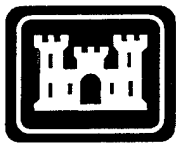
FPMA

FloodPlain Management Assessment

June 1995

Appendix D
(Public Involvement / Institutional Factors)



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19. ABSTRACT (Continue on reverse if necessary and identify by block number)

The oversight agency for the floodplain management assessment was the North Central Division. The St. Paul District was the lead agency for completion of the report, but actual work on the report was accomplished by five Corps District; St. Paul, Rock Island, St. Louis, Kansas and Omaha.

The assessment evaluated the impacts of a wide array of floodplain policies, programs and flood damage reduction measures to the Midwest Flood of 1993. However, this assessment has taken an important step toward achieving a better understanding of the current uses of floodplain, forces causing those uses and impacts of various alternative changes in the managment of floodplains. Some of the objectives included in the assessment are: describing land and water resources and making projections of future conditions; identify local interests; alternative uses of floodplain resources; identify facilities needing additional flood proction; examine Federal cost-sharing; evaluate cost effectiveness of alternative flood control projects and recommend improvements to current system.

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Appendix D

Public Involvement Work Group

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Note: This appendix is a compilation of working papers generated by the five Corps of Engineer Districts involved in the Floodplain Management Assessment. These working papers are often results of separate analyses that were synthesized to generate the main report. The data in these appendices were not as thoroughly reviewed to remove all inconsistencies or editorial errors as was accomplished for the main report. In some cases, numbers or percentages may have been reconciled in the main report but not in the appendix.

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Appendix D

Public Involvement Work Group

1. Public Involvement Strategy

Identifying and Arraying Desires of **All** Interested Parties

The Public Involvement Work Group designed its program to meet the study objectives; particularly Objective B: Identify and array the desires of interested parties within the study area to reflect the diversity of opinions regarding appropriate future outputs from alternative uses of floodplain resources; and Objective F: Evaluate and prioritize alternative land and water resource actions based on consultation and coordination with affected Federal, State, and local entities through a series of public workshops or similar mechanisms.

Identifying and arraying the desires of interested parties within the study area was done to ensure that the assessment reflects the diversity of opinion regarding the alternative uses of floodplain resources. The public involvement strategy was based on two definitions: 1) All potentially affected individulas, agencies, organization and interest groups; and 2) Involvement was characterized by the nature and extent of the public's participation in problem solving and decision making. To follow this strategy required a series of public workshops/open houses, and evaluation meetings with local, State, and federal agencies. Public input was also obtained from written correspondence and comment sheets.

Public Involvement Strategy

In order to accomplish the above tasks, three sets of public meetings were designed. The first set, held in June 1994, was designed to educate the public and obtain information from them. The second set, held in November 1994 was designed to inform and obtain their desires. The third set, held in April 1995, was designed to provide the information and conclusions from the draft report, and to obtain from interested parties, their priority rating for Policies/Programs and Action Alternatives.
A master mailing list was developed from all five Districts, consisting of Federal and State agencies, Organizations and Interest Groups that had shown prior interest in the subject of floodplain management. The St. Paul District maintained the master mailing list in order to avoid sending duplicate mailings. The master mailing list, of approximately 200, was used to distribute the Milestonge Packages, notice of public meetings and other information. Each District also used supplemental mailing lists to include others who were interested and requested information about the Floodplain Management Assessment (FPMA).

Interagency Team Workshops with Local, State and Federal agencies took place during February 1994, August 1994, October 1994, January 1995, February 1995 and May 1995.

Three milestone packages were prepared and distributed to Federal agencies, State agencies, Organizations, Interest Groups, and interested individuals. The first milestone package (Existing Condition Identification Summary) was sent on August 5, 1994 to provide an update of the work being done on the (FPMA). Recipients were encouraged to review the data and offer guidance on revised directions, additional sources of information, or general comments for consideration. The

second milestone package (Problem/Issue Identification)was sent on September 15, 1994 as a further update and recipients were again encouraged to review and offer guidance, direction, or comments. The third milestone package (Alternatives Identified and Developed), completed January 18, 1995, was also provided as an update, with continued encouragement to review and offer comments. Questions expressed at the public meetings in November and written comments received through December were responded to in the 3rd Milestone Package. Several refinements to the study were made as a result of the comments received.

2. Institutional Analysis

General

An institutional analysis "consists of the identification and/or the creation of organizations and procedures that will be needed to effectuate the efficient implementation of formulated plans" (Taylor, 1977:122). "For the layperson an institution is the organizations, legal mechanisms, and the market processes that hinder or facilitate decision processes: (Dr. Peter J. Nowak, 1988 Great Lakes report). "Institutional arrangements are the 'rules of the game'. The rules dictate human behavior and help formulate expectations of the actions of others" (Frerichs and Easter, 1988).

An Institutional Analysis is an extremely valuable tool in evaluating how the floodplain players interact, and where there are contradictions and overlapping.
Ideally, an analysis would cover the study area to determine if: (1) policies and authorities varied between States and units of Government (municipalities, counties) within these States; (2) floodplain strategies were compatable; and (3) various floodplain management approaches in relationship to land and water resources were effective.
Just as the focus of the FPMA study explored the systemic nature (whole system) of floodplains during the 93 floods along the Mississippi and Missouri Rivers; so too, the focus of the Public Involvement process required a look at the whole body of potential individuals, agencies, organizations and interest groups. The institutional analysis was considered an extremely important part of this process. It serves as a valuable tool in understanding, evaluating, and analyzing the institutional setting: legality and compliance, political conflicts, social and cultural values, and administrative effectiveness. "In our complex world, decisions which impact the public interest require complex coordination between all concerned interests, and due consideration of the legal and economic factors, political feasibility, and examination of the powers and authority of public bodies which are charged with responsibility for the public interest" (Bro et al., 1976:5). Politial interaction from indiviuals, groups, organizations is necessary for consensus building. Opposition interests which fail to show up at public meetings may surface later to stall implementation.

The success of any change in floodplain management will depend on gaining support from local communities and citizens since most decisions on floodplain land use is decided by local policy. Local communities must be actively engaged in efforts to work together to manage the health of the floodplain system. Communities, especially floodplain landowners, perceive the loss of jobs, economic productivity, and are reluctant to change, but communities really stand to gain the most from improvements that generate economic and community development opportunities (improved water quality and supply, improved recreational/ fishing/hunting opportunities, improved aesthetics and land values, etc.). River focused community revitalization projects work with bottom-up local involvement. Local communities will need support in making floodplain changes to maintain economic vitality, but it will require local empowerment, effective new incentives, the removal of disincentives, and effective implementation structures.

Inventory Data

Chapter 2 "Forces impacting uses of the floodplain" of the Floodplain Management Assessment report (FPMA) begins to analyze the floodplain forces by providing a historical evaluation of the study area, an institutional inventory, and policy and program evaluation. The institutional inventory is a list of institutions, organizations and groups and is located in this Appendix. The inventory list is only the first step in gathering data for the analysis. Because of the interrelated complexity of an institutional analysis, cost and time required for the analysis it was beyond the scope of the FPMA study. An unbiased, comprehensive institutional analysis would be necessary to fully understand and prepare for a new floodplain approach that would be supported. This would aid in reducing possible problems or preparing ahead to confront them.

The FPMA study has examined the forces impacting uses of the floodplain in chapter 2. Sections of this chapter include a **Historical Evaluation**, an **Institutional Inventory**, and examined **Polices and Programs**. The **Historical** documentation includes a look at: (1) historical reconstruction to develop a picture of how the relatively undisturbed system functioned compared to how the system functions today; (2) historical data to document pre-project channel conditions, channel stability/instability, and identify patterns of development; (3) riverine-riparian biodiversity in the historic floodplain; and (4) an assessment of the relative impacts of dams, diversions, levees, and other impacts. The **Institutional Inventory** includes a compilation (list) of Federal, State and Local Agencies; Tribal Governments; Organizations and Interest Groups; Levee and Drainage Districts; Agriculture and Recreational interests. This list is available at the end of this appendix. A need for an evaluation of how these players interact, overlap, link together, or contradict purposes or goals still needs to be completed. The **Policies and Programs** evaluation has looked at the variations between States and Local units of Government; reviewed compatability of floodplain strategies; and looked at the effectiveness of various floodplain management approaches such as the National Flood Insurance Program. For a more in-depth analysis of the polices and programs see chapter 7 of the main report. As we have begun to analyze these floodplain forces (Historical, Institutional, Policies and Programs) we know that: (1) The extent of damages from flooding increases over time; (2) The responses to flooding are becoming more technical and sociopolitical; and (3) The institutional setting in relationship to flooding has become increasingly complex.

An evaluation is necessary to understand how differences in floodplain management will affect individuals and groups with different political systems. Conflict is unavoidable, but conflict between interest groups and agencies, as well as interagency conflicts need to be identified, and opened for discussion. Private interest groups/organizations, elected officials, and Government are competing interests. Better coordination is not the sole answer in reducing conflicting agency goals, missions, bureaucratic inertia and turf battles that prevent public agencies from effectively cooperating to protect complex river systems.

1993 Flood Impact on River Communities

Before the Great Floods of 1993 arrived, communities were dealing with major problems involving old infrastructure issues, and social and economic change. These issues and changes were accelerated due to unprecedented damage from the floods. Tough planning issues that needed to be dealt with quickly included: "resolving housing shortages, finding suitable sites for subdivisions and towns, finessing the financial resources to implement projects, building the necessary infrastructure to accommodate growth, and reusing cleared floodplain lands" (Morrish, Swenson, Baltus, 1994). The recovery process is far from over. "While the floods and the recovery process are felt most immediately in the community, their regional and national importance will only become more apparent with time.

From a preliminary needs assessment study of post-flood recovery planning issues at the community level, we can draw conclusions that have implications at the larger scale" (Morrish, Swenson, Baltus, 1994). Very little money has been made available to communities to plan for relocation, while millions were spent to aquire flood damaged properties. A very real problem exists in a relocation program when it moves parts or entire towns out of the floodplain without addressing what held that community together (common link, culture, bond or sense of belonging). All of a sudden that community quality is gone and individuals will feel displaced. People are a part of the environment and "communities need to be included if the entire ecology of the river is to be sustained. A sustainable balance with the environment is a crucial part of the planning process we have found so deficient, or missing altogether in changing and relocating communities. Holistic thinking is needed to plan communities that better recognize and enhance their connections with the environment" (Morrish, Swenson, Baltus, 1994).

3. Public Meetings and Workshops

Results of Public Meetings and Workshops

Summaries, comment sheets and other information from the June and November Public Meetings was submitted by each of the five Districts, and is included in order: Kansas City District Summaries; Omaha District Summaries; Rock Island District Summaries; St. Louis District Summaries; and St. Paul District Summaries. The April Public Meeting information and statistical packages for each District plus the overall statistical tabulation for four Districts is complied together under the April Comment Spreadsheets. Rock Island has a statistical program in which all their data results are complied.

From June 13 to June 30, 1994, 12 open house meetings were held in various locations throughout the study area (see figure 1 for locations). The Public Involvement point of contact representative from the St. Paul District attended most of the June meetings with each District's assigned public involvement person. The open house format was designed to educate, answer questions and solicit input. As interested parties entered the meeting they were shown a slide and audio presentation describing the background and reason for the study. They then had the opportunity to look at displays that included information on the objectives, study organization, study area, and related information. Four tables each had a subject expert available for questions along with displays of work by that discipline. The public was encouraged to ask questions and make comments at these tables. Flip charts were used to list alternatives and perceived needs. The public was encouraged to identify alternatives and needs or place a mark beside the alternatives or needs that interested them.

Overall, the comments were positive to the open house meeting because it assured more people could take the opportunity to express their views, and those people felt the meetings were educational and contributed to their understanding. Many of the open house participants provided comments either at the open house or mailed their comments later. The comments received were recorded in a computor matrix format. The Figure 2 pie chart shows the coded information from the matrix identified as the percentage of group representation that responded at the June meetings. The majority (34.1 percent) represented agricultural interests, while the second largest group (23.5 percent) was represented by self interest. The third largest group (17.4 percent) was represented by Government (separated into four groups: Regional/Local, City, County, and State). Other interests included: Environmental, Industry, Other, Private Interest Groups, Planning, and Mental Health.

A content analysis of the comments received from the June meeting reveals four underlying themes. First, there is the strong support among agricultural

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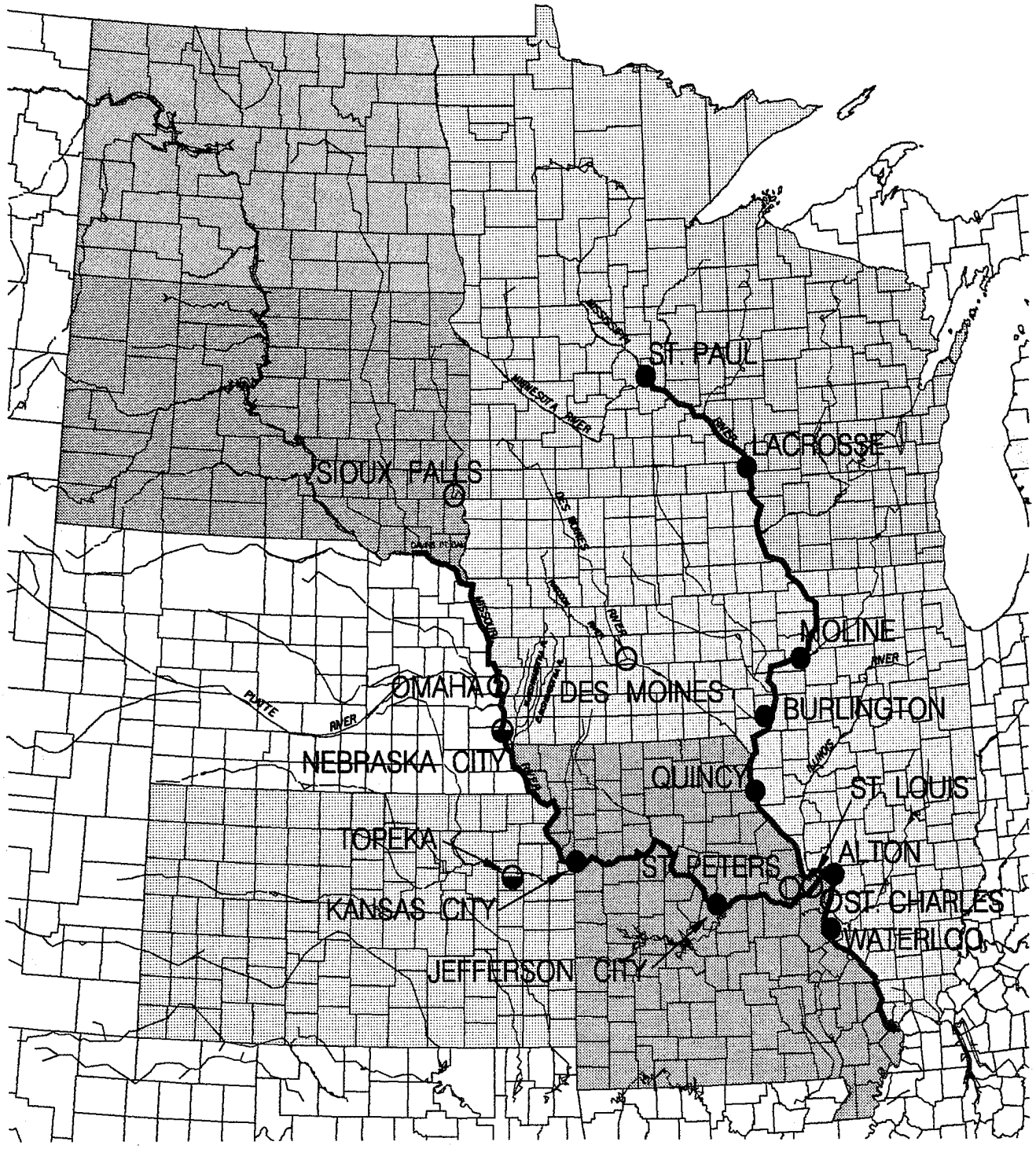

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LEGEND

- ● 3 MEETINGS
- ◒ 2 MEETINGS
- ○ 1 MEETING

FIGURE 1

PUBLIC MEETING LOCATIONS

US Army Corps of Engineers

REPRESENTATION AT JUNE MEETINGS
(34.1%) Agriculture
(23.5%) Self
(7.6%) Environmental Interests
(6.1%) Regional/Local Gov't
(4.5%) Other Industry
(6.1%) Other
(4.5%) City Gov't
(4.5%) County Gov't
(3.0%) Private Interest Group
(2.3%) State Gov't
(1.5%) Mental Health
(2.3%) Planning

FIGURE 2

interests for improving and continuing development of structural flood control measures, especially levees. Second, the environmental interests together with some agricultural and recreational interests tend to support the idea that greater enphasis needs to be placed on non-structural measures, particularly those that will provide environmental enhancement and benefits. Third, is that agricultural, environmental, and government representatives are asking for greater coordination among agencies responsible for managing the Upper Mississippi and Lower Missouri rivers. The forth theme suggested that there is genuine interest in understanding the flood of 1993. Other comments from the June 1994 meetings focused on specific problem areas, often calling for detailed solutions. Many of these comments have been addressed.

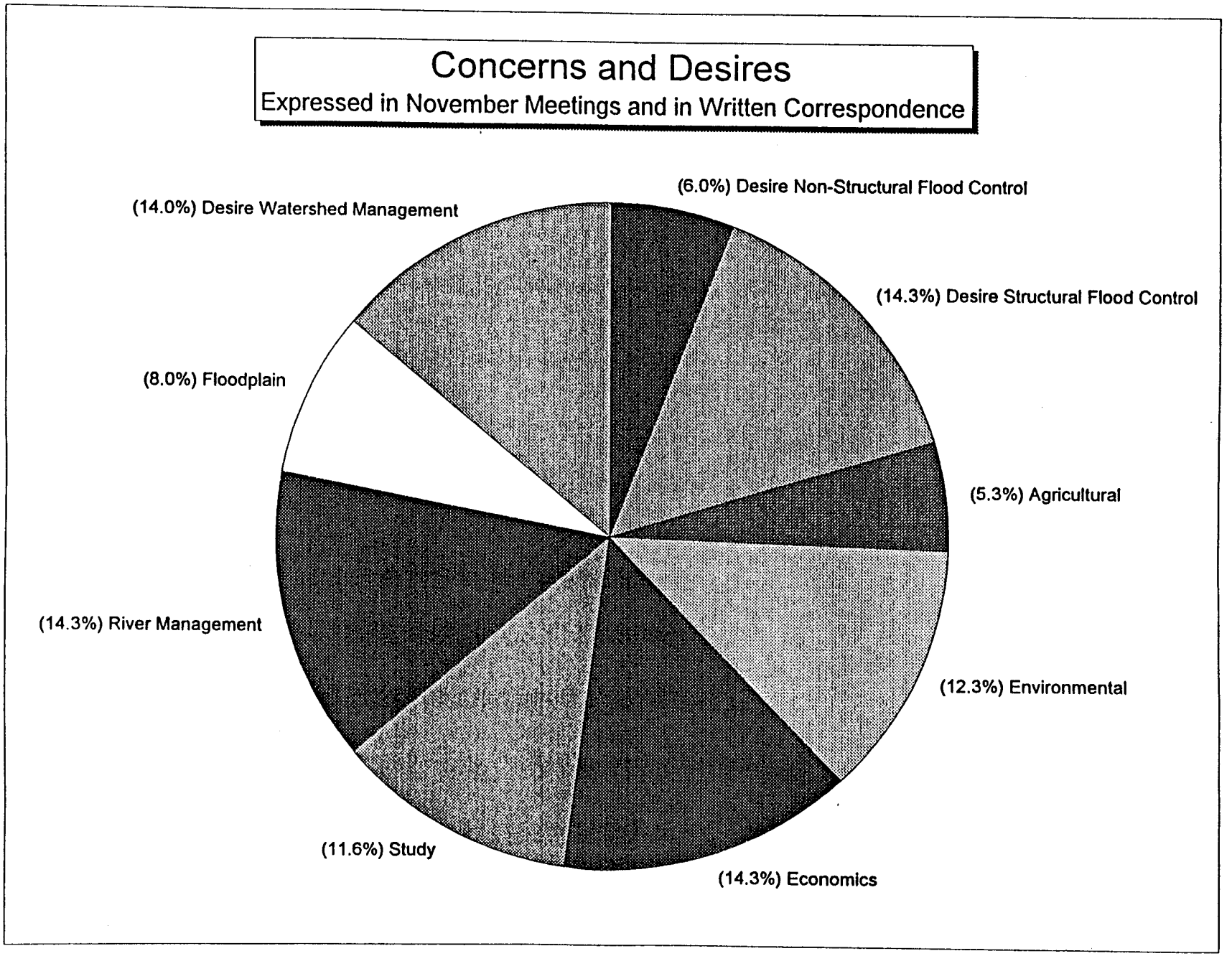
In November 1994, thirteen meetings were held at locatons within the study area (see figure 1). These meetings followed the same basic format: a set of slides and script provided by the St. Paul District. The Rock Island District varied somewhat by conducting a focus meeting before the public meetings were held to help clarify the format and style of presentation.

Many interested parties that attended the November public meetings voiced concern about a wide variety of issues involved in the floodplain study. Others provided written comments about their concerns. Some meetings were dominated by one main issue while other meetings had a wide variety of discussion issues. Comments heard from these meetings and the written correspondence has been recorded.. Comments have been coded to identify the desires and concerns of all interested parties and are shown in Figure 3. The key to the pie chart is discribed in Figure 4a, 4b, 4c, and Figure 5.

The following discussion provides an analysis of the comments received from the November meetings. One of the limitations of this meeting analysis is it's subjective and anecdotal method of recording comments. However, this representative summary of the comments heard can still provide some observations and reinforces the theme of the June meetings. The majority of comments revolved around (1) Levees, especially their good qualities and the value of the 500-year levee . Other recommendations were to raise heights and build more levees. On the reverse side, some people thought levees were high enough but in need of better maintenance and improved interior drainage. Approximately a dozen people were in the middle: wanting to keep levees low and improve costs. (matrix codes: LVG, LVC, LVB, LMS). The second and third most often heard comments were concerning (2) Economics: costs vs. benefits and measuring impacts by dollars vs. acres (matrix code: ECON); and (3) Study: is it worth it, confidence level, need 4th scenario, very complex and hard ot understand (matrix code: STDY). The fourth most often heard comment concerned (4) Environmental measures such as ecosystem concerns, culmulative effects , water quality and impacts to species (matrix code: ENV) . Other comments that were also reflective of an environmental position but placed in different categories include: encroachments in the floodplain (matrix code: DEV); optimum management plans (matrix code: OMP); the value of wetlands and river ecosystem (matrix code: WET); watershed management (matrix code: WS); social well being impacts (matrix code: SOC) and historic preservation (matrix code: HIS) plus a few others. A more detailed explanation and actual number of people responding to certain comments are shown in the Key to the Matrix Code, Figure 4a, b and c.

The third set of Public Meetings were held during the last two weeks of April, 1995. Eleven meetings were conducted within five districts. Handouts were available to the public at all meetings. They included the: Executive Summary, Hydraulic summary with tables of alternative actions affecting the floodplain, Findings, and Conclusions. Those in attendance were given a comment sheet to fill out before leaving the meeting. The presentation format consisted of a 30-40 minute slide show with a brief narrative. The slides were prepared so that each District could select from two action alternative case studies. The presentation was designed to educate the public by presenting the products from the study,

FIGURE 3


Concerns and Desires
Expressed in November Meetings and in Written Correspondence
(6.0%) Desire Non-Structural Flood Control
(14.3%) Desire Structural Flood Control
(5.3%) Agricultural
(12.3%) Environmental
(14.3%) Economics
(11.6%) Study
(14.3%) River Management
(8.0%) Floodplain
(14.0%) Desire Watershed Management

Public Involvement - Key to Matrix Code

AALT - remove extreme action alternatives

AGR - agriculture benefited by levees; not enough about agriculture in this study; want regional versus national impacts in study; ag. subsidies; crops enhance wildlife; ag. protected as well as business; look at realistic ag. data - 5 to 10 yr. events; need ag. land in floodplain; rented land lost to the CORPS?; look at ag. practices in floodplain

BIOE - suggested use of nonstructural techniques by CORPS is one of best components of this study; use native vegetation in the watershed

BLD - build levees as HREP impoundments were done; lower road height; use water control structures to release water

BUF - buffer zone between waterways and tilled land; need buffer strip at least 60 ft.; better enforcement of buffer zone

CHF - levee channeling causes increase flow/volumes down river
CORP - well received at meeting; generally support study
CRIT - critical facilities considered priority; combine critical and priority sites; better explaination

DEV - encroachments in floodplain/river; embankments; 'hard surfaces' decreasing rainfall infiltration and increasing flood events?; construction of I-635 bridge caused increase flooding; took ag. land for development

DRE - dredged sand should be used on levees/ or completly removed; reduce dredging

ECON - cost/benefit to floodplain or land developed behind levees; benefits may not equal B/C ratio requirements (Do analyses favor those impacts that are easy to quantify and undervalue those that are difficult?); data does not allow complete analysis or by specific hydrologic setting; need higher estimates in modeling the impacts of watershed runoff reduction estimates; reduce FED. expenditures; need consistent funding; use a lottery system to raise capital; compare transportation cost of export grain shipped by barge; need better values placed on wetlands; difficult to measure dollars against acres

ENV - environmental values; impact of flooding on species; declining ecosystem; changes in aquatic ecosystem; water quality should be impact; consider the Draft Environmental Impact Statement for this study; include impact of flooding to wildlife; address culmulative effects to environment; more aggressive strategy to protect wildlife likely as shift seen in national policy

FE - look at using other flood events other than 1993 flood; impact of those on wetlands, tributary flooding and high water on uplands; flood control should be analysed
FER - flooding improves land fertility; promote cyclical flooding of agricultural lands
FF - oppose limited flood fighting

FLD - field studies in various land management practices on flood dynamics are needed in a variety of physiographic regions ; comparison of standard project flood control levees along the UMRS.; need flood hazzard mapping

FP - floodplain; use of area for extreme flood events; lost storage capacity; move people out of the flood prone areas; need to study individual floodplain characteristics

FIGURE 4a

Public Involvement - Key to Matrix Code

FST - fast and more financial response action post flooding

HDW - flood damage reduction strategies needed in the headwater and on the upland floodplains

HIS - historic preservation; sites protected; look at historical flood damages

HO - low cost housing outside of floodplain; housing location suggested in Galloway study

HYD - consider the hydraulic distribution of flood damages; specific hydrologic setting, such as the watershed scale or flood magnitude, better modeling studies needed like the Hydrologic Simulation Program for Fortran (HSPF); dams altered hydrology of mainstem rivers

INS - insurance rate costs; claim costs; crop ins. required - residences too?; Gov't should not pay flood insurance

LMS - build levees as on the lower Mississippi; rebuild levees

LVB- bad about 500-year levee; flooding behind; maintenance and improvement; private levees bad; use of 500-year seems excessive; don't build higher; interior drainage problem; why push back ag. levees but not urban levees?

LVC - levee, maintenance/improvement costs; study individual levee districts; clarify max. height; change slopes; keep levees low; either 500 yr. or NO levees; no segregation of urban/public levees

LVG - good about 500-year levee; value to navigation; set back from waterway; raize levees; maintain levees as is; need levees; repaired levees

MM - mismanagement by Feds, give to locals to manage; water control plan for Missouri River manual appears over influenced by Upper Mississippi executives and deters Lower Mississippi residents of their rights

MTG - public meetings good idea but - response to format negative;use microphones for speakers and questions; too abstract; show slides that show work completed and make it more interesting to public; visual aids important!; no facts just PR at this session; interesting mtg.

NAV - impact of navigation projects, channeling, wing dams on flooding; value of nav.; expand nav. study to restore river dynamics; scenarios applied to nav.; consider long term impacts; determine the impact of cumulative effects from continued or increased navigation

NS - return rivers to there natural state (natural state not defined?);simulate natural geomorphological process

OFC - other flood control; other management than use of floodplains
OMP - strive for optimum management plan, use watershed management; CORPS experts so willing to work with them; CORPS should make all an inter-agency endeavor with USFWS, DNR, SCS, etc. as in other areas of country ; need third party peer review; require a national balance of standard project flood protection to navigation, economic development, and environment and habitat protection; avoid agency self-interest - multi-agency; Gov't work with communities

PC - more pollution control for river water**POL** - policy defined through district or river mile, (same?)

FIGURE 4b

Public Involvement - Key to Matrix Code

PPR - value of property in floodplain, private property rights; treat landowners fairly

REC - provide recreation, hunting, fishing, boating, etc.; consideration of ease of access by elderly, disabled, and non-boaters
REG - consistency in Gov't regulations; need uniform, standard, Federal policies; want Gov't. ownership of floodway

REM - remove structures from floodplain; buyout
RES - use water reservoirs; may invite criticism; Pick-Sloane plan; reservoirs are proven to reduce flood damages;

RO/DR - stormwater run-off (urban and agricultural), use of upland measures, agricultural run-off problems; tailor to a variety of flood magnitudes; soil conservation and enrichment to prevent runoff and sedimentation buildup in rivers; address drainage problems

RR - reroute excess water to dryer areas
RVR - river wide policy, not separate for upper and lower; change river management

SOC - social well being impact category; human value is not given enough importance; unclear what significance short and long term human trauma damages are caused by large flood events; human beings have a right to be protected; solution the same for everyone; equal representation; focus on social issues; moving out of floodplain

STDY - study, what will happen when it is completed? is it worth it? study nothing but public reaction placating, no confidence; need more time to collect data; study seems to cover too many issues/solutions; Will plan work? - too vague; don't misinterpret the data; potential benefit of study; very useful; HEC-1 modeling underestimates flood peak reduction; 3 scenarios - need better description; the three scenarios presented at the meeting raise some additional issues that must be studied as a comparison of floodplain management policy; need 4th scenario; very complex study- needs more funding

STRC - Corps should consider impacts of a maximum structural flood control approach versus the current bioengineering approach suggested

TRAN - water transportation important; address transportation impacts separately; determine future of Miss. river; increasing river traffic causes ecosystem decline (wind/wave action)
TRB -consider tributaries for importance, large amount of 1993 flood occurred in these areas, small watersheds

URB - urban protected areas; include/expand traffic corridors;

WET - value of wetlands, use as leased areas for water storage, habitat; large-scale restoration of pothole wetlands; benefits of ground water recharge and flood control; increases water quality; include all wetlands; management of river ecosystem to floodplain is unclear

WL - water levels, need more capacity adjustment capabilities, clean out backwaters; change water levels in pool, make channels deeper, wider

WS - watershed management approach; need to take specific watersheds into account; future watershed study needed with a complete analysis of the distribution of cumulative historical flood damages within specific watersheds; storage capacity; integrate other studies; use of upland watershed reduction a plus; evaluate groundwater surface interactions; water supply

Public Involvement - Key to Matrix Code

CONCERNS EXPRESSES IN NOVEMBER MEETINGS AND WRITTEN CORRESPONDENCE

COMMENTS EXPRESSED WERE GROUPED INTO COMPATIBLE CATEGORIES AND SHOWN AS A PIE CHART GRAPHIC. CATEGORIES WERE ESTABLISHED FROM GROUPS OF COMMENTS THAT WERE SIMILIAR IN NATURE AND CAN BE REFERENCED ON PAGE 2 OF THE **Key to Matrix Code.** Categories follow:

Desires of public:

1) FAVOR NON-STRUCTURAL FLOOD CONTROL:
BIOE - LVB - REM - NS - BUF

2) FAVOR STRUCTURAL FLOOD CONTROL:
BLD - LVG - LMS - STRC - RES - RR -

3) FAVOR WATERSHED MANAGEMENT
WS - TRB - OMP -FE -HDW - RO/DR -

Concerns of public:

1) AGRICULTURAL CONCERNS:
AGR - FER -

2) ENVIRONMENTAL CONCERNS:
WET - PC - ENV - HIS - SOC -

3) ECONOMICS CONCERNS:
ECON - HO - INS - LVC - FST -

4) STUDY CONCERNS:
CORP - STDY - MTG - AALT - FF-

5) RIVER MANAGEMENT CONCERNS:
CHF - DRE - TRAN - WL - MM - NAV - REC - RVR - REG - POL -

6) FLOODPLAIN CONCERNS:
DEV - PPR - FP - URB - CRIT - HYD - FLD - OFC -

existing base conditions, policy and program findings, and action alternative evaluations from the Floodplain Management Assessment (FPMA) draft report. After the presentation those in attendance were asked to complete the comment sheet; identifing their priorities on Policies/Programs and Action Alternatives, while keeping in mind that the goal of floodplain management was to (1) minimize the vunerability of people to floods, (2) reduce flood damages and costs, and (3) assure a healthy floodplain environment.

Responses to the comment sheet questions have been recorded by commputor, using a statistical package to quantify the results. The majority of the public meeting participants that choose to complete the comment sheets, represented agricultural interests. Agricultural interests from Rock Island, Kansas City, St.Louis, and the Omaha Districts had a combined total of 67% attendance, while the St.Paul District had only 5.3% attendance, pulling the total down to 54.68%. Other interest groups were not as well represented: home owners = 11.68%, government = 12.6%, and environmental = 5.8%. Priorities were ranked by individuals who attended the April public meetings. Overwhelmingly, all Districts gave a very high (5) priority rating to **1) protect critical facilities (56.4%)** and **2) upland retention and additional watershed measures (57%)**. Since the attendance at most meeting sites consisted of a majority of agricultural interests, correlations by other interest groups are not necessarily representative of the attitudes of a larger population sample. Therefore the measures of association here is limited to the agricultural interests only. Agricultural interests show an association with raising agricultural levees, but not with uniform levee heights, levee setbacks, or agricultural support policies. That interest group also shows a very low priority correlation with relocation and mitigation programs, wetland restoration programs, limited flood fighting and removing agricultural levees. An interesting observation shows that these associations get stronger further south (below Moline) on the Mississippi River, but are evenly distributed along the entire Missouri River in the study reach. The results of the tabulation by District, follows:

St.Paul District: Two meetings were held in St.Paul, Minnesota and in LaCrosse, Wisconsin. The number of people who attended was a small but diverse group.

Attendance: total of 27
Responses received: 19
Primary interest of respondents:

Agriculture	5.3%
Commercial	10.5%
Government	26.3%
Home owner	26.3%
Environment	15.8%
Recreation	5.3%
Other	10.6%

Where respondents live:

Outside of flood plain	57.9%
Unprotected urban flood plain	26.3%
Protected urban floodplain	5.3%
Other	10.5%

The following priorities were rated by the respondents on an increment scale from 1 to 5. A very high or very low indicates that more than 50% rated the issue either 5 (Very high) or 1 (Very low). A high or low indicates that more than 50% rated the issue 4 or 2 (above or below neutral).

Priorities on program and policies:	St.Paul	LaCrosse
National flood insurance	High	--
State flood plain management	High	--
Local flood plain management	High	High
Relocation and mitigation	High	--
Disaster relief programs	--	Low
Flood plain wetland restoration	High	High
Agricultural support policies	--	Low
Priorities on alternatives:		
Limit flood fighting	--	--
Remove agricultural levees	Low	--
Agricultural levee setbacks	--	--
Uniform levee height	--	--
Raise agricultural levees	Low	Low
Raise urban levees	--	--
Protect critical facilities	High	High
Upland retention	High	Very high

A correlation between the respondents' primary interest and how the issue was ranked showed differences in opinions. Associations between interest groups and their priority ranking of 1) policies/programs and 2) alternatives are shown below:

Interest Group	Environmental	Government	Home
National Flood Insurance	High	--	Very high
State flood plain management	High	High	Very low
Local flood plain management	High	High	Low
Relocation and mitigation	High	High	Very low
Disaster relief	High	--	Very low
Floodplain wetland restoration	High	Very high	--
Agriculture support policies	Low	--	Very low
Limit flood fighting	--	High	--
Remove agriculture levees	High	--	Low
Agricultural levee setbacks	High	High	Low
Uniform levee height	--	--	Low
Raise agricultural levees	Low	Very low	Very low
Raise urban levees	--	--	Low
Protect critical facilities	Very high	Very high	--
Upland retention	Very high	Very high	--

Rock Island District: Three meetings were held in Moline and Quincy, Illinois; and Burlington, Iowa. The majority of respondents attending were representing agricultural interests. It must be cautioned that the numbers for those who indicated a primary interest other than agriculture are relatively small and the results do not necessarily reflect the attitude of a larger population.

Attendance: total of 167
Responses received: 145
Primary interest of respondents:
- Agriculture 61%
- Government 10%
- Home owner 10%
- Environment 6%
- Other 13%

Where respondents live:

Protected agricultural flood plain	47%
Outside of flood plain	37%
Unprotected urban flood plain	8%
Other	8%

Priorities were rated by the respondents on an increment scale from 1 to 5. A very high or very low indicates that more than 50% rated the issue either 5 (Very high) or 1 (Very low). A high or low indicates that more than 50% rated the issue 4 or 2 (above or below neutral).

Priorities on the policy issues were fairly mixed. Only local floodplain management received a high rating with more than 50% of the respondents listing this policy as a 4 or 5. Only relocation and mitigation and floodplain wetland restoration received low ratings.

The opinions on alternatives were more clear cut. This was primarily because the issues were more understandable and could be perceived as having a more direct effect on the respondents. Levee setbacks received the only low rating while all of the others received high ratings. Clearly, raising levees, protecting critical facilities and upland retention were the preferred alternatives. Results by meeting site are shown below:

Priorities on program and policies:	Moline	Burlington	Quincy
National flood insurance	--	Low	High
State flood plain management	High	Low	High
Local flood plain management	High	--	High
Relocation and mitigation	--	Low	Low
Disaster relief programs	--	--	--
Flood plain wetland restoration	--	Low	Very Low
Agricultural support policies	--	--	High
Priorities on alternatives:			
Limit flood fighting	--	Very low	Very low
Remove agricultural levees	--	Very low	Very low
Agricultural levee setbacks	--	Very low	Low
Uniform levee height	--	Very high	High
Raise agricultural levees	--	Very high	Very high
Raise urban levees	--	High	Very high
Protect critical facilities	High	Very high	Very high
Upland retention	Very high	Very high	Very high

A correlation between the primary interest and the issue ranked also showed differences in opinions.

Interest Group:	Agriculture	Government	Home
Flood Insurance	--	--	--
State flood plain management	--	High	High
Local flood plain management	--	Very high	Very high
Relocation and mitigation	Very high	High	High
Disaster relief	--	--	High
Floodplain wetland restoration	Very low	--	--
Agriculture support policies	--	High	--
Limit flood fighting	Very low	--	--
Remove agriculture levees	Very low	--	Low
Agriculture levee setbacks	Low	--	--

Uniform levee height	High	--	High
Raise agriculture levees	Very high	--	High
Raise urban levees	Very high	--	--
Protect critical facilities	Very high	High	Very high
Upland retention	Very high	High	Very high

It must be cautioned that the numbers for those who indicated a primary interest other than agriculture are relatively small and the above results do not necessarily reflect the attitude of a larger population.

Kansas City District: Two meetings were held in Kansas City and Jefferson City, Missouri. The majority of persons attending represented agricultural interests. The district was prepared for questions on the Missouri River Master Manual by having a representative attend the meeting and discuss later.

Attendance: total of 108
Responses received: 76
Primary interest of respondents:

Agriculture	75%
Commercial	2.6%
Environment	1.3%
Government	7.9%
Home owner	9.2%
Recreation	2.6%
Regional Planning	1.3%

Where respondents live:

Protected agricultural floodplain	32.9%
Unprotected agricultural floodplain	21.1%
Outside of floodplain	32.9%
Protected urban floodplain	1.3%
Unprotected urban floodplain	10.5%
Other	1.3%

Priorities were rated by the respondents on an increment scale from 1 to 5. A very high or very low indicates that more than 50% rated the issue either 5 (Very high) or 1 (Very low). A high or low indicates that more than 50% rated the issue 4 or 2 (above or below neutral),

Priorities on program and policies:	Kansas City	Jefferson City
National flood insurance	--	--
State flood plain management	High	--
Local flood plain management	High	High
Relocation and mitigation	--	--
Disaster relief	--	--
Flood plain wetland restoration	Very low	Very Low
Agricultural support policies	High	High
Priorities on alternatives:		
Limit flood fighting	Very low	--
Remove agricultural levees	Very low	Very low
Agricultural levee setbacks	Very low	Very low
Uniform levee height	--	--
Raise agricultural levees	High	--
Raise urban levees	High	--
Protect critical facilities	Very high	Very high
Upland retention	Very high	High

Interest Group	Agriculture	Government	Home
National Flood Insurance	--	High	--
State flood plain management	High	High	Very high
Local flood plain management	High	High	Very high
Relocation and mitigation	Low	--	--
Disaster relief	High	Low	High
Floodplain wetland restoration	Very low	--	Very Low
Agriculture support policies	Very high	High	High
Limit flood fighting	Very low	--	Very low
Remove agriculture levees	Very low	Very low	Very low
Agricultural levee setbacks	Very low	Low	Low
Uniform levee height	High	High	--
Raise agricultural levees	High	High	Very high
Raise urban levees	High	Very high	Very high
Protect critical facilities	Very high	Very high	Very high
Upland retention	High	--	Very high

St.Louis District: Three meetings were held in Alton and Waterloo, Illinois and in St.Peters, Missouri. The majority of persons attending represented agricultural interests.

Attendance: total of 181
Responses received: 88
Primary interest of respondents:

Agriculture	59.1%
Government	8.0%
Home owner	10.2%
Environment	3.4%
Unknown	13.6%
Other	5.7%

Where respondents live:

Protected agricultural floodplain	61.4%
Outside of floodplain	30.7%
Protected urban floodplain	5.7%
Other	2.3%

The following priorities were rated by the respondents on an increment scale from 1 to 5. A very high or very low indicates that more than 50% rated the issue either 5 (Very high) or 1 (Very low). A high or low indicates that more than 50% rated the issue 4 or 2 (above or below neutral).

Priorities on program and policies:	Alton	St.Peters	Waterloo
National flood insurance	--	--	High
State flood plain management	--	High	--
Local flood plain management	High	High	High
Relocation and mitigation	Low	--	Low
Disaster relief programs	--	--	--
Floodplain wetland restoration	Low	Very low	Very Low
Agricultural support policies	--	--	Very high

Priorities on alternatives:

Limit flood fighting	--	Very low	Very low
Remove agricultural levees	Very low	Very low	Very low
Agricultural levee setbacks	Low	Very low	Very low
Uniform levee height	--	--	--
Raise agricultural levees	--	--	Very high
Raise urban levees	--	--	--
Protect critical facilities	Very high	Very high	Very high
Upland retention	Very high	Very high	Very high

A correlation between the primary interest and the issue ranked also showed differences in opinions.

Interest Group	Agriculture	Government	Home
National Flood Insurance	--	High	High
State flood plain management	--	Very high	High
Local flood plain management	High	Very high	High
Relocation and mitigation	Low	--	Low
Disaster relief	--	High	--
Flood plain wetlands	Very low	Low	Low
Agricultural support policies	High	Low	High
Limit flood fighting	Very low	--	Low
Remove agriculture levees	Very low	Very low	Very low
Agricultural levee setbacks	Very low	--	Very low
Uniform levee height	High	--	Very low
Raise agricultural levees	Very high	--	--
Raise urban levees	--	--	Very high
Protect critical facilities	Very high	High	Very high
Upland retention	Very high	Very high	Very high

It must be cautioned that the numbers for those who indicated a primary interest other than agriculture are relatively small and the above results do not necessarily reflect the attitude of a larger population.

Omaha District: One meeting was held at Nebraska City, Nebraska. The majority of persons attending represented agricultural interests.

Attendance: total of 60
Responses received: 37
Primary interest of respondents:

Agriculture	73.0%
Commercial	2.7%
Government	10.8%
Home owner	2.7%
Environment	2.7%
Industry	5.4%
Other	2.7%

Where respondents live:

Outside of flood plain	43.2%
Unprotected agriculture floodplain	8.1%
Protected agriculture floodplain	48.6%

The following priorities were rated by the respondents on an increment scale from 1 to 5. A very high or very low indicates that more than 50% rated the issue either 5 (Very high) or 1 (Very low). A high or low indicates that more than 50% rated the issue 4 or 2 (above or below neutral).

Priorities on program and policies:	Omaha
National flood insurance	--
State flood plain management	--
Local flood plain management	High
Relocation and mitigation	Low
Disaster relief programs	--
Flood plain wetland restoration	Very low
Agricultural support policies	Very high
Priorities on alternatives:	
Limit flood fighting	Very low
Remove agricultural levees	Very low
Agricultural levee setbacks	Very low
Uniform levee height	High
Raise agricultural levees	High
Raise urban levees	High
Protect critical facilities	Very high
Upland retention	Very high

A correlation between the respondents primary interest and how the issue was ranked showed differences in opinions. Associations between interest groups and their priority ranking of 1) policies/programs and 2) alternatives is shown below:

Interest Group	Agriculture	Government	Industry
National Flood Insurance	--	Very high	--
State floodplain management	--	Very high	Very low
Local floodplain management	High	Very high	Very low
Relocation and mitigation	Very low	Very high	High
Disaster relief	--	--	High
Floodplain wetland restoration	Very low	High	Very low
Agricultural support policies	Very high	High	Very low
Limit flood fighting	Very low	High	Very low
Remove agriculture levees	Very low	Low	Very low
Agricultural levee setbacks	Very low	High	High
Uniform levee height	High	High	High
Raise agricultural levees	High	Very low	Very high
Raise urban levees	High	Very low	Very high
Protect critical facilities	Very high	Very high	Very high
Upland retention	Very high	Very high	Very high

It must be cautioned that the numbers for those who indicated a primary interest other than agriculture are relatively small and the above results do not necessarily reflect the attitude of a larger population.

Comments Expressed - Spreadsheets and Statistics

During three public meetings/workshops and during the time periods following the meetings comments were collected and formated into comment spreadsheets and statistical data. Comment sheets were filled out at the June and April public meetings, and written correspondance received was also tabulated into the spreadsheets and statistical data. The coded matrix spreadsheets from each set of public meetings along with written comments from Individuals, State and Federal Agencies, and Interest groups are included as an attachment to this Appendix D: Floodplain Management Assessment Report for the Upper Mississippi and Lower Missouri Rivers.

4. Findings

***Comments heard and read throughout the public involvement process confirmed strong support for three main themes: 1) levees among agricultural interests, 2) non-structural measures and upland watershed management plans by all interests, and 3) agricultural, environmental, and government representatives are asking for greater coordination among agencies responsible for managing the upper Mississippi and lower Missouri rivers.

***Overwhelmingly, the priority response from the whole region, at the April public meetings, was to 1) protect critical facilities and 2) use upland retention and additional watershed measures.

**The success of any change in floodplain management will require complex coordination between all concerned interests (public agencies, private interest groups/organizations, and local communities). Throughout all the meetings and from written correspondance interest groups were asking for the opportunity for more involvement in the assessment process. Partnering efforts to determine future management options were mentioned often.

**Desire for total watershed management was as strong an issue as the desire for structural flood control.

*Any relocation/mitigation program needs to serve the floodplain communities by providing financial resources for planning for the cohesiveness of that community.

4. References

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Kansas City District Summaries

CEMRK-EP-PF

29 November 1994

Floodplain Management Assessment

Second Series Open-houses

Public Comments

Topeka, Kansas, November 9, 1994

The impact of the mental health issue would be useful to local mental health agencies to provide services. I am curious as to the money spent on these studies and what will actually be done with the river. The study should be interesting, but if the recommendation of best scenario isn't followed, what good did it do?

###

I think it's vital that intense effort be made to study the sociological effects of each of the scenarios on local populations.

###

Overall looks like a good plan. At some point, make data collected available to the States, others. Even if the data is not precise, it would be helpful. Although you man need to aggregate results in the end, display them separately as well (local data is more helpful to locals). A look at a less frequent event could have substantially different results. A look at another event (perhaps a separate one for each region) could be quite helpful. Might be a good follow-up study.

###

You aren't looking at realistic agricultural data. Many of the ag levees are only for 5- or 10-year events. Why is the smallest event a 25-year event? The Missouri River Master Manual study needs to look at higher flow. Not just low flows. You should separate the tables by State or District. Parts of the table are valuable, not the whole. You should be looking at more than just the 1993 flood event.

###

Kansas City, MO, November 10, 1994

No floodplain assessment can be proper or complete until you factor in the results of an ever-changing (more development) watershed. It may be that the Government (Fed., State, or local) would own the floodway (say 25-year) and levee the 100- or 500-year floodplain area outside the floodway.

###

CEMRK-EP-PF

29 November 1994

Attached letter on legal status of damages from the operation of revised flood control manual. Basically we like the original manual better than the revised manual. In area south of Ft. Gavins, we are very interested in flood control which would supply adequate economical water supply for industry and public uses from Gavins Point to New Orleans.

Text of enclosure:

October 12, 1994

U. S. Army Corps of Engineers
Missouri River Division
Public Affairs Office
12565 West Center Road
Omaha, Nebraska 68114-3869

Colonel Thuss
Duane Sveumn

Gentlemen;

I am completely dissatisfied with the proposed manual for Water Control of Missouri River.

It is apparent in the development of this Manu, that the sports enthusiast and Upper Missouri River executives were in control when the Manual was developed.

The Corps of Engineers are to be congratulated for the control of low in the past. it is the belief they are influenced by people form Upper Missouri River Basin.

What can the residents of the Lower Missouri Basin and Mississippi River Basin from St. Louis to New Orleans do to voice their rights?

Let us discuss what has been done in other areas of United States and the Supreme Court to f United States. In New Jersey the United States Supreme Court reversed a Lower Court decision to **deny right** of property owners to reclaim their property which had been classified as wetland.

On June 24, 1994 the Supreme Court ruled five to four that a Public entity taking of uncompensated property is in violation of the Fifth Amendment to the U. S. Constitution.

In majority opinion, chief Justice William H. Rehnquist elevated judicial scrutiny of property cases, saying the Fifth Amendment should not be a poor relation to such liberties as free speech and protection against search and seizure. The opinion underscored the right of property owner, to keep other people off of your property.

A Federal Appellate Court recently held that Congress did not intend for the Endangered Species Act to require landowners to provide habitat.

Gentlemen, which includes suppliers of water, electricity, public services, farmers and concerned citizens from Omaha, Nebraska to New Orleans, Louisiana in the Missouri and Mississippi Valleys. I urge you to organize and stop these organizations and individuals who take and damage our property.

Sincerely yours.

/S/

Rex T. Horn
2715 Gene Field Road
St. Joseph, Missouri 64506
Phone (816) 279-6982

###

Change in Flood Plain caused by I-635 at the Missouri River in Riverside, Missouri. Relocation of levee and set-back for floodway. Protection of critical sites (sewer plant). In Parkville, the Corps of Engineers on several occasions miscalculated how high the water would reach.

###

When describing impact of each scenario, try to show both regional and National impacts on agriculture. Please feel free to contact me if we need to coordinate any GIS/data on expenditures.

###

CEMRK-EP-PF

29 November 1994

Text of letter from the City of Parkville:

November 10, 1994

To the U.S. Army Corps of Engineers:

I understand that the levee at the I-635 Bridge is 800 linear feet short of the requirement to carry water down the Missouri River, without backing up the flow. This apparent error escalated the flood of Parkville's shopping district in 1993.

We fear that any new levees or increased size of levees may further escalate the flooding of Parkville if we revisit the same conditions which contributed to that most recent flood.

Parkville has no levee and no place to build one. We have two creeks coming into this small area, and it is not practical to build levees.

The 1951 and 1952 floods created only 3' of water in the low areas of Parkville while the 1993 flood created 11' of water in the same area because of the backup of I-635.

I would ask that you take these facts into consideration when reviewing the need for new levees of increased size in this area. We also request that we be notified of and permitted input into any further discussions on this topic.

Thank you,
/S/
William M. Quitmeir
Mayor

###

I do not understand how the Corps can discuss and consider alternatives of flood plain management without considering the Draft Environmental Impact Statement recently released. This is like one hand doesn't know what the other is doing! Both of these studies are done by the Corps and should be taken into consideration. This is a good example of governmental waste. It

would also help to have informed people lead the discussion -- someone who knows something about what is going on! This was better than the one held at the Embassy on the Plaza some months ago. However, there is great room for improvement in the format!

St. Louis, Missouri, November 15, 1994

[No written comments from the St. Louis meeting to date]

Jefferson City, MO, November 16, 1994

As farmers we would like to see the river management left as it is now. We know when excessive rains come, the river will have to flood. The levees as we now have protect us from the small overflows; to build them higher would be crazy. To increase the flow during March, April, May and June is the very worst time to do this. Let's keep it like it has been in the past as navigation can continue well into the harvest season. Callaway County cannot afford to lose the tax base of our agriculture land in the river bottoms. ###

Economic Impact on Recreation vs. Commercial in your 3 scenarios:
Recreational Economy of 500 mi. of Upper Mississippi in 1992=$492 million whereas Rec. Economy on 500 miles of Mo River in Missouri in 1992=$2 million.
Conclusion: Due to former decision to MANAGE the Lower Missouri as a confined barge canal, a vast untapped recreation economy is being held hostage by the outdated ropes of an agricultural/commercial river management paradigm that NEVER has materialized and therefore should be abandoned in favor of movement toward your scenario 3###

Believe the meetings are a good idea. I went to the earlier version in Jefferson City also. I am particularly interested in the Osage Delta area and its diversion structure. All our agricultural levees have been repaired by the association. I am interested and willing to work with the Corps of Engineers on anything dealing with Osage County. (I am a high level Rec Cross disaster worker and chairman of the Osage County Unmet Needs Committee.) ###

Ag levees should be kept at 25- to 100- year flood height. Some leveed areas do not justify the 100-year height because of size of the area protected. Commercial buildings should be allowed only in areas protected for 500-year floods. New residential buildings should have 100-year protection. Old residential buildings should be allowed to stay if not badly damaged and be

covered by flood insurance. No attempt should be made to make the lower Missouri into the 1900 riverbed. In other words, please do not make a giant step backward.

Omaha District Summaries

CEMRO-PD-A (10-1-7a) 9 December 1994

MEMORANDUM FOR CENCS-PE-P (Dave Loss)

SUBJECT: Flood Plain Management Assessment (FPMA) Public Workshops

1. The following are comments made at the Omaha District FPMA public workshops held in Nebraska City on 14 November. The majority of those attending were farmers, including the representatives of city and county governments. Attenders provided input on policy issues, causes of flooding, solutions, and additional information.

2. Comments relating to policy issues:

a. Farmers who received disaster assistance in 1993 were required to purchase crop insurance in 1994. Were people who received disaster assistance for their residences similarly obligated to purchase flood insurance?

b. Many farmers resent the push to realign the agricultural levees in order to spare urban areas, when in many cases these urban areas have failed to properly enforce zoning rules and have built into the floodway.

c. There is often an SCS requirement to establish a buffer zone between waterways and tilled land. This needs to be better enforced to prevent erosion, sedimentation, and polluted runoff.

d. Some people maintained that no private levees should be allowed between the river and federal levees. If the private levee was there first, the government should buy it out. The reason for this feeling is that the private levees cause a rise in stage, which causes seepage behind both levees. (See 2b below.)

e. There was some support for higher flood insurance premiums in areas of higher risk.

f. Dissatisfaction with the job done by some (not all) private levee districts was expressed by many attenders. There is a feeling that maintenance and repair is not being done, that the tax paid by those in the levee district is not providing a service. These people want the Federal government to have a way to enforce levee district responsibilities.

3. Several causes of flooding were presented.

a. The original Pick-Sloane plan called for floodways three times greater than there are now, and the problem of interior drainage was not a problem addressed in this plan.

b. Siltation of the river-side of levees decreases channel width, increasing water surface elevation and hydraulic pressure. There are now times that the water level is higher than the land inside the levees, causing seepage in the "protected" areas, which in turn exacerbates interior flooding. This is a problem with both federal and private levees. Must make levees far enough back that they don't get silted up right away.

c. Local flooding problems are exacerbated by encroachments into the channel, by development, and by bridges and their erosion control (riprap), which narrow the channel.

d. In many places, levees retained interior flooding even after the river receded. Are the drainage structures adequate for their purpose? Although the problem is most severe with private levees, federal levees have contributed to this problem.

e. It is possible that highway and interstate embankments are having a severely negative effect on drainage. (This was perhaps true of the events of 1993, but not of more frequent events. Drainage is taken into consideration in roadway design.)

4. Some solutions to the problem that were offered were a dam on the Nemaha River (a major tributary of the Missouri River), leases of wetlands for habitat and water storage, and the Missouri River Corridor concept (restrict development to help preserve historic and cultural resources and provide recreation to attract tourists, as well as reduce damages).

5. The meetings were also opportunities to gather more information on the effects of flooding on land and water resources.

a. An unexpected result of the sediment deposits on the fields: After 2-5 feet of sand was removed, the remaining sediment actually improved fertility in the flooded land, suggesting that fields should be let to flood every ten years or so, with help to remove sand from the surface. Data to support this might be obtained by comparing per-acre yields in the flooded areas before and after the flood, but hail storms, dry or very wet weather, or other events might obscure the data. (On the Platte River, which experienced spring flooding, the possibly enhanced fertility was overshadowed by the weeds sowed by the flood waters.)

b. The economist got lots of good information about crop yields, land use, and flooding history.

c. We spoke to a man who had been a commercial fisherman on the Missouri River, and got lots of valuable information about fish species, habitats, and the effects the changes on the river have had on numbers and varieties of fish.

6. Suggestions for the next meeting: Our efforts were overshadowed by the Master Manual Review process. The navigation study probably had a similar effect on the Mississippi River meetings. We may need to model the items of particular interest (in Omaha District, the effect of higher releases in the spring on Missouri River height and tributary flooding) to be ready to respond to concerned citizens. I do not think it is fair to just tell them that some other group is handling the issues: We are the Corps, and as an organization we look better if we know what the Corps is doing and why. Perhaps representatives of the other ongoing studies can accompany us to the workshops.

ANNA M. CRICKMER, P.E.
Omaha District Point of Contact

Rock Island District Summaries

ROCK ISLAND DISTRICT NOVEMBER PUBLIC MEETINGS SUMMARY

PERCENT

DESCRIPTION	BURLINGTON		QUINCY		MOLINE		TOTAL	
	Agree	*Disagree*	*Agree*	*Disagree*	*Agree*	*Disagree*	*Agree*	*Disagree*
Ag Levees								
Limit flood fight	13	73	2	84	50	20	17	65
Remove	7	87	1	89	24	42	8	76
Set back	13	67	9	67	56	10	23	51
Max. 25 yr.	10	77	3	65	40	18	12	54
Max. 100 yr.	30	53	16	52	26	28	21	45
Max. 500 yr.	87	7	98	1	12	36	72	12
Urban Levees								
Max. 500 yr.	81	3	67	5	38	30	61	12
500 yr. for priority sites	73	10	46	10	44	18	50	12
500 yr. for all critical sites	77	10	53	6	50	18	57	10
Watershed								
Add reservoirs	60	10	69	6	42	20	60	10
Revise reservoir operation	63	10	65	2	46	2	60	3
Reduce runoff 5%	50	13	39	6	60	4	46	7
Reduce runoff 10%	57	17	55	5	62	6	57	7
Other								
Allow FP to revert	7	87	3	82	48	16	16	65
Raise flood insurance	20	63	7	66	36	12	17	51
Consisten levee system	93	0	80	4	38	22	71	8
Increase flood proofing	71	13	35	22	52	14	45	18
Other	13	0	9	1	12	0	10	1
ATTENDEES								
Farmers	47		70		10		50	
Business/Industry	23		7		6		9	
Urban residential	0		7		18		9	
Environ./Conservation	0		4		14		6	
Other	30		16		66		26	mostly students

Numbers do not equal 100% due to neutral votes and no answers. Percents are of total response.

The Public Involvement Work Group designed its program to meet the study objectives; particularly Objectives B. and F:

Identify and array the desires of interested parties within the study area.

Evaluate and prioritize alternative actions based on consultation and coordination with Affected Federal, state, and local entities.

In order to accomplish the tasks, three sets of meetings were designed. The first set was designed to educate the public and obtain information from them on their needs. The second set was designed to inform and obtain their desires. The third set was designed to provide draft information and obtain priorities from the interested parties.

The Rock island District held a series of four public meetings in June of 1994. There was both an afternoon and evening session of each meeting.

Moline, IL

Burlington, IA

Quincy, IL

DesMoines, IA

A mailing list was developed from the Rock island Districts master list. It consisted of all individuals on the list that lived in the study area as well as all study area communities organizations and communities. The St. Paul District maintained the list of national organizations and state and Federal agencies in order to avoid sending duplicate mailings.

The meetings were an open house format designed to educate, answer questions and solicit input. Those entering the meetings were shown a video describing the background and reason for the study. They then had the opportunity to look at displays that included information on the objectives, study organization, study area, and related information. There were also four tables with a subject expert at each one with displays of the work of that discipline. The public was encouraged to ask questions and make comments at these tables. There were also several flip charts which had an initial list of alternatives and needs listed. The public was encouraged to identify further alternatives and needs and to place a mark behind those that most interested them.

What was heard at the meetings is reflected well in the comments taken from the flip charts.

Those now protected want a higher level of protection.

Do more to stop the rain where it falls.

Those not protected want to blame someone for the flooding; the Corps manipulates the pools, without levees there would have been no flood.

Overall, the comments were positive for having the meetings and listening. There was little unexpected. We received 215 responses to our survey on the meetings, about 67% of attendees. The results are shown on the attached summary.

65% found the meetings educational, 10% did not.

57% have a better understanding of the FPMA, 15% do not.

56% had their questions answered satisfactorily, 11% did not.

79% had ample opportunity to make their opinions known, 9% did not.

The last issue is most important for this meeting. This was an excellent format to assure that 320 people would have such an opportunity to make their opinions known. Based on observations, the 9% did not want or take the available opportunity.

The second set of meetings was held to provide further information and study status as well as to develop an initial screening of the desires of the interested parties.

The Rock island District held three public meetings as follows:

November 21 in Burlington, Iowa

November 22 in Quincy, Illinois

November 29 in Moline, Illinois

There was no meeting held in Des Moines since the June meeting there was not well attended.

The format of the meetings varied somewhat from the meetings held in other areas. This was due to the results of a focus group meeting held on November 2nd in New Canton, Illinois. This meeting was held with a random sample of people who had attended the June meeting in Quincy. The purpose was to get recommendations on a format and style that would be most acceptable, understandable and result in the best public input.

The meetings used the basic slides and script provided by the St. Paul District, modified to meet the recommendations of the focus group. The major change was in the description of the matrix and use of scenarios. The focus group felt that the matrix was not useful without the data. No priorities could be given to scenarios unless the data was available on impacts. it was felt that the best format for the meeting was to describe progress to date, describe the alternatives and discuss the concept of scenarios. The public could then offer opinions on alternatives as they related to their interest. this would then allow for scenarios to be developed that related to the various interests in the flood plain.

The results of the meetings indicated that the farm interests wanted to see levees raised to provide better protection. There were some negative comments related to the development of scenarios by groups who were not a part of the public meeting process. There was also concern that there was not sufficient data to present on impacts and alternatives.

The primary concern however was on how the scenarios would be presented at the next set of meetings. the public wanted to be assured that the data would be available and the information furnished prior to the meetings so that the public had ample review time before being asked to prioritize the scenarios.

It was obvious that the three scenarios presented was not sufficient for the public. A do nothing scenario is unacceptable to many. The moderate scenario is perceived by many to be only a follow-up to the Galloway Report and a scenario to meet the desires of the UMRBA and the Association of Flood Plain managers. The third scenario is totally unacceptable to most of the flood plain residents. There was no perception of a scenario that met the needs of the flood plain residents as reflected in attendance at the public meetings.

On each afternoon prior to the meetings, an opportunity was available to meet with agencies and interest groups. The first meeting in Burlington had no one in attendance. The meeting in Quincy had three people attend; a representative of the Upper Mississippi River Flood Control Association, a contractor for the Illinois DOT, and a representative of wetland interests.

The meeting in Moline had a representative from FEMA and one from the Dept. of Agriculture. Both of these meetings resulted in good discussions of the issues and provided valuable information to the study team.

The information gathered at the meetings in the Rock Island District is summarized in the following table:

TABLE IN EXCELL

SUMMARY OF APRIL MEETINGS PROVIDED AFTER MEETINGS.

SUMMARY OF FPMA NOVEMBER PUBLIC MEETINGS
ROCK ISLAND DISTRICT

The Rock island District held three public meetings as follows:
November 21 in Burlington, Iowa
November 22 in Quincy, Illinois
November 29 in Moline, Illinois
There was no meeting held in Des Moines since the June meeting there was not well attended.

The format of the meetings varied somewhat from the meetings held in other areas. This was due to the results of a focus group meeting held on November 2nd in New Canton, Illinois. This meeting was held with a random sample of people who had attended the June meeting in Quincy. The purpose was to get recommendations on a format and style that would be most acceptable, understandable and result in the best public input.

The meetings used the basic slides and script provided by the St. Paul District, modified to meet the recommendations of the focus group. A copy is attached. The major change was in the description of the matrix and use of scenarios. The focus group felt that the matrix was not useful without the data. No priorities could be given to scenarios unless the data was available on impacts. it was felt that the best format for the meeting was to describe progress to date, describe the alternatives and discuss the concept of scenarios. The public could then offer opinions on alternatives as they related to their interest. this would then allow for scenarios to be developed that related to the various interests in the flood plain.

The results of the meetings is attached as well as the comments received. it was obvious that the farm interests wanted to see levees raised to provide better protection. There were some negative comments related to the development of scenarios by groups who were not a part of the public meeting process. There
was also concern that there was not sufficient data to present on impacts and alternatives.

The primary concern however was on how the scenarios would be presented at the next set of meetings. the public wanted to be assured that the data would be available and the information furnished prior to the meetings so that the public had ample review time before being asked to prioritize the scenarios.

It was obvious that the three scenarios presented would not be sufficient for the public. A "do nothing" scenario is unacceptable to many. The "moderate" scenario is perceived by many to be only a follow-up to the Galloway Report and a scenario to meet the desires of the UMRBA and the Association of Flood Plain managers. The third scenario is totally unacceptable to most of the flood plain residents. There was no perception of a scenario that met the needs of the flood plain residents as reflected in attendance at the public

meetings. **It is recommended that at least one scenario be developed to meet the needs as reflected in the comments of the public meetings.**

On each afternoon prior to the meetings, an opportunity was available to meet with agencies and interest groups. The first meeting in Burlington had no one in attendance. The meeting in Quincy had three people attend; a representative of the Upper Mississippi River Flood Control Association, a contractor for the Illinois DOT, and a representative of wetland interests.

The meeting in Moline had a representative from FEMA and one from the Dept. of Agriculture. Both of these meetings resulted in good discussions of the issues and provided valuable information to the study team.

Based

FACSIMILE HEADER SHEET

U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
P.O. BOX 2004
ROCK ISLAND, ILLINOIS 61204-2004

DELIVER TO		FROM	
Fax No.	612-290-5800	Fax No.	309/794-5710
Name	Karen Nagengast	Name	Paul Soyke
Office	PE	Office	Planning Division
Phone	612-290-5241	Phone	309/794-5231

Date	No. of Pages	Subject
3/7/95	6	FPMA

REMARKS

Attached are comments taken from our meeting evaluation forms at the Nov. mtgs. Then may be useful in designing the April mtgs.

Quincy Meeting Evaluation Comments

I believe each district has different problems and Congress and other people don't listen to the people that have suffered and their problems are ignored. Listen to the sufferers.

No, lets get started soon to raise levees to 500 yr. floods

Core eng. blue the levee and took our cabin and 4 others we have not heard a word about paying for this large cabin worth $100000 and $8,000.00 in side. Did no about other meeting.

I think more of an agricultural effect of the flooding deeds to be presented to no ag community to get them to realize our side of the ramification. I don't think the environmentalists can grasp the devastations the flood had on all of us and they can't see the good we do. We need more media coverage--before & during the meeting.

All your questions are too general. You do not address the problems.--Don not include the river as flood management.--We need to manage the river--Our area (Sny Island) is different then some district bur our area is not treated different. We have railroad, bridges, CIE a village of over 500, we need to protect these area's.

All studies are being done by engineers not from around here. Involve district engineers, involved people in the district.

This was a poor meeting. There must be specific areas dealt with and specific problems. You can't put 10 gallon in a five gallon bucket. Not even the Corps can do that. What's needed is a sheet showing how much taxpayer money has been spent on each district (drainage) since WWII index inflation into it, then see how many districts are willing to reimburse the taxpayers for these amounts. Would like to see cost sheets for each drainage district for 93 flood. Ollie l. Lymenstull 1806 Hilltop Quincy 62301

Make more of the information gathered during the studies public knowledge during the study.

No I don't if our suggestion are listened to.

These meetings need to be more focused per region.

Continue to keep the public informed.

We need a lot more news media involvement and announcement of meeting times and places. The facility in Quincy had no P.A. system and was hard to hear and understand questions and answers.

Publicize the meetings time & places better!--Put it on all TV channels on each news cast 6 & 10pm & 12 noon--We needed a PA system so we could hear

Get more hard facts at meetings--i.e. don't just take that suggestions

If you gave the amount of money spent on these "studies" to the communities impact by the flood of '93, responsible, practical, feasible solutions would be identified & implemented & we could all be done with this!

I felt it was adequate.

After the discussion, I re-evaluated my answers - and change some. Some more explanation of the (alternatives) choices would be helpful in evaluation.

Corp is too inflexible and public doesn't realize under what conditions you have to work--During Flood National Guard & Civilians learned to work together for the best of all concerned . They bent & we adjusted to their limitation with improved working

ability--Help people understand complaining to the Corps doesn't work - complain to Congress because they tell Corps what to do & what rules Corps works under. P.S. All done good job of keeping difficult condition under control during meeting.

Possibly state more clearly the purpose of these meetings - might become more informational rather than confrontational. Appreciate your help thus far.

Make the objective of meeting very clear.

Quincy's Flood Plain Management Assessment Alternatives

Additional scenario 1) Aggressive project to improve level of protection for all existing levee districts

I can't evaluate any of these out of context.

I cannot believe that on policy of flood control could be fairly adopted to remedy all problems of the Upper Mississippi River corridor. I believe that each flood plain has it's own individual characteristics and problems to resolve. This questions asks the individual completing it to give answers to too broad of answers. It seems to give me the feeling that more consideration should be given to a through study of each flood plain as to if it needs partial levee set back and/or partial levee reconstruction, or even to the point of study of objects that could be restricting flow of water within the river proper itself -- such as low bridges, etc. Thank you.

The 1993 flood was the result of a low pressure area centering over northern midwestern areas. Rainfall amounts were much above normal. Every year more land is taken from production for building, roads, lots, etc. The government has promote no-till which causes water to run off quickly which is what happened in 1993. Because of these the river reached a level that n levees were not designed to hold. Because of the changes in our land we need to protect people down stream the present time we need to raise levees to the 500 year level.

We don't what the government to keep paying out in flood insurance, if we had the proper levee systems, we wouldn't have to call on the government to pay any claims. Also we wouldn't have the large expense that we had last year fighting the river raising our levees, then pushing them all back down. As far as the environmentalists are concerned--where do they think all the wildlife in these areas feed-is is off our farmland!! without it--if it were all wetlands--where would a lot of our wildlife get their support? Then we have our roads and bridges to consider--the country was practically disconnected between east and west due to the lack of transportation facilities when the river got the slightest bit out of its banks. I'm sure there was a tremendous financial impact.

Also what is the cost of a human life? Luckily we didn't lose any lives this time, but it drastically changed al to of lives not for the better--I thought we lived in a country where a human being was something precious (as much as a zebra muscle or wood duck) and we had a right to be protected. If we raised all the levees to the 500 year level, we could all live with it!

I feel this session was not a fact-finding effort, but rather a Public Relations effort in an attempt to placate those individuals directly affected the '93 flood.

Should address transportation impacts separately (not specified in presentation).
urban/agricultural levees were segregated in presentation; this is not always the case
Under urban levees--insufficient explanation of priority sites vs. critical facilities
Presentation should have followed questionnaire more closely; it was too abstract. Very insufficient explanations of individual alternatives.
Much of the wording of alternative was ambiguous; the Corp personnel could not even explain them!

2

Why not raise the levees, have a one time cost instead of spending money on relocation of towns or financing and funding clean-ups, buy-outs, etc. after a disaster.

I believe raising the levees would be the least costly and do the most good.

I feel we need 500 yr. levee because dam's have filled the river up. Reservoirs are need and managed right.

Every 500 year levee held during the 1993 flood. This in itself proves the adequacy of a levee of that structure. It makes better economical sense to build these levees than spend more money on studies that will not solve anything and probably cost more in the long run.

Please, lets get started to raise levees to 500 yr. flood.
If all levees held in 1993 this county would have gained $100,000,000.00 for taxed etc.!
The river was bluff to bluff in 1993, so having no levee would not have helped!

When dredging the river put the sand o the levees instead of just moving it to another place in the river. Have 500 year levees for all. Make questions that make sense.

Have a five hundred year levees.

It is cheaper for govt. and better for wildlife to have levee protection. A 500 year levee is by far the best choice. The developed nation of the world all protect their prime farmland with levees.

This study is trying to address the flooding problem by regions instead of specific drainage district, or areas with special problems such. As Hannibal railroad bridge that holds water back this creates a very critical problem for everyone in the say island levee drainage district.

There needs to be greater consistency with the governments regulations and improvements to other business districts. It in itself is a mega-million dollar business. If various business can be given 500 yr. levees long with some urban areas then agricultural areas should be protected as well. There were levees constructed in these specialized areas with no comment or concern given to agricultural area and the land owner and drainage districts so effected; yet, we as a drainage district cannot even privately improve our own internal levees without a study being completed on how other downstream and else where might be effected.

New runoffs need to be completed to see if what we all assume to be a 100 yr. levee is indeed a 100 yr. levee and not possibly, today, a 25 yr. levee.

The environmental studies should include the impact flooding has on wildlife. Habitat is no created, but devastated to a point it takes years to recover.

Raise levees to 500 yr. protection.

Dredge river--place fill on levees. Let's don't get hung up on something as simple as improving our levee protection system. we must remember that levees protect wildlife, people, infrastructure, and homes. Yes--we can have it all--behind a good levee system. Let's invest in the future.

Please make it plain to the public just what phase each group plays in the scenario process such as TEMA, the Corps of Engineers, the government, etc.

You are playing with peoples' lives, land and livelihood--get specific and give specifics on meetings "behind the scenes."

I feel all scenarios could be applied to the Upper Mississippi River Navigation System. Some places may require 500+ year levees above bottlenecks, and some places may need the levee moved back. also is the railroad and other entities involved? I've lived and played in and along the river all my live, and I fully believe its holding capacities have reduced dramatically. I can't boat in the back waters because the islands have washed away and filled them up.

As for the Sny area, it can be solved by raising the levee to the 500 year levee. We have plenty of available sand in the river and equipment to put it on the levee --sand on the levee.

The answer is not too difficult. We don't need any more surveys or studies and our tax money wasted. We need the river dredged and dredged material put on the levee. How can you justify spending $500,000.00 to create a "moist soil unit" (or wetland) in our district when PEOPLE are still suffering from the efforts of the flood on '93. This is LUDICROUS!

I would also like to say that limiting flood-fighting in any area with towns, homes and farms will be strongly opposed!

Set a pool of funds like in Las Vegas where persons can "bet" for or against the river reaching a certain level in any one year. Wagers could be made in $1,000 increments and based on actuarial odds.

Make them wider.

Make river deeper from shore to shore. Take river bottom and put on levees instead of making sandbars located just to the side of river barge channels. Too much Federal Politics Involved. Give the money to the local government because local govt. knows the needs. Federal Govt. spends too much time and our tax dollars on so called studies, surveys, and meeting to watch a slide program. Then when it's all over nothing has changed just more tax dollars wasted.

Kirk Rveb
P.O. Box 142
Hull, Il 62343

Make sure the solution is the same for everyone.

Treat the upper and lower Mississippi system the same

When dredging river for barge traffic - what is dredged should be completely removed from inside levees so it does not fill up the inside of our levees.

We need a combination of reservoirs and 500+ yr. levees.

Quincy

For many years the Corp has dredged the river to keep navigation going. Why hasn't the material that was dredged, put on the levees to raise them? It seems like if this had been done over the years we would have had 500 yr. levees.

Why is our levee now lower then it was before the flood of '93?

We want more than a study--We need action for protection our homes, businesses and farms. We need a 500 year levee!

Raise levees to 500 year level. When rivers are dredged they should put material on levees. The most inexpensive solution in the long run is the 500 year levee The environmental issue was it when it was flooded, there was no environment no habitual

500 year levee

1) The cost-benefit ratio must include all affected by the loss of a levee. Not just corn and bean but loss of beanstraption, jobs and etc.

2) Keep building reservoirs on upland to slow water runoff.

3) Build higher levees to get water down stream faster.

4) Build higher levees to protect game and refuge areas.

5) Build a system on the upper Mississippi like on the lower Mississippi.

6) Doing this will increase the economic value of the Midwest and return more money to US treasury then what a million dollar/mile levee costs.

7) Build flood walk for cities.

Change River management, when dredging do not put spoil back in river--it reduces capacity of reservoir ability of river. Please consider human feeling and desires of losses an oz. of prevention would have saved rounds in 1993. Please consider agriculture as a business in evaluation. Flood affected nation--such as loss of highways. The levees were first built for flood protection . Please consider this--plus affect on cities not on river flood plains who depend on river barges for supplies. Study ways speed up response time to problems it just takes too long to respond.

Any flood proofing measures are a waste of money and infringement on personal freedoms. If one has had one flood insurance's clam then that should be it, but if I want to rebuild in the flood plain that should be my prerogative. if I do this I am on my own. No more claims.

We need to have either a 500 yr. levee or have no levees at all. Either way my village would not have had eight feet of someone else's water. We might have had on foot of our own but not seven feet of someone's else's water from up stream.

Change the inside slope to 3 to and the outside slope to 4 to 1 on all upper Mississippi River. Pump channel maintenance waste and sand to the top up the existing levees vs back into the river on the island for job security.

2-7 Agriculture is very important to this country and this land should be used and protected.

8-10 The urban area are spreading out; pouring more concrete--raising levees--putting in flood walls--hence--more water endanger farm land

11-14 From what I can understand we received great walls on water due to reservoirs being emptied--Kept high for recrcation

15-19 Can't understand why and how the lower Mississippi has received 500 yr. levees and no one cares enough to see our levees done the same--clean out the runs bottom--Recommend to Congress to raise our levees to the 500 yr.--Meeting--waste of time. Recreation is more important than farms, animals and America.

Use money and time used to pump river channel toward raising levees. Use the same sand and put it to good use instead of putting it back in the river. It will increase wetland development at the same time.

We need to allow the sand from dredging the river to put o the levees and raise the land of the levee--This is the easiest, most economical long term solution to both river navigation problems and to raising fluid plain protection levees. This needs to be brought to the attention of Congress this option must be allowed!

Tell the Upper Mississippi River Ass. the report before the April meeting to respond directly to what is in the report. Thank you!

Agriculture levee's that also protect critical sites should be raised to 500 year level (Bay view Bridge Quincy Ill Faius Drainage Districts)

We need a 500 year levee. Dredge material from channel put on levee's.

These questions need to be much more specific!

We need to rename agricultural levees to (Federal Agricultural Commercial and Transportation Levees!)

These meetings are not getting to the heart of this matter--We do not really have a voice in this study. If the government was spending it's money wisely this study would be better designed to study specific area.

1) Why are there Environmentalists who work for the Corps--maybe there ought to be farmers and other businessmen to have representation their interest and not just on interest group.

2) Why is moving everyone out of the floodplain even a question? Are people who are affected by other natural disaster--like earthquakes and hurricanes not being allowed to rebuild or encouraged to move elsewhere? Flood planes are being singled out--unfairly. How can anyone be told where to live or where not live? Is this a free country?

3) Why are agricultural levees not given the same set of circumstances that urban and vise versa? (on the front of this paper)

Before the '93 flood, Paul Simon met with a group on the local near heyer, he said at that time, there's was enough studies on problems of the levees'--lets get something done.

This study is entirely too vague. I understand the mandatory constrainghts etc. but this can not be separated into urban and agricultural. The two overlap too much. How come urban level options are only about raising to 500 yr. when ag levee are being considered to be

6

eliminated. Industrialize there is probably more production and revere put into the GNP by agriculture areas protected by levee's vs all urban industries protected by levee.

Most reservoirs were originally built to control flood waters. Reservoirs should be right at extremely low levels instead of being kept at levels for boat and recreation. The public was originally ask for tax money for flood control not for recreation.

Make flood proofing measures use more common sense.

Put the sand while dredging channel onto the levees to raise them.

River dredging should have all material totally removed from the river and put again river levees.

Quincy

QUINCY

SUMMARY OF 101 FORMS

(1) Please check the one catgory below that best reflects your primary interestin this study.

Frequencies (Percents; Counts):

70.3%; 71	Farmer	2.0%; 2	Recreation group
6.9%; 7	Business/industry	0.0%; 0	State agency
6.9%; 7	Urban homeowner	0.0%; 0	Federal agency
5.0%; 5	Local govt.	0.0%; 0	Media
5.0%; 5	Other	0.0%; 0	No Answer
4.0%; 4	Environment/conservation		

Other answers: Too many answers repeat to count, reporting verbatim.
Member of club SSBC ... Flood Control Association ... drainage district ...
Farmer-homeowner-business ... Farmer, business and home owner ... Drainage dist Comm

Please check the box that best represents your opinion of the importance of the alternative.

If you need assistance or have questions, ask one of the representatives who are here to help you.

AGRICULTURAL LEVEES

(2) Limited flood fighting

Frequencies (Percents; Counts):

1.0%; 1	Strongly Agree	5.0%; 5	Disagree
1.0%; 1	Agree	79.2%; 80	Strongly Disagree
1.0%; 1	Neutral	12.9%; 13	No Answer

Statistics: Mean 4.84; Std Dev 0.60

(3) Remove

Frequencies (Percents; Counts):

0.0%; 0	Strongly Agree	4.0%; 4	Disagree
1.0%; 1	Agree	85.1%; 86	Strongly Disagree
0.0%; 0	Neutral	9.9%; 10	No Answer

Statistics: Mean 4.92; Std Dev 0.37

(4) Set back

Frequencies (Percents; Counts):

3.0%; 3	Strongly Agree	14.9%; 15	Disagree
5.9%; 6	Agree	52.5%; 53	Strongly Disagree
9.9%; 10	Neutral	13.9%; 14	No Answer

Statistics: Mean 4.25; Std Dev 1.12

(5) Maximum height 25 year

Frequencies (Percents; Counts):
1.0%; 1 Strongly Agree
2.0%; 2 Agree
5.0%; 5 Neutral
5.9%; 6 Disagree
59.4%; 60 Strongly Disagree
26.7%; 27 No Answer

Statistics: Mean 4.65; Std Dev 0.83

(6) Maximum height 100 year

Frequencies (Percents; Counts):
9.9%; 10 Strongly Agree
5.9%; 6 Agree
4.0%; 4 Neutral
9.9%; 10 Disagree
41.6%; 42 Strongly Disagree
28.7%; 29 No Answer

Statistics: Mean 3.94; Std Dev 1.50

(7) Maximum height 500 year

Frequencies (Percents; Counts):
95.0%; 96 Strongly Agree
3.0%; 3 Agree
0.0%; 0 Neutral
0.0%; 0 Disagree
1.0%; 1 Strongly Disagree
1.0%; 1 No Answer

Statistics: Mean 1.07; Std Dev 0.43

URBAN LEVEES

(8) Maximum height 500 year

Frequencies (Percents; Counts):
57.4%; 58 Strongly Agree
9.9%; 10 Agree
9.9%; 10 Neutral
0.0%; 0 Disagree
5.0%; 5 Strongly Disagree
17.8%; 18 No Answer

Statistics: Mean 1.60; Std Dev 1.10

(9) 500 year protection for priority sites

Frequencies (Percents; Counts):
36.6%; 37 Strongly Agree
8.9%; 9 Agree
10.9%; 11 Neutral
1.0%; 1 Disagree
8.9%; 9 Strongly Disagree
33.7%; 34 No Answer

Statistics: Mean 2.04; Std Dev 1.42

(10) 500 year protection for all critical facilities

Frequencies (Percents; Counts):
48.5%; 49 Strongly Agree
6.9%; 7 Agree
2.0%; 2 Disagree
4.0%; 4 Strongly Disagree

11.9%; 12 Neutral

26.7%; 27 No Answer

Statistics: Mean 1.72; Std Dev 1.16

WATERSHED MEASURES

(11) Add reservoirs

Frequencies (Percents; Counts):
53.5%; 54 Strongly Agree
15.8%; 16 Agree
10.9%; 11 Neutral
3.0%; 3 Disagree
3.0%; 3 Strongly Disagree
13.9%; 14 No Answer

Statistics: Mean 1.68; Std Dev 1.05

(12) Revise operation of reservoirs

Frequencies (Percents; Counts):
51.5%; 52 Strongly Agree
13.9%; 14 Agree
11.9%; 12 Neutral
1.0%; 1 Disagree
1.0%; 1 Strongly Disagree
20.8%; 21 No Answer

Statistics: Mean 1.56; Std Dev 0.88

(13) Reduce runoff by 5%

Frequencies (Percents; Counts):
21.8%; 22 Strongly Agree
16.8%; 17 Agree
19.8%; 20 Neutral
5.0%; 5 Disagree
1.0%; 1 Strongly Disagree
35.6%; 36 No Answer

Statistics: Mean 2.17; Std Dev 1.04

(14) Reduce runoff by 10%

Frequencies (Percents; Counts):
45.5%; 46 Strongly Agree
9.9%; 10 Agree
14.9%; 15 Neutral
4.0%; 4 Disagree
1.0%; 1 Strongly Disagree
24.8%; 25 No Answer

Statistics: Mean 1.74; Std Dev 1.04

OTHER MEASURES

(15) Allow river corridor to revert to natural use through zoning

Frequencies (Percents; Counts):
2.0%; 2 Strongly Agree
1.0%; 1 Agree
2.0%; 2 Neutral
10.9%; 11 Disagree
71.3%; 72 Strongly Disagree
12.9%; 13 No Answer

Statistics: Mean 4.70; Std Dev 0.78

(16) Revise flood insurance to pay a claim only once

Frequencies (Percents; Counts):

3.0%; 3 Strongly Agree	10.9%; 11 Disagree
4.0%; 4 Agree	55.4%; 56 Strongly Disagree
12.9%; 13 Neutral	13.9%; 14 No Answer

Statistics: Mean 4.30; Std Dev 1.10

(17) Develop a consistent system of levees as in Lower Mississippi River

Frequencies (Percents; Counts):

75.2%; 76 Strongly Agree	2.0%; 2 Disagree
5.0%; 5 Agree	2.0%; 2 Strongly Disagree
6.9%; 7 Neutral	8.9%; 9 No Answer

Statistics: Mean 1.36; Std Dev 0.88

(18) Increase flood proofing measures

Frequencies (Percents; Counts):

27.7%; 28 Strongly Agree	8.9%; 9 Disagree
6.9%; 7 Agree	12.9%; 13 Strongly Disagree
22.8%; 23 Neutral	20.8%; 21 No Answer

Statistics: Mean 2.65; Std Dev 1.47

(19) Other alternative not shown above (please describe it)

Frequencies (Percents; Counts):

7.9%; 8 Strongly Agree	0.0%; 0 Disagree
1.0%; 1 Agree	1.0%; 1 Strongly Disagree
2.0%; 2 Neutral	88.1%; 89 No Answer

Statistics: Mean 1.75; Std Dev 1.29

(20) Write any comments in the space below; use other side if necessary.

Written answers: Too many answers repeat to count, reporting verbatim.

Aggressive project to improve level protection of all levees ... No one answer for individual floodplain ... 500 year levee ... Raise levees--500 year levee ... Session not a fact-finding effort ... Address transportation impacts ... Raise levees ... Raise levees ... 500 year levee ... 500 year levee ... 500 year levee ... 500 year levee ... 500 year levees ... 500 year levee ... Study trying to address problems for regions verses specific areas ... 500 year levee ... 500 year levee ... Improve levee protection system ... Define what plays each group makes--be specific ... Some places--500 year levee, others--push levees back ... 500 year levee ... River dredged and dredged material on levee ... A pool of funds to "bet" for or against river ... Make them wider ... Make river deeper ... Make solution the same for everyone ... Treat

upper and lower Miss. the same ... Dredging should be completely removed from inside levees ... Resivors and 500+ yr levee ... Dredged material on levees = 500 year levees ... 500 year levee ... Put dredged material on levees; 500 year levees ... 500 year levee ... Cost benifit ratio expanded, reserviors on upland, higher levees, ect. ... Please consider human feelings/desires and agriculture as a business ... Flood proofing measures--waste of money, 500 year levee or no levee at all ... Change inside slope to 3 to 1 and outside slope 4 to 1 on upper Miss. ... many points, last one:'Recreation more important than farms, animals, Amer. ... Pump river channels – use sand to raise levees ... Need to put sand from dredging on levees ... Tell Upper Miss. River Ass. the report before the April meeting to respond ... 500 year agricultural levee's ... 500 year levees, put dredge material from channel on levees ... Question need to be much more specific! ... Rename agricultural levees to Fed. Agr., Commercial and Transportation levee ... Not getting to the heart of matter ... (Many comments) ... Let's get something done ... (more comments) Study is extremly too vague ... Reservoirs--kept at extremly low levels instead of levels for recreation ... Make flood proofing measures use more common sense ... Put the sand fromo dredging channel onto the levees to raise them ... Totally remove material from river dredging and put on river levees

Thank you for attending. We appreciate your taking your time and showing your interest in ththis study.

21 - 500 yr. levee
5 raise levees
5 Dredge material on levees
31

Moline Flood Plain Management Assessment Comments

Are home owner, who rent their land from the Corps of Engineers, in jeopardy of losing their land to the Corps in this study and your recommendation?

This survey is very poor--not enough information to give meaningful answers. Need costs of alternatives also more alternatives.

The key must be flood plain insurance policies and then the hydrological implication of what one community (or individual) does that affects another community. If communities want to utilize land with the use of construction of flood walls they may have to assist other communities negatively affected by their decision's and hydrologic information should be made available to communities about those decisions.

Long range: We should utilize the Corps of Engineers to begin to take responsibility for publicly held railroad beds (just as waterways) in a concrete effort to make sense of transportation policies.

I. While the Galway report may have been hasty, it had the advantage of being on inter-agency study. Thus avoiding agency self-interest. This is a concern of many in the public relative to the Corps or any single agency.

II. This form is not a good instrument of opinion survey since its alternatives entail technical assumptions unknown to the public. The result will be a random spread of responses showing no trend in public opinion.

III. I generally favor a natural river system, but as long as the 9 foot canal system is an assured part of the system. I support the idea of a natural river is precluded.

To be accurate the enter basin needs to be studied not just the flood plan.

Removal of structures from flood plain. Buyout of wetland/flood plain area and allow to flood.

Existing flood plain development must be reduced only through buyout. New flood plain development must conform to a unified scientific plan enforced and consistently administered at state level or above.

Ag levees maintain at low levels so that farming works in dry years and flood storage is available in floods keep Ag supports dwellings and business upland> Provide workable funding to maintain drainage facilities at local level.

Urban levees only for business districts of communities of >200,000. Protect utilities health related facilities.

Have more consistent state and fed. flood aid. Money was actively being given away in 93 and absolutely unavailable in 94. Funds were marked for other purposes were misdirected in 94 because of the inconsistency.

Because of the potential for negative externalizes if different segments are allowed to have different flood plain management alternatives, it seems essential to me

that the recommendation be system-wide, i.e., a federal policy, not a serics of state or more local responses. At least it must be system wide for each type of environment, e.g., one policy for urban areas, one policy about agricultural levees one policy about conservation/wetland areas, etc. For example, if one area has a build ag. levee high policy, thus channeling the water downstream, it would here average impact on downstream communities which might opt to allow lands to remain unprotected--which would cause damages and also distribute flood protection dollars unequally. In sum, there needs to be uniform, standard, federal policies.

Clean out back waters!

I think that the government should be ready to work with individual communities in how they decide to deal with flooding. Provide rclief and planning accordingly.

Lower river levels to lowest possible level prior to heavy rain and run off periods. Better pool water height control. Stop barge traffic earlier and lower water levels prior to flood conditions.

All levees should be set at a uniform distance from river. Channelizing water isn't very wise. It need room to adjust to large volumes of water. Sediment is another problem. I think that if there was a law or regulation that all streams, creeks, rivers, etc., should have some type of buffer strip, at least 60 ft. at its banks. This would reduce sediment getting into the water and other impurities chemicals for example.

Added reservoirs 1) capture water for future use (as in drought) 2)increase inland recreation areas 3) allows for immigration efforts 4) would allow urban areas to expand 5) could be naturally or manmade in Northern Scott City and lower Henry, Mercer, and Rock Island Cties.

Example: Clarence J. Brown Reservoir in Clark Cty--Springfield, Ohio.

I am more interested in what local communities can do to mitigate the impact of flooding.

Build a flood wall (like in Cincinnati, Ohio)
Build reservoirs in Rock Island and Scott County. Better yet Henry Co.
Better drainage systems in Scott and Rock Island County.

It appears you are looking at a problem with the same policies which did not work originally. I think it would be important to do this study using not only the old policies but seeing what new policies could be created which would better suit a similar situation.

Some of these questions are rather vague--what exactly is meant by revise apparition of reservoir? I think that I understand most of these, but the information and solutions should be more descriptive.

Moline

3

Since flood plain wetlands are largely gone it would appear to be essential to maintain artificial ones--state and federally managed wildlife impoundments. When rebuilding levees around these areas the policy should be to construct them like some Corps built HREP impoundments, that is they should flood from the bottom end. They should have water control structures that allow slow release of flood waters after the river flow is moderated.

Important historical sites like Kaskaskia should be protected but generally only critical infrastructures should be given additional protection, key transportation features, etc.

You should look at lowering the profile of some roads crossing flood plains so that water can over top them.

Lost flood storage capacity includes wetland on croplands/former tall grass prairies, etc. not just flood plain. This should be taken into account in planning.

You are the ones with the knowledge--hold less weight on public opinion--it is a study not an action.

Moline

Moline

SUMMARY OF 50 FORMS

(1) Please check the one catgory below that best reflects your primary interestin this study.

Frequencies (Percents; Counts):

38.0%; 19 Other
18.0%; 9 Urban homeowner
14.0%; 7 Environment/conservation
10.0%; 5 Farmer
6.0%; 3 Federal agency
6.0%; 3 Business/industry
6.0%; 3 Local govt.
2.0%; 1 Recreation group
0.0%; 0 State agency
0.0%; 0 Media
0.0%; 0 No Answer

Other answers: Too many answers repeat to count, reporting verbatim.
Educator/local citizen3 ... UMFCA ... Education institution--teaching an enviromental course ... taxpayer ... Planning Student ... Student and Resident in Floodplain5 ... student ... Class with Dr. Moline ... STUDENT ... TAXPAYER BETTENDORF IA ... STUDENT - BIOLOGY & GEOGRAPHY ... RESIDENT WHO IS CURRENTLY CONCERENED ABOUT THE FUTURE ... GEOGRAPHY STUDENT ... STUDENT ... STUDENT ... STUDENT ... STUDENT ... COLLEGE COURSE INTEREST GROUP ... STUDENT

Please check the box that best represents your opinion of the importance of the alternative.

If you need assistance or have questions, ask one of the representatives who are here to help you.

AGRICULTURAL LEVEES

(2) Limited flood fighting

Frequencies (Percents; Counts):

20.0%; 10 Strongly Agree
30.0%; 15 Agree
22.0%; 11 Neutral
12.0%; 6 Disagree
8.0%; 4 Strongly Disagree
8.0%; 4 No Answer

Statistics: Mean 2.54; Std Dev 1.22

(3) Remove

Frequencies (Percents; Counts):

12.0%; 6 Strongly Agree
12.0%; 6 Agree
24.0%; 12 Neutral
28.0%; 14 Disagree
14.0%; 7 Strongly Disagree
10.0%; 5 No Answer

Statistics: Mean 3.22; Std Dev 1.26

(4) Set back

Frequencies (Percents; Counts):

10.0%; 5 Strongly Agree
46.0%; 23 Agree
22.0%; 11 Neutral
6.0%; 3 Disagree
4.0%; 2 Strongly Disagree
12.0%; 6 No Answer

Statistics: Mean 2.41; Std Dev 0.95

(5) Maximum height 25 year

Frequencies (Percents; Counts):
12.0%; 6 Strongly Agree
18.0%; 9 Agree
34.0%; 17 Neutral
14.0%; 7 Disagree
4.0%; 2 Strongly Disagree
18.0%; 9 No Answer

Statistics: Mean 2.76; Std Dev 1.07

(6) Maximum height 100 year

Frequencies (Percents; Counts):
6.0%; 3 Strongly Agree
20.0%; 10 Agree
26.0%; 13 Neutral
8.0%; 4 Disagree
20.0%; 10 Strongly Disagree
20.0%; 10 No Answer

Statistics: Mean 3.20; Std Dev 1.29

(7) Maximum height 500 year

Frequencies (Percents; Counts):
4.0%; 2 Strongly Agree
8.0%; 4 Agree
32.0%; 16 Neutral
14.0%; 7 Disagree
22.0%; 11 Strongly Disagree
20.0%; 10 No Answer

Statistics: Mean 3.53; Std Dev 1.15

URBAN LEVEES

(8) Maximum height 500 year

Frequencies (Percents; Counts):
16.0%; 8 Strongly Agree
22.0%; 11 Agree
20.0%; 10 Neutral
8.0%; 4 Disagree
22.0%; 11 Strongly Disagree
12.0%; 6 No Answer

Statistics: Mean 2.98; Std Dev 1.45

(9) 500 year protection for priority sites

Frequencies (Percents; Counts):
24.0%; 12 Strongly Agree
20.0%; 10 Agree
24.0%; 12 Neutral
8.0%; 4 Disagree
10.0%; 5 Strongly Disagree
14.0%; 7 No Answer

Statistics: Mean 2.53; Std Dev 1.32

(10) 500 year protection for all critical facilities

Frequencies (Percents; Counts):
28.0%; 14 Strongly Agree
22.0%; 11 Agree
18.0%; 9 Neutral
8.0%; 4 Disagree
10.0%; 5 Strongly Disagree
14.0%; 7 No Answer

Statistics: Mean 2.42; Std Dev 1.35

WATERSHED MEASURES

(11) Add reservoirs

Frequencies (Percents; Counts):
20.0%; 10 Strongly Agree
22.0%; 11 Agree
24.0%; 12 Neutral
14.0%; 7 Disagree
6.0%; 3 Strongly Disagree
14.0%; 7 No Answer

Statistics: Mean 2.58; Std Dev 1.22

(12) Revise operation of reservoirs

Frequencies (Percents; Counts):
14.0%; 7 Strongly Agree
32.0%; 16 Agree
36.0%; 18 Neutral
2.0%; 1 Disagree
0.0%; 0 Strongly Disagree
16.0%; 8 No Answer

Statistics: Mean 2.31; Std Dev 0.78

(13) Reduce runoff by 5%

Frequencies (Percents; Counts):
20.0%; 10 Strongly Agree
40.0%; 20 Agree
14.0%; 7 Neutral
4.0%; 2 Disagree
0.0%; 0 Strongly Disagree
22.0%; 11 No Answer

Statistics: Mean 2.03; Std Dev 0.81

(14) Reduce runoff by 10%

Frequencies (Percents; Counts):
38.0%; 19 Strongly Agree
24.0%; 12 Agree
16.0%; 8 Neutral
6.0%; 3 Disagree
0.0%; 0 Strongly Disagree
16.0%; 8 No Answer

Statistics: Mean 1.88; Std Dev 0.97

OTHER MEASURES

(15) Allow river corridor to revert to natural use through zoning

Frequencies (Percents; Counts):

22.0%; 11 Strongly Agree	12.0%; 6 Disagree
26.0%; 13 Agree	4.0%; 2 Strongly Disagree
14.0%; 7 Neutral	22.0%; 11 No Answer

Statistics: Mean 2.36; Std Dev 1.20

(16) Revise flood insurance to pay a claim only once

Frequencies (Percents; Counts):

22.0%; 11 Strongly Agree	8.0%; 4 Disagree
14.0%; 7 Agree	4.0%; 2 Strongly Disagree
30.0%; 15 Neutral	22.0%; 11 No Answer

Statistics: Mean 2.46; Std Dev 1.17

(17) Develop a consistent system of levees as in Lower Mississippi River

Frequencies (Percents; Counts):

10.0%; 5 Strongly Agree	12.0%; 6 Disagree
28.0%; 14 Agree	10.0%; 5 Strongly Disagree
18.0%; 9 Neutral	22.0%; 11 No Answer

Statistics: Mean 2.79; Std Dev 1.24

(18) Increase flood proofing measures

Frequencies (Percents; Counts):

26.0%; 13 Strongly Agree	8.0%; 4 Disagree
26.0%; 13 Agree	6.0%; 3 Strongly Disagree
14.0%; 7 Neutral	20.0%; 10 No Answer

Statistics: Mean 2.28; Std Dev 1.24

(19) Other alternative not shown above (please describe it)

Frequencies (Percents; Counts):

10.0%; 5 Strongly Agree	0.0%; 0 Disagree
2.0%; 1 Agree	0.0%; 0 Strongly Disagree
8.0%; 4 Neutral	80.0%; 40 No Answer

Statistics: Mean 1.90; Std Dev 0.99

(20) Write any comments in the space below; use other side if necessary.

Written answers: NONE

Thank you for attending. We appreciate your taking your time and showing your interest in ththis study.

Burlington Meeting Evaluation Comments

Slides are good but need information on paper also

Be better informed, there were too many "Can't answer that", "Don't know" and "Can't tell you".

Have handouts of slides available at meeting!--I wasn't sure notes were being made to incorporate into study?--I presume this feed back was valuable?!

Burlington Flood Plain Management Assessment Comments

More data should be compiled about the recreational use and value of flood plain land before 93 flood hunting, fishing, eagle watching, boating, etc.

I do not feel confident that the study the Corps is compiling will have any "concrete" facts and figures. Everything is too "general". Many question did not receive an answer. If this is the way most studies are done and "major" decisions in economic development are based on--then they have lost my trust that they put any value on people.

As I listened to answers from Corp people I felt they were uncertain about the data they are using. This makes me very uncomfortable. It seems maybe more time should be allowed so that accurate data can be collected before this report is submitted to congress.

Check the river level today to what it was in the past. The river is filling up at a fast rate. We need to hold more water in each pool.

The Mississippi river System is a natural economic treasure for this country. Please work to insure it's usefulness as a connection between the most productive land in the world and foreign buyers. Water transport is less polluting and more efficient than any other farm at grain/wheat transport.

Revision of current formula for benefit/cost ratio needs to be made. Benefits should include value of infrastructure protected e.g. public utilities, public land, as well as substantial investment structures e.g. pumping stations and building price benefits to ag producers in other parts of the interior, prevention of loss of transportationial facilities e.g. closed highways and bridges and similar matters. Current formula is too restrictive and not comprehensive.

I consider the notches to be inappropriate. The only way this type of system could work is if the areas to be flooded were agriculture or green spaces with no buildings or dwellings. I can't believe that the NEIP would allow bedgs in this type of situation.

Route to desert/high population areas i.e. California, Arizona

*Need to emphasize importance of further studies to evaluate other scenarios. Flood of '93 was rare both in length of rainy period and severity.

*Also, it is not fair to consider some economics, but not value all factors because over simplification are inevitable.

**There is a critical need for development of low cost housing outside of flood plain. As outreach disaster worker many families rent and can not afford housing else where (also owners including elderly!)

I think the interested public should be made very aware of the extreme limitation of the Corps study. Versus the already widely published Galloway study. In the real

political world, the Corps study has already been evaluated simply because it has no specific concluding premise. Thanks for your time.

"500 year levee is the only way"

For the points marked neutral (excepting 16), there is a strong need for a real cost-benefit analysis to determine what would be beneficial! The current study is not intended to do this. For point 16 there are several issues. It is pointless to par to rebuild structures in unprotected floodplain. Agriculture insurance should be paid repeatedly as real insurance. That is, fees set at a level to recoup costs.

Many comments necessary. Need to consider flood control as main theme and rather than migration or flood plain management.

Need to create definitions

Need to consider value of levees to navigation

Need to consider impact of various related lows on results it levee size and it impacts flood insurance rates and/or crop insurance rates

Need to approach idea of structure improvement

Need to discus what damages would have been (or not been) with more aggressive maintenance and improvement on levees over past 30 years

Need to consider private property rights

Need to consider value of stability in system (vs variable flooding)--to maintain business, social, environment and value of stable access to economic transportation (river)

B:fpma2

Moline Meeting Evaluation Comments

Need to provide more information and costs.

Yes hold meeting at the Mississippi Room at River Center in Davenport, Iowa

Yes

Opinion survey form is poor--see my comments on the survey form. It contained technical assumptions unknown to the public and will not yield useful information.

Improve tributaries levees such as Green River

Need to have advance information of program format before next meeting

There were a lot of people present that didn't understand many concept. More back ground needed to be presented somehow. Panel speakers needed microphones. I understated the issues and I found this meeting somewhat confusing as to its purpose. I hope the April meeting will clear things up!

I believe more public comment and input would have been forthcoming if more developed plans were explained.

Better explanations--Real choices on questionnaire--Concrete uses for public opinion

Go slower in presentation of study--Distribute hand-out--Be more clear on relationship of this study (which explicitly is historical) to possible future changes (which clearly is the ultimate reason for this study)--Need to have more education about the alternative really mean/what they are.

Educate more about what the meeting pertains to. Many questions could not be answered because the study did not address the questions.

Explain the issues--public education--Solicit ideas and give them out so that people know what is going on--Slow down presentation - too fast to sink in--Have more meetings--Have experts in each field speak i.e. environment, economic, etc.

The average picture is well presented here, but we still need to address the local wetland problem, flood plain and river siltration, there are many river front property owners that are left out of consideration. What is really needed is more <u>local</u> information meetings. This Moline meeting does not address this area.

Better planning to handle water prior to flooding--reduce pools accordingly. Even is barge traffic is halted for a longer period.

Possibly show more slides that show the impact of the study --More graphics.

Improve tributaries rivers & dikes

1)Explain what congress asked the Corps to do exactly. 2)The objective of the report was not clearly stated. 3)The questions should be repeated so that everyone hears them. 4)The blue sheet needs explanation.

'fair' was my best assessment due to this being my first mtg. and unfamiliar w/terms

More information ahead of meeting for attendees to study.

A handout of some sort given before meeting starts would be very helpful & help new comers to the meeting understand type & issues at hand.

Have written information really when meeting begins. This was my first meeting.

None--it was done well.

Present material to teach anyone the short of each presentation so a person with limited knowledge can learn what the processes at hand really are.

SUMMARY OF 30 FORMS BURLINGTON

(1) Please check the one catgory below that best reflects your primary interestin this study.

Frequencies (Percents; Counts):

46.7%; 14 Farmer	0.0%; 0 Environment/conservation
23.3%; 7 Business/industry	0.0%; 0 Urban homeowner
13.3%; 4 Other	0.0%; 0 Media
10.0%; 3 Local govt.	0.0%; 0 Recreation group
3.3%; 1 Federal agency	3.3%; 1 No Answer
0.0%; 0 State agency	

Other answers: Too many answers repeat to count, reporting verbatim.
Upper Mississippi Flood Control Assoc ... Disaster recovery counselor ... Grain Elevator(s) on River ... an integrted evaluation of flood plain managment

Please check the box that best represents your opinion of the importance of the alternative.

If you need assistance or have questions, ask one of the representatives who are here to help you.

AGRICULTURAL LEVEES

(2) Limited flood fighting

Frequencies (Percents; Counts):

6.7%; 2 Strongly Agree	0.0%; 0 Disagree
6.7%; 2 Agree	73.3%; 22 Strongly Disagree
3.3%; 1 Neutral	10.0%; 3 No Answer

Statistics: Mean 4.41; Std Dev 1.31

(3) Remove

Frequencies (Percents; Counts):

3.3%; 1 Strongly Agree	0.0%; 0 Disagree
3.3%; 1 Agree	86.7%; 26 Strongly Disagree
3.3%; 1 Neutral	3.3%; 1 No Answer

Statistics: Mean 4.69; Std Dev 0.97

(4) Set back

Frequencies (Percents; Counts):

0.0%; 0 Strongly Agree	16.7%; 5 Disagree
13.3%; 4 Agree	50.0%; 15 Strongly Disagree
10.0%; 3 Neutral	10.0%; 3 No Answer

Statistics: Mean 4.15; Std Dev 1.13

(5) Maximum height 25 year

Frequencies (Percents; Counts):

6.7%; 2 Strongly Agree	3.3%; 1 Disagree
3.3%; 1 Agree	73.3%; 22 Strongly Disagree
6.7%; 2 Neutral	6.7%; 2 No Answer

Statistics: Mean 4.43; Std Dev 1.23

(6) Maximum height 100 year

Frequencies (Percents; Counts):

16.7%; 5 Strongly Agree	13.3%; 4 Disagree
13.3%; 4 Agree	40.0%; 12 Strongly Disagree
10.0%; 3 Neutral	6.7%; 2 No Answer

Statistics: Mean 3.50; Std Dev 1.60

(7) Maximum height 500 year

Frequencies (Percents; Counts):

86.7%; 26 Strongly Agree	3.3%; 1 Disagree
0.0%; 0 Agree	3.3%; 1 Strongly Disagree
3.3%; 1 Neutral	3.3%; 1 No Answer

Statistics: Mean 1.31; Std Dev 0.97

URBAN LEVEES

(8) Maximum height 500 year

Frequencies (Percents; Counts):

63.3%; 19 Strongly Agree	0.0%; 0 Disagree
16.7%; 5 Agree	3.3%; 1 Strongly Disagree
10.0%; 3 Neutral	6.7%; 2 No Answer

Statistics: Mean 1.54; Std Dev 0.96

(9) 500 year protection for priority sites

Frequencies (Percents; Counts):

53.3%; 16 Strongly Agree	0.0%; 0 Disagree
20.0%; 6 Agree	10.0%; 3 Strongly Disagree
6.7%; 2 Neutral	10.0%; 3 No Answer

Statistics: Mean 1.81; Std Dev 1.30

(10) 500 year protection for all critical facilities

Frequencies (Percents; Counts):

56.7%; 17 Strongly Agree	3.3%; 1 Disagree
20.0%; 6 Agree	6.7%; 2 Strongly Disagree

3.3%; 1 Neutral
10.0%; 3 No Answer

Statistics: Mean 1.70; Std Dev 1.20

WATERSHED MEASURES

(11) Add reservoirs

Frequencies (Percents; Counts):
40.0%; 12 Strongly Agree
20.0%; 6 Agree
20.0%; 6 Neutral
6.7%; 2 Disagree
3.3%; 1 Strongly Disagree
10.0%; 3 No Answer

Statistics: Mean 2.04; Std Dev 1.16

(12) Revise operation of reservoirs

Frequencies (Percents; Counts):
16.7%; 5 Strongly Agree
46.7%; 14 Agree
13.3%; 4 Neutral
3.3%; 1 Disagree
6.7%; 2 Strongly Disagree
13.3%; 4 No Answer

Statistics: Mean 2.27; Std Dev 1.08

(13) Reduce runoff by 5%

Frequencies (Percents; Counts):
20.0%; 6 Strongly Agree
30.0%; 9 Agree
20.0%; 6 Neutral
3.3%; 1 Disagree
10.0%; 3 Strongly Disagree
16.7%; 5 No Answer

Statistics: Mean 2.44; Std Dev 1.26

(14) Reduce runoff by 10%

Frequencies (Percents; Counts):
36.7%; 11 Strongly Agree
20.0%; 6 Agree
13.3%; 4 Neutral
10.0%; 3 Disagree
6.7%; 2 Strongly Disagree
13.3%; 4 No Answer

Statistics: Mean 2.19; Std Dev 1.33

OTHER MEASURES

(15) Allow river corridor to revert to natural use through zoning

Frequencies (Percents; Counts):
3.3%; 1 Strongly Agree
3.3%; 1 Agree
3.3%; 1 Neutral
6.7%; 2 Disagree
80.0%; 24 Strongly Disagree
3.3%; 1 No Answer

Statistics: Mean 4.62; Std Dev 0.98

(16) Revise flood insurance to pay a claim only once

Frequencies (Percents; Counts):

13.3%; 4 Strongly Agree	13.3%; 4 Disagree
6.7%; 2 Agree	50.0%; 15 Strongly Disagree
16.7%; 5 Neutral	0.0%; 0 No Answer

Statistics: Mean 3.80; Std Dev 1.47

(17) Develop a consistent system of levees as in Lower Mississippi River

Frequencies (Percents; Counts):

90.0%; 27 Strongly Agree	0.0%; 0 Disagree
3.3%; 1 Agree	0.0%; 0 Strongly Disagree
6.7%; 2 Neutral	0.0%; 0 No Answer

Statistics: Mean 1.17; Std Dev 0.53

(18) Increase flood proofing measures

Frequencies (Percents; Counts):

53.3%; 16 Strongly Agree	6.7%; 2 Disagree
16.7%; 5 Agree	6.7%; 2 Strongly Disagree
6.7%; 2 Neutral	10.0%; 3 No Answer

Statistics: Mean 1.85; Std Dev 1.29

(19) Other alternative not shown above (please describe it)

Frequencies (Percents; Counts):

10.0%; 3 Strongly Agree	0.0%; 0 Disagree
3.3%; 1 Agree	0.0%; 0 Strongly Disagree
6.7%; 2 Neutral	80.0%; 24 No Answer

Statistics: Mean 1.83; Std Dev 0.98

(20) Write any comments in the space below; use other side if necessary.

Written answers: NONE

Thank you for attending. We appreciate your taking your time and showing your interest in ththis study.

Percents	Overall	Limited flood fighting: Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	No Answer
Interest							
Farmer	46.7	0.0	50.0	0.0	-	54.5	33.3
Business/industry	23.3	50.0	0.0	0.0	-	18.2	66.7
Other	13.3	50.0	50.0	100.0	-	4.5	0.0
Local govt.	10.0	0.0	0.0	0.0	-	13.6	0.0
Federal agency	3.3	0.0	0.0	0.0	-	4.5	0.0
State agency	0.0	0.0	0.0	0.0	-	0.0	0.0
Environment/conservation	0.0	0.0	0.0	0.0	-	0.0	0.0
Urban homeowner	0.0	0.0	0.0	0.0	-	0.0	0.0
Media	0.0	0.0	0.0	0.0	-	0.0	0.0
Recreation group	0.0	0.0	0.0	0.0	-	0.0	0.0
No Answer	3.3	0.0	0.0	0.0	-	4.5	0.0
Totals	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Forms	30	2	2	1	0	22	3
Cross %	-	6.7	6.7	3.3	0.0	73.3	10.0

CONTINUED	Remove: Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	No Answer
Interest						
Farmer	0.0	100.0	0.0	-	50.0	0.0
Business/industry	100.0	0.0	0.0	-	19.2	100.0
Other	0.0	0.0	100.0	-	11.5	0.0
Local govt.	0.0	0.0	0.0	-	11.5	0.0
Federal agency	0.0	0.0	0.0	-	3.8	0.0
State agency	0.0	0.0	0.0	-	0.0	0.0
Environment/conservation	0.0	0.0	0.0	-	0.0	0.0
Urban homeowner	0.0	0.0	0.0	-	0.0	0.0
Media	0.0	0.0	0.0	-	0.0	0.0
Recreation group	0.0	0.0	0.0	-	0.0	0.0
No Answer	0.0	0.0	0.0	-	3.8	0.0
Totals	100.0	100.0	100.0	100.0	100.0	100.0
Forms	1	1	1	0	26	1
Cross %	3.3	3.3	3.3	0.0	86.7	3.3

CONTINUED	Set back					
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	No Answer
Interest						
Farmer	-	50.0	33.3	60.0	46.7	33.3
Business/industry	-	0.0	33.3	40.0	20.0	33.3
Other	-	50.0	33.3	0.0	6.7	0.0
Local govt.	-	0.0	0.0	0.0	13.3	33.3
Federal agency	-	0.0	0.0	0.0	6.7	0.0
State agency	-	0.0	0.0	0.0	0.0	0.0
Environment/conservation	-	0.0	0.0	0.0	0.0	0.0
Urban homeowner	-	0.0	0.0	0.0	0.0	0.0
Media	-	0.0	0.0	0.0	0.0	0.0
Recreation group	-	0.0	0.0	0.0	0.0	0.0
No Answer	-	0.0	0.0	0.0	6.7	0.0
Totals	100.0	100.0	100.0	100.0	100.0	100.0
Forms	0	4	3	5	15	3
Cross %	0.0	13.3	10.0	16.7	50.0	10.0

CONTINUED	Maximum height 25 year					
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	No Answer
Interest						
Farmer	0.0	0.0	0.0	100.0	54.5	50.0
Business/industry	50.0	100.0	50.0	0.0	13.6	50.0
Other	50.0	0.0	50.0	0.0	9.1	0.0
Local govt.	0.0	0.0	0.0	0.0	13.6	0.0
Federal agency	0.0	0.0	0.0	0.0	4.5	0.0
State agency	0.0	0.0	0.0	0.0	0.0	0.0
Environment/conservation	0.0	0.0	0.0	0.0	0.0	0.0
Urban homeowner	0.0	0.0	0.0	0.0	0.0	0.0
Media	0.0	0.0	0.0	0.0	0.0	0.0
Recreation group	0.0	0.0	0.0	0.0	0.0	0.0
No Answer	0.0	0.0	0.0	0.0	4.5	0.0
Totals	100.0	100.0	100.0	100.0	100.0	100.0
Forms	2	1	2	1	22	2
Cross %	6.7	3.3	6.7	3.3	73.3	6.7

CONTINUED	Maximum height 500 year2					
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	No Answer
Interest						
Farmer	47.4	60.0	33.3	-	100.0	0.0
Business/industry	21.1	0.0	33.3	-	0.0	100.0
Other	10.5	20.0	33.3	-	0.0	0.0
Local govt.	15.8	0.0	0.0	-	0.0	0.0
Federal agency	0.0	20.0	0.0	-	0.0	0.0
State agency	0.0	0.0	0.0	-	0.0	0.0
Environment/conservation	0.0	0.0	0.0	-	0.0	0.0
Urban homeowner	0.0	0.0	0.0	-	0.0	0.0
Media	0.0	0.0	0.0	-	0.0	0.0
Recreation group	0.0	0.0	0.0	-	0.0	0.0
No Answer	5.3	0.0	0.0	-	0.0	0.0
Totals	100.0	100.0	100.0	100.0	100.0	100.0
Forms	19	5	3	0	1	2
Cross %	63.3	16.7	10.0	0.0	3.3	6.7

CONTINUED	Protection for priority					
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	No Answer
Interest						
Farmer	50.0	50.0	50.0	-	66.7	0.0
Business/industry	25.0	0.0	50.0	-	0.0	66.7
Other	6.2	33.3	0.0	-	33.3	0.0
Local govt.	12.5	16.7	0.0	-	0.0	0.0
Federal agency	0.0	0.0	0.0	-	0.0	33.3
State agency	0.0	0.0	0.0	-	0.0	0.0
Environment/conservation	0.0	0.0	0.0	-	0.0	0.0
Urban homeowner	0.0	0.0	0.0	-	0.0	0.0
Media	0.0	0.0	0.0	-	0.0	0.0
Recreation group	0.0	0.0	0.0	-	0.0	0.0
No Answer	6.2	0.0	0.0	-	0.0	0.0
Totals	100.0	100.0	100.0	100.0	100.0	100.0
Forms	16	6	2	0	3	3
Cross %	53.3	20.0	6.7	0.0	10.0	10.0

CONTINUED	Protection for critical Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	No Answer
Interest						
Farmer	47.1	66.7	0.0	100.0	50.0	0.0
Business/industry	23.5	0.0	100.0	0.0	0.0	66.7
Other	11.8	16.7	0.0	0.0	50.0	0.0
Local govt.	11.8	16.7	0.0	0.0	0.0	0.0
Federal agency	0.0	0.0	0.0	0.0	0.0	33.3
State agency	0.0	0.0	0.0	0.0	0.0	0.0
Environment/conservation	0.0	0.0	0.0	0.0	0.0	0.0
Urban homeowner	0.0	0.0	0.0	0.0	0.0	0.0
Media	0.0	0.0	0.0	0.0	0.0	0.0
Recreation group	0.0	0.0	0.0	0.0	0.0	0.0
No Answer	5.9	0.0	0.0	0.0	0.0	0.0
Totals	100.0	100.0	100.0	100.0	100.0	100.0
Forms	17	6	1	1	2	3
Cross %	56.7	20.0	3.3	3.3	6.7	10.0

CONTINUED	Add reservoirs Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	No Answer
Interest						
Farmer	58.3	50.0	50.0	0.0	0.0	33.3
Business/industry	8.3	33.3	16.7	100.0	0.0	33.3
Other	16.7	16.7	0.0	0.0	100.0	0.0
Local govt.	8.3	0.0	33.3	0.0	0.0	0.0
Federal agency	0.0	0.0	0.0	0.0	0.0	33.3
State agency	0.0	0.0	0.0	0.0	0.0	0.0
Environment/conservation	0.0	0.0	0.0	0.0	0.0	0.0
Urban homeowner	0.0	0.0	0.0	0.0	0.0	0.0
Media	0.0	0.0	0.0	0.0	0.0	0.0
Recreation group	0.0	0.0	0.0	0.0	0.0	0.0
No Answer	8.3	0.0	0.0	0.0	0.0	0.0
Totals	100.0	100.0	100.0	100.0	100.0	100.0
Forms	12	6	6	2	1	3
Cross %	40.0	20.0	20.0	6.7	3.3	10.0

CONTINUED	Revise operation of reser					
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	No Answer
Interest						
Farmer	80.0	50.0	25.0	0.0	50.0	25.0
Business/industry	0.0	28.6	25.0	0.0	0.0	50.0
Other	20.0	14.3	0.0	0.0	50.0	0.0
Local govt.	0.0	7.1	25.0	100.0	0.0	0.0
Federal agency	0.0	0.0	0.0	0.0	0.0	25.0
State agency	0.0	0.0	0.0	0.0	0.0	0.0
Environment/conservation	0.0	0.0	0.0	0.0	0.0	0.0
Urban homeowner	0.0	0.0	0.0	0.0	0.0	0.0
Media	0.0	0.0	0.0	0.0	0.0	0.0
Recreation group	0.0	0.0	0.0	0.0	0.0	0.0
No Answer	0.0	0.0	25.0	0.0	0.0	0.0
Totals	100.0	100.0	100.0	100.0	100.0	100.0
Forms	5	14	4	1	2	4
Cross %	16.7	46.7	13.3	3.3	6.7	13.3

CONTINUED	Reduce runoff by 5%					
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	No Answer
Interest						
Farmer	83.3	44.4	33.3	0.0	33.3	40.0
Business/industry	16.7	33.3	0.0	0.0	33.3	40.0
Other	0.0	22.2	16.7	0.0	33.3	0.0
Local govt.	0.0	0.0	33.3	100.0	0.0	0.0
Federal agency	0.0	0.0	0.0	0.0	0.0	20.0
State agency	0.0	0.0	0.0	0.0	0.0	0.0
Environment/conservation	0.0	0.0	0.0	0.0	0.0	0.0
Urban homeowner	0.0	0.0	0.0	0.0	0.0	0.0
Media	0.0	0.0	0.0	0.0	0.0	0.0
Recreation group	0.0	0.0	0.0	0.0	0.0	0.0
No Answer	0.0	0.0	16.7	0.0	0.0	0.0
Totals	100.0	100.0	100.0	100.0	100.0	100.0
Forms	6	9	6	1	3	5
Cross %	20.0	30.0	20.0	3.3	10.0	16.7

CONTINUED	Reduce runoff by 10%					
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	No Answer
Interest						
Farmer	81.8	16.7	25.0	33.3	0.0	50.0
Business/industry	9.1	50.0	0.0	0.0	50.0	50.0
Other	9.1	33.3	0.0	33.3	0.0	0.0
Local govt.	0.0	0.0	50.0	33.3	0.0	0.0
Federal agency	0.0	0.0	0.0	0.0	50.0	0.0
State agency	0.0	0.0	0.0	0.0	0.0	0.0
Environment/conservation	0.0	0.0	0.0	0.0	0.0	0.0
Urban homeowner	0.0	0.0	0.0	0.0	0.0	0.0
Media	0.0	0.0	0.0	0.0	0.0	0.0
Recreation group	0.0	0.0	0.0	0.0	0.0	0.0
No Answer	0.0	0.0	25.0	0.0	0.0	0.0
Totals	100.0	100.0	100.0	100.0	100.0	100.0
Forms	11	6	4	3	2	4
Cross %	36.7	20.0	13.3	10.0	6.7	13.3

CONTINUED	Natural use					
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	No Answer
Interest						
Farmer	0.0	0.0	0.0	0.0	58.3	0.0
Business/industry	100.0	0.0	0.0	0.0	25.0	0.0
Other	0.0	0.0	100.0	50.0	8.3	0.0
Local govt.	0.0	100.0	0.0	50.0	0.0	100.0
Federal agency	0.0	0.0	0.0	0.0	4.2	0.0
State agency	0.0	0.0	0.0	0.0	0.0	0.0
Environment/conservation	0.0	0.0	0.0	0.0	0.0	0.0
Urban homeowner	0.0	0.0	0.0	0.0	0.0	0.0
Media	0.0	0.0	0.0	0.0	0.0	0.0
Recreation group	0.0	0.0	0.0	0.0	0.0	0.0
No Answer	0.0	0.0	0.0	0.0	4.2	0.0
Totals	100.0	100.0	100.0	100.0	100.0	100.0
Forms	1	1	1	2	24	1
Cross %	3.3	3.3	3.3	6.7	80.0	3.3

CONTINUED	Revise flood insurance					
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	No Answer
Interest						
Farmer	0.0	0.0	20.0	75.0	66.7	-
Business/industry	75.0	0.0	20.0	25.0	13.3	-
Other	0.0	0.0	40.0	0.0	13.3	-
Local govt.	0.0	100.0	20.0	0.0	0.0	-
Federal agency	25.0	0.0	0.0	0.0	0.0	-
State agency	0.0	0.0	0.0	0.0	0.0	-
Environment/conservation	0.0	0.0	0.0	0.0	0.0	-
Urban homeowner	0.0	0.0	0.0	0.0	0.0	-
Media	0.0	0.0	0.0	0.0	0.0	-
Recreation group	0.0	0.0	0.0	0.0	0.0	-
No Answer	0.0	0.0	0.0	0.0	6.7	-
Totals	100.0	100.0	100.0	100.0	100.0	100.0
Forms	4	2	5	4	15	0
Cross %	13.3	6.7	16.7	13.3	50.0	0.0

CONTINUED	Consistent levee system					
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	No Answer
Interest						
Farmer	51.9	0.0	0.0	-	-	-
Business/industry	22.2	0.0	50.0	-	-	-
Other	7.4	100.0	50.0	-	-	-
Local govt.	11.1	0.0	0.0	-	-	-
Federal agency	3.7	0.0	0.0	-	-	-
State agency	0.0	0.0	0.0	-	-	-
Environment/conservation	0.0	0.0	0.0	-	-	-
Urban homeowner	0.0	0.0	0.0	-	-	-
Media	0.0	0.0	0.0	-	-	-
Recreation group	0.0	0.0	0.0	-	-	-
No Answer	3.7	0.0	0.0	-	-	-
Totals	100.0	100.0	100.0	100.0	100.0	100.0
Forms	27	1	2	0	0	0
Cross %	90.0	3.3	6.7	0.0	0.0	0.0

CONTINUED	Increase flood proofing					
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	No Answer
Interest						
Farmer	43.8	60.0	0.0	50.0	50.0	66.7
Business/industry	31.2	20.0	50.0	0.0	0.0	0.0
Other	6.2	20.0	50.0	0.0	50.0	0.0
Local govt.	12.5	0.0	0.0	50.0	0.0	0.0
Federal agency	0.0	0.0	0.0	0.0	0.0	33.3
State agency	0.0	0.0	0.0	0.0	0.0	0.0
Environment/conservation	0.0	0.0	0.0	0.0	0.0	0.0
Urban homeowner	0.0	0.0	0.0	0.0	0.0	0.0
Media	0.0	0.0	0.0	0.0	0.0	0.0
Recreation group	0.0	0.0	0.0	0.0	0.0	0.0
No Answer	6.2	0.0	0.0	0.0	0.0	0.0
Totals	100.0	100.0	100.0	100.0	100.0	100.0
Forms	16	5	2	2	2	3
Cross %	53.3	16.7	6.7	6.7	6.7	10.0

CONTINUED	Other alternative					
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	No Answer
Interest						
Farmer	33.3	0.0	50.0	-	-	50.0
Business/industry	66.7	0.0	0.0	-	-	20.8
Other	0.0	100.0	50.0	-	-	8.3
Local govt.	0.0	0.0	0.0	-	-	12.5
Federal agency	0.0	0.0	0.0	-	-	4.2
State agency	0.0	0.0	0.0	-	-	0.0
Environment/conservation	0.0	0.0	0.0	-	-	0.0
Urban homeowner	0.0	0.0	0.0	-	-	0.0
Media	0.0	0.0	0.0	-	-	0.0
Recreation group	0.0	0.0	0.0	-	-	0.0
No Answer	0.0	0.0	0.0	-	-	4.2
Totals	100.0	100.0	100.0	100.0	100.0	100.0
Forms	3	1	2	0	0	24
Cross %	10.0	3.3	6.7	0.0	0.0	80.0

Answers By Interest

CONTINUED	Maximum height 100 year					
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	No Answer
Interest						
Farmer	20.0	50.0	0.0	50.0	66.7	50.0
Business/industry	20.0	25.0	33.3	25.0	16.7	50.0
Other	20.0	0.0	0.0	25.0	16.7	0.0
Local govt.	20.0	25.0	33.3	0.0	0.0	0.0
Federal agency	20.0	0.0	0.0	0.0	0.0	0.0
State agency	0.0	0.0	0.0	0.0	0.0	0.0
Environment/conservation	0.0	0.0	0.0	0.0	0.0	0.0
Urban homeowner	0.0	0.0	0.0	0.0	0.0	0.0
Media	0.0	0.0	0.0	0.0	0.0	0.0
Recreation group	0.0	0.0	0.0	0.0	0.0	0.0
No Answer	0.0	0.0	33.3	0.0	0.0	0.0
Totals	100.0	100.0	100.0	100.0	100.0	100.0
Forms	5	4	3	4	12	2
Cross %	16.7	13.3	10.0	13.3	40.0	6.7

CONTINUED	Maximum height 500 year					
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	No Answer
Interest						
Farmer	53.8	-	0.0	0.0	0.0	0.0
Business/industry	23.1	-	100.0	0.0	0.0	0.0
Other	7.7	-	0.0	100.0	100.0	0.0
Local govt.	11.5	-	0.0	0.0	0.0	0.0
Federal agency	0.0	-	0.0	0.0	0.0	100.0
State agency	0.0	-	0.0	0.0	0.0	0.0
Environment/conservation	0.0	-	0.0	0.0	0.0	0.0
Urban homeowner	0.0	-	0.0	0.0	0.0	0.0
Media	0.0	-	0.0	0.0	0.0	0.0
Recreation group	0.0	-	0.0	0.0	0.0	0.0
No Answer	3.8	-	0.0	0.0	0.0	0.0
Totals	100.0	100.0	100.0	100.0	100.0	100.0
Forms	26	0	1	1	1	1
Cross %	86.7	0.0	3.3	3.3	3.3	3.3

St. Louis District Summaries

CELMS-PD-F

17 Nov 94

MEMORANDUM FOR RECORD

TO: CELMS-PD-F FILES

SUBJECT: Public Meeting results, 17 Nov 94, Alton, Illinois.

1. Subject public meeting was attended by 39 citizens. Considerable interest was expressed in the technique the Corps intends to utilize in presenting the Flood Plain Management Assessment (FPMA) data and analysis.

2. The Corps presentation went quickly (about 35 minutes) and a lively and worthwhile exchange of questions and answers ensued. The citizens attending were sufficiently interested in the ongoing discussion to stay for about 3/4 hour beyond the 9PM closing time.

3. In summary, two specific citizen suggestions for improving the FPMA approach were as follows:

A. It was requested that the Corps consider developing broad data that would discuss an important fourth scenario that is currently missing. The person suggesting the addition of a fourth scenario seemed to understand very well that the three scenario's currently proposed were a "backdrop" of local, State and federal policies and programs against which the various alternatives being studied would be evaluated. Further, he appreciated the current concept of Scenario #1 basically business without great change, Scenario #3 maximum environmental policies, and Scenario #2 something in-between. However, he believes the current approach to be flawed because we are not considering a maximum structural flood control scenario. He believes that to be fair and equitable, a counterbalance to the maximum environmental scenario is sorely needed. In summary, the concept was that as long as the Corps was considering a maximum environmental scenario (assumed to be maximum non-structural proposals), the Corps must also identify the impacts of a maximum structural flood control approach.

B. It was requested that the Corps identify the impacts of constructing all of the flood control reservoirs identified in "Pick-Sloan" plan. Further, a similar maximization of flood control reservoirs on the Upper Mississippi River should be a integral part of the Corps systemic Flood Plain Management Assessment inorder to have the data necessary to consider the best way for controlling floods and reducing future flood damages.

DAVE RAHUBKA
FPMA

cc: Dave Loss, Gary Nelson
CELMS FPMA team

CELMS-PD-F 15 Nov 94

MEMORANDUM FOR RECORD

TO: CELMS-PD-F FILES

SUBJECT: Public Meeting results, 15 Nov 94 19:00-21:00 hours, St. Louis, Missouri.

1. Subject public meeting was attended by 26 citizens. Considerable interest was expressed in the technique the Corps intends to utilize in presenting the Flood Plain Management Assessment (FPMA) data and analysis.

2. The Corps presentation went quickly (about 35 minutes) and a lively and worthwhile exchange of questions and answers ensued. The citizens attending were sufficiently interested in the ongoing discussion to stay for about 1/2 hour beyond the 9PM closing time.

3. In summary, one specific suggestion for improving the FPMA approach was heard more that once at this public input session as follows:

A couple of individuals insisted that the systemic Corps FPMA effort would be sorely incomplete if the worth and impacts of adding significant additional flood control (multi-purpose) reservoirs throughout the seven State study area were not evaluated. On the Missouri River system, it was requested that the Corps identify the impacts of constructing all of the flood control reservoirs identified in "Pick-Sloan" plan. A similar consideration for the Upper Mississippi River should be a integral part of the Corps systemic Flood Plain Management Assessment flood control and flood damages mitigation effort.

It was requested that the Corps FPMA accomplish a comprehensive assessment of all the known and proven ways/means for significantly reducing flood heights and damages. It was stated that major flood control reservoirs have clearly demonstrated that they are effective in significantly reducing flood heights and flood damages. Therefore, the FPMA would not be properly accomplishing its assigned mission, if it did not evaluate the possibility of many additional major flood control reservoirs throughout the seven State study area. Reservoirs have clearly demonstrated that they preform the flood control function very effectively. Therefore, they must not be excluded as one comprehensive systemic alternative to controlling major future flood events similar to the 1993 flood disaster.

DAVE RAHUBKA
FPMA

cc: Dave Loss, Gary Nelson, Chris Erickson
CELMS FPMA team

CELMS-PD-F 8 Nov 94

MEMORANDUM FOR RECORD

TO: CELMS-PD-F FILES

SUBJECT: Public Meeting results, 8 Nov 94, Waterloo, Illinois.

1. Subject public meeting was attended by 48 citizens. Considerable interest was expressed in the technique the Corps intends to utilize in presenting the Flood Plain Management Assessment (FPMA) data and analysis.

2. The Corps presentation went quickly (about 35 minutes) and a lively and worthwhile exchange of questions and answers ensued. The citizens attending were sufficiently interested in the ongoing discussion to stay for about an hour beyond the 9PM closing time.

3. In summary, two specific citizen suggestions for improving the FPMA approach were as follows:

A. It was requested that the Corps develop and discuss in its FPMA report, some technique for judging the impact on flood heights of mankind creating "hard surfaces" that reduce rainfall infiltration. The many shopping centers, roads, parking lots, and other urban and rural development has reduced the ability of rainfall to infiltrate. What is the overall significance of these activities by mankind upon small, medium and large flood events?

B. It was requested that the Corps develop and discuss in its FPMA report, some technique for better presenting and evaluating "human trauma" caused by large flood events. It is considered that significant short and long term human trauma damages are caused by large flood events that is not properly or clearly evaluated.

DAVE RAHUBKA
FPMA

cc: Dave Loss, Gary Nelson
CELMS FPMA team

St. Paul District Summaries

SUMMARY OF PUBLIC MEETINGS
and other written comments

The following Public Meetings (Discussion Sessions) were held in November, 1994 at 13 locations:

DISTRICT/DATE	CITY, STATE	MEETING TIME	ATTENDANCE
ST.PAUL DISTRICT			
November 14	St. Paul, Minnesota	2:00 pm session only	14
November 15	LaCrosse, Wisconsin	2:00 pm session only	15
ROCK ISLAND DIST			
November 21	Burlington, Iowa	2:00 and 7:00 pm	0, 37
November 22	Quincy, Illinois	2:00 and 7:00 pm	3, 125
November 29	Moline, Illinois	2:00 and 7:00 pm	2, 63
OMAHA DISTRICT			
November 14	Nebraska City, Nebr.	2:00 and 7:00 pm	20, 35
November 15	Sioux Falls, S. Dakota	2:00 and 7:00 pm	3, 0
KANSAS CITY DIST			
November 9	Topeka, Kansas	2:00 and 7:00 pm	5, 8
November 10	Kansas City, Missouri	2:00 and 7:00 pm	2, 30
November 16	JeffersonCity, Missouri	2:00 and 7:00 pm	10, 25
ST.LOUIS DISTRICT			
November 9	Waterloo, Illinois	7:00 pm session only	48
November 15	St. Louis, Missouri	2:00 and 7:00 pm	0, 30
November 17	Alton, Illinois	7:00 pm session only	0, 39

The meetings in all Districts followed the same basic format: a set of slides and script provided by the St. Paul District. The Rock Island District varied somewhat from this format.. They conducted a focus group meeting before the public meetings were held in order to clarify the format and style of the presentation and obtain good public input. A random sample of people who had attended the June meeting in Quincy provided their input to the focus group. The focus group suggested simplifying the presentation and obtaining input on the action alternatives of the matrix by way of a survey sheet.

WHAT WAS HEARD?

Many people that attended the public meetings voiced comments at the meeting or provided written comments about their concerns. Some meetings were dominated by one main issue while other meetings had a wide variety of discussion issues. Comments from the public meetings and other written correspondance from state/federal agencies and interest groups have been recorded on the attached matrix table. These comments are in the process of being coded to identify the main interest or desire of all interested parties. A more detailed accounting of these desires and interests will be discussed in the Floodplain Management Assessment Report.

The following discussion describes, in general terms, issues that were brought up during the public meetings at the locations listed in the above table.

ST. PAUL DISTRICT

The St. Paul District held two meetings in the afternoon, each followed by Navigation Study Public Meetings held in the evening. The issues brought up for discussion by the people present were very diverse. The issue that received the most attention were the impact categories on the evaluation matrix table. Impacts that were discussed included: the need to recognize impacts to developed areas behind levees, water quality should be an impact category, the need for a common measurement rather than a combination of dollars and acres, and that environmental enhancement measures are not measured directly. Some of the other issues of discussion included the need for: a definition of terms used in the study ("hazardous", "cost effective"); an urban protection analysis; a look at long term costs, upland runoff, and other flood events, not just the "93" flood; planning for 500 year frequency seems excessive; and the need for data on agricultural subsidies and incentives. Each meeting lasted at least 2 hours with a question and answer period following the presentation. Participants were encouraged to submit comments in writting within the next two weeks and interviews to the local television station and newspaper followed the LaCrosse meeting.

ROCK ISLAND DISTRICT

The Rock Island District held the three public meetings listed in the table above. A public meeting was not held in Des Moines, Iowa, in November because the public meetings held at that location in June, 1994 were not well attended. A majority of agricultural farm interests were present at two of the three meetings and they were mainly interested in raising the levees to provide better protection.

Attendance and primary interest at each meeting location follows:

Burlington: 37 people attended and 30 filled out survey sheets that identified their primary interest in this study. Out of the 30 surveyed 47% expressed an agricultural farming interest, followed by 23% as business/industrial interests, 13% as other interests, and 10% as local

government interest. The main topics of discussion focussed on (1) levees: the need for maintenance and improvement, their value to navigation, and 500 year levee protection; (2) the public's confidence level for this study because of its limitations; and (3) economic factors and B/C ratios. A variety of other issues that surfaced included: flood insurance, water levels, water transportation, low cost housing outside of the floodplain, the need to evaluate other scenarios and the need for more data on recreational use and floodplain values before the 1993 flood.

Quincy: 128 people attended and 101 filled out survey sheets indicating that 70% represented agricultural farming interests and a very low representation in the other six interest groups. Most of the public identified overwhelmingly the desire to raise the levees to the 500 year level and suggested using dredged material. Many questioned the study itself as being too vague and abstract and hope that the April meetings will respond directly to what is in the report. Other issues that surfaced included identifying the individual characteristics of the floodplain, land use changes in the floodplain, floodproofing, relocation, not limiting flood fighting, consistency in government requlations, and water transportation. One creative thinker suggested betting on the water levels to provide a pool of funds.

Moline: 65 people attended and 50 filled out survey sheets identifying 38% in the Other categories (many were students from a water resources class and educators), 18% as urban homeowner interests, 14% as environmental interests, and 10% as agricultural farm interests. Because of the diversity of the audience 25 different issues surfaced and most of those consisted of only one comment per issue. Issues that surfaced that were different from those listed at other meetings were to utilize the natural river system, leaving 60 feet as a buffer, and removing structures from the floodplain, having State managed wildlife impoundments, protecting historical sites, utilizing the buyout, lower road profiles so flood waters can overtop, the need for a system-wide floodplain management for different areas (urban, wetland, ag., conservation, etc.), need for a total watershed basin study, lost flood storage from former tallgrass prairies now in cropland, and the poor survey.

The primary concern at the above meetings was on how the scenarios and matrix would be presented at the next set of public meetings. The public wanted assurance that the data would be available and that information should be furnished prior to the next set of public meetings so that they would have ample review time. The public who attended the meetings and viewed the three scenarios presented , felt that these scenarios did not meet the needs of the flood plain residents. A "do nothing" scenario was unacceptable to many people. The "moderate" scenario was perceived by many as only a follow-up to the Galloway Report and to meet the desires of the UMRBA and the Association of Flood Plain managers. The third scenario seemed totally unacceptable to most of the flood plain residents.

OMAHA DISTRICT

The Omaha District held two meetings and the primary issue of concern involved levees: enforcement of maintenance, set-back far enough to allow room between river and floodplain, flooding behind, and siltation on the riverside. Other issues that were discussed included:

adequate drainage, buffer zones, failed enforcement of zoning laws in the floodplain, and post-event insurance requirements equal for residents and agriculture.

An interesting observation from the Omaha meetings was that some farmers want to see private as well as federal levees set back to reduce water surface elevations and seepage problems.. It was also noted that after 2 to 5 feet of sand was removed the flooded land increased in fertility from the sediment deposits although enhanced fertility was sometimes overshadowed by weed growth in some locations.

KANSAS CITY DISTRICT

The Kansas City District held three meetings and primary interest involved agricultual levees left as they are, without raising because the raise may escalate flooding; along with protection of critical sites and relocations/setbacks for floodway. Other issues of concern included: Floodplain development, improved scenario descriptions, positive and negative comments on this study and the Missouri River Master Mannual, flood events, water supply, rights of the property owners, historical river context, and getting realistic agricultural data.

ST. LOUIS DISTRICT

The St. Louis District held three meetings and considerable interest was expressed in the technique that the Corps will be utilizing in presenting the Flood Plain Management Assessment data and analysis. In summary, the primary issues requested the Corps to: (1) develop a technique for judging the impact on flood heights of "hard surfaces" that reduce rainfall infiltration and the significance of these activities on flood events; (2) discuss and evaluate "human trauma" caused by large flood events; (3) develop a 4th scenario for a maximum structural flood control approach; (4) identify the impacts of constructing flood control reservoirs identified in the "Pick-Sloan" plan and on the Upper Mississippi River; (5) evaluate and add additional flood control (multi-purpose) reservoirs throughout the seven State study area; and to (6) accomplish a comprehensive assessment of all the known and proven ways for significantly reducing flood heights and damages.

CONCLUSION

It is expected that the April 1995 Public Meetings will clear up any misconceptions on the part of the public because the evaluation matrix framework will have the data needed to explain the impact categories and scenerios. The presentations will focus on findings and conclusions that will be contained in the draft assessment report, to be completed on March 31, 1995.

All comments received from the last round of public meetings, along with written comments received, during this timeframe, from state and federal agencies, and interest groups have been incorporated into the attached computerized matrix table. All comments are in the process of

being coded to identify the main interest or desire of all comments. A more detailed accounting of these desires and interests will be discussed in the Floodplain Management Assessment Report. A coded matrix table from each set of public meetings, along with written comments from state and federal agencies and interest groups will be included in Appendix D - Public Involvement, of the Floodplain Management Assessment Report.

A tenative listing for April Meetings at 7 pm follows:

DISTRICT/DATE	CITY, STATE
ST.PAUL DISTRICT	
Tues. April 18, 1995	St. Paul, Minnesota
Wed. April 19, 1995	LaCrosse, Wisconsin
ROCK ISLAND DIST	
Wed. April 19, 1995	Burlington, Iowa
Thurs. April 20, 1995	Quincy, Illinois
Tues. April 18, 1995	Moline, Illinois
OMAHA DISTRICT	
Wed. April 26, 1995	Nebraska City, Nebr.
KANSAS CITY DIST	
Tues. April 18, 1995	Kansas City, Missouri
Wed. April 19, 1995	JeffersonCity, Missouri
ST.LOUIS DISTRICT	
Wed. April 19, 1995	Waterloo, Illinois
Thurs. April 20, 1995	St. Charles, Missouri **Combined mtg. with Kansas City District**
Tues. April 18, 1995	Alton, Illinois

NCSPE-M 17 November 1994

MEMORANDUM FOR RECORD

SUBJECT: Public Discussion Session for FPMA at LaCrosse, WI on 15 November 1994.

1. The subject meeting was held at the Holiday Inn at 2:00 pm. Attendance included those on the sign-in sheet (encl. 1), plus representatives of the the local television station and newspaper and representatives from the Navigation Study team (who conducted a public meeting at the same location at 7:00 in the evening). Those present from the FPMA team were: Dave Loss, Terry Birkenstock, Scott Jutila, Karen Nagengast and Ken Gardner. See other attachments for the similar meeting that was held in South St. Paul on 14 November.

2. Some of the the key comments included the following:

- For economic impact evaluation of ag levee alternatives are we going to recognize impacts to developed areas behind those levees? (Jonathan Ela and Bill Redding - Sierra Club)

- The watershed analysis is of great interest and we must be careful to not misrepresent results by concentrating only on the 1993 flood and only on a portion of the basin. Also, the 5 and 10% runoff reductions appear to be on the low side. (Sierra Club)

- Traffic corridors should be included in the analysis of urban protection (Sierra Club)

- The "Galloway" Report did not adequately cover the area of agricultural subsidies and incentives. (Sierra Club)

- We should discuss how the runoff is reduced by upland measures. (John Flynn - attorney)

- It would be preferrable to look at the long term costs of levees - not just at a single point in time since they are subject to repeated repairs. (Sierra Club)

- In response to a question on how many of the pre-1993 ag levees have been restored we guessed at a figure of 50 - 70%.

- In response to a question of what will happen to our report after it is completed and how will its conclusions be addressed in relationship to the "Galloway" Report, we indicated that our report will be submitted to our headquarters office and Washington and be forwarded to Congress.

- The use of proposed reservoirs in the 1971 comprehensive basin study report as a basis for the additional reservoirs alternative is inviting criticism. (Sierra Club)

- Jonathan Ela (Sierra Club) requested a copy of the main report of the Corps 1993 post flood report. (request passed on to NCR for action)

3. The meeting lasted about 2 hours. Participants were encouraged to submit comments within the next 2 weeks. I provided interviews to the local television station and newspaper following the meeting.

1 Encl.

DAVID LOSS, P.E.
FPMA Assessment Manager

NCSPE-M 17 November 1994

MEMORANDUM FOR RECORD

SUBJECT: Public Discussion Session for FPMA at South St. Paul, MN on 14 November 1994.

1. The subject meeting was held at the Drover's Holiday Inn at 2:00 pm. Attendance included those on the sign-in sheet (encl. 1), plus a representative of the Minneapolis Star Tribune, and representatives from the Navigation Study team (who conducted a public meeting at the same location at 7:00 in the evening). Those present from the FPMA team were: Dave Loss, Curt Meeder, Terry Birkenstock, Scott Jutila, and Karen Nagengast. Other attachments include the handout (encl. 2), the slide presentation (encl. 3), the initial letter sent to the primary mailing list (encl. 4), the news release (encl. 5), and the reminder notice sent on November 3rd (encl. 6).

2. Some of the the key comments included the following:

- The definition of the term "cost effective" should be clarified since we are not intending to do a BCR analysis or annualize costs. (Harlan Hirte - EPA)

- By measuring impacts with a combination of dollars, acres, etc., it will be difficult to reach a conclusion. The approach is like mixing apples and oranges and there should be attempts to quantify to the extent possible with a common measurement, such as dollars. (Brett Smith - Sierra Club and Rick McMouagle - Friends of the Mississippi River).

- Water quality should be an impact category. (Sierra Club).

- The watershed analysis may be misleading since it is only looking at the 1993 flood and is not utilizing the portion of the study area that has lost most of its wetlands - Iowa and Missouri. Also, the 5 and 10% runoff reductions seem very low. (Sierra Club).

- The category of critical facilities that was labeled as "hazardous" may be misleading. It would be better to refer to this primary list of critical facilities as "health risk" facilities. (EPA and Sierra Club)

- Planning for the 500-year frequency event seems excessive. (Arnold Vogel - Isaac Walton League).

- For claiming that Scenario 3 is the most environmentally based combination of policies and programs, we do not specifically address environmental enhancement measures very

directly, other than imply that they are a secondary result of other actions. (Sierra Club)

3. The meeting lasted about 2 1/2 hours. The Sierra Club left a letter of comment on the Milestone 2 (encl. 7) package and participants were encouraged to submit comments within the next 2 weeks.

7 Encl.

DAVID LOSS, P.E.
FPMA Assessment Manager

SUMMARY OF OPEN HOUSES

The following Open Houses were held in June 1994 with the indicated attendances:

		Attend.
St. Paul, MN	June 13	20
LaCrosse, WI	June 14	35
Moline, IL	June 15	85
Des Moines, IL	June 16	35
Alton, IL	June 21	30
Burlington, IA	June 22	85
Waterloo, IL	June 22	30
Quincy, IL	June 23	125
St. Peters, MO	June 27	40
Jefferson City, MO	June 28	75
Kansas City, MO	June 29	100
Topeka, KS	June 30	30

There are also 4 public meetings being held in the St. Louis area as part of the St. Louis Region Study and further input is expected from these meetings to provide guidance for the FPMA effort. They are:

Chesterfied Valley area	Sept. 12
Arnold, Fenton, and Kimmiswick area	Sept. 13
Areas of the St. Louis County and City of St. Louis flooded by the River Des Peres	Sept. 15
Crystal City, Festus, Herculaneum, and St. Genevieve	Sept. 20

WHAT WAS HEARD? Approximately 10 percent of the individuals attending the open-houses provided written comments. These seventy-eight people represented diverse interests including agriculture, environmental, state government, county government, city government, private property, navigation and other industrial interests. Their comments have been recorded on the attached matrix.

A content analysis of these comments reveals four underlying themes. First, there is strong support among agricultural interests for improving and continued development of structural flood control measures, especially levees. Second, the environmental interests together with some agricultural and recreational interests tend to support the idea that greater emphasis needs to be placed on non-structural measures, particularly those that will provide environmental enhancements and benefits. Comments also focused on perceived contradictions and blurs in floodplain management policies. Here, agricultural and environmental interests together with local and state

government representatives called for greater coordination among agencies responsible for managing the Upper Mississippi and Lower Missouri rivers. The fourth theme suggests that there was a genuine interest or quest for understanding and explaining the flood of 1993.

Other comments focused on specific problem areas and often delineated detailed solutions. These comments have been shared with appropriate Corps district personnel.

US Army Corps
of Engineers

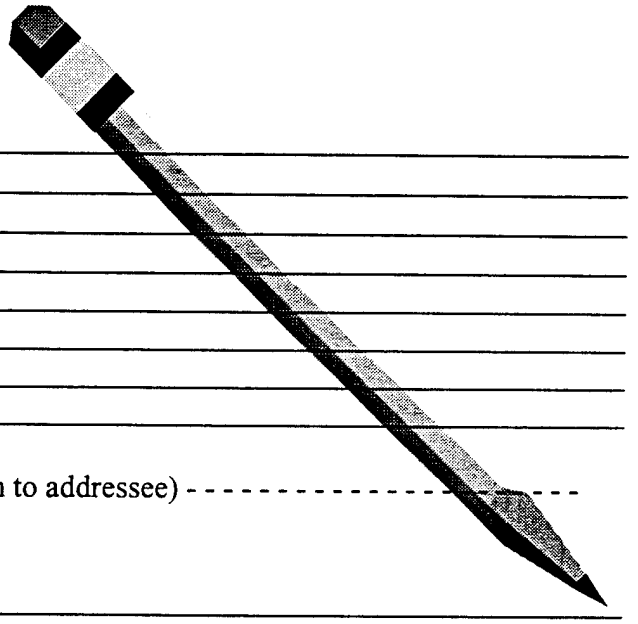
June 94

FLOODPLAIN MANAGEMENT ASSESSMENT OF THE UPPER MISSISSIPPI AND LOWER MISSOURI RIVER, AND THEIR TRIBUTARIES - COMMENT SHEET

Name _____ Telephone _____

Address _____

City _____ State _____ ZIP _____



(Please provide your comments in the space below)

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(Continue comments here)

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Please check the appropriate category below.

I represent:

____ Agriculture	____ Federal Government	____ Regional/Local Planning
____ Other Business/Industry	____ State Government	____ Self
____ Environmental Interests	____ County Government	____ Other (specify) _____
____ Private Interest Group	____ City Government	

____ I wish to be included in the offical mailing list for future informational publications

Privacy Act Statement

In accordance with the Privacy Act of 1974 (Authority: Paragraph 11, ER 1105-2-502), routine uses of the information obtained from this form include compiling official mailing lists for future informational publications and recording additional views and public participation in studies.

April Comments Spreadsheet

Comments that were submitted to the Corps of Engineers between February and May of 1995 are included here. Letters that included general, descriptive, or individual comments about floodplain study issues, along with some editing comments are included. Inter-district comments and editorial comments only about the draft report havenot been included.

ID	FROM	CODE	COMMENT OR QUESTION
1	WI DNR, Bureau of Water Regulation & Zoning Madison, WI	5/12/95	This letter summarizes the comments of a few people in the department, including the floodplain management program, on the March, 1995 draft Floodplain Management Assessment prepared by the US Corps of Engineers. As we stated previously, the assessment carries the burden of being a single agency report. Though you offered opportunities for input, our ability to participate was limited due to funding constraints and the fact that agencies other than the Corps of Engineers were not full partners in decisions. Therefore, these comments are the result of a minimal review and should not be construed as being comprehensive nor the limit of our concerns. While the report provides some useful information, it does not appear to fulfill the request of the Congress or committee. We do not fault the Corps for that, in fact, we feel the request could not have been met with the time frame and resources provided. It might be useful for the report to indicate what would yet have to be done to meet the Congressional requests, so Congress does not labor under a mid-impression. The data information and analysis necessary for local, state and federal agencies to fully manage the Upper Mississippi River "System" is not yet available. This report does, however, provide a good start in that direction, and with adequate time, resources and a "partnership" approach, the management options can be determined for the future of this major river basin in the nation. This report should be useful as a basis for future study by the Corps in its programs, and may provide some useful information to FEMA for some of its efforts in the future. Since it has a major focus on flood control and on the main stem, it would appear to have limited use at this point of development for state or local agencies in management of floodplains throughout the basin. It also has very limited "assessment" of state floodplain management programs. The discussion seems to focus on the "inconsistency" of state programs, as if that is a negative thing. State programs are inconsistent where a given state has developed its own program to go beyond the minimum federal program to address flood concerns and better prevent flood damages in that state. That is a strength, not a weakness. The disappointment is the lack of analysis of the different approaches used in different states and communities to determine which is most effective and efficient, so that information could be used as a basis of improving the ability of states and locals to reduce flood losses and to reduce the costs of flooding to federal, state and local governments. The document provided a good history of attempts to structurally modify the flow characteristics of the Upper and Middle Mississippi River basin. The report analyzes ways to protect existing development while still recognizing that when levees are constructed the flood risk is not entirely eliminated. In addition, the report identifies a major concern associated with levee construction in that levees induce increased development behind them. It also acknowledged that, as early as 1936, Gilbert White suggested land use planning as an effective alternative to structural modification for reducing flood damages. A major limitation of the report is that it focused entirely on the floods of 1993 and did not relate to the standards in place - especially protection of most development to the 100 year flood elevations. The floods of 1993 were unique, like all floods - they will never reoccur to exactly the same height or areal extent throughout the basin. This limitation was most obvious in the portions of the report related to

ID	FROM	CODE	COMMENT OR QUESTION
			state and local floodplain management and zoning practices. The report appeared to downplay the impact of state and local floodplain management and zoning practices by indicating that a significant portion of the damages occurred in areas outside the 100 year floodplain (the area at which state and local floodplain management programs are focused). The report mentions this on pp. 8-4, 10-24, and 10-29. The report should include some description of the extent that this was the case and an assessment of why this occurred. The report should include a map that identifies where flooding was above 100 year and also where it was above 500 year elevations. The report implies that all areas flooded were above 500 year elevation. In Wisconsin, only two very isolated areas had flood elevations that exceeded 100 year flood elevation. Some scenarios that should be evaluated include: * were areas mapped incorrectly? * were flood elevations above the 100 year flood protection elevations because of outdated hydrology? * were increased flood elevations caused by dam failures where the mapping did not include that as a risk factor? * were areas behind levees not mapped as floodplain even though the levee did not meet standards? In addition, the report needs to acknowledge that the depth of flooding and therefore damages in areas outside the floodplain were substantially less than areas in the floodplain or in areas flooded due to levee failure. Total damages in the following types of flooded areas: * within 100 year floodplain * within 500 year floodplain * outside of floodplain * protected by levee should be compared instead of just number of structures damaged. Various management options could then be explored. In addition, this information would be useful in another portion of the report in which it is identified that the damages to structures when a levee fails tend to be more severe. On page 1-8, the report states "the locks were ready for operation before USCG had determined the river to be safe for traffic". This statement seems to ignore a major aspect of the navigation system that is often overlooked. Although the locks may have been ready, the navigation channel (adequate depths) and navigation aids (gone or destroyed) were not. The USCG acted prematurely to opening the channel to commercial navigation before the system was safely ready to handle it. This resulted in numerous groundings and increased risk of accidents and spills. Further, the rush to dredge after these groundings resulted in "emergency dredging operations" and increased problems associated with dredge disposal. This study made progress on developing an unsteady state computer model for large river systems. Such a model is needed. Before the modeling done in this study can be used, the work needs extensive review by experts in the nation and states. Until that is done, the states and FEMA can not accept it for mapping flood hazard areas and using those maps for floodplain management. It will also be necessary that some agency agree to be responsible for completing and maintaining such a model, just as all acceptable national computer models are handled now. Perhaps the Corps is a

ID	FROM	CODE	COMMENT OR QUESTION
			logical agency to do that. On page 10-24, the third paragraph discusses the "risk based" design approaches to structural flood protection projects presently being proposed by the US Army Corps of Engineers. A more detailed explanation of "risk based" design should be included. Considering the catastrophic damages that occurred due to the floods of 1993, the report should discuss the "risk based" design proposal in more detail. How would levee heights have been impacted by a "risk based" design criteria? The summary and findings should include a discussion on "risk based" design. In the last paragraph of the summary on page 10-31, appears to be a summary of the summary. This paragraph should be expanded and highlighted so that it is easier to read. Due to the significance of "risk based" design and especially since it is something that is primarily under the US Army Corps of Engineers control, the conclusions in this paragraph should be specifically discussed in relation to implementation of "risk based" design. The statement that the number one lesson from the 1993 flood was that large amounts of damage associated with extraordinary flood events are unacceptable would seem to contradict the concept of basing levee design height on the amount of structures protected. In addition, "risk based" design does not take into account the induced development (that is discussed earlier in this section) behind levees that will increase the risk of flood damages over time. In the evaluation portion of the report, it was unclear how the scenarios (changes in policies/programs) were selected. For example, in the section of state/local programs, the discussion focused on legislative changes that have occurred since the floods of 1993. Since there were none, very little discussion was included. Additional discussion should have been included regarding the willingness of local government to enforce floodplain regulations already in place. Additional scenarios associated with increased federal monetary support of state floodplain management programs should have been included. On page 8-4, the report states "All the states could benefit from readable products for local governments to use in developing their floodplain management regulations." What "products" are being referred to? The product most needed in Wisconsin, is large scale floodplain mapping. A scenario in which such mapping is provided to local government should have been included. Improved mapping for local government should be included as an effort of value on page 12-5. We mentioned this specifically at one of the public input sessions. In item 1 on page 8-4, the sentence "a large portion of the damages were to structures outside the floodplain" is followed by the sentence "Many of the structures in these communities are, therefore, nonconforming or historically significant." It is unclear as to how these two sentences are related. We recognize that the document had several authors which can inhibit the "flow" of the document. As a result, we found the document difficult to read. We suggest that the "scenario" descriptions and the evaluations of "scenario measures" should follow each other - likewise for description of action alternates and the evaluation of action alternatives. We found the matrices developed difficult to

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			interpret and feel they could easily be taken out of context. For instance it is unclear why state floodplain management and zoning went from a low to high associated with scenarios 1 and 2 respectively. More narrative regarding the matrices and clearer indices identifying the abbreviations used would be helpful. Scenario III on page 8-6, suggests that state governments as well as federal agencies be required to meet the standards in Executive Order 11988. Wisconsin already has such a requirement - via an executive order issue by the Governor of the State of Wisconsin. We believe the discussion on wetland restoration is misleading. On page 12-2, the report indicates that modeling showed that reducing runoff from upland watersheds by 5 and 10 percent would have lowered the flood stages by 0.6 and 1.3 feet respectively. The report then states that wetland restoration measures would not have achieved this level of reduction for the 1993 event due to extremely wet antecedent conditions. The first paragraph on page 12-3 states that depressional areas are normally already full of water during a major flood event. The conditions existing during major flood events vary substantially. A statement that depressional areas are normally full needs justification and supporting documentation. The report should include a discussion of the impacts for the entire range of events - from annual to the flood of 1993. We suggest the following statement: "The Flood of 1993 was an extreme event and it is questionable whether increased wetland storage would have reduced flood stages since a prolonged period of rainfall in the fall of 1992 and the spring of 1993 filled much of the flood storage areas. Increased storage would have more impact on more typical and/or more frequent flood events." As indicated earlier, it was good to see a recognition of catastrophic damages and induced development that occur behind levees. Other costs discussed in the report appear to lack foundation. An example seems to be the costs identified for raising the levees, where we were unable to find supporting data. The report does not have information on comparing the economics of the various approaches, which would seem necessary before they could be used. It is not clear who the Corps thinks will use the report. If key decision makers in Congress and the Administration are the audience, some modifications in the way the findings and recommendations are presented will be necessary. The document is too detailed for that audience. Perhaps a bridge document, which talks in different terms, would be useful for such an audience. The Corps could work that up separately, and continue to use this report as background and as a starting point for further "partnership" study efforts to determine future management options.
2	MN DNR, Environmental Review Section St. Paul, MN	5/12/95	This document is without a doubt one of the better documents the Corps has ever written in terms of evaluating a wide range of policy options for dealing with flooding problems. The analysis task was massive, the findings are thought-provoking. The conclusions are wide ranging and go far beyond COE traditional authorities. It is our hope that the Clinton Administration and the Congress use this document in conjunction with the Galloway Report to make some serious changes in flood control and river management policies in this country.

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			Specific Comments Executive Summary - This seems pretty weak given all of the material in the findings and conclusions in the main text of the report. P. 8-13 Federal Costs could have been reduced by limiting cost-share to 75%, but the odds are that a lot of the acquisition/relocation projects that have been or will be completed would not be accomplished. P. 8-13, paragraph 4 IHMT Reports have had a tendency to take a "shotgun" approach to flood damages rather than identifying specific implementable projects complete with funding. As an example in the 1989 Red River Flood, the F&WS was adamant that wetland restoration had to be included in the IHMT Report, but they had no funding and no specific program for joint funding to accomplish wetland restoration at the time. If recommendations about mitigation are going to be made and approved, then a realistic program for implementation and funding for implementation must also be included. P. 8-27, paragraph 5 Why should farmers get subsidized rates for Crop Insurance? For that matter, why should floodplain residents in pre-FIRM homes get subsidized insurance? Subsidies are fine while new programs are being initiated, but over a period of a few years these should become actuarially rated. Why should taxpayers that make wise decisions about where they live be penalized because others do not! The NFIP flood insurance program has been around for 25 years and many, if not most, rates are still subsidized. As far as cropland is concerned, there is an assumption that floodplain land should cost less because of the flood risk, and this difference in cost should help to offset the cost of disaster insurance. Agriculture is an acceptable and even encouraged use of floodplain areas in many cases, but there are risks involved and society at large should not have to pay for these risks. P. 8-29, paragraph 2 No new levees or repairs of badly damaged levees should be allowed riverward of the edge of the floodway. Unfortunately most rural areas in the country do have designated floodways from FEMA, and few states or communities require levee developers to designate a floodway before levee construction begins. A final problem is that many agricultural levees are built in pieces and there is little effort to plan for or model a consistent level of protection from the head of a watershed to the mouth. P. 8-29, paragraph 4 Municipalities, counties and sometimes townships are primarily responsible for administrating floodway regulations. P. 8-29, last paragraph Why have private or local levees been allowed to decrease the level of protection of federal levees without providing compensation or improvements to the federal levees? In Minnesota, a huge fear

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			is that floodway encroachments could cause a reduction in the level of protection provided by a certified levee and thereby recreate the need for flood insurance and regulations in areas that have been provided high levels of flood protection. P. 8-34 * National Flood Insurance "voluntarily participated" may be an overstatement. "Coerced to participate" may be more realistic. * Are there any positive inducements rather than penalties that could be used to encourage communities to participate in the NFIP? * As soon as disaster assistance of flood insurance payments are made for a property, the property should automatically be mapped as a floodplain. GIS and GPS capabilities should make this quite possible. * There are still too many properties that should have flood insurance that do not have mortgages because they are paid off or because the property was purchased under a contract for deed or with private financing. Some way needs to be found to require insurance for non-mortgaged properties. Of course, avoidance of floodplain areas in the first place is the best solution for most homes, businesses, and land use. P. 8-37, 8-hh Anything we do costs money. What criteria do the authors suggest for evaluating these programs? P. 9-32, paragraph 2 It is good to see a reasonable approach taken to the flood control benefits of wetland restoration on a large basin scale. There may be large flood control benefits for wetland restoration in small watersheds. There may be good benefits from wetland restoration for smaller storms or floods for somewhat larger watersheds. There are also a lot of other good reasons to restore wetlands, but the benefits of wetland restoration for large floods, over large watersheds, have in the past been oversold. 2.5 million acres of wetland restoration at a cost of approximately $1000 per acre for 1 foot of flood stage reduction seems excessive just for the purposes of flood control. It was noted, however, that you emphasize that there are many good non-flood control reasons to continue to restore and protect wetlands and that these in combination with flood control benefits may make wetland restoration very desirable. Maybe COE, FEMA, EPA, SCS and F&WS should develop a joint program for wetland restoration rather than individual programs emphasizing single benefits. P. 9-42, paragraph 3 Since when is 50 year flood protection with 3 feet of freeboard a "relatively low level of protection for agricultural land"? There are communities all over the country that could really use this level of protection even if flood insurance and regulations were still required. In Minnesota, agricultural levees have usually been thought of as providing 10-25 year flood protection! What is an appropriate level of protection for urban and rural areas? We cannot always construct flood control projects for the worst case scenario. P. 10-2, paragraph 3

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			Since when are the only components of an integrated comprehensive river system navigation and flood control? What ever happened to ecosystem management, recreation, aesthetics, etc.? It is no wonder that the Upper Mississippi River states are leery of the Galloway Report recommendation for a Lower Mississippi River System model for interstate coordination, planning and implementation. P. 10-3, paragraph 2 If levees are the selected alternative for flood protection, a system of 50 year protection for agriculture and 500 year protection for developed areas seems to make good sense. At least it is a planned system. There are, however, the looming questions of residual risk and induced development behind levees. P. 10-5, last paragraph In theory, a good system-wide flood control system should start at the top of the watershed and work down in order to insure some sort of consistent level of protection. The fact that the flood protection system for the lower Mississippi is already in place, puts potentially severe constraints on what can be done on the Missouri, Middle and Upper Mississippi Rivers. P. 10-6, paragraph 1 The Middle Mississippi River may not be "stable" in an engineering sense, but may be trying to establish stability in a geomorphological sense and possibly in an ecological sense. P. 10-15 FEMA allows floodway encroachments that cause up to 1 foot of stage increase in the process of designating a regulatory floodway. There is no FEMA requirement that homes be elevated 1 foot above the 100 year flood elevation. The .1 foot of flood stage increase due to floodway obstructions is not familiar. FEMA does allow homes and businesses to be built in the floodway as long as they are elevated and do not cause a stage increase. It does not make any sense to allow homes and businesses to be constructed in floodway areas. There are many improvements still needed in state and national floodplain management programs. P. 10-16 Minnesota does not require "state permits" for floodway or floodplain development. These are administered locally based on minimum state standards. P. 10-18, 10-K 10-I Any community is eligible to participate in the NFIP. You are probably referring to communities that have been notified that they need to participate because of the presence of mapped floodplain areas within the community. P. 10-19, 10-U This is essential for a meaningful and timely response to disasters. Adopting uniform application forms and environmental review procedures would be a huge first step.

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			P. 10-20 It is our understanding that the Donnelly data has been largely discredited. Minnesota does not have 98,000 floodplain structures. Estimates made in the 1970's indicated approximately 17,000 structures in the floodplain subject to flooding. This number has probably been reduced by 3000 to 4000 structures due to acquisition/relocation and federal/state/local flood control projects. P. 10-23, last paragraph It is very important to stress that no matter what level of protection is provided by whatever means, there is still some risk to development located in a floodplain. P. 10-24, paragraph 2 There are a lot of areas with known flooding problems that have not been officially designated as floodplain areas. People in these areas would not buy insurance if there was not a known risk. If the people know it, FEMA should most like map it and set rates accordingly. But then FEMA has not for a number of years been aggressively pursuing improved mapping. There appears to be much more interest in selling insurance policies than in providing good floodplain management information to individuals and local governments. P. 10-25, paragraph 1 * We greatly appreciate the honest appraisal of some of the shortcomings of structural flood control projects that have been a mainstay off the COE for many years. * For many years one of the attractions of COE flood control projects has been the removal of floodplain zoning and flood insurance requirements once the project is completed. It is unlikely that many projects would have been built since 1968 if these requirements would not have been removed. P. 10-34, Findings It should also be mentioned that refinement and extension of the UNET model could be (will be) extremely expensive. The model has some very interesting capabilities, but our experience on the Red River is that you need to have a huge budget to develop and use the model. P. 10-38 The discussion of sedimentation is very interesting and informative but does not seem to fit with the efforts of the EMP to open up and restore backwater areas in the pools of the Upper Mississippi River that have been cut-off or filled in with sediment. Who is right? In conclusion the Corps of Engineers is to be commended for producing a truly outstanding review of the benefits and detriments of past and present flood control policies and laying out some old and some new directions for the flood control policies of the future. This is one of the more extensive analyses of structural and non-structural flood control measures ever to have been written by the Corps of Engineers.
3	IA DNR, Water Resources Section		This letter provides our comments on the March, 1995 draft "Floodplain Management Assessment" report.

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			In general, the report does a credible job of documenting the 1993 flood and historic development aspects of the Mississippi River basin and floodplain as well as answering some key questions concerning the impact of basin and floodplain development on flood discharges and levels, especially as they relate to a flood of the magnitude experienced in 1993. Although Department staff did not have the time to conduct an in-depth review of the methodology used to assess the impacts of various floodplain management scenarios, none of conclusions reached in this regard appear to contradict previously held Department views on the causes and effects of the 1993 flood. In this respect, the assessment validates the view that while structural flood control measures are an important part of an overall floodplain management program, they have limitations and floodplains are best managed through a combination of structural and non-structural measures that fully recognize the inherent risk of occupying flood hazard areas. A review of the report findings and conclusions will leave even the most casual reader with the sense that there are no absolutes regarding the management of the Mississippi and Missouri River floodplains. The report is unlikely, in and of itself, to answer the question of what the federal government's future role and policy should be or what the needs are but the report does demonstrate the necessity of evaluating alternatives from a basin perspective through the use of models such as UNET. Too often in the past, projects have been evaluated on a site-specific basis. Perhaps one of the greatest strengths of the report is to demonstrate that there are no simple answers and that management alternatives must be evaluated from a basin perspective. The title of the report is considerably broader than the product the assessment delivers. It might be better to characterize it as an evaluation of the flood of 1993 and the impact selected management changes would have for a similar flood in the future. A major issue that the assessment did not address adequately is the benefit of sound local and state floodplain management programs, both in terms of the 1993 flood as well as lesser magnitude and more frequent events. We feel the assessment should have attempted to determine the benefits of such programs. Undoubtedly, there were areas that experienced substantially less damages during the 1993 flood (even where flood levels exceeded the 100 year flood level) than what would have occurred if development had occurred in the absence of state or local floodplain management regulations over the last 20 or more years. The assessment should have attempted to identify several areas where floodplain management regulations have been in effect over the past 20 or more years and compared damages in those areas to areas that have allowed uncontrolled floodplain development to provide a qualitative if not quantitative assessment of the benefits of floodplain management regulations. We recognize that time and cost limitations may have prevented a more thorough examination of all alternatives but, at a minimum, the report should clearly point out that the assessment was not a comprehensive evaluation of all floodplain management alternatives and should point the reader to documents such as "A Unified National Program for Floodplain Management" or "Floodplain Management in the Untied States: An Assessment Report" for a more comprehensive discussion of floodplain management alternatives. As it is, a reading of the report's findings and conclusions leaves the reader with the strong impression that reservoirs and levees are still the floodplain management alternatives of choice.

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			A discussion of flood risk would also be of benefit to most readers. The 1993 flood was an extreme event, which the report acknowledges, but little additional information is presented as to how extreme the event was. Discussing management and the level of risk that is considered acceptable for structural flood control projects of the level of risk reduction the government should provide. Policy decisions on future management should not be made solely on the basis of the 1993 flood and a full understanding of the entire risk spectrum is needed to make intelligent decisions. Some more detailed issues noted in our review are as follows: * It would also be useful for the Corps to complete an inventory of critical facilities in the study area, since they would logically be included in future studies. * In the discussion of flood fighting, it would be worthwhile to recognize the difficulty of limiting actions as suggested in Chapter 9 without strong prior agreements at the highest level. * On page 9-41, levees with overflow weirs are discussed with the need to have prior understandings with landowners. It would appear logical to discuss whether some form of compensation or easement might be appropriate. * While the conclusions talk about the effectiveness of storage reservoirs in the mix of detention measures, it is worthwhile to note that the analysis of the effectiveness of other possible reservoirs is not that promising. * On page 10-15, it is stated that the FEMA model ordinance restricts development to uses that will not create more than 0.1 ft. of rise and requires that structures be elevated or floodproofed to at least one foot above the 100 year flood level. NFIP regulations limit floodway development to uses that do not create any rise in flood elevations and only require structures to be elevated or floodproofed to the 100 year elevation.
4	US Dept. of Transportation Great Lakes Region Des Plaines, IL	5/5/95	This report is a very valuable historical tool and is interesting in its limited scope. Unfortunately, there is no identification of management strategies and their impact on the river transportation industry. Certainly the river vessel owners were impacted. Some towboat industry estimates claimed revenue losses of $1.5 million per day. The dislocation of barge and towboat equipment took several months to correct after flood waters receded, causing further financial damage to the vessel owners and users. The river channel seemed to have a mind of its own for months after the flood waters receded causing delays for towboats and barges while waiting for COE dredges to clear the obstructions. US Coast Guard established regulations for towboat operators that created smaller less efficient tows until the flood waters receded. Loading facilities along the river were shut down and damaged along with commodities in storage. This impact was felt by producers, shippers, and receivers in domestic and international trade. This also affected employees of towboats and river terminals. Numerous shipments intended for river transit were either held or rerouted at substantial additional cost. Other modes such as rail and truck were unable to meet the shippers demands due to flooded roads or rails. The Flood of 1993 had a drastic impact on commercial navigation and users of the waterway navigation industry. This transportation impact should be included in your Floodplain Management Assessment and future recommendations for development and control of river structures and operating policies.

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			In addition, your assessment should look at a broader picture of intermodal land transportation and the impact on domestic and ocean shipping. During the flood we surveyed numerous ocean vessel owners such as Sea-Land, American President Lines, Matson, etc. to determine if their container cargo crossing the Mississippi River Basin was affected by the flood. We found some serious impacts such as ocean vessels idled at docks without cargo or cargo rerouted to more costly circuitous routes in order to continue the flow of commerce. Maritime container cargo to Hawaii and Alaska were disrupted during the flood. In some cases, food cargoes were damaged by the delays. In other cases, container movements were disrupted due to the rerouting that caused manufacturing plant schedules to be disrupted. In general, intermodal transportation was seriously impacted where railroad bridges and right-of-ways along with highways were closed due to the high water during the flood. Your assessment includes recreation, agriculture, airports, power plants, water treatment facilities, and other interests. I cannot understand why you did not treat transportation by barge, rail and truck in your study draft. Please let me know the reason for excluding transportation.
5	US EPA, Interstate Rivers Section Chicago, IL		The draft Floodplain Management Assessment (FPMA) Report, which you provided on March 31, 1995, has been reviewed by this agency. Discussions at the May 2, 1995 Coordinating Team Meeting regarding the Report and the reports on the comments received during the round of public meetings assisted me in preparing the enclosed comments on that document. Several changes have been made from the draft document I provided prior to the meeting. As an overall summary, it is noted that although the authorizing language directed the Corps of Engineers to analyze flood control measures and floodplain management needs, the title chosen reflects the latter aspect. While some portions of the report begin to assess how the floodplain could be managed to preclude a recurrence of the 1993 disaster as well as being restored to an environmental asset managed as a sustainable resource, by far, the preponderance of the report addresses how the flood events can be controlled. As was discussed at the Team meeting, there are three major concerns that the Corps must address as the document is presented to those who may rely on the conclusions as follow-up actions are taken. First of all, it must be emphasized that the conclusions are based upon one major event, while decisions should be based on the cumulative results of analyzing the entire range of flooding events. Secondly, the Report clearly identifies that major damages in urbanized areas were avoided because of the failure of agricultural levees despite flood fighting efforts. To follow through, it is essential that a forecasting model be refined so that the appropriate degree of protection to existing agricultural lands, including timing of flood fighting, be defined within a total river management concept. The last point is that while the Report supports the concept that restored wetlands are not an asset to conveying the large floods (and over time wooded wetlands could even inhibit conveyance) the real value of wetland must be assessed in terms of damage control and environmental integrity of the floodplain. By looking at only the one event, this Report does not provide an appropriate analysis of wetlands restoration, and it must not be alluded to as the

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			authoritative reference document regarding this aspect of floodplain management. While your staff is to be commended for preparing the report on a tight schedule, it is unfortunate that even with this schedule, many decisions have already been made to repair levees to the point where most of the alternatives considered are unrealistic.
6	Sierra Club Piasa Palisades Group East Alton, IL	5/10/95	I attended the public meeting in Alton, Illinois on the draft assessment. The meeting was the most unprofessionally run meeting I have ever attended. At every other Corps meeting I have ever attended, the Corps employees were introduced. At this meeting, one of the Corps employees kept speaking up on several issues. Several requests for this employee to identify himself were made. He refused to tell the public who he was. After the meeting, I again asked him who he was. He rudely told me the meeting was over and he did not have to talk to me. But he gave me his card. He was John Perulfi. I also asked for a copy of the study at the meeting. I was told the District only had one copy of the study! At the meeting the Corps was making absurd claims. The Corps indicated that wetlands did not impact the flood of 1993 since they were all full of water. I asked for clarification and pointed out that over 80% of the wetlands in the watershed of the area that flooded had been destroyed. I also pointed to the Illinois Water Survey Study that found a direct relationship between the loss of wetlands and increased flood heights. The Corps explained that the loss of these wetlands had no impact on the flood since the remaining wetlands were all full. I persisted and asked for more clarification. (The Corps had been describing wetlands as sponges.) I said if 100 years ago you had 100 sponges that could each 1 gallon of water and you poured 100 gallons of water on them the sponges would hold the water. If today you only had 20 sponges left and your poured 100 gallons of water on them you would have one hell of a mess. But the Corps explained I just did not understand. It did not matter since all the wetlands were full of water. I then explained that if there used to be a wetland where the hotel we were in is, the wetland would have provided flood storage. I pointed out with the gutters and storm water drains, the hotel no longer provides flood storage, it all drains away. The Corps told me I was wrong. They said a hotel provides just as much flood storage as a wetland does! This demonstrates the people doing this study are incompetent. May we suggest that the St. Louis District people be directed to leave their computer models and go outside their building and watch what happens the next time it rains. The report also makes erroneous claims about the importance and impact of wetlands on flooding. The report incorrectly concludes: * Restoration of such wetlands would not have impacted flooding in the lower floodplain reaches because most depressional areas were already full of water throughout the watershed, as normally occurs during flood events. Assessment at 6-28 The draft assessment contradicts this claim by stating: * Also, the extremely wet, cool, conditions had drastically inhibited spring planting in some areas,

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			resulting in little vegetation in the fields of this heavily farmed region. This further exacerbated the flood conditions as it reduced soil moisture hold capacity and left little vegetation for evapotranspiration. Assessment at 6-8 Wetlands do not need to be planted. If the wetlands had not been drained and converted to farm fields, they would have held much more water and would have provided evapotranspiration. Thus, the conclusion is in error. On page 6-16, the Assessment contends that wetland restoration would not have an impact. This is based on the premise that all the depressed areas were full of water in the Flood of 1993. The Corps seems to have forgotten what happens when a wetland is filled and destroyed. When a wetland is filled in to build a shopping center, house, or road, the ground is filled in. There is no longer a depressional area to store water. It does not take a rocket scientist to figure out that the water that used to be in the wetland has to go somewhere else, which means higher flood levels. The Corps wants us to believe that when a wetland is filled in the water that the wetland used to store magically disappears. In summary, the Corps claims about the influence of wetlands on flood heights are simply not true. Please include correct information in the final assessment.
7	Marion County Highway Dept. Salem, IL	4/17/95	I have read your Public Notice, dated April 3, 1995, announcing PUBLIC MEETINGS REGARDING THE FLOODPLAIN MANAGEMENT ASSESSMENT ON THE UPPER MISSISSIPPI AND THE LOWER MISSOURI RIVERS, the Executive Summary and Chapter 12 - Conclusions. I am a civil engineer, having been in County Highway work for 38+ years. I have been responsible for bridge and culvert design, construction and maintenance for this time. In Illinois, we have used the USGS Regression equations and the Hydraulics of Bridge Waterways, USDOT, September 1970 and in later years WSPRO to determine the necessary waterway openings for our structures, and the backwater caused by our structures. As a matter of interest, whenever we received a "design rainfall" amount in a waterfall, I checked the water elevation. I can verify your conclusions that the saturation of the soil and the "n" value, the roughness of the surface over which the flood flows are two very significant factors. I further concur that the wetlands even if drained and farmed especially in the floodplain do not significantly impact the flood elevation, in fact if empty, they would serve as flood water storage areas at low flood stages. As far as the timbered floodplains, old growth timber with less understory growth would have a lower n value, hence faster flow, than say a corn field, at lower flood elevation. So, whether the land is farmed or in timber, really is rather immaterial as far as downstream flooding, it seems to me. I further agree that floods are a natural occurrence. Levees are a good protection up to a certain stage flood, then above that (100 year, 500 year or whatever is justified) we just have to expect the floodplain to be a floodplain.

GENERAL COMMENTS FROM APRIL MEETINGS

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8	Allie J. Lymenstull Quincy, IL	5/3/95	The fraudulent Floodplain Management Assessment! This has been a $2,000,000 waste of taxpayers money because it is a fraud. How can this be called a Floodplain Management Assessment when there is no accounting for the billions of taxpayer dollars spent on so called flood control, levee building, reservoir building, etc., which were contributing causes to the great flood of 1993. No mention of the thousands of acres of land taken out of production and flooded permanently, under the guise of protecting other land downstream from occasional flooding and the cost to the taxpayers of doing this. How can an honest, accurate, intelligent assessment be made unless these figures are indexed into it? It can't be done, ask a CPA. On pg. 12- "The assessment will focus on the floodplain of these river reaches, generally considered to be the 'bluff to bluff' area. This is the correct description of the floodplain, but the beginning of the floodplain elevation must be identified at various reaches of the river, and all other figures, their so called 25-yr50yr-100yr-500yr-Standard Project Flood numbers, relating to any flooding must be indexed to it . The present use of these numbers are misleading, false and fraudulent since they don't index to the beginning of the floodplain and the floodplain. They don't relate to floodway, engineered and manufactured by the Corps of Engineers, not the floodplain and should be so stated. Why aren't the total sums of tax dollars spent on each drainage district shown, so a true cost perspective can be shown. Example- South Quincy drainage district, Index the 1939-1954 expenditures: 1939 - $61,200; 1954 - $1,231,000; 1992 - $10,500,000; 1995 - $880,000. To inflation and today's costs and the Taxpayers have paid about $5000 per acre for this district. This does not include yearly sums by Corps districts. Show the same totals for all districts on the river. Show the totals expended on these districts by the Corps, FEMA and Dept. of Agriculture relating to the flood of 1993. Until and unless all of these expenditures are figured in this assessment it won't be truthful and realistic. No private business would tolerate such and incomplete, inaccurate assessment, why should we taxpayers? Show how many businesses, industries and cities were flooded out due to raising agricultural levees. These damages should be indicated separately and those districts responsible for this illegal flooding of those businesses, have to compensate them. Why wasn't the flood of 1851, in the Quincy area of the river, used as a reference point in it's relation to the 1993 flood? It's volume was about 35% greater at stage 22.7, while the manufactured flood

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			stage of 32.3 in 1993 shows how raising levees caused considerably more damage to businesses and industries not in the floodplain. 9.5 feet lower stage with 35% greater volume - this shows what a poor job the Corps has done with their so called flood control. Basic problem on the Upper Mississippi River, the Corps has built a 5 gallon bucket and are trying to put 10 to 15 gallons of water into it, this is physically and mechanically impossible. This "floodplain management assessment" should not be done by the Corps of Engineers, since it's a conflict of interest, studying their own mistakes and engineering, what kind of an assessment can we expect. Don't depend on it.
9	Allie J. Lymenstull Quincy, IL	6/29/94	The Great Flood of 1993 Engineered and Manufactured by the Corps of Engineers and Congress, paid for by the taxpayers. Let's look at some of the statement or mis-statements made in the past months relative to the river and the 1993 flood. Quincy Herald Whig Sun, March 6, 1994, John Robb has it all figured out for the taxpayers to pay for raising all levees from Minneapolis to Cairo eight feet, at a cost of 1.8 billion dollars. He didn't mention how many more billions would be required to protect all the cities, businesses, industries and homes this would flood out. He didn't mention how much the taxpayers have already spent on this gigantic pork barrel project. Raising levees that much will require every city along the river to rebuild their sewage systems, their water plants and most other facilities near the river. Who would be flooded out at Quincy? Gardener Denver, Celotex again, Quincy Water Works, Frese Iron and Metal, Comstock Castle again, SSBC again, MSBC, Quincy Ready Mix, Duesterhaus Fertilizer, Quincy Boat Club again, Bayview Storage again, Quincy Sewage Plant, all other businesses and homes and camps along Front Street, Bay view drive and North Bottom Road. All so called "flood walls", Canton and Hannibal locally, won't be high enough. Every city from Minneapolis to Cairo, IL would be flooded out. This 1.8 billion cost just to protect dirt, which Mother Nature put there for an expansion valve for the river. The Corps has spent hundreds of millions of dollars on these through the years and results were 15 to 30 billion dollars in damages in the 1993 flood. Was this a good buy? For whom-Not the taxpayers. If a private engineering firm would have designed and built this they'd have been sued for

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			incompetence and poor engineering. Where is the safety factor on this-there is none. Have you heard of any one mention that the largest volume of water to go by Quincy was the flood of 1851, a volume approximately 35% greater than in 1993. The river stage was 22.7, not the manufactured level of 32.2 in 1993. Nine and one half feet lower, and moving down river it's full width. Hull, Alexandria, Quincy and many other towns were not flooded out as in 1993. It's past time that the Government Agencies and their personnel be held accountable for these costly mistakes and damages as a private firm would. I don't want anyone to get flooded but this is going to have to be addressed with sound economics and proper engineering, with proper safety factors. How many innocent people and businesses, not in the floodplain, were flooded out in this manufactured flood of 1993, thousands of them. Is FEMA and the Corps and other Government Agencies and Drainage Districts going to pay for flooding them out-don't hold breath waiting for it. They should have to, they caused it. Building levees back approximately 1 mile on each side would provide enough running room for the river. This land could be farmed most years but would be subject to the river flooding-so cities, businesses and industries are not flooded. Approximately 50% of the bottom lands (floodplain) could be farmed as it is now and not have to be worried about flooding. Of course Mother Nature could still throw us a curve and flood out everything. Remember our bluffs were once Coral Reefs in a large sea. Had levee been back one mile, river stage would have been approximately 23 feet, minor flooding of some Quincy businesses along river. Two miles back approximately 20 feet stage, no flooding of industries or cities along the river. Had there been no levees on the river, with river free flowing, and only the "floodplain" to be flooded, river stage would have been in the range of 17 ft to 18 ft. Increasing capacity by moving levees back is the easiest and most practical way to prevent this type flooding and provide proper safety factor. Otherwise drainage districts should be required to carry liability insurance to compensate those cities, factories and businesses they are flooding out.

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10	Scott Bumselmeyer Pegognea Fountain Bluff	5/11/95	This letter is in regards to the Floodplain Management Assessment Study. This report was very helpful in many ways. Many falsehoods relied upon by the environmental community were proven untrue by the report. Vast wetlands would not have made any difference on the flood height. Also no levees with natural vegetation would have produced similar flood heights. The area of the report that I have trouble with is the model of all levees surviving would cause a seven foot higher crest at St. Louis. This model cannot be correct and it needs to be reviewed and verified by the Mississippi Basin Model or by the flood flows of 1993. Thank you for all the work that was compiled in the report.
11	Upper Mississippi Flood Control Association Gladstone, IL	5/8/95	Please find enclosed, comments which were given to the St. Louis and Kansas City Districts during the public hearings. In addition, I will offer the following observations. Many of the study findings are very helpful toward elimination of ideas that do not have any basis in fact, such as, "wetlands do not effect major floods." However, the continued statement of the Corps which are entirely biased toward the environmental view, FMAS 9-14, "In areas where annual flooding is allowed to occur unhindered, the bottomland farm fields are rich and require little supplemental fertilization", are absolutely not true and only add to the animosity between Urban and Agricultural interest, which the environmental industry has carefully nurtured. In the St. Peters meetings, Marvin Meyers of the Missouri River Bottoms, gave the exact analysis which he had conducted of silt and sediment deposited on his farm, by the 1993 flood. The analysis were very deficient and not suitable for modern agriculture. Maybe the Corps environmental consultants are confused by the needs of another environmental dream, "sustainable agricultural," which produces yields of 50 years ago, 50 to 60 bushel corn, compared to the needs of modern agricultural, 150 to 200 bushel corn, and will bankrupt the farmer and starve America. On my farm, in the Mississippi River bottoms, near Gladstone, Illinois, which flooded in 1993, I applied 400 pound per acre of potash to 300 acres of soybeans and wheats, in 1994. Will the facts, of Mr. Meyer's soil analysis and Mr. Robb's fertilizer application, be printed in the FMAS or will the Corps elect to stay with biased theory provided by biased environmentalist? The FMAS goes far afield to justify "floodplain management", but does not attempt to identify and evaluate for the American people, the billions of dollars needed to transform the viable economic systems now in place, because of flood control, into a system of "floodplain management", or the billions of dollars lost because of the prohibition against development along Midwest's link to World

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			Trade. The report clearly states that the river will meander in the Middle Mississippi and the Missouri River, without bank stabilization afforded by the levees, and in the Lower Mississippi flood control and navigation are one mission. How can these statements be made, while the same report makes it very clear, that the Upper Mississippi does not need levees to prevent the river from meandering, and what about the Illinois. In all these areas the water and soil are the same. Where are the values for support of the navigation system, and the loss to the national economy? How about the additional expenses of very expensive maintenance and eventual loss of navigation, if the levee systems are abandoned, or diminished, to allow flooding? Please refer to item 5 of the attached comments. The UNET Model which has been used in the FMAS to predict flood stages, of 1993 flows with levees adequate to prevent flooding. The UNET Model has been calibrated by past flood events and by physical model test of the 1973, 1982, and 1983 flows at St. Louis. The UNET Model has not been calibrated with the 1993 flows, 20% greater, and a levee configuration adequate to have prevented the 1993 flood. The UNET Model was calibrated to actual events and physical tests, which in layman terms means tweaked, adjusted, altered, to actual facts. How, someone tell me, can a theoretical model be adjusted to facts, if there are none? In the public hearings, request for the Corps to perform physical modeling to confirm the UNET Model was explained as unnecessary. Surely, an engineering company, is not satisfied to publish information which is already being taken by the public as factual, without proving that the theory can be proven by nature or in the laboratory. The animosity being built by the environmental community, between the citizens along the Midwest major rivers, will be increased if this report implies a threat to the urban areas if agricultural levees are improved, see "Flood Threat Pits Farms Against Cities", St. Louis Post Dispatch, May 7, 1995. Surely, an engineering company can realize the implications and devastating impact upon the future of local and national economies of these positions. A report with this magnitude of impact, must not be filled with unsubstantiated opinions or cut short by political agendas, and must be, as nearly as possible, proven by solid engineering methods. The UMFCA respectfully requests that the alternative of levees along the major navigable rivers, adequate to prevent the 1993 flood, be verified with physical models at the Waterways Experiment Station in Vicksburg, Mississippi. Please, forward copies of all appendices and other papers and references, used to verify this report. Upon completion of the final draft, please forward the complete report with all attachments.

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			The continued concern and consideration by the United States Army Corps of Engineers, of our concerns and ideas is appreciated.
12	The Wetlands Initiative Chicago, IL	2/27/95	Nancy and I appreciated the time you and your staff spent with us discussing the Upper Mississippi Floodplain Management Assessment. I welcomed the opportunity to explore, in depth, the hydrologic work you are doing and I look forward, at some later date, to reviewing the results. I remain concerned, however, about the hydrologic and hydraulic analyses that you are performing relative to the effects that wetlands may, or may not, have on flooding, since these tools do not take into consideration the spatial and temporal effects that wetlands exert on the hydrological cycle. In regard to this concern, I offer the following: While wetlands can be found at almost any landscape setting from hillsides to coastal plains, the significant wetlands relative to flooding are generally founding and amount low gradient landscapes. As the water generated by the uplands moves through these landscapes, it forms and sustains marshes, lakes, sloughs and streams. Whether palustrine, lacustrine or riverine, these wetlands convey, store and distribute water. In earlier times, in fact, they dominated the hydrologic structure of North American streams. The functions and values of aquatic ecosystems -- flood storage, water quality maintenance and others -- are tied inextricably to the hydrologic components of wetlands. Regardless of wetland type, water encompassed in these landscape units is subject to numerous hydrologic processes: interception storage, evaporation, infiltration, percolation, surface and groundwater storage, evapotranspiration, groundwater recharge and discharge, and streamflow. To represent these components as independent, separate, conservative (no losses) functions at any juncture within this complex hydrologic hydraulic system, is to misrepresent reality. These components subtract or add to their effect at every storage node and step along the flow path. As the water moves down landscape, into and through adjourning wetlands and along sloughs, streams or rivers, the hydrologic processes continue to operate. Significant quantities of water are trapped on the floodplains and in back-water areas, while vast quantities are evaporated and transpired from surface waters and removed from ground water and soils storage by evapotranspiration. Some water leaves the system through infiltration and percolation while other water returns from the soil and ground water storage. Even in incised streams, these processes continue to operate, albeit at a reduced level. In larger watersheds and where hydraulic efficiency is low, the hydrologic processes have more time to act and affect the overall yield and flow distribution. These effects can be readily observed in recorded streamflow: for example, compare the flow of the Mississippi River north of St. Paul with the Minnesota River at Minneapolis, or contrast the yield of an agricultural watershed with that of an urban watershed. In the case of an agricultural watershed, the yield may be perhaps eight inches per year whereas, in an urban watershed, it can be higher than twelve inches per year. To analyze the effects of wetlands on the hydrology and hydraulics of a watershed, the analytical

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			procedures must reflect the related physical processes. For a short reach of stream, particularly one that has been channelized, these might not be significant, but in extreme events, at the watershed scale, they are. They are certainly important in the consideration of basins associated with the mainstem and tributaries of the Mississippi River. Consequently, both the hydrologic and hydraulic analyses must reflect and integrate these phenomena. Water exchanges across the boundaries of air and land must be represented. There is certainly adequate time as water moves down the mainstem of the Mississippi for additional interception storage losses, evaporation, infiltration and percolation. The analytical procedure cannot adequately represent reality if an underlying assumption precludes important processes, for example, conservation of mass within the channel system. In short, HEC/1 and HEC/2 reflect some of the physical phenomenon, but not enough to serve as tools to evaluate the effects of wetlands on streamflow or flood flows. These models do not adequately reflect the influence of wetlands on the time and space distribution of water. I would recommend that a full water budget analyses be undertaken as part of the FPMA, even if only on a sub-watershed basis. Such an analysis could provide the quantitative assessment of the importance of the relevant hydrologic functions and, at the same time, point the direction to future analyses. We certainly have, today, the capability to run a water budget for the entire Mississippi River or one of its sub-basins. Our computer systems are robust enough and our models sufficiently well formed to accomplish this task. Doing less is denying twenty years of research and experience. Doing more is essential for future flood management.
13	Osage River Flood Control Association St. Elizabeth, MO	5/5/95	These are comments of the Osage River Flood Control Association on the study titled Floodplain Management Assessment, dated March 1995. The Association was formed in 1935, and incorporated under the laws of the State of Missouri. The majority of our members farm along the lower Osage River. The lower Osage River is that portion of the river which lies below Bagnell Dam, Federal Energy Regulatory Commission Project 459-MO, and is located at Osage River Mile 81.7. We also have members who farm along the Missouri River in the general area of the mouth of the Osage River. Because of the damage to farm land during the flood of 1993, we are uncertain if we will have members actively farming in this area in the future. We also represent business interests, those who own recreational interests, and those who own homes which lie along the Osage River. To the best of our recollection and information contained in our files, we have not been notified of previous meetings, and were not aware of the scope of this study. Our comments may be more wide-ranging than the Corps would like at this point of the proceedings. However, we cannot participate in meetings we are either unaware of, or are unaware of the scope of the Assessment that includes activities which affect our members. Had we known the scope of the Assessment, and of the previous public meetings, you may be assured you would have heard from our Association before this time. It is apparent the Corps has put a great deal of time and effort into this Assessment, and has done some excellent work. We regret our involvement has come so late in the proceedings and any inconvenience it may cause.

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			The congressional authorized scope of the Assessment is to study the flood control needs of certain areas. Therefore, it is to identify problems and look at alternatives to present conditions. Our comments will center on factual deficiencies, general deficiencies, and omissions. Our comments are not to simply complain, but are offered as a service to help the Corps, Congress, and to address areas which we believe are important and necessary to complete the Assessment, and hopefully lead to needed improvements in floodplain management. General Comments 1. Our experiences with federal government flood control projects and floodplain management decisions is the lack of respect by the federal government for the property of others. One of the cornerstones of good floodplain management should be respect for the property of others, the survival of their business interests, and care for their property. This aspect of floodplain management has been generally overlooked in the Assessment. Where flow regimes of a stream have been altered by federal actions and greater flood, other burdens are shifted on to a smaller group of persons to accommodate the majority or one special interest. The reasoning that your live in a floodplain and the responsibility is yours, or you should survive on flood insurance or disaster payments, must be dropped by the federal government. Each person owning property along a waterway under federal jurisdiction is exposed to the same tax rate and to making the same required contribution to the federal government in the form of taxes. Therefore, each individual merits a measure of protection from federal actions which would harm them. The federal government has done a good job of obtaining the authority to regulate. It now needs to be equally as diligent in seeking the ability to compensate for that portion of the damages which are caused, or made greater, by federal actions. (See sections relating to Truman and Bagnell Dam, Lock and Dam #1 and Trainer dikes as they relate to the Osage River.) It is not that compensation cannot be done; it is a matter that it is not being done! 2. It appears that the scope of the study has been changed from what was ordered by Congress. In section ATT, it clearly states the lower Missouri River and its tributaries that were flooded in 1993 are to be included. The explanation given at the April 19th meeting in Jefferson City, MO, was that sufficient funds were not provided to study tributaries. Again, persons living along a tributary of the lower Missouri River are exposed to the same tax rates as persons living along the Mississippi and Missouri Rivers, and deserve the same consideration in the Assessment. The fact the Corps has spent the vast majority of funds on the Missouri and Mississippi Rivers and generally ignored the tributaries appears to be government by bureaucratic powers rather than government by legislation. We cannot comment on the needs of other tributaries or their needs. We can state the members of this Association wish to have the needs of the Osage River included, should a review of this Assessment, alone or in combination with other studies, result in further study or other federal actions. If the Osage River is not included and its problems identified and addressed with action alternatives, it may not be considered for further funding. We do not believe, based on the authorizing documents contained in the Assessment, it allows the Corps to exclude the Osage River. NOTE: Information pertaining to the Osage River, Trainer Dikes, and Osage Lock & Dam omitted. General Comments on things contained in the Assessment: 1. Page 1, paragraph 4 - Talks about the high degree of cooperation between the Corps, Natural

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			Resources Conservation Service, Federal Emergency Management Agency, US Environmental Protection Agency, Fish and Wildlife Service, and the states. It appears on this level of organization the parties involved are heavily loaded with environmental interests. There is no representation of the navigational or agricultural interests. This can sometimes skew the direction of a study. 2. We totally agree with the statement made in the last paragraph on page 1. An example would be the Levee Heights at a 25 year level. It may have reduced flooding in the 1993 event. However, it may be shown this proposal would increase river heights on floods under the 25 year event. It has been our experience with the series of smaller floods produced by the Truman Dam, a series of small floods can be just as costly as a large flood. This would shift the burden of flooding onto the unprotected areas. Concentrating only on one large event is a mistake. 3. Responsibility for residual flooding, page 2, paragraph 7 - The federal government should be responsible when a change in flow regime produces greater damage due to a federal action. The attitude expressed that residual flooding is the landowners responsibility must be dropped by the federal government. Flood insurance does not fully compensate for damages and in some cases flood insurance is not practical. 4. Page I-2 - Study Area - As previously stated, authorizing document shows what the scope of the study is to be. We question the Corps authority to limit the scope to less than what is authorized. THEREFORE WE ARE AGAIN REQUESTING THE OSAGE RIVER BE GIVEN THE SAME CONSIDERATION AS THE MISSOURI AND MISSISSIPPI RIVERS FROM THE FUNDS REMAINING. Secondly, as previous stated, based on the amount of water stored in a reservoir system, the Osage River system stored the THIRD LARGEST AMOUNT OF WATER AND DID MORE THAN ITS SHARE IN PROTECTING THE MISSOURI AND MISSISSIPPI RIVERS. WE NOW NEED RELIEF FROM THE FEDERAL GOVERNMENT'S ACTIVITIES. 5. Chapter 9 - Evaluation of Action Alternatives - It is difficult for us to comment on the specific proposals, as no information is given as to changes in water levels for the Action Alternatives at the mouth of the Osage River. We cannot afford to donate any more property to the federal government. We certainly cannot afford any alternatives which would cause greater damages. 6. Missouri FPMA counties - page 7-10, paragraph 2 - Miller County sustained damage in the flood of 1993. It cannot be excluded from the Assessment. 7. Page 9-23 Urban Levees - We strongly recommend the Kansas City District not be given any funds, or spend any time on new projects until the problems associated with existing projects are solved. 8. Chapter 11 - Desires of Effected Interests - states the first set of meetings was held in June of 1994, and was designed to educate the public and obtain information, and shows four locations for this set of meetings. The second set was held to obtain interests and concerns in two locations. The third set was designed to educate the public by providing findings and conclusions in nine locations. It appears the public input portion having less meetings (meeting 1 and 2) having six locations vs nine locations where results and conclusions were presented, show a heavier emphasis on "this is what we found out" vs the "what do you need portions." This goes a long way to discredit the Assessment, and raise outcries rather than support, along with the special interests involved previous stated in Comment 1 of this section. We cannot recall being informed of any of the meetings, although a study on floodplain management does ring a bell. We cannot remember why, if we were informed of any of the meetings, we would have taken the term floodplain management as

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			meaning such things as where houses are built, where barns are permitted to be built, town, etc., and we would not have taken it to mean a wide-ranging study on flood control projects. We could have heard a partial explanation of a floodplain management meeting through the media after or before the fact, which would have lead us to believe there was nothing of interest to our Association, or could have heard something about the Preferred Alternative on the regulation of the Missouri River and are confusing it with the Assessment. The Kansas City District knows of our interest in these matters and we should have been informed. The relatively small number of persons showing an interest in any one area on Page 11-4a speaks more to the lack of meeting location, than a lack of concern. Closing Comments: While good floodplain management does take structures, the number one need in floodplain management is the federal government's need to change their attitude towards the property of others. As it applies to the Osage River, for example, in the additional flooding, denied access, and affected land must be addressed, and the problems solved at the expense of the federal government in a manner which will allow farms and businesses to remain viable economic units as they are passed from father to son, or person to person. As it relates to the Lock and Dam, congress gave the Corps the authority to prepare this project for abandonment, and it was not done in a proper manner. In each of the areas outlined in our specific needs of the Osage River, in each case the problems should be considered a project cost, and considered regardless as to whether each individual item is cost effective. It is almost impossible for an individual to overcome the damages caused by major federal actions, and the cost effectiveness of the tax paying citizens should come first in this area. The section on Bagnell Dam was done by our memory of events. We believe our statements are true and correct but are susceptible to errors. The time we have had to prepare this statement has been short, and we did not have time to gather and review all facts as they relate to the 1993 event. If there is anyone who remains skeptical as to whether major errors occurred in the design of Truman Dam, and whether this project is functioning as designed, we suggest you review the power portion of this project and compare what was expected to occur with 1995 reality. We also would like to warn the readers should the Corps respond to this letter, generally the Corps statements as to dollar benefits attributable to a project or not subtract the costs of additional damage attributable to the project from the benefit. We do not enjoy pointing out what we believe are errors of others; however, it is necessary in reviewing this Assessment. We make mistakes like everyone else, but it does not change the fact, we need the federal government to take responsibility for the damage which they are creating.
14	Illinois Agri-Women Lamoille, IL	5/3/95	Please review the hydrologic modeling which considered all levees surviving the 1993 flood, would have produced a 7 foot higher crest at St. Louis. The model is obviously not correct. The Kansas City reach, 7.5 miles and 1500 feet wide, and the St.

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			Louis reach, 20 miles and 2200 to 3300 feet wide, only increased the stage 1 to 2 feet through these areas. The gradient was not changed and all of the 1993 flood waters flowed through these areas. The model is not correct. Before the Corps makes such a definitive state, (all levees surviving the 1993 flood would have produced a 7 foot higher crest at St. Louis), there must be verification, either by the 1993 flood or a physical model at the Mississippi Basin Model, Clinton, Mississippi. If the hydrologic modeling remains as presently stated, the above assumption would be devastating to flood control in the Upper Valley.
15	William D. Lay Fayette, MO	5/4/95	The third paragraph of page 9-17 entitled "Change in Value of Floodplain Resources." states: "With agricultural levees removed, the market value of the crop acres impacted could be reduced by about 20% overall." This is a gross understatement. With the high costs of chemicals, seed, fertilizers, and machinery, farmers cannot farm unprotected agricultural land today. Today's inputs amount to about 75% of the value of the harvested crops and the crop insurance premiums on such high risk fields would take most of the balance. No successful farmer would take such a risk. You are correct that "...the net agricultural produce would be drastically reduced..." Bottom land which is protected by levees commonly commands a price of $1000 per acre or more. To place a crop at the risk of flooding every two or three years would be a clear road to bankruptcy. Bottom land without levees is not fit for agricultural purposes, and the policy of removing the agricultural levees would reduce the value of the land from agricultural to a recreational value of about $150 per acre. After the land is allowed to remain idle for a five year period in a wetlands condition, recreation is the only possible value that would remain. Soft wood river timber is not fit for any profitable forestry program. By removing the agricultural levees, the value of the land would be reduced by roughly 85%. It is doubtful that the removal of the levees and resulting agricultural loss would lead to any reduction of flood crests more than a few inches in urban communities. In fact, the third paragraph on page 12-3 states: "Converting floodplain agricultural land to wetlands would not have reduced the stages in the 1993 Midwest Flood." Any benefits obtained by the urban dwellers, would surely not offset the exorbitant loss that would be suffered by the farming communities. The report implies that the losses in the agricultural land would be fully "...offset by increased land values in communities no longer flooded." The losses might create a trivial offset for the urban dwellers but the offset would not come close to matching the cost to the farmer. The cost benefit ratio would be well below a 1:1 ratio. Moreover, this plan would unfairly place tremendous costs on the farmer and provide only slight (by the questionable UNET model only 2% to 6%), if any, benefits to the urban dweller. In summary, the agricultural losses would include (1) the value of most of the crops which would not be produced upon the unprotected fields and (2) about 85% of the value of the crop land. Those losses would not come close to being offset by any small benefits which might accrue to the urban dwellers. This plan omitted the consideration of added upstream reservoirs, comparable in part, to the Missouri

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			River Main Stem reservoirs. This is the only way meaningful flood control in a flood the size of the 1993 event may be achieved. In 1993 the chart on page 62 of the 1994-95 APO shows that the reservoirs prevented over 2.1 billion dollars of flood damages. The plan to prevent the farmers who farm the river bottoms to raise their levees, to fight floods, or to even require them to remove the levees for the benefit of the urban dwellers, and to call for the payment confiscatory crop insurance premiums is clearly a corrupt plan and lacks any sense of fairness. Why should there be a dual standard by which the few powerless farmers would be driven from the bottoms and the many well-connected and wealthy urban dwellers are protected in the development their valuable lowland sites? The cost benefit formulas by which their infrastructure protection is highly valued, also, clearly shows an enormous partiality to the urban dweller and the affluent business interest. It is difficult to understand any lofty virtuous social purpose which flows from this plan. The plight of the river bottom farmers who can not raise their levees or fight to protect their threatened levees during flood events is more reminiscent of the plight of unarmed Christians of ancient Rome who were placed in the Coliseum with the hungry lions and tigers and were forbidden any means of defense.
16	US Dept. of Agriculture Natural Resources Conservation Service Lincoln, NE	5/4/95	Thank you for the opportunity to provide comments for consideration as you complete the Floodplain Management Assessment of the Upper Mississippi and Lower Missouri Rivers and their Tributaries study. I have enjoyed working with the many different people assigned to prepare the report and appreciate their commitment to providing as good a product as possible in the time constraints set on the study. The following comments are for consideration by the different authors as they prepare the final document. Executive Summary * Page 1, third paragraph, first sentence: Possible rewrite: "These impact analyses were primarily based on..." * Page 1, fourth paragraph, first sentence: NRCS is Natural Resources Conservation Service, not Resource. THIS COMMENT APPLIES THROUGHOUT THE DOCUMENT WHENEVER NRCS IS REFERRED TO. * Page 1, item 1, first sentence: Suggested rewrite: "We used the 1993..." * Page 2, item 3, first sentence, third line: Suggested rewrite: "...be required to define more accurately the flow capacity..." * Page 2, third paragraph, first sentence, second line: Suggested rewrite: "...has been to include any conclusions that..." * Page 2, second conclusion in middle of page, first sentence: Comment: "...performed well, reducing flood water elevations by several feet..." (cannot reduce flood peaks by feet). * Page 2, fifth conclusion, next to last paragraph: Suggested rewrite: "...reduction benefits, but would

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			have had little effect on the main stem flooding caused by the 1993 event." * Page 3, third conclusion, first sentence: Possible rewrite: "...being placed on use of flood hazard mitigation..." * Page 3, fifth conclusion: Possible rewrite: "Relative impacts of evaluated alternative measures that would reduce ... floods are summarized in chapter 12..." * Page I-1, last paragraph, first sentence: Possible rewrite: "The eleven objectives established for this assessment correspond to..." * Page I-1, last paragraph, last sentence: Possible rewrite: "These reference documents are..." * Page I-2a, Study Area Map: Is the study limited to the area below Gavins Point Dam: If it is, the upstream limit of the study should be shown on the map. Or is the study concentrating on the different reaches of the Mississippi River, Missouri River, and major Tributaries? Then the map should have those reaches highlighted and so indicated in a legend on the map. * Page I-3, Strategy, second paragraph, last sentence: Possible rewrite: "...each report and the addresses for obtaining copies of the four reports." * Page I-4, item 3, last line: Possible rewrite: "...description and appraisal of flood damages is provided." * Page I-4, first paragraph following discussion under item 4: Possible rewrite: The evaluations accomplished by the above efforts and other initiatives identified in this report significantly impacted the direction and conclusions of this assessment. To best accomplish the objectives defined for this assessment, it was decided that it was necessary to quantify the impacts different structural and non-structural proposals would have had if they had been in place at the time the 1993 event occurred. Because of the large land area involved in the study, and the many different alternatives identified by the public and others to be considered, some of the evaluations concentrated on limited reaches of the rivers and different changes in policies and programs were combined to form 3 distinctive 'scenarios.' * Page I-4, next to last paragraph, last sentence: Possible rewrite: "...encompasses floodplains along over 3,500 miles..." (In this paragraph or earlier it would be helpful to point out that this study concentrated on the major rivers, primarily those with floodplains wider than 0.6 miles.) * Page I-5, first paragraph, first line: Possible rewrite: "...whether application of these evaluations could reasonably be made..." * Page I-6, first paragraph, first line: Possible rewrite: "...compares how implementation of various policies, programs..."

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			* Page I-6, second paragraph, first sentence: Possible rewrite: "Conclusions are provided in Chapter 12 of this report." * Page I-6, second paragraph, next to last sentence: Possible rewrite: "...list of conclusions for Chapter 12." * Page 3-12, last paragraph, last line: The statement on farm acres damaged uses 10 million acres. I provided a document to the St. Paul office late in March that develops an argument for a total of at least 25 million acres of cropland damaged, with 14 million acres were described in the Galloway Report/SAST report; 12 million not harvested and 2 million never planted. If this paragraph is only concerned about the land along the major rivers, that needs to be stressed in the write-up. * Page 6-1, third paragraph and fourth paragraph as it continues on Page 6-2: The document as currently printed is confusing and it appears that most of the information in paragraph three is either included in paragraph two or paragraph four. Therefore it is recommended that paragraph three be removed and paragraph four be rewritten as follows: "The new levee algorithm for UNET models reaches of the river that contain levees as follows: 1) When a levee fails at a breach...to be horizontal; 2) When the river elevation exceeds...width of the floodplain; and 3) When the river falls...through the breach. * Page 6-3, first paragraph, sixth line: Suggested rewrite: "...less than the valley width." * Page 6-3, Levee Setback Alternative, third line: Suggested rewrite: "...analysis will be included in the finals..." * Page 6-7, second paragraph, sixth line: Suggested rewrite: "This information helped define..." * Page 6-19, River Dex Peres-Case Study, last two paragraphs: In one paragraph the flood protection heights are described in river gage heights, in the other USGS datum is used. These need to be tied today for the paragraphs to make sense. * Page 8-17 and 8-18, Emergency Wetland Reserve Program: Not sure exactly what the author is trying to say. Possible rewrite: 4) NRCS data indicates that as many as 50,000 acres will be enrolled. 5) Wetland Restoration Plans have been prepared on 25,000 of these acres as of January 1995 and landowners are in the process of recording the easements on these acres. 6) It is estimated that at least 75 percent of the land being enrolled is wetland. When all easements are recorded, at least 37,500 acres of riverine wetlands will be under permanent easements owned by the USDA. COSTS: Allocated funds for EWRP total approximately $44,000,000. (See Table R-48) * Page 8-18, Conservation Reserve Program: The background for the 212,000 acres used is not known. Perhaps your staff obtained these acres from the CFSA offices in the impacted counties along the rivers. NRCS NRI data indicates that over 10 million acres of CRP land is enrolled in the

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			study area. This amounts to about 3.5 percent of the total study area and about 7.5 percent of the cropland in the study area. We did not do any NRI analysis to define the amount of CRP land located in flood prone or hydric soil locations. This could be done in the future if it would be of value. * Page 8-22, top of page: Remove item 9 as it is not a criteria used to establish EWRP priority. * Page 8-22, Wetland Reserve Program, item 2: How was the 75 percent determined? It is not unreasonable, based on the first two sign-ups, if you are including all floodplain conditions used in the NRI data. If this is to only be on the wide floodplains along the major rivers, the percentage is considerably smaller. Earlier in the report it was assumed that 50 percent of enrolled WRP land was on the floodplains. Need to develop a process for estimating and stick to it. * Page 8-22, Emergency Wetland Reserve Program, item 6: Based on 75 percent of 50,000 acres it seems that the sentence should read: "...additional 37,500 acres." * Page 8-28, 2) ACREAGE RESERVE PROGRAMS, next to the last line in the first paragraph: The amount of CRP land located in the study area floodplain has to be more than 1,803 acres. Based on the NRI evaluation, it is estimated that total riverine floodplain in the study area exceeds 26 million acres with about 14 million of this being cropland. Using an average of 7.5 percent discussed earlier, the riverine CRP could be as large as 1 million acres. As previously stated, these numbers could be better defined with additional analysis of information in NRI. * Page 8-34, Item 8-d: Possible rewrite: "Compliance...not always adequate to ensure purchase of needed insurance. NFIP...is obtained and maintained." * Page 8-35, Item 8-h, second sentence: Possible rewrite: "The process is underway to acquire more than 8,000...flood are (most are residential structures) as part of the strategy to reduce repetitive flood damage in..." * Page 8-35, Item 8-h, last sentence: Possible rewrite: "...directed toward acquisition of damaged properties." * Page 8-35, Item 8-i: Suggest adding the following after the last sentence of this item: "The additional funds and larger federal cost share in paying for the projects has significantly increased interest by the local governments impacted." * Page 8-35, Item 8-k: Why is this item needed in this part of the document? * Page 8-35, Item 8-m: Possible rewrite: "...follow-up actions by states...recommendations provided by the Interagency Hazard Mitigation Teams as part of the recovery effort." * Page 8-35, Item 8-n: Possible rewrite: "...structures is firmly addressed through implementation of existing regulations by both Local and Federal Governmental Agencies."

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			* Page 8-35, Item 8-o: Possible rewrite: "...and other losses associated with flooding, especially..."
			* Page 8-36, Item 8-t: Possible rewrite: "...percentage of floodplain covered with natural vegetation."
			* Page 8-36, Item 8-w: Suggested addition to end of paragraph: "...reduced production that resulted in less need for price supports."
			* Page 8-36, Items 8-x,b: Suggested rewrite: "...could be restored or converted to a valuable wetland at a reasonable cost."
			* Page 8-36, Items 8-x,e: Suggested rewrite: "...are owned by landowners who are willing to voluntary cooperate with the restoration or conversion."
			* Page 8-37, Item 8-ee: Suggested rewrite: "...support for the State and Federal agencies to take a closer..."
			* Page 8-37, Item 8-gg: Suggested rewrite: "Use of acquisition...programs is an effective way to remove vulnerable..."
			* Page 8-37, Item 8-hh: Suggested rewrite: "Acquisition of marginal farmland and environmental restoration of that land will require the expenditure of significant dollars. Thus, the value of a proposed acquisition area must be evaluated..."
			* Page 8-37, Item 8-ii: Suggested rewrite: "The purchase of agricultural or developmental interests through buyout programs must take into account..."
			* Page 8-38, Column B: The floodplain acres shown in this column need to be similar to what has been included throughout the report of the differences need to be explained to the reader. Example: Line 115 shows 776,276 acres of floodplain inundated while, earlier in the report, values in the millions of acres were discussed. Galloway report showed over 4 million acres of cropland along the major rivers.
			* Page 9-2, Impact of removing levees, first paragraph: Possible rewrite: "To remove the Federal...to the 1993 flood impact to the area served by the Omaha District of the Corps of Engineers. The removal of sections of existing Federal levees, to restore the flood flow characteristics of the floodplain, would... To remove the existing levees completely...I-29 would be significantly more vulnerable to damage from flood waters. Real...impacted due to the increased frequency of flooding."
			* Page 9-2, second paragraph: The sentence on the impact on the environment should be strengthened (see other write-ups in this document).

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			* Page 9-2, third paragraph: Possible rewrite: "River stages are decreased when it is assumed that the floodplain will remain in agricultural production or maintained as prairie areas with higher flows routed downstream in certain reaches. When it is assumed that the area currently protected by levees is allowed to return to native shrubs and trees, the evaluation shows minor decreases or some minor increases in river stages. Other items that also impact on the future flow characteristics of the modified valley section are the maintenance of the main channel and the amount and location of future sediment deposits. * Page 9-2a: These tables showing comparisons of different evaluations are very confusing. Columns A and B should be the same on all tables but they don't seem to be. Also how is the reader to determine what the number under L mean? I can read that to state two different views. First, that the numbers are what remain after the alternative is installed. In this case damages for residential (line 1) either went from 65,648,752 to 6,635,000 or if the comparison is with column B they went from 24,017,611 to 6,635,000. Second, that the numbers in Column L are the increase of decrease in damages. Then it would show that the removal of the levees would increase residential damages by $6,636,000 compared to either column A or B. Compared to A it is about a 10 percent increase; compared to B it is more than a 25 percent increase. EITHER WAY IT IS IMPORTANT THAT THE READER UNDERSTAND WHAT THE TABLE IS SHOWING. PLEASE IMPROVE THE DISCUSSION ON THE USE OF THE TABLE OR ADD ADDITIONAL DESCRIPTION TO THE HEADINGS TO INDICATE WHAT THEY ARE TO BE COMPARED WITH. Additional reading of the document on page 9-2 indicates that the numbers are showing increases compared to one or the other of Columns A or B. * Page 10-20: This page includes a table that shows the identified floodplain in the nine states for FEMA purposes as about 18 million acres. Again, back to a previous comment, we have too many different values in the document on floodplain acres. If possible, it would help the understanding of the document if the flooding potential of the entire area was described, the impacts and area flooded in 1993 was quantified and finally how many of these two damages areas would be impacted by the alternatives discussed in this document. The tables are a start on this but they do not include enough areal extent information to indicate that the floodplain area the Corps evaluated may be as small as 25 percent of the total area subject to damages.
17	Federal Emergency Management Agency Chicago, IL	5/2/95	We have reviewed the draft FPMA report and wish to offer the following comments on Chapter 8, Evaluation of Scenario Measures: Page 8-3; Illinois does not use "the FEMA model zoning ordinance as the basis for its floodplain management program..." There is no FEMA model zoning ordinance. Illinois uses a state-produced model floodplain development ordinance fashioned after building code ordinances. Page 8-7; Not all communities adopt "floodplain zoning ordinances." The National Flood

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			Insurance Program (NFIP) does not require that communities adopt zoning or any other land use control measures. It only requires regulation of floodplains through a permit system, and that can be a building permit, development permit, subdivisions permit, zoning permit, etc. Adoption of zoning is not a requirement of the NFIP. Some states require that communities adopt floodplain zoning, however. Page 8-8; The NFIP's Community Rating System (CRS) already allows for more than a 5% discount on flood insurance premiums, but this section suggests the USACE is not aware of the CRS credit system. Or, the communities which were contacted do not know the credit structure either, or they are all CRS Class 9 (5%) discount communities. Community responses to the USACE that CRS only benefits the individual insurance policy holder and not the municipality as a whole ignores the flood loss reduction benefits of the CRS. The community is expected to understand and appreciate that the extra measures they are implementing contribute to less damage, less public expenditure for emergency services, protection of infrastructure, etc. even though significant staff time is expended in the CRS application and verification process. Does the USACE truly mean "private" insurance for public facilities in the discussion of the limitation of the "first-bite free" provision of the Stafford Disaster Relief Act for Public Assistance? The Act calls for the purchase of the Standard Flood Insurance Policy to assure maximum disaster assistance benefits are available. There are some private underwriters willing to carry these risks, but they often impose very high deductibles and limits on occurrences. "Differences and Conditions" policies, umbrellas, and municipal league group coverage may also be available, but it is not clear if private insurance or the NFIP's coverage is meant in this section. Page 8-10; The USACE's determination that elimination of cottage site leases is "not highly significant in terms of achieving a dramatic reduction in the overall amount of Federal disaster aid and insurance payouts..." suggests USACE is not aware that cottage lease sites are probably the single greatest repetitive loss structure category we have. Some of these structures are valued at $15,000 and have received $100,000 in flood insurance claims and additional disaster assistance benefits in the last 15 years. Elimination of these sites will have a significant positive impact on flood insurance claims payments and disaster assistance. Page 8-12; We suggest that if USACE believes there is a concern existing over the Federal government "assuming more and more responsibility over time for disaster recovery costs...", USACE needs to review Federal law on the matter. Disaster assistance is a Federal program and benefit that unfortunately has come to be looked upon as an entitlement. Also, and at least as important, the states claim they cannot afford the required state and local match (currently 25%) and usually request the FEMA Director raise the Federal share to 90 or 100%. The states demand more Federal involvement, not Federal agencies. Page 8-13; This section is good and gets to the point about the need to encourage state and local

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			preparedness planning to avoid losses, rather than constantly emphasizing the rebuild and recovery Section 404 assistance and buyouts to people who did not carry flood insurance and how that seems to penalize those who did (because their benefit is reduced by the amount of the claim paid.) Finally, this section correctly notes there is no substantive followup of, or required compliance with, the Interagency Hazard Mitigation Team (IHMT) reports following a declared Disaster. The suggested linking of future assistance to states and locals with execution of IHMT report recommendations needs to be emphasized more here.
18	Harold Gloe Hermann, MO		Of the five alternatives being studied in the Floodplain Management Assessment Study, only reducing the flow from the watershed by ten to fifteen percent would be feasible or practical. To remove reservoirs would be unthinkable and extremely counterproductive. We need more reservoirs. To set back levees 2000 to 3000 feet would eliminate most of the bottomland we are trying to protect. This would be the case in my area. To remove sections of levees or reduce the height would not help either. That is exactly what happened with the first crest during the 1993 floods. That first crest breached every levee between Kansas City and St. Charles, yet the river had two more crests, each higher than the first. To raise the levees higher on the Missouri River would be expensive. It would also cause more backwater on the tributaries. Reducing runoff is a win-win solution. Instead of spending money on flood related repairs and buy outs, this money could be better spent on holding basins to catch runoff from large shopping centers and housing developments. These basins could be designed with a permanent pool to provide fishing for the urban people. More money should be spent on terraces and dry structures. The push to no-till has helped a great deal to reduce erosion but it is not as effective as terraces in slowing runoff. We all agree that the 1993 flood caused a great deal as the 1994 Georgia and Texas floods, and the 1995 California floods. Instead of harassing the farmers in this country, we should be applying pressure and using incentives for these countries to halt their land clearing. If we really wanted to balance the budget we would stop helping these countries develop their inland water transportation systems. These systems will reduce their transportation costs and make it more profitable to raise beans in the interior areas of these countries, leading to more destruction of these valuable rainforests. Stopping the expansion of farming in the rainforests will also reduce the direct competition with the farmers in this country. The farmers of this country are the people who raise the crops which helps balance our foreign trade. They are the people who pay property taxes to support our schools and

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			local services. And they, if they are lucky enough to make a profit, pay the income taxes that support the bureaucrats who are so willing to put them out of business. In conclusion, everyone seems to be concerned about the wildlife. Get the bureaucrats off our backs, give us a chance to make a profit and then we'll do it better than any government agency. Thank you.
19	Fabius River Drainage Dist. Taylor, MO	4/20/95	Thank you for the opportunity to address a few issues with you. In chapter 9, Evaluation of "Action Alternatives", Hydrology and Hydraulics, 9-40. The report states results of a UNET Simulation Model, which produced a failure of the Middle cell (58,000 acres) of the Sny Island Levee District, (which did not fail during the 1993 flood), produced a reduction of stage in the Hannibal/Quincy area of 3 feet. This is a good example of the lack of reliability of computer simulated models. During the 1993 flood before the river crested there were numerous levee "overtopings" in the Hannibal/Quincy area, and after every "overtoping" within 24 hours the crest was higher than before the levee "overtopped." The simulated model cannot possibly be correct, please restate this issue to reflect real conditions. Also in chapter 9, Evaluation of "Action Alternatives," Limited Flood Fight, 9-39, the report states that "Limited Emergency Response to Agricultural Levees... There would be a tradeoff of flood damages for savings by reducing or eliminating emergency levee raise restoration costs." The flood fight levee raise on the Mississippi to protect the 50,000 acres. Iowa Flint Creek Levee District #16 prevented in excess of $50 million in damages which saved $7 million more than the $43 million spent for flood fighting in the entire Rock Island District. Please restate this issue to reflect the tremendous savings for flood fighting, not only in 1993 but, also during all previous floods. Another example is of the Fabius River Drainage District's efforts of flood fighting was in 1960 when we saved our district from flooding and consequently the Federal Government many 100s of thousands of dollars in rebuilding and restoring our district. In general, we cannot agree with the report's overall underlying theme that it is less expensive to remove floodplain structures and discourage any building in the floodplain. We feel Standard Project Flood Levees would be far less expensive and the resulting revenues generated to the Federal and State governments would more than repay the cost of the Standard Project Flood Levees. Why can't we implement and obtain the same levee protection in the Upper Mississippi basin as is enjoyed in the Lower Mississippi basin from Cairo, Illinois south??
20	Sandy Carpenter Joe Carpenter Ohio, IL	4/27/95	As farm operators in Bureau County, Illinois, we depend heavily on Barge transportation on the Illinois and Mississippi River and/or the Missouri River will also affect the Illinois River. Nothing is listed in your summary about the economic or ecological outcomes, even though a major portion of the state of Illinois and parts of other states are affected by your decisions. Agriculture seemed to get a very low priority in this plan, we are talking about the more productive farmland in the world. The US Dept. of Commerce is spending our US tax dollars to build and promote the Teite-Parana Development Agency's $655 million waterway project in South America, because of the $20 billion of future economic development, made possible by the waterway project. This will reduce their transportation cost of soybeans by 5 fold and move 5 million tons of additional soybeans to the

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			international market. This could easily put the US soybean farmer out of business, because our competitive edge in World Trade now, is our affordable and efficient barge transportation system. It would also destroy more of Brazil's rain forest and many endangered species. We also have the Conservation congress wanting to tax 10 cents per ton and passengers $1 per head at the loading or unloading point at all docking tie ups at lake or river terminals in the state, which cuts down our meager profits even more. The only way the Midwest can participate in World Trade is if our waterways are fully developed. Europe and South America are spending billions of dollars to improve their navigation systems, and the US does little or nothing. If the FWS and EPA are brought under control, the sediment and sand can be removed from the rivers and placed on the levee systems. The cost would be $1.8 billion and will prevent 500 year floods. The 2 million acres protected, produce $73 dollars an acre of taxes per year and will pay for the project in 18 years. The savings in transportation cost and economic development is the answer to rural development in the Midwest. These levied acres have paid $12 billion in taxes, in 1993 since since being built. The damages of the 1993 flood were $2.5 billion. Without the tax base our local schools will suffer worse than they already are. American agriculture employs 18.5 percent of the labor force, so you are not just cutting the farmer's throat. The Corps and the FWS have spent millions of dollar on numerous studies since 1979 and have not come to a conclusion. Farmers could do a better job. If the flood control is eliminated and the levee systems are not maintained, economic development is forbidden, insurance is unaffordable, agriculture made unequal, what happens after the next flood? Europe and South America will be laughing all the way to the bank. I wish everyone in America had to spend one day in Russia standing in line for hours for a loaf of bread, perhaps our abundant food supply would not be taken for granted.
21	Illinois Valley Flood Control Association Virginia, IL	4/28/95	We are concerned that the impact of flooding on the Illinois River for the most part was not factored into the study. While this report was prepared only on the basis of the 1993 flood a longer history must be included to get a true picture of flood conditions and the proper response to them. A history of the discharge at the Oakford Gage on the Sangamon River, a tributary of the Illinois, points out the need for a more detailed study. In 1943 the discharge at Oakford was 123,000 cu. ft per sec. This was at least 10 percent of the flow at St. Louis in 1993. In 1973 it was 45,800, in 1979 it was 55,900 and in 1982 it was 71,600. Because of these limitations it's important that this study remains only that and not become the sole source for the making of rules and regulations. We realize the area of study was restricted in its scope but we feel it is most important the fact of this limitation be noted in the final general summary. Any type of modeling must include the percent of error that might be found in the conclusion. It is probably impossible to create a model on flooding that would not include a error factor of from ten to

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			fifteen percent. This information must also be in the summary. Public Health is a most important factor to include in any flood study but unfortunately was not included in the scope of this study. There are two conclusions that we are most pleased to see in the Report. At long last it has been recognized that wetlands have very little impact on the level of flooding. The other point is an admission that levees may at times be an important factor in maintaining the navigational channel of our rivers.
22	Illinois State Water Survey Hydrology Division Champaign, IL	5/5/95	We would like to take this opportunity to thank you for providing us the draft Floodplain Management Assessment (FPMA) report of the US Army Corps of Engineers (USACOE) for our review. Even though we did not have adequate time to review the whole report and its appendices with great detail, we were able to review issues related to hydrology and hydraulics. We were impressed with the number of precautions about making generalizations and explicit discussion of the limitations of the analysis and approximations made to prepare the report. However, the report still makes system-wide generalizations and conclusions based on approximate results and model results for specific conditions. We therefore believe some of the findings based on limited sets of analysis and for specific conditions may be misinterpreted and misused by non-hydrologists who might not have reviewed the assumptions made to arrive at those findings. Our major concerns related to the hydrology and hydraulics aspect of the report are summarized as follows. We hope you will take these comments into consideration when you prepare you final report. 1. Our first major concern is the use of the 1993 flood as the sole basis for evaluating floodplain management issues in the Upper Mississippi and Lower Missouri Rivers and their tributaries. As correctly noted in the report the 1993 flood was "without precedent" a unique flood. Its aerial extent and duration make it the most difficult flood to analyze and use as a basis for evaluating alternatives. Most storage facilities, man made or natural, were filled and most levees were either overtopped or breached. The long duration of the 1993 flood makes it the wrong flood to evaluate the effectiveness of upland or floodplain storage areas. An evaluation using a more general flood with shorter duration would likely result major reversals of the findings and conclusions on the effectiveness of flood storage. Thus, even though the report repeatedly cautions that the results are based on only the 1993 flood, broad and general conclusions are made that could be wrong if applied for other floods. 2. The second major concern we have on the hydraulic analysis is the choice of roughness values and the resulting findings and conclusions related to the effectiveness of floodplain conveyance. Since most people who would read this report might not understand how important and significant the roughness factor is, we would like to raise several questions. Most of the findings and conclusions related to floodplain conveyance of flood carrying capacity are based on assumed values of Manning's n. Even though a range of Manning's n is used in the hydraulic model, most of the arguments related to floodplain conveyance are based on the results of the high "n" values. The selection of n=0.32 as a realistic value for natural floodplain areas cannot be supported based on

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			previous studies by the USACOE or others. Since flow is inversely proportional to the Manning's n, the assumption of high Manning's n significantly reduces the conveyance capacity of the floodplain. For example, a USACOE model for the Illinois River uses Manning's n in the range of 0.05 to 0.100 for the floodplain. The use of 0.32 for the Mississippi River means that the Mississippi River floodplains are three to six times less efficient in conveying flood waters. How could this be justified? In terms of the different levee alternatives, the most reliable and consistent results are for the "contained" and "25-year" levee options. If levees were high enough to contain the 1993 flood the analysis results show that flood heights would be increased almost everywhere with a maximum increase of 6.3 feet at St. Louis. On the other hand, if all the levee heights were set at the 25-year flood level, flood stages would have been reduced everywhere with the maximum reduction of 4.7 feet at Grafton. These results can be relied upon because they are based on existing roughness values and not assumed values. Until a reasonable Manning's n can be determined and calibrated for the Mississippi floodplain, most of the findings and conclusions related to floodplain conveyance should not be used for policy making decisions that could have long-term impact on floodplain management in the region. 3 The third issue we would like to comment on is wetland storage. The analysis assumes reduction in flood volume of 5 to 10 percent for evaluating the influence of wetlands. Even though wetlands might not reduce the total volume of runoff significantly, it has been demonstrated and proven that they reduce flood peaks significantly. The important factor in this argument is the influence of wetlands on flood peaks and the time to peak, and not on flood volume. In a large river basin such as the Upper Mississippi, it will be very difficult to precisely quantify the influence of wetlands on flood peaks. If the FPMA can accept the fact that wetlands can reduce flooding by up to 25 percent for smaller watershed, why then is it difficult to accept that the cumulative effects of such reductions would be significant for larger watersheds. We believe the effect of wetlands in reducing flood peaks is not limited to small watersheds, even though the magnitude of the effect might be different. We do not see any significant difference between wetland storage and reservoir storage other than the control and location. One is distributed throughout the watershed, while the other one is concentrated in one location. What about evaluating the impact of wetland storage on more frequent and short duration floods? The findings and conclusions will be significantly different. This is the problem of using just one major flood to make general conclusions that are misleading. 4. The fourth issue we would like to comment on is floodfighting and its effects. Now that we have passed the emotional period of dealing with the difficulties and tragedies of a major natural disaster, we should be able to discuss some of the issues such as floodfighting efforts more objectively than was possible at the time of the flood. We believe a lot of people's lives were put at risk by encouraging floodfighting efforts for agricultural levees at remote locations where evacuations would have been difficult if a sudden levee break took place. Most of those agricultural levees failed any way.

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			Based on the information presented in the report, floodfighting activities on agricultural levees appear to have increased flood stages along much of the Mississippi River, causing as much as 3.0 feet increase in peak stage near Quincy, Illinois and a 1.3 increase near St. Louis. Floodfighting reduced peak stages by 0.6 foot in only one reach of the river, that being near Chester, Illinois and Ste. Genevieve, Missouri. The analysis of the floodfighting alternative by the St. Louis and Rock Island Districts seems to conclude that the peak stages would have been reduced along most of the Mississippi River if the levees had not been built up. We believe floodfighting by a large number of untrained people at remote locations where evacuations are unreliable should be discouraged. Levees designed for specified flood heights should be allowed to be over topped when the design stages are exceeded. What is the purpose of designing levees for a 25-year flood if the levees are going to be raised during floods that exceeded the design height? It is important that the report include a discussion of the increased risk to human life and the cost both economical and psychological of floodfighting and not just how much it increases or decreases flood stages.
23	Erma Clanton Dallas City, IL	5/4/95	It seems apparent that the flood of 1993 could have been much less severe had the Corps of Engineers not stopped dredging some 40 years ago. The Mississippi River is big enough without adding the proposed wetlands. Here in Dallas City, and I am sure, in many other towns along the Mississippi River was deep enough that the excursion boats could dock at the end of main street some 60 years ago. Now you can walk almost out to the island some 300 feet plus away. It stands to reason that a 5 gallon bucket half full of mud and silt will not hold 5 gallons of waters. Would it not be financially more sensible to dredge rather than any present plant?
24	Upper Mississippi Flood Control Association Gladstone, IL	5/5/95	It has been my privilege to make a somewhat limited review of the referenced Draft Report. As you know, it is quite voluminous and there has not been sufficient time to fully digest the contents. As President Emeritus of the Upper Mississippi Flood Control, I can no longer speak directly for our Association, but I believe the comments herein will represent the general feeling of the majority of our membership. First, I wish to commend your team for making a very thorough report in a limited time and in so doing basing a major part of your study on the hydraulic modeling of the 1993 flood and various alternatives. I have noted the cautions set forth on page 2 of the Executive Summary and concur with all three. I also agree with the basic findings and conclusions set forth on pages 2 and 3 of the Executive Summary.

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			Nevertheless, I seem to have a different philosophical perception of the overall flood control problem and perhaps this is the time and place to set some of my thoughts down. 1. Man is inherently a builder. From the time, as a small child, he builds with blocks, he has continued to build throughout history. 2. Four-thousand years before Christ he was damming, leveling and irrigating the Tigris and Euphrates Rivers; all for the purpose of better feeding his family. 3. I need not enumerate the great works of man in harnessing the laws and forces of nature for the better use of mankind. 4. This Country has been blessed with the greatest natural resource found anywhere in the world, the great river valleys with its rich alluvial soil, water and climate conducive to the production of food. No man can name a greater or better natural resource. With proper husbandry, it can help feed mankind for unlimited time to come. All we need to do is accept the challenge and make use of what has been given us. 5. The US Army Corps of Engineers and others with proper leadership can harness the Mississippi River and its tributaries, not free from catastrophic events, but certainly on the order of protection from a flooding frequency of once in 500 years or greater as the Standard Project Flood. 6. One may argue, "where is the money coming from?" That is a serious question. However, with a national budget of some 350 billion yearly for welfare, 25 billion for SSI, etc., all annually, it would seem possible to squeeze out 5 to 10 billion for a one time levee improvement project (SPF) which, as in the past, would be maintained by local interests. 7. The infrastructure could be constructed over a period of several years and would return more dollars per dollar spent than any federal expenditure one can enumerate.
25	St. Louis Audubon Society Kirkwood, MO	4/30/95	The St. Louis Audubon Society presents this response to the Draft Floodplain Management Assessment Report dated March 1995. The comments expressed in our earlier response of 15 November 1994 are also valid to an evaluation of the Draft Report. 1. The Draft Report does not include a comprehensive review and comparison of conclusions for each of the three scenarios -- Three scenarios are defined in Chapter 5. In Chapter 8 the impacts, often in qualitative terms, of seven management measures are evaluated when those measures are interpreted in the light of the guiding principles for each of the three scenarios. An important exception is the evaluation of Floodplain Wetland Restoration Programs, page 8-14, where the six measures considered are not clearly related to any of the three scenarios. The "Findings" for Chapter 8 (pages 8-34 - 8-37) make no reference to any of the scenarios. The three (unnumbered tables at the end of the Chapter do describe the impacts of the several measures as applied in each

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			of the three scenarios, but those tables are not mentioned in the text. Some explanation is required before the reader can fully understand the implications of those tables. Chapter 9, which discusses the evaluation of "Action Alternatives, " such as removal of levees, provision of 500 year protection, etc., is clearly of primary importance to the Draft Report, yet these "Alternatives" are not clearly associated with one or more of the three scenarios. Presumably that is left as a task for the reader. There is much useful information in Chapter 9, but because it is fragmented (analysis by Engineer District) it is difficult for the reader to pull it all together and reach useful conclusions. Likewise, Chapter 10 presents useful and interesting conclusions, but again there is no attempt to integrate these findings into the body of the report, or to evaluate their importance to an overall floodplain management plan. Finally, the Conclusions presented in Chapter 12 are not related in any way to the three scenarios which form the basis for the Draft Report. Again the reader is presented with a number of isolated facts, but without any guidance as to how these facts may be used to guide the formulation of an overall strategic plan for floodplain management. 2. The Draft Report does not address the need for an integrated management plan for the Upper Mississippi and Lower Missouri Rivers -- Many government agencies (federal, state, and local) are involved in floodplain management. Many nongovernmental organizations also make important contributions to river management. The need for an integrated management structure involving all of these organizations should be discussed. Such an integrated approach has been found useful in the Chesapeake Bay Program and in the Great Lakes Program. 3. Floodplain management is narrowly interpreted to include primarily flood damage control and to disregard those ecological values usually associated with floodplain management -- A comprehensive floodplain management plan is required that recognizes the mutual importance of all aspects of floodplain management. For too long the Corps of Engineers has concentrated on flood control and navigation with no attention to the floodplain as an important ecosystem that is essential to our well-being. Clean water, recharging of our underground aquifers, and habitat for waterfowl and aquatic systems are as important as flood control. Concentration on flood control and navigation has turned the Missouri River into an ecological disaster. The Corps should not continue to ignore ecological values. As an example, the Draft Report (page 8-20) presents an evaluation of the value of wetlands in flood control and mentions that wetlands also "play important roles" in fulfilling other functions on the floodplain, but those functions are clearly only side benefits that we might enjoy if wetlands had been found to result in substantially higher flood damage control benefits. 4. A Watershed Management Approach Is Needed -- Agricultural practices, urban development, and flow in tributary streams in upland areas all contribute to flooding on the floodplain. The FPMA did

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			look at such items as the role of upland wetlands in alleviating floods, but ignored many other watershed factors. On factor important to us in Missouri, for example, is channelization of tributary rivers an streams. When channelized, tributary rivers carry water more rapidly to the main river. Flood waters from several tributary rivers may reach the main river simultaneously, contributing to higher crests than would have been observed without channelization. 5. Ecological benefits of floodplain management strategies are not expressed as dollar values -- Much of the FPMA is essentially a cost/benefit analysis in which the costs of structural changes, including such strategies as higher levees or removal of levees, are balanced against the costs of flood damage that may be averted, or induced. Those costs are relatively easy to estimate in dollar values. Associated benefits such as wildlife and aquatic habitat restored and wetlands and bottomland forests restored are measured in acres or some other similar unit. The reader, who may be a Senator or Congressman, may find it difficult to compare the benefits of acres of wildlife habitat saved with the dollar costs of restoration. In our earlier Response of 15 November we suggested that the Corps of Engineers should lead the way in attempting a true accounting of ecological values in dollars. Since we presented our November Response, we find that John C. Sawhill, President of The Nature Conservancy, has expressed the same idea. Writing in Nature Conservancy for January/February 1995, page 6, he said: "Technological advances must be matches by advances in, of all things, accounting. Simply put, our national accounts do not reflect the direct linkages between the economy and the environment; we tend to undervalue our natural assets and over look the costs of declining ecosystem health. But an exciting experiment focusing on the Upper Mississippi watershed may change this by bridging the gap between traditional measures of economic performance and the new field of natural resource accounting." As we said before, we believe that, among large engineering organization, the Corps is uniquely prepared to undertake this task. The conclusions presented in the Floodplain Management Assessment Program are not easily put into a context that suggests a useful floodplain management strategy. The Floodplain Management Assessment Program is too narrowly focused on flood damage control. Those broad ecological values usually associated with floodplain management are ignored or given only passing attention. The necessity for a continuing floodplain management structure should be recognized. That structure should include the variety of governmental and nongovernmental organizations that now contribute to the floodplain management on the Upper Mississippi and Lower Missouri Rivers. A long term solution must consider watershed management and not merely floodplain management. The Corps of Engineers should take the lead in developing methods to account for ecological values, whether benefits or losses resulting from management activities, in dollar equivalents so that they

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			can more easily be compared with dollar costs of structural changes and flood losses.
26	Missouri Farm Bureau Federation Jefferson City, MO	4/27/95	We have followed with great interest the Corps' Floodplain Management Assessment (FPMA) which you began in January 1994. Missouri Farm Bureau staff and volunteer leaders have attended several of the public meetings on the FPMA which the Corps has sponsored in Missouri during the past year. In addition, we have reviewed your draft report and have discussed the report with several Farm Bureau members who farm Missouri River bottomland. We are encouraged that your draft report clearly points out the reservoirs, levees, floodwalls, and other structural measures did "perform in an outstanding fashion" during the 1993 flood and prevented $19 billion in additional damages that would have occurred had the structures not been in place. We also concur with your finding that converting farmland to wetlands would not have impacted flooding in 1993 because most of the depressional areas were already full of water throughout the watershed. Our biggest concern with the FPMA was that results for one of the more controversial policy options, agricultural levee setback, were not available at the time of your public meetings in April. We are particularly concerned about the handling of this option because many in the non-farm community are advocating farm levee setbacks and your assessment of this alternative will no doubt be scrutinized carefully by both the opponents and proponents of this proposal. We believe the economics of this option make it totally unacceptable regardless of the outcome of your hydraulic computer modeling. To give you a good example of the economics involved with the levee setbacks option, we would refer you to the enclosed study conducted in Saline County, Missouri, by the Center for National Flood and Agricultural Policy (CNFAP). Please note, in particular, two findings on page 13 of the study. First, in analyzing the impact of the primary levees being setback to 2,500 feet from the current bank, the CNFAP report estimates the cost of the new levee at $240,000/mile. The second important finding was that with the levee at a distance of 2,500 feet from the river, over one-half of the existing farmland would lose flood protection. When you couple the high cost of constructing new levees further away from the river along with the high percentage of farmland which would lose flood protection, the setback option is an economic impossibility for the farm community. We urge you to thoroughly analyze and prominently report the full economic consequence of the levee setback option before you issue your final report.
27	Natural Hazards Research and Appplications Information Boulder, CO	5/5/95	I very much appreciate the opportunity to look at the draft FPMA report of March 31.

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	Center		Because of travel and other commitments I have read it only rapidly and have not been able to give it careful review. I have seen enough to know that it would be premature to offer detailed comments without giving it much more time. From what I have seen I am impressed by the broad range and the new framework for analysis that your grouped has developed. More power to you! Two points not involved in the basic analysis come to mind that you may want to consider on final drafting. One is that the report does not stress the great range in specificity and validity of evidence on which comparisons of alternatives are ventured. For example, some of the estimates of changes in flood stage are based on rather precise calculations whereas estimates of changes in flood stage are based on rather precise calculations whereas estimates of how property owners make decisions about purchasing flood insurance are based on superficial observations. It would seem important to confront the reader with the great differences among findings on such matters as those enumerated on p. 2-25. This difference in confidence enters into public decisions, and also into specification of what further research is needed. A second minor point is historical. In referring to development of Federal floodplain management policy no reference is made to the 1966 Bureau of the Budget report in H. Doc. 455 that recommended flood insurance to serve a purpose the FIA never adequately pursued and that stressed "wise use" as a goal of Federal policy. It would seem desirable to recognize that those proposals were never achieved. I could find, on one reading, only reference to Executive Order 11296 that was recommended in the report.
28	US Dept. of the Interior Bureau of Mines Denver, CO	4/14/95	As requested by Colonel Thomas Suermann, District Engineer, personnel of the US Bureau of Mines reviewed the subject notice to determine whether mineral resources or mineral production facilities would be impacted by the proposed project. The notice pertains to the draft Floodplain Management Assessment (FPMA) report that addresses management procedures and policies and how they may have contributed to the severity of the Great Midwest Flood of 1993. The FPMA resulted from cooperation between the US Army Corps of Engineers, Natural Resources Conservation Service, Federal Emergency Management Agency, US Environmental Protection Agency, US Fish and Wildlife Service, and individual state governments. Virtually any action taken, as outlined in the text provided, probably would impact the crushed stone and sand and gravel industries. Numerous companies dredge material from the rivers, and many other operations are located along and near the river banks. Proposed changes, such as those involving levees and wetlands, could interfere with existing operations or prohibit their expansion, as well as prohibit siting new operations. Some of the alternatives discussed would require substantial amounts of construction materials in the surrounding region and the impact to operators and other consumers while filling those needs also should be addressed in the assessment. If no impact

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			would occur, it should be so stated in the document. Many aggregate producers provided construction materials (primarily sand for sandbags) during the flood, with the understanding that the material would be returned or replaced. To the best of our knowledge, replacement has not occurred. Perhaps a system whereby the Federal Government provides such material for future incidents and/or reimburses those providing it should be considered.
29	Upper Mississippi Flood Control Association	4/18/95	1. The FPMA has continued for 16 months with a budget of $4 million and those directly affected have been given 2 weeks to review the document and develop an alternative response, during our most busy time of the year. Surely, if our government is truly interested in the people who pay it taxes, we could be allowed a reasonable time to respond. 2. The change of policy which established "Floodplain Management" as the preferred alternative to Flood Control and Economic Development is not in the best interest of our nation. In 1960 when "Floodplain Management" was conceived it seemed like a good idea however, it has prevented flood control from being installed in the Upper Valley and is therefore directly responsible for billions of dollars in damages in the past 30 years, and continues to prevent economic development along the navigation corridors. In view of the tremendous development in all areas in the Upper Valley which have 500 year protection, the economic loss to the Midwest of the prohibition of development is a sad tale of lost opportunity but, the future loss because of world trade will be devastating. The cost of past damages is not fully known but, any one of the previous major floods would have installed a comprehensive system that would have prevented 95% of the 1993 flooding along the navigation corridors. In view of the tremendous development in all areas in the Upper Valley which have 500 year protection, the economic loss to the Midwest of the prohibition of development is a sad tale of lost opportunity but, the future loss because of world trade will be devastating. The greatest witness against "Floodplain Management" is that it has not prevented damages and has increased loss to the federal government, has not improved the wildlife habitat, and has not increased or improved recreation. The UMFCA strongly opposes "Floodplain Management" and respectfully requests that the Corps does not structure this report in such a manner that will lead the American people to believe that "Floodplain Management" is a viable alternative to Flood Control and Economic Development. If the American people and the United States Congress wishes to increase our National Park System and turn priceless land back to nature, let the decision be made upon facts and not upon misleading information in the name of flood control.
30	Juneau Associates, Inc., P.C. Granite City, IL	4/20/95	We have two comments in regard to the Floodplain Management Assessment Report that are for public record. 1. Groundwater flooding in the American Bottoms area is an issue that needs to be addressed. This area consists of the cities of Granite City, Venice, East St. Louis, Cahokia, etc., all located in the state of Illinois. These cities experienced and are still experiencing damage to their underground utilities

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			due to the high groundwater table during the 1993 flood. 2. The Corps of Engineers needs to consider making improvements rather than repairs to the underground utilities damaged due to the high groundwater conditions. An example is when a sewer main has failed at a certain point, the requirement was just to fix that point. A viable option would be line the sewer main from manhole to manhole with a liner. By performing the lining, you have eliminated any chance of having to do another point repair to that sewer main during another high groundwater flooding condition.
31	Missouri Dept. of Conservation Jefferson City, MO	4/17/95	We appreciate the opportunity to offer comments on the draft Floodplain Management Assessment report. Members of the Department staff with a clear understanding of the 1993 Flood reviewed the document recognizing that based on the floods of 1973, 1986, 1993, and other years "government" needs to alter its approach to floods, and flood damages. With that in mind we offer the following general comments on the draft in order of priority: 1. We are disappointed that the report does not focus more on flood damage reduction as opposed to flood control. Hopefully the 1993 event taught us that it is impossible to "control floods." Facing that fact, it is time to replace dated thinking regarding flood control by realizing that we cannot control floods, but we can certainly substantially reduce flood damages. 2. There are many ways to reduce flood damages, some of which were discussed in the draft report. If government, and ultimately the taxpayers are to continue to pay for repair, restoration and rehabilitation following floods then it should be the same government that "calls the shots" regarding how and when government will foot the bill for such efforts. It would be our thinking that 25 year or less protection should be provided for agricultural areas. Such levees must be set-back some distance from the river channel to provide an adequate floodway. The Pick-Sloan Plan presented many good ideas regarding uniform levees and setbacks. Urban areas, because of their high dollar values would obviously need high levels of protection. Federal policy must be incorporated into law that dictate how we move forward to reduce flood damage in the long term. One step in that direction would be repeal or amend Public Law 84-99. Amendments should focus on wise repair of damaged facilities, not blind rebuilding of what has been damaged or destroyed again and again. 3. Several places in the draft report suggest there is an indication that the overtopping of levees does little to reduce flood levels downstream. We question that premise. If the Missouri River floodplain contains approximately 700,000 acres of bottomland, which if levees are overtopped or damaged will store flood water 10 feet deep, that is 7 million acre feet of water an amount that exceeds total "flood control" storage in the large and very expensive reservoir systems of the Kansas River or Osage River (Table 6-3). 4. The report indicates that a "no levee system" would not be that beneficial since the "roughness" of the floodplain would exacerbate the conveyance of flood waters. The system, in its current

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			configuration with levees frequently located right on the river bank has a great deal of "roughness" even when the levees are overtopped or crevassed. Floodway problems on the Missouri River have been aggravated by the removal of an estimated 100,000 acres from the riverine environment. The 100,000 acre floodway without levees would convey a large volume of water. 5. While we do not question the fact that the system of reservoirs reduced the flood levels at some locations, we believe it should be pointed out that the hundreds of thousands of acres in the reservoir flood pools were flooded for long periods of time with severe impacts.
32	Illinois Dept. of Conservation Springfield, IL	4/19/95	Reference is made to the draft Floodplain Management Assessment (FPMA) of the Upper Mississippi and Lower Missouri Rivers and their tributaries which was recently released for public and agency review and comment. The Illinois Department of Conservation wishes to express its concern about two specific aspects of the review process: first, the very short time period between release of the report and the public meeting dates and, second, that the Department (and presumably the other reviewing state agencies) was provided with only the executive summary and conclusions rather than the full report. Taken together, these actions seriously limit the opportunity for thorough public/agency review of and comment on the study. We are also concerned that Headquarters, US Army Corps of Engineers has not reviewed the report, thus opening up the possibility of substantial change after the opportunity for public/agency review has passed. These concerns having been stated, there is little in the Executive Summary or in Chapter 12 (conclusions) with which the Department would take issue. Our concern is simply that the full narrative contained in the chapters cited in these documents (from which the conclusions were drawn) might present qualifying additions that weaken those conclusions we support. Our specific comments follow: * The FPMA states that reservoirs and levees worked well to reduce flood peaks and damages, but that first priority for floodplain management should be avoidance rather than structural measures. The Department agrees. * The FPMA states that 80% of the crop damage was not from overbank flooding. We take this to mean that flooding from on-the-site rainfall and interior drainage accounted for most of the damage. For this type of damage, watershed treatment measures and upland wetlands would appear to be a much better federal investment than floodplain levee raises. In fact the FPMA states that upland wetland restoration would provide localized flood reduction benefits in a flood such as in 1993, and even reduction on the mainstem for smaller floods. More emphasis should be placed on addressing the benefits from these measures, given that few floods will achieve the magnitude of 1993. * In the pursuit of "furthering future understanding and enhancing floodplain management directions"

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			(page 12-4), the first priority should be more data collection and hydraulic modeling of upland watershed areas. The information should then become a critical component in future planning by federal agencies that can fund and promote watershed treatment measures. * Some statement in the summary promote the idea of making those who occupy the floodplain assume more of the risk created by their actions. We agree in concept, but there is still the underlying assumption of federal responsibility for building levees and other flood control structures. We believe there should be serious consideration given to transferring this responsibility (with appropriate regulatory controls) from the federal government to the actual individuals and communities occupying the floodplain.
33	Illinois Agri-Women Lamoille, IL	4/19/95	My name is Eleanor Zimmerlein. I own and live on a farm in north central Illinois. I am also president of Illinois Agri-Women. All the corn and beans we grow are shipped by barge on the Illinois River from Spring Valley, Illinois. We see many trucks from Wisconsin unloading there also. Anything you do to change the Mississippi River and/or the Missouri River will also affect the Illinois River. Yet I do not see any of the economic or ecological outcomes listed in your summary. Why? A major portion of the state of Illinois and parts of other states are affected by your decisions. You are apparently considering abandoning agricultural interests and protecting urban interests. Have you considered what that would do to the tax base that supports our local schools? What about the six jobs it takes to support every farmer in his production efforts? Why improve our levees to withstand a 500 year flood? This could be done by using dredge material on our existing levees. Instead it is dumped back into the river where it is soon causing further siltation and a necessity to dredge the river that much sooner. The sand and sediment can be dredged out and placed on the levee system for a cost of $1.8 billion and will prevent 500 year floods. The 2 million acres protected, produce $73 dollars an acre of taxes per year and will pay for the project in 18 years. The savings in transportation cost and economic development is the answer to rural development in the midwest. These levied acres have paid $12 billion in taxes, in 1993 dollars, since being built. The 1993 damages with $2.5 billion A natural river is not navigable with modern barges. The major rivers are America's fourth coast line and have a tremendous economic potential. The Midwest can fully participate in World Trade only if our waterways are fully developed. The US Dept. of Commerce is spending US tax dollars to help plan and promote the Tiete-Parana Development Agency's $655 million waterway project in South America, because of $20 billion of future economic development, made possible by the waterway project. This will reduce their transportation cost of soybeans by 5 fold, and move 5 million tons of additional soybeans to the international market. This could easily put the US soybean farmer out of business, because the competitive edge we have

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			now in World Trade is because of our efficient transportation system. It would result in destroying more of Brazil's rain forests and destroying endangered species. "Observing the attitude, investments, and plans for the future, it appears that at this time, the development of inland waterways and their perceived role in the US National Transportation system and in the rest of the world look like opposites," says Dr. Anatoly Hochstein, Director of National Ports and Waterways Institute. The Administration's Fiscal Year 1996 Budget recommendations, to reverse the federal and sponsor contributions to 25% federal and 75% local for flood control projects would virtually eliminate flood control in America. This is placing the expense of flood control on those who live next to the river, not those areas where the water originally comes from. The Administration is attempting to change the 1936 Flood Control Act without legislation. The EPA's requirement that the least term, piping plover, and sturgeon population can only be improved by changing the waterflow on the Missouri River is narrow-minded and extremely expensive. Why shouldn't all options be considered?
34	University of Iowa Dept. of Physics and Agronomy Iowa City, IA	4/24/95	I have reviewed the March 1995 Draft Report of the Floodplain Management Assessment. I applaud the generally high caliber of the work in the report, especially considering the difficulty of putting together a polished report of this magnitude in the limited time and budget available to your team. I am writing you to alert you to a number of inconsistencies and unsupported assertions in the discussion of the alternative of revised reservoir operation (alternative U), hoping these will be useful as you make refinements on your final version. The source of the inconsistencies seems to arise generally from the failure to make a clear distinction between the performance of the reservoirs that were on the periphery of the flood area from those in the heart of it. The report shows clearly how those on the periphery were used to the fullest extent to mitigate down stream flooding, and hence for which revised operation would make little difference. The confusion arises in the description of the reservoirs in the heart of the flooding (those in Iowa), which seems to both describe and deny the fundamental distinctions in performance they experienced. This leads to the paradoxical conclusions that revisions of the operation is both a major priority and of negligible value. The available evidence in this and other recent COE reports seems to support the "major priority" rather than the "negligible value" viewpoint. In the following I will identify first the passages that support the former viewpoint, and then the inconsistencies in the passages that imply the latter viewpoint. On p. 9-54, it states that "funding is being sought to study revision of the Water Control Plan for Coralville Reservoir to address changes that have occurred in the floodplain below the reservoir since the reservoir went into operation." A request for funding clearly points out the priority of the

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			alternative. Indeed it significantly understates it. The Section 216 Initial Assessment (Rock Island, Sept. 1994) that was written to justify the funding cites not only downstream conditions in the floodplain but "changes in the physical, hydrologic and economic conditions upstream and downstream." Perhaps the most dramatic change has been the enormous change in average streamflow. The 1990 USGS report entitled "Statistical summaries of selected Iowa streamflow data through September 30, 1988" (USGS Open-File Report 90-170) gives average flow records pre- and post-regulation (1903-1958 and 1959-1988). The mean annual discharge is given as having risen from 1472 cfs to 2199 cfs, a dramatic 49%. Likewise the figure shows the threshold of the upper quartile of years rose 2 from 2000 cfs to 3000 cfs. Similar changes have been experienced throughout the upper Midwest. The key factor that distinguished the performance of the Iowa reservoirs, especially the relatively small Coralville reservoir, from that of the others is that they were essentially filled to capacity BEFORE the major flooding began, and so could not be used for normal flood mitigation during the major flooding in July and August. For example, in Appendix B of the COE report "The Great Flood of 1993, Post-Flood Report" (Sept. 1994) it notes that the down stream flooding thresholds for outflow reductions from Coralville had to be disregarded after June 20th due to high pool levels, and that the pool went over 100% in the first major storm in July (pp. 53-54). In direct contradiction to this report, p. 6-9 and p. 6-14 of the FPMA describe Table 6-3 as listing the reservoir storage used to mitigate major problems in July and August. At the bottom of p. 6-14, it describes the revision of operating plans as having only a "slight" effect on flood reduction. On p. 9-54 the phrase "minimal impact" is used to describe changes of operation for the Iowa reservoirs in specific. (I note that the latter quote explicitly includes Coralville, although as presented at the public meetings, the original design of the FPMA was intended to exclude Coralville from consideration.) No values are quoted. However, computations made by Dave Martin at Rock Island in January 1994 are consistent with the hypothesis that revised operations at the Coralville reservoir could have reduced peaks by a foot or more at downstream locations on the Iowa River. On p. 9-48, similar reductions (Tables R-37, 38, 39) are referred to as of "vital importance." For consistency, "slight" and "minimal impact" could be substituted with "vital importance." On p. 6-14, it notes that revisions made for 1993 apply only to 1993. This is a gratuitous statement that applies to the entire report. The major criticism of the report made at all of the public meetings I attended (in Burlington) is that it is not a cost/benefit analysis that takes into account more than 1993. Hence NO conclusion in the report can be used to justify any action in the field. States more positively, the purpose of the report is to identify areas that merit a cost/benefit analysis. Hence to make p. 6-14 consistent with the spirit of the remainder of the report, the conclusion should be that revised operation MAY have the potential to be of vital importance in some situations, and therefore merits a careful cost/benefit analysis. On p. 6-15, the phrase "lessons learned" is used, but with no reference to what any such lessons might be. None of the "lessons learned" listed in the "Post-Flood Report" mention revisions in reservoir operation.

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			The reference to concerns about "dam safety" on p. 9-54 directly contradicts the suggestion in the same paragraph that it may be desirable to buy land to allow still higher pool levels. According to George Johnson, chief hydrologist in Rock Island, the Coralville dam is designed to hold up under pool elevations more than 20 feet higher than experienced in 1993. Finally, in the light of the preceding comments, the blanket statement in the executive summary that "Corps reservoirs performed well" needs some modification. Perhaps the world "some" could be inserted in front of "Corps." I would like to acknowledge again the difficulty of putting together a report of this magnitude under severe time constraints. I specifically applaud the honest knowledgeable responses I received from the Rock Island team at all of the public meetings in Burlington. I have dwelled on the report's shortcomings in this letter to give you the chance to clean up these points before the final draft. Hopefully this will strengthen your conclusions and the prospects for funding for the proposed Water Control study.
35	The Wetlands Initiative Chicago, IL	5/15/95	Thank you for the opportunity to comment on the draft of the Floodplain Management report. It is an ambitious document and, in scope and purpose, promises to be one of the most valuable of its kind. Realizing that promise, on the other hand, will require a great deal of work beyond the draft, as I'm sure that you and year team are well aware. The single most important recommendation we could make, perhaps, is to take the time and apply the effort necessary to pull together and organize that data so that there is time and apply the effort necessary to pull together and organize the data so that there is a logical progression from data to analysis to findings. This has not yet been done. It isn't possible, at this point, with so much incomplete and ambiguous data, to comment on the substance of the report. We would like, instead, to describe the difficulties it presented and make some suggestions for improvement In the early chapters you lay the groundwork, and Chapters 2 and 3, particularly, are excellent - informative and thoughtful chapters. It is quite inappropriate, however, to conclude these chapters with "findings," none of which play a useful role in summarizing the substance of the chapters and many of which are simply vacuous. Those readers who, overwhelmed with the size and complexity of the report, can be expected to restrict their reading to the findings, will be misled. In Chapter 4 you tell us that you have looked at the negative effects of a variety of different conditions and how these effects will be measured. These negative effects are organized into conditions and how these effects will be measured. These negative effects are organized into several categories: damages in dollars; federal costs; changes in real estate values; environmental damages; and reductions in risk to people, residents and communities. The damages, costs and reductions in risk are appropriate categories, and the measurements are, in most cases, straightforward. Whether the measurements of changes in flood insurance costs are expenditures or costs (expenditures less premiums paid in) is not clear, however. They appear to be the former yet, in scenarios where the

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			National Flood Insurance Program is used to shift risk to the floodee, the latter is more appropriate. Environmental damages and, particularly, changes in real estate values, become useless categories when the analysis is applied to them. The problem is in the measurement: where measurement is straightforward, such as increases or decreases in dollar amounts of damages and expenditures, or ranking the impacts to archaeological and historical sites on a 10-point scale, the methodology is clear. It is not at all clear, however, how measurements of impacts on real estate values and on other environmental functions were made and the evaluations suggest that there was no consistency in approach. How, for example, could the impact of removing agricultural levees reduce agricultural land values by 30-40% in Omaha, 20% in Kansas City, by $255 million in St. Louis, and these same land values not be affected at all by changes in agricultural support policies? It is impossible to read, much less draw conclusions from these table entries. Chapter 5 is purely descriptive, explaining the program alternatives selected to include in each of the three scenarios. The deficiencies of the analysis of scenarios in Chapter 8 may or may not be a reflection of the selection of program and policy changes which was made, but that's a matter of Monday-morning quarterbacking. In Chapter 6 you describe the alternative actions, and this is a very important chapter. The problem with it is that it is not just a description of the action categories and methodology for measuring their impact -- it mixes in much of the results of the analysis, and, as a result, is terribly confusion, since one expects to find all of the results of this analysis in Chapter 9. It is not parallel to Chapter 5, as probably intended. Later we find that nine of the 22 final conclusions of Chapter 12 come from Chapter 6 and only one from Chapter 9 -- another reflection of this problem. Chapter 7 describes the baseline conditions against which the changes created by the hypothetical conditions are measured. This is the first of two major chapters in which the input of the five participating Corps districts is treated separately and for this reason cannot be dealt with in its present form. The chapter should be organized around the individual impact categories, making clear and definitive statement about how the final numbers were arrived at. At some point, for example, the discrepancy in flood damage estimates has to be dealt with. The Galloway report identified $15.6 billion, a number quoted by the Corps in its Post-Flood Report. The Economic Damage assessment being done by the LMVD (still not published, but some data is available on the Internet) uses a figure around eight billion and you are using six and a half billion in this report. Isn't this the place to explain and resolve these non-trivial discrepancies? Likewise, the dollars in the bill by which Congress first (but not last) appropriated money for the 1993 floods exceeded your estimates of total government expenditures by two billion dollars. The meat of the study is in Chapters 8 and 9, where you describe how different policies, programs (Chapter 8) and actions which could change the hydrology of the floodplain (Chapter 9) would have affected the flood of 1993. Yet it is here that the document needs the most work. If those two chapters are pulled together, organized around the programs and actions, and then analyzed to

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			directly support the findings, everything else will fall into place. The two pieces of work which those chapters describe are how the negative effects of the 1993 floods would have been lessened or increased under different conditions, and that is what this assessment is all about. Chapter 8 contains descriptions of the effect of the different scenarios, organized by programs; this organization is the best one, much better than to do it than by scenarios since the scenarios only represent artificial conglomerates of different program levels with no logical connections among them. The discussion of the separate programs and policies, however, should relate directly to the tables and the analyses which they represent since it is these analyses, after all, which are the crux of the chapter. Most of the cells in the scenario tables are empty of difficult to interpret, and there is little direct discussion about them in the test (in contrast to Chapter 9, where the individual cells are referenced in the text). As for the findings, since they are fortunately also organized by program, it would be helpful if they directly followed the discussion of that program. It is even more important, however, for this is one of the great weaknesses of the draft report, that the findings relate to and draw directly upon the analysis. It is hard to understand why findings are included that contain mixtures of fact and opinion which could have (and have frequently) been derived deductively. "Legislation may be needed," "The...definition...may not be adequate," "regulation could be most effective...": where did these findings come from? Certainly mot from the analysis. And where is the discussion of the conclusions of the analysis? You can't get it from the text, you can't get it from the findings and you can't get it from the tables, most of latter being empty, unintelligible and even contradictory. Are we to read the Scenario III values, for example, where the most dramatic changes in programs were postulated, as follows: strong NFIP policies would affect residential flood damages by reducing them slightly; and local floodplain zoning would have no effect on those damages? Or that the actuarially-based crop insurance (scenario 3 of agricultural support policies) which the text gratuitously tells us would "produce tremendous benefits," yet "isn't feasible," would have (as the table tells us) no effect on agricultural real estates values? There is, not surprisingly, no finding related to actuarially-based crop insurance. Finally, the text in Chapter 8 is grossly uneven; apparently the program segments were prepared independently; neither the quality of the content nor the format is consistent. Chapter 8 needs a lot of work. Chapter 9, perhaps the most important chapter in the report, is even more difficult to read. It suffers from the lack of consolidation of results from the five participating Corps district offices. The quality and scope of discussion and analysis varies greatly from district to district, and it is hard to imagine that the same analytical techniques were used in several cases. It needs to be organized into the alternative actions under consideration; and consolidation of the individual districts and incorporation of the appropriate information from Chapter 6 is absolutely essential. At that point, as in Chapter 8, findings could be developed that are related to and supported by the analyses themselves. I won't comment on Chapters 10 and 11, which are only indirectly related to the main thrust of the

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			project. As for the Conclusions of Chapter 12, they will be as good as the findings which come out of the prior chapters, and will be most useful if they are related directly to and organized around the specific programs and actions which it is the purpose of the assessment to examine.
36	US Dept of Interior Fish and Wildlife Service Fort Snelling, MN	5/18/95	This letter provides comments of the Fish and Wildlife Service (Service) regarding the draft Floodplain Management Assessment (FPMA) report distributed on March 31, 1995. We thank you for the opportunity to review this important document, and look forward to the results of further analyses and hydraulic modeling referenced in the report transmittal letter. General Comments The Service realizes the magnitude of the Corps of Engineers' (Corps) assignments, considering the complexities of historic and current Federal water resource development policies, shifting societal goals, and technological limitations. If the report has accomplished nothing else, it has highlighted these complexities, and should give pause to those seeking simple solutions or quick fixes in the form of structural investment by the Federal government. Overall, the report points to the need for a complete systemic physical analysis, including a hydrologic and hydraulic model to accurately estimate effects of structural and non-structural flood damage reduction alternatives. The Service wholeheartedly supports flood damage reduction alternatives through systemic analyses that consider the physical, biological, and social ramifications of all alternative measures. The report format presents some difficulty to the reviewer, and may have resulted in our overlooking of information. The report's variable discussion of cells, alternatives, or columns, and lack of ready reference to tabled information also hindered review in some cases. The circulation of another draft prior to final report binding might be appropriate considering the incomplete analyses referenced in the report transmittal letter, along with potential format modifications, improved graphic/text connections, and grammatic/typographics errors. Some agency reviewers anticipated the FPMA to be somewhat of a follow-up study to last year's report of the Interagency Floodplain Management Review Committee (Galloway Report). Instead, the FPMA focuses on assessing impacts and issues associated with a catastrophic event, the Flood of 1993. As a result, many alternatives and scenarios (wetland, upland, and floodplain protection and restoration), which may provide benefits to society and natural resources in managing smaller flooding events, were of little consequence in affecting a flood of this magnitude. Water management must begin in the upper watersheds and extend downstream. Once flooding occurs on the main stem, few water management options exist. From the Service's perspective, there are many benefits which could be realized from upland, wetland and floodplain restoration in reducing flooding damages from smaller events. The Service would have preferred that the FPMA look at the general issue of water management in the Midwest and not be confined to a single catastrophic flood. This would be in keeping with the study purpose identified in the report Attachment 2 - Authorization documents.

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			Specific Comments The Executive Summary indicates that this report is the product of collaborative planning. While Service staff interacted periodically with some of the District staffs, and attended several workshops, we would not consider this to be an example of truly collaborative planning. Several discussions along this line were held between two agencies during the early phases of the Corps' FPMA effort, but no mutual understanding was reached. Therefore, it may be inappropriate to include the Service among the agencies described to be involved in the FPMA collaborative planning process (page 1, paragraph 4). In Chapter 2, the report provides a history of floodplain development, beginning in the 1800's, but fails to include reference to the Swamp Land Acts of 1849, 1850, and 1860. These Acts results in the transfer of millions of acres from federal to state ownership, with the intent of creating productive and taxable land by selling to private interests. These were significant actions underpinning the development of the river basin and its agricultural heritage, and should be discussed in the final report. In the Chapter 2 discussion of the Missouri River, it may be of interest to note that between the mid-1800s and mid-1900s, the river was shortened by 45 miles, surface area reduced by 50,000 acres and that the cross-section formerly included over 60,000 acres, existing as public waters of the United States, that accreted to ownership by adjacent landowners under Missouri law. This acreage of "new" fast land was cleared and cultivated in the mid-1900s, thus becoming damageable floodplain eligible for Federal disaster assistance and crop program assistance. The Kansas City analysis referenced in Finding 6-f on page 6-27 indicates that a + 4.5 foot stage increase may be possible with a forested floodplain. The Missouri River once occupied a wide, braided cross-section that was not densely forested prior to navigation channel improvements, so this may not be a valid alternative for the model reach. The increased stages at urban areas/critical facilities noted in Finding 6-j on page 6-27 are not readily apparent when lower overall constriction of a floodway generally provides decreased stages upstream and downstream. Although conceptually a floodway constriction at an urban area will cause an upstream backwater effect in a water surface profile, wouldn't the stage peak be reduced from prior conveyance of flood flow at lower stages? Does the model application referenced in 6-k on page 6-28 consider some configuration of side channel, chute, and slough in model cross-sections? We understand the roughness coefficient in hydraulic modeling, but find it conceptually unlikely that a natural floodplain cross-section would present a wall of wood functionally similar to a solid levee surface. The report discussion of floodplain restoration on page 8-36 takes a step toward clarifying a point of significant controversy in the post-flood rhetoric. It must be stated clearly that the primary reason for "restoration" of the floodplain in this context is not to benefit wildlife and fish, it is to derive human

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			benefit from flood attenuation and reduction in damages accruing to the Federal tax base. Wildlife and fisheries values (spawning, rearing, or foraging) will follow any enhancement of floodplain function. These values would not be expected to outweigh human values (damage reduction benefits) derived from flood attenuation. Recreation benefits derived from natural resources are a human value, and could possibly increase where public lands are limited, but are also secondary to the national goal of flood damage reduction. On page 8-36, the report discussion of "Current theories on floodplain function..." (8-u) seems to mix concepts of function and values. The wildlife and human values associated with the floodplain functions of habitat and flood attenuation, respectively, would be variably served by the patch series described. Achievement of human value might require a more hydraulically substantial floodplain cross-section or floodway than the "string of beads" required to achieve wildlife value. The conclusion on pages 7-76, 12-3 and 12-4 regarding the 25-year protection standard for agricultural lands (Alternative N) does not seem to be supported by the analysis provided on page 41. In fact, the UNET analysis reported on page 40 for restricting flood fighting to the current design height indicates a stage reduction of up to 3 feet below Quincy. In that paragraph, the report references the failure of the middle cell of the Sny Levee and Drainage District in the model application. Is this truly failure or is it overtopping? What is the basis for the report's estimate of "billion of dollars" for implementation of alternative N? Alternative L (removal of agricultural levees) describes the degradation of 2200 levee sections, each being approximately 100 feet long, to allow unimpeded flood access. This seems extraordinarily labor-intensive. Why would it be necessary to open levee and drainage districts beyond former side channel locations to the horizontal dimensions of those side channels? Several chapter references contained in Chapter 12, pages 12-2 to 12-4, are inaccurate. The Service supports the report's statement regarding the five efforts identified on page 12-5 as having the greatest value in enhancing sound floodplain management. By completing efforts a, c, d, and e, a major step in understanding the aquatic and wetland components of floodplain ecosystems will also be complete, and informed decisions can be made regarding restoration of key areas and functions. The report lacks a final recommendation for action. It appears that the Corps supports a systemic approach to flood damage reduction, but no recommendation is made regarding modification of consolidation of existing authorities under which levee and drainage districts are currently seeking Federal assistance for flood control improvements. Unless legislative action is taken, the past piecemeal approach to flood damage reduction will likely continue. The Service recommends that the next version of this report contain budget and schedule estimates for completion of the five efforts noted on page 12-5, along with an action plan for development of a basin-wide flood damage reduction strategy. The first step in the action plan should be identification of an

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			intergovernmental/public team to ensure collaboration by stakeholders. Overall, the FPMA report restates and/or supports many of the conclusions provided by last year's Interagency Floodplain Management Review Committee. As with the Galloway Report, some of the FPMA conclusions may not be readily accepted by segments of the basin population, as was acknowledged as "fundamental tension" in Chapter 2, and will undoubtedly lead to pressure to downplay those conclusions. However, as the primary Federal water resources construction agency, it will be incumbent upon the Corps to promote sound floodplain management at every possible opportunity, a task in which the Corps will have the Service's full support. On behalf of the Service, we want to take this opportunity to commend the Corps' efforts to date on the FPMA and look forward to receipt of the updated report.
37	Federal Emergency Management Agency Mitigation Directorate Washington, D.C.	5/5/95	Page 3-15. Top of page. The $372 million figure for National Flood Insurance Program (NFIP) claims payments for the 1993 flood is too high. We suggest you use the $297 million from the Interagency Floodplain Management Review Committee report "Sharing the Challenge." Page 3-15. The Water Resources Council's Floodplain Management Guidelines are not "Draft." Page 3-20. FEMA is unaware of a publication titled "Executive Order 11988, Floodplain Management" that is dated 1986. In 1986 FEMA did reprint the US Water Resources Council's publication of that name. However, that publication was originally printed in 1978. Page 5-2. Scenario Descriptions. Because of the way that the scenarios are constructed, it appears that floodplain management measures have very little impact. The crux of the problem may be that floodplain management programs were already implemented and at work in the region for a number of years prior to the Midwest flood. Many of the states have had floodplain management programs for twenty or more years, the initial National Flood Insurance Program (NFIP) floodplain mapping has been completed, and nearly all communities with flood problems have adopted and are enforcing minimum standards. The Midwest floods demonstrate that these efforts generally have been successful in minimizing damages to new development either by protecting that development or by discouraging it altogether. In addition, the Scenario I's already reflect the many changes that were incorporated into the programs after the Midwest flood. As a result, very little is left for the Scenario II's and Scenario III's and they show almost no incremental impacts. For example, Scenario I includes the changes to the NFIP in the National Flood Insurance Reform Act of 1994. This was a major piece of legislation that addressed most of the concerns and ideas that constituencies have had about how to improve the NFIP. The legislation and other actions already undertaken by FEMA address fully or in part most of the recommendations and actions in the Interagency Floodplain Management Review Committee

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			report "Sharing the Challenge." Similarly, we now have programs for funding mitigation projects for flood damaged buildings that were not available or as effective prior to changes made in response to the Midwest flood. We do not have a solution to this problem other than to clearly recognize in the descriptions of the Scenarios what has already been accomplished. There would be a greater contrast in impacts if the comparison was made between the programs as modified after the Midwest flood and the programs as they existed prior to the flood or if there have been no programs at all. However, we realize that the programs are now part of the base condition and that these other conditions are not really options at this point. Pages 5-4 and 8-8. Category E, Scenario 2. The NFIP Community Rating System already provides for up to a 40 percent discount in flood insurance premiums for communities depending on its class rating. Currently, the highest rated community is a Class 5 and receives a 25 percent discount. The discount is limited to 5 percent (Class 9) only for the first year of participation. Applying for the Community Rating System does require some effort on the part of the community, but discounts of up to 10 percents can probably be obtained with minimal cost to the community. Over 800 communities currently participate in the CRS, accounting for 56 percent of all NFIP policies. The current low level of CRS participation in the Midwest probably is due to the low number of whole accounts for less than 2% of the NFIP policies nationwide. Many of the Midwest communities probably could receive at least the 5% discount based solely on implementing more restrictive awareness activities that they may already do. However, they probably do not view it as worthwhile to go through the application process since so few people would benefit from the premium discount. Page 5-5. Category F, Scenario 1. As of April 25, 1995 the Midwest Buyout/Relocation Project had 177 approved projects consisting of 8,251 parcels. The total approved cost is $205 million of which $4.1 million is from the NFIP's Sections 1362 programs, $67.1 million from CDBG, $21.5 million from EDA and $105.6 from FEMA's Section 404 Hazard Mitigation Grant Program. Note also that P.L. 103-181 significantly increased the amount of funding available by changing the formula to 15 percent of FEMA assistance for Human Services assistance and Infrastructure assistance less administrative expenses. Page 5-6. Category G, Scenario 3. Part of this has already been done. The National Flood Insurance Report Act of 1994 already limits federal disaster payments. If a property has received federal disaster payments. If a property has received federal disaster assistance that flood insurance must be maintained or the property will not be eligible for assistance in the future. This restriction applies even if the property changes owners. FEMA has published a rule applying this provision to the Individual and Family Grants program. Page 8-2. Fully Implemented Community Rating System. The Community Rating System is fully implemented and fully funded. Any community which submits an application and has the required number of

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			credits can obtain the premium discounts. However, as discussed previous, many Midwest communities which may qualify have minimal incentives to apply because of their relatively small number of flood insurance policies. Page 8-4. Scenario I Impacts. A.2. The observation about the federal government indiscriminately providing disaster assistance to flood victims should be documented and explained or removed from the report. If you are going to raise this issue, you need to be more specific as to the type of assistance and how it is being indiscriminately provided. You should not just insert it as an anonymous observation. The issue of whether disaster assistance encourages or perpetuates floodplain development is a legitimate issue that would require a more in depth analysis than is presented. Page 8-5. B.1. The impact of the $1.5 million funding for mitigation plans is understated. First, FEMA anticipates funding considerably more than 30 plans a year. These plans will largely be developed using local resources and will not require a high level of funding. Second, it is anticipated that only a relatively small percentage of NFIP participating communities have enough buildings in the floodplain to be motivated to develop a mitigation plan. For example, of the over 18,500 communities participating in the NFIP, less than 800 in the nation and 128 in the seven states have 10 or more repetitive loss properties. Realistically, these communities are likely candidates for mitigation plans. Many of the 3,972 communities in the seven states have no development or only a few structures in their flood hazard areas and are not likely to be interested in developing a mitigation plan or be funded. Third, a number of the communities with significant flood hazards have already completed mitigation or floodplain management plans using their own resources. Page 8-7. Scenario I Impacts, A.1. and 2. The fact that there was only a 2 percent increase in community participation indicates that nearly all communities with significant flood hazard areas in the Midwest states impacted already participated in the NFIP prior to the flood. The impact of this scenario over time is minimal since few communities are left to join the program. A community can be mapped and have special flood hazard areas designated and have no existing floodprone development or potential for next development. Page 8-8. Scenario II Impacts. B. See prior discussions of the Community Rating System. It is possible to obtain premium discounts with little or no investment on the part of the community. Many communities in the Midwest could qualify for 5 or 10 percent discounts based on activities they already do. However, the community does have to make application. Low NFIP policy counts make this effort less attractive in the Midwest than in other parts of the nation with more floodplain development. Page 8-8. Scenario III Impacts. C. 1. Requiring communities to obtain private insurance would probably increase protection levees. If local units of government must obtain private insurance for their infrastructure, this in itself is an incentive

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			to protect those facilities since the cost of the insurance will depend on the risk. The Des Moines Waterworks upgraded their levee and took other mitigation measures in part so they could retain their private insurance coverage at affordable rates. Page 8-9. Scenario III, Impacts 3. Losses to public facilities were high in relation to total expenditures. FEMA expenditures for Infrastructure nearly equaled that for Human Service (see "Sharing the Challenge"). Page 8-9. Scenario I. Measures. Again, buyouts should exceed 8,000 buildings. The key provision of the PL 103-181 that resulted in increased funding was not the change of the cost share. It was the change in the formula for determining how much hazard mitigation funds would be available. Page 8-11. Top full paragraph. In regards to the issue of making flood hazard mitigation funds available quickly after a flood, there is a provision in the National Flood Insurance Reform Act of 1994 that does just that. The Act authorizes FEMA to provide coverage in the flood insurance policy for the cost of bringing buildings into compliance with local floodplain management regulations (mitigation insurance). This coverage should be in effect for new and renewal policies beginning on October 1, 1996. Payments would be made through the flood insurance claims adjustment process. If this coverage had been in effect prior to the Midwest flood, several thousand buildings would have been elevated, demolished, relocated, or floodproofed in the few months after the flood. The National Flood Insurance Reform Act does not change the definition of substantial improvement in NFIP floodplain management criteria so that it is cumulative. It defines repetitive loss structure and includes such structures as eligible for mitigation insurance coverage. Page 8-13. Top full paragraph. The $375 million savings appears to be overstated. Total FEMA assistance was under $1 billion and not all of this is cost/shared. Going from 90% to 75% for the federal share will not result in this high a savings. Page 8-34. 8-a) Caution must be exercised to avoid placing administrative burdens on communities with minimal flood problems by forcing them into the NFIP. While there are a few communities that are not eligible for the NFIP that should be, most nonparticipating communities with their flood hazard areas mapped have minimal or no existing floodplain development or potential development. The benefits of these communities joining the NFIP are marginal. Page 8-34. 8-b) Note that there is already a deductible in the Stafford Act for Infrastructure assistance for buildings that is equal to the amount of flood insurance coverage that the community could have purchased. NFIP coverage is not available for other infrastructure.

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			Page 8-34. 8-c) Some caution should be used before concluding that there is a problem with the FEMA definition of "floodplain location." Many of the buildings that were flooded that were outside the 100-year floodplain were in the City of Chicago or in Cook County, Illinois and has basements flooded due to sewer back-up, inadequate storm sewers or other drainage problems or high groundwater (some of it behinds levees). These types of problems do not lend themselves to floodplain mapping. Also, 24 percent of the NFIP claims paid between 1978 and 1993 have been made on buildings in B, C, and X zones. For the Midwest Flood only 2,483 out of 16,167 claims filed were in B, C, and X zones. Note that B, C, and X zone buildings as a class are actuarially rated and not subsidized. Page 8-35. 8-i) The formula for determining the Hazard Mitigation Grant Program Funds was 10 percent of FEMA Infrastructure assistance. The new formula is based on 15 percent of all FEMA assistance, including Infrastructure and Human Services assistance, less administrative costs. The additional 5 percent and the inclusion of the Human Services assistance significantly increased the amount of funds available. Page 10-15. 5) There is no such thing as a single FEMA model ordinance. Model ordinances are developed by FEMA Regional Offices and by states to reflect any more restrictive state standards or unique state administrative procedures. FEMA minimum floodplain management criteria at 44 CFR 60.3(d) limit increases in flood stage when floodways are designated by communities to no more than one foot. Several of the States in the study area have more restrictive surcharge limitations which FEMA recognizes in its mapping. Once a floodway has been designated, obstructions in that floodway cannot cause any increase in flood stage. Buildings must be elevated or floodproofed to the 100 year or base flood elevation. The one foot freeboard also is a more restrictive requirement of several of the states. Page 10-16. Top paragraph. All of the states have state enabling legislation that allows communities to adopt and enforce local floodplain management ordinances necessary for local ordinances and independently require adoption of floodplain management ordinances by communities. These regulations often have some provisions that are more restrictive than NFIP minimum requirement. In some limited instances there is direct state regulation of some floodplain development. All of the states have communities that are not eligible from the NFIP or which are suspended from the program. Page 10-17. Table. This table is misleading. These are not "state ordinances." States do not adopt ordinances. The State of Missouri does not have state floodplain management regulations. However, communities within the state that participate in the NFIP must comply with NFIP minimum requirements. It would make more sense to title this table "State Floodplain Management Requirements" and just indicate that Missouri has no state regulations.

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			Page 10-18. Findings. 10-i) It would be more correct to state that six states have adopted state floodplain management statutes or regulations. All communities in all states are subject to the minimum standards of the NFIP. 10-k) and 10-1) These are meaningless comparisons. Some states have more communities that have floodplain maps, but no floodplain development and no potential for development. There is little incentive for these communities to join the program and little need. More significant would be numbers of communities that have floodplain development which do not participate. Page 10-20. Background. We suggest that you do not use the Donnelly data from the Assessment Report of 1992. This data probably considerably overstates the numbers of floodprone households in most of the Midwest states. The Donnelly estimates were developed by assuming that households are uniformly distributed across the community. Donnelly multiplied the percentage of land area in the community that is floodplain times the number of households in the community to get floodplain households. Since many floodplains in the more urban areas of the Midwest tend to be used for agriculture or open space or are wetlands, this methodology is highly questionable. Page 10-24. First paragraph. Again, B, C, and X zone losses for the NFIP for the years 1978-93 were 24 percent of all losses. Many of these losses are in areas with localized drainage problems which are too small to warrant the cost of floodplain mapping. These urban stormwater management problems that are really beyond the scope of the NFIP and are the responsibility of the individual community. There is also a question of definition in regards to the 40 percent estimated to be out of the floodplain for the Midwest flood. Sewer back-up may be caused by high groundwater resulting from heavy rainfall and not directly related to a general condition of flooding. Page 10-27. Full paragraph 2. Flood insurance does not subsidize new development within the 100 year floodplain. Rates are fully actuarial. The situation behind a levee that has been accorded 100 year protection is more complicated. It may be that removal of the floodplain designation has a greater impact on whether the area will develop than the expectation of subsidized insurance or disaster assistance. Empirical evidence of this is the low level of flood insurance that was in force in Chesterfield prior to the Midwest flood. Also, businesses would qualify only for SBA loans is flooding occurred. It is difficult to view the expectation of a disaster loan as a subsidy encouraging development even if the interest rate is below market.
38	Dept. of Natural Resources Missouri Jefferson City, MO	5/12/95	This is in response to Colonel Scott's request for comments on the draft Floodplain Management Assessment (FPMA) report of the Upper Mississippi and Lower Missouri Rivers and their tributaries. The FPMA covers a large geographical area composed of states/regions with varying levels of floodplain management, and two major rivers, the Mississippi and the Missouri, which responded very differently to the 1993 flood. Seeming to recognize the value of obtaining state/regional input into

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			the FPMA, the Corps encouraged state resource agencies to actively participate in the reports' development. As the state hardest hit by the Midwest Flood of 1993, Missouri had a great interest in providing comments that would make the FPMA results useful to state and local governments currently grappling with the complexities of floodplain management issues. The Missouri Department of Natural Resources committed staff time and resources early on and throughout the process to travel to workshops, review drafts, and to provide constructive, detailed suggestions. In reviewing the draft FPMA report, it is apparent that our time, effort and resources have been wasted. Regrettably, only one of our recommendations to correct serious flaws in the FPMA has been considered, and incompletely at that. Although not included in the draft report. the Corps has agreed to hydraulically model the levee set back alternative. However the associated environmental, economic and social effects will not be evaluated, as they will with the other alternatives. Attached is a letter to Dr. John Zirschky, Acting Secretary of Civil works regarding the Corps of Engineer's Floodplain Management Assessment (FPMA). The letter was jointly signed by the Missouri Department of Natural Resources, the Missouri Department of Conservation, and the State Emergency Management Agency. Also attached is Dr. Zirschky's response letter. In short, the FPMA fails to address the hydrologic and hydraulic conditions of Missouri River flooding. We remain concerned that the FPMA will provide misleading results to state and local governments who will likely use them as a basis for making or revising floodplain management policies.
39	State of Nebraska Natural Resources Commission Lincoln, NE	5/11/95	Thank you for the opportunity to review and comment on the above-referenced report. Considerable time and energy have been put forth to coordinate and complete this broad-based effort in a timely manner. Our comments are not intended to address all of the issues contained in the report. Instead, they are focused on concepts of the report that we support, questions and concerns about the report, and specific corrections needed in the report as they relate to the State of Nebraska. The Assessment does a very good job of stressing the importance of evaluating hydraulic impacts systemically. The development and use of the UNET mmodel was an excellent first-step in this process. The discussions involving the challenge to ensure that decisions regarding floodplain use are made with full recognition and acceptance of risks and potential costs associated with living, working, or investing floodplain locations are right on target. The case study on the Chesterfield-Monarch area and the discussion in Chapter 10 on the residual flood risks and induced development associated with structural flood control projects are very insightful and these concepts should be recognized in a future project development and design. The major weakness of the report is that it is a one-agency report. A true multi-agency approach would assure that the unique floodplain management perspectives and insights of all agencies were presented. Although considerable effort was made to involve other federal and state agencies there

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			are numerous places in the report where other federal and state agencies, there are numerous places in the report where other federal and state agency programs are not depicted accurately. Hopefully, many of these inaccuracies will be addressed during the comment period. The description of the evaluation process used for the Assessment is very confusing and spans six chapters. The matrix tables and cell descriptions are of limited value to the reader and might best be presented in an Appendix. The "Findings" at the end of each chapter should be reviewed to assure that they are well On page 8-4, the third bullet point should read: "Nebraska has had an active floodplain management program since 1967, and has not made changes in the program as a result of the "Flood of 93." On page 8-29, the sentence in paragraph six should read: "The Papio-Missouri River Natural Resources District (NRD)..." On page 10-14, the second paragraph should also reflect state and local standards required for floodplain and floodway development. On page 10-15, the FEMA requirements stated are not correct and should be reviewed. On page 10-16, in reference to the first bullet point, Nebraska does not require state permits for floodplain development. In reference to the second bullet point, the state does not specifically prohibit the development of hazardous waste facilities within floodways (although it would be very difficult to locate such a facility in the floodway). It should be recognized that the state does prohibit new structures for human habitation in the floodway and reuires all structures to be elevated at least one foot above the 100 year floodplain. I have included for your information a copy of "Statutes Relating to Flood Plain Management" and the Nebraska Natural Resources Commission's "Minimum Standards for Floodplain Management Programs." The table on page 10-17 should be corrected to reflect the state exceeding NFIP requirements in floodways and for siting critical facilities. On page 10-18, 10-o) should read: "Five of the seven FPMA States (Nebraska, Illinois,..." 10-p) should read: "...The states of Nebraska, Iowa,..." Again, we do appreciate the opportunity for reviewing the report. The development of the UNET models to look at system wide effects provided an excellent "end product" for this study effort. Finally, we do look toward a collaborative future effort to prevent unwise development decisions in floodplains.
40	American Rivers Washington, D.C.	5/9/95	American Rivers, the nation's leading river conservation group, appreciates the opportunity to comment on the Draft Floodplain Management Assessment (hereinafter "Assessment").

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			The Great Flood of 1993, the most destructive flood nationally in more than 50 years, changes the way the nation calculates the economic and social costs of floodplain development. Rather than return to the river's edge, thousands of people voluntarily relocated more than 8,000 homes and businesses from harm's way. The largest voluntary relocation in our nation's history has inspired floodplain residents in Texas, Georgia and California to seek higher ground as well. More than an exodus, the nation's response to the Great Flood of 1993 was a thorough repudiation of many long-held flood control and agricultural policies. Indeed, the Floodplain Management Assessment contains several important findings that support this view: * Raising agricultural levees would increase flood heights. The Assessment concludes that by raising and strengthening agricultural levees along the Middle Mississippi to prevent overtopping in the 1993 event, flood stages would have been an average of about 6 feet higher. Raising all agricultural levees to contain the 1993 flood would substantially increase flood damages in St. Louis, St. Louis County, St. Charles County and in the Mississippi River floodplain below St. Louis. Adopting a 25-year level of protection for all agricultural levees would cost nearlt $6 billion and significantly increase flood damages in 993. In some cases, setting back levees was shown to be an effective way to reduce flood losses. * Wetlands can help reduce flood losses. Although wetland restoration would not have substantially reduced damages caused by the Great Flood of 1993, wetlands can reduce local flooding by as much as 25 percent where contributing areas are small. Several case studies reviewed by the Assessment indicate that flood peaks can be reduced significantly for fairly frequent flood events. In addition to reducing flood losses, wetlands restoration can also improve water quality, wildlife habitat and groundwater recharge benefits. * Allowing the river to interact with parts of its floodplain is a key link in the Mississippi's food chain. A flood is the major in way by which exchanges of nutrients, organic matter, and organisms take place between the main channel and the floodplain. Although the extent and magnitude of floodplain acreage suitable for conversion or restoration is considered to be quite small in comparison with floodplain that would continue to be farmed, the Assessment concludes that acquisition of these areas would allow the river to resume limited interaction with it floodplain and reduce payments for agricultural damages. Current theories on floodplain functions predict that the area needed for an improvement to te natural biota is probably small and that restoration of a series of natural floodplain patchs - a string of beads -- connected to the river would be practical and beneficial. Agricultural subsidies that facilitate farming in areas that would otherwise not be farmed should be reviewed and reformed. Unfortunately, acquisition programs are underfunded relative to the interest in participating in these programs. American Rivers applauds the Corps' Floodplain Management Assessment and urges you to work with Congress and the Clinton Administration to: 1) implement a series of wetlands demonstration

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			projects throughout the Upper Mississippi and Lower Missouri rivers basins; 2) create an Environmental Management Program (EMP) for the Missouri River and allow this program and the existing program on the Upper Mississippi to engage in the existing program on the Upper Mississippi River to engage in habitat acquisition; and 3) use existing wetlands restoration programs, including an expanded Section 1135 program, the Conservation Reserve Program (CRP) and the Wetland Reserve Program (WRP), to protect and restore floodplain wetlands. In preparation for the final draft of the Assessment, we urge you to further develop the economic and environmental benefits of wetlands and floodplain restoration. The beauty and diverse history of the Upper Mississippi River attracts more than 12 million visitors annually -- more than Yellowstone National Park -- generating more than $1 billion in revenue and supporting 18,000 jobs. Despite its degraded state, Missouri River recreation generates $76 million annually. Recreation benefits on the Lower Missouri alone nearly exceed benefits from Missouri River navigation. Further, we urge you to develop sit specific case studies for wetland and floodplain restoration. Since 1986, the Corps has struggled begun to redefine its mission to reflect contemporary concerns about the environment. We believe that the Corps, by using the information developed by the Floodplain Management Assessment, can undertake its greatest mission yet -- the restoration of the Mississippi and Missouri rivers.
41	US Dept of Agriculture Natural Resources Conservation Service Salina, KS	5/10/95	On April 18, 1995, Johnny Green, Assistant State Conservation Engineer on my staff, participated in the public meeting for the draft Floodplain Management Assessment (FPMA) report which was held in Topeka, Kansas. We did receive a copy of the draft report and have briefly reviewed portions of the report. Due to the length of the report and the ongoing heavy workload which we are experiencing. I regret that a more detailed review cannot be done at this time. In addition, due to the short turn around requested, we are unable to provide comments to you by May 5 as requested. Thank you for the opportunity to comment on the draft report. Once again, I regret that a review could not be completed at this time. I wish you the best of luck in compiling all the comments and completing the final copy of the report.
42	Thomas J. Juen Glen Carbon, IL	5/12/95	I would like to offer the following comments in regard to the draft Floodplain Management Assessment (FPMA) report dated March 1995. 1. Additional detail should be added to Chapter 2 to clarify policy decision which were made regarding navigation and levee improvemtns. As an example, on page 2-8 in the last paragraph, the second sentence states, "By 1918, virtually no through traffic moved between St. Paul and St. Louis." An explanation of economic forces at work besides the lack of a "dependable navigation channel" would be helpful. It wouuuld appear that river shipping was uncompetitive and was then subsidized by the federal government at the states' request.

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			2. Prior to issuing the final FPMA, a peer review of the document and its basis for findings should be performed by an independent group of engineers and planners such as a water resources agency from another country, for example Great Britain. 3. A moratorium should be placed on the raising of any agricultural levee which involves the use of federal government funds. This moratorium should continue until additional public discussion of the impacts of this policy is invited. The COE should be required to demonstrate that raising agricultural levees will not result in large expenditures of federal money for the improvement of urban flood protection works. 4. Additional and more detailed consideration should be given to nonstructural alternatives such as expanded state and federal parks located in upland areas. Perhaps these parks could be combined with "smaller" flood control reservoirs to provide cost effective protection. These comments are made as a private citizen and do not represent the opinion of any specific organization or company. I believe the FPMA will be a valuable planning tool for professionals both within and outside of government. I appreciate the opportunity to provide input to this ongoing overall planning process. Some of these comments are general in nature but I believe their intent should be incorporated wherever possible into the final FPMA. To some extent, they reflect conversations I have had with other private taxpayers.
43	Upper Mississippi River Basin Association St. Paul, MN	5/30/95	This letter provides the Upper Mississippi River Basin Association's comments on the Army Corps of Engineers' March 1995 draft Floodplain Management Assessment (FPMA). We realize that this letter arrives somewhat after your May 12 comment deadline. Unfortunately, the review time provided was simply not adequate for each of our member states to develop its own position on the report and then for the five states to articulate their consensus thoughts. However, by virtue of the fact that the Association's comments are conceptual in nature, we believe they remain timely as you finalize your report and decision-makers in Congress and elsewhere begin to consider how it might best be utilized. The states recognize that the Corps faced significant challenges in undertaking the FPMA. The Congressional directive was to "conduct comprehensive, system-wide studies to evaluate the flood control and floodplain management needs of the Upper Mississippi and Lower Missouri Rivers and their tributaries that were flooded in 1993." This directive was both broad and ambitious, while the time and money available to accomplish the work were quite limited. The systemic approach specified in the directive represents a departure from typical Corps studies, which are most often linked to evaluating individual projects. The states are also keenly aware that the FPMA was a single agency study in which other federal and state agencies were observers, not partners. Nothing in the Congressional directive precluded the Corps' approach, and logistical constraints may have even demanded it. Yet it must also be recognized that a comprehensive floodplain management assessment for the Upper Mississippi and Lower Missouri Rivers and their major tributaries cannot be adequately accomplished by any single

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			agency. Despite this fundamental disjuncture between FPMA's stated objectives and the process employed for undertaking the effort, the Association's member states believe that the assessment has made several valuable contributions. The report's strengths include the following: * The FPMA demonstrates the importance of systemic analysis. The draft report's findings regarding potential structural modifications illustrate that there are no easy solutions and that site-specific measures must be considered in light of their cumulative systemic impacts. As elected officials and river managers consider potential changes to individual components of that system, this is a particularly important lesson to bear in mind. Unfortunately, while the importance of systemic analysis is implicit in many of the Corps' specific technical findings, the draft report is not as effective as it could be in highlighting this cross-cutting conclusion for the non-technical reader. * The assessment also served to demonstrate and advance technology in important areas. Specifically, the FPMA illustrates the power of UNET modeling and digital mapping as tools for systemic analysis. State floodplain managers in the basin have long called for development of an unsteady state hydraulic model for the region. While the Corps' work did not test the UNET model exhaustively, it did provide some good case studies on which further evaluation can build. * By exploring a variety of "what if" questions, the Corps has attempted to provide insights into a range of structural and policy alternatives. The Association is not in a position to judge the technical merits of the analysis, more do the states necessarily agree entirely with the alternatives evaluated or the conclusions drawn. However, the Association members do believe strongly that the sound assessment of potentially viable alternatives is critical to good floodplain management decisions. * The draft report also includes some specific findings that are useful in addressing public concerns and misconceptions regarding the 1993 flood. Of particular note is the Corps' finding that "approximately 80 percent of 1993 flood damages related to crops were not caused by overbank flooding and would not have been affected by any projects or changes in floodplain management policies..." Another significant insight is that levee modifications would not necessarily affect flood stages in the manner one might expect. For example, the assessment concludes that levee setbacks may actually raise flood stages down stream. These types of findings are particularly significant precisely because they are somewhat counter intuitive. However, the FPMA fails to clarify that its findings with regard to the impacts of raising or lowering levees in the 1993 flood event would likely differ dramatically if the modifications were modeled for more frequent, lesser magnitude floods. By explaining and publicizing its findings, the FPMA can make a valuable contribution to the continuing discussions surrounding the future of floodplain management on the Upper Mississippi and Lower Missouri Rivers. While the Association's member states are providing their technical comments to the Corps directly, there are some more general observations regarding the FPMA's limitations that the states wish to offer jointly:

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			* The draft report falls short of being a floodplain management assessment. It is instead largely an evaluation of selected flood control alternatives. While the report includes some findings regarding policy options, there is a severe paucity of technical and analytical justification for these conclusions relative to that which is provided for the structural flood control findings. This is not surprising to the states, given that the assessment would have required a genuine partnership effort involving all disciplines relevant to floodplain management at the federal, state, and local levels. * While the FPMA directive was to study the area that was flooded in 1993, the Corps chose to limit modeling and analysis to that single, unusual flood event. Although the 1993 flood was undeniably a major event with tremendous human consequences, it is not the only type of event upon which floodplain management decisions should be based. Policy makers and managers must also consider the greater frequency, lower stage floods. The Corps' analysis of various structural and policy alternatives would have been far more useful if it included evaluation of these options under more routine flood conditions. * In drafting the report, the Corps was not always as effective and accurate as it might have been in conveying the meaning of its findings. As we have already noted, certain fundamental conclusions, such as the importance of systemic analysis, are implicit in specific findings but are not stated explicitly. In other instances, the language used to summarize quantitative findings introduced judgments that are not justified. For example, the Rock Island District concludes that floodfighting generally had a "minor to moderate impact on river levels" in the district. However, the figures cited on p. 9-40 include impacts of 2.7 feet at Quincy, Illinois and 2.9 feet at Hannibal, Missouri. In the view of state floodplain managers, these impacts should be no means be described as minor or moderate in the context of the 1993 flood. Given the high level of interest in the FPMA and the potential for portions of it to be taken out of context, it is particularly important that the report be as readable, clear, and accurate as possible. * The draft report poses the question of whether there are inconsistencies among the states in their administration of floodplain regulations. The states are troubled to the extent that this question and the Corps' analysis of state programs imply that there is inherent virtue in consistency. From the perspective of the state floodplain managers, it is far more important that states and localities are effective in regulating floodplain development than that they are consistent. The FPMA, however, did not evaluate which state and local programs, regulations, and approaches were most effective in the 1993 flood. Data on repetitive loss, compliance rates, community rating system participation, and other important measures are all readily available and would have permitted the Corps to undertake a more meaningful comparative analysis. This is the type of information that decision-makers at all levels of government need to optimize their approach to floodplain regulation. The absence of such analysis further demonstrates the need for collaborative interagency approaches to addressing floodplain management issues. The member states of the Association believe strongly that the Corps' FPMA report should not become another study that sits on the shelf. The Corps performed valuable analyses that should

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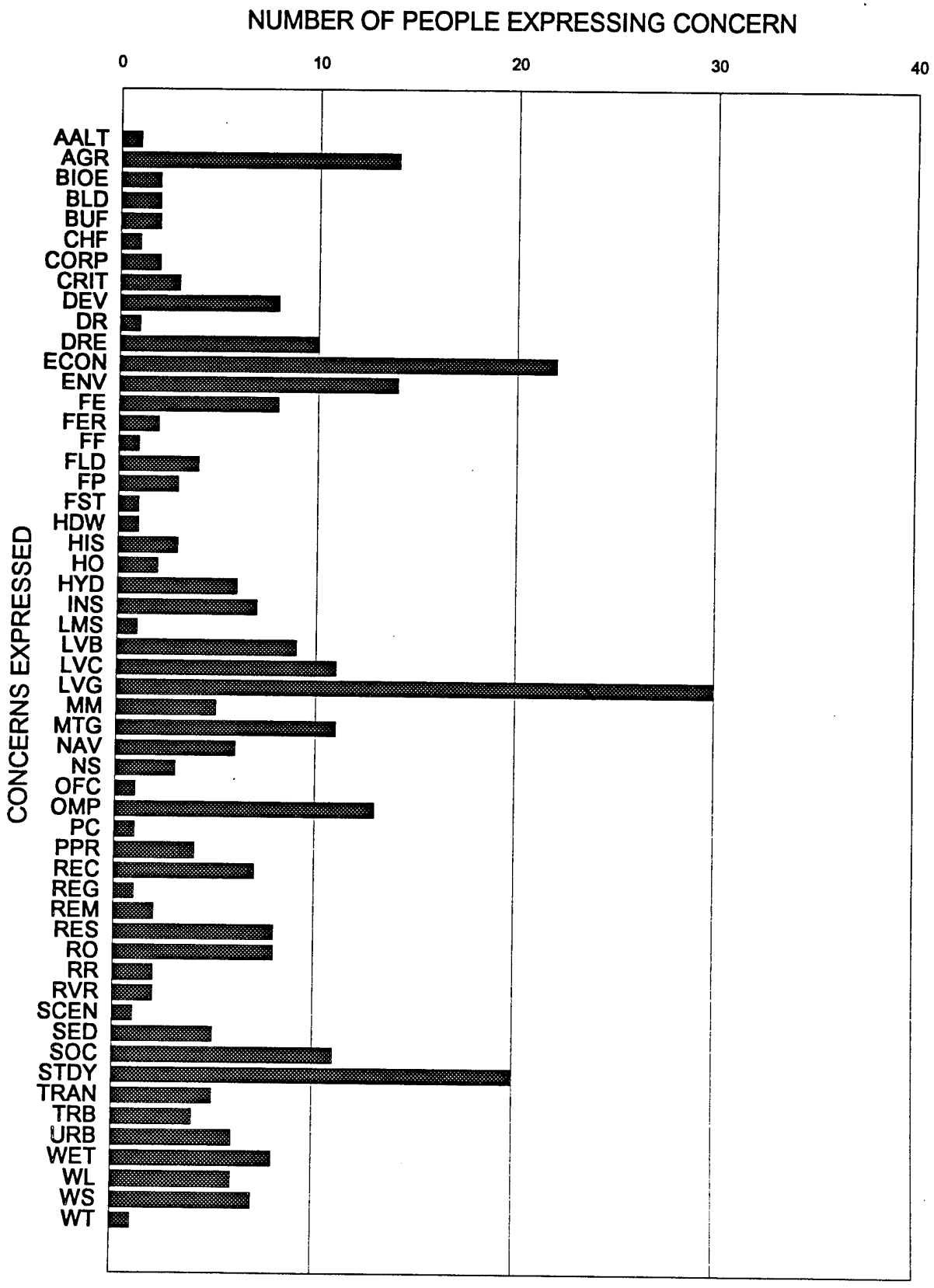
			serve to inform future efforts and decisions. Toward that end, the Association offers the following observations regarding next steps that might be taken: * The draft report contains a great deal of valuable information, but it is not an optimal vehicle for conveying its most important findings and conclusions to a non-technical audience. In preparing to submit the report to Congress, the Corps may wish to consider an enhanced executive summary or a separately bound summary document. Such a document would be helpful not only to members of Congress and their staffs, but also to the wide range of others outside of the professional floodplain management community who are interested in the FPMA. * While the FPMA lacked the partnership approach necessary to meaningfully assess the full range of issues associated with floodplain management, the state believe that the Corps; work can become a starting point for future multi-agency partnership. The report has certainly highlighted a number of issues that merit further consideration by federal, state, and local entities. For example, the Corps' work with UNET represents a good first step and should be used as basis for continuing dialogue and work among the states and the federal agencies on unsteady state modeling. Refining the model as well as resolving issues such as how and where it should be maintained will require a joint effort. It is possible that the Association's State Floodplain Management Work Group could serve as a means for facilitating some state/federal cooperative efforts. * Because the FPMA was a single agency effort, the Corps may wish to consider taking special steps to communicate with its sister federal agencies. There are a number of findings as well as specific technical products that are quite relevant to the work of other agencies, such as the Federal Emergency Management Agency's mapping program. If the FPMA is simply forwarded to Congress, it will not have its broadest possible impact at the federal level. A targeted outreach effort by the Corps' leadership to their counterparts in other federal agencies could go a long way in this regard.

November Comment Spreadsheets

CONCERNS EXPRESSED IN NOVEMBER MEETINGS AND IN WRITTEN CORRESPONDENCE



Public Involvement - Key to Matrix Code

AALT - remove extreme action alternatives

AGR - agriculture benefited by levees; not enough about agriculture in this study; want regional versus national impacts in study; ag. subsidies; crops enhance wildlife; ag. protected as well as business; look at realistic ag. data - 5 to 10 yr. events; need ag. land in floodplain; rented land lost to the CORPS?; look at ag. practices in floodplain

BIOE - suggested use of nonstructural techniques by CORPS is one of best components of this study; use native vegetation in the watershed

BLD - build levees as HREP impoundments were done; lower road height; use water control structures to release water

BUF - buffer zone between waterways and tilled land; need buffer strip at least 60 ft.; better enforcement of buffer zone

CHF - levee channeling causes increase flow/volumes down river
CORP - well received at meeting; generally support study
CRIT - critical facilities considered priority; combine critical and priority sites; better explaination

DEV - encroachments in floodplain/river; embankments; 'hard surfaces' decreasing rainfall infiltration and increasing flood events?; construction of I-635 bridge caused increase flooding; took ag. land for development

DRE - dredged sand should be used on levees/ or completly removed; reduce dredging

ECON - cost/benefit to floodplain or land developed behind levees; benefits may not equal B/C ratio requirements (Do analyses favor those impacts that are easy to quantify and undervalue those that are difficult?); data does not allow complete analysis or by specific hydrologic setting; need higher estimates in modeling the impacts of watershed runoff reduction estimates; reduce FED. expenditures; need consistent funding; use a lottery system to raise capital; compare transportation cost of export grain shipped by barge; need better values placed on wetlands; difficult to measure dollars against acres

ENV - environmental values; impact of flooding on species; declining ecosystem; changes in aquatic ecosystem; water quality should be impact; consider the Draft Environmental Impact Statement for this study; include impact of flooding to wildlife; address culmulative effects to environment; more aggressive strategy to protect wildlife likely as shift seen in national policy

FE - look at using other flood events other than 1993 flood; impact of those on wetlands, tributary flooding and high water on uplands; flood control should be analysed
FER - flooding improves land fertility; promote cyclical flooding of agricultural lands
FF - oppose limited flood fighting

FLD - field studies in various land management practices on flood dynamics are needed in a variety of physiographic regions ; comparison of standard project flood control levees along the UMRS.; need flood hazzard mapping

FP - floodplain; use of area for extreme flood events; lost storage capacity; move people out of the flood prone areas; need to study individual floodplain characteristics

Public Involvement - Key to Matrix Code

FST - fast and more financial response action post flooding

HDW - flood damage reduction strategies needed in the headwater and on the upland floodplains

HIS - historic preservation; sites protected; look at historical flood damages

HO - low cost housing outside of floodplain; housing location suggested in Galloway study

HYD - consider the hydraulic distribution of flood damages; specific hydrologic setting, such as the watershed scale or flood magnitude, better modeling studies needed like the Hydrologic Simulation Program for Fortran (HSPF); dams altered hydrology of mainstem rivers

INS - insurance rate costs; claim costs; crop ins. required - residences too?; Gov't should not pay flood insurance

LMS - build levees as on the lower Mississippi; rebuild levees

LVB- bad about 500-year levee; flooding behind; maintenance and improvement; private levees bad; use of 500-year seems excessive; don't build higher; interior drainage problem; why push back ag. levees but not urban levees?

LVC - levee, maintenance/improvement costs; study individual levee districts; clarify max. height; change slopes; keep levees low; either 500 yr. or NO levees; no segregation of urban/public levees

LVG - good about 500-year levee; value to navigation; set back from waterway; raize levees; maintain levees as is; need levees; repaired levees

MM - mismanagement by Feds, give to locals to manage; water control plan for Missouri River manual appears over influenced by Upper Mississippi executives and deters Lower Mississippi residents of their rights

MTG - public meetings good idea but - response to format negative;use microphones for speakers and questions; too abstract; show slides that show work completed and make it more interesting to public; visual aids important!; no facts just PR at this session; interesting mtg.

NAV - impact of navigation projects, channeling, wing dams on flooding; value of nav.; expand nav. study to restore river dynamics; scenarios applied to nav.; consider long term impacts; determine the impact of cumulative effects from continued or increased navigation

NS - return rivers to there natural state (natural state not defined?);simulate natural geomorphological process

OFC - other flood control; other management than use of floodplains
OMP - strive for optimum management plan, use watershed management; CORPS experts so willing to work with them; CORPS should make all an inter-agency endeavor with USFWS, DNR, SCS, etc. as in other areas of country ; need third party peer review; require a national balance of standard project flood protection to navigation, economic development, and environment and habitat protection; avoid agency self-interest - multi-agency; Gov't work with communities

PC - more pollution control for river water**POL** - policy defined through district or river mile, (same?)

Public Involvement - Key to Matrix Code

PPR - value of property in floodplain, private property rights; treat landowners fairly

REC - provide recreation, hunting, fishing, boating, etc.; consideration of ease of access by elderly, disabled, and non-boaters
REG - consistency in Gov't regulations; need uniform, standard, Federal policies; want Gov't. ownership of floodway

REM - remove structures from floodplain; buyout
RES - use water reservoirs; may invite criticism; Pick-Sloane plan; reservoirs are proven to reduce flood damages;

RO/DR - stormwater run-off (urban and agricultural), use of upland measures, agricultural run-off problems; tailor to a variety of flood magnitudes; soil conservation and enrichment to prevent runoff and sedimentation buildup in rivers; address drainage problems

RR - reroute excess water to dryer areas
RVR - river wide policy, not separate for upper and lower; change river management

SOC - social well being impact category; human value is not given enough importance; unclear what significance short and long term human trauma damages are caused by large flood events; human beings have a right to be protected; solution the same for everyone; equal representation; focus on social issues; moving out of floodplain

STDY - study, what will happen when it is completed? is it worth it? study nothing but public reaction placating, no confidence; need more time to collect data; study seems to cover too many issues/solutions; Will plan work? - too vague; don't misinterpret the data; potential benefit of study; very useful; HEC-1 modeling underestimates flood peak reduction; 3 scenarios - need better description; the three scenarios presented at the meeting raise some additional issues that must be studied as a comparison of floodplain management policy; need 4th scenario; very complex study- needs more funding

STRC - Corps should consider impacts of a maximum structural flood control approach versus the current bioengineering approach suggested

TRAN - water transportation important; address transportation impacts separately; determine future of Miss. river; increasing river traffic causes ecosystem decline (wind/wave action)
TRB -consider tributaries for importance, large amount of 1993 flood occurred in these areas, small watersheds

URB - urban protected areas; include/expand traffic corridors;

WET - value of wetlands, use as leased areas for water storage, habitat; large-scale restoration of pothole wetlands; benefits of ground water recharge and flood control; increases water quality; include all wetlands; management of river ecosystem to floodplain is unclear

WL - water levels, need more capacity adjustment capabilities, clean out backwaters; change water levels in pool, make channels deeper, wider

WS - watershed management approach; need to take specific watersheds into account; future watershed study needed with a complete analysis of the distribution of cumulative historical flood damages within specific watersheds; storage capacity; integrate other studies; use of upland watershed reduction a plus; evaluate groundwater surface interactions; water supply

GENERAL COMMENTS FROM NOVEMBER MEETINGS

ID	FROM	DATE	CODE	COMMENT OR QUESTION
1	FPMA Environmental Work Group Meeting	12/06/94		Public discussion sessions held in each District over the past few weeks, common concerns expressed:
			FE	1. Why aren't we looking at less extreme events for developing flood plain policy? This is related to a frequently heard concern that conclusions from our watershed modeling will suggest that wetland restoration has no flood reduction benefits.
			ENV	2. The title of the third scenario, "Maximum Environmental Scenario", is misleading and/or confusing and should be changed. This scenario does not require that environmental issues be the deciding factor in flood plain development, although it is being interpreted that way by non-environmental interests.
			RO	3. Storm water run-off retention in new urban areas needs to be considered.
			LVG	4. An interesting observation from Omaha meetings was that some farmers want to see the levees set back.
2	Burlington Public Meeting	11/06/94	REC	* More data should be compiled about the recreational use and value of flood plain land before 93 flood hunting, fishing, eagle watching, boating, etc.
			STDY	* I do not feel confident that the study the Corps is compiling will have any "concrete" facts and figures. Everything is too "general". Many question did not receive an answer. If this is the way most studies are done and "major" decisions in economic development are based on–then they have lost my trust that they put any value on people.
			STDY	* As I listened to answers from Corps people I felt they were uncertain about the data they are using. This makes me very uncomfortable. It seems maybe more time should be allowed so that accurate data can be collected before this report is submitted to Congress.
			WL	* Check the river level today to what it was in the past. The river is filling up at a fast rate. We need to hold more water in each pool.
			WT	* The Mississippi river system is a natural economic treasure for this country. Please work to insure its usefulness as a connection between the most productive land in the world and foreign buyers. Water transport is less polluting and more efficient than any other farmer grain/wheat transport.
			ECON	* Revision of current formula for benefit/cost ratio needs to be made. Benefits should include value of infrastructure protected e.g. public utilities, public land, as well as substantial investment structures e.g. pumping stations and building price benefits to ag producers in other parts of the interior, prevention of loss of transportation facilities e.g. closed highways and bridges and similar matters. Current formula is too restrictive and not comprehensive.
			LVC	* I consider the notches to be inappropriate. The only way this type of system could work is if the areas to be flooded were agriculture or green spaces with no buildings or dwellings. I can't believe that the NEIP would allow this in this type of situation.
			RR	* Route to desert/high population areas i.e. California, Arizona:
			FE	1. Need to emphasize importance of further studies to evaluate other scenarios. Flood of 93 was rare both in length of rainy period and severity.
			ECON	2. Also, it is not fair to consider some economics, but not value all factors because over simplifications are inevitable.
			HO	3. There is a critical need for development of low cost housing outside of flood plain. As outreach disaster worker many families rent and can not afford housing elsewhere (also owners including elderly!)
			STDY	* I think the interested public should be made very aware of the extreme
			LVG	limitation of the Corps study. Versus the already widely published Galloway study. In the real political world, the Corps has already been evaluated simply because it has no specific concluding premise. Thanks for your time. "500 year levee is the only way."
			ECON	* For points marked neutral (excepting 16), there is a strong need for a real cost-benefit to determine what would be beneficial!
			LVB	The current study is not intended to do this. For point 16 there are several issues. It is pointless to par to rebuild structures
			INS	in unprotected flood plain. Agriculture insurance should be paid repeatedly as real insurance. That is, fees set at a level to recoup costs.
			OFC	* Many comments necessary. Need to consider flood control as main theme rather than migration or flood plain management.
			STDY	* Need to create definitions.
			LVG	* Need to consider value of levees to navigation.
			INS	* Need to consider impact of various related lows on results it levee size and it impacts flood insurance rates and/or crop insurance rates.
			LVC	* Need to approach idea of structure improvement.
			PPR	* Need to discuss what damages would have been (or not been) with more aggressive maintenance and improvement on levees over past 30 years.
			ECON	* Need to consider private property rights. Need to consider value
				* Need to consider value of stability in system (vs variable flooding)--to maintain business, social environment and value of stable access to economic transportation (river).
3	MO Dept. of Conservation 2901 W. Truman Blvd. P.O. Box 180	12/06/94		* Staff member Norman Stucky attended FPMA meeting in Jefferson City, MO. Floodway protection, restoration and wise use of the flood plain are critically important issues along our large rivers. We are hopeful this study effort will generate recommendations that will correct some of the poor decisions made in the past in this regard. We believe the single

ID	FROM	DATE	CODE	COMMENT OR QUESTION
	Jefferson City, MO 65102		CHF	* We believe the single most important factor relating to floodway loss and subsequent increase in flood heights is the constriction that occurred as part of the channelization process. This is particularly true on the Missouri River and the Mississippi River below St. Louis. We are disappointed the study effort has not addressed this issue. In a January 1981 study, the Kansas City District COE reported that over 100,000 surface acres of the Missouri River had accreted to the mainland during the channelization process. This means that the river today, is on the average 1,500 to 2,000 feet narrower below Kansas City. This undoubtedly represents a tremendous loss in flood carrying capacity.
			FP	* We strongly recommend the FPMA address these important issues. With recent advances in design of river stabilization structures, i.e. bendway weirs, we believe it is possible to allow the river to widen a bit and recapture some of the lost flood carrying capacity and still maintain the commercial navigation channel.
4	St. Louis Audubon Society James N. Holsen 419 E. Argonne Dr. Kirkwood, MO 63122	12/14/94	STDY	1. The Proposed Study Does Not Lead To An Optimum Management Plan. * The three scenarios (status quo, middle of the road, and maximum environmental) are rather arbitrarily chosen. There seems to be no attempt to define an optimum solution for flood plain management. The study promises to be an exercise in accounting, but without the quality of engineering judgment that is required to arrive at a solution that can be recommended to the nation as the best method for managing these river systems. * From the literature distributed at the hearing, the flood plain assessment is designed to answer the question: "If specific policy or program changes had been in effect at the time of the 1993 flood, how would the damages or other losses have been different." These three scenarios serve as a basis for the study. With each scenario, however, there are apparently many alternatives to be evaluated, such as set back or raising of levees, upland retention watershed measures, etc. This seems to be a very complex study which will not lead to a simple answer or provide clear direction for future plans. * The resources available for this study seem to be rather limited. I understand that the funds available for the study are in the range of $3 to $4 million. At the same time, the Corps is conducting a navigation study on the Mississippi that is funded at approximately $44 million for the first two phases. Based on the damages sustained during the 1993 flood, the value to the nation of a good flood plain management system of the Upper Mississippi and Missouri Rivers seems to warrant a study at least as extensive as the navigation study.
			ENV	2. Environmental Values Should Receive Greater Emphasis. * At the Open House there appeared to be a lack of recognition of the environmental values of flood plains and wetlands. I am sure that the Corps is aware of these values, but there does not seem to be a place for them in the study. Following the discussion in Paragraph 2 of Statement 1 if the Corps looks at the damages incurred for a certain scenario, then it must also look at the benefits that would have been enjoyed if that scenario had been in place; i.e., if a greater acreage of wetlands had been in place, the study must evaluate the ecological benefits from those wetland and use those benefits to offset some of the losses.
			WET	* Wetlands have many values. To quote from the Corps (Kansas City District, FEIS, Page Avenue Extension, St. Louis County): "Wetland are important ... because of such functions as food chain production, nesting, spawning, rearing, and resting sites for aquatic and land species, discharge or recharge areas for groundwater, storage for flood waters, and purifying water in our waterways." We would like to be assured that the values of these functions will be considered.
			ECON	3. Estimation of Dollar-Values of Benefits and/or Losses Not Directly Expressible In Dollars. * While the construction and restoration costs for the several scenarios are fairly easily evaluated in dollar values, it appears that the benefits to society will not be presented in dollar values so that they can be easily compared with the costs. In the Sample Impact Matrix Table distributed at the hearing, for example, the economic costs and benefits such as flood damage reduction, government expenditure reduction, and increase in flood plain resources are all given in dollars. However, the environmental costs and benefits are given in numbers of acres or of sites impacted and, likewise, the reduction of risk is stated in numbers of vulnerable facilities, people, or communities. * The bottom line is the implementation cost, also given in dollars. The reader, perhaps a congressman, is left with the task of balancing benefits in acres and numbers of people affected with costs in dollars. Most people who are not experts in such fields as threatened species and wildlife habitat, wetland and flood plain management, or open space values, will find it very difficult to compare benefits with costs in dollars. This is a difficult task, even for those who have the necessary expertise, and there is bound to be much controversy about the results. Nevertheless, it must be done by someone in order to make results meaningful. Among large engineering organizations, the Corps is uniquely prepared to tackle this job. It is certainly proficient in cost-benefit analysis and has the experts, or can call upon consultants, to advise on the environmental values. This would be a major undertaking.
			WS	4. A Watershed Management Approach Is Needed. * A watershed system approach is required for a long term management plan for flood damage reduction on the Mississippi and Missouri Rivers. Agricultural practices, including tillage methods and runoff, urban development, and flow in tributary streams all contribute to flooding problems. In northern Missouri, for example, channelization of tributary rivers carries flood waters to the Missouri River much more rapidly than was the case before channelization. There has been some discussion of returning those rivers to a more natural state and that should be included in a complete study of flood plain management. Since the 1993 flood, these problems are more widely appreciated and there is greater demand for a new approach.
			NS	Summary.

ID	FROM	DATE	CODE	COMMENT OR QUESTION
			ECON	* The cost projection to be obtained in this assessment will be useful in evaluating many conflicting proposals for flood plain management, not just the three scenarios considered in this study. It appears that the study itself, however, will have as a product an assessment of three rather arbitrary scenarios and will not attempt to arrive at a recommendation for an optimum approach to flood plain management. There are many new ideas about flood plain management and, following the flood of 1993, the nation seems ready to try a different approach. The placement of dollar values on the different options would be a valuable contribution. We hope that the study will fully discuss the qualitative values of an "environmental approach" to flood plain management and will attempt to quantify those values in dollars so that they can be more readily compared with the dollar costs of the three flood damage reduction schemes. But those quantifications must include an evaluation of the full
			ENV	ecological benefits that accompany a more environmental approach to watershed and flood plain management. * A long term solution must consider watershed management and not just flood plain management, since agricultural practices, urban development, and flow management in tributary streams all contribute to the timing and magnitude of floods on the Mississippi and Missouri Rivers. With additional funds, the study could include a complete watershed management study and could also delve more deeply into the ecological benefits of wetland and flood plain restoration. A more comprehensive study would provide a better forum for assessing the ecological benefits of a particular management system for the region as a whole.
5	Omaha District FPMA public meeting	12/09/94		II. Comments relating to policy issues.
			INS	1. Farmers who received disaster assistance in 1993 were required to purchase crop insurance in 1994. Were people who received disaster assistance for their residences similarly obligated to purchase flood insurance?
			LVB	2. Many farmers resent the push to realign the agricultural levees in order to spare urban areas, when in many cases these urban areas have failed to properly enforce zoning rules and have built into the floodway.
			BUF	3. There is often an SCS requirement to have a buffer between waterways and tilled land. This needs to be better enforced to prevent erosion, sedimentation, and polluted runoff.
			LVB	4. Some people maintained that no private levees should be allowed between the river and Federal levees. If the private levee was there first, the government should buy it out. The reason for this feeling is that the private levees cause a rise in stage, which causes seepage behind both levees. (see 3b below)
			INS	5. There was some support for higher flood insurance premiums in areas of higher risk.
			LVB	6. Dissatisfaction with the job done by some (not all) private levee districts was expressed by many attendees. There is a feeling that maintenance and repair is not being done, that the tax paid by those in the levee district is not providing a service. These people want the Federal government to have a way to enforce levee district responsibilities.
				III. Causes of Flooding.
			LVB	1. The original Pick-Sloane plan called for floodways three times greater than there are now, and the problem of interior drainage was not a problem addressed in this plan.
			LVB	2. Siltation of the river-side of levees decreases channel width, increasing water surface elevation and hydraulic pressure. There are now times that the water level is higher than the land inside the levees, causing seepage in the "protected" areas, which in turn exacerbates interior flooding. This is a problem with both Federal and Private levees. Must make levees far enough back that they don't get silted up right away.
			DEV	3. Local flooding problems are exacerbated by encroachments into the channel, by development, and by bridges and their erosion control (riprap), which narrow the channel.
			LVB	4. In many places, levees retained interior flooding even after the river receded. Are the drainage structures adequate for their purpose? Although the problem is most severe with private levees, Federal levees have contributed to this problem.
			DEV	5. It is possible that highway and interstate embankments are having a severely negative effect on drainage. (This was perhaps true of the events of 1993, but not of more frequent events. Drainage is taken into consideration in roadway design.)
			WET	IV. Some solutions to the problem that were offered were a dam on the Nemaha River (a major tributary of the Missouri River), leases of wetlands for habitat and water storage, and the Missouri River Corridor concept (restrict development to help
			HIS	preserve historic and cultural resources and provide recreation to attract tourists, as well as reduce damages).
				V. Effects of flooding.
			REC	1. An unexpected result of the sediment deposits on the fields: after 2-5 feet of sand was removed, the remaining sediment
			FER	actually improved fertility in the flooded land, suggesting that fields should be let to flood every ten years or so, with help to remove sand from the surface. Data to support this might be obtained by comparing per-acre yields in the flooded areas before and after the flood, but hail storms, dry or very wet weather, or other events might obscure the data. (On the Platte River, which experienced spring flooding, the possibly enhanced fertility was overshadowed by the flood waters.)
6	FPMA Public Meetings in LaCrosse, WI	11/15/94		Key comments.
			ECON	* For economic impact evaluation of ag levee alternatives are we going to recognize impact to developed areas behind those levees? (Sierra Club)
			STDY	* The watershed analysis is of great interest and we must be careful to not misrepresent results by concentrating only on the
			RO	1993 flood and only on a portion of the basin. Also, the 5% and 10% runoff reductions appear to be on the low side. (Sierra Club)
			TRAN	* Traffic corridors should be included in the analysis of urban protection. (Sierra Club)

ID	FROM	DATE	CODE	COMMENT OR QUESTION
			AGR	* The "Galloway" report did not adequately cover the area of agricultural subsidies and incentives. (Sierra Club)
			RO	* We should discuss how the runoff is reduced by upland measures. (John Flynn - attorney)
			LVC	* It would be preferable to look at the long term costs of levees - not just at a single point in time since they are subject repeated repairs. (Sierra Club)
			STDY	* In response to a question on how many of the pre-1993 ag levees have been restored we guessed at a figure of 50-70%.
				* In response to a question what will happen to our report after it is completed and how will its conclusion be addressed in relationship to the "Galloway" report, we indicated that our report will be submitted to our headquarters office and Washington and be forwarded to Congress. The use of proposed reservoirs in the 1971 comprehensive basin study report as a
			RES	basis for the additional reservoirs alternative is inviting criticism. (Sierra Club)
				* Johnathan (Sierra Club) requested a copy of the main report of the Corps 1993 post flood report. (request passed on to NCR for action)
7	Quincy's Public Meeting	11/22/94		Additional scenario.
			LVG	1. Aggressive project to improve level of protection for all existing levee districts.
				* I can't evaluate any of these out of context.
			FP	* I cannot believe that on policy of flood control could be fairly adopted to remedy all problems of the Upper Mississippi River corridor. I believe that each flood plain has its own individual characteristics and problems to resolve. This question asks the individual completing it to give too broad of answers. It seems to give me the feeling that more consideration should be given to a thorough study of each flood plain as to if it needs partial levee set back and/or partial levee reconstruction, or even to the point of study of objects that could be restricting flow of water within the river proper itself -- such as low bridges, etc. Thank you.
			LVG	* The 1993 flood was the result of a low pressure area centering over northern midwestern areas. Rainfall amounts were much above normal. Every year more land is taken from production for building, roads, lots, etc. The government has
			DEV	promoted no-till which causes water to run off quickly which is what happened in 1993. Because of these the river reached a level that n levees were not designed to hold. Because of the changes in our land we need to protect people down stream the present time we need to raise levees to the 500 year level.
			INS	* We don't want the government to keep paying out in flood insurance, if we had the proper levee systems, we wouldn't have to call on the government to pay any claims. Also we wouldn't have the large expense that we had last year fighting the river
			AGR	raising our levees, then pushing them all back down. As far as the environmentalists are concerned --where do they think all
			URB	the wildlife in these areas feed? off our farmland! without it -- if it were all wetlands -- where would a lot of our wildlife get their support? Then we have our roads and bridges to consider -- the country was practically disconnected between east and west due to the lack of transportation facilities when the river got the slightest bit out of its banks. I'm sure there was a
			SOC	tremendous financial impact. Also what is the cost of a human life? Luckily we didn't lose any lives this time, but it drastically changed a lot of lives not for the better -- I thought we lived in a country where a human being was something
			LVG	precious (as much as a zebra muscle or a wood duck) and we had a right to be protected. If we raised all the levees to the 500 year level, we could all live with it!
			MTG	* I feel this session was not a fact-finding effort, but rather a Public Relations effort in an attempt to placate those individuals directly affected by the 93 flood.
			TRAN	* Should address transportation impacts separately (not specified in presentation). Urban/agricultural levees were segregated in presentation; this is not always the case.
			CRIT	* Under urban levees -- insufficient explanation of priority sites vs. critical facilities.
			MTG	* Presentations should have followed questionnaire more closely; it was too abstract. Very insufficient explanations of individual alternatives.
				* Much of the wording of alternative was ambiguous; the Corps personnel could not even explain them!
			LVG	* Why not raise the levees, have a one time cost instead of spending money on relocation of towns or financing and funding clean-ups, buy-outs, etc. after a disaster.
			LVG	* I believe raising the levees would be the least costly and do the most good.
			LVG	* I feel we need 500 year levee because dams have filled the river up. Reservoirs are needed and managed right.
			LVG	* Every 500 year levee held during the 1993 flood. This in itself proves the adequacy of a levee of that structure. It makes better economical sense to build these levees than spend more money on studies that will not solve anything and probably cost more in the long run.
			LVG	Please, lets get started to raise levees to 500 year flood level. If all levees held in 1993 this county would have gained $100,000,000.00 for taxed etc.! The river was bluff to bluff in 1993, so having no levee would have helped!
			DRE	* When dredging the river put the sand on the levees instead of just moving it to another place in the river.
			LVG	* Have 500 year levees for all. Make questions that make
			MTG	* Make questions that make sense.
			LVG	* Have a 500 year levees.
				* It is cheaper for government and better for wildlife to have levee protection. A 500 year levee is by far the best choice. The developed nations of the world all protect their prime farmland with levees.
			LVG	* This study is trying to address the flooding problem by regions instead of specific drainage district, or areas with special problems such as Hammibal railroad bridge that holds water back, this creates a very critical problem for everyone in the Say

ID	FROM	DATE	CODE	COMMENT OR QUESTION
				Island Levee Drainage District.
			OMP	* There needs to be greater consistency with the governments regulations and improvements to other business districts. It in itself is a mega-million dollar business. If various business can be given 500 year levees along with some urban areas then
			AGR	agricultural should be protected as well. There were levees constructed in these specialized areas with no comment or concern given to agricultural area and the land owner and drainage districts so effected; yet, we as a drainage district cannot even
			RO	privately improve our own internal levees without a study being completed on how others downstream and elsewhere might be effected. New runoffs need to be completed to see if what we all assume to be a 100 year levee is indeed a 100 year levee and
			ENV	not possibly, today, a 25 year levee. The environmental studies should include the impact flooding has on wildlife. Habitat is not created, but devastated to a point so it takes years to recover.
			LVG	* Raise levees to 500 year protection. Dredge river -- place fill on levees. Let's don't get hung up on something as simple as
			DRE	improving our levee protection system. We must remember that levees protect wildlife, people, infrastructure, and homes. Yes -- we can have it all -- behind a good levee system. Let's invest in the future.
			MTG	* Please make it plain to the public just what phase each group plays in the scenario process such as TEMA, the Corps of Engineers, the government, etc. You are playing with peoples' lives, land and livelihood -- get specific and give specifics on meetings "behind the scenes."
			NAV	*.I feel all scenarios could be applied to the Upper Mississippi River Navigation System. Some places may require 500+ year levees above bottlenecks, and some places may need the levee moved back. Also is the railroad and other entities involved?
			SED	I've lived and played in and along the river all my life, and I fully believe its holding capacities have reduced dramatically. I can't boat in the back waters because the islands have washed away and filled them up.
			LVG	* As for the Sny area, it can be solved by raising the levee to the 500 year levee. We have plenty of available sand in the river
			DRE	and equipment to put it on the levee -- sand on the levee.
			STDY	* The answer is not too difficult. We don't need any more surveys or studies and our tax money wasted. We need the river dredged and dredged material put on the levee. How can you justify spending $500,000.00 to create a "moist soil unit" (or wetland) in our district when PEOPLE are still suffering from the efforts of the flood in 93. This is LUDICROUS! I would
			FF	also like to say that limiting flood-fighting in any area with towns, homes and farms will be strongly opposed!
			ECON	* Set a pool of funds like in Las Vegas where persons can "bet" for or against the river reaching a certain level in any one year. Wagers could be made in $1,000 increments and based on actuarial odds.
				* Make them wider.
			WL	* Make river deeper from shore to shore. Take river bottom and put on levees instead of making sandbars located just to the side of river barge channels. Too much Federal Politics involved. Give the money to the local government because local
			MM	government knows the needs. Federal government spends too much time and our tax dollars on so called studies, surveys, and meeting to watch a slide program. Then when it's all over nothing has changed just more tax dollars wasted.
			SOC	* Make sure the solution is the same for everyone.
			RVR	* Treat the upper and lower Mississippi system the same.
			DRE	* When dredging river for barge traffic - what is dredged should be completely removed from inside levees so it doesn't fill up the inside of our levees.
			RES	* We need a combination of reservoirs and 500+ year levees.
			LVG	* For many years the Corps has dredged the river to keep navigation going. Why hasn't the material that was dredged, put on
			DRE	the levees to raise them? It seems like if this had been done over the years we would have had 500 year levees. Why is our levee now lower than it was before the flood of '93?
			LVG	* We want more than a study -- We need action for protecting our homes, businesses and farms. We need a 500 year levee!
			LVG	* Raise levees to 500 year level. When rivers are dredged they should put material on levees. The most inexpensive solution in the long run is the 500 year levee. The environmental issue was it when it was flooded, there was no environment no habitual.
			LVG	* 500 year levee.
			ECON	1. The cost-benefit ratio must include all affected by the loss of a levee. Not just corn and bean but the loss of beanstraption, jobs and etc.
			RES	2. Keep building reservoirs on upland to slow water runoff.
			LVG	3. Build higher levees to get was down stream faster.
			LVG	4. Build higher levees to protect game and refuge areas.
			LMS	5. Build a system on the upper Mississippi like on the lower Mississippi. 6. Doing this will increase the
			ECON	6. Doing this will increase the economic value of the Midwest and return more money to US treasury then what a million dollar/mile levee costs.
			LVG	7. Build flood walk for cities.
			RVR	* Change River management, when dredging do not put spoil back in river -- it reduces capacity of reservoir ability of river.
			SOC	Please consider human feeling and desires of losses an oz. of prevention would have saved rounds in 1993. Please consider
			AGR	agriculture as a business in evaluation. Flood affected nation -- such as loss of highways. The levees were first built for flood protection. Please consider this -- plus affect on cities not on river flood plains who depend on river barges for supplies. Study
			FST	ways speed up response time to problems it just take too long to respond.
			INS	Any flood proofing measures are a waste of money and infringement on personal freedoms. If one has had one flood insurance's claim then that should be it, but if I want to rebuild in the flood plain that should be my prerogative. If I do this I

ID	FROM	DATE	CODE	COMMENT OR QUESTION
			LVC	am on my own. No more claims. We need to have either a 500 year levee or have no levees at all. Either way my village would not have had 8 feet of someone else's water from upstream.
			LVC	* Change the inside slop to 3 to 1 and the outside slope to 4 to 1 on all upper Mississippi River. Pump channel maintenance
			DRE	waste and sand to the top up the existing levees vs. back into the river on the island for job security.
			AGR	* 2-7 Agriculture is very important to this country and this land should be used and protected.
			DEV	* 8-10 The urban area are spreading out; pouring more concrete -- raising levees -- putting in flood walls -- hence -- more water endanger farm land.
			REC	* 11-14 From what I can understand we received great walls on water due to reservoirs being emptied -- Kept high for recreation.
			LVG	* 15-19 Can't understand why and how the lower Mississippi has received 500 year levees and no one cares enough to see our levees done the same -- clean out the runs bottom -- Recommend to Congress to raise our levees to the 500 yr. level -- meeting -- waste of time. Recreation is more important than farms, animals, and America.
			LVG	* Use money and time used to pump river channel toward raising levees. Use the same sand and put it to good use instead of putting it back in the river. It will increase wetland development at the same time.
			DRE	* We need to allow the sand from dredging the river to put on the levees and raise the land of the levee -- This is the easiest, most economical long term solution to both river navigation problems and to raising fluid plain protection levees. This needs to be brought to the attention of Congress this option must be allowed!
			MTG	* Tell the Upper Mississippi River Ass. the report before the April meeting to respond directly to what is in the report. Thank you!
			LVG	* Agriculture levee's that also protect critical sites should be raised to 500 year level (Bayview Bridge Quincy III Falus Drainage Districts).
			LVG	* We need a 500 year levee. Dredge material from channel put on levees.
			MTG	* These questions need to be much more specific!
			AGR	* We need to rename agricultural levees to (Federal Agricultural Commercial Transportation Levees!)
			MTG	* These meetings are not getting to the heart of this matter -- We do not really have a voice in this study. If the government
			LVC	was spending its money wisely this study would be better designed to study specific area.
			SOC	1. Why are there Environmentalists who work for the Corps -- maybe there ought to be farmers and other businessmen to have representation of their interest and not just an interest group.
			SOC	2. Why is moving everyone out of the flood plain even a question? Are people who are affected by other natural disaster -- like earthquakes and hurricanes not being allowed to rebuild or encouraged to move elsewhere? Flood plains are being singled out - unfairly. How can anyone be told where to live or where not live? Is this free a country?
			AGR	3. Why are agricultural levees not given the same set of circumstances that urban and vise versa?
				* Before the 93 flood, Paul Simon met with a group on the local near heyer, he said at that time there was enough studies on problems of the levees' -- lets get something done.
			STDY	* This study is entirely too vague. I understand the mandatory constraints etc. but this cannot be separated into urban and agricultural. The two overlap too much. How come urban level options are only about raising to 500 year when ag levee are being considered to be eliminated. Industrialize there is probably more production and revere put into the GNP by agriculture
			AGR	areas protected by levee's vs all urban industries protected by levees.
			RES	* Most reservoirs were originally built to control flood waters. Reservoirs should be right at extremely low levels instead of
			WL	being kept at levels for boat and recreation. The public was originally asked for tax money for flood control not for recreation.
				* Make flood proofing measures use more common sense.
			DRE	* Put the sand while dredging channel onto the levees to raise them.
			DRE	* River dredging should have all material totally removed from the river and put again river levees.
8	Moline Public Meeting	11/29/94	AGR	* Are home owners who rent their land from the Corps of Engineers, in jeopardy of losing their land to the Corps in this
			STDY	study by your recommendation?
				* This survey is very poor -- not enough information to give meaningful answers. Need costs of alternatives also more alternatives.
			INS	* The key must be flood plain insurance policies and then the hydrological implication of what on community (or individual)
			URB	does that affects another community. If communities want to utilize land with the use of construction of flood walls they may
			PPR	have to assist other communities negatively affected by their decision's and hydrologic information should be made available
			TRAN	to communities about those decisions. Long range: We should utilize the Corps of Engineers to begin to take responsibility for publicly held railroad beds (just as waterways) in a concrete effort to make sense of transportation policies.
			OMP	I. While the Galloway report may have been hasty, it had the advantage of being an inter-agency study. Thus avoiding agency self-interest. This is a concern of many in the public relative to the Corps or any single agency.
			MTG	II. This form is not a good instrument of an opinion survey since its alternatives entail technical assumptions unknown to the public. The result will be random spread of responses showing no trend in public opinion.
			NS	III I generally favor a natural river system, but as long as the 9 foot canal system is an assured part of the system. I support the idea of a natural river is precluded.
			WS	* To be accurate the entire basin needs to be studied not just the flood plain.

ID	FROM	DATE	CODE	COMMENT OR QUESTION
			REM	* Removal of structures from flood plain. Buyout of wetland/flood plain area and allow to flood.
			REM	* Existing flood plain development must be reduced only through buyout. New flood plain development must conform to a
			LVC	unified scientific plan enforced and consistently administered at state level or above. Ag levees maintain at low levels so that farming works in dry years and flood storage is available in floods keep Ag supports dwellings and business upland> Provide
			ECON	workable funding to maintain drainage facilities at local level. Urban levees only for business districts of communities of >200,000. Protect utilities health related facilities. Have more consistent state and federal flood aid. Money was actively being given away in 1993 and absolutely unavailable in 94. Funds were marked for other purposes were misdirected in 94 because of the inconsistency.
			OMP	* Because of the potential for negative externalizes if different segments are allowed to have different flood plain management alternatives, it seems essential to me that the recommendation be system-wide, i.e., a federal policy, not a series of state or more local responses. At least it must be system wide for each type of environment, e.g., one policy for urban areas, one policy about agricultural levees, one policy about conservation/wetland areas, etc. For example, if one area has a build ag levee high policy, thus channeling the water downstream, it would here average impact on downstream communities which might opt to allow lands to remain unprotected -- which would cause damages and also distribute flood protection dollars unequally. In sum, there needs to be uniform, standard, federal policies.
			WL	* Clean out back waters!
			OMP	* I think that the government should be ready to work with individual communities in how they decide to deal with flooding. Provide relief and planning accordingly.
			WL	* Lower river levels to lowest possible level prior to heavy rain and run off periods. Better pool water height control. Stop barge traffic earlier and lower water levels prior to flood conditions.
			LVG	* All levees should be set at a uniform distance from river. Channeling water isn't very wise. It need to adjust to large
			SED	volumes of water. Sediment is another problem. I think that if there was a law of regulation that all streams, creeks, rivers,
			BUF	etc., should have some type of buffer strip, at least 60 ft. at its banks. This would reduce sediment getting into the water and
			PC	other impurities, chemicals for example.
			RES	Added reservoirs:
			RR	1. capture water for future use (as in drought)
			REC	2. increase inland recreation areas
				3. allows for irrigration efforts
			URB	4. would allow urban areas to expand
				5. could be naturally or manmade in Northern Scott City and Lower Henry, Mercer and Rock Island Cities. Example: Clarence J. Brown Reservoir in Clark City - Springfield, Ohio.
			MM	* I am more interested in what local communities can do to mitigate the impact of flooding. Build a flood wall (like in Cincinnati, Ohio) Build reservoirs in Rock Island and Scott County. Better yet Henry Co. Better drainage systems in Scott
			OMP	and Rock Island County. It appears you are looking at a problem with the same policies which did not work originally. I think it would be important to do this study using not only the old policies but seeing what new policies could be created which would better suit a similar situation.
			STDY	* Some of these questions are rather vague -- what exactly is meant by revise apparition of reservoir? I think that I understand most of these, but the information and solutions should be more descriptive.
			WET	* Since flood plain wetlands are largely gone it would appear to be essential to maintain artificial ones -- state and federally managed wildlife impoundments. When rebuilding levees around these areas the policy should be to construct them like some
			BLD	Corps built HREP impoundments, that is they should flood from the bottom end. They should have water control structures
			HIS	that allow slow release of flood waters after the river flow is moderated. Important historical sites like Kaskaskia should be protected but generally only critical infrastructures should be given additional protection, key transportation features, etc.
			BLD	* You should look at lowering the profile of some roads crossing flood plains so that water can over top them. Lost flood
			FP	storage capacity includes wetland on croplands/former tall grass prairies, etc. not just flood plain. This should be taken into account in planning.
			OMP	* You are the ones with the knowledge - hold less weight on public opinion - it is a study not an action.
9	Waterloo Public Meeting	11/08/94		* Suggestions for improving the FPMA approach:
			DEV	a. It was requested that the Corps develop and discuss in its FPMA report, some technique for judging the impact on flood heights of mankind creating "hard surfaces" that reduce rainfall infiltration. The many shopping centers, roads, parking lots, and other urban and rural development has reduced the ability of rainfall to infiltrate. What is the overall significance of these activities by mankind upon small, medium and large flood events?
			SOC	b. It was requested the Corps develop and discuss in its FPMA report, some technique for better presenting and evaluating "human trauma" caused by large flood events. It is considered that significant short and long term human trauma damages are caused by large flood events that is not properly or clearly evaluated.
10	Alton Public Meeting	11/17/94		* Suggestions for improving the FPMA approach:
			STDY	a. It was requested that the Corps consider developing broad data that would discuss an important fourth scenario that is currently missing. The person suggesting the addition of a fourth scenario seemed to understand very well that the three scenario's currently proposed were a "backdrop" of local, State and federal policies and programs against which the various alternatives being studied would be evaluated. Further, he appreciated the current concept of Scenario #1 basically business

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				without great chance, Scenario #3 maximum environmental policies, and Scenario #2 something in-between. However, he
			STRC	believes the current approach to be flawed because we are not considering a maximum structural flood control scenario. He believes that to be fair and equitable, a counterbalance to the maximum environmental scenario is sorely needed. In summary, the concept was that as long as the Corps was considering a maximum environmental scenario (assumed to be maximum non-structural proposals), the Corps must also identify the impacts of a maximum structural flood control approach.
			RES	b. It was requested that the Corps identify the impacts of constructing all of the flood control reservoirs identified in "Pick-Sloan" plan. Further, a similar maximization of flood control reservoirs on the Upper Mississippi River should be an integral part of the Corps systemic Flood Plain Management Assessment in order to have the data necessary to consider the best way for controlling floods and reducing future flood damages.
11	St Louis Public Meeting	11/15/94		* Suggestion for improving the FPMA approach.
			RES	* A couple of individuals insisted that the systemic Corps FPMA effort would be sorely incomplete if the worth and impacts of adding significant additional flood control (multi-purpose) reservoirs throughout the seven state study area were not evaluated. On the Missouri River system, it was requested that the Corps identify the impacts of constructing all of the flood control reservoirs identified in "Pick-Sloan" plan. A similar consideration for the Upper Mississippi River should be a integral
			OMP	part of the Corps systemic Flood Plain Management Assessment flood control and flood damages mitigation effort.
			RES	* It was requested that the Corps FPMA accomplish a comprehensive assessment of all the known and proven ways/means for significantly reducing flood heights and damages. It was stated that major flood control reservoirs have clearly demonstrated that they are effective in significantly reducing flood heights and flood damages. Therefore, the FPMA would not be properly accomplishing its assigned mission, if it didn't evaluate the possibility of many additional major flood control reservoirs throughout the seven state study area. Reservoirs have clearly demonstrated that they perform the flood control function very effectively. Therefore, they must not be excluded as one comprehensive systematic alternative to controlling major future flood events similar to the 1993 flood disaster.
12	St Paul Public Meeting	11/14/94		Key comments included:
			ECON	1. The definition of the term "cost effective" should be clarified since we are not intending to do a BCR analysis or annualize costs (Harlan Hirte - EPA).
			ECON	2. By measuring impacts with a combination of dollars, acres, etc., it will be difficult to reach a conclusion. The approach is like mixing apples and oranges and there should be attempts to quantify to the extent possible with a common measurement, such as dollars (Brett Smith - Sierra Club and Rich McMouagle - Friends of the Mississippi River).
			ENV	3. Water quality should be an impact category (Sierra Club).
			FE	4. The watershed analysis may be misleading since it is only looking at the 1993 flood and is not utilizing the portion of the study area that has lost most of its wetlands - Iowa and Missouri. Also, the 5% and 10% runoff reductions seem very low (Sierra Club).
			CRIT	5. The category of critical facilities that was labeled as "hazardous" may be misleading. It would be better to refer to this primary list of critical facilities as "health risk" facilities (EPA and Sierra Club).
			LVB	6. Planning for the 500 year frequency event seems excessive (Arnold Vogel - Isaac Walton League).
			ENV	7. For claiming that Scenario 3 is the most environmentally based combination of policies and programs, we do not specifically address environmental enhancement measures.
13	Dept. Geography-Earth Science, Shippensburg Univ.	12/05/94		Second Milestone Package.
			STDY	* I have read this package and believe this assessment to be an enormously useful study. For the past several months I have been working with the Environmental Defense Fund researching 1993 flood and the potential for wetland restoration and
			AGR	agricultural management changes to redress flood damages in the Upper Mississippi River Basin. EDF believes that upland
			OMP	riparian wetland restoration, agricultural practices that enhance infiltration and reduce runoff, and a sound flood plain management policy could substantially reduce flood damages in the Basin as well as providing significant environmental enhancement. The extent to which this approach could be successful is somewhat unclear due to a lack of data and analysis. The comments that follow suggest some avenues through which these issues could be made more clear.
			FE	1. Do not focus exclusively on 1993 flood of large river flood plains.
				* Much of the proposed analysis in the FPMA centers around the flood of 1993. Every flood event is unique and this event will not recur. The 2nd Milestone Package states (p.39) that since the 1993 event varied in likelihood of occurrence throughout the lower Missouri and upper Mississippi Rivers, it allows analysis of large and small events. A greater range of flood-generating mechanisms (i.e., antecedent conditions, meteorological processes) over a range of basin scales should be considered.
			TRB	* Similarly, a great deal of attention has focused on revising flood management strategies to minimize damages along the flood plains of the major rivers (e.g. the Interagency Flood Plain Management Review Committee (1994) Report). Strategies for effective management of small watersheds necessarily differ from what is needed along the big rivers. For example, management strategies that reduce peak flood discharges are most effective at small watershed scales while those that reduce total runoff volumes are more effective at larger scales. Flood protection policies should be tailored to the variety of flood magnitudes, frequencies, and watershed scales and we should not focus our concern only on large drainage basins and infrequent events.
			HYD	2. Consider the hydraulic distribution of flood damages.
				* Because greatly different strategies are required to reduce flood damages on upland agricultural areas, on flood plains of small tributary streams, and on flood plain of the Mississippi River, a sound flood management policy should be based on the

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				extent to which historical flood damages have occurred in each type of hydrologic setting. The currently available economic
			ECON	damage data from the 1993 flood (Corps of Engineers data set) is aggregated at the county level. This data does not allow complete analysis of the flood damages according to the specific hydrologic setting, such as the watershed scale or flood magnitude.
				* However, the county distribution of 1993 flood damages does indicate that the majority of damages occurred outside the flood plains of the largest rivers in uplands areas and tributary watersheds. Table 1 presents a summary of the damage data, differentiating counties bordering the major rivers (Missouri and Mississippi Rivers) from those along tributaries and in upland areas. Thus more damages occurred due to tributary flooding and high water on uplands (either high groundwater tables or excessive soil moisture) than reported in this analysis.
				* In summary, over half of the total damages from the Great Flood of 1993 occurred in tributary basins, rather than along the flood plains of the Mississippi and Missouri Rivers. While these tributary damages were dominated by agricultural losses, over 500 million dollars and almost one-fourth of the non-agricultural damages also occurred in tributary watersheds. Thus, even when the major rivers in the UMRB flood, much of the damage occurs in smaller watersheds. In addition, tributaries flood in years when the main rivers do not, generating substantial flood damages in portions of the UMRB.
				* This distribution of damages should not be surprising, given that the majority of land exists within small watersheds and tributary streams comprise the majority of stream length within a watershed. The sum result is a likelihood of flood damages along tributaries that often cumulatively exceeds the likelihood of damages along main rivers.
			HIS	* A complete analysis of the distribution of cumulative (historical) flood damages according to the hydrologic setting of the damages is necessary to the development of a flood protection strategy for the future. This analysis should include a breakdown of damages according to specific watersheds (What is the magnitude and frequency of flood damages within each watershed?), watershed scale (What is the drainage area above each damages site?), hydrologic location (Does the damages site exist within the 5-year flood plain, the 100-year flood plain, or in an upland area?). Such information would provide a basis for targeting specific areas with the most appropriate flood protection strategy.
			ENV	3. Upland management and environmental restoration.
				* The Addition to Plan of Study ("Upland Watershed Retention Measures, Hydrologic Analysis" p.58-59) is essential to the FPMA and should be as thorough as consideration of flood plain wetlands and land use.
			WS	* The study should go well beyond the type of work done to evaluate the four watersheds studied during the SAST effort. The watershed studies conducted by the SAST were limited by the tight time schedule of the investigation. Most importantly, the time limitations dictated that depression areas (pothole wetlands) within the Boone and Redwood Rivers be identified on existing 1 : 24,000 topographic maps with 10-foot contour intervals. Many of the depressions, especially in the low-relief Boone River watershed, are only a few feet deep and are thus not displayed on maps of this scale. Thus, the potential for
			WET	prairie pothole wetland restoration is greater than that considered in the modeling and the actual peak flow reductions on the Boone and Redwood River would be greater than described in these studies.
				* The models employed in these studies (HED-1 and TR-20) are both event-based models. As such, they are incapable of estimating some hydrologic processes that are significant over longer periods of time. For example, evaporation and plant transpiration of water from surface and soil storage back to the atmosphere are neglected in these models. The amount of water lost through these means is usually insignificant in these studies. Water loss through evapotranspiration does become substantial when considering long-duration regional flooding such as occurred in 1993. Ground water-surface interactions should also be fully evaluated.
			HYD	* The useful insights provided by previous watershed studies need to be integrated to improve our understanding of hydrologic processes over a range of spatial scales and flood magnitudes. Most studies that have examined both runoff generation processes (e.g. land use) and the hydraulics of flood flows through the stream network have been conducted in small- to moderate-scale watersheds (less than 1000 square mils). Studies of flood flows in larger watersheds have typically focused on flood hydraulics (e.g. the effect of levee setbacks). And effort is needed to examine the combined influence of restoring a number of small and medium-sized watersheds at downstream (large drainage area) locations. That is, we need to consider both upland runoff processes and flood plain hydraulics in large-watershed models. For example, the restoration of depression wetlands in the prairie pothole region would reduce both flood peaks and flood volumes at downstream locations. The cumulative effects of actions in small tributary watersheds has the potential to diminish flood damages in even large watersheds, assuming a large-scale restoration of pothole wetlands. The spatial scales at which substantial flood peak reduction benefits could be gained from this approach have received insufficient attention. 4. Additional study of prairie pothole region hydrology.
				* The prairie pothole region strongly influences the flood hydrology of the UMRB, yet the hydrology of this region discharges through restoring the natural hydrology of this region is unknown.
				* Many of the critical hydrologic processes are conceptually appreciated, yet the specific roles of these processes within particular watersheds and under a range of potential physical conditions are poorly understood. The SAST studies of the Redwood River and Boone River have provided some useful data, but were limited by the short duration of the studies. Better topographic analysis is needed to determine the depression storage capacity within specific watersheds of the prairie pothole region. A data base of the agricultural drainage technologies in place in the prairie pothole region and their flow capacities is needed to facilitate hydrologic modeling. Additional field study is needed to determine rates at which water passes between phases of the hydrologic cycle, including groundwater recharge, evaporation and transpiration, and agricultural drainage to

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				surface water outlets. Additional hydrologic modeling should address a range of conditions, watershed scales, and flood magnitudes and frequencies. Continuous, rather than event-based, hydrologic models used to simulate periods of months or years could improve our understanding of critical processes.
			FLD	5. Experimental field studies of watershed restoration.
				* Field demonstrations should be conducted within select watersheds to implement wetland restoration and agricultural conservation projects and evaluate their hydrologic effects. These projects should target areas with extensive historical hydrologic data and high potential for flood protection improvements. The SAST (1994, 161) makes essentially the same recommendation: "Conduct field trials and demonstration projects to determine the effect of various land management practices on flood dynamics, sedimentation and soil conservation, agriculture, and habitat restoration. These studies should be conducted in a variety of physiographic regions."
14	Topeka, Kansas Public Meeting	11/09/94	SOC	* The impact of the mental health issue would be useful to local mental health agencies to provide services. I am curious as to the money spent on these studies and what will actually be done with the river. The study should be interesting, but if the recommendation of best scenario isn't followed, what good did it do?
			SOC	* I think it's vital that intense effort be made to study the sociological effects of each of the scenarios on local populations.
				* Overall looks like a good plan. At some point, make data collected available to the States, others. Even if the data is not precise, it would be helpful. Although you may need to aggregate results in the end, display them separately as well (local
			FE	data is more helpful to locals). A look at a less frequent event could have substantially different results. A look at another event (perhaps a separate one for each region) could be quite helpful. Might be a good follow-up study.
			AGR	* You aren't looking at realistic agricultural data. Many of the ag levees are only for 5- or 10- year events. Why is the smallest event a 25-years event? The Missouri River Master Manual study needs to look at higher flow. Not just low flows.
				You should separate the tables by state or district. Parts of the table are valuable, not the whole. You should be looking at
			FE	more than just the 1993 flood event.
	Kansas City, Missouri Public Meeting	11/10/94	DEV REG	* No flood plain assessment can be proper or complete until you factor in the results of an ever-changing (more development) watershed. It may be that the Government (Federal, State of local) would own the floodway (say 25-year) and levee the 100- or 500- year flood plain area outside the floodway.
				* Attached letter on legal status of damages from the operation of revised flood control manual. Basically we like the
			WS	original manual better than the revised manual. In area south of Ft. Gavins, we are very interested in flood control which would supply adequate economical water supply for industry and public uses from Gavins Point to New Orleans. Text of
				enclosure: Gentlemen, which includes suppliers of water, electricity, public services, farmers and concerned citizens from
			SOC	Omaha, Nebraska to New Orleans, Louisiana in Missouri and Mississippi Valleys. I urge you to organize and stop these organizations and individuals who take and damage our property. Sincerely, Rex T. Horn.
			MM	* Change in Flood Plain caused by I635 at the Missouri River in Riverside, Missouri. Relocation of levee and set-back for floodway. Protection of critical sites (sewer plant). In Parkville, the Corps of Engineers on several occasions miscalculated how high the water would reach.
			AGR	* When describing impact of each scenario, try to show both regional and National impacts on agriculture. Please feel free to contact me if we need to coordinate any GIS data on expenditures.
			MM	* Gentleman: I am completely dissatisfied with the proposed manual for Water Control of Missouri River. It is apparent in the development of this Manual, that the sports enthusiast and Upper Missouri River executives were in control when the Manual was developed. The COE are to be congratulated for the control of flow in the past. It is the belief they are influenced by people from the Upper Missouri River Basin. What can the residents of the Lower Missouri Basin and Mississippi River Basin from St. Louis to New Orleans do to voice their rights? Let us discuss what has been done in other areas of United States and the Supreme Court to United States. In New Jersey the United States Supreme Court reversed a Lower Court decision to deny right of property owners to reclaim their property which had been classified as wetland. On June 24, 1994, the Supreme Court ruled five to four that a Public entity taking of uncompensated property is in violation of
			PPR	the Fifth Amendment of the United States Constitution. In majority opinion, chief Justice William H Rehnquist elevated judicial scrutiny of property cases, saying the Fifth Amendment should not be a poor relation to such liberties as free speech and protection against search and seizure. The opinion underscored the right of property owners, to keep other people off of your property. A Federal Appellate Court recently held that Congress did not intend for the Endangered Species Act to require landowners to provide habitat.
			DEV	* I understand that the levee at the I-635 Bridge is 800 linear feet short of the requirement to carry water down the Missouri River, without backing up the flow. This apparent error escalated the flood of Parkville's shopping district in 1993. We fear that any new levees or increased size of levees may further escalate the flooding of Parkville if we revisit the same conditions which contributed to that most recent flood. Parkville has no levee and no place to build one. We have two creeks coming into this small area, and it is not practical to build levees. The 1951 and 1952 floods created only 3 ft. of water in the low areas of Parkville while the 1993 flood created 11 ft. of water in the same area because of the backup of I-635. I would ask that you take these facts into consideration when reviewing the need for new levees of increased size in this area. We also request that we be notified of and permitted input into any further discussions on this topic. City of Parkville.
			MM	* I do not understand how the Corps can discuss and consider alternatives of flood plain management without considering the Draft Environmental Impact Statement recently released. This is like one hand doesn't know what the other is doing! Both of these studies are done by the Corps and should be taken into consideration. This is a good example of governmental

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			MTG	waste. It would also help to have informed people lead the discussion -- someone who knows something about what is going on! This was better than the one held at the Embassy on the Plaza some months ago. However, there is great room for improvement in the format!
	Jefferson City, Missouri Public Meeting	11/16/94	LVB	* As farmers we would like to see the river management left as it is now. We know when excessive rains come, the river will have to flood. The levees as we now have protect us from the small overflows; to build them higher would be crazy. To increase the flow during March, April, May and June is the very worst time to do this. Let's keep it like it has been in the
			ECON	past as navigation can continue well into the harvest season. Callaway County cannot afford to lose the tax base of our agriculture land in the river bottoms.
			ECON	* Economic Impact on Recreation vs. Commercial in your 3 scenarios: Recreational economy of 500 miles of Upper Mississippi in 1992=$492 million whereas Rec. Economy on 500 miles of Missouri River in Missouri in 1992=$2 million.
			REC	Conclusion: Due to former decision to MANAGE the Lower Missouri as a confined barge canal, a vast untapped recreation economy is being held hostage by the outdated ropes of an agricultural/commercial river management paradigm that
			MTG	* Believe the meetings are a good idea. I went to the earlier version in Jefferson City also. I am particularly interested in
			LVG	the Osage Delta area and its diversion structure. All our agricultural levees have been repaired by the association. I am interested and willing to work with the Corps of Engineers on anything dealing with Osage County. (I am a high level Red Cross disaster worker and chairman of the Osage County Unmet Needs Committee.)
			LVC	* Ag levees should be kept at 25- to 100- year flood height. Some levied areas do not justify the 100-year height because of size of the area protected. Commercial buildings should be allowed only in areas protected for 500-year floods. New
			URB	residential buildings should have 100-year protection. Old residential buildings should be allowed to stay if not badly damaged and be covered by flood insurance. No attempt should be made to make the lower Missouri into the 1900 riverbed. In other words, please do not make a giant step backward.
15	U.S. Land &Wildlife Program Constance E. Hunt	12/23/94		** Thank you for your letter of November 23 discussing the ongoing Flood Plain Management Assessment (FPMA) watershed modeling exercise. WWF commends the Corps for including watershed management in its assessment of flood impacts. We realize that the Corps study is constrained by time and funding limitations, and appreciate your hard work to produce a product that will indicate some new directions in management of the river system.
			STDY	* While we recognize the constraints on the study, we also recognize the potential benefits of using current funding to steer Mississippi River management in a constructive direction. Congressional direction provided by the House Public Works and Transportation Committee does not, in fact, specifically request the Corps to address the impacts of more severe floods in the larger flood plain areas. On the contrary, the House resolution adopted November 3, 1993, directs the Corps to conduct "...comprehensive, system-wide studies to evaluate the flood control and flood plain management needs of the upper Mississippi and lower Missouri River and their tributaries that were flooded in 1993" (emphasis added). The FY 94 Energy and Water Development Appropriations Conference Report (H.R. 2445) directs the Corps to "...assess the adequacy of current flood control measures on the Upper Mississippi River and its tributaries" and to "...evaluate the cost-effectiveness of alternative flood control projects..."
			HYD	* We believe that the most cost-effective strategy for flood damage reduction must begin with restoration of the hydrology of portions of the Mississippi watershed, because such restoration is relatively inexpensive compared with large-scale engineering approaches, and because such approaches, can provide other benefits, including water quality improvements, wildlife habitat enhancement, soil erosion reduction, augmented groundwater recharge, and increased agricultural production. In fact, any
			WS	strategy to reduce federal expenditures on flood damages and disaster relief should include a watershed analysis. Over 70% of the 1993 flood damage payments from the Department of Agriculture were for crop losses in predominantly upland areas.
				* Further, you imply that the Science Assessment and Strategy Team (SAST) found significant reductions in flood peaks through watershed based approaches to be effective only in one to five year events. The SAST team actually found substantial
			WET	reductions in the 100 year flood peak using a combination of land management techniques, including wetland restoration (see enclosed Figure 7.4: Peak Flow Reductions, from SAST report). On the redwood River watershed, for example, SAST estimate a 16% reduction in the 100 year flood using wetland restoration; on the Whitebreast Creek, soil and water conservation practices would yield a predicted 20.4% reduction in the 100 year flood.
			OMP	* Since rivers provide so many different services to society, river management is appropriately an inter-agency endeavor. The Corps of Engineers has a unique opportunity in the FPMA not only to identify opportunities to improve its own flood damage reduction programs, but also to provide leadership for other agencies by identifying opportunities to reduce flooding by retaining water on the landscape. The Corps could, for example, help the Fish and Wildlife Service and Natural Resources Conservation Service to target their programs to subbasins where wetland restoration and soil and water conservation practices could significantly reduce flood damages. Soil organic matter enrichment and conservation practices could also
			SED	reduce sedimentation downstream, thus increasing the success of Corps Environmental Management Program projects and eventually reducing the need for dredging to maintain navigable waterways.
				* The integration of environmental and economic objectives through inter-agency watershed management is being pioneered with substantial Corps participation and leadership in the South Florida ecosystem. Like the Mississippi basin, much of the current economic and environmental decline of the South Florida resource base is linked to hydrologic alteration of the system. Reductions in freshwater flows to Florida Bay, for example are responsible for declines in commercial fisheries and damages to coral reefs, which support an extensive recreational diving industry. In the Mississippi River many hydrologic alterations
			ENV	caused by extensive drainage systems, stream channelization, and soil erosion are largely responsible for increasing flood

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				damages throughout the watershed. The elimination of natural water purification systems, such as wetlands and grass filters, combined with an increase in fertilizer use, has increased the nutrient content of runoff conveyed downstream into the Gulf of Mexico. This nutrient load has triggered a seasonal zone of anoxia, or "dead zone", in the Gulf. While the economic impact of this dead zone on commercial fisheries has not yet been quantified, scientists in the Mississippi coastal zone have documented substantial environmental degradation.
			DRE	* Because of its involvement in the upper Mississippi Environmental Management Program and its responsibility for navigation and flood damage reduction, the Corps of Engineers is unique positioned to initiate a watershed-basin, interagency hydrologic restoration program for the Mississippi basin that will provide a wide range of environmental and economic benefits. These benefits could include reductions in dredging and flood control costs, reduced flood damages, improved water levels for navigation in the summer resulting from increased groundwater storage of water during the wet seasons, improved water quality, reduced soil erosion, increased agricultural productivity, enhanced success of Environmental Management Program restoration projects, and increased wildlife towards realization of these results.
		10/11/94		** Thank for your letter of September 19, 1994. The following is my response to your letter and to the second milestone package for the Flood Plain Management Assessment (FPMA).
			HDW	* As you know, the damages of the 1993 Mississippi River floods were distributed throughout the basin; not limited to the flood plain of the river and her major tributaries. Since the inception of the Corps' flood control mission, however, we have seen a failure to integrate flood damage reduction strategies on the uplands and in headwater areas with strategies for navigable rivers and their flood plains. The Corps has a unique opportunity in the flood plain management assessment to begin to link upland and flood plain strategies together, and to assist programs that provide upland treatment in identifying those Mississippi subbasins that could most contribute to a basinwide reduction in flood damages. In order to achieve this important mission, the design of the study structure is extremely important.
			WS	* I appreciate the inclusion of a watershed modeling exercise in the FPMA. The structure of this portion of the assessment will be important in determining follow up actions for the present study, as you indicated when you said that "this analysis could
			HYD	serve as a pilot study to determine whether a much larger undertaking [such as a modeling effort for the entire basin] is warranted and feasible." The modeling effort may determine whether further attempts to model the hydrology of the basin are undertaken, so I hope you will consider the following observations. First, many of the communities and farms that were
			TRB	damaged during the floods of 1993 were not on the mainstem of the Mississippi River or major tributaries. Relatively large amounts of flood damages historically have been realized in upstream areas rather than on large flood plains. On a national scale, flood damages appear to be rising fastest along small to medium sized tributary streams. Focusing flood damage reduction strategies only on larger rivers, therefore, will not lead to prevention of a majority of flood damages. WWF urges you, therefore, to consider the local impacts of runoff reduction on lower order tributaries as well as runoff reduction effects downstream on the higher order rivers, such as those included in the FPMA study area. We also encourage you to look at impacts along the course of the streams studied, and not just at their mouths.
			FE	* Second, concentrating only on the flood of 1993, even though the proposed study area does include 20 to 30 year event upstream of Gutenberg, Iowa, misses the large proportion of flood damages that accrue in very small (two to three year) events. Although the flood of 1993 was devastating, over time the majority of flood damage expenditures in this nation are probably attributable to more frequent events. It is possible that, by including very small tributaries in your study, these events could be captured in an analysis of the 1993 flood. We urge you to include a study area that is representative of the full range of possible flood conditions in your watershed modeling exercise.
			RO	* Third, when evaluating the impacts of runoff reduction downstream from the subbasin where the reduction is to occur, if one assumes that runoff from drainage areas downstream is not reduced proportionately, the results in terms of peak reduction on the Mississippi and major tributaries will almost certainly be negligible. This is because the runoff from any one subbasin during the flood of 1993 was small in proportion to the total runoff from the entire basin; as one moves further from the subbasin where runoff has been reduced, the impact of the reduction on the cumulative flood volume is very small.
			STDY	* While the "addition to the plan of study" indicates that "each subarea within the Minnesota River watershed" will be modeled, recent conversations with Mr. Curtis Meeder in your office indicate that only a few subbasins within this watershed will be included. If the intended products of this exercise are estimates of runoff reductions at the mouth of the Minnesota River, the Corps should construct the model to estimate reductions in runoff throughout the entire watershed. If the intended product of the modeling exercise is to demonstrate the utility of runoff reduction techniques in reducing flood damages, such an analysis is more appropriately done along the course of the stream and at the mouth of the subbasin where the reductions are to occur than at the mouth of a major river receiving runoff from many other tributaries.
			HYD	* Finally, the use of HEC-1 for this type of model is inappropriate. HEC-1 is a unit hydrograph model that essentially maintains initial conditions throughout the model run. The approach that you propose for application of the model, reducing the hydrograph at the start of the model run and routing the modified hydrograph to the river's mouth, does not capture the generation of the altered hydrograph or track the factors that change the shape of the hydrograph, such as gradual release of water from wetlands, changes in infiltration rates, or delayed flow of water in vegetated swales. the use of HEC-1 as proposed is therefore likely to result in an underestimation of flood peak reduction.
				* Continuous models, such as the Hydrologic Simulation program for Fortran (HSPF), are better suited to a demonstration of the flood damage reduction potential of watershed management. These types of models can account for important processes that influence the shape of a hydrograph such as evaporation, evapotranspiration, and infiltration. We encourage you to make

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				use of the best available watershed models in order to enhance the credibility of your results.
			WS	* If properly designed and implemented, the Flood Plain Management Assessment could become a vehicle to encourage integration of flood damage reduction for large events on large rivers with the more frequent and cumulatively costly smaller
			OMP	events in the headwaters. This nation needs a flood damage reduction strategy that take entire watersheds into account. A holistic approach to assessing flood damages will provide us with a basis much more efficient and effective water management strategy. Thank you for the opportunity to comment.
16	Sierra Club, North Star Chap. Minneapolis, Mn	11/14/94		* This letter contains questions and commments from the Sierra Club North Star (Minnesota) Chapter regarding the Flood Plain Management Assessment being conducted by the Corps, particularly relating to the "Second Milestone Package" date 15 September, 1994. We appreciate the opportunity to comment.
			BIOE	* GENERAL COMMENTS: We are encouraged by a number of methodological components in the study as outlines in the second milestone package. Specifically, we strongly endorse the inclusion impact analysis of non-structural measures for flood prevention and avoidance rather than solely focusing onflood control through structural measures. Further, we strongly support the inclusion of upland watershed reduction measures in the modeling. This is absolutely essential to truly preventing floods while simultaneously improving soil and water quality.
			OMP	* While we support these methodological approaches, we remain deeply skeptical of the study's ability to objective evaluate the costs and benefits of the full array of flood prevention measures. Basic assumptions about impacts about impacts and their evaluation will remain critical to the findings of the study. "Garbage in" will still produce "garbage out," and (to mix a metaphor) we believe that to have the Corp examining the merits of various flood prevention measures is like having the fox study ways of improving the security system of the chicken coop.
				* Because of our skepticism, we urge you to include as many other groups and individuals as possible in the development of your assumptions and valuation methodologies. We also urge you to consider the following:
			RO	1. Why were the estimates of 5% and 10% selected for modeling the impacts of watershed runoff reduction measures? Shouldn't a significantly larger runoff reduction be included to gauge that impact off aggressive runoff reduction measures? Studies cited in the milestone package found a range from 5-15% for a 100 year storm and 5-20% for a 10 year storm. Studies cited in 3/17/94 comments from the World Wildlife Fund indicate that much higher percentages, up to 50% are achievable. We urge you to include some of these higher estimates in your modeling.
			ECON	2. How will costs imposed by "regular" flooding events be incorporated in the model? Cumulative losses and impacts from these "annual" events are greater than those from 100 year events. To ignore them will skew results away from measures that could impact more regular flooding.
			ENV	3. Many of the flood prevention strategies (upland land practices, wetland restoration, etc.) will improve water quality as well as reduce flooding. How will the benefits from improved water quality be quantified and incorporated into the cost benefit analysis?
			URB	4. Have the impacts from measures to reduce urban stormwater runoff been incorporated into the analysis? This seemed to be overlooked.
			NAV	5. How will the study assess the impact of navigation projects (channeling, wing dams, etc) on flooding?
				6. Biologists in the upper Mississippi are warning of an ecological collapse in the upper river. How will the impacts of various flood control and prevention measures on the future of this ecosystem be analyzed and quantified?
			ECON	7. What measures are you taking to assure that your "cost-benefit" analyses do not favor those impacts that are relatively easy to quantify and undervalue those impacts which are difficult to assess in dollar terms, such as the collapse of a world class ecosystem? Who will be involved in the careful review of your assumptions and conclusions. Will you fund independent, third party peer review?
				8. How will long term benefits and costs be treated in the study? That is, some measures, such as levee reconstruction, create the conditions for future flood, damage, reconstruction scenarios, whiel others, such as flood plain restoration offer more permanent solutions. How ill these differing cycles be treated in the study?
			OMP	9. What cooperative effforts have you under taken with other federal and state agencies to assist you in determining impacts? How are agencies such as USFWS, MNDNR, USEPA, MNPCA, etc. included in your study process?
			SED	10. Sedimentation is a critical threat to habitat in the upper Mississippi basin. How iwll the idfferingimpacts of variousflood prevetnion and protection measures on sediment dispersal be analyzed and valued?
			STDY	11. We agree with World Wildlife comments that scenario2 and 3 seem very similar. Why not take a more aggressive strategy as one of the scenarios to see what might be possible with dramatic shifts in national policy and program?
17	Holst, Vogel, Erdmann & Vogel Attorneys at Law Red Wing, MN Public Meeting Attendee	11/17/94	CORP	* I attended the Flood Plain Meeting and enjoyed it very much and learned a lot.
				* I have some suggestions to liven up the discussions.
				* Have microphone for audience to ask the questions.
			MTG	* Have Corps members use microphone so audience can hear questions asked an answered.
				* Have Corps use microphone so that audience can understand the answers. I have a hearing impairment and missed about 1/3 of the answers.
				* Have slides showing work done to alleviate a problem. Precise problem before was commercial.
				* This note is not sent as a complaint but as a suggestion to make your discussions more interesting to th public.
				* I have lived in this area since 1916 and am now 91 years of age. Yesterday I pulled in a dock with a crew of men. Last of "hung it up" for 1994.

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18	Joe Toigo, Godfrey, IL Public Meeting Attendee	11/19/94	BIOE	* I recently attended a public meeting on the flood management in Alton, Illinois. I did not comment at the meeting but would like to do so now. Everyone knows that we can't prevent flooding no matter how many levees are constructed. We can only minimize the impacts (economically, environmentally, socially, etc.). I believe that the more native vegetation that the watershed has (notice I didn't say flood plain), the less water that will reach the river. Trees, shrubs, grasses, etc. take up water and then transpire the moisture to the atmosphere. Thus the surface area available to evaporate water is increased. A farm field where much of the ground is bare dirt does not hold water as well. I believe more native vegetation will lessen the severity of any particular flood.
			FP	* Secondly, we need to move people out of the frequently flooded areas and keep them out. Money is better spent on buy-outs rather than on payments to rebuild in flood prone areas.
			PPR	* Finally, we must treat the homeowners and landowners fairly to help get them back on their feet, but we should not encourage rebuilding in flood plains, nor should we encourage farming in commonly flooded areas by rebuilding all agricultural
			LVG	levees. Thank you for the opportunity to comment.
19	Upper Mississippi Flood Control Association	12/26/94	STDY	* In the public meeting November 21 at Burlington Iowa scenarios of study were presented by the Corps for public comment that were proposed by the environmental interest. In that public meeting, the Upper Mississippi Flood Control Association asked permission to submit a scenario of study for the flood plain assessment study. The following is the list of areas requested to be added to the scenario of study.
				* Scenario 4: The balance of flood protected and natural flooding areas in the present system is considered with national and regional benefits of a comprehensive system of Standard Project Flood Protection to navigation, economic development, and environment and habitat protection.
			FLD	* A comparison of a comprehensive system of Standard Project Flood Control Levees along the Mississippi, Missouri, and Illinois rivers and the existing system in regard to 1993 damages and future value of economic development and environment protection.
			TRB	* Existing public use of watershed management practices to include slow release reservoirs on creeks and small streams with special consideration on CRP land and valued according to flood reduction by existing small stream reservoirs during the 1993 flood i.e., Lost Creek and Bryant Creek in Lincoln and Pike counties in Missouri.
			REC	* Existing public use of Levee Districts for hunting, fishing, trapping, mushrooming, and other recreation with consideration of ease of access by elderly, handicapped, and non-boat owners.
			ENV	* Flood control benefits to wildlife habitat when compared to the large percentage of naturally flooding areas and loss of
			OMP	hardwoods and other species and habitat in the 1993 flood. What is the value of the existing system balance of natural
			RO	flooding areas, wildlife refuges, and levee and drainage districts.
				* Identify affects of prairie and urban drainage systems accelerated run off of flood water and mitigation needed to offset damages in major river flood plains.
			ECON	* Compare transportation cost of export grain produced in Levee Districts adjacent to the navigation system and export grain produced in Central Iowa with consideration that 30$ to 40% of the corn and soybean that are produced in the Upper Mississippi Valley is exported through the East Gulf.
				* There requested areas of study are needed as a control or comparison to flood plain management policy and study as outlined in the other three scenarios. The study items in scenario four is certainly not meant to state all of the items needed to fairly compare flood plain management to flood control, navigation, economic development, and environment protection of a comprehensive system, but are intended to raise some of the issues that must be studied as a comparison of flood plain management. If study of the benefits and affects of a comprehensive system of flood control is not included the in flood plain management assessment will be nothing more than an attempt to justify an arbitrary shift of policy.
				* If the requested scenario four items need clarification or discussion the UMPCA would be glad to participate in further discussion.
20	Southeastern Iowa Mental Health Center, Inc.	10/29/94		The Burlington Area Flood Coalition of Iowa would like to respond to your request for input regarding alternatives for the Flood Plain Management Assessment of the Upper Mississippi and Lower Missouri Rivers and their tributaries. During and after the Flood of 1993, the agencies in our coalition responded to the disaster in Des Moines County Iowa. The following are concerns raised by our vast experience acquired over the last year and a half.
			HO	Our most important concern is the availability of affordable housing. While many people are unable to find comparable housing elsewhere. Housing within the city is more costly. Affordable housing anywhere in the county can be difficult to find. At least one third of families impacted by flooding appearing at or below poverty level. Thus, any alternatives to evacuate or to increase potential for flooding must consider the impact to available and affordable housing in the affected area.
			ECON	A related problem is finding alternative employment for farmers whose income is adversely affected by flooding their farmland. Will surrounding towns be able to offer employment? For every dollar of farm income lost along the flood plain, an estimated four dollars is lost in the local economy. What will be the estimated financial loss and increase in unemployment to communities in the Midwest? Finally, will retraining opportunities be offered to those displaced due to removal of levees or other alternatives resulting in increased flooding?

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			LVC	Turning to the various alternatives, the first key question is "how are agricultural and urban levees defined?" It is hard to comment on the alternatives if uncertainty exists as to what areas are proposed for 500 year flood protection (i.e. urban) and what areas range from proposed no protection to 500 year flood protection.
			URB	This proposal assumes that it is best to protect "urban" areas, but does not identify how small of a community is "urban." Furthermore, how small of a community is considered expendable by increased risk of flood with alteration to levees?
			CRIT	An ancillary problem is how are critical facilities considered "priority." Again is this based upon the population they serve or other factors? In rural communities, an important factor to consider is location of next available resources. So if a hospital is proposed not critical, how far would residents need to travel during flooding conditions to other hospitals that would be functional and accessible?
			SOC	Regarding the impact categories, it is curious that environmental impacts category will be reviewed so thoroughly, yet human concerns are only touched briefly in the Social Well Being section under Reduction of Risk Category. Furthermore, it was noted at the meeting that social and emotional factors are not part of this study. While these may be difficult to quantify, social and emotional impacts are still critical to discussions of major changes in flood plain management policy. As mentioned above, destruction of housing in the flood plain without alternative replacement housing will have a devastating impact on the Midwest. Thank you for reviewing these comments. Please include the impact on availability of affordable housing in this discussion of flood plain management.
21	Dept. of Natural Resources Jefferson City, MO	12/22/94		We appreciate the fact that the Corps of Engineers encourages state resource agencies to actively participate in the Flood Plain Management Assessment (FPMA) of the Upper Mississippi and Lower Missouri Rivers and their tributaries. The FPMA covers a large geographical area composed of states/regions with varying needs and flood plain issues. As the state hardest hit by the Midwest Flood of 1993, Missouri has a great interest in providing comments that will make the FPMA results useful to state and local governments currently grappling with the complexities of flood plain management issues. The Department of Natural Resources responded early on in the process by providing detailed, written suggestions, and by participating in the August 10-11 St. Paul workshop. On behalf of the Department of Natural Resources, I would like to formalize concerns expressed verbally at the St. Paul workshop and to provide constructive, specific suggestions based upon the 2nd Milestone Package of the FPMA.
			FE	During the initial reviewing of the FPMA Scope of Work, we strongly suggested the inclusion of more frequent, lesser magnitude flooding events, in addition to modeling the 1993 event. The evaluation of these more frequent, lesser magnitude flood events are of equal or greater value to decision makers because of their repetitive nature and cumulative costs. Limiting the FPMA Study to the 1993 flood, establishes a bias under which the effects of important alternatives, such as levee set backs, will be masked. We reiterate our suggestion to include the evaluation of 5, 10, and 25 year flood events. This evaluation is critical if the FPMA results are to be of use in addressing local and state government needs throughout the study area. We reiterate the importance of We reiterate the importance of systematically evaluating the levee set back alternative (p. 46 of the 2nd Milestone Package) This action, as well as the limitation of all agricultural levees, and levee notching at the 25-yr. level will only provide meaningful results if the FPMA hydrologic model is run, as suggested, at 5, 10, 25-yr. flooding events. These actions would have no effect if modeled based on the 1993 flood events, leading to conclude that those actions are not worth pursuing. In addition, the description of the set back alternative requires basic information. For example, to what distance from either side of the channel will the model set back the levees - 2,000 feet? To what level of protection will the model run the set back levee alternative - 25-year level?
			SCEN	To facilitate meaningful results of the FPMA, state and local governments need to identify with one of the FPMA scenarios. The three existing scenarios represent the upper and lower limit, with one option to the right of the middle. Scenario one represents flood plain management policies and programs as they exist today, post 1993 flood. Scenario two represents implementation of many UMRBA and ASFPM recommendations as well as those from the Galloway Report. Scenario three represents a step beyond scenario two and is, for the most part, unrealistic. We suggest that at least one more scenario be added which represents a step between existing scenarios one and two. Scenario three could be dropped if necessary to accommodate a more realistic combination of flood plain options.
			DEV	We reiterate our suggestion that constrictions to flood flow, such as bridges, railroads, and highways, be evaluated for their hydrologic effect on flooding in case study reaches. We believe constrictions to flood flow are a significant factor in the Lower Missouri River basin and should not be discounted.

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			AALT	We suggest that, in order to concentrate on the evaluation of feasible alternatives, the limitation of all federally constructed reservoirs, removal of all agricultural levees, and raising all levees to a 500-year level plus freeboard options be eliminated from the list of actions affecting hydrologic conditions (p.47 of the 2nd Milestone Package). These are extreme actions which few, if any, state/local governments would consider. If the intention of analyzing the limitation of existing structural flood control measures is to illustrate their positive affect on reducing 193 flood damages, we suggest a truer analysis. A true evaluation of the elimination of one structural measure cannot be done independently of the others. We suggest modeling flood plain conditions prior to federal dams, levees, channelization, induced accretion of land, and flood plain development.
			CRIT	We suggest either clarification of unification of the definition of critical sites and priority sites under the critical sites and priority sites under the critical facilities option (p.47 of the 2nd Milestone Package). If there is a benefit of breaking the definition of critical facilities into two parts and evaluating them separately, explain it and make the terminology on p. 47 and p. 52 consistent. If there is not a benefit to defining critical sites and priority sites separately, we suggest that there be a single definition of critical facilities.
			LVC	We suggest clarification regarding the maximum height option (p.47 of the 2nd Milestone Package). While not stated, we assume this option refers exclusively to agricultural levees and, in addition to not lowering existing levees, would not raise existing levees to accommodate notching at the 25 year level.
			WET	We suggest the evaluation of wetlands (p.51 of the 2nd Milestone Package) not be limited to non-forested wetlands, but include all wetlands, but include all wetlands as identified in the National Wetland Inventory.
			FLD	While the need for complete and updated flood insurance rate maps (FIRM's) is addressed to varying degrees in scenarios two and three, we suggest that the need for accurate mapping of flood hazard areas is fundamental to the successful implementation of any flood plain management program and should be emphasized within the text of the final report. We hope these specific, constructive suggestions will assist you in making the FPMA an important tool for decision makers at federal, state, and local levels. We look forward to the results.
22	U.S. Environmental Protection Agency Chicago, IL	10/13/94		Attached are my comments on the subject document. Because of the scheduling, I did not receive any input from other Region 5 staff or Region 7, and as I discussed, I will not be available for several weeks so did want to get these to you. Both staffs will continue to review the document, and as appropriate, additional comments may be provided.
			STDY	I will also note that Region 5's representative to the Scientific Assessment and Strategy Team felt that some of the information regarding the data bases was not consistent with what is available from other Team resources and therefore, he provided copies of study documents to other members on the Team for information and possible coordination. I understand that any follow-up from these contacts will be sent directly to you, however, I will advise you of any that are received in Region 5.
			ECON	Objectives. As noted in previous comments on the Plan of Study, Objective J, regarding cost-effectiveness is in reality dealing with benefit-costs of various proposals, in that there are no given objectives that are to be achieved, but rather the assessment, by its preliminary nature, is looking for cases where flood control measures, both structural and non-structural, when compared with the perceived benefits appear to warrant further pursuit. It would greatly enhance communication with the public, if the study documents would tactfully acknowledge that the Congressional resolution used the wrong nomenclature and thereby explain this in simple, more precise terms. For reference, Appendix A to 40 CFR 35, subpart E, is EPA's explanation of cost-effectiveness, and par 4.b is the primary definition. The bottom line is not to suggest that the Corps needs to define cost-effectiveness, but rather to arrive at an explanation that can be understood by the general public. What is presently provided on Page 3 is confusing and implies some undisclosed predetermined flood control standard.
			SOC	Issues and Questions. While several of the stated issues skirt the social issues, none appear to focus on these aspects, but rather the predominant focus is economic aspects, i.e., material damages and assistance payments. How can this study include a focus on the social disruption caused by flooding? A related aspect is the loss of human life, and to a lesser degree, injuries. (Scenario 3 on page 45 briefly introduces this topic, but does not pursue it either.) None of the issues address how loss of life can be controlled. Although I have seen several estimates, e.g. the IFMRC cites 38 deaths on page 8, I have yet to see any elaboration on the circumstances leading to those cases and whether indeed there can be actions to control loss of life.

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			WET	Under the Flood Plain Wetland Restoration section, the fourth item includes an issue regarding the EMP that relates to the management of the river ecosystem, but the connection to flood management is unclear. The issue that is not addressed is how the floods can be managed to allow the historic flood pulse to occur on the wetlands that already exist and those that will be reconnected to the river system. Will the system accommodate the natural regime up to some frequency of event?
			STDY	Scenarios. Page 40 identifies that "flood plain wetland restoration policies will be included." It would appear appropriate to include the concept of the flood pulse as a necessary aspect of wetland restoration. This would appear to be more significant in its application to the Missouri River flood plain that the Mississippi, but could include the "hinge point" issue on several UM pools. Pages 41 and 43 suggest that Scenario 1 may include changes anticipated in the 1995 farm bill. This does not appear to fit with the definition, and also, it may be impractical to wait to see the outcome before defining scenario 1. Instead, could not these proposed measures be worked into scenario 2 or 3? Page 42, under zoning, states "no major changes in ... zoning trends." Will these trends be identified? This may be one area where the trend as it now exists (post 1993 flood) is different than the pre-flood trend. There are several components of the scenarios that identify that national assistance programs will continue to be applied or intensified in their application to the flood plain area. It would be extremely beneficial to define the current appropriation level associated with these programs, the amount currently being applied to the study area, and what the national program level would need to be to allow a meaningful increase for the study area. Conversely, the scenarios, particularly #3 could suggest that the UM/LM area could be given a priority for the national programs. The last item under section 6 on page 44 and section 6 on page 46 address an issue that does not appear to relate to the flood control issue, but rather, promoting the concept that the Environmental Management Program funds would be used to acquire lands on a scale that could impact flood control may be detrimental to the successful inclusion of land acquisition in the EMP. It is noted that the title of Scenario 3 includes "reduction of risk to lives," however, nothing appears to directly relate to this issue. Impact Categories. It appears that page 50, under flood damage reduction, identifies "overbank" flooding, to distinguish it from rainfall accumulation damages. How does this intent address the concept of damage behind levees, if and when the evacuation pumps do not function adequately? Does control of internal drainage fit the definition of overbank flooding? It certainly appears to be a class of damage that should be included. The intent of 2.C. on page 50 is not clear, in that the first section is dealing with damage reductions, and 2.C. is apparently addressing the "change in estimated costs", although the capitalized heading does not make this clear. Wouldn't this category be a subset of section 1? It appears that 1.A. on page 52 should be titled, "Number of Facilities with Hazardous Materials or Public Utilities at Risk." While some sewage treatment plants, power plants or water works may have some hazardous materials on site, that consideration seems minor, compared with the service of the facility that could be potentially lost. Therefore, the introductory text should also be modified to reflect that it is the loss of service that is considered paramount at the utilities. Other approaches to present these impacts would be to subdivide this into two paragraphs or define these utilities into category B, if it is too late to revise the rating tables. Upland Watershed Retention Measures. It is not clear from the text on page 58 and 59 (or preceding documents) as to whether this section will identify the measures needed to reduce the runoff, or if the study will assume this can be achieved and run the hydrologic/hydraulic models based on the assumed reductions. While it is almost obvious that defining the specific needed measures for the entire study area is unrealistic, the lead in paragraph and paragraph 3 almost give one the impression that specific measures will be evaluated. While measure identification might be considered for the basin selected for detailed study (Minnesota R.), the second paragraph on page 59 implies that the study begins with runoff reduction synthesis. To put on a comparable basis as for other structural measures, it appears that having the costs associated with the reduction would be useful. Because this section is an addendum to the Plan of study, it should contain a clear presentation of what will be accomplished, recognizing whatever budget constraints must be applied.
23	Upper Mississippi Flood	12/26/94		In the public meeting November 21 at Burlington, Iowa, scenarios of study were presented by the Corps for public

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	Control Assocation			comment that were proposed by the environmental interest. In that public meeting, the Upper Mississippi Flood Control Association asked permission to submit a scenario of study for the flood plain assessment study. The following is the list of areas requested to be added to the scenario of study. Scenario 4. The balance of flood protected and natural flooding areas in the present system is considered with national and regional benefits of a comprehensive system of Standard Project Flood Protection to navigation, economic development, and environment and habitat protection.
			LVC	* A comparison of a comprehensive system of Standard Project Flood Control Levees along the Mississippi, Missouri, and Illinois rivers and the existing system in regard to 1993 damages and future value of economic development and environment protection.
			TRB	* Expanded implementation of watershed management practices to include slow release reservoirs on creeks and small streams with special consideration on CRP land and valued according to flood reduction by existing small stream reservoirs during the 1993 flood i.e., Lost Creek and Bryant Creek in Lincoln and Pike counties in Missouri.
			REC	* Existing public use of Levee Districts for hunting fishing, trapping, mushrooming, and other recreation with consideration of ease of access by the elderly, handicapped, and non-boat owners.
			ENV	* Flood control benefits to wildlife habitat when compared to the large percentage of naturally flooding areas and loss of hardwoods and other species and habitat in the 1993 flood. What is the value of the existing system balance of natural flooding areas, wildlife refuges, and levee & drainage districts.
			RO DR	* Identify affects of prairie and urban drainage systems accelerated run off of flood water and mitigation needed to off set damages in major river flood plains.
			ECON	* Compare transportation cost of export grain produced in levee Districts adjacent to the navigation system and export grain produced in Central Iowa with consideration that 30% to 40% of the corn and soybeans that are produced in the Upper Mississippi Valley is exported through the East Gulf.
			STDY	These requested areas of study are needed as a control or comparison to flood plain management policy and study as outlined in the other three scenarios. The study items in scenarios four is certainly not meant to state all of the items needed to fairly compare flood plain management to flood control, navigation, economic development, and environment protection of a comprehensive system, but are intended to raise some of the issues that must be studied as a comparison of flood plain management. If study of the benefits and affects of a comprehensive system of flood control is not included the flood plain management assessment will be nothing more than an attempt to justify an arbitrary shift of policy. If the requested scenario four items need clarification of discussion the UMPCA would be glad to participate in further discussion.
24	American Rivers, Environmental Defense Fund, Friends of the Mississippi R., Izaak Walton League of America, Mississippi River Basin Alliance, Quad City Conservation Alliance, and Sierra Club		NAV	Given the deteriorated state of the Upper Mississippi River, we urge your to expand the Upper Mississippi River - Illinois Waterway System Navigation Study to fully consider the long-term impacts of impoundment and strategies to restore the river's dynamic hydrologic and sediment processes. The study as it is conceived now should be discontinued.
			TRAN	Rather than simply assessing the impacts of increased commercial traffic, this study, for all practical purposes, will determine the future of the Upper Mississippi River until the year 2050. This is a master plan that affects the entire future of the river, including the people who rely upon it. The proposed expansion contemplated by the Upper Mississippi River - Illinois Waterway Study would be an "irretrievable" commitment of resources, ultimately requiring future resources to refurbish and rebuild existing navigation infrastructure. The decision to expand the navigation system is therefore "connected" to the decision to maintain the system until the year 2050 and beyond.
			ENV	Accordingly, the Corps must not only consider the impacts associated with increased commercial traffic but must also consider the long-term consequences of the lock and dam system and measures to maintain the ecological integrity of the nation's great river. While a marginal increase in traffic may appear insignificant, such impacts become more significant in a ecological system that has significantly deteriorated. The Corps must assess the affects that impoundment and river regulation have on sediment processes, water quality, vegetation, and fish and wildlife habitat, and assess changes in river regulation that might improve hydrologic and habitat conditions, including draw downs and changing control points.

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				In general, we believe the Corps must assess:
			NS	* mechanisms by which the Corps can simulate the river's natural geomorphological processes, including the creation of new backwaters, chutes and sloughs, and manipulations of the river's hydrograph (e.g. drawing down reservoirs) that might enhance fish and wildlife habitat.
			ENV	* the cumulative environmental impacts of training structures and the potential benefits of modifying and removing training structures; and the effects of commercial navigation traffic on macroinvertebrates inhabiting rock structures; * impediments to fish passage caused by the navigation dams and the potential benefits of retrofitting dams to aid fish passage; and, the long-term impacts and potential mechanisms to reduce the impacts of introduced species, including the zebra mussel; * the extent to which flood plain development would be induced by increased navigation traffic; and the extent to which the flood plain restoration would mitigate for the impacts of impoundment; * an endangered river
				The Upper Mississippi River is home to 50 species of mammals, 45 species of reptiles and amphibians, 36 species of mussels, and 241 species of fish, including the most ancient lineage of freshwater fish in North America, and is the central flyway for 40 percent of North America's migratory waterfowl. The river has a natural beauty and rich, diverse history that attracts more than 12 million visitors each year -- more than Yellowstone National Park -- generating $1.2 billion annually.
			NAV	But for more than a century, the Army Corps of Engineers has sacrificed the Mississippi's natural heritage to facilitate commercial navigation. In 1878, Congress authorized the Corps to develop and maintain a four-and-half foot deep navigation channel, and in 1907 authorized a six-foot channel to meet the needs of larger vessels with deeper drafts. The channel was developed by the construction of wingdams, closing dams and stabilized banks to constrict the flow of the river, cutting off side channels and backwater sloughs. In 1930, the channel was deepened to nine feet and Congress authorized a system of 29 navigation locks and dams to further stabilize the river for navigation.
				Now, the biologist who monitor the health of the Mississippi River tell us that the construction of the locks and dams that make navigation on the Upper Mississippi River possible has set off a chain reaction that has placed the nation's great river on the verge of ecological collapse.
				Biologists point to declining populations of freshwater mussels and aquatic vegetation -- key links in the Mississippi's complex food chain -- and predict a long-term decline in fish and wildlife. A number of species are in danger of being eliminated from the river altogether, including the Higgins Eye pearly mussel, the paddlefish, and the lake sturgeon.
				Initially, the pools that were created by the construction of the locks and dams temporarily increased fish and wildlife. But the 1960s signaled the start of a long-term decline, as biologists and river users noticed a sharp drop in river productivity. The oxbows and meanders that once provided refuge from the river's currents, allowing fish and wildlife to feed and spawn, had been replaced by rock-lined banks. Those that remain are increasingly being filled with sediments from eroding farmland. The pools created by the locks and dams are becoming shallower as sediment that once passed downstream to replenish the river's delta settles out in the slow-moving reservoirs.
			TRAN	Wind and wave action, as well as increasing river traffic, resuspend these sediments in the water, blocking sunlight needed for aquatic plants to grow and eliminating the "compacted" soils these plants need to take root. A group of river biologists recently warned that aquatic vegetation and insects -- the base of the river's food chain -- will soon disappear, and that waterfowl and fish will follow. "This sequence of events is inevitable whenever a river is impounded, and it is happening with increasing speed," on the Upper Mississippi River, said the Upper Mississippi River Conservation Committee, a 50-year-old coalition of federal and state biologists.
			HYD	The "stairway" of navigable river pools created by the navigable river pools created by the navigation dams has greatly altered the hydrology of the mainstem of the river. Extensive areas of river flood plain were altered by the navigation dams, resulting in continuous inundation of areas that were formally seasonally-inundated. Over time, the once-complex topography of these areas has been modified by currents and wave action into a uniform substrate that offers little diversity of habitat.
			SED	Low rates of water exchanges in the impounded backwater areas has resulted in increased rates of sedimentation and, ultimately, conversion of shall-water habitat into wetland and flood plain habitat. The damming and channelization of the river has also prevented the river from carving new channels and backwaters and has, in turn,

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				reduced the complexity and variety of riverine habitats in these areas as well.
			ENV	Many of the backwaters have, since impoundment, shifted from clear water macrophyte dominated systems to turbid blue-green algae systems lacking submerged plants. In addition to increasing turbidity, the continuous inundation caused by the dams has prevented the germination of emergent aquatic plant seeds, most of which require dewatered mud flats to propagate. Continuous inundation has also negatively impacted flood plain vegetation by elevating groundwater levels and reducing the available rooting depth for trees and other terrestrial vegetation. This problem, combined with increased wind and wave action, has made flood plain trees vulnerable to wind throw. Navigation dams also present obstacles to fish passage, although there are records of fish movements through the dams, including passage by the lake sturgeon and paddlefish. A catadromous species, the American eel, must also travel through or over dams on the river and have been found in the river's upper pools. Although the dam allow some upriver and downriver passage, young-of-year and small fish are thought to suffer some increased mortality and predation when stressed by the dams. And, upriver movements mostly occur through the gated section of the dams, often restricting range of spawning, feeding and over-winter habitat. Large river flood plain river systems.
			FER	Despite centuries of abuse, the Mississippi retains many of the natural characteristics that make it biologically more productive than less dynamic river systems, one of a handful of large rivers that includes the Nile, the Amazon, the Congo and the Mekong. For large flood plain rivers, flooding is not a disturbance but a predictable event to which native organisms have adapted.
			WL	In contract to small streams, most of the biological productivity in large river-flood plain systems occurs in the flood plain. Nutrient cycling is aided by wet and dry periods, and fish and birds are able to exploit nutrient-rich backwaters and bottomland lakes during periods of high flow. The period of low flow is equally important. Submerged vegetation and moist soil plants benefit from low, stable water levels during the summer growing season. This naturally fluctuating water is a critical link in the preservation of species that occupy large river-flood plain systems. Mississippi River species have adapted to a predictable annual cycle that affects seasonal timing, duration, and the rate of rising and falling water levels. By occupying large areas of bottomlands, the original Mississippi ensued that some portion of the flood plain would meet the requirements for a species during the high flow periods. A variety of species rely on this "flood pulse" for access to seasonally-inundated spawning and nursery habitat, including crappie, yellow perch, suckers, sunfishes, gizzard shad, silver chub and white bass. Water birds that use the Mississippi, a flyway for 40 percent of the North America's ducks, geese, swans, and wading birds, use the spring and fall floods for access to the supply of seeds, roots, invertebrates and fish that are produced during the growing season, and their spring and fall migrations may be adjusted to the annual riming of these floods. Rising and declining water levels make food available in stages and at different depths to successive waves of migrating birds. The elimination of other major flyways in the North America has made the remnants of the Mississippi a critical link in the survival of these species. The upper Mississippi-Illinois waterway system navigation study The Corps of Engineers initiated the Upper Mississippi-Illinois Waterway System Navigation Study in 1988 to address capital investment planning for the system for the year 2000-2050. The study will establish a prioritization schedule for evaluating sites where improvements are needed, leading to a "system" Congressional Authorization for construction while also maintaining the social and environmental qualities of the river system. In order to comply with Corps regulations and the National Environmental Policy Act (NEPA), the Corps plans to produce a system-wide Environmental Impact Statement (EIS) that will document the system-wide physical and biological impacts of navigation traffic. The "system-wide impact" studies proposed by the Corps includes the development of models to assess the impacts of navigation traffic on the sedimentation of side channels, backwaters and bank erosion, and the impacts on fish and wildlife, including plants and mussels. Failure to assess cumulative impacts As currently designed, these studies will fail to consider the cumulative physical and biological impacts of continued maintenance of the lock and dam system and the nine-foot channel. By their very nature, capital

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				investments in the infrastructure of the Upper Mississippi River-Illinois Waterway System will extend the life of the lock and dam system. And, while a marginal increase in traffic may appear to have insignificant environmental impacts, marginal impacts become more significant in a system that is experiencing deteriorating conditions.
			NAV	In order to comply with NEPA, the Corps of Engineers must consider not only direct and indirect effects of an increase in navigation capacity, but must also address the cumulative effects of an increase in navigation capacity, but must also address the cumulative effects of this increase as well as the cumulative effects of ongoing operation of the lock and dam system until the year 2050 and beyond and other "reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions." 40 C.F.R. Sec. 1508.7. See also 40 C.F.R. Sec. 1508.8 (effects include ecological, aesthetic, historical, cultural, economic, social or health impacts, whether direct, indirect or cumulative); 40 C.F.R. Sec. 1508.25(c) (EIS shall consider three types of impacts, including cumulative effects); 40 C.F.R. Sec. 1508.25(a) (2) (EIS must analyze the effects of actions " which when viewed with other proposed actions have cumulatively significant impacts"). As a general matter, NEPA was enacted to ensure that Federal agencies take account of the environmental effects of their major Federal actions by preparing, in advance of a decision, an EIS that sets forth in detail all environmental impacts of the action. Indeed, the principal thrust of NEPA is to ensure that environmental effects are considered before a decision is made. CEQ Regulations, 40 C.F.R. Sec. 1500.1(b) ("NEPA procedures must ensure that environmental information is available to public officials and citizens before decisions are made and before actions are take"). This is true of all impacts of an action, including cumulative impacts. CEQ's regulations have defined cumulative impact as the impact on the environment which results from incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time. 40 C.F.R. S. 1508.7. The courts have consistently held that cumulative impacts are among the environmental effects that must be considered in advance of an agency decision. E.G., City of Tenakee Springs v. Clough, 915 F.2d 1308, 1313 (9th Cir. 1990) ("NEPA requires consideration of the potential [cumulative] impact of an action before the action takes place."); Sierra Club v. Penfold, 857 F.2d 1307, 1321 (9th Cir. 1988) ("NEPA requires that where several actions have a cumulative or synergistic environmental effect, this consequence must be considered in an EIS."). EPA's Section 404(b) Guidelines, which govern the issuance of dredge and fill permits under the Clean Water Act, provide a quite explicit statement of what must be done by an agency with respect to cumulative impacts before issuing a permit that will affect river resources: Cumulative impacts are the changes in an aquatic ecosystem that are attributable to the collective effect of a number of individual discharges... The cumulative effect of numerous such piecemeal changes can result in a major impairment of the water resource and interfere with the productivity and water quality of existing aquatic ecosystems. Cumulative effects attributable to the discharge of dredge of fill material in waters of the United States should be predicts to the extent reasonable and practical ... This information should be documented and considered during the decision-making process concerning the evaluation of individual permit applications. Rather than simply assessing the effects of an increase in the navigation traffic on the Upper Mississippi-Illinois Waterway System, this study is, for all practical purposes, deciding the future of the Upper Mississippi River until the year 2050. As described by the Corps, this study will "address capital investment planning for the Upper Mississippi River-Illinois Waterway System for the years 2000-2050" and will, by its very nature, extend the life of the infrastructure. Under CEQ regulations, the decision to expand the navigation system is "connected" to the decision maintain the system for an extensive period. (40 C.F.R. Sec. 1508.25 requires that the scope of an EIS consider "connected actions." "Actions are connected," among other reasons, "if they... are interdependent parts of a larger action and depend on the larger action for their justification." In this case, the economic analysis of expansion is dependent on the maintenance and rebuilding of the existing system and is therefore a connected action). The courts have repeatedly enforced this regulation. They have repeatedly enforced this regulation. They have repeatedly found that an agency that makes an "irretrievable" commitment of resources that will then heavily influence a subsequent action, the environmental effects of that subsequent action must be analyzed at the time of the first. For example , in Port of Astoria, Oregon v. Hodel, 595 F.2d 467 (9th Cir. 1979), the court considered whether entry by the Bonneville Power Administration into a long-term energy contract constituted a major federal

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				action. The court held that it did constitute a major federal action because it "sets the stage" for the initiation of a new hydropower program. See also Environmental Defense Fund v. Andrus, 596 F.2d 848 (9th Cir. 1979). Nor can there be any doubt that a decision to maintain and rebuild the existing navigation system is an action that requires an EIS to examine the full range of environmental issues associated with that system. In Confederated Tribes and Banks v. F.E.R.C., 746 F.2d 466 (9th Cir. 1984), FERC claimed that it did not need to prepare an EIS before relicensing an existing dam because doing so would cause no new environmental effects. But the court held that maintaining the dam for an additional period constituted a new action with significant environmental effects. Without doubt, the ongoing maintenance of the lock and dam system will exacerbate what river biologists have called "aging reservoir syndrome," the long-term biological decline associated with the impoundment of river systems. Biologists warn that impoundment will lead to the loss of aquatic vegetation and insects -- the base of the river's flood chain -- and that waterfowl and fish will follow, a sequence of events that is inevitable whenever a river is impounded. The well-documented ecological collapse of the Illinois River provides a dramatic example of the effects of impoundment. Sediments that were already being delivered at faster rates due to farming practices remained in the system longer after the damming and channelization of the Illinois and were more easily and frequently resuspended, blocking the light needed for aquatic vegetation. Wind and wave activity increased, finishing off the last remaining flood plain trees, leading to increased erosion and turbidity. Ultimately, increased turbidity and the absence of a period of low flow, eliminated aquatic plants and insects, leading to a system-wide ecological collapse (See R. Sparks, Making Predictions that Change the Future: Forecasts and Alternative Visions for the Illinois River, Illinois River, Illinois Natural History Survey, 1994.) Like the Illinois, the Upper Mississippi River is undergoing a similarly dramatic transformation. Backwater areas have begun to fill in with sediments and convert from a system dominated by emergent aquatic plants to one dominated by algae, and other key biological indicators -- mussel populations, for example -- suggest that the system is on the verge of a similar ecological collapse. By reinvesting the lock and dam system without assessing and mitigating for the long-term ecological effects of ongoing impoundment, the Corps is ensuring that the Upper Mississippi River will follow the same course as the Illinois. Failure to Set an Appropriate Baseline. The Corps violates NEPA by defining the baseline as existing conditions instead of pre-project conditions. For all practical purposes, a capital investment in the lock and dam system is not the "mere continuation of the status quo", but rather a "new irreversible and irretrievable commitment of public resource." Confederated Tribes and Bands of Yakima Indian Nation v. FERC, 746 F.2d at 476. (The decision to relicense is to be based on the same inquiry as the original licensing, including a consideration of all relevant harms and benefits to public uses related to the project). By simply measuring the impacts of additional navigation traffic on an already degraded river system, the Corps is assuring that environmental impacts will appear minimal when compared the economic costs associated with barge delays. In comments on an issue similar to the navigation study, EPA recommended that the EIS evaluate the total impact of the project, not merely the impacts from the proposed modifications or operation changes. For purposes of measuring the impacts, the baseline for the environmental analysis should be the conditions that existed pre-project, before the construction of the facilities. This baseline of pre-project conditions should also be used as the basis of the without-project alternative analysis. EPA scoping comments, 11/23/92). EPA also suggested that the Corps recognize that the "no action alternative" in its review of the Missouri River Master Water Control Manual is not a "no impact alternative' and said the Corps "must take into consideration the past and continuing adverse environmental impacts that the current operating scenario had had." EPA comments on PDEIS, 8/4/93, at 4. A pre-project baseline is the only appropriate benchmark for determining what steps the Corps must take to restore and give equal consideration to the natural resources affected by the existing project, and provides the basis for evaluating the continuing impacts of the lock and dam system. A pre-project baseline provides the only means to assess the cumulative impacts of an existing project, which under NEPA, includes the impacts on the environment from "past, present, and reasonably foreseeable future

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				actions." 40 C.F.R. Sec. 1508.7 (emphasis added). By adopting the currently degraded condition as the baseline, the Corps has simply accepted past and expected damage to the river's natural resource values. Failure to Assess a Full Range of Alternatives The Upper Mississippi Illinois Waterway System Navigation Study fails to consider all reasonable alternatives, including the removal of some or all the structures that make navigation of the Upper Mississippi River possible, and appropriate consideration of other means of transportation that could supplement or even replace navigation. As has been discussed, systemwide impacts from the ongoing maintenance of lock and dam system are substantial and merit consideration as decisions about the future of the waterway system are made. By limiting the consideration of environmental impacts the effects of increased navigation (including sediment resuspension, bank erosion, substrate disturbance, propeller related effects, and the effects of pool fluctuations), the Corps has designed a study that will understate the environmental impacts the effects of pool fluctuations), the Corps consequences of long-term capital investment. By their nature, capital investments to maintain or expand the lock and dam system continue the steady deterioration originally caused by construction of the lock and dam system. Thus, the question the Corps must answer as part of the Upper Mississippi-Illinois Waterway Navigation Study is the extent to which navigation and environment are possible, using the pre-disturbance river as a baseline for comparison. CEQ regulations implementing NEPA, 42 U.S.C. Sec. 4321-4370a, state that the analysis of alternatives "is the heart of the environmental impact statement," and direct federal agencies to "evaluate all reasonable alternatives." 40 C.F.R. Sec. 1502.14. The goal of alternatives analysis is to "present the environmental impacts of the proposal and the alternatives in comparative form, thus sharply defining the issues and providing a clear basis for choice among options by the decision maker and the public." NEPA regulations and federal caselaw make clear that the Corps must therefore consider not only the impacts of an increase in navigation capacity, but the option of providing enhanced protection for the Upper Mississippi River. Therefore, the Corps must consider the effects that impoundment and river regulation have on sediment processes, water quality, vegetation, and fish and wildlife habitat, and assess changes in river regulation that might improve hydrologic and habitat conditions, including draw downs and changing control points. Unless the Corps considers a full range of alternatives, it will fail to comply with NEPA. The Corps must expand the scope of the navigation study to assess cumulative impacts. Restoration of the river's natural hydrologic and sediment processes may be the surest and least costly way to sustain an ecologically viable river system and continue to support commercial uses of the river. In order to properly assess the effects of ongoing operation and maintenance of the lock and dam system, the Corps must assess the effects that impoundment and river regulation have on sediment processes, water quality, vegetation, and fish and wildlife habitat and must assess changes in river regulation that might improve hydrologic and habitat conditions, including draw downs and changing control points. For practical purposes as well, the Corps should assess least costs alternatives that maintain the ecological integrity of the Upper Mississippi River system. Although the environmental restoration program authorized by the Water Resources Development Act of 1986 has produced numerous projects with significant local environmental benefits, these projects are costly and fail to address the long-term changes to the river's natural processes. Solutions that restore the river's dynamic hydrologic and sediment processes may more cost-effectively offset the impacts of existing or increased levels of traffic. To reiterate, the Corps must assess: * mechanisms by which the Corps can simulate the river's natural geomorphological processes, including the creation of new backwaters, chutes and sloughs, and the manipulations of the river's hydrograph (e.g. drawing down reservoirs) that might enhance fish and wildlife habitat. * the cumulative environmental impacts of training structures and the potential benefits of modifying and removing training structures; and the effect of commercial navigation traffic on mactroinvertebrates inhabiting rock structures; * impediments to fish passage caused by the navigation dams and the potential benefits of retrofitting

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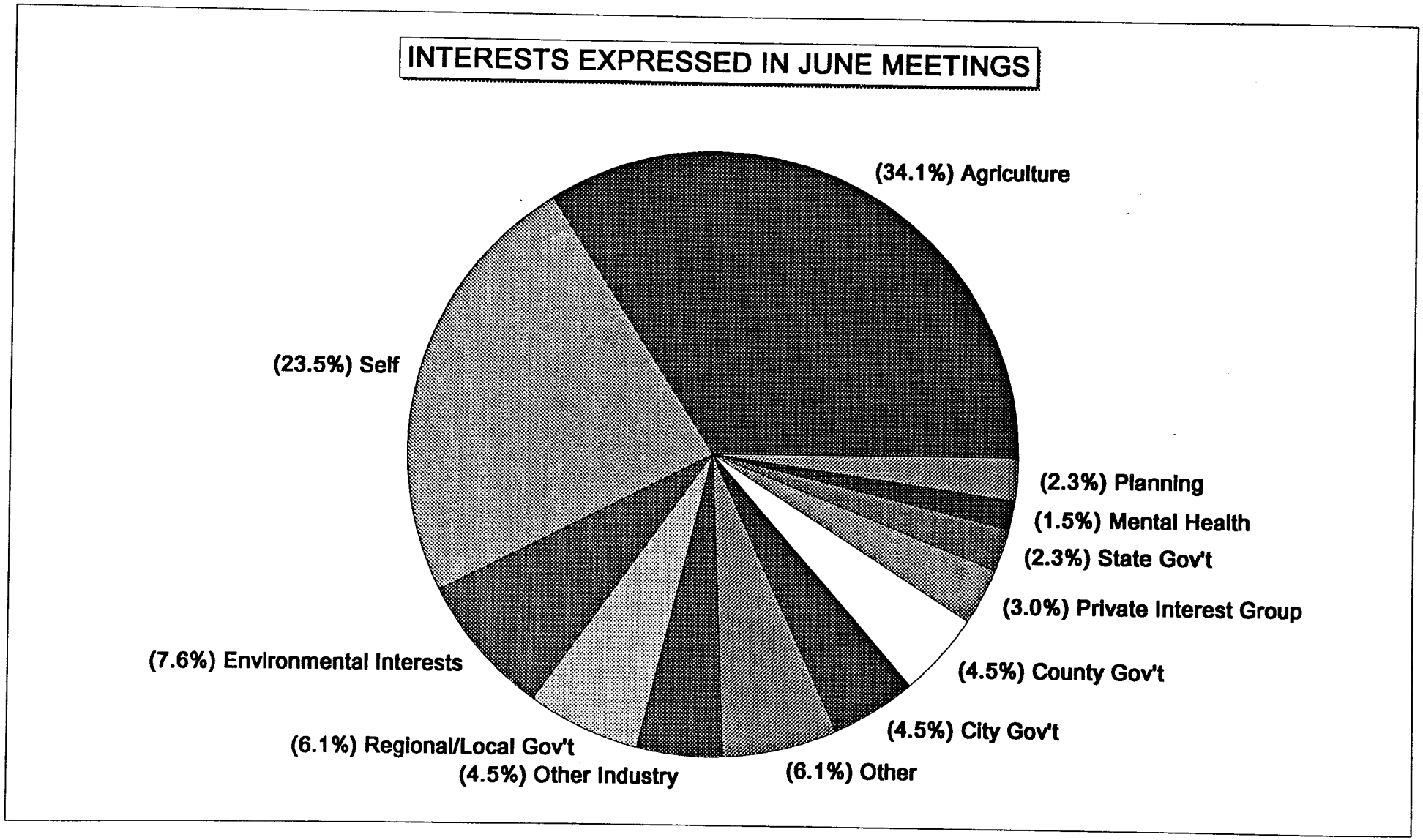
				dams to aid fish passage; and the long-term impacts and potential mechanism to reduce the impacts of introduced species, including the zebra mussel; * the cumulative effects of channel maintenance dredging and material placement; and the environmental impacts of resuspension of contaminated sediments; * the extent to which flood plain development would be induced by increased navigation traffic; and the extent to which the flood plain restoration would mitigate for the impacts of impoundments; NEPA's implementing regulations specifically require that the EIS for the Upper Mississippi-Illinois Waterway Navigation Study – "include reasonable alternatives not within the jurisdiction of the lead agency." 40 C.F.R. Sec. 1502.14(c). CEQ guidance explains that "an alternative that is outside the legal jurisdiction of the lead agency must still be analyzed if it is reasonable." CEQ Memorandum: Questions and Answers About the NEPA regulations, 46 Fed. Reg. 18026 (March 23, 1981), as amended Fed. Reg. 15618 (April 25, 1986). Federal appeals courts have required agencies to consider reasonable alternatives beyond their jurisdiction. See, e.g., Natural Resources Defense Council v. U.S. EPA, 822 F.sd 104, 128 (D.C. Cir. 1987) (agency "[took] note of its obligation to action, regardless of whether the agency has the power to implement those alternatives.") The same appeals court agreed earlier that the spirit of the NEPA requires an analysis of alternatives which goes beyond the bounds of the lead agency's jurisdiction. NEPA requires an integrated view of the environmental damage that may be caused by a situation, broadly considered, and its purpose is not to be frustrated by an approach that would defeat a comprehensive and integrated a consideration by reason of the fact that particular officers and agencies have particular occasions for an limits on their exercise of jurisdiction." Henry v. FPC, 513 F.2d 395, 406 (D.C. Cir. 1975) (where federal agency has jurisdiction over decision that would help trigger larger project, agency must analyze impact of larger project). See all NRDC v. Morton 458 F.2d 827, 833-34 (D.C. Cir. 1972) (Department of Interior must consider impacts of alternatives only Congress and President have authority to implement); National Wildlife Federal v. Marsh F. Supp. 985, 990-991 (D.D.C. 1983) (Department of Army considers 19 alternative sites for facility for which applicant had identified its preferred location). Failure to evaluate reasonable alternatives merely because they cannot be directly implemented by the lead agency or the applicant squarely contradicts the goals of the Act. At least one other circuit has concurred with this view is a decision that directly involved the Corps. See Van Abbema v. Fornell, 807 F.2d 633, 638 (7th Cir. 1986) (Army Corps of Engineers must explore fully alternatives beyond its jurisdiction in evaluating Clean Water Act Sec. 404 permit). In the next five years, decisions will be made by the Corps of Engineers that will either ensure the destruction of the nation's great river or will instead begin to reverse more than a century of short-sighted ecological decline. As currently designed, the Upper Mississippi-Illinois Waterway Navigation Study will fail to balance the needs of ecology and commerce. Rather than attempt to measure the consequences of ongoing operation and maintenance of the lock and dam system, the Corps has instead designed a study that is a self-fulfilling prophecy.
25	The Wetlands Initiative	12/15/94	WET	After a delay in obtaining the data necessary to evaluate the initial fifteen sites selected in Phase I of our Mississippi River Wetland Restoration Project, we have now reduced the number of sites to six. The sites, selected for Phase III of our study, provide an exciting opportunity to demonstrate the potential to reduce flood damages by restoring wetlands in the Upper Mississippi River Basin. The six sites, and the process we used to evaluate and rank them, are described in the enclosed report. We are impressed by the number of restoration projects that are going on in the region, especially along the Missouri and Iowa rivers, and in the Minnesota River basin. Unfortunately, most of them will not significantly reduce flood damages, either because they already flood on a regular basis or they are not located near a flood damage area. There is great potential for wetlands restoration along other rivers that warrant additional consideration, but our time and budget do not allow us to pursue these projects now.
			CORP	We especially want to acknowledge the staffs of the state and regional offices of the U.S. Fish and Wildlife Service and the state offices of the U.S. Soil Conservation Service for their help in identifying potential restoration projects and obtaining information on the projects located in their states. We also want to thank the Rock Island District of the Corps of Engineers for providing access to their GIS data base on levees and levee breaks in the basin during the 1993 flood, which aided our evaluation.

ID	FROM	DATE	CODE	COMMENT OR QUESTION
26	Brunswick, MO	01/13/95	NAV	Please accept this letter as an indication of my support for flood control and navigation requirements for the Missouri River. If this were a ballot, it is intended to be cast for the human race composed of tax payers instead of the pallid sturgeon.
27	Brunswick, MO	01/20/95	AGR	I suppose I am wasting my time pleading with you to please give the land owners some consideration. Not so long ago I was offered $2500.00 an acre for my farm. Also I was asked just to name my price a few weeks before the '93 flood. Does this sound like a farm to be put in wetland? This farm has been in my family four generations and I couldn't part with it. Due to the levee you put across my farm, leaving so much of it on the outside of the levee, taking my pecan trees, destroying part of the irrigation system (the government said our city had to have for their lagoon disposal) my farm has declined in value. So much of this was uncalled for except you want to make good farms into wetlands for wild life and fish. Please give all this some thought! What about the farms that furnished your food?
28	Dalton, MO	01/23/95	AGR	Haste makes waste!" Please don't inundate this richest farming soil of the Missouri Valley on a whim. Agriculture is not only the livelihood of our farmers and the many, many others who work and depend on ag products it is the one thing there is no more of on this earth – LAND! Turning this productive farmland into possible tourist attractions, or making it into a fish and wildlife area doesn't make sense. Please consider: AGRICULTURE STILL IS THE BACKBONE OF OUR COUNTRY!

June Comment Spreadsheets


INTERESTS EXPRESSED IN JUNE MEETINGS
(34.1%) Agriculture
(2.3%) Planning
(1.5%) Mental Health
(2.3%) State Gov't
(3.0%) Private Interest Group
(4.5%) County Gov't
(4.5%) City Gov't
(6.1%) Other
(4.5%) Other Industry
(6.1%) Regional/Local Gov't
(7.6%) Environmental Interests
(23.5%) Self

US Army Corps
of Engineers

June 94

FLOODPLAIN MANAGEMENT ASSESSMENT OF THE UPPER MISSISSIPPI AND LOWER MISSOURI RIVER, AND THEIR TRIBUTARIES - COMMENT SHEET

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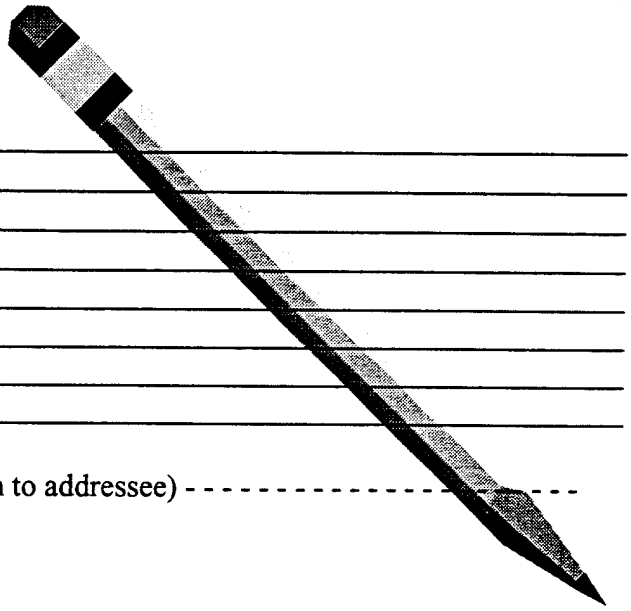

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Please check the appropriate category below.

I represent:

____ Agriculture	____ Federal Government	____ Regional/Local Planning
____ Other Business/Industry	____ State Government	____ Self
____ Environmental Interests	____ County Government	____ Other (specify) _____
____ Private Interest Group	____ City Government	

____ I wish to be included in the offical mailing list for future informational publications

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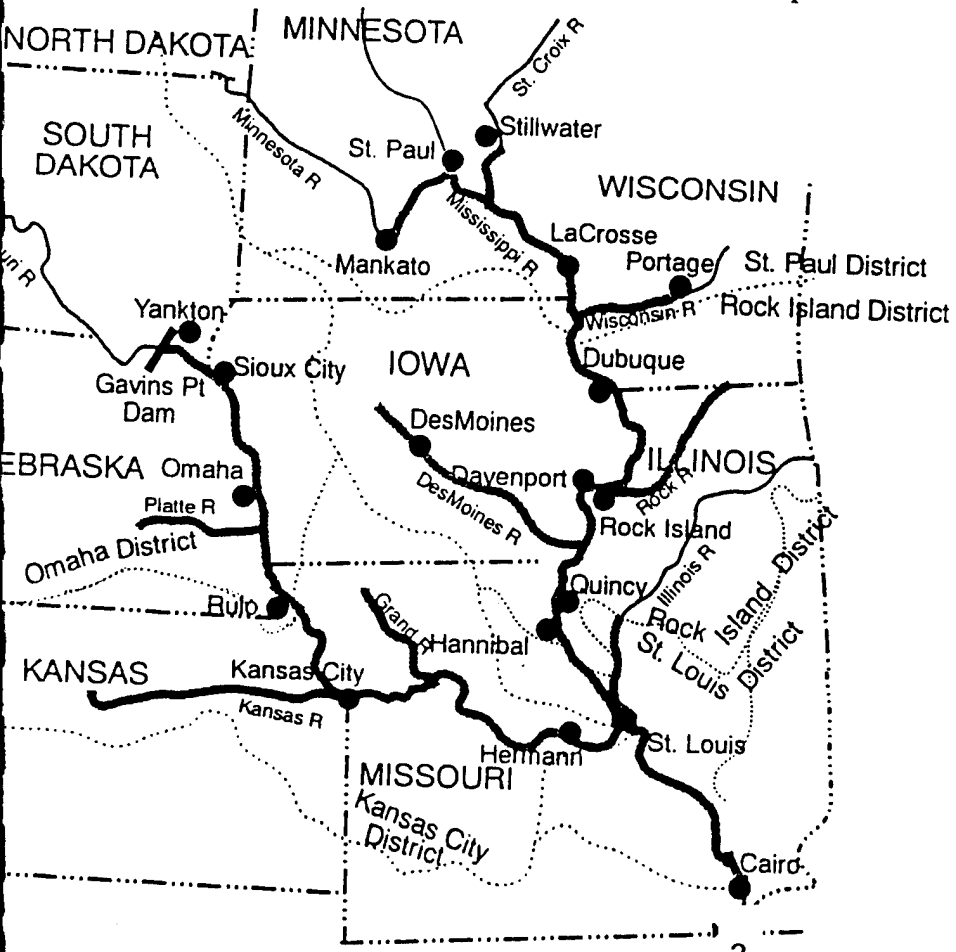

FLOOD PLAIN MANAGEMENT ANALYSIS
COMMENTS AND QUESTIONS RECEIVED FROM JUNE MEETINGS

ID	CITY, STATE	INTEREST	CODE	COMMENT OR QUESTION
1	Fults, Illinois	Agriculture		I lived and farmed in this area for all my life, I am 68 years old. I raised a family of 4 boys putting them through college. We farm approximately 1200 acres in this vicinity. I own 400 acres. Maintaining all of this by proper farming methods. I do not wish to see this destroyed by some silly ideas. I experienced 4 flood years. We are back in full operation since the 1993 flood. Keep our levees in good condition and we'll take it from there.
2	Kansas City, Missouri	Agriculture		The Corps of Engineers and any other planning group must be very careful when flood plain management is being considered. Not only should wild life be preserved and encouraged but also our farmers. The very best and most fertile land is in the bottoms with the most flooding being produced there. At the present time, we have surplus but we must think of the future. The farmer must not be short-changed in this plan. Please let him be heard! Without proper flood control, all will be lost.
3	Hartsburg, Missouri	Agriculture		Nearly everything that is being discussed at our meetings are directly affecting the farmer, yet there is no farmer of farm organization that has had a chance to protect their interests. You're affecting the lives of a lot of people yet your ideas are so slanted toward fish and wildlife it makes me wonder who has priority, fish or people! The Corps has made a lot of progress by channeling the river. Now you're heading back to the "horse & buggy days" when you had sandbars in the middle of the river and this is all happening because we've had a 1 in 500 years flood. I think the whole thing is stupid!
4	Kansas City, Missouri	Agriculture		The corps should weigh the economic impacts to people (i.e. crops, homes, etc.) more heavily than the environmentalists and recreation groups. Raising the MO river level 4 ft. would cause billions of dollars lost in the economy. Response and coordination is very important. I've had an application in for 1.5 years without any conclusions (A 404 permit to create a drainage ditch to the MO river). Too much bureaucracy will limit effectiveness and cost too much to the taxpayers. Keep repairs and rebuilding to local contractors who can be held accountable.
5	Hermann, Missouri	Agriculture, Other Industry, Env. Interests		There needs to be some reservoirs or holding areas built on rivers empting in the Missouri. With more and more land put under concrete, we need to slow the run-off down, and at the same time save water and silt, also the MO River banks are filling. Since 1973, the bank on the north side of the river at Hermann has gone up 8 ft.. Also trail dikes that go completely across river need to be looked into. Also the dikes we feel need to be ran at slant, so as the river has a wider channel. River channel needs more width. I think Corps could make a deeper and wider channel.
6	Columbia, Missouri	Agriculture, Mental Health		My clients say put levees back to pre-flood levels. Then decide what needs to be done. People and property are at risk. Question asked most often: Is it fair not to return levees to pre-flood status? Earthquake and hurricane victims are not relocated!! Please send me a copy of environmental working groups report. Thanks!
7	Columbia, Missouri	Agriculture, Mental Health		Please send me a copy of Draft Economic Work Groups Report. It would be very helpful for my constituency to review. Thanks!
8	Red Bud, Illinois	Agriculture, Self		I grew up on a farm in the flood plain near Fulto, IL, and presently work for an agricultural supply and grain marketing Co-op. The lives and livelihoods of many tax-paying farmers and the people they do business with (the Co-op I work for, other ag suppliers, their employees, schools, churches, etc.) are impacted by continued use of this area, which hasn't flooded since before the present levee system was built in the early 1950's. Drastic measures such as reducing protection, which some are advocating, might serve a specific purpose of theirs, but would adversely affect food production, the economy and employment in the area, and the diverse wildlife already inhabiting the area. The risks of using this protected area have historically been far lower than the hurricane-prone gulf coast or the earthquake/fire area of California, yet these places remain heavily populated. Adequate protection for the bottoms in Monroe and Randolph County, Illinois and other areas like this, such as the McBride, Missouri bottom, to name just one, certainly seems to me to be a good long-term investment. Thanks you for consideration of my comments.
9	St. Peters, Missouri	Other Industry		I am concerned that the Environmental Work Groups is only focused on preserving flora and fauna and not about other infrastructure that can impact the environment tremendously if not protected from regular flooding.
10	Waterloo, Illinois	Agriculture		The 1 to 4 session was very productive as everyone was able to hear questions and the answers given. The 6 to 8 session had everyone standing around in individual groups and most people left because no one had any idea what was going on. Seems they had too many hard to answer questions.
11	Fults, Illinois	Agriculture, Self		We don't want to be made into a wetland. We don't need so much studying, what we need is our levee repaired and not so many agencies telling us how to take care of our lives. There has been people living in the river bottoms for centuries. Our own homestead has almost been in the family for 200 years. There was a study started in 1986 that

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				cost 8 million dollars to repair our levee that was cost effective. If the 8 million dollars had been used to repair the levee it would have been a lot less costly than the flood damage. This would have been for a 100 year levee.
12	Red Bud, Illinois	St. Gov't, Planning		The Pat District manages extensive resources within wetlands along the Kaskaskia Navigation Project.
13	Belleville, Illinois	Self		Any plans developed for groundwater control should use voluntary Best Management practices and given adequate time to work. These practices take time to show results. Product removal should be a "last resort measure" used only in extreme cases. The cost/benefit analysis should be applied to this problem at an early date in the study. A method for challenging the findings should be readily and inexpensively available to all parties. While protecting our groundwater is of utmost importance to all of us as rural residents. This must be tempered by good common sense and moderated to something that can be documented and pose a real (not imaginary) threat to public safety and health.
14	Valmeyer, Illinois	Agriculture		The flood of '93 probably was a hard lesson on the power of Mother Nature. Building reservoirs north of St. Louis would greatly reduce the possibility of this disaster ever happening in the future. The emotional, physical and financial hardship that this has caused far outweigh any environmental concerns. With open minds, the result could be a WIN/WIN situation for both the taxpayers and the residents.
15	Fults, Illinois	Self		The Mississippi River's main focus should continue to be barge traffic and the use of the flood plains should continue to be for agriculture and related purposes. The levee system should be upgraded and all levees should be brought under the Corps' jurisdiction, so that the upper Mississippi has one continuous integrated levee system like that in place on the Miss. south of Cairo. Flood runoff management needs to begin in the uplands. By the time the water reaches the river bottoms, it is too late to effectively manage the volume. The rivers and flood plains midwest are too valuable to be left unused. The present uses work and should not be discontinued because of an occasional flood.
16	Waterloo, Illinois	County Gov't		I believe the upper Mississippi basin should continue to be used for agriculture and residences. The principal focus of the river itself should remain navigation. The river and its bottom lands are too valuable a resource to be left unused or used for recreation only. It is my understanding based of FEMA data that 50% of the damages paid out during the flood of "93" were for upland crop damages caused by the heavy rains. To use inflated figures to justify changes in the use of our river resources does not help anyone. I firmly feel, based on our county's experience in the 93 flood, that what needs reviewing is not our nation's use of the flood plains and rivers. Rather, we need to concentrate on reviewing our response to the occasional flooding which occurs.
17	Sparta, Illinois	Agriculture		I don't think that we can afford to think of abandoning our levee system and all its benefits to our people and our economic system. The loss of business tax moneys people and business would be devastation to our community.
18	Kirkwood, Missouri	Env. Interests		The St. Louis Audubon Society advocates a greater reliance on non-structure techniques of flood plains management, including buy-outs and restoration of open spaces and wet lands. Non-agricultural development on flood plains should be restricted. A single federal agency should have responsibility for coordinating all aspects of river management and for the preparation of a plan for restoring the Missouri and Mississippi River ecosystems. The coordinating agency should seek the cooperation of non-governmental organizations in preparing the restoration plan.
19	Columbia, Illinois	Agriculture, Env. Interests		This study is being done because of one (1) five-hundred year flood. At one time several thousand years ago, the river was bluff to bluff but there were less people too. If the levees are taken away, the rivers will flood the earth, maybe every year, maybe every ten years killing everything. If the levees are built and maintained at _____ a two foot freeboards, homes, animals, plants, railroads, highways, will be protected. A closer cooperation between the Corps of Engineers and local levee districts is a must.
20	Washington, Missouri	Agriculture, Private Property		Wetlands are a waste of government money which will come from hardworking citizens anyway. Only the working class will suffer the consequences. The government now already has too much land under control and the individual is just being pushed out. Such things as private property and easements mean absolutely nothing. I've had private property and easements taken by government through the Katy Bike Trail. To have private property and easements are not even worth the paper they are written on. A 500 year flood does not make it grounds for wetlands. That is not even common sense. The only one that make this to their own good is big business and money, not poor people and farmers or private property owners. Private property should be a #1 issue. This country is getting worse and harder to live in just because of too many rules and regulations. Farmers need protections and not being forced out of business. Things would look very different if the big money men could not buy food even if they had money.
21	Waterloo, Missouri	Agriculture		Our farm partnership feels strongly that farmland in the Monroe County bottoms area should be protected as it was prior to the 1993 flood. Our farm has been in our family for many years and has provided income and jobs. Our farm, though small in acres, is very fertile and produced outstanding yields. We would like to urge the government to return the levees to their pre-flood height.

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22	Perryville, Missouri	Agriculture, County Gov't		Levee systems should be left in tact and should be raised to provide extra protection from excessive run-off. Because of the fast run-off from concrete and new drainage systems and more and more hard surfaces such as asphalt and concrete being _____ each year. The whole picture needs to be looked at instead of saying river level's high because of levees. In 1993 quite a number of levee systems had failed leaving river from bluff to bluff and the water levels keep going higher. Levee's could be raised by dredging the rivers out and putting dredge material on land side of levee.
23	Festus, Missouri	Private Int. Group, City Gov't		Am including recommendations and local problems as sources of those recommendations. This was presented at the workshop held jointly by the Kansas City and St. Louis Corps of Engineers at St. Peters, MO on June 27, 1994. Please keep me informed (if you can) on the final report. 1. That area at the confluence of the Missouri and Mississippi rivers south to Cairo, Ill., has not been protected (on the Missouri side) as the vast area of the upper basin has grown. That area has not been accorded the attention due with regard to increasing run-off. 2. States and local governments should be required to adopt federal guidelines for building or re-building roads in flood plains. 3. Consider future problems resulting from expected growth. EX: added traffic problems resulting from interstate highways built or expanded through urban flood-prone areas. 4. Serious and specific analysis should be given to "social disruption" and endangerment to a community on a par at least equal to economic and environmental standards. Apply a monetary formula to be used in the BCR for imminent danger, health, and well-being of the citizens to be protected. 5. A comparable cost-effective study be made to raise roads and remove structures from the flood plain when considering structural or non-structural solutions. 6. Adopt a format/formula to address the economic loss when businesses are closed because of limited or no access when flooding occurs. 7. Emphasis should be placed on the entire "region" affected by flooding even though an appropriation is designated for the core city. 8. A study showing what effect any levee downstream and across from a project site may have. Any adverse effects should be included with a mitigation factor in the BCR. 9. Adopt a formula that puts both positive and negative environmental effects into monetary terms to create a usable guideline the corps can apply to the justification of a project. 10. Those areas that are unique in their flooding problems must have a recourse to pursue their solutions and not be denied by silly policies that do not reflect the reality of the situation. SOURCES OF RECOMMENDATIONS: Festus and Crystal City, is currently involved in the fourth congressionally authorized study of the flooding problems in our area. (1957, 1981, 1991, and 1993) According to the HISTORICAL ATLAS OF MISSOURI (Milton D. Rafferty, University of Oklahoma Press: Norman) the western border of the Mississippi river from St. Louis to Cape Firardeau was settled before any other area of the state (1). The Lewis and Clark Expedition of 1806 began the westward expansion. We have received protection from those flood control reservoirs above us, but have also received the brunt of all the runoff as the 700,000 sq. mile Upper Basin became urbanized. Every acre turned into farmlands and communities has affected us. (See recommendation #1) Highway 61-67 was built with Federal funds in the 1930s. It was built in the flood plain along an old existing route that followed the path of the river as were many other highways in the Basin. As with any new highway it encouraged growth and development. (Witness the latest addition of a Super Center Wal-Mart) It is the designated Business Route for our community. Both cities adopted FEMA guidelines for controlled development in the flood plain area in the early 1970s. We recommend that states be required to adopt FEMA guidelines for building highways in the flood plains. A portion of Highway 61-67 that flooded in 1993 was rebuilt since FEMA guidelines were instituted for structures. State Highway A was built in the last ten years and also flooded last year. Both of these routes were crucial for traffic flow. (See recommendation #2) When six out of eight of our north/south arteries are flooded we are virtually shut off from medical services. (Our hospital and doctors' offices are to the south of both communities). Police, fire, and ambulance service is severely restricted when our streets flood. Being a bedroom community in the Metro-St. Louis area deems access to I-55 to six lanes through our community and will increase the local lanes through our community and will increase the local population considerably. As in the 1930s the Federal government will again promote growth, creating an increase in local traffic, which has become life-threatening during floods. (See recommendation #3) In the past studies we have been repeatedly turned down because there is "no economic justification although a severe flooding problem does exist". (Col. James E. Corbin, USACE Study, 1991.) The 1991 study (pg. 6) states: The specific Plattin Creek planning objectives are: Determine if there exists any economically feasible plan for reducing the economic, environmental and social disruption caused by flooding in the Plattin Creek Basin. We recommend serious and specific analysis be given to "social disruption" on a par equal to economic and environmental objectives. (See recommendation #4) As we studied past reports we realized that in following the Water Resources Council's ECONOMIC AND ENVIRONMENTAL PRINCIPALS AND GUIDELINES FOR WATER AND RELATED LAND RESOURCES IMPLEMENTATION STUDIES, the Corps of Engineers are

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				unable to justify a project here because there is: No monetary amount applied in the benefit-cost ratio for the imminent danger, health, and well-being of our citizens. (Our cities' sewage treatment plant was shut down for almost five months) Also: (See comments from our police and fire departments and our local ambulance district.) No comparable cost-effective study to raise roads and remove structures from the flood plain. (Moving the city of Valmeyer is being used as a nationwide example of moving people out of flood plains, but we have seen no cost-effective study to determine the cost of protecting that community with alternative structural solutions.) If moving people out of flood plains is to be the primary solution adopted by the Federal government as a "common sense, cost-effective solution", then all guidelines should apply equally to everyone. Are we to assume that we would have to settle for moving our entire community or be left to continual flooding as the only two alternatives we have? (See recommendation #5). No format to address the economic loss when businesses are closed because of limited or no access when flooding occurs. (A survey of our local businesses showed that 50% to 80% of their customers come from somewhere other than Festus or Crystal City. We have become a goods and service (especially medical services) hub for approximately 55,000 people. (Map 2) (See recommendation #6) Note: At the I-55 ramp in the middle of Festus, travelers exit to three major motels, ten restaurants, three services stations, two banks, and one supermarket. A five screen cinema is being erected now in the same area on Highway A. This intersection is the only access south for our community when we are in flood. (At less than 10 year flood probability). We feel there is a Catch 22 situation in being told any benefits included in a BCR for project justification must be of "National Economic Interest" and economic loss to our local businesses cannot be included. And in the aftermath of a flood the Small Business Administration comes to offer assistance because, evidently, we are of some interest to the national economy. Either we are, or we aren't! The last study (1991) begins with a survey of water damage to both residential and business structures within the confines of the Festus/Crystal City limits and ends with "being unable to include local and regional benefits we find this project economically unjustified." Why do a survey of "local and regional" damages if those damages can't be counted in the final analysis? (See rec. #7) To determine a benefit-cost ratio of a project, the Federal government should adopt a formula that puts both positive and negative environmental effects into monetary terms to create a usable guideline the Corps can apply to the justification of a project. The only reference made to "regional" studies is in the environmental impact statement. Being a goods and services hub we MUST be looked at as a region. A study should be done showing the effects levees downstream and across from us have on our area. Any adverse effects should be included with a mitigation factor in the BCR. (See rec. #8) There is a question whether we are flooding more often and at higher stages than previously thought. The Meramac River, Joachim, and Plattin Creeks, uncontrolled by reservoirs, add large amounts of water to our stages. Past studies have relied on St. Louis levels to determine our flood frequency and a more detailed analysis should be done. We are the largest community on the Mississippi River north (with the exception of Davenport, Iowa) without flood protection. We do not want to be left out of any decisions made with regard to a re-evaluation of the Upper Mississippi River Basin. We feel we are unique in location being south of St. Louis. Past proposals by the Corps were for an earthen levee 1.3 miles inland, away from the high-energy flow of the river, to protect us from backwater created when the Plattin Creek cannot enter the Mississippi River. The environmental statement of the last study emphasized enhancement of a wetland/deepwater complex within the area between the proposed levee and the Mississippi River. (See Rec. #9) Our generation, our children's and grand-children's generations should not be permanently penalized because our forefathers did not create an Upper Mississippi River Basin unified system as they did in the, evidently, very successful Lower Basin to protect the older communities along the rivers. Neither should we be penalized by having to follow the strict and stringent policies adopted in the 1980s that seem to be formulated to find any structural solutions unjustified. A major portion of the "patchwork" flood protection system in the Upper Basin was achieved by the "squeaky wheel" process. This is not to say they were not needed. It does seem that there should be equal protection for us as a vibrant growing community because of the effect flooding has had upon us (just as they were protected in the Lower Basin) rather than how loud our "wheel" squeaks. There should always be an allowance made for those flooding situations that do not fit into any category, but are unique in their problems. We recommend changes be made in Congress to allow these exceptions and, yet, maintain controls to avoid "flood pork". We should not be denied flood protection by silly policies that do not reflect the reality of the danger to our community every time our roads are flooded. (See Rec. #10)
24	BonneTerre, Missouri	City Gov't		
25	Rushville, Missouri	Agriculture		
26	University City, Missouri	Self		Although I am an attorney working for St. Charles County, MO, I write on my own behalf and express views that are my own, not those of the county or its policy-making officials. It is imperative that the Flood Insurance

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				Program be revised to discourage rather than encourage development on flood plains--for fiscal as well as environmental reasons. (The same goes for leasing out Army Corps land.) With respect to levees and wetland restoration, I hope the assessment will model the impact of wetland restoration upstream or flooding downstream--generally to treat the rivers and plains as a large hydraulic system. Force (re)construction should not proceed without such studies. Finally, I am not adverse to special provisions allowing agricultural use of rich cotton lands, but with attention to non-point source pollution.
27	Grafton, Illinois	Self		Import of the Nutwood levee, and the effects of levees above and below Grafton, on the water level during floods at Grafton, Hardin, Ebsah. Also need Copy of Galloway Report.
28	Bethalto, Illinois	Env. Interests		I would like a copy of the Galloway report. I favor return of often flooded agricultural land to their natural state. I think levees are part of the problem not the solution. Most urban levees should not be rebuilt or enlarged.
29	Barnhart, Missouri	Self		Levees in Illinois south of St. Louis along the Mississippi River have contributed to severe flooding accompanied by tragic suffering and financial losses to the victims on the Missouri side. During the flood of '93, our friends on the Illinois side suffered frightful losses and the area suffered ecological disaster. I hope that past mistakes will not be repeated by attempting to _____. _____ should be treated fairly through _____ measures, but the government should, in an effort to _____ following a policy already demonstrated to be futile, waste, _____ and impose further tragedy upon its citizens.
30	Pevely, Missouri	Self		I think they are very unsightly sight, they such make them better looking and we'll never mind they such! They cost to much money to build there a waste of time if someone want to live in a flood zone screw them. It's their fault they moved next to them not mine. So move the dumb things.
31	Barnhart, Missouri	Agriculture, Self		I would like to see the levees gone. Let the rivers run their natural courses, without being bottled up. I as a taxpayer am tired of buying people out time and again because they are too stupid to realize that the river is at their back doors when they buy. It amazes me to think that you people need our comments when you have engineers being paid to tell you the levees need to go. My tax dollars, I am sure, are going for these forms and their processing! Why pay engineers, wildlife specialists and the like when you can ask the public and do it cheaper. Use your heads instead of my wallet!
32	Fieldon, Illinois	Agriculture, Project Recovery		1. Dredging the rivers and using the material to elevate and strengthen the levees would be of great benefit. 2. The levied areas are taxed as prime property, the counties would lose a huge revenue without this property being within a levee system. 3. Our levee was built in 1910. It has worked for 83 years, with only one failure in 1993. Excellent average. 4. Sail conditions were excellent in over-flow areas where there was not a sediment of sand. Sail was extremely mellow and crops went in with minimum till-no apparent surface compaction. 5. This is not from personal experience, but there were many comments regarding the personnel sent out by Corps not being knowledgeable about a situation this serious. Many contradictory statements, by Corps personnel, were made adding to the confusion. Corps representatives need to be better informed and trained. In working with Project Recovery, the outreach workers, FEMA employees, etc. would like to see the inequities addressed for future disasters. It appeared that carelessness and extravagance were rewarded. The responsible, hard-working people were penalized in regard to the grants, etc.
33	Fieldon, Illinois	Agriculture		The Illinois River has changed. There's more sediment in the river which has reduced its capacity.
34	Godfrey, Illinois			1. Hartwell levee repair. 2. Greene County ordinance regulation development in special flood hazard areas, provides for permits and variances, FEMA had no permits or variances. Why not? Upper Mississippi River committee- fit into overseeing picture? FEMA jurisdiction? When and how long?
35	LaCrosse, Wisconsin	Self		Existing flood control structures did not prevent severe damage during the flood of '93, and we are opposed to increasing structural control in the hope of avoiding a repeat of such a catastrophe. Wetlands along the Mississippi need to be restored, farming discouraged and building prohibited. If possible, individuals and communities should be paid to move out of the flood plain, leaving it for water storage in times of floods.
36	Eau Claire, Wisconsin	Env. Interests		The studies proposed seem to be very desirable and address some of the major issues. It is encouraging to see the Corps take this extensive introspection and I appreciate it. Some specific concerns: Integration and coordination of existing structures on the river itself and tributaries: To what extent is it possible to coordinate the structures now functioning on tributary systems and operated mainly for power and recreation impoundment use to mitigate peak discharges during floods or potential flood periods? I.E. timing discharges to prevent all release from peaking at critical areas at the same time? Do all of the agencies and other entities involved, state DNR, FERC, etc. have a communications net capable of coordinated action? Prevention of runoff from agricultural and urban areas. What ag practices can best prevent major fluctuations in surface waters in the basin? While wetlands may fill and in periods of unusual rain may not actually reduce the volume of water (although this is not firmly established), is there

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				a role for wetlands and filter strips in regulating the intensity of flow regardless of unusual rain patterns? Can current storm water runoff practices in urban areas be changed to significantly lower their impact on flooding-settling basins, diversion of rain gutter outflows from driveways, streets, to vegetated areas? Can for flood plains? Can the natural deposit of nutrient rich sediment now excluded by levees actually benefit agriculture rather than current situation of concentrating such sediments in existing backwaters of natural areas and wildlife refuges where they contribute to and accelerate eutrophication? Navigation Issues: This is another area probably best addressed in another major Corps study where environmental groups have some interest and major concerns too complex to detail here. Effect of recreational use of river on flooding. What is effect of channeling the river and tributaries for providing stable channels deep enough for larger and larger recreational traffic (mainly on tributaries) with such practices as wing dams and rip raping shore lines. Everyone wants the rivers to go where they want rather than where flood plain rivers naturally go. Isn't a major flood one of the river's answer to this constraint? To what extent does use of large and fast recreational boats on flooded backwaters not normally open to recreation contribute to major erosion, destruction of levees, etc.? Industrial and development along the river. Many of the major issues here seem to addressed in the study from a point of view of economic loss during flooding. Is there another perspective from the point of view of effect of construction on flooding, since both types of development seem to depend on set channels which are often created by techniques that contribute to flooding. (I realize this is debatable but from my point of view it is pretty firmly established) Are there some industries that are river dependent and need to be located along the river? Can these sites be chosen for least impact? Can industrial construction move back a little and give the river a little room to be a river.
37	Minneapolis, Minnesota	Private Int. Group		The project should clearly identify areas of repetitive flood damage, using flood insurance and crop insurance claims.
38	LaCrosse, Wisconsin	Env. Interests, Self		The slide presentation at LaCrosse did not clarify that the locks/dams on the Upper Mississippi are not intended to control flooding, but seemed to assume COE is currently embarked on restraint of flooding in any exigency. As a taxpayer, I resist continued security for flood plain development by anyone, then calling on COE and ME to bail them out (Pammel Creek, LaCrosse). Please tell me what it means: item #3 under general objectives: "how the array of land and water resources could be used to provide varying outputs from alternative uses of flood plain resources." Good grief! The resource of flood plain is to refrain from using it if at all possible, and leave it for flood water storage and wildlife.
39	Madison, Wisconsin	Env. Interests		Seem to be a good beginning.
40	LaCrosse, Wisconsin	City Gov't		
41	Hull, Illinois	Agriculture, Other Industry, Self		I believe the levees in the Sny Island Levee Drainage District (110,000 acres) located in Adams, Pikes and _____ counties of Illinois need to be raised and maintained to at least the subjected 500 year flood level. The Drainage District had never been flooded until 1993 when the northern portion of the District consisting of 44,000 acres and the town of Hull, Ill, were flooded. The water level at the _____ of the levee break has been calculated to have been at or above the 500 year level. With the relatively simple construction of a higher levee, we can prevent another flood for 5 centuries! I believe the economic study of this area will also show that Pike County, Ill _____ the income and taxes from this 100,000 acres, not another government level acre to maintain.
42	Ames, Iowa	State Gov't		The Corps' Flood plain Management Assessment should include discussion on the impacts of flooding on highways. Questions to be addresses: 1. Is the bridge too small and road grade too high thus creating excess backwater and significant economic damage upstream. Also, when the road grade is too high, the flood has no "relief valve" for extreme events (e.g. Q500) which could result in increased velocities and scour through the bridge opening. 2. Is the road too low forcing frequent over-topping and road closure, thus impacting emergency vehicle needs and the transportation of goods, and also increasing safety problems for vehicles (e.g. people driving through flooded roads and being injured or killed). Issues involved: Importance of highway--traffic count, National Highway System status, emergency vehicle route, proximity to other high level highways for detours. Costs of building higher road grades and longer bridges. Costs of repairing damaged roadways and bridges. Roadway damage is generally from over-topping. Bridge damage results from several problems: Channel meandering, high velocities causing scour of berm erosion, very high road grade which eliminates "relief valve" for extreme flooding, bridge too small even for a "typical" flood such as Q50, bridge experiences a large flood, such as Q500, that is well beyond the design discharge. Economic impacts of bridge backwater. Impacts to raising road grades, especially in urban areas . Safety to traveling public. In Iowa, FEMA/NFIP and Iowa Department of Natural Resources (IDNR) already have regulations/criteria that adequately cover many of our bridges. The Iowa Department of Transportation is opposed to any additional regulations or restrictions on hydraulic design criteria. Since each location has unique problems and potential solutions, we prefer to continue our practice of analyzing bridges and highways on a site-by-site basis

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				while also following existing FEMA/NFIP and IDNR regulations.
43	New Cawton, Illinois	Agriculture, Self		The levees along the upper Mississippi must be raised to protect the homes, farmland, highways, railroads, trees, and wildlife, on the land side of the levee. The higher levees would also protect the barge traffic so vital to the inland welfare of our country. We should not bow to special interest groups; our country was built on freedoms, not laws and regulations. A 500 year levee is a must to keep the inland of our country working and prospering.
44	Quincy, Illinois	Agriculture Land		I have lived in the Indian Grave Drainage District for 55 years. I have cleaned up after the flood of 1965 and now 1993. The 1993 flood was bad because all crops were planted and expenses in putting 300 acres of crops in was a big loss. Storms destroyed over 90% of the buildings in our area. A 32 ft. levee would have solved all these losses in 1993. The money spent on fighting the 1993 flood and cleanup would have easily paid for a 35 ft. levee in our district. The buildings, trees, crops, money are gone. The people are back to farm the land and produce food for the world's population. My recommendation is for higher levees to prevent this from happening again in the near future. The 11.5 reading at Quincy which is maintained at the dam at Quincy Keeps 4000 acres plus 3 roads under water in this 17000 acre district. The 9 ft reading in 1960 allowed the district to drain in a few days. This man-made decisions kept water in our district for 2 extra months. The water had to be pumped instead of gravity drained. This hold water on land is taking up property without compensation by the Corps of Engineers for Navigation's benefit.
45	Iowa City, Iowa	Self		As presented this "Flood plain Management Assessment" completely ignores the impact dam management policies on the flood plain, and is therefore incomplete. (Indeed the map logo on the reverse of this sheet omits the Iowa River, which has one of the major dams in the regions.) One element of dam management that is most in need of updating is crest control trigger levels. For example, the Coralville dam regulation calls for emergency flow reductions when the Burlington stage reaches 18 ft. Corps data show no levee districts are endangered at this level. Burlington waterfront residents indicate that only a parking lot is flooded at this level. Raising the trigger level to 19 or 20 ft. would have no negative impact on the Mississippi, while saving the Coralville reservoir from being filled unnecessarily, thereby lowering flood risk along the Iowa River.
46	Des Moines, Iowa	Other Industry		Please consider projects currently underway which will impact the flooding in the future. The Walnut Creek levee will minimize damage to West Des Moines in the event of another flood such as 1993 but will result in additional risk of loss on the Des Moines' side. Please see attached documentation and letters addressed to the Army Corps of Engineers. Roger Less, COE, Rock Island District. West Des Moines, Des Moines, Iowa, Walnut Creek Levee. The IMT Insurance Company has concerns regarding the impact of the proposed flood control levee on the flood levels across our property. We hired Veenstra & Kimm, Inc. to provide consulting engineering services for our firm. Their investigation showed that while the proposed levee will raise the flood levels less than a foot during the 100 year flood, the nominal increase will cause flooding of our building which presently is protected from the 100 year flood. Our building is vulnerable along the south exposure where the threshold elevation at which floodwater would gain entry to our building is elevation 818.15. The current 100 year flood elevation at this location is 817.6, but will increase to elevation 818.4 due to the proposed flood control levee. Once floodwater levels exceed the threshold elevation of 818.15, the floodwater will have direct access to our buildings lower floor through a loading ramp and walk out patio area. Our building's lower flood elevation is 814.29 and contains our computer center. If the computer center floods, our damage exposure is in the range of $2 to $3 million in equipment and files. IMT Insurance Company is requesting your prompt review of our consultants' correspondence and consideration for a grant of reimbursement of our expenses to minimize flood damage to our building and contents. From our perspective, the Corps of Engineers needs to address the IMT Insurance Company flood threat and mitigate the damage potential attributable to the flood levee project. Our consultant has recommended several improvements including a flood wall alternative along the southern exposure of our building. Please contact Mr. Mick Briedis, our consulting engineer at 515-225-8000 with any questions or feel free to contact me. Sincerely, George Nagla, Building Supervisor, Extension 207, IMT Insurance Company. Mr. George Nagla, Building Supervisor, IMT Insurance Company. Dear Mr. Nagla: This is in response to your letter to Mr. Roger Less regarding the flood protection project along Walnut Creek in the city of Des Moines. A review of your consultants' correspondence by our technical engineering staff determined that the information contained therein was consistent with that of the Design Memorandum for the project. Construction of the project will raise the 100 year water surface profile .8 foot over present conditions at your location. You also requested consideration for a grant or reimbursement of expenses to flood proof your building to a level equal to that of the Walnut Creek project including freeboard. For water resource projects developed in Iowa, state flood plain regulations do not require any mitigating action in adjacent areas unless the project causes over one foot of additional flooding at the 100 year flood. The West Des Moines - Des Moines

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				project was formulated to minimize impacts to unprotected areas and designed not to exceed the one foot standard. Consequently, there are no provisions for the Corps of Engineers nor the city of Des Moines to provide mitigation or payment of damages as a feature of this project. You may wish to contact the city of Des Moines to determine if they might be able to assist you in reducing the risk to your computer center. If you have any questions concerning the flood protection project, please contact the project manager, Mr. Mark Schroeder, at (309) 794-5297. Sincerely, Doyle W. McCully, P.E., Deputy District Engineer for Project Management. IMT Insurance Company. ATTN: Ms. Linda Slycord. STORM WATER CONSULTATION. On January 26, 1994, field surveys were conducted at the IMT Insurance Company to verify what impact, if any, the increased flood elevations from the proposed flood control levee would have on potential flooding of your site. Elevations at key locations were taken and referenced to the City bench mark located on the southeast Bridge Abutment Rail of the Grand Avenue Bridge over Walnut Creek. Our findings are set forth in the following paragraphs. The location where flood waters would first begin to enter your building at 6000 Grand is at the loading dock ramp at the southwest corner of the building. When flooding waters would reach elevation 818.15, the water will begin to flow from the parking lot down the ramp into the loading dock area. The loading dock platform is at elevation 816.31. The lowest level floor elevation is 814.29 and will receive water entering the building at the loading dock. At the present, without the flood levee, the projected water level at the southwest corner of the building during a 100 year flood is 817.6 according to the Iowa Department of Natural Resources. The projected water level for existing conditions is therefore 6.5 inches lower than the elevation at which water would begin flowing into the loading dock. Based on our field surveys, and the flood elevations provided by the Iowa Department of Natural Resources, the IMT building which is presently protected from flooding at the 100 year flood level, will be adversely impacted by the flood control levee. The second location where the building is vulnerable from Walnut Creek flooding is in the south patio area of the building. The parking lot top of curb south of the patio area is between elevation 818.4 and 818.5. Once floodwater over tops the parking lot curb, it has direct access to the old cafeteria patio area and window wall. The impact of the flood control levee project is the loss of the previous .8 foot margin of safety between projected peak flood levels and the top of curb elevation along the patio area. Upon completion of the flood levee, the projected peak flood level will be 818.4 which is equivalent of the top of curb elevation. The third location where the building is vulnerable from Walnut Creek floodings is east of the south patio area at the windows to the computer room. Although the windows are bricked up, the sill area is not designed to be watertight against flood water. The projected future peak flood elevation of 818.4 is only 8 inches below the window sill elevation of 819.06. In our opinion, the IMT building will be adversely impacted by the construction of the Walnut Creek levee. The 100 year design flood will inundate the building with the levee in place. In comparison, the same magnitude of flood under present conditions would not flood the building. The levee freeboard area (levee height above the projected 100 year flood) is intended to provide a factor of safety due to the inability to precisely project flood levels. The levee top will therefore be 3 to 4 feet above the projected 100 year flood level. In the event a flood exceeds the 100 year flood, the broad area which would flood in the West Des Moines side of the levee would act as a "relief valve." With the flood levee in place, floods in excess of the 100 year flood will have a relatively higher rise in the water level on the IMT side of the levee because the levee will not allow West Des Moines to act as a "relief valve." Our recommendation is to increase the level of flood protection to the IMT building to 1 foot above the level of flood protection to the West Des Moines side of the flood control levee. The recommended 1 foot higher protection level is based on the extensive property damage which would occur if the IMT lower building level would flood. Such protection could be provided by the construction of a 4 to 5 foot high flood wall along the perimeter of the south side of the building, with removable planks at the loading dock and rear sidewalk entrance to the building. Because a direct adverse impact can be shown for the 100 year design flood from the Corps of Engineers levee project, IMT should request the City of Des Moines and the Corps of Engineers to mitigate the damage as a part of the overall levee project. IMT should include the damage potential from flooding in the lower building level with a requisition of a review by the Corps of Engineers of their project impact. Should you have any questions of comments regarding this matter, please contact us at 225-8000. VEENSTRA & KIMM, INC. Mikelis Briedis. IMT Insurance Company. ATTN: Ms. Linda Slycord. STORM WATER CONSULTATION. This letter report presents the results of our investigation into the potential for flooding on the IMT Insurance Company properties. Our analysis is based on flood data for the Walnut Creek Basin obtained from Mr. Jeff Simmons of the Iowa Department of Natural Resources, and review of available building plans. In our opinion, the potential exists for flooding up to 4 feet deep in the lower level of the main office complex, and minor flooding in the claims office building during a 100 year. The following paragraphs document in detail the basis of our opinion. IMPACT OF PROPOSED FLOOD LEVEE: The proposed flood control levee along Walnut Creek will cause an increased water

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				level at IMT of approximately 8 to 10 inches above the level which would be experienced during a 100 year recurrence interval flood without the flood control levee. Flood levels referenced to USGS datum at three locations along the IMT property are shown in the following table: 1. 63rd St., Existing Condition –, With flood levee and full flood plain encroachment 821.9. 2. Downstream side of Grand Avenue, Existing Condition 819.1, With flood levee and full flood plain encroachment 819.9. 3. 120 feet downstream of Grand Avenue, Existing Condition 818.5, With flood levee and full flood plain encroachment 819.2. 4. 620 feet downstream of Grand Avenue, Existing Condition 817.6, With flood levee and full flood plain encroachment 818.4. Note: 1986 Flood of Record, measured at 63rd St.: 819.36. The flood levels shown for the flood levee and full flood plain encroachment assume that fill material could be placed in the flood way fringe area along the east side of Walnut Creek as well as construction of the levee on the west side of Walnut Creek. Flood way fringe is the technical term for the area of a flood plain which can be recovered for development purposes without increasing the 100 year flood elevation by more than 1 foot. For example, the IMT claims building is built in the flood way fringe area and causes limited obstruction to the flow of water in Walnut Creek. When the flood levee is built on the west side of Walnut Creek, the constriction of the creek between the flood levee and the IMT claims building should cause water levels to approach the levels in the table shown for flood levee and full flood plain encroachment. The concept of a 100 year flood also needs to be discussed. A 100 year flood may result when approximately 6.7 inches of rain occurs over the Walnut Creek Basin during a 24 hour time period. If the rain occurs when the ground is saturated there is a higher probability of a 100 year flood than if the rain occurs after a prolonged dry spell. The 100 year flood protection level is used as a common level of protection for normal buildings. It should be noted that large dams are designed for what is referred to as the probable maximum precipitation level, which is 26 inches of rain in a 6 hour time period. If the level of protection used by IMT is the 100 year flood level, the question for IMT will not be if the buildings will flood, but when will the buildings flood. It is not uncommon to hear of rainfall amounts over localized areas in Iowa which produce 12 to 15 inches of rainfall. The Corps of Engineers flood levee will extend 4 feet higher than the elevations shown in the table. From a practical standpoint, floods on Walnut Creek at Grand Avenue can be anywhere from elevation 819.9 to 823.9 without flooding the protected side of the levee. Floods will have to exceed elevation 823.9 before the levee would over top and provide relief to the unprotected side of the levee (IMT buildings). CLAIMS OFFICE BUILDING FLOODING POTENTIAL: The Iowa Department of Natural Resources is utilizing the recent flood modeling provided by the Corps of Engineers for determining maximum flood elevations along Walnut Creek. The Corps of Engineers model is more conservative than previous flood modeling which was used to establish building elevations along Walnut Creek. Previous flood modeling established a 100 year flood elevation at the claims office building of 816.5 USGS datum. The Corps of Engineers model has established a 100 year flood elevation at the same location of 819.2, of almost 3 feet higher. When the claims office was constructed, the minimum protection level required was elevation 817.5, or 1 foot above the 100 year flood elevation per the original flood model. The office part of the claims building was actually constructed at elevation 819.64 which is slightly higher than the current 100 year flood level used by the Corps of Engineers. The Corps of Engineers model is based on a flow of 17,000 cubic feet per second (cfs) in Walnut Creek. The previous flood of record occurred on May 10, 1986, and was estimated to have a peak flow rate of 12,500 cfs. The Corps of Engineers flow projections for a 100 year flood is therefore 36% higher than the flood of record. In addition to the peak flow rates used in the flood modeling, the condition of the flood way vegetative growth also impacts flood levels. Flood ways with substantial willow trees and brush will cause much higher flooding than identical flood ways without vegetative growth. Caution should be used in flood protection planning for contingencies which are not accounted for in flood models including obstructions of channels by sand bars and debris and trees blocking bridge openings. Although the claims building office is 5 inches higher than the most current flood model 100 year flood level, in our opinion, the claims building has the potential to experience damaging flooding. As a minimum, important documents should not be stored in the bottom drawers of desks and file drawers. MAIN OFFICE COMPLEX: The main office complex has a ground floor elevation of 814.67, and first floor elevation of 827.34 according to 1958 plans of the building. The ground floor is vulnerable to flooding entering through the south wall of the building where the former cafeteria was located. The elevation in the patio area was shown as 814.4 on a flood certificate signed by Bishop Engineering. An apparent discrepancy exists in the data used by the Corps of Engineers which shows the "First Floor Main Building lower level (rear)" elevation for the IMT office as 816.06. They have apparently missed the significance of the ground flood level of IMT in evaluating flood related impacts of the levee. Topographic maps show the ground elevation along the southwest corner of the building as elevation 817.8 (city datum 44.0). The Corps flood model shows an "Existing Condition" flood elevation of 817.6 at a location 620 feet downstream of Grand Avenue. This flood elevation is approximately the same

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				elevation as the ground immediately south of the IMT patio area. Under the "Existing Condition," the IMT facility is borderline protected based on the Corps of Engineers flood modeling. The flood level increase due to levee construction, while minor (10"), is significant to IMT. By raising the flood level above the ground level adjacent to the patio, entry of flood water into the patio area and walkout ground floor level will occur. IMT should notify the Corps of Engineers that the elevation used by the Corps of Engineers is apparently erroneous. Also notify them that your building which would not flood under pre-levee construction will be exposed to damaging flooding as a result of the levee. The main office complex is also vulnerable to sanitary sewer backups into the building. Manhole covers which become dislodged during flooding conditions and breaks in the sanitary sewer lines can allow flood waters to surcharge the sanitary system to the same level as the Walnut Creek water level. In the case of IMT, the ground floor elevation of 814.67 is lower than flood levels on Walnut Creek which occur quite frequently. The 30 inch sanitary trunk sewer serving IMT is located along the Walnut Creek flood way and becomes inundated during flood conditions. Our review of the building site also indicated a potential source of surface water flooding is the east drive entrance from Grand Avenue. The steepness of the Grand Avenue pavement will cause fast water movement in the pavement gutter sections. The velocity of the storm water could potentially cause storm water to cross the east drive entrance and sidewalk, flowing to the north building wall. RECOMMENDATIONS: The primary focus of reducing the risk of flooding should be placed on the ground level of the main office building. Sanitary sewers from the building to the trunk sewer should be protected from sanitary sewer backups by either using a backwater valve in conjunction with a plug valve, or placing a pumping facility between the building and the trunk sewer. The backwater valve would be the least expensive construction option, but sometimes the back water valves stick open. The plug valve backup system would allow for either a manual closure, or if equipped with an electric motor actuator, could automatically close upon sensing wastewater above a preset detection level. With the backwater and/or plug valve in the closed position, water usage in the IMT building would have to be stopped to prevent backups in the ground floor level. The pump station option would require all wastewater generated in the IMT building to flow into a separate pump station, and then flows from the pump station would be piped back under pressure into the municipal sewer system. The pumps essentially prevent sewer backups in the municipal sewer system from reaching the building plumbing. Pump stations can be equipped with alarms and telephone dialers to notify key personnel if pump failure occurs and wastewater reaches a preset high water alarm in the pumping station. With a pumping station, the IMT buildings' water usage would not be disrupted even if the municipal sanitary sewer is inundated in floodwater. Protection of the building from surface water flooding will require either temporary closures and sandbags along the south perimeter of the building, or permanent measures such as a flood wall or regrading the parking lots and grass median west of the building. It appears a permanent closure around the building could be constructed without adversely impacting aesthetics or present the use of the site. A raised berm could be constructed from the entrance drive along the west side of the main building, extending southerly along the grass median to approximately the property line, then southeasterly to a point in line with the south garage building, then easterly for a closure against the south garage building. The grass area south and west of the existing parking lots would become the area which would store runoff from rain water which falls on the protected (office building side) of the berm. The storage is necessary in the event Walnut Creek is at flood stage and a rainstorm also occurs. Walnut Creek floodwater on the west side of the berm could be higher than the protected ground on the east side of the berm. After Walnut Creek recedes, the stored water could be released back into the railroad ditch through a gated storm sewer through the berm. The recommended alignment for the berm between the main office and claims office would not impact other businesses along Grand Avenue which are subject to flooding. IMT could construct the berm further west between the claims office and the Pizza Hut building without technically impacting the Walnut Creek flood plain regulations. However, the localized flow path for the flood water along the railroad tracks could be partially obstructed if a berm is constructed on IMT property directly east of the Pizza Hut. Businesses along Grand Avenue could perceive that their flooding is being aggravated if IMT places its berm in the localized drainage course. To reduce the potential for litigation, our recommendation is to concentrate the berm effort to protect the main office building and allow the claims building to flood in the event the Corps of Engineers 100 year flood projection is exceeded. Minor regrading and raising of the sidewalk section could also be performed along Grand Avenue at the east entrance to increase the level of protection against flooding from the Grand Avenue at the east entrance to increase the level of protection against flooding from localized drainage along Grand Avenue may be insignificant when compared to flooding potential from Walnut Creek. We also contacted Mike Klapp of the city of Des Moines to investigate if IMT could participate in the Walnut Creek early warning system. He indicated only governmental bodies could participate in the system, and IMT could not be included. His suggestion was to monitor weather alert radios which are activated

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				by a flood warning or severe weather warning issued by the National Weather Service. (Map included in papers.) To: Dean Honnold From: Linda Slycord RE: Meeting today at 11:00 a.m. Today's meeting will be with Mayor Pat Dorrian, Assistant City Manager John Bryan, George Nagla, you and I. We will review the reports from Veenstra Kimm Engineering and the levee map. George Nagla will bring you photo copies of all materials prior to the meeting. We have currently spent approximately $2,500 on engineering services and contracted with Crose-Gradner Associates, Landscape Architects for the wall and design for approximately $2,500. We have not yet received bids for the sewer by-pass work. At the direction of the board, we are updating the estimate to move computer operations upstairs. The last estimate 3 years ago was for approximately $250,000. If the bottom level would flood, we have potential loss of $3,000,000. These estimates were furnished to the Army Corps of Engineers and the city of Des Moines.
47	Palmyra, Missouri	Self		The time for taxpayer subsidization of flood plain development to be halted is now. Federal dollars spent in the past for levee construction have encouraged development of high risk areas. Following the 1993 flood those who benefited the most from federal assistance to levee districts are urging us, the taxpayers, to get them up and operating again. If their production is so vital to the national economy, as they claim, why does the government pay for whole, or portions, of upland farms to reduce or stop production? The bottom line is: we do not really need the flood plain farms to add to the existing crop supplies, why should we, the taxpayers, pay for keeping upland farms out of production and pay to keep flood plain farms in production. It looks like the only ones who want the flood plains to be in production are those who are getting the most benefits from the levees, the farmers. I think that if they want to farm the flood plain, they should be taking the risk of losing a crop like everyone else. We have lost such a high proportion of our wetlands in this country to agriculture that some species that need that habitat type are in danger of being lost forever. You can't put a price on a rare turtle or bird or snake like you can an ear of corn. As we lose species diversity, we lose our quality of life. Flood plains contribute to the nutrient flow in the aquatic environment. As the amount of nutrients available to the river ecosystem is restricted by levee construction, the standing crop of all species dependent on those nutrients is reduced. The explosion of aquatic invertebrates and fish in the flooded fields last summer and fall are proof of what could occur every year if adequate flood plain space were available. Where have all the big fish gone? Maybe they can no longer grow to larger sizes in the abundance of years past. Only a few now reach larger sizes. The former flood plain is now restricted to a narrow strip outside the levees. I suggest a compromise with agriculture. Discontinue flood protection assistance and see how many are willing to take the risk alone. Building levees to protect existing facilities and none else. Anyone who wants to develop the flood plain has to do it on their own. There are more comments I could make, but this has been enough. Thanks for listening.
48	E. Peoria, Illinois	Other Industry, Self		I have always thought that management of the river systems should be along natural, ecological ways of thought. The mess we experience is attributed to human intervention without acknowledgment of the natural systems involved. If more natural scientists are used instead of engineers the systems would work more harmoniously with less expense to the taxpayer and the environment. I thank you for letting me air my viewpoint.
49	Savanna, Illinois	Self, Farmer		I got a farm on Plum River about 6 miles from the Mississippi River near Savanna, Ill. We get some severe flooding on this river. In 1993, water covered my land for 45 day during the summer. It leaves a lot of silt every time it goes down. On average about every 3rd year it floods and they were talking about buying easement so they could go back to trees and grass. I think that might be a good idea. But when they do this they should take all farm ground on the river not just where it is swampy.
50	Oakville, Iowa	City Gov't		I thank you for the opportunity to visit with the representatives of the Corps at the informational meeting in Burlington. Being on a tight schedule at that time I chose to make my comments on the attached paper. I appreciated the working relationship that the city of Oakville had with the Corps during the flood. I found the personnel to be very knowledgeable and responsive to the difficult situations that we faced during that time. ATTN: COE At the informational meeting held in Burlington, Iowa, I voiced my concerns on several issues facing the city of Oakville, all of which could have a devastating impact on our livelihood and safety. The Iowa River, over a period of time, has been allowed to silt-in to the point of posing a problem. With this silting in of the river, the channel has narrowed and become shallow resulting in the ice freezing to the bottom in the winter and literally sitting on the sandbars that make up the majority of the river bed. A significant flow of water coming from upstream causes the ice to jam against the bridge shoving huge hunks of ice against the floor of the bridge, posing a real threat to the integrity of the structure. In most instances, the displacement of water that would and should flow in the confines of the river bed results in flooding Hwy. 99 and the County Road access. The closing of Hwy. 99 via a temporary levee across the highway leaves the area residents with only one route for evacuation, if warranted, and even that escape

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				route would be threatened. The dredging of the Iowa River is needed to keep the river from encroaching further onto what used to be the banks. A higher levee system would not be a solution in this situation, but would be a definite plus during warm weather flooding. With the dredging of the river both problems could be rectified. The re-opening of the mouth of the river might also be helpful. I realize that the navigable rivers demand and get priority by reason of economics alone, I do, however, feel that problem areas along the tributaries, such as the Iowa, need to be addressed and resolved. My other concern is for the levee condition that exists south of Pumping Station #4. I am appalled to think that the washing away of the face of the levee, to the degree that exists, has seemingly been treated with a shrug of the shoulders by the Corps. This, as is with the silting in of the Iowa River, is not a Flood 1993 happening. This has been a known condition that has not been addressed as it should have been. In speaking with General Galloway, I asked for his interpretation of the word maintenance in this instance. He was aware of the levee and the situation that I was speaking of. His reply was that this would be considered MAJOR MAINTENANCE and the responsibility for repair is that of the CORPS not the Drainage District. I cannot fathom why the Corps would allow this levee to deteriorate to this condition and not repair it when first notified that the problem existed. I am convinced that a revamping of FEMA is needed. The Federal Government cannot continue to pay in toto for natural disasters, whether it be flood, earthquake of hurricane. The abuse and misuse of Federal funds that were mis-spent during the Flood of 1993 would certainly pay for preventative measures, such as sea walls and yes--- even levee MAJOR MAINTENANCE. Somewhere in the question of "inalienable rights of life, liberty and the pursuit of happiness' the burden of responsibility has been placed upon the Government. It's time that the responsibility be placed in its rightful place!
51	Mahomet, Illinois	University		I am interested in a thorough study of the flood of 1993. I am preparing a book on the impacts and responses made to the flood.
52	Iowa City, Iowa	Self		1. Equipment should be installed to allow all dams managed by Rock Island to be controlled remotely, with appropriate safeguards. This would be an inexpensive, but invaluable backup system in the event that an engineer is unable to get to the dam during a crisis. It would complement the existing measures to automate notification of Rock Island officials of high water conditions. 2. Past COE reports are marked by a lack of interaction between the working groups (economic, hydraulic, environmental, etc.) during the study process. A good example of this is the 1991 study of the Coralville reservoir management plan in which each group seems to have written their section nearly independently of the others. Strong coordination between the groups at every step should be considered an explicit part of the study process, so that the final conclusions accurately reflect the strong interactions found in the system being studied.
53	E. Peoria, Illinois	Self		The river flood plains should be used for the river--let it flood when it wants to. Man has always tried to down rate nature, at great sacrifice, and cost (to the taxpayers). If you need any help in tearing down the levees, please call me.
54	Lockport, Illinois	Agriculture, Self		The US Army Corps of Engineers should restrict its operations to major navigable rivers.
55	Manhattan, Kansas	Self		I believe that flood control should take precedence over recreation. The flood we had in and around Manhattan could have been avoided with better management early on. Many people were betrayed by an arrogant few.
56	Manhattan, Kansas	Agriculture, Private Int. Group		We own property in the flood area. But we had no water in '93 flood. We are in the process of selling our property, so we do not live there now. We do feel the flow from Little Creek Lake could have been handled different and taken care of by our local area better.
57	Atchison, Kansas			I am definitely not in favor of making the Sugar Lake area into Wetlands. For many different reasons, not the least of which is the fact it has been my home for over 30 years, and my family for over 60. For economic reasons: If the area was converted to wetlands, then 59 Hwy. would be in jeopardy, and the towns of Atchison, KS, and St. Joseph would suffer. These two towns are sleeper communities to Kansas City, MO, and without 59 Hwy. there would be no convenient access. There are vital farm grounds located in this area, and even though the farmers know it will flood, it is not annually, but more like every 10 years. So 90% of the time, the fields are productive for the farmers, and produce food. As far as the environmental aspect, I am not in favor of mandatory displacement of people, and in this case a whole community to protect a particular species of fish or fowl. Making this area a wetland is not letting nature take its course, 90% of the time, this area is as dry as any other. In my opinion the government could take other proactive measures. For example if you live in a flood plain, and choose not to carry flood insurance, there would not be FEMA grants, which I am told went up to 11,000 per family in my area. I know of at least two homeowners who were left with nothing, when FEMA awarded grant money to tenants who were buying on contract, who of course took the money and ran. The federal government at times is almost too nice to people in terms of handouts, in my opinion if you choose to live in a flood zone, you better be able to afford flood insurance. But don't make everyone suffer because of government policy of handout and then trying to dictate where people can and

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				cannot live. As if people were not smart enough to make their own decision. The federal government needs to do a better job of educating people in regard to flood insurance, and make communities enforce the rules when it comes to rebuilding. I carried flood insurance, but did not know I could have taken out more coverage, or that out buildings are covered at a percentage of the amount carried on the residential structure. I am sure that the main driving reasons behind this wetland proposal is the money. It has taken a lot of different avenues, but there is no need to protect people from themselves. I think it would be a good idea to let the individual take on the responsibility of deciding whether they want to reside in a flood plain, and the consequences of that decision. I was a flood victim, and while the temporary assistance was greatly appreciated, it was definitely not expected. I feel like the main problem with this type of decision, is it will be made by people who live out of state and have no idea of the consequences . Broad control yes maybe, but government mandates--NO. Our government continually formulates government policy based on special interest groups, and people that do not want to be held accountable for their decisions or actions. I read the Flood of 1993 in the Midwest cost 16 billion dollars, in comparison to 29 billion for the L.A. earthquake. The midwest flood covered six states, the earthquake, one major town. If policy were to be changed strictly for economic reasons, where would you start? Because California has more representatives in Congress, and has more tax paying citizens than any midwest state, will continue to occur, well it doesn't take a rocket scientist to figure out L.A. will have another earthquake. I must apologize for the sarcasm, but I can tell you the flood I went through wasn't nearly as stressful as the aftermath of wondering if our local level would be fixed, and now if we can plan to live in the area at all, taken the total wetland idea into account. Please feel free to contact me I would be more than happy to discuss this in greater detail.
58	Kansas City, Missouri	Agriculture, Env. Interests, Self, Hunting		Please let us know the status of the wetlands and ox bow land purchase by the government. Can a property owner hunt on his ground next to a wildlife area? Can a property owner lease ground to farm or hunt next to a wildlife area? Will you still want the Fahrmeier tract partly or entirely in the Berger, MO bottoms? Please send these answers to my father. Walden Fahrmeier, 6828 Fairchild, Normandy, MO 63121.
59	Augusta, Missouri	Agriculture, Other Industry, Excavating		We are definitely against the proposed wetlands. This ground is our livelihood, we need this ground for crops so we can stay alive. There may be some ground not as productive as this and I feel strongly that it would be unfair to take it for wetlands.
60	Washington, Missouri			This is very good farmland by the MO river here in Wash., MO. We do not need it turned into wetlands. Our roads go through there also.
61	Des Moines, Iowa	State Gov't		1. Eliminate Crop leased land properties. Enforce lease restriction of no federal assistance. 2. Procure digital elevation for the entire state of Iowa. This could benefit the states' G.I.S. system. 3. Update Corps dam operation plans to address quicker releases, lower pre-flood pools; more accurate modeling of in/out flows. 4. Update Dam Safety Plans- Specifically, accurate inundation levels downstream.
62	Hull, Illinois	Agriculture		Need some people to answer questions and make comments about different alternatives.
63	Muscatine, Iowa	City Gov't		Industrial needs for large quantities of water from Zlluvial Valley must continue to increase. Employment provided does not mean residential development must follow in the valley but can be on high ground. Air, land, rail, water transport must be interlinked, obviously in the valley. Protection of water/waste water treatment requires very high (improved) level of protection. I.E. Freeze residential use of flood plains and areas protected by industrial levees. Accommodate industrial and transportation features, permit recreational and agricultural use. Accept beginning and end of plumbing systems and protect with vigor and vigilance. Agriculture levees limited to just that activity and those on farm resident operators. Power plants protected to industrial levels by site when not inside equal level of protection.
64	Dubuque, Iowa	County Gov't, City Gov't, Planning		The system of incentives and sanctions in the NFPI program should be completely overhauled. Local jurisdictions are not held accountable for continuing development in the flood plain. The river Commerce should be brought closer to actual costs of operation with less subsidy available. More risk should be assigned to individual homeowner, farmer, business, industry and less to the taxpayer.
65	Columbia Illinois	Ag., O. Ind., Self		
66	LaCrosse, Wisconsin	County Gov't		You need to do a much better job of contacting interested individuals with a timely notice. Otherwise you have no credibility.
67	Grafton, Illinois	Self		Import of the Nutwood levee, and the effects of levees above and below Grafton, on the water level, during flood at Grafton, Hardin, Ebsah. Also need copy of Galloway Report.
68	River Falls, Wisconsin	Env. Interests		1. I favor a federally funded program to buy back all agricultural land which was reclaimed wetland originally. 2. Let's not repair levees and dams for reservoirs unless they are critical such as for toxic chemical facilities, water treatment plants and water purification facilities! 3. Let's move towns from flood plains to uplands as we did for

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				Soldiers Grove, WI! 4. Lets ban and enforce filling in wetlands where they have natural drainage patterns and forbid reconstruction of artificial dams and flood walls to allow the flood waters to spread out. I represent the Sierra Club - St. Croix Valley Interstate Group. I am a Conservation Chairperson.
69	New Ulm, Minnesota	Agriculture		We can't possibly survive the way reservoir is being run. Something must be different than it was years ago. Draw it down to 0 in winter so you have room for spring run-off. The river banks are all caving in and all the trees are dying, also taking along our ground. We have not had a crop for 4 years yet we have to pay taxes. If you continue dumping water on us I think the State of Minnesota should buy all the land from us (or Federal Government) then use it to store everybody's water.
70	Rushville, Missouri	Self, P. Int. Group		
71	Modoc, Illinois	Self, Levee District		Levees and the maintenance thereof are a necessity! The economic benefits that have accumulated throughout the years that they have been in place are impossible to put a monetary figure to. Miles and miles, acres and acres that are protected throughout the system are a resource that reach from localities to the national economy. The prime agricultural environment to the shipping interests and all the spin off activities and businesses associated with them are a benefit the midwest as well as the nation cannot afford to lose of jeopardize. Keep the levees!
72	Peoria, Illinois			I am writing to plead in the strongest terms that you not get involved in the business of levee maintenance for drainage districts on the upper Mississippi river. These levees have absolutely nothing to do with navigation. There needs to be a consideration of the impact on the environment creating higher levees would cause. It would cause flood to stay on the river forest (thus killing the trees) and rapidly fill in backwater lakes that fish use to spawn. Instead of spending millions of dollars rebuilding drainage districts we should buy some of them up and use them for flood holding basins. This will lesson the impact of future floods, increase fish spawning areas, and increase wildlife habitat along the river. The farmers have destroyed practically the wildlife habitat behind the levees and I resent my tax dollars being used for this. They have drained dozens of lakes and diverted ditches into the remaining ones (which fills them with sediment and makes them useless. All these farmers think about is money and not what they do to the environment. billions of tax payer dollars have went in to making these districts farmable and not one acre of ground in them is worth all the money tax payers have spent making them farmable. I resent what they have done to what was some of the best wildlife habitat in the country and I do not want to continue subsidizing this habitat by paying for higher levees. If they want to farm in these areas let them pay their own way and not the American tax payer. Please consider these ideas and the environment when you make your decision about getting into the levee building business. Thank you.
73	St. Louis, Missouri	Agriculture		As a member of a farm family on the lower Missouri river, I'm writing to express my wishes for the construction of a 500 year flood levee for the protection, benefit, and future potential for the associate's farmers, transportation industry, communities, and for population as a whole. I'm in favor of maintaining a higher river level to facilitate more river traffic during the shipping period. The barge industry and property owners benefiting from the expanded levee system should by tax or other assessment share the cost of such expansion but the American people should be informed about their associated benefits: secure and consistent food supply at a price second to none in affordability and surplus production for exportation (trade balance implications) and humanitarian aid.
74	O'Fallon, Missouri	Self		To keep the water clean so that the animals can live in it. Also make safe places where the animals can live. Keep the river clean so that we have clean water to drink.
75	Augusta, Missouri	Agriculture		This is a very good example of a communist state. Great numbers of the population who derive their living from the river bottoms are against your proposal but a few people in power think they know what is better.
76	St. Charles, Missouri	Environmental Issues		Greenway Network a nonprofit citizen group would urge the USACE to help create buffer zones of tree, plants, shasses along the Missouri and Mississippi River to provide wildlife habitat, mitigate air and water pollution and provide recreational opportunities.
77	O'Fallon, Missouri	County Gov't, Regional/Local Planning		St. Charles Co. needs access to the rivers in the community. Many areas such as Corps property near the Golden Eagle ferry have no public access. Our committee as part of the County Flood plain's Vision project has suggested such access areas as this.
78	O'Fallom, Missouri	Self		Environmental and recreational values need to be considered equal to transportation needs. Wetland restoration should be given priority. Eco-system management should be utilized. Wing damns on the lower Missouri river should be reduced and bank stabilization by rip-rap should be minimized.
79	Cahokia, Illinois	Self		I would like to see the expansion and preservation of wetlands in all flood plains. More public access to the rivers, as in the new Alton Dam areas.
80	Cache, Illinois	Agriculture		Stay with old plain for Missouri river.
81	Salem, Illinois	Agriculture, Self		I think that the rivers should be used for transportation to the maximum. Water transportation is the most energy

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				efficient and least polluting of present types. Also the flood plain should continue to be allowed to be used for agriculture. This bottom land is very productive, therefore not as much erodable land needs to be cultivated. As far as levees causing floods, if this were the case no floods would have occurred before European immigrants arrived on this continent.
82	New Haven, MO	Agriculture		There's so much land in Wetland already. And for the dam's they should be used for what they were built for to control floods instead of reaction purposes.
83	Washington, MO	Agriculture		I am not sure I favor the height of levees that are used today. I do however favor levees that control the normal annual spring rains and snow thaw water so that agriculture can plan and do spring planting. I feel lower levees would do that but in case of unusual amount of rainfall the river could spread out sooner and handle the amount of water with less damages as was witnessed this past 1993 flood.
84	Washington, MO	Agriculture		I believe the Missouri river is managed correctly now. No changes needed. Need barge traffic in the fall.
85	Marthasuille, MO	Agriculture, Missouri Valley Levee District President		I am writing in regard to the Corps' idea of raising that stage of the Missouri river in the early spring because the spring always brings a high stage and will only add to the flooding of bottom land that is not protected by levees and also will add to the seep water on lands that are protected by levees also. And are the fish really on the endangered species list? Also it is going to add to the problem of more and bigger trucks on our highways to add to the problems of more serious accidents and our Federal and state roads being damaged by these trucks. Also who will compensate agriculture for these losses they will have to endure.
86	New Haven, MO	Agriculture		Very concerned about the flood management plan and the effect it will have on the farmers and all business. It seems we put very little concern on people and their livelihood.
87	Washington, MO	Agriculture		I feel that the levees should be built up if the rivers will be used for boats. The water level will be higher and in spring we get rain and in 1929 the June rise claimed a lot of corps that was before the river was levied. Wet land does not cause flood. A sure sign of a flood is two full moons in one month. I kept a record of this the more _____ the higher the water level if it rains. I feel the Missouri River should be levied higher to maintain a higher water level for boats. It is an asset to towns like Washington, New Haven, and Hermann and other small towns along the Missouri River. Thank you.
88	Marthasville, MO	Agriculture		I am farming on one of the tributaries of the Missouri River. I lost most of my 93 crops. The changing _____ Missouri River by the Corps of Engineers will be pushing the backwater up on my _____. Spring when I am planting a crop. We don't need any more wetlands we have enough already.
89	New Haven, MO	Agriculture		I feel wetlands are not needed.
90	Washington, MO	Agriculture		To the best of interest of our farmers, I feel it should be a shame to put this good farm land into wet land. For we need these crops in our acres.
91	New Haven, MO	Agriculture		My primary concern is that the waterways be maintained for maximum use. As a most efficient and timely means for moving commodities via barge transportation. I am sure you have been advised statistically of the advantages of this transportation -- Please give you most serious consideration.
92	Valmeyer, IL	Self		Flood plain management of the upper Mississippi and lower Missouri River must concentrate on protecting prime farmland which is vital to the survival of the Midwest farmer. The only feasible way to do this is to maintain and improve the present levee system.

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100	Topeka, Kansas	Regionl/Local Gov't		* Will recommendations in FPMA extend beyond change in Corps policy to other Federal agencies/State agencies and government/Local Government. * Change in just Corps policies will not result in permanent change in flood plain policies as other Federal/State/Local agencies will implement structural means themselves. * Upland, small watershed projects can have severe impact on the environment - destroy existing wetlands - impact runoff in river - changes in sediment load - impact to endangered species. * No Flood Insurance for vacation/temporary housing in 100 year flood plain. * Ag land flooded in 1993 should be purchased and leased back to landowner for Ag use only - no development allowed. * Shouldn't automatically convert flooded lands to wetlands - should evaluate the land for best use and practicality of being developed for wetlands. * Corps 404 permit process should consider system-wide impacts of the 800 and watershed projects up for permits in State of Kansas. * Still many people who have not received help - still need help with clean-up and repairs - people who were not aware help was available or were not eligible for help from available programs. * Concerned with slow progress on buy-out options from FEMA - people are still waiting to hear and can't repair homes until find out if buyout is an option. * Community Service agencies would like to work with communities on preparedness plan and would like FEMA to address preparedness issues. * States are interested in getting levee database/GIS info when available. * Look at modifications to Reservoir Operation Plans. * Look at impacts of sedimentation in reservoirs and impacts upstream of reservoirs. * State of Kansas and Nebraska both interested in GIS layer showing location of Critical Facilities/Levee info. * Rebuild levees in urban areas. * No new housing in areas subject to flooding. * Enforcement of restrictions on flood plain development hampered by low (FEMA) budgets and manpower needs to be strengthened. * Need means of (1) getting more flood plain properties insured when they change hands, and (2) making them retain the insurance until property is either floodproofed or removed (not just for 3 years). * Where levee repairs cost a fortune and they are only lightly used, they should be allowed to revert to wetlands, wildlife habitats, etc. * BCRs should not include damages to structures not in compliance with flood plain regs (i.e., w/o insurance) or that are repeatedly damaged and rebuilt. * Environmental considerations need to be included in BCR. * BCRs need to include both economic benefits and costs of wetlands. * Environmental value of wetlands needs to be quantified somehow. THOUGHT ON FUTURE FLOOD PLAIN MANAGEMENT BY KEITH S. KRAUSE, Chief Engr., Exec. Dir - U.S. Water Res. Boar - '66-'76, wrote first state floodplan management les. First Commissioner EPA in Wash, D.C. (for Nation) - '49-'66, Public Health Service, Interior. A. Rebuild levee systems where needed in urban centers where populations have been indigenous for 50 years or more. Prohibit, by purchasing land, any new housing development in those areas subject to flooding in 1993 or rebuilding of housing destroyed or badly damaged in the 1993 flood where such housing was built in the 1% chance of flood plain since 1968 whether or not flood insurance was utilized. Temporary or vacation type housing built in any future 1% chance flooding area can not be insured against flood damage under the Federal program. B. Purchase rural agriculturally productive lands inundated in the 1993 flood with a clause in the purchase contract which gives the original land owner the right to continue agricultural use of the land on a rental basis, as long as the present owner and heirs maintain it for agricultural use only. The rental contract may be sold with the same conditions applying as stated above but if it is sold for purposes other than agricultural crop production, it is subject to any changes in land use the Federal Government may decide to make. C. No lands in the 1993 flood plain shall be converted automatically to wetlands unless during years of normal rainfall as have been recorded over 50 years, the land has been subject to a ground water table higher than the land surface. Drained lands may be evaluated for wetlands on the basis of their value on the basis of a "best and highest use" criteria. * Counties in SE Kansas also were declared disaster areas - not reflected on or display (which only goes thru Aug.) - needs to be updated. Tulsa District needs to be involved, too. * Continued availability of flood insurance to flood victims is necessary. (But 5-day waiting period is silly) it should be longer. * Put responsibility for informing renters of risk on landlords - reduce FEMA aid and hold landlords liable when the info isn't passed on. Increase responsibility for informing buyer or renter. * No FEMA Aid to those property owners that receive aid and knowingly re-establish their home in flood plain. (One occurrence only). To allow multiple occurrence for flood insurance as long as structure is less than 50% ruined. * Hunter's Island neighborhood - believes the reservoirs (Tuttle Creek, Milford, etc) current policy of zero release when there's downstream flooding should perhaps be amended to allow small controlled releases when near (5 ft.?) max. cap. They feel their motivation is to determine the best thing for those downstream as well as their own neighborhood. * More controlled releases would lessen

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				damages to erosion washing out bridges, etc. * Everybody can't live on the hill - people shouldn't be penalized for living in flood plain. Flood insurance should be a personal prerogative. * Government should have very little authority over how a building should be built in a flood plain (like when they can get permission to build only if they leave large doors on both ends for water to flow through). Mobile home parks are allowed to be built in flood plains, despite their restrictiveness to water flow. * New development in flood plain should be ineligible for FEMA aid of any kind. Local Government should be allowed to require that they build to a higher elevation than FEMA does. TUTTLE CREEK SPILLWAY * When are repairs to be started? - Are you going to fix it? How do you model flood plains areas? * Reservoir Regulation Policy - Flatten Peaks - Begin Releases earlier - Even if minor flooding results - delay momentum or accelerate slopes.
101	Kansas City, Missouri	Regional/Local Gov't		* Concern about proposed changes for operation of Main stream reservoirs that would increase flows/stages on MO River in spring for fish and wildlife. * EPA feels need to model and run alternatives for more than 1993 event because impacts of levee realignments/set-backs and MO River navigation project won't show-up for large events, but will show-up for smaller flood events. * Need to run model to determine impacts of MO River navigation project on flood stages. * Look at impacts of navigation dikes on bank erosion on outer bend (specifically Prunty bend) below Fishing River. * Atchison - concerned with proposals that recommend not rebuilding levees - would cut off access to US Hwy. 54 and Hwy. 59 - major access to city. * Reform in flood plain management is needed to prevent further human environmental devastation, create green space and protect wetlands. * Move away from structural control and towards restoring wetlands. Clean-up contaminated sediments and improve sediment transport by natural means. * Buy out individuals in flood plains who want to move out. * Restore natural flood control processes to the greatest extent possible. * Levee boards want more say so during design and reconstruction of levees - want copy of P&S before Contractors - feel they put in 20% - should have some say - also say so on acceptability of construction. * Give the 80% Federal Funds to Levee Boards and let them get own Contractor to do work and let them decide where alignment should be using the funds they get. * Hold meeting up River - near St. Joseph. * KCMO wants to look at current level of protection using up to date hydrologic and hydraulic data - current data 20/30 years old. * Try to streamline levee repair program so levees can be repaired more quickly to avoid future damage. Make sure to recognize the importance of Agriculture vs. fish and trees - People should come first. * Preserve existing wetlands, but don't create more at expense of crop acres. * Wetland acres have significantly diminished because they have silted in from previous floods. Operate the reservoirs for flood control the purpose for which they were built -- FC first and navigation second. * Better communication between COE and Levee Districts -- (levees in compliance). * Create wetlands by buying out willing sellers for a fair market value. * Think about people and the economy rather than fish. * Overhaul crop insurance program. * If Corps of Engineers had notified farmers earlier that levees would not be fixed, landowners would have made repairs themselves during the winter. * Parkville had erosion and deposition from '93 flooding, particularly deposition, and this has changed the overbanks in the Parkville area. * Parkville is getting surveys of its parks by the river. * Revetments were pushing water into the Root Levee District levee 63-G and causing erosion into the levee. * Can separate "N" values be input into the UNET model for channel and overbank areas? * Will the FPMA look at the navigation channel? * Cottonwood growing out to the river at Atchison restricts flow. * Need to put wildlife refuges landward of levee. * What is the level of protection of the Rushville Bend levee? Is the top of the levee 768 feet? * Concern about how the Rushville Bend levee was rebuilt. Need small riprap on top of the large that was placed, the topsoil and plant prairie grass which produces deep root systems. This method was used on another levee that held even though it was over topped. * Objections to wetlands and losing control of family lands via wetlands. * Wetlands have been reduced by floods and silting in. * Large concern about raising river 1 foot as proposed by the Master Manual preferred plan. * Lower the Missouri River water level in the summer months. Use barges for plover nesting on the upper Missouri River.
102	St. Charles County, Iowa	County Gov't		Flood Plain Management Assessment of the Upper Mississippi and Lower Missouri River and their tributaries - Comment Sheet. In north St. Charles Co., we need much better protection on the Missouri and only a slight degree better on the Mississippi. This would prevent the crossover effect flow of the MO into the Miss. at Portage. It would lower Miss. stages at Alton and Grafton and upstream on the Miss. It would prevent 90% of the flooding in this area and I do not believe it would cause near the effect upstream on the Missouri as claimed by hydrologist. Hazardous land fill in old hole in Katy R.R. from '51 flood - washing onto ground, river downstream. Cinder pile at U.E. Sioux plant - possibility of washing into Miss. river into St. Louis, Alton water plants. 100 year flood level should remain constant. If I put my faith in what level is, should I be responsible for the losses to me caused either by a mistake in 100 years level or what someone else did? An open space system (i.e. a Greenway) should be developed along the Mississippi and Missouri Rivers in the flood way. Trails, park and conservation areas should be included. The

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				Confluence of the MO and Miss Rivers should be the keystone of this system. The highest priority should be a consistent and strong Federal policy that states no new development of wetlands and/or flood plains. Then, ALL federal programs, particularly FEMA's flood insurance, should be consistent with this policy. I support only non-structural, natural land uses of the flood plain. Please send a copy of all unpublished flooded area maps with the post-flood reports sent to our office. Indian tribes are entities just like cities are and should be included in the process. The Iowa Tribe of KS and Nebraska, the Sac and Fox Tribe of Missouri in KS and Nebraska , the Kickapoo Tribe of KS, and Prairie Band of Potowatami Indians were all impacted by the Flood of 1993. The water works system of the Kickapoo Tribe of KS was impacted by the flood. Certain structures were weakened. The public health of the communities were impacted by the standing water. Children as well as adults have become ill. We would like to see Cultural Resources and the Economics of the tribes be discussed in the Environmental portion of this assessment. We would also like to see a Public meeting held at Rulo, Nebraska. Interested in repair status of levees as well as "high water mark" as shown on updated maps. Would like to get a full set of maps for flooded area in Kansas and Missouri. I support a flood plain management program that will restore natural flood control processes to the greatest extent possible. I believe in moving away from structural control of the River. Only rebuild those levees most urgently needed. Control flooding by protecting and restoring wetlands and backwaters. I suggest buying out communities and individuals who want to move out of the flood plain. I think you should work with E.P.A. and other agencies to characterize and clean up contaminated sediments and support resources which let sediments naturally move down the Missouri and Mississippi Rivers. I cannot stress enough how important it is to develop flood plain areas for riparian habitat and/or wetlands. It is a grand opportunity to make a good step back in time and preserve our wildlife, have cleaner water and good natural flood control. I am concerned about the Osage delta/Bonnets Mill Area in Osage County. "Levee" has about half-mile break. No road now to vacation properties on delta. About 20 trailers demolished - must be removed but no road. Without levee, Bonnetts Mill, a small town on Historic Register, will experience several feet higher flooding on Osage River bank across from delta. Missouri River will one day claim entire delta area and cause problems with shipping channel. I would be interested in being local contact for Osage County and working with you in this work. Retired, so I have time. We last lost crops to flooding in 1973. We hired a neighbor, his son, their dozer and scoop and rebuilt the levees. The corps paid 80%. Due to Environmental Legislation in the ensuing 20 years we now have at least 10 Federal and State Agencies telling us what we can and cannot do, such as don't touch that tree, an eagle might sit in it and we must get borrow dirt inside the levee. Somehow common sense must be reintroduced to the process. Trees grow back and high-water deposits soil. In your meetings cast your thoughts 25 to 50 years in the future. We all know more reluctant laws will be passed. What will their effect be on the next big flood in 85 years. Need to restore to maximum extent practically all levees protecting transportation infrastructure(s) population, and agricultural lands. Economic well being of MO residents is dependent on this more wetlands, and duck habitat provide little economic benefit to this state. Interested in proposed levee setback alternatives in Berger Bottoms area which has future farms - Also interested in selling land landward of levee for mitigation project/wetland projects. Levees and reservoirs have been used for years to control flooding and have prevented billions of dollars in damages proving they work. There is no better use from an economical standpoint for flood plain than farming. If no levees were allowed to protect the flood plain, it would result in a devastating blow to our Nation economics and also have a severe social-economic and environmental impact to the people who make their livings farming and working in the flood plains. If levees and bank stabilization weren't allowed along the rivers, navigation systems will cease to exist as a transportation system, putting thousands of people out of work in the export of grains and other commodities. Our country cannot afford the expensive mitigation requirement of moving everything out of the flood plains and the loss of the prime agricultural farm land on the flood plains. For every acre of farm land lost in the flood plain, some time in the future there will probably have to be two or three acres of highly erodible soil returned to crop farming to feed a growing world population. This will result in additional silting of our river and cause increased flooding. Last year's record flood was caused by one thing -- too much rain over too wide an area for too long -- not by anything man had done. At St. Louis the peak stage exceeded the previous flood of record by 6.2 ft. The discharge of 1,080,000 cubic feet per second is the greatest discharge ever measured during more 130 year of site data, exceeding the previous high by 27%. We need to take a balanced approach to flood plain management. There has to be a certain level of protection for agricultural land. A minimum of 25 years to reduce the loss of crop income and damage to the levees when over topping occurs. Urban areas and areas with strategic infrastructure need more protection. Also their is a need for more reservoirs built in the Upper Mississippi and Missouri River basin to help control the flows during periods of excessive rainfalls. Reservoirs have proved they reduce flooding. Removing agricultural levees from the flood plains

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				has not been proven to reduce flooding during peak flow time. Management of flood control should remain with the US Army Corps of Engineers.
103	Jefferson City, Missouri	Regional/Local Gov't		* Agriculture - certain damages take several years to recover from (wave wash, sand, etc.) - long term costs need consideration. * Master control manual - planned reduction in barge traffic adds costs to ag. * One foot raise in river levels in springtime. * Tag costs - floodgates will trap and kill fish - more pumps needed. * Reservoirs in South Dakota - Flood control first - navigation second - no other priorities should be ahead of those. This is insurance to Americans that they will have food, and cheap food. * Comment sessions are right in the middle of harvest - planned sessions in fall are during fall harvest. (Inappropriate for farmers to attend). * FMHA grants and loans to provide sewer water in flood plains - encourages conversion of farmland to residential and urban uses. Destroys economy. Also raises risk from flooding. Non-ag development of flood plains needs to be discouraged. * Corps leases in flood plains - riverbank cottages on Mississippi - properties have now been flooded - leases should be stopped. Also, they weren't supposed to hold Fed. Gov't responsible for damages, but they got aid. Wetlands conversion is taking rights from property owners of the land. * Jefferson City - Casino development effects on water flow under Highway 54. * Osage River/MO River levee - protected crop land and rec. cabins - (for access to them) - levee isn't being repaired by Corps - access to properties cutoff. Farmers can't do anything because Corps still owns the levee. * Bank stabilization is crucial to many levees in wake of '93 flood. * Ag levees don't really seem to impede river flow in big floods. One levee had 6" of fill deposited on top of it when water receded, indicating very little movement. Wetlands and natural areas do slow down current. * Uncertainty of future flood plain management is lowering ag land values - also reducing base for estate taxes for state revenues. (One assessor was charging $3 - $3.50 per acres last year and is down to 10 cents per acres this year). * Well constructed private levees, which got expensive damage because they were well-constructed, come out with poor B/C's - while less well-constructed levees got less damage and will be repaired, despite the fact that they will be damaged more often over the years and perhaps cost more in the long run. (re: Cole Junction). * Bonnets Mill, MO at delta of mouth of Osage and Osage City and upstream 20 miles - 100 cabins/homes constructed by Corps - abandoned - control structure/levee breached and flooded part of town (most of Downtown on Historic Register) - Also concerned about MO river cutting across flood plain in this area - people who have homes in area having problems accessing property - road flooded and won't be rebuilt without levee protection because it would flood frequently. * How much damage and how much would stages on Grand River and MO River been reduced if Grand River Reservoirs would have been in place? * Will results of MO River Master Manual Review be used in the FPMA effort? * Denying repairs on cost-benefit basis is self-defeating - the land will go to wetlands, producing no crops, contributing nothing to the tax-base - how is that good economics? Land going to wetlands eventually will have to be reclaimed because of population increases and need to keep food cheap. * On negative B/C ratios, they're often based on costs per cubic yard that turn out to be excessive - why aren't they put to bid to find out the true cost and given a change? * Where levee boards have done a good job in the past, why won't the Corps contract with them and let the boards manage the repairs? * Dredges - why no more dredging along the Missouri after the flood? * The flood already gave the MO River net gain in wetlands - it seems like environmentalists are taking advantage of the situation to get even more. * Advantages of farming land over wetlands: -Doesn't erode as badly and cause sedimentation. -Causes better farming processes, utilizing inputs (especially fertilizer) better, because of available water via irrigation. -Higher yields. * Simply fixing all of the levees would have cost a lot less than all of these studies. * City of Columbia, Water Treatment Plant: -$300,000 to build temp. flood wall out of concrete blocks/Jersey Limestone (crushed)/Plastic and sandbags, 7' high. -$72,000 Repair and stabilization of 36" influent line from well field, plant. -Putting in for grant 75% of cost to build, $1,200,000, permanent levee/flood wall. -Underground power line to replace above ground line that powers well pumps, $250,000. -10,000 feet, 24" water main as back-up line for main influent line, 400 restraining clamps on 36" main, raise 8 wells, 5' higher, $170,000 cost. * Water, $900,000 to repair wetland cells, levees around cells erosion damage. Was under construction. New type of Environmental Treatment Plant. * Stream Erosion, $500,000 to repair erosion near wetland/ S T cells on bend of Perche Creek, SCS may be helping. * McBain Bottoms Levee, $1,000,000 to repair, EPA funds protect Ag land, Waste Water Treatment Plants, and MDC Eagle Bluffs Area (Wildlife Area/Wetlands). * Speed of levee repair: '93 damage was repaired on part of the levee; levee was again breached in Spring '94. When will '94 damage be repaired? * When levees realigned during repair, more land is now between levee and river. Cottonwoods grow and owner has 5 years to reclaim land as crop land. If he doesn't, land becomes a wetland. Farmers need guarantee they won't lose control of their land if they allow the cottonwoods to grow. * Next public meeting should be in Nov. or Dec., rather than Sept. or Oct. which is the farmer's busy season. * Too much emphasis on '93 Flood, which was a rare event. Need more emphasis on studying the effects of 25-, 26-, or 27-

ID	CITY, STATE	INTEREST	CODE	COMMENT OR QUESTION
				year frequency events which are more common and of greater concern to the farmers along the river. * Corps needs to base their H&H analysis on more detailed mapping, i.e. one- or two-foot contours. Vertical error is approximately 4 feet at Boone Co. levee according to an engineer from Columbia, MO, who does work along the river. * PL 84-99 Restrictions/Red tape reduction. * Where will the addition of future environmental laws leave us in the next big flood, 25 years hence? * 3' stage requirement Missouri Master Manual alternative. * Operation of Bagnell Dam. * Flood control for upland development. * Bank profile higher. * The Steedman Levee which is just downstream of the Auxvasse River breached in 1993 and in the spring of 1994 just after repair. * The Steedman Levee needs repair at the lower end, but hasn't started yet. * Repair started with the Bingell part of the levee and moved downstream. * Concern about slowness with which the entire levee is being repaired; contractor appears to be leaving before the entire is repaired. * The Baltimore Bend Levee attaches to a levee which is not in compliance with Federal regulations and didn't receive repair funds. This is hard to understand because a 1973 repair to the Baltimore Bend Levee was part of the Federal program. * Agricultural interests should be considered first and throw out recreation interests as not important. * Omaha District has cross sections upstream and downstream of all water intakes on the Missouri River. * Cross sections were done for the Master Manual Review study. * The State of Missouri is raising Highway 63 north of Jefferson City and possibly also Highway 19 at Hermann. * Is the level of protection of same on Marion Bend approximately 10 miles upstream from Jefferson City? * At Hartsburg Levee District Levee No. 39, they are realigning the levee around 5 breached in the levee an area of approximately 100 acres, and 8,000 feet of levee with county road on top. They are putting back the levee at the same elevation. The lower part of the realignment forms a pocket which will have riprap. As the river comes around the bend, it aims straight into this "pocket" in the levee. * When levees are realigned, the area river ward of the levee -- if it grows up in cottonwoods, the owner has 5 years to clear and reclaimed it as cropland or lose it to wetlands -- farmers need guarantee they won't lose control of land if they leave the cottonwoods in place. * Farmers don't want an FPMA meeting in September-October. That is not a good time for the agriculture business. November-December is better. * How can the Cole Junction levee No. 37 be 25-year protection if the height of the levee is such that it would have been over topped between 1844 and 1993? The river had not been that high since 1844 until the flood of 1993. * Concern that levees will be replaced with cheaper structures. Levees with 12-foot crowns and 4-on-1 slopes cost more to build but the O&M costs are less than the 8-foot-crown, 2-on-1 levees. * Will raising Highway 19 at Hermann cause higher water surface elevations at approximately 12 river miles upstream? Someone suggested the raise would be approximately 7 feet. * Too much emphasis being put on the '93 flood, a rare event. Need more emphasis on the 25-year flood, a more common and worrisome event to the farmer. * Need more emphasis on studying effects of 25-, 26-, or 27-year frequency events which are more common and of greater concern to the farmers along the river. * The mapping of the Boone County Levee District is off by 4 feet vertically. * Concern about repair of the Corps levee on the Missouri River so that water won't cross over from the Missouri to the Osage in time of flood. * Study the impact of backwater effects from the crossover flow of the Missouri River on the upstream Osage River water surface elevation: Flood Plain Management is a property rights issue, levees are a necessity now more than before because the cost of production means that the loss of even one crop is too much, the uncertain future of river bottom farmland is eroding it's value already (levees don't cause floods, rainwater causes floods), not letting farmers take dirt from the river side of the levee (because of trees) will cause them to begin farming right to the river again (or clear the banks and promote bank erosion), wildlife at the river's edge uses crops for food, some flood protection projects have succeeded many times before 1993, concerned FPMA will result in PL 84-99 approval being still more difficult, corps headquarters is not listening to farmers, giving fish more priority than people (dike notching a gradual step to removing them) -- encroaches on farming.
104	Festus & Crystal City, Missouri	Regional/Local Gov't		1. Any study authorized in the area considered the "end of the funnel" of the upper basin from St. Louis to Cairo must include flows from the Meramac River, Joachim and Plattin Creeks, etc. Conclusion reached by St. Louis-based gages are not accurate. 2. States and local governments should be required to adopt federal guidelines for building or re-building roads in flood plains. 3. Consider future problems resulting from expected growth. EX: added traffic problems resulting from interstate highways built or expanded through urban flood-prone areas. 4. Serious and specific analyses should be given to "social disruption" and endangerment to a community on a par at least equal to economic and environmental standards. Apply a monetary formula to be used in the BCR for imminent danger, health, and well-being of the citizens to be protected. 5. A comparable cost-effective study be made to raise roads and remove structures from the flood plain when considering structural or non-structural solutions. 6. Adopt a format/formula to address the economic loss when businesses are closed because of limited or no access when flooding occurs. 7. Emphasis should be placed on the entire "region" affected by flooding even

ID	CITY, STATE	INTEREST	CODE	COMMENT OR QUESTION
				though an appropriation is designated for the core city. 8. A study showing what effect any levee downstream and across from a project site may have. Any adverse effects should be included with a mitigation factor in the BCR. 9. Adopt a formula that puts both positive and negative environmental effects into monetary terms to create a usable guideline the Corps can apply to the justification of a project. 10. Those areas that are unique in their flooding problems must have a recourse to pursue their solutions and not be denied by silly policies that do not reflect the reality of the situation.
105	St. Louis, Missouri	Regional/Local Gov't		WATERLOO: Want sand boils fixed. Want levees fixed to same height, do not take levees out. Would they make levees here as high as levees down south. It doesn't make sense to have weakest part of levee here and higher levees south. Whole levee is 1.5 ft lower than levees south of here. Corps knew levee was too low for 40 years and did nothing about it (Fountain Creek). (How would farmers survive farming out in river (without levees)) not enough money in farming to survive losses. Trees 75-100 years old dead. We are taxpayers and are paying for other disasters (what about us?) People have lived in river bottoms since country started and have done well (why are they trying to get rid of us?). Levees needed to keep water in channel. If bottom levees removed, trees, planted, where are people going to make a living? Cypress trees (10,000) have not generated any income in 64 years. Land damaged by flood are some of most fertile areas, where will food come from? Levees have worked for 40 years, we need to consider benefits between floods. Have you considered what rock dikes have done to river elevations? Consider not only agriculture, but MO Pacific railroad will be affected (it has multi-million dollar business - at 10 years level - railroad will be flooded) 50,000 grant from R&R to Columbia D&LD. Amount of money spent on relocating is more than what it would cost to raise levees 10-15 ft. State of Illinois has lost 300,000 areas to development (where will food be raised). Concerned about Federal Flood Crop Insurance change in land assessment, land classification change from low risk to high risk since the flood (reclassification into high risk) Columbia, IL. Trees between levee and main river channel are impeding flow of flood water. Areas are declared wetlands and trees cannot be removed. Trees are dying due to 93 flood levels created by trees themselves. Trees in flood plain are causing levees to rupture or be over topped. This happens in numerous places on the river. USDA purposes regarding wetlands are flawed in that they directly contradict purposes of Corps of Engineers. Encourage agricultural use of flood plain since that would not impede flood waters as much as tree. Run off has been increased by development of all types. In upland ravines, trees can be removed but not in flood plain wetlands. Cost of agricultural ground will be more expensive then residential development (news paper article). There is more runoff in river, not from farmers, something has to be done. River raises faster, i.e. 8" - 9" per hour than it did i.e. 1" per hour. How much does upstream urbanization and channelization affect downstream levels? Dredge channel instead of building levees. When levees are removed, and wetlands are recreated, what will happen to property owners? Sycamore, cottonwood, pecan are dying - why? Pin oaks are dying. Our of all levees damaged in '93 flood, how many will be repaired? No spokesperson for farmers. Our land bottom drains therefore it is not a wetland. Who pays for maintaining levee if it becomes a wetland? No till encourages water run-off (this is gov't program). Need to add more weight to locals' comments because they know what goes on. Corps needs to work with local interest groups and up level of cooperation with other state, federal, local agencies. Higher electrolyte levels caused by leaching of coal fields. ALTON: Channel is silting in. FEMA is requiring people to move to 100 year when land has only been flooded in 80 years. Blue herons are eating all snakes and roads.
106	Rock Island, Illinois	Regional/Local Gov't		1. Jerry Ostendorf, Emergency Management Division, Hoover State Office Building, Room A-29, Des Moines, Iowa 50319 515/281-3231. 1) Eliminate Corps leased land properties. Enforce lease restrictions of no federal assistance. 2) Procure digital elevation for entire state of Iowa. This could benefit the states' G.I.S. system. 3) Update Corps dam operation plans to address quicker releases; lower pre-flood pools; more accurate modeling of in/out flows. 4) Update dam safety plans, specifically accurate modeling of in/out flows. 4) Update dam safety plans, specifically accurate inundation levels down stream. 2. Larry Moore, Rt. 1 Box 39C, Hull, Illinois 62343 217/432-5749 Need some people to answer questions and make comments about different alternatives. 3. Ray Childs, City Engineer, 1459 Washington St., Muscatine, Iowa 52761 319/263-8933 Industrial needs for large quantities of water from alluvial valley must continue to increase. Employment provided does not mean residential development must follow in the valley, but can be on high ground. Air, land, rail, water transportation must be inter linked, obviously in the valley. Protection of water/waste water treatment requires very high (improved) level of protection. I.E.: Freeze residential use of flood plains and areas protected by industrial levees. Accommodate industrial and transportation features, permit recreational and agricultural use. Accept beginning and end of plumbing systems and protect with vigor and vigilance. Agriculture levees limited to just that activity and those on farm resident operators. Power plants protected to industrial levels by site when not inside equal level of

ID	CITY, STATE	INTEREST	CODE	COMMENT OR QUESTION
				protection. 4. Barbara Wright, 300 Nesler Centre, PO Box 1140, Dubuque, Iowa 52004-1140, 319/556-4166. The system of incentives and sanctions in the MFPI programs should be completely overhauled. Local jurisdictions are not held accountable for continuing developments in the flood plain. The river commerce should be brought closer to actual costs of operation with less subsidiary available. More risk should be assigned to individual home owner, farmers, business, industry, and less to the tax payer. * Will the study address siltation and its effect on navigation, back water habitats, and impacts on the lower Mississippi? And how to control and/or reduce siltation (2) CONTROLLING SILT FORMATION. * Use dredge material to fill/place on levees to reinforce/stabilize them. (13) PLACE DREDGE MATERIAL ON LEVEES. * Stockpile dredge material for future use on levees. * Maintain upper Miss. River Levee System the same as lower Miss. River Levee System, i.e. Rip Rap, etc. (11) * Use dredge mat. to put on the levee's. * Develop inter-agency cooperation for flood plain management to include USFWS, Corps, UMRCC, EPA, state and county gov't, etc. EXPAND FLOOD PLAIN MANAGEMENT PARTICIPATION. * Recommend water retention practices to metropolitan communities for local and general flood control. * What are the most effective non-structural flood control methods. * Restoring natural flood control processes to the greatest extent possible. * Build temporary levees to protect wetlands from siltation. * Congratulation on coming to the public and listening --a real change-- more emphasis should be put on keeping water where it fall --forget recreation and think flood control-- let land return to wetland state --KEEP WATER WHERE IT FALLS-- CONTROL. * Targeted and site specific watershed management. * The river corridor should be allowed to become a natural area --wildlife habitant and non-destructive human uses-- encourage expansion of wetlands as natural flood control EXPANSION OF WETLANDS FOR FLOOD CONTROL AND NATURAL AREAS. * What % of total volume of flood flow comes from urban catchment areas? * What effect do dams have in holding water from flowing at its "desired" rate? (1) * There needs to be a correlation made between out flows (C.F.S. releases) from reservoirs and elevations, so that people know what to expect... How much they are likely to get flooded. -Prepare maps that can be easily understood. -Educate public, make maps available to public. PROVIDE PUBLIC WITH INFORMATION TO UNDERSTAND FLOOD PLAINS. * Buy flood plain easements, extend wetland reserve program and CRP, only pay a flood claim ONCE. People must accept the risk or relocate. (2) TELL PEOPLE THE RISK. * Put dip in dike so water can go into field instead of homes. More canals in low areas. (1) * (Re)consider practices that reduce upland runoff and retention of storm water (3). * Cost-share assistance to fund conservation practices that reduce upland runoff --which reduces flooding. CONSERVATION TO REDUCE FLOODING. * Include secondary waterways and current levee construction plans in the study i.e.: Walnut Creek levee project of WDM & DM. Do the current planned levee constructions remain a valid alternative in light of the '93 flood and this study? Include SECONDARY WATERWAY IN THE STUDY. * Develop a practical use manual which can be used by local gov'ts when considering capital improvement development adjacent to river and in flood prone areas. (i.e. methods of mitigation/alternatives/funding sources/technical assistance) DEVELOP A FLOOD PLAIN USE MANUAL. * Are the beneficial effects of the drainage districts' capacity to capture sediment prior to entering the river being considered? * Increased levee protection has not been discussed at this meeting. Levees work very good and are easy to build. Many levees in this area are a 50 yr. + 2 ft., yet some held 500 yr. event (with lots of work). It seems odd that we can do many things in this great nation, yet we seem unable to put additional dirt or sand on our levees. Homes, roads, towns, and farms deserve more protection than we have. Let's build bigger levees. What a great way to save taxpayers' money. (16) INCREASE LEVEE LEVELS. * Install upland water management systems, to keep the raindrop where it fall --use a series or a combination of waterways, terraces, tile lines and ponds to store storm water runoff. Design ponds for permanent water level, plus temporary flood retention with a regulated discharge flow, to other downstream storage. (9) INSTALL UPLAND WATER MANAGEMENT SYSTEMS. * Large drainage districts need to be developed to maintain and consistently managed.
107	Kansas	Sierra Club		Due to the disastrous nature of the floods of 1993, we believe that flood plain management is needed to prevent further human and environmental devastation, create green space, and protect wetlands. The Sierra Club supports a program of flood plain management that emphasizes: 1. Moving away from structural control of the river. Only rebuilding those levies most urgently needed. Control flooding by protection and restoring wetlands and backwaters. 2. Working with E.P.A. and other agencies to characterize and clean up contaminated sediments safely and to support measures which let sediments naturally move down Missouri and Mississippi Rivers. 3. Buying out communities and individuals who want to move out of the flood plain. 4. Restoring natural flood control process to the greatest extent possible.
108	St. Peters, Missouri	Regional/Local Gov't		Landfill and HTRW debris washing Downstream from Union Electric. Rights of property owners in the flood plain. Federal agencies working at cross purposes. Concerned about special interest influence. Corps leased property is not a model of proper flood plain management. Move Corps field offices into flood plain. ECONOMY - ST. PETERS * Floods in Festus/Crystal City cut off access to emergency equipment when Hwy. 62/67 inundated - public safety

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				problem. Social disruption got little attention in study. * Ungauged streams in Festus/Crystal City vicinity flood at lower elevations than reflected in Corps studies - underestimating damages. Studies need to be expanded to include other problematic streams. * There should be gov't standards for height when roads are rebuilt - Hwy. 61/67, a new road, still flooded. * NED guidelines cause social/economic community disruption far beyond damages reflected in study. NED philosophy contradicts SBA loans in wake of floods. * Economy considerations should include levees across the river, flood plain development over the years upstream, etc. * Piecemeal analysis of levee system has denied them a project, because of politics rather than legitimate analysis. (Levee on Illinois side extends about 60 miles.) St. Louis to Chester should be a "hot spot". * There should be allowances for special circumstances a town may have that might not fit into standard categories. (Urban bedroom communities). HYDROLOGY/HYDRAULICS: For St. Charles: Miss R.: Little higher level of protection levee desirable. MO R.: At least 100 year L.O.P. is needed or maximum possible. Flood Plain Management Assessment: * Hwy. 94/40 commuters 30,000 - 40,000 people, St. Charles County and St. Louis County Residents. * Hwy. 40 was flooded 3 weeks. * Impact commute time 45 minutes to 2 hours. * Ag levee set-backs without compensation should be considered a taking. * Setback of Ag levees would require many farmers giving up 50% of farmable land.

April District Summaries and Statistical Data

St. Paul District April Meetings Summary and Statistics

APRIL PUBLIC MEETING PRESENTATION - 1995

Hand outs on table near door: Executive Summary, Findings, Conclusions, and Hydraulic Tables. GIVE PEOPLE A COMMENT SHEET AS THEY ENTER THE ROOM.

PRESENTATION:

SLIDES	NARRATIVE
	10 to 15 minutes - Brief intro to Study and Systemic look at Mississippi & Missouri Rivers
BLANK SLIDE	
1,2) Present FPMA	**STUDY** - Floodplain Management Assessment (need slide to keep organized - highlight & show again, as move through presentation)
3)Brainstorming	The study was directed by Congress/ authorized in November 1993; started in January, 1994 and is to be completed in June. This assessment compared the impacts of the 1993 flood within floodplain management philosophies, flood control measures, and selected river reaches.
4) Regional location	The work was accomplished by five districts located in the midwest: St. Paul, Rock Island, St. Louis, Kansas City, and Omaha. The study area covers 3,500 miles of the Mississippi and Missouri rivers, as shown.
5) Word slide 6,7) 2 products	**Products from the Study:** development of UNET hydraulic model to show system-wide effects; GIS mapping of land use, environmental resources, critical facilities, and watersheds; historical overview of floodplain use; and a data collection from economics, environmental, hydrology/hydraulics and the institutional players involved in floodplain management. Slide 6 shows saturated soils in the watersheds of Missouri and Mississippi Rivers. Slide 7 shows Counties receiving disaster aid (includes counties not in floodplain). Do not mention unless questioned (Scheduling for this report did not allow time for completion of **all** mapping products; evaluation of **all** river reaches subjected to flooding in 1993, or coordination and evaluation of **all** data complied.)
8) Landsat image	Flood description: The 1993 flood was the greatest flood ever witnessed in some locations. Landsat image shows St. Louis Flood area: difference from July, 1988 (on left) to July, 1993, after flooding (on right). Persistent rainfall and flooding was unprecedented. 80% of damages were not related to overbank

flooding and damages, in general were much lower because of the existing system of Federal levees and reservoirs.This extreme flood inundated a large percentage of the floodplain and demonstrated how plants and animals, adapted to a flood-pulse (especially fish), can positively respond to a flood. Impacts of the flood on the floodplain forest will generate long-term changes in forest community structure. The stage reduction of the 1993 flood does not automatically equate to reduced flood damages.

9) Highlight slide — **EXISTING RESOURCES/ BASE CONDITIONS**

10,11) Bar graphs — Very different land uses occur on the floodplains of the Mississippi and Missouri river systems and between upper and lower reaches of these rivers. Slide 11 shows land use of both rivers combined and Slide 12 shows the rivers separated. Agricultural use accounts for over 75% of the Missouri River floodplain while the Mississippi river has between 31% to 64%, depending on the river reach. Wetlands and forests account for a higher percentage (15% to 25%) on the Mississippi than on the Missouri river (10%).

12) Wetlands role — Role of wetlands in flooding - A wetlands ability to absorb flood waters and possibly reduce flood damages varies by the 1) type of wetland, 2) location of the wetland within the watershed, and 3) wetlands hydrologic "condition" at the time of the flood. The "condition" can either increase or decrease flooding. Slide 12 shows the difference between a "dry base condition" and a "wet base condition," as what happened during the 1993 flood event, when existing wetlands were filled early. The sponge analogy is appropriate to some wetlands during some periods of the hydrology cycle: sometimes the sponge is dry, sometimes it is damp, and sometimes it drips all over the floor! Wetlands are an important part of upland runoff reduction and floodplain storage and conveyance. Floodplains provide opportunities for a wide range of diversity that includes both private individual and societal benefits: improves water quality, wildlife/fish habitat and gives people a place to recreate or rejuvenate in a natural environment.

20 to 30 minutes to briefly describe the results of the study (what does the data mean)

13) Highlight slide — **POLICY AND PROGRAM CHANGES (findings - refer to chapter 8)**

14) Bubble matrix — Reflects matrix in a simplified format - shows all policies and programs and economic, environmental and risk impacts.

15) Word slide — **NATIONAL FLOOD INSURANCE PROGRAM:** A number of reforms are included in Title V of PL 103-325 in 1994 that

strengthened compliance with the insurance requirement and expanded flood hazard mitigation planning opportunities. An expanded definition of flood risk beyond the current 100 year floodplain standard may be needed to achieve an improved understanding and appreciation of the potential for extraordinary flood losses in highly developed areas. Community Rating System has the potential to improve floodplain management and avoid flood damages.

16) Word slide **STATE AND LOCAL FLOODPLAIN MANAGEMENT/ZONING REGULATIONS:** Need for more effective local land use planning and zoning requirements, strict requirements for siting critical facilities, and an increase in the number of individuals and businesses that carry insurance - in order to meet responsibilities for flood risk.

17) Word slide **RELOCATION, MITIGATION, AND DISASTER RELIEF:** Flood hazard mitigation options, particularly acquisitions (buyouts) of substantially damaged structures, have been a more prominent part of the Federal response in recovering from the 1993 flood. Close to $200 million have been budgeted for future mitigation. Future disaster assistance and insurance needs could be significantly reduced if the problem of repetitively damaged structures is firmly addressed. Actuarially sound flood insurance coverage would help assure that those who invest and live in the floodplain accept appropriate responsibility for the damages that result from floods, especially new development.

18) Word slide **FLOODPLAIN RESTORATION:** Floodplain restoration, as
19) Profile of floodpl. opposed to wetland restoration, requires changes in the levee system to restore natural hydrologic functions and create the linkage back to main channel areas. Floodplain Management is not simply "Flood Control." Conversion or restoration of a small percentage of agricultural land use to wetland or other natural conditions can significantly increase the existing percentage of natural floodplain acreage. Such land conversion in the floodplain would not reduce flood peaks, assuming the same floodway width, but would have reduced payments for agricultural damages and provide many benefits beyond simply flood control. Current theories on floodplain function predict that the area needed for an improvement to the natural biota is probably fairly small and that restoration of a series of natural floodplain patches (a string of beads) connected by more restricted river corridors would be practical and beneficial.

20) Word slide **AGRICULTURAL SUPPORT POLICIES AND CROP INSURANCE:** The extent of floodplain acreage suitable for

conversion or restoration is small in compariason to the floodplain acreage that would continue to be farmed. Levee repair criteria are not sufficiently based on repetitive break or maintenance history; environmental considerations; hydrologic analysis; economic analysis; or system-wide effect.

21) Highlight slide **ACTION ALTERNATIVES (IMPACT EVALUATIONS - refer to chapter 9)**

22) Bubble matrix Shows action alternatives and impact categories

23) 2 reaches-examples

24) 2 Bar graph's **Only** refer to Hydrology handouts after showing the slides - people can pick up the two tables, two bar graphs and info sheet showing stage changes from the 1993 flood and the hydraulic impact to the alternatives at several locations (shaded areas will be discussed) along both rivers (Mississippi and Missouri).

25) Base conditions Examples are taken from GIS mapping in the report at the end of chapter 6, from Rock Island and Omaha - select one to show some of the action alternatives.

26) Map **Agricultural Levees Removed (alternative L):** A flood is the major way that exchanges of nutrients, organic matter, and organisms take place between the main channel and lateral floodplain areas. Levees break the linkage of floodplain ecosystem components.

— 27) Map **Agricultural Levees Setback (M): Omaha example only**

27,28) Map **Agricultural Levees Uniform Height (alternative N):** Systemically increasing levee heights to protect farm acreage in floodplains is not judged to be economically justifiable.

28,29) Map **Agricultural Levees Raise to 25 year (alternative O):**

No slide **Urban Levees:** No example on this. A 100 year floodplain level of protection often provides a false sense of security in developed or developing areas. Example: Chesterfield-Monarch levee was breached near St. Louis. Insert a slide if you have one.

29 —) Map **Critical Facilities (alternative Q): Rock Island example only** An example of inventory data that can be collected and located within the floodplain. More extensive iventory work in other districts needs to be completed.

29,30) **Remove Reservoirs (alternative S) :**

30,31) Map **Upland Runoff Reductions (5%, 10%) (alternatives V &W):** Acreage reserve programs in upland watershed areas have significant environmental benefits to: improved water quality, reduced sedimentation, improved wildlife habitat, and a reduction in runoff for more localized and frequent flood events. Reserved acres do little to reduce stages on the mainstem rivers during

	catastrophic events, such as the 1993 flood.
— 32) Map	Type of flooding (Omaha example only).
33) Wrap-up/close	Wrap-up and conclude (in your own words). Slide shows confluence of the Missouri and Mississippi Rivers. **Please complete the Comment Sheets** before leaving tonight. They must be filled out tonight - cannot be mailed in. Thank them for taking the time to complete the comment sheets and tell them to place in tray on table at the back of the room before walking out the door. Other handouts are available on the table.
34) Highlight slide	**CONCLUSIONS/QUESTIONS AND ANSWERS**: Open for questions.
35) Blank slide	

April Public Meeting Schedule for Floodplain Assessment Study

The following dates and locations have been identified, (All meetings will be held at 7 p.m.) :

Tuesday, April 18, 1995
So. St. Paul, Minnesota
Drovers Holiday Inn, 701 So. Concord Street
612-455-3600
Moline, Illinois
Holiday Inn of Moline, 6902 27th Street
Ballroom C, 309-762-8811
Alton, Illinois
Holiday Inn, 3800 Homer Adams Pkwy.
618-462-1220
Kansas City, Missouri
Adams Mark Hotel, I-70 at Blue Ridge Cutoff
800-444-2326

Wednesday, April 19, 1995
LaCrosse, Wisconsin
Holiday Inn, 529 Park Plaza Drive
Mississippi Room, 608-784-9500
Burlington, Iowa
Burlington Community High School Cafeteria
421 Terrace
Waterloo, Illinois
American Legion Hall, 405 Front Street
618-939-9990
Jefferson City, Missouri
Capital Plaza Hotel, 415 West McCarty
314-635-1234

Thursday, April 20, 1995
Quincy, Illinois
Quincy Senior High School, 3322 Main Street
Student Cafeteria, POC / admin: 217-223-8700
St. Peters, Missouri
Holiday Inn, 4221 South Outer Road
314-928-1500

Wednesday, April 26, 1995
Nebraska City, Nebraska
Lieds Center, 2700 Sylvan Road
402-873-8733

HANDOUT

FPMA COMMENT SHEET

We are very interested in your comments and would appreciate answers to the following questions:

(1) Check the one box that best reflects the interest that you represent.

- ☐ Agriculture
- ☐ Commercial
- ☐ Environment
- ☐ Government
- ☐ Home Owner
- ☐ Industry
- ☐ Recreation
- ☐ Regional Planning
- ☐ Other _____

(2) What state do you live in? _____

(3) What county do you live in? _____

(4) Check the one box that best describes where you live.

- ☐ Agricultural flood plain behind a levee
- ☐ Agricultural flood plain without a levee
- ☐ Urban flood plain behind a levee
- ☐ Urban flood plain without a levee
- ☐ Outside of flood plain

For the next two groups of questions you are asked to place priorities assuming that the goal of flood plain management is to

- Minimize the vulnerability of people to floods.
- Reduce flood damage and costs.
- Improve the health of the flood plain environment.

Please circle the number that indicates the priority you would give to the following programs:

		Low		Neutral		High
(5)	National flood insurance programs	1	2	3	4	5
(6)	State flood plain management programs	1	2	3	4	5
(7)	Local flood plain management programs	1	2	3	4	5
(8)	Relocation and mitigation programs	1	2	3	4	5
(9)	Disaster relief programs	1	2	3	4	5
(10)	Flood plain wetland restoration programs	1	2	3	4	5
(11)	Agricultural support policies	1	2	3	4	5

Please circle the number that indicates the priority you would give to the following alternatives:

		Low		Neutral		High
(12)	Limit flood fighting on agricultural levees	1	2	3	4	5
(13)	Remove agricultural levees	1	2	3	4	5
(14)	Agricultural levee setbacks	1	2	3	4	5
(15)	Uniform height on agricultural levees	1	2	3	4	5
(16)	Raise agricultural levees	1	2	3	4	5
(17)	Raise urban levees	1	2	3	4	5
(18)	Protect critical facilities	1	2	3	4	5
(19)	Upland retention and additional watershed measures	1	2	3	4	5

(20) Did the information presented at this meeting change your opinion? ____Yes ____No

Thank you.

DRAFT

Handout

ALTERNATIVE ACTIONS AFFECTING HYDRAULIC CONDITIONS IN THE FLOODPLAIN

METHOD OF ANALYSIS

The mathematical computer model program UNET, developed and programmed by Dr. Robert Barkau, was chosen to simulate the river system as the hydraulic basis of this study. UNET is a one-dimensional, unsteady flow program which simulates unsteady flow through a full network of open channels and reservoirs. A UNET unsteady flow model was constructed of the Mississippi, Missouri, and significant tributary rivers. Corps District offices along the Mississippi River include St. Paul, Rock Island, and St. Louis. Corps District offices along the Missouri River include Omaha and Kansas City. While coordinating with all involved Corps Districts, each unsteady flow model was developed independently. Assimilation of model results and system wide routing was then performed for all conditions examined between adjacent Districts.

During the 1993 flood, the Missouri River experienced three flood crests. Many of the agricultural levees within the Kansas City District failed as flood stages exceeded the design height of the levees by several feet. On the third and highest crest, virtually all agricultural levees were overtopped and there was significant overbank flow. A unique levee algorithm was programmed to represent the Missouri River levees and simulate their singular mode of failure that was manifested during the 1993 flood event. The Missouri River levees failed early in the 1993 flood event, and subsequently the protected area behind the levees filled with water from the river. During the final third crest, the levees degraded and the floodplain behind the levees actively conveyed flow. The Missouri River functioned under two geometric conditions: one in which levees constrained the flow to the channel, but provided storage behind the levees; and the second in which the levees no longer constrained the flow, and the overbank actively conveyed water as if the levees did not exist.

With the new levee algorithm, UNET models levees in the manner described in the following two paragraphs: When a levee fails at a breach and the area behind the levee subsequently fills, the flow through the breach section depends on the elevation of the river and the elevation of the water in storage behind the levee. The water surface inside the levee interior is assumed to be horizontal. When the river elevation exceeds a specified elevation, or when the river discharge exceeds a specified flow, then the levee storage cross-sectional area and conveyance is added to the river cross-sections and the program routes flow through the channel and the entire width of the floodplain. When the river falls below a specified elevation or the flow falls below a specified discharge, the levee storage cross-sectional area and conveyance is subtracted from the cross-sections and the river once again interacts with the levee through the breach.

ACTIONS EVALUATED

Alternatives. Several alternatives were analyzed to address flood plain conditions and study objectives as outlined in the correspondence authorizing the study. Many questions have been raised following the 1993 flood concerning the impact levees have on flood heights. This included various alternatives involving the existing agricultural levees and several upland retention/watershed measures both structural and nonstructural. Evaluation of levee action alternatives focuses on agricultural levees because the vast amount of land protected by these levees offers the potential for storage of flood waters. In most cases, limited opportunity for storage or conveyance of flood water exists behind urban levees because of the relative size of the protected area. Agricultural levee alternatives include levee removal, levee confinement to contain the 1993 event and altering levees to provide only a 25-year level of protection. Upland retention/watershed measures include no main stem

reservoirs, runoff reductions of 5% and 10%, and revised operation of main stem Missouri River reservoirs. All the above alternatives were system wide and included passing flow and stage information from upstream districts to downstream districts. Impact study reach evaluations were also completed for several reaches within the assessment area.

Base Condition. Levees in the base condition model include freeboard added to the levee crown during flood fight operations. Although the additional freeboard in most cases did not prevent levee failures during the 1993 flood, it did affect the timing of the failures. Had additional height not been added to the levees, failures would have occurred much earlier in the event. Levee failures in the base condition model were reproduced on the dates and times they actually occurred. In all other alternatives modeled, levee overtopping was dependent on the relationship between the levee crown elevation and the water surface elevation of the river. Timing of levee failures plays an important role in determining the effects levees have on flood stages. Levees which fail close to the peak of the event, may have a substantial impact on flood stages. Results of the base condition analysis closely matched the 1993 flood event.

Agricultural Levee Alternatives. The effects of several alternative agricultural levee heights and locations were analyzed employing calibrated UNET models developed for the base condition. For each alternative, the base condition UNET model was modified to reflect geometry changes required to simulate the effect on conveyance within the model. Calibration parameters determined in the base condition were not altered for any of the alternatives. Since no federal agricultural levees exist either upstream of Omaha, Ne, on the Missouri River or upstream of Lock and Dam 10 on the Mississippi River, only the UNET models downstream of these locations were used to assess the systemic alternatives.

Levee Removal. For this alternative, all agricultural levees were removed. Simulations were performed with both a minimum and maximum roughness level within the overbank area. Roughness values were selected to provide a reasonable lower and upper bound for computed results. Factors affecting conveyance were not evaluated in detail. For example, removal of the levee would not result in an effective flow width equal to the entire valley width. Physical factors such as channel meandering, vegetation, topography, structures such as roads and railroads, and other components will restrict effective flow width to a value much less than the cross section width. Various forms of land use within the overbank such as farming and natural habitat will have considerably different roughness values. Levee removal will remove channel constraints such that channel meandering and overbank sediment deposition may actually reduce conveyance. The roughness values chosen for the area between the existing agricultural levees and the bluff represent both Manning's "N" and non-effective flow areas. Land use between the river and the levee was assumed to remain the same as it is now.

1993 Flood contained within Agricultural levees. For this alternative, all agricultural levees were raised infinitely high such that the 1993 flood event was confined to the existing area between the levees. Levee locations or roughness values were not altered for this alternative.

Levee Height at 25 Year Level. For this alternative, the height of all agricultural levees were set to correspond with an estimated 25 year profile based on previous hydrology. Federal levees, which are currently higher than the 25 year elevation, were notched to an elevation equal to the 25 year elevation. When flood levels exceed the 25 year level, the levee cells fill with water. In this manner, the levee cells along the channel act as detention basins to store water when river elevations exceed the 25 year elevation.

Upland Retention/Watershed Measures. Various upland flood retention / reduction measures exist which may affect inflow rates to the river system. For the evaluation of these measures, no modifications to UNET model geometry were performed. Assessment was performed by adjusting inflow hydrographs to the UNET model for each scenario examined.

Without Federal Reservoirs. The analysis of the 1993 flood event without the federal reservoirs storage was accomplished by determining the discharge hydrograph at each site without the storage effects of the reservoir. These unregulated hydrographs were then routed downstream to determine the effects on peak discharges and stages at critical locations. The hydrographs were routed to the Missouri and Mississippi mainstems from the upstream tributaries using hydrologic routing and the UNET model was used to route the hydrographs through the floodplains to determine resultant water surface profiles. The flood storage in federal reservoirs had significant impacts on flood stages during the 1993 flood on the Mississippi River from Grafton to Cape Girardeau and on the Missouri River from Gavins Point Dam to the mouth at St. Louis. Flood stages in these reaches would have been several feet higher if the federal reservoir system had not existed.

Runoff Reduction. For this alternative, measures which would reduce the total runoff volume during the 1993 flood were evaluated by reducing mainstem and tributary inflow hydrographs to the model by both 5 and 10 percent. Based on the St. Paul District's preliminary studies of wetland storage and other upland retention methods, it was determined that the maximum reasonable amount of available storage would reduce the total runoff volume into the Mississippi and Missouri Rivers of between 5 and 10 percent. Depending on individual drainage basin characteristics, some tributary basins could store more than 10 percent of the basin runoff volume and some tributary basins have little or no upland retention storage available. To simplify the UNET modeling, all the inflow hydrographs were reduced by an equal amount. In reality, runoff reduction would not be distributed equally over the total inflow hydrograph but instead would have a major impact on the shape of the inflow hydrograph at the beginning of the 1993 event and would have little or no impact on the peak discharges and stages on the river.

Missouri River Hydraulic Impact Alternatives
Change in Stage from 1993 Flood

MISSOURI RIVER GAGE	RIVER MILE	AGRICULTURAL LEVEES REMOVED		1993 FLOOD CONFINED BETWEEN AGRICULTURAL LEVEES	25-YEAR LEVEE	NO RESERVOIR	REDUCE RUNOFF BY 5%	REDUCE RUNOFF BY 10%
		AGRICULTURAL LOW ROUGHNESS	NATURAL HIGH ROUGHNESS					
OMAHA	615.9	-0.3	+0.1	0.0	0.0	+4.9	-0.7	-1.4
NEBRASKA CITY	562.6	+4.7	+2.3	0.0	+1.8	+2.5	-0.7	-1.5
RULO	498.1	-1.3	+2.0	+7.2	-2.6	-0.1	-0.5	-0.5
ST. JOSEPH, MO	448.2	-3.0	-2.9	+1.6	-5.0	+0.4	-0.2	-0.6
KANSAS CITY, MO	366.1	+1.2	+2.9	+2.8	+4.5	+5.1	-1.1	-2.2
WAVERLY, MO	293.4	-2.7	-0.7	+6.9	-0.7	+1.2	-0.3	+1.2
BOONVILLE, MO	197.1	-0.1	+1.8	+4.1	-0.3	+1.4	-0.5	-0.4
HERMANN, MO	97.9	+1.0	+4.6	+6.8	-0.8	+3.6	-0.2	+0.6
ST. CHARLES, MO	28.3	+2.5	+0.8	+2.5	+1.8	+3.8	-0.2	-0.3

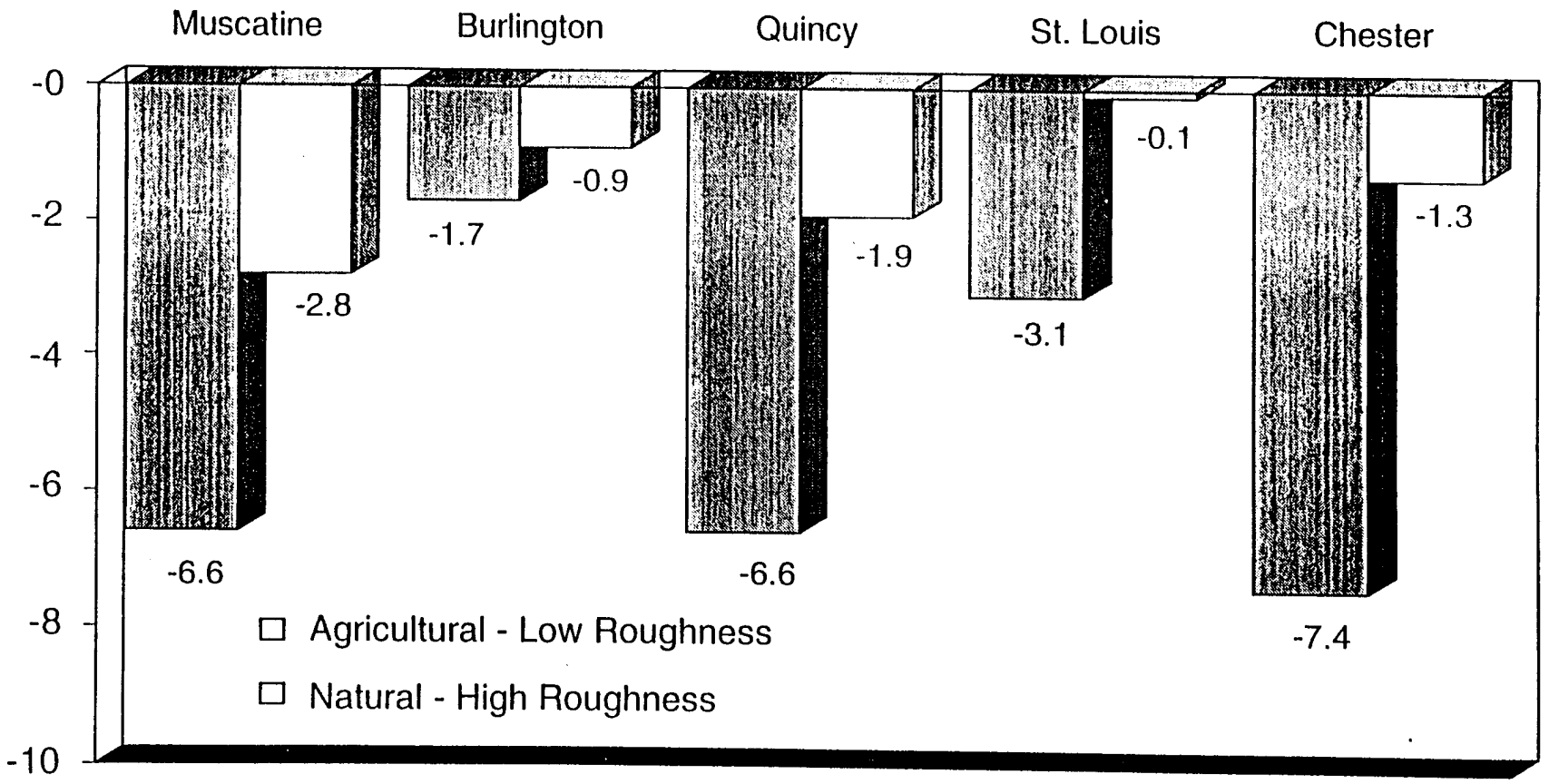
Note: Values in this table are approximate and appropriate only for this assessment. A more detailed model is required to accurately estimate the flow capacity of the floodplain. Roughness values for the floodplain were selected to represent variations in land use and provide an upper and lower bound for overbank conveyance. Data on bridges, roads, railroad embankments, and existing vegetation were unavailable for the model. As a result, effective overbank flow area is overstated at some locations. Although further analysis may result in different stages for the without levee conditions, the general trends should remain the same.

Mississippi River Hydraulic Impact Alternatives
Change in Stage from 1993 Flood

MISSISSIPPI RIVER GAGE	RIVER MILE	AGRICULTURAL LEVEES REMOVED		1993 FLOOD CONFINED BETWEEN AGRICULTURAL LEVEES	25-YEAR LEVEE	NO RESERVOIR	REDUCE RUNOFF BY 5%	REDUCE RUNOFF BY 10%
		AGRICULTURAL LOW ROUGHNESS	NATURAL HIGH ROUGHNESS					
ST PAUL	839.3	N/A	N/A	N/A	N/A	0.0	-0.6	-1.3
WINONA	725.7	N/A	N/A	N/A	N/A	0.0	-0.5	-1.0
L&D 10 TW	615.2	N/A	N/A	N/A	N/A	0.0	-0.6	-1.2
CLINTON	588.7	0.0	0.0	0.0	0.0	0.0	-0.7	-1.4
DAVENPORT	565.1	-1.6	-0.8	+0.2	-0.2	0.0	-0.7	-1.5
MUSCATINE	455.2	-6.6	-2.8	+0.3	-0.6	0.0	-0.7	-1.5
BURLINGTON	403.1	-1.7	-0.9	+0.3	-1.1	0.0	-0.9	-1.7
QUINCY	327.9	-6.6	-1.9	+3.8	+2.3	+0.3	-0.9	-1.4
HANNIBAL	309.9	-6.2	-1.5	+4.2	-3.3	+0.4	-1.0	-1.9
L&D 22 TW	301.1	-5.5	-1.6	+3.5	-3.2	+0.3	-0.7	-1.5
GRAFTON	218.3	-1.3	+1.0	+5.2	-4.7	+3.3	-0.3	-1.8
ST. LOUIS	179.6	-3.1	-0.1	+6.3	-3.8	+3.2	-1.1	-1.2
CHESTER	109.9	-7.4	+1.3	+5.8	-3.8	+4.0	-1.2	-1.8
CAPE GIRARDEAU	52.0	-1.0	+1.3	+4.1	-2.6	+3.2	-0.6	-1.2

Note: Values in this table are approximate and appropriate only for this assessment. A more detailed model is required to accurately estimate the flow capacity of the floodplain. Roughness values for the floodplain were selected to represent variations in land use and provide an upper and lower bound for overbank conveyance. Data on bridges, roads, railroad embankments, and existing vegetation were unavailable for the model. As a result, effective overbank flow area is overstated at some locations. Although further analysis may result in different stages for the without levee conditions, the general trends should remain the same.

AGRICULTURAL LEVEES REMOVED - MISSISSIPPI RIVER



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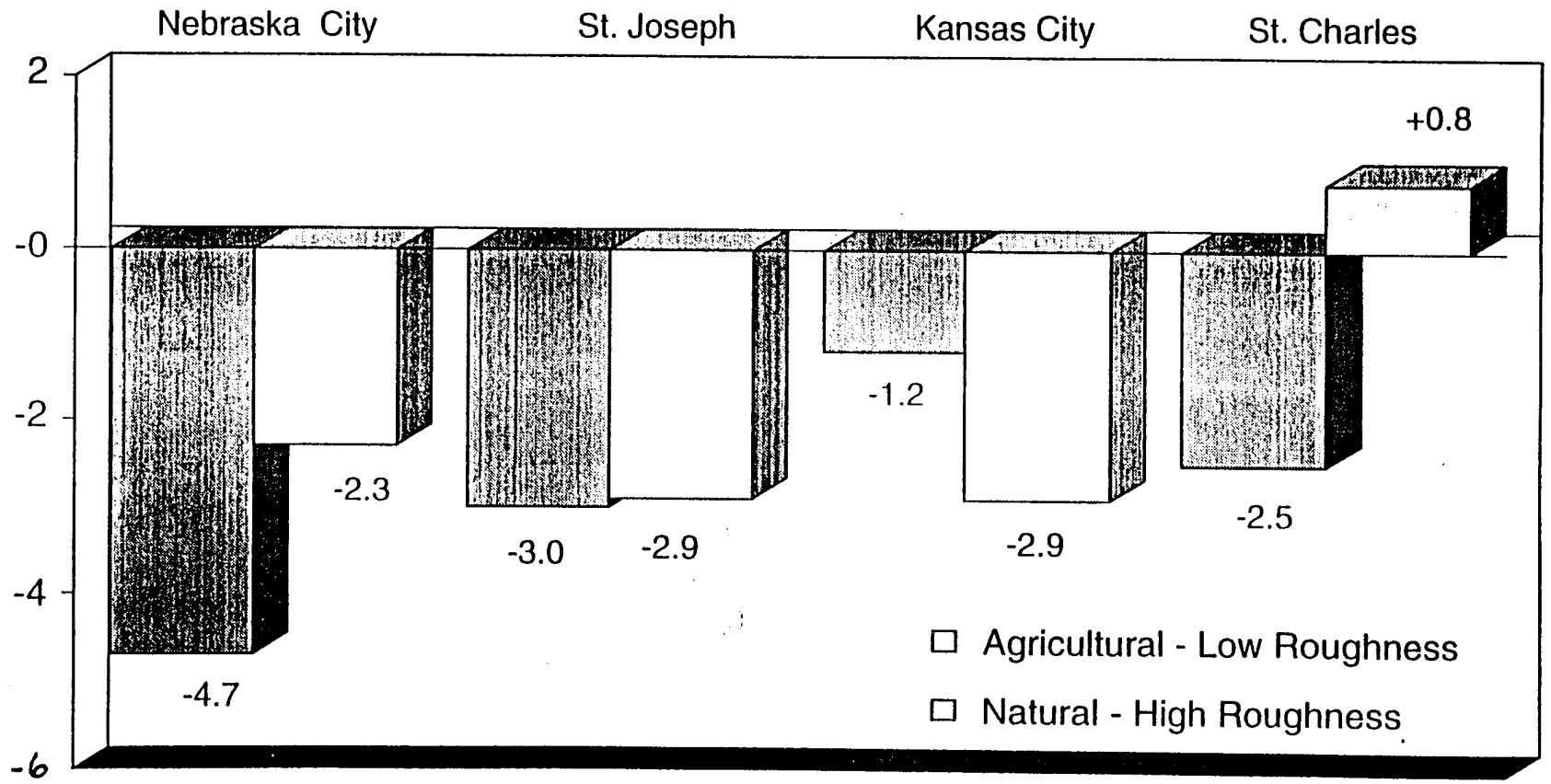
AGRICULTURAL LEVEES REMOVED - MISSOURI RIVER



VD045KM-18

CENCS-PE-M-FM DRAFT NOTES 20 April 1995
FN: fpmamtgs

QUESTIONS ASKED AT FINAL TWO FPMA PUBLIC MEETINGS IN ST. PAUL DISTRICT
- 18 April 1995, South St. Paul, 7:00 - 8:30 p.m. (10 attendees)
- 19 April 1995, La Crosse, WI, 7:00 - 8:45 p.m. (18 attendees)

South St. Paul Meeting, 18 April 1995

Q U E S T I O N S & R E S P O N S E S

1. In the slide presentation, why is there a major difference in stage reduction with the ag levee removal alternative in comparing the "continued agriculture low roughness" condition and the "natural high roughness" condition?? At Nebraska City, the low roughness condition resulted in a much larger stage reduction than the high roughness condition, as expected (-4.7 ft. and -2.3 ft.), but at Kansas City the opposite pattern is shown in the bar chart (only -1.2 ft. with low roughness but -2.9 ft. with high roughness). Why??

(Scott Jutila provided the response after the meeting, indicating that a much narrower channel width at Kansas City is responsible for the unexpected reversal of the stage reduction pattern in comparing the low roughness versus high roughness stage changes at this location).

2. In the GIS map slide showing critical facilities, does the shaded area represent the 1993 extent of flooding?

(Terry Birkenstock confirmed after the meeting the initial response given to the question when it was asked, that the shaded area in the slide did represent the 1993 flood extent in the reach below the Quad Cities).

3. Is there some value in extending flood insurance requirements to areas protected by levees?

(Curt Meeder responded that it is an interesting concept that was identified in the Galloway report, but that the NFIP reform legislation in 1994 did not include any such provisions).

4. Did we consider different types of flooding, such as that caused by rapid snowmelt, as a part of the Assessment?

(Response was no; focus was on the 1993 event).

5. Is there a "threshold" on the number of ag levees that can be built before you begin to increase downstream river stages dramatically?

(Scott Jutila provided the response, indicating the systemic impacts can now be examined through use of the UNET model. Otherwise, there is not a simple answer for any given reach or for the system as a whole without doing a substantial number of model runs. Ag levees can cause changes in stages upstream and downstream.)

6. Who can best benefit from the information in the report?

(Dave Loss responded that the report will be transmitted back to Congress in response to the study authorization. Findings and conclusions should assist policy makers in considering changes that will improve floodplain management practices).

7. An anecdote was provided from the audience about a government buyout of farmland in Iowa, where the DNR apparently turned around and leased back the land to farmers.

(Dave Loss and NRCS rep responded that such a situation could occur, but that the government liability for disaster assistance would certainly have been removed, meaning that farming on the leased acreage would be entirely at the farmer's risk).

8. What policy changes might happen in the next 5-10 years? The report contains a lot of good ideas, but what is likely to get implemented?

(General discussion ensued with mention being made of the FEMA national review of Natural Hazards Mitigation strategy, with a draft report out and a final report forthcoming, including such concepts as all hazards insurance, etc.).

La Crosse meeting, 19 April 1995

Q U E S T I O N S & R E S P O N S E S

1. What about past Corps actions that have contributed to more flooding, such as wing dam construction with subsequent siltation behind the wind dams? The observer insists that filling in takes place and restricts the flow capacity. It's like putting sand in the bottom of a glass; it takes less water to overflow or "flood" the glass once the sand takes up space at the bottom.

(Response from Scott Jutila and Dave Loss explained that main channel is scoured, providing a larger, deeper main channel cross section for increased flows. Assessment finding on this subject is that Corps structures did not contribute to worse flooding on the Upper Mississippi River during the 1993 flood. The Missouri River situation is not able to be answered without more research).

2. Some in the past have suggested that the dam gates should be opened in advance of floods to pass more water down sooner ahead of the arrival of flood waters.

(Response from the audience {Arne Thomsen from La Crosse Project Office} and from Scott and Dave is that there is almost no storage available for flood control purposes on the Upper Miss main stem and that such a strategy would not work for major floods on the river.)

3. Farmlands that were drained seemed to have the most flood problems. Conversion to farmland speed up runoff to the rivers.

(Scott's response basically confirmed the observation, especially in areas shown on the slide with high percentages of hydric soils).

4. City of La Crosse changed the flood gages at time of 1993 flood to a location half a mile farther downstream, with a one foot lowering of the gage readings at the new location in comparion with past readings at old gage site. Residents were caught unaware because they were not informed of this change.

(Arne Thomsen confirmed that a satellite network/gage reading problem led to the change in gage location and that this information and the change in stage readings that resulted were not communicated adequately to local citizens in advance of the flood).

5. Forecasts have been inadequate and untimely at times of flood in this area of the basin. Information has not been made available to the public. Accuracy is only 10 hours in advance of the event or less. The questioner recognizes the challenges and even suggests that they ought to be acknowledged.

(Scott/Dave response was that technological improvements in forecasting and flood modeling are being made; the National Weather Service has lead responsibility).

6. The Corps needs to consider the original river conditions and the subsequent man-made changes to the river as impacting flooding. Bridges also restrict flood flows. New bridge at Prairie du Chien in 1973 backed up local flows by one foot and made the local flooding worse. These types of changes should be communicated to the public. Bridge approaches can also constrict flood flows, not just the bridge piers or abutments.

(Scott's response acknowledges localized effects on flood flows for up to 1/2 mile upstream of the point of constriction, but no systemic impact).

7. As the Corps regulates the pools, can we provide <u>advance</u> notice, not just after-the-fact day old reports in the local newspaper? A mistake happened this past winter, where the pool level was allowed to drop a stage of 4.1 feet and large fish kills occurred locally.

(Arne's response confirmed that gate adjustments are made daily at L&D 8 with the Water Control office in St. Paul issuing the instructions for these daily gate settings. No real way to provide advance notice of what gate adjustments will be.)

8. What are the comparative damages between the flood damages on the Mississippi River and those damages occuring from other disaster around the country and world? Is evacuation of floodplains the only answer? There is a sense of unfair treatment in the Federal response. Private landowners want to be able to develop and provide tourism and recreation opportunities, but FED & STATE government restrictions on floodplains, wetlands, maintaining high value

farmlands in urbanizing areas, etc., all restrict private landowner rights.

(Dave's response indicated that the assessment was not recommending any restrictions on private land use rights, but was directed at wise use of floodplain resources).

9. Are we going to analyze more frequent flood events?

(Dave's response was that this work would be useful follow up effort but that it is not a part of the FPMA and not a part of any study authorization at this time).

10. How does this effort differ from the post flood reports recently published?

(Dave's response was that the post flood reports covered the meteorological and hydrologic aspects of the 1993 flood with some limited data on economic damages. The FPMA report is much more detailed with hydaulic modeling outputs, policy/program reviews, much more flood damage and environmental resources data, etc.)

11. Who is going to follow up with any policy changes? What is going to happen to FEMA?

(Dave's response is that the report will be transmitted to Congress. The political process will have to determine what actions will be pursued, but that the results are not intended to be only placed on a bookshelf. A lot of interest continues in this subject and there is momentum for significant changes. Many actions have already taken place with flood insurance reform, etc.)

12. More local press attention is needed in announcing these meetings and in covering this issue.

(Response confirmed that 3 notices had been provided to local media in advance).

Questions/Responses summary
prepared by:

Curt Meeder

Curt Meeder
Regional Economist
St. Paul District

FLOODPLAIN MANAGEMENT ASSESSMENT
OF THE
UPPER MISSISSIPPI AND LOWER MISSOURI RIVERS
AND THEIR TRIBUTARIES

Attendance for Public Meeting

April 18, 1995
South Saint Paul, MN

	Name	Representing	Telephone	Address
1.	Robert Axtmann	Sierra Club	561-1671	8217 Ewing Ave N. Brooklyn Park, MN 554
2.	Bruce Hancock	Riverway Co.	835-6720	5200 W. 102nd St #307 Bloomington MN 55437
3.	Randee Loss	Citizen	(715)386-2974	Hudson
4.	Dave Dickison	watergate marina	292-7526	St. Paul
5.	John Ourada	USDA - NRCS	612-290-3672	St. Paul
6.	Nancy Duncan	Nat'l Park Service	612-290-4160	175 E. 5th St St. Paul
7.	Lawrence Benson	CFSA/RM/USDA	612-290-3304	World Trade Ctr Ste 920
8.	Kevin Erickson	CFSA/USDA	612-290-3304	60
9.	Tom Lutgen	MDNR	612 296-0522	500 Lafayette St. Paul Mn
10.	Mark Carpenter	Riverway Co.	835-6700	
11.				
12.				
13.				
14.				
15.				
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FLOODPLAIN MANAGEMENT ASSESSMENT
OF THE
UPPER MISSISSIPPI AND LOWER MISSOURI RIVERS
AND THEIR TRIBUTARIES

Attendance for Public Meeting

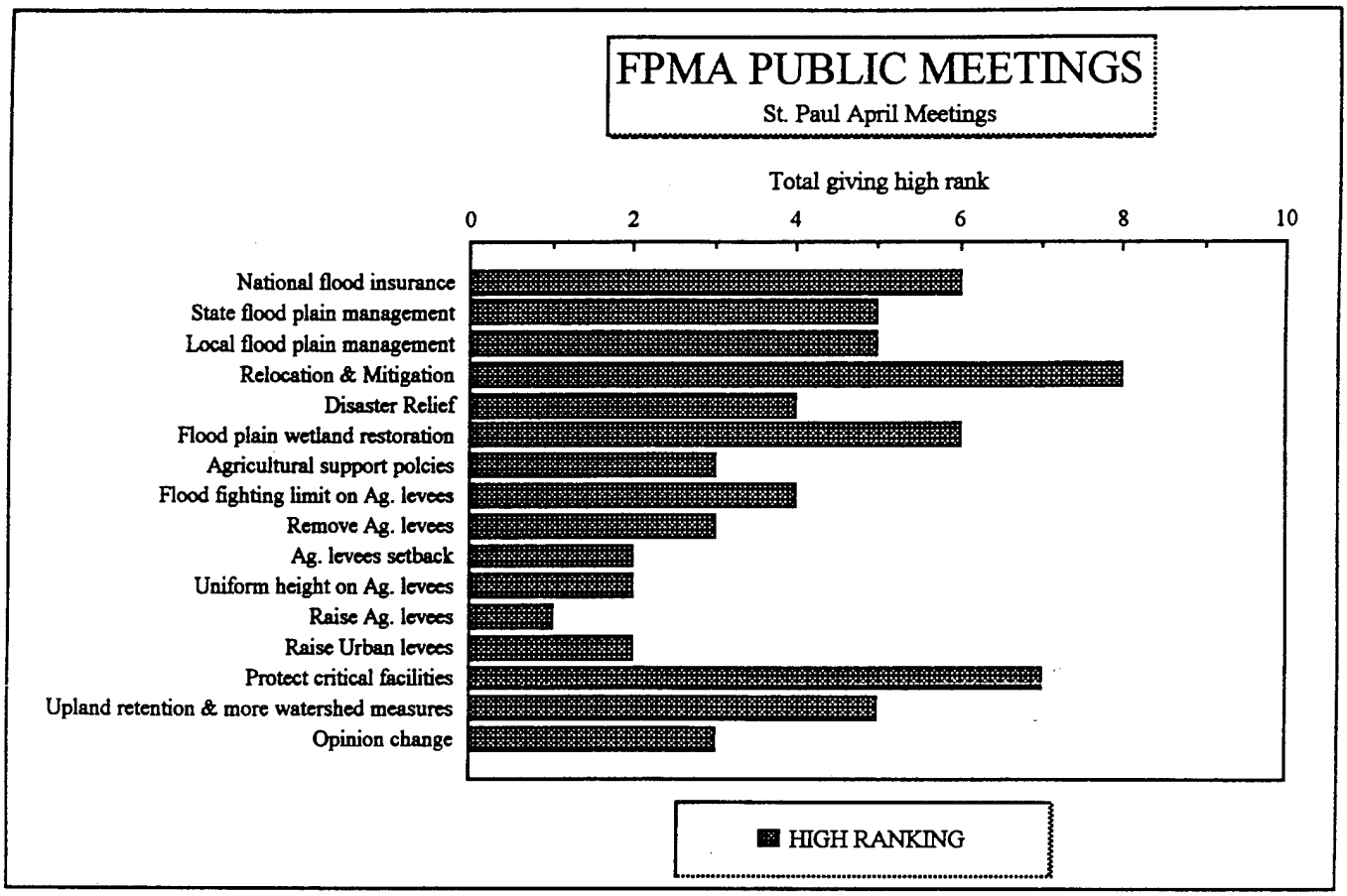
April 19, 1995
LaCrosse, WI

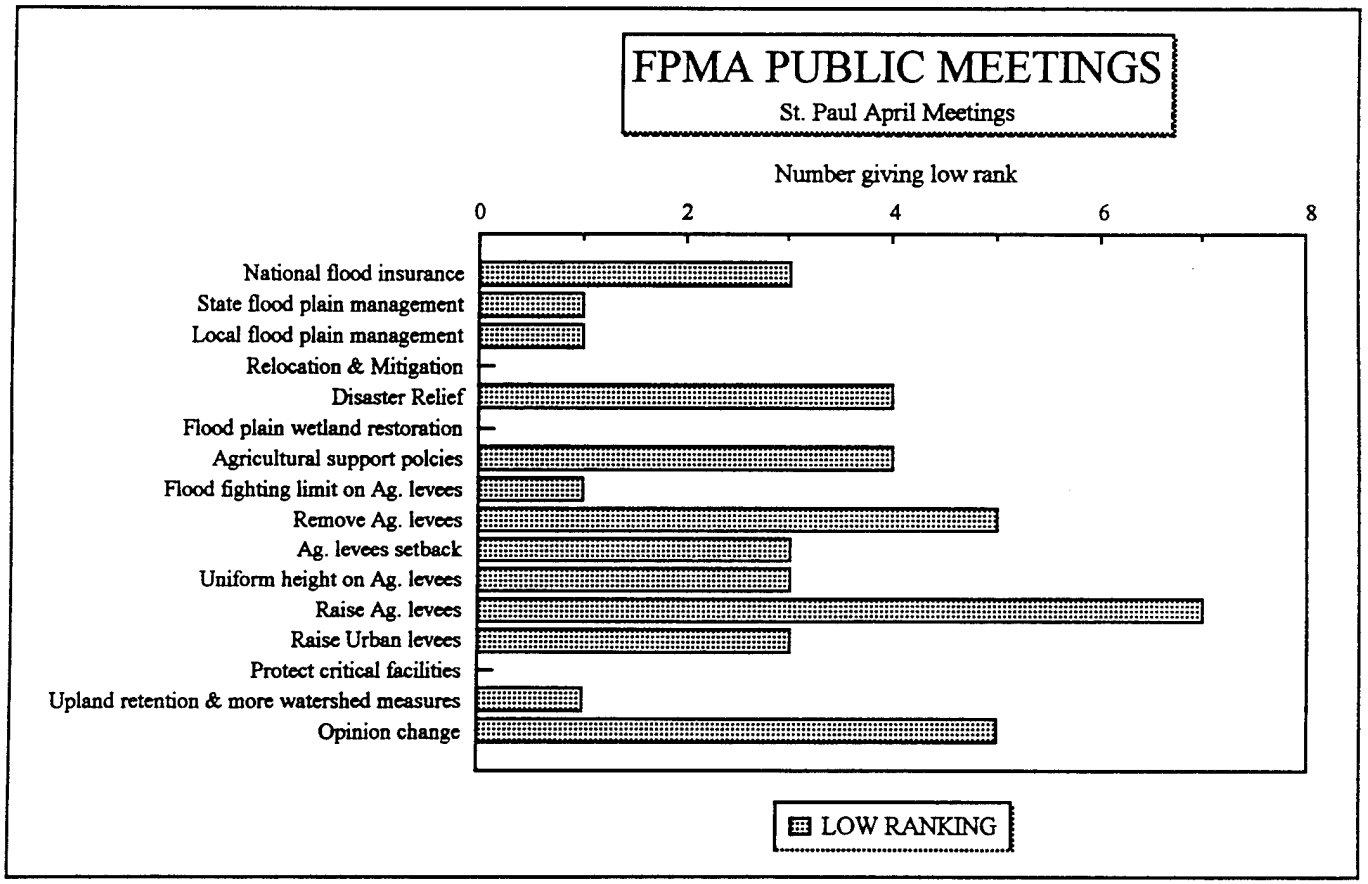
	Name	Representing	Telephone	Address
1.	John E Flynn	Self	6087877358	224 So 9th LaCrosse
2.	Jorlene Ray	Vernon Co Pow. & Light	608-689-2526	RT1 Genoa
3.	Jack Blask		(608) 689-2506	R1 Box 211 Genoa
4.	Bill Howe	Dairyland Power	608-396-7441	BX 149 Dairyland
5.	JOHN P. RYBARCZYK	CRAWFORD COUNTY	608 326 0294	PRAIRIE DU CHIEN
6.	Hal Scheie	Self	507 895 4193	Box 2348 La Crosse
7.	Larry Fricksn	The Country Today	(800)236-4004	Eau Claire
8.	Jerry Lee	Self	507 895 6341	La Crescent
9.	Rudy Schnurrer	self	2108 Sisson Drive	La Crosse
10.	Richard Mini	La Crosse Tribune	401 N 3rd	La Crosse
11.	Reggie McLeod	Big River	POB 741	Winona
12.	Howard Jessen	WKBT-TV	(608) 784-7897	141 S 6th St La Crosse
13.	Marion Havlik	Malacological Consultants	608-782-7958	160 Main La Crosse, WI 54601
14.	Jerry Dukerschein	WDNR	608-783-6169	575 Lester Ave. Onalaska, WI
15.	DAVE SKOLODA	Onalaska Community Life	526-3713	BOX 66 Holmen 54636
16.	George Johnston	Dairyland Power	608 7571322	Box 817 LaCrosse WI 54601
17.	BRAD WILLIAMS	WIZM/Z93 RADIO	(608) 782-0650	P.O. BOX 99, LA CROSSE
18.				
19.				
20.				

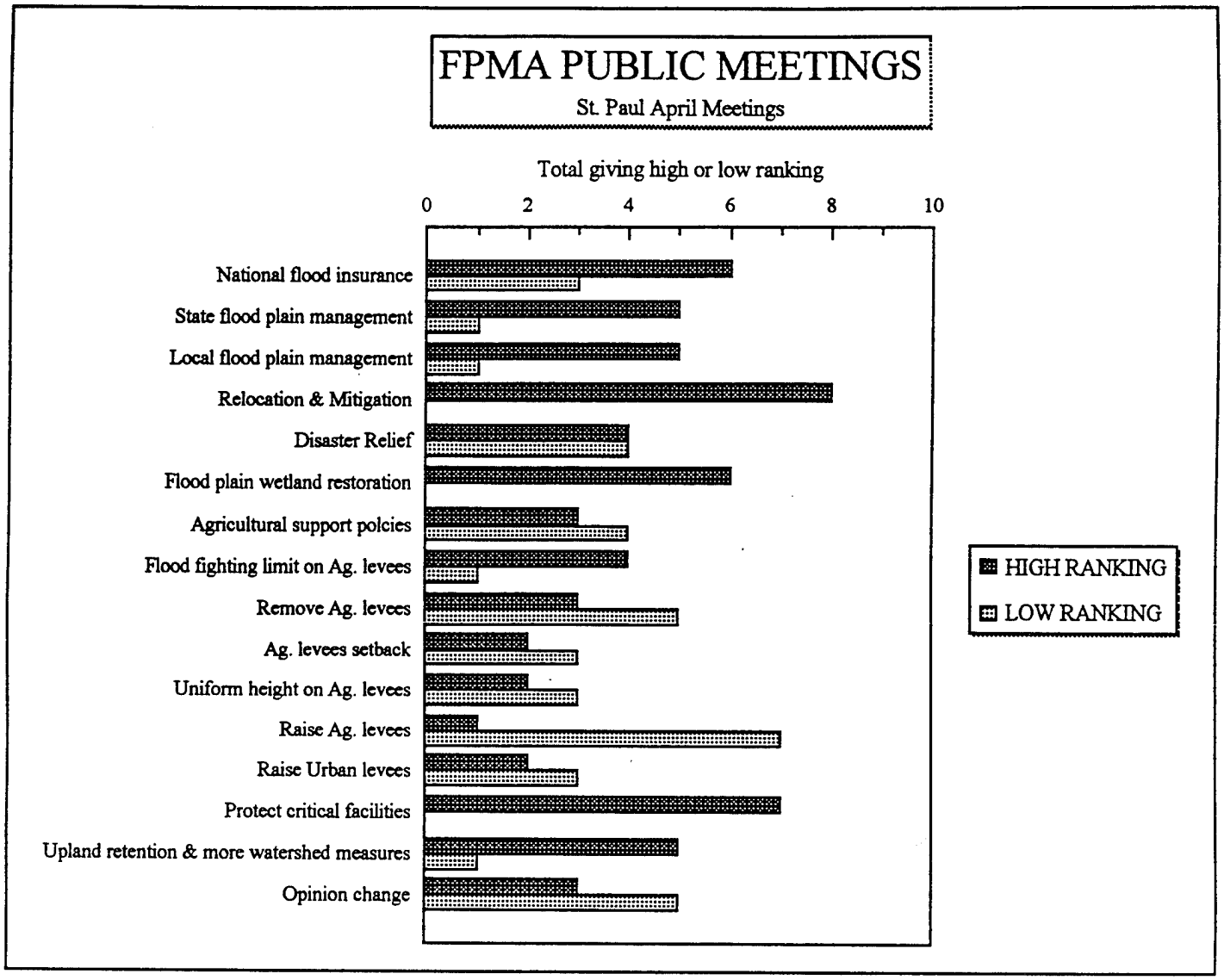
					PRIORITY RANKING OF THE FOLLOWING PROGRAMS (Low = 1, High = 5)						
I.D.	INTEREST	STATE	COUNTY	LOCATION	National flood insurance	State flood plain mngt	Local flood plain mngt	Relocation & Mitigation	Disaster Relief	Wetland Restoration	Agricultural support
SP1	H, R	MN	DAKOTA		5	2	2	3	4	5	5
SP2	C	MN	HENNEPIN	OFP	1	3	3	4	2	4	2
SP3	G	MN	RAMSEY	OFP	1	5	4	4	2	5	2
SP4	C	MN	DAKOTA	OFP	1	3	3	4	2	3	2
SP5	G	MN	WASHINGTON	OFP	5	4	4	4	5	5	5
SP6	A	MN	DAKOTA	OFP	4	3	3	4	5	3	5
SP7	G	MN	WASHINGTON	OFP	5	4	4	5	3	5	3
SP8	R	WI	ST. CROIX	OFP	4	4	4	5	5	3	3
SP9	E	MN	HENNEPIN	OFP	4	5	5	4	2	4	2
LC1	G	MN	HOUSTON	OFP	2	4	4	3	4	4	2
LC2	G	MN	HOUSTON	OFP	3	5	5	5	3	5	5
LC3	H	WI	LA CROSSE	UFPWOL			5				
LC4	H	MN	HOUSTON	UFPWOL	5	1	1	1	1	1	1
LC5	H	MN	HOUSTON	UFPWOL	5	1	1	1	1	1	1
LC6	H	WI	CRAWFORD	UFPWOL	1	1	4	1	1	4	1
LC7	H	WI	CRAWFORD	UFPWOL	1	1	4	1	1	4	1
LC8	E	WI	LA CROSSE	OFP	4	4	4	4	5	4	2
LC9	O-Publication	MN	WINONA	UFPBL	4	4	3	5	2	5	4
LC10		WI	VERNON		1	1	5	1	1	1	1
LC11	E	WI	LA CROSSE	UFPWOL	3	3	3	5	4	5	3

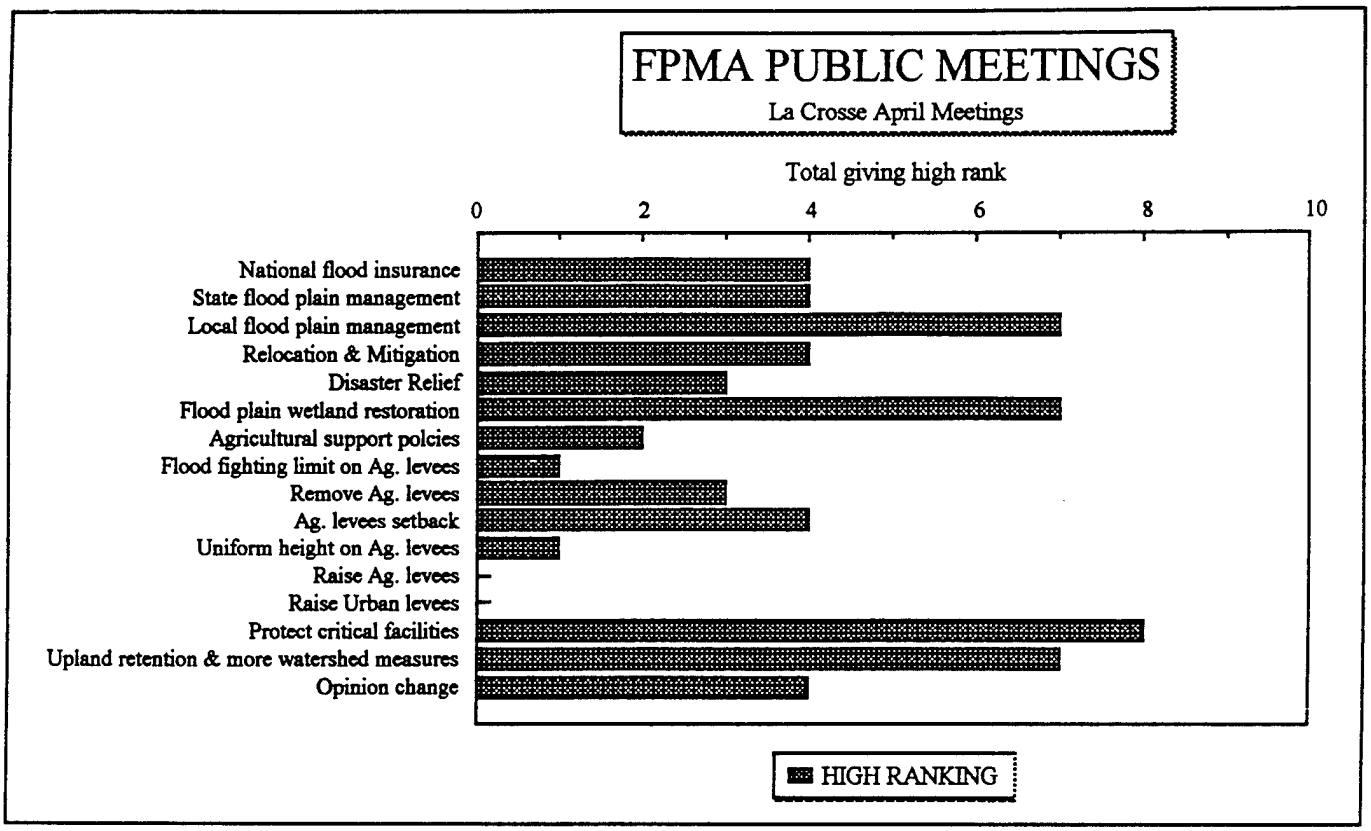
PRIORITY RANKING OF THE FOLLOWING ALTERNATIVES (Low = 1, High =5)

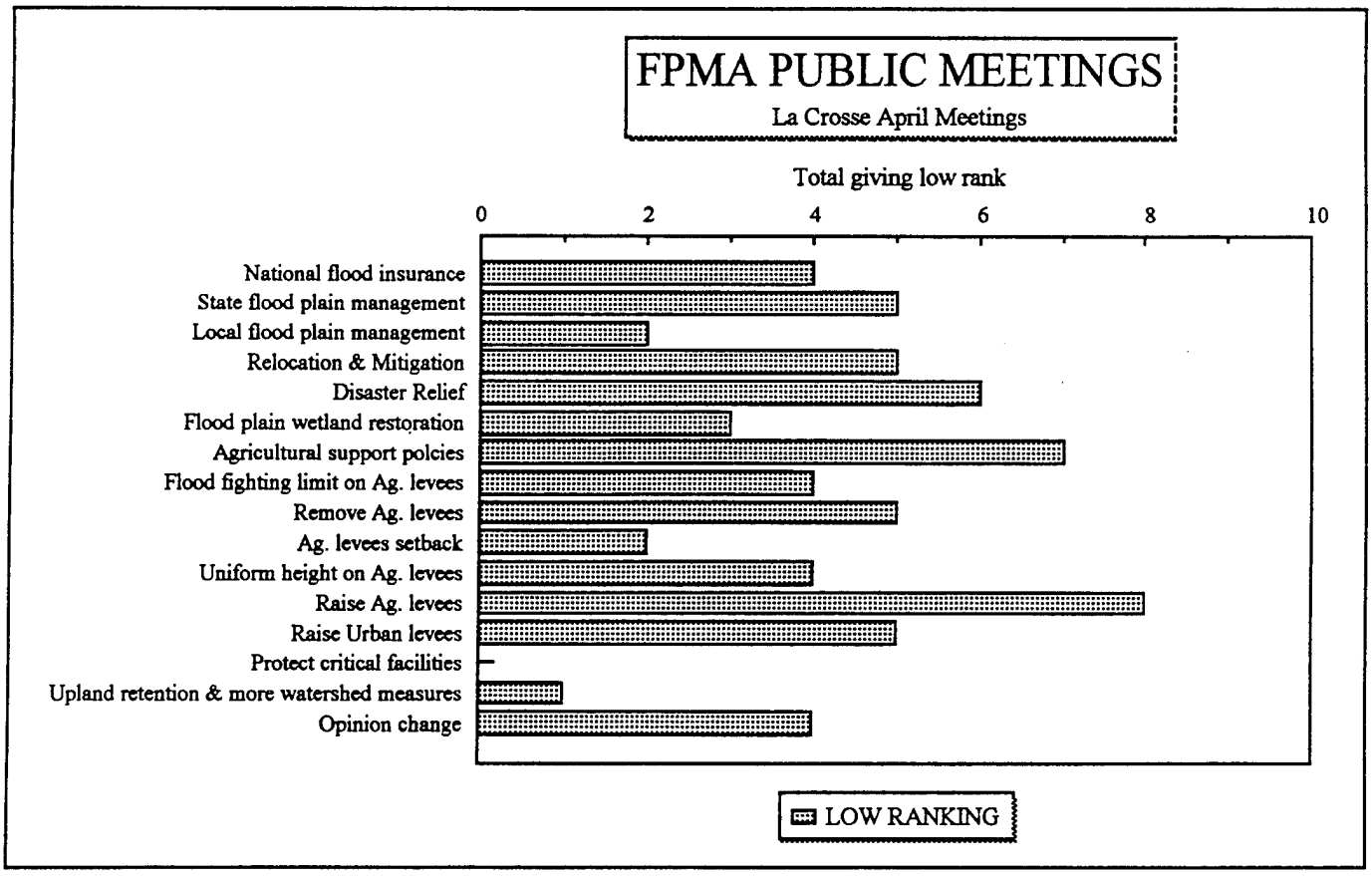
Flood fighting limit on Ag. levees	Remove Ag. levees	Ag. levees setback	Uniform height on Ag. levees	Raise Ag. levees	Raise Urban levees	Protect critical facilities	Upland rentention & more watershed measures	Opinion Change
5	5	2	3	1	2	3	3	YES
2	2	3	2	2	4	4	3	YES
5	4	3	3	1	2	5	4	NO
3	2	3	3	2	2	4	3	NO
3	1	3	5	3	3	5	4	NO
5	2	4	3	4	3	3	4	NO
4	3	4	4	2	3	4	5	NO
3	2	2	2	2	4	5	2	
	4	2	1	1	3	5	5	YES
1	2	4	3	1	3	5	5	NO
	4	5	3	1	1	4	5	YES
3	3	3	3	3	3	3	3	
2	2	2	2	3	3	3		
3	1	3	1	1	1	4	4	YES
3	1	3	1	1	1	4	4	YES
4	3	5	4	1	3	5	4	NO
3	4	3	3	2	3	4	5	YES
1	1	1	1	1	1	5	1	NO
2	4	4	3	1	2	4	5	NO

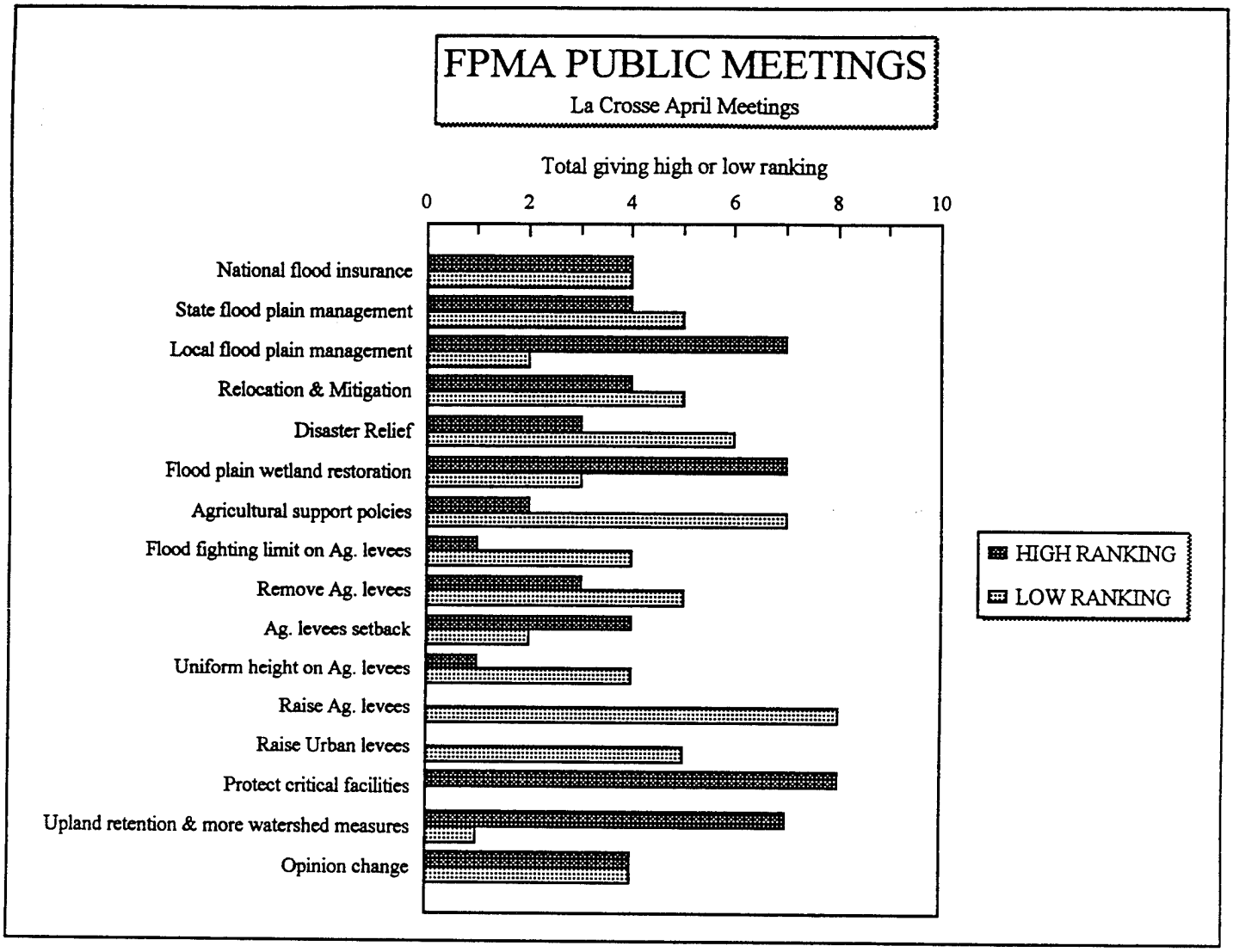

FPMA PUBLIC MEETINGS
St. Paul April Meetings
Total giving high rank
0
2
4
6
8
10
National flood insurance
State flood plain management
Local flood plain management
Relocation & Mitigation
Disaster Relief
Flood plain wetland restoration
Agricultural support polcies
Flood fighting limit on Ag. levees
Remove Ag. levees
Ag. levees setback
Uniform height on Ag. levees
Raise Ag. levees
Raise Urban levees
Protect critical facilities
Upland retention & more watershed measures
Opinion change
HIGH RANKING


FPMA PUBLIC MEETINGS
St. Paul April Meetings
Number giving low rank
0
2
4
6
8
National flood insurance
State flood plain management
Local flood plain management
Relocation & Mitigation
Disaster Relief
Flood plain wetland restoration
Agricultural support polcies
Flood fighting limit on Ag. levees
Remove Ag. levees
Ag. levees setback
Uniform height on Ag. levees
Raise Ag. levees
Raise Urban levees
Protect critical facilities
Upland retention & more watershed measures
Opinion change
LOW RANKING


FPMA PUBLIC MEETINGS
St. Paul April Meetings
Total giving high or low ranking
0
2
4
6
8
10
National flood insurance
State flood plain management
Local flood plain management
Relocation & Mitigation
Disaster Relief
Flood plain wetland restoration
Agricultural support polcies
Flood fighting limit on Ag. levees
Remove Ag. levees
Ag. levees setback
Uniform height on Ag. levees
Raise Ag. levees
Raise Urban levees
Protect critical facilities
Upland retention & more watershed measures
Opinion change
HIGH RANKING
LOW RANKING


FPMA PUBLIC MEETINGS
La Crosse April Meetings
Total giving high rank
0
2
4
6
8
10
National flood insurance
State flood plain management
Local flood plain management
Relocation & Mitigation
Disaster Relief
Flood plain wetland restoration
Agricultural support polcies
Flood fighting limit on Ag. levees
Remove Ag. levees
Ag. levees setback
Uniform height on Ag. levees
Raise Ag. levees
Raise Urban levees
Protect critical facilities
Upland retention & more watershed measures
Opinion change
HIGH RANKING


FPMA PUBLIC MEETINGS
La Crosse April Meetings
Total giving low rank
0
2
4
6
8
10
National flood insurance
State flood plain management
Local flood plain management
Relocation & Mitigation
Disaster Relief
Flood plain wetland restoration
Agricultural support polcies
Flood fighting limit on Ag. levees
Remove Ag. levees
Ag. levees setback
Uniform height on Ag. levees
Raise Ag. levees
Raise Urban levees
Protect critical facilities
Upland retention & more watershed measures
Opinion change
LOW RANKING


FPMA PUBLIC MEETINGS
La Crosse April Meetings
Total giving high or low ranking
0
2
4
6
8
10
National flood insurance
State flood plain management
Local flood plain management
Relocation & Mitigation
Disaster Relief
Flood plain wetland restoration
Agricultural support polcies
Flood fighting limit on Ag. levees
Remove Ag. levees
Ag. levees setback
Uniform height on Ag. levees
Raise Ag. levees
Raise Urban levees
Protect critical facilities
Upland retention & more watershed measures
Opinion change
HIGH RANKING
LOW RANKING

Ranking of Programs & Alternatives by Interest

INTEREST	Very Low	Low	High	Very High
Government	Raise Agricultural Levees		Agricultural Levees Setback Local Floodplain Management Relocation & Mitigation State Floodplain Management	Protect Critical Facilities Upland Retention & more watershed measures Wetland Restoration
Home Owner	Agricultural Support Disaster Relief Relocation & Mitigation State Floodplain Management	Local Floodplain Management		National Flood Insurance
Environment	Raise Agricultural Levees	Agricultural Support	Agricultural Levee Setback Disaster Relief Local Floodplain Management National Flood Insurance Relocation & Mitigation Remove Agricultural Levees State Floodplain Management Wetland Restoration	Protect Critical Facilities Upland Retention

Note: Agriculture - none listed

Ranking of Programs & Alternatives by Location

INTEREST	Very Low	Low	High	Very High
Outside Floodplain		Agricultural Support Raise Agricultural Levees Remove Agricultural Levees	Local Floodplain Management National Flood Insurance Relocation & Mitigation State Floodplain Management Upland Retention & more watershed measures Wetland Restoration	Protect Critical Facilities
Urban Floodplain Without Levees	Agricultural Support Disaster Relief Relocation & Mitigation State Floodplain Management			

The SPSS/PC+ Statistical Package for the IBM PC was utilized in the St. Paul District. The Omaha, Kansas City and St. Louis District's prepared and provided a data file to the St. Paul District to be incorporated into the SPSS/PC+ , for the statistical data sheets that follow. Rock Island had their own computor spreadsheet package and provided a summary of their data tabulation, from the comment sheets completed at the Moline, Burlington, and Quincy public meetings, to the St. Paul District.

SPSS/PC+ The Statistical Package for IBM PC 5/11/95

SPSS/PC+ 5/11/95

Crosstabulation: INTEREST
By NATIONAL

- - - - Page 1 of 4

NATIONAL→ Count	0	1	2	3	4	Row Total
INTEREST						
		1		2	4	12
A	1	25	18	32	27	126
C		4		1		5
E		2		2	4	8
G		2	3	3	5	22
H		2		6	5	19
I				2		2
Column	1	39	21	51	47	202
(Continued) Total	.5	19.3	10.4	25.2	23.3	100.0

Crosstabulation: INTEREST
By NATIONAL

- - - - Page 2 of 4

NATIONAL→ Count	5	Row Total
INTEREST		
	5	12
A	23	126
C		5
E		8
G	9	22
H	6	19
I		2
Column	43	202
(Continued) Total	21.3	100.0

Crosstabulation: INTEREST
By NATIONAL

NATIONAL-> Count	0	1	2	3	4	Row Total
INTEREST						
O	2	2	2	1	1	5
R	1	1	1	1	1	3
Column Total	1	39	21	51	47	202
	.5	19.3	10.4	25.2	23.3	100.0

(Continued)

Crosstabulation: INTEREST
By NATIONAL

NATIONAL-> Count	5	Row Total
INTEREST		
O	5	
R	3	
Column Total	43	202
	21.3	100.0

Number of Missing Observations = 18

Crosstabulation: INTEREST
By STATE_FL

- - - - Page 1 of 2

STATE_FL→ Count	1	2	3	4	5	Row Total
INTEREST						
	5		2	3	3	13
A	25	18	28	26	25	122
C			2	1	2	5
E	1		1	2	3	7
G			4	8	10	22
H	3	4	1	2	8	18
I	2					2
Column Total	37	22	40	45	54	198
	18.7	11.1	20.2	22.7	27.3	100.0

(Continued)

Crosstabulation: INTEREST
By STATE_FL

- - - - Page 2 of 2

STATE_FL→ Count	1	2	3	4	5	Row Total
INTEREST						
O	1		2	1	1	5
R				2	1	3
RP					1	1
Column Total	37	22	40	45	54	198
	18.7	11.1	20.2	22.7	27.3	100.0

Number of Missing Observations = 22

Crosstabulation: INTEREST
By LOCAL_FL

- - - - Page 1 of 2

LOCAL_FL-> Count / INTEREST	1	2	3	4	5	Row Total
	2			4	8	14
A	14	10	21	29	45	119
C			2	1	1	4
E	1		1	2	3	7
G			1	11	10	22
H	3	5	1	3	7	19
I	2					2
Column Total	22	15	30	52	78	197
	11.2	7.6	15.2	26.4	39.6	100.0

(Continued)

Crosstabulation: INTEREST
By LOCAL_FL

- - - - Page 2 of 2

LOCAL_FL-> Count / INTEREST	1	2	3	4	5	Row Total
O			3	1	2	6
R			1	1	1	3
RP					1	1
Column Total	22	15	30	52	78	197
	11.2	7.6	15.2	26.4	39.6	100.0

Number of Missing Observations = 23

Crosstabulation: INTEREST
By RELOCATI

- - - - Page 1 of 2

RELOCATI-> Count / INTEREST	1	2	3	4	5	Row Total
	5	2	2	1	2	12
A	54	24	20	14	4	116
C	1		1	2		4
E	1		1	4	2	8
G		4	5	5	8	22
H	6	3	5	1	2	17
I				2		2
Column Total	67	34	38	29	23	191
	35.1	17.8	19.9	15.2	12.0	100.0

(Continued)

Crosstabulation: INTEREST
By RELOCATI

- - - - Page 2 of 2

RELOCATI-> Count / INTEREST	1	2	3	4	5	Row Total
O			3		3	6
R		1	1		1	3
RP					1	1
Column Total	67	34	38	29	23	191
	35.1	17.8	19.9	15.2	12.0	100.0

Number of Missing Observations = 29

Crosstabulation: INTEREST
By WETLAND

- - - - Page 1 of 2

WETLAND•> Count	1	2	3	4	5	Row Total
INTEREST						
	7	2	1		3	13
A	93	13	12	3	2	123
C		1	2	1		4
E		1		3	3	7
G	3	4	5	4	5	21
H	8	4	3	2	2	19
I	2					2
Column Total	114	27	27	14	17	199
	57.3	13.6	13.6	7.0	8.5	100.0

(Continued)

Crosstabulation: INTEREST
By WETLAND

- - - - Page 2 of 2

WETLAND•> Count	1	2	3	4	5	Row Total
INTEREST						
O	1	1	2		2	6
R		1	2			3
RP				1		1
Column Total	114	27	27	14	17	199
	57.3	13.6	13.6	7.0	8.5	100.0

Number of Missing Observations = 21

Crosstabulation: INTEREST
By AGRICULT

- - - - Page 1 of 2

AGRICULT•> Count	1•	2•	3•	4•	5•	Row Total
INTEREST						
	3		3	2	6	14
A	10	7	26	16	65	124
C	1	2	1		1	5
E	3	2	2	1		8
G	4	3	5	5	5	22
H	7	2		4	6	19
I				2		2
Column	29	17	42	31	85	204
(Continued) Total	14.2	8.3	20.6	15.2	41.7	100.0

Crosstabulation: INTEREST
By AGRICULT

- - - - Page 2 of 2

AGRICULT•> Count	1•	2•	3•	4•	5•	Row Total
INTEREST						
O	1		2	1	2	6
R			3			3
RP		1				1
Column	29	17	42	31	85	204
Total	14.2	8.3	20.6	15.2	41.7	100.0

Number of Missing Observations = 16

Crosstabulation: INTEREST
By FLOOD_FI

- - - - Page 1 of 4

FLOOD_FI-> Count	0	1	2	3	4	Row Total
INTEREST						
	1	9		1		13
A		84	3	8	6	118
C			1	3		4
E		2	1		2	6
G		4	2	6	6	20
H		10	2	5	2	20
I		2				2
Column Total	1	113	10	28	16	192
	.5	58.9	5.2	14.6	8.3	100.0

(Continued)

Crosstabulation: INTEREST
By FLOOD_FI

- - - - Page 2 of 4

FLOOD_FI-> Count	5	Row Total
INTEREST		
	2	13
A	17	118
C		4
E	1	6
G	2	20
H	1	20
I		2
Column Total	24	192
	12.5	100.0

(Continued)

Crosstabulation: INTEREST
By FLOOD_FI

- - - - Page 3 of 4

FLOOD_FI ▸ Count	0	1	2	3	4	Row Total
INTEREST						
O	2		2			5
R		1	2			3
RP			1			1
Column Total	1 .5	113 58.9	10 5.2	28 14.6	16 8.3	192 100.0

(Continued)

Crosstabulation: INTEREST
By FLOOD_FI

- - - - Page 4 of 4

FLOOD_FI ▸ Count	5	Row Total
INTEREST		
O	1	5
R		3
RP		1
Column Total	24 12.5	192 100.0

Number of Missing Observations = 28

Crosstabulation: INTEREST
By REMOVE

REMOVE•> Count / INTEREST	1	2	3	4	5	Row Total
	10		1		1	12
A	112	5	1	1	1	120
C	1	3				4
E	1	1	3	2		7
G	12	2	5	3		22
H	12	2	4	1	1	20
I	2					2
Column Total	154	14	16	8	4	196
	78.6	7.1	8.2	4.1	2.0	100.0

(Continued)

Crosstabulation: INTEREST
By REMOVE

REMOVE•> Count / INTEREST	1	2	3	4	5	Row Total
O	2		1	1	1	5
R	2	1				3
RP			1			1
Column Total	154	14	16	8	4	196
	78.6	7.1	8.2	4.1	2.0	100.0

Number of Missing Observations = 24

Crosstabulation: INTEREST
By AG_LEVEE

- - - - Page 1 of 2

AG_LEVEE•> Count	1	2	3	4	5	Row Total
INTEREST						
	6	1	2	1	2	12
A	83	19	10	6	1	119
C		1	2		1	4
E	1	1		3	3	8
G	5	1	8	4	4	22
H	8	3	5	1	3	20
I	2					2
Column Total	108	28	30	16	14	196
	55.1	14.3	15.3	8.2	7.1	100.0

(Continued)

Crosstabulation: INTEREST
By AG_LEVEE

- - - - Page 2 of 2

AG_LEVEE•> Count	1	2	3	4	5	Row Total
INTEREST						
O	2		2	1		5
R	1	2				3
RP			1			1
Column Total	108	28	30	16	14	196
	55.1	14.3	15.3	8.2	7.1	100.0

Number of Missing Observations = 24

Crosstabulation: INTEREST
By UNIFORM_

UNIFORM_→ Count	0	1	2	3	4	Row Total
INTEREST						
		4	2	2	1	13
A		28	10	21	25	123
C			1	2		5
E		2	2	1	1	8
G		2	2	8	7	22
H	1	7	1	6	2	21
I					2	2
Column	1	44	19	44	39	203
(Continued) Total	.5	21.7	9.4	21.7	19.2	100.0

Crosstabulation: INTEREST
By UNIFORM_

UNIFORM_→ Count	5	Row Total
INTEREST		
	4	13
A	39	123
C	2	5
E	2	8
G	3	22
H	4	21
I		2
Column	56	203
(Continued) Total	27.6	100.0

Crosstabulation: INTEREST
By UNIFORM_

- - - - Page 3 of 4

UNIFORM_ -> Count	0	1	2	3	4	Row Total
INTEREST						
O		1		2		5
R			1	1	1	3
RP				1		1
Column	1	44	19	44	39	203
(Continued) Total	.5	21.7	9.4	21.7	19.2	100.0

Crosstabulation: INTEREST
By UNIFORM_

- - - - Page 4 of 4

UNIFORM_ -> Count	5	Row Total
INTEREST		
O	2	5
R		3
RP		1
Column	56	203
Total	27.6	100.0

Number of Missing Observations = 17

Crosstabulation: INTEREST
By RAISE_AG

- - - - Page 1 of 2

RAISE_AG-> Count / INTEREST	1	2	3	4	5	Row Total
	2	2	2	2	5	13
A	7	8	27	17	64	123
C	1	2		1	1	5
E	5	1	1		1	8
G	9	2	4	4	3	22
H	4	1	5	1	9	20
I					2	2
Column Total	29	17	44	26	86	202
	14.4	8.4	21.8	12.9	42.6	100.0

(Continued)

Crosstabulation: INTEREST
By RAISE_AG

- - - - Page 2 of 2

RAISE_AG-> Count / INTEREST	1	2	3	4	5	Row Total
O	1		3		1	5
R		1	1	1		3
RP			1			1
Column Total	29	17	44	26	86	202
	14.4	8.4	21.8	12.9	42.6	100.0

Number of Missing Observations = 18

Crosstabulation: INTEREST
By RAISE_UR

- - - - Page 1 of 2

RAISE_UR→ Count / INTEREST	1	2	3	4	5	Row Total
	2		1	1	8	12
A	19	7	32	20	40	118
C		1	2	1		4
E	2	1	4		1	8
G	5	1	8	5	3	22
H	3	2	5	2	8	20
I					2	2
Column Total	32	12	56	32	63	195
	16.4	6.2	28.7	16.4	32.3	100.0

(Continued)

Crosstabulation: INTEREST
By RAISE_UR

- - - - Page 2 of 2

RAISE_UR→ Count / INTEREST	1	2	3	4	5	Row Total
O	1		3		1	5
R				3		3
RP			1			1
Column Total	32	12	56	32	63	195
	16.4	6.2	28.7	16.4	32.3	100.0

Number of Missing Observations = 25

Crosstabulation: INTEREST
By PROTECT

- - - - Page 1 of 2

PROTECT-> Count / INTEREST	1	2	3	4	5	Row Total
		1	1	1	9	12
A	5	3	20	28	63	119
C				3	1	4
E				2	5	7
G		1		9	12	22
H	1		5	5	8	19
I					2	2
Column Total	6	5	28	51	105	195
	3.1	2.6	14.4	26.2	53.8	100.0

(Continued)

Crosstabulation: INTEREST
By PROTECT

- - - - Page 2 of 2

PROTECT-> Count / INTEREST	1	2	3	4	5	Row Total
O			1	2	3	6
R				1	2	3
RP			1			1
Column Total	6	5	28	51	105	195
	3.1	2.6	14.4	26.2	53.8	100.0

Number of Missing Observations = 25

Crosstabulation: INTEREST
By UPLAND_R

- - - - Page 1 of 4

UPLAND_R ▸ Count	0	1	2	3	4	Row Total
INTEREST						
		2		2	1	13
A	1	9	4	14	21	124
C				3		5
E		1		1	1	8
G				4	7	21
H		1		4	5	19
I						2
Column	1	13	5	31	37	202
(Continued) Total	.5	6.4	2.5	15.3	18.3	100.0

Crosstabulation: INTEREST
By UPLAND_R

- - - - Page 2 of 4

UPLAND_R ▸ Count	5	Row Total
INTEREST		
	8	13
A	75	124
C	2	5
E	5	8
G	10	21
H	9	19
I	2	2
Column	115	202
(Continued) Total	56.9	100.0

Crosstabulation: INTEREST
By UPLAND_R

- - - - Page 3 of 4

UPLAND_R	Count	0	1	2	3	4	Row Total
INTEREST							
O					1	1	6
R				1	1	1	3
RP					1		1
	Column	1	13	5	31	37	202
(Continued)	Total	.5	6.4	2.5	15.3	18.3	100.0

Crosstabulation: INTEREST
By UPLAND_R

- - - - Page 4 of 4

UPLAND_R	Count	5	Row Total
INTEREST			
O		4	6
R			3
RP			1
	Column	115	202
	Total	56.9	100.0

Number of Missing Observations = 18

Crosstabulation: INTEREST
By OPINION

- - - - Page 1 of 2

OPINION•> Count	N/Y	NO	YES	Row Total
INTEREST				
	3	1	9	1	14
A	13		117	7	137
C			4	1	5
E			6	2	8
G	1		18	3	22
H	4		12	6	22
I			2		2
Column Total	22	1	175	22	220
	10.0	.5	79.5	10.0	100.0

(Continued)

Crosstabulation: INTEREST
By OPINION

- - - - Page 2 of 2

OPINION•> Count	N/Y	NO	YES	Row Total
INTEREST				
O			4	2	6
R	1		2		3
RP			1		1
Column Total	22	1	175	22	220
	10.0	.5	79.5	10.0	100.0

Number of Missing Observations = 0

St. Paul ✓ District

ID

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	LC	10	52.6	52.6	52.6
	SP	9	47.4	47.4	100.0
	TOTAL	19	100.0	100.0	

Valid Cases 19 Missing Cases 0

INTEREST

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
		1	5.3	5.3	5.3
	Ag	1	5.3	5.3	10.5
	Comm.	2	10.5	10.5	21.1
	Envir	3	15.8	15.8	36.8
	Govt	5	26.3	26.3	63.2
	Home	5	26.3	26.3	89.5
	Other	1	5.3	5.3	94.7
	RR	1	5.3	5.3	100.0
	TOTAL	19	100.0	100.0	

Valid Cases 19 Missing Cases 0

STATE

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	MN	13	68.4	68.4	68.4
	WI	6	31.6	31.6	100.0
	TOTAL	19	100.0	100.0	

Valid Cases 19 Missing Cases 0

COUNTY

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	CRAWFORD	1	5.3	5.3	5.3
	DAKOTA	3	15.8	15.8	21.1
	HENNEPIN	2	10.5	10.5	31.6
	HOUSTON	4	21.1	21.1	52.6
	LA CROSS	3	15.8	15.8	68.4
	RAMSEY	1	5.3	5.3	73.7
	ST. CROI	1	5.3	5.3	78.9
	VERNON	1	5.3	5.3	84.2
	WASHINGT	2	10.5	10.5	94.7
	WINONA	1	5.3	5.3	100.0
	TOTAL	19	100.0	100.0	

Valid Cases 19 Missing Cases 0

LOCATION

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
		2	10.5	10.5	10.5
	OFP	11	57.9	57.9	68.4
	UFPWL	1	5.3	5.3	73.7
	UFPWOL	5	26.3	26.3	100.0
	TOTAL	19	100.0	100.0	

Valid Cases 19 Missing Cases 0

NATIONAL

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1	5	26.3	27.8	27.8
	2	1	5.3	5.6	33.3
	3	2	10.5	11.1	44.4
	4	5	26.3	27.8	72.2
	5	5	26.3	27.8	100.0
	9	1	5.3	MISSING	
	TOTAL	19	100.0	100.0	

Mean 3.222 Std Dev 1.629 Minimum 1.000
Maximum 5.000
Valid Cases 18 Missing Cases 1

LEVEL_NA

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
		3	15.8	15.8	15.8
	high	10	52.6	52.6	68.4
	low	6	31.6	31.6	100.0
	TOTAL	19	100.0	100.0	

Valid Cases 19 Missing Cases 0

STATE_FL

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1	4	21.1	22.2	22.2
	2	1	5.3	5.6	27.8
	3	4	21.1	22.2	50.0
	4	6	31.6	33.3	83.3
	5	3	15.8	16.7	100.0
	9	1	5.3	MISSING	
	TOTAL	19	100.0	100.0	

Mean 3.167 Std Dev 1.425 Minimum 1.000
Maximum 5.000

Valid Cases 18 Missing Cases 1

LEVEL_ST

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
		5	26.3	26.3	26.3
	high	9	47.4	47.4	73.7
	low	5	26.3	26.3	100.0
	TOTAL	19	100.0	100.0	

Valid Cases 19 Missing Cases 0

LOCAL_FL

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1	2	10.5	10.5	10.5
	2	1	5.3	5.3	15.8
	3	5	26.3	26.3	42.1
	4	7	36.8	36.8	78.9
	5	4	21.1	21.1	100.0
	TOTAL	19	100.0	100.0	

Mean 3.526 Std Dev 1.219 Minimum 1.000
Maximum 5.000

Valid Cases 19 Missing Cases 0

LEVEL_LC

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
		5	26.3	26.3	26.3
	high	11	57.9	57.9	84.2
	low	3	15.8	15.8	100.0
	TOTAL	19	100.0	100.0	

Valid Cases 19 Missing Cases 0

RELOCATI

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1	4	21.1	22.2	22.2
	3	2	10.5	11.1	33.3
	4	7	36.8	38.9	72.2
	5	5	26.3	27.8	100.0
	9	1	5.3	MISSING	
	TOTAL	19	100.0	100.0	

Mean 3.500 Std Dev 1.505 Minimum 1.000
Maximum 5.000
Valid Cases 18 Missing Cases 1

LEVEL_RL

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
		3	15.8	15.8	15.8
	high	12	63.2	63.2	78.9
	low	4	21.1	21.1	100.0
	TOTAL	19	100.0	100.0	

Valid Cases 19 Missing Cases 0

DISASTER

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1	4	21.1	22.2	22.2
	2	5	26.3	27.8	50.0
	3	2	10.5	11.1	61.1
	4	3	15.8	16.7	77.8
	5	4	21.1	22.2	100.0
	9	1	5.3	MISSING	
	TOTAL	19	100.0	100.0	

Mean 2.889 Std Dev 1.530 Minimum 1.000
Maximum 5.000

Valid Cases 18 Missing Cases 1

LEVEL_DI

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
		3	15.8	15.8	15.8
	high	7	36.8	36.8	52.6
	low	9	47.4	47.4	100.0
	TOTAL	19	100.0	100.0	

Valid Cases 19 Missing Cases 0

WETLAND

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1	3	15.8	16.7	16.7
	3	3	15.8	16.7	33.3
	4	5	26.3	27.8	61.1
	5	7	36.8	38.9	100.0
	9	1	5.3	MISSING	
	TOTAL	19	100.0	100.0	

Mean 3.722 Std Dev 1.447 Minimum 1.000
Maximum 5.000

Valid Cases 18 Missing Cases 1

LEVEL_WE

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	4	4	21.1	21.1	21.1
	high	12	63.2	63.2	84.2
	low	3	15.8	15.8	100.0
	TOTAL	19	100.0	100.0	

Valid Cases 19 Missing Cases 0

AGRICULT

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1	4	21.1	22.2	22.2
	2	6	31.6	33.3	55.6
	3	3	15.8	16.7	72.2
	4	1	5.3	5.6	77.8
	5	4	21.1	22.2	100.0
	9	1	5.3	MISSING	
	TOTAL	19	100.0	100.0	

Mean 2.722 Std Dev 1.487 Minimum 1.000
Maximum 5.000
Valid Cases 18 Missing Cases 1

LEVEL_AG

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
		4	21.1	21.1	21.1
	high	5	26.3	26.3	47.4
	low	10	52.6	52.6	100.0
	TOTAL	19	100.0	100.0	

Valid Cases 19 Missing Cases 0

FLOOD_FI

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1	2	10.5	12.5	12.5
	2	3	15.8	18.8	31.3
	3	6	31.6	37.5	68.8
	4	2	10.5	12.5	81.3
	5	3	15.8	18.8	100.0
	9	3	15.8	MISSING	
	TOTAL	19	100.0	100.0	

Mean 3.063 Std Dev 1.289 Minimum 1.000
Maximum 5.000

Valid Cases 16 Missing Cases 3

LEVEL_FL

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
		9	47.4	47.4	47.4
	high	5	26.3	26.3	73.7
	low	5	26.3	26.3	100.0
	TOTAL	19	100.0	100.0	

Valid Cases 19 Missing Cases 0

REMOVE

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1	3	15.8	16.7	16.7
	2	6	31.6	33.3	50.0
	3	3	15.8	16.7	66.7
	4	5	26.3	27.8	94.4
	5	1	5.3	5.6	100.0
	9	1	5.3	MISSING	
	TOTAL	19	100.0	100.0	

Mean 2.722 Std Dev 1.227 Minimum 1.000
Maximum 5.000

Valid Cases 18 Missing Cases 1

LEVEL_RM

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	4	4	21.1	21.1	21.1
	high	6	31.6	31.6	52.6
	low	9	47.4	47.4	100.0
	TOTAL	19	100.0	100.0	

Valid Cases 19 Missing Cases 0

AG_LEVEE

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1	1	5.3	5.6	5.6
	2	4	21.1	22.2	27.8
	3	7	36.8	38.9	66.7
	4	4	21.1	22.2	88.9
	5	2	10.5	11.1	100.0
	9	1	5.3	MISSING	
	TOTAL	19	100.0	100.0	

Mean 3.111 Std Dev 1.079 Minimum 1.000
Maximum 5.000
Valid Cases 18 Missing Cases 1

LEVEL_AL

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
		8	42.1	42.1	42.1
	high	6	31.6	31.6	73.7
	low	5	26.3	26.3	100.0
	TOTAL	19	100.0	100.0	

Valid Cases 19 Missing Cases 0

UNIFORM_

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1	3	15.8	16.7	16.7
	2	3	15.8	16.7	33.3
	3	9	47.4	50.0	83.3
	4	2	10.5	11.1	94.4
	5	1	5.3	5.6	100.0
	9	1	5.3	MISSING	
	TOTAL	19	100.0	100.0	

Mean 2.722 Std Dev 1.074 Minimum 1.000
Maximum 5.000

Valid Cases 18 Missing Cases 1

LEVEL_UN

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
		10	52.6	52.6	52.6
	high	3	15.8	15.8	68.4
	low	6	31.6	31.6	100.0
	TOTAL	19	100.0	100.0	

Valid Cases 19 Missing Cases 0

RAISE_AG

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1	7	36.8	38.9	38.9
	2	5	26.3	27.8	66.7
	3	5	26.3	27.8	94.4
	4	1	5.3	5.6	100.0
	9	1	5.3	MISSING	
	TOTAL	19	100.0	100.0	

Mean 2.000 Std Dev .970 Minimum 1.000
Maximum 4.000

Valid Cases 18 Missing Cases 1

LEVEL_RA

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
		6	31.6	31.6	31.6
	high	1	5.3	5.3	36.8
	low	12	63.2	63.2	100.0
	TOTAL	19	100.0	100.0	

Valid Cases 19 Missing Cases 0

RAISE_UR

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1	3	15.8	16.7	16.7
	2	4	21.1	22.2	38.9
	3	9	47.4	50.0	88.9
	4	2	10.5	11.1	100.0
	9	1	5.3	MISSING	
	TOTAL	19	100.0	100.0	

Mean 2.556 Std Dev .922 Minimum 1.000
Maximum 4.000
Valid Cases 18 Missing Cases 1

LEVEL_UR

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	10	10	52.6	52.6	52.6
	high	2	10.5	10.5	63.2
	low	7	36.8	36.8	100.0
	TOTAL	19	100.0	100.0	

Valid Cases 19 Missing Cases 0

PROTECT

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	3	4	21.1	22.2	22.2
	4	7	36.8	38.9	61.1
	5	7	36.8	38.9	100.0
	9	1	5.3	MISSING	
	TOTAL	19	100.0	100.0	

Mean 4.167 Std Dev .786 Minimum 3.000
Maximum 5.000

Valid Cases 18 Missing Cases 1

LEVEL_PR

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	5	5	26.3	26.3	26.3
	high	14	73.7	73.7	100.0
	TOTAL	19	100.0	100.0	

Valid Cases 19 Missing Cases 0

UPLAND_R

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1	1	5.3	5.9	5.9
	2	1	5.3	5.9	11.8
	3	4	21.1	23.5	35.3
	4	5	26.3	29.4	64.7
	5	6	31.6	35.3	100.0
	9	2	10.5	MISSING	
	TOTAL	19	100.0	100.0	

Mean 3.824 Std Dev 1.185 Minimum 1.000
Maximum 5.000

Valid Cases 17 Missing Cases 2

LEVEL_RN

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
		6	31.6	31.6	31.6
	high	11	57.9	57.9	89.5
	low	2	10.5	10.5	100.0
	TOTAL	19	100.0	100.0	

Valid Cases 19 Missing Cases 0

OPINION

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
		4	21.1	21.1	21.1
	NO	9	47.4	47.4	68.4
	YES	6	31.6	31.6	100.0
	TOTAL	19	100.0	100.0	

Valid Cases 19 Missing Cases 0

(Interest)

Crosstabulation: INTEREST
By NATIONAL

NATIONAL-> Count / INTEREST	1	2	3	4	5	Row Total
–	1					1
High A				1		1
V. Low C	2					2
High E			1	2		3
– G	1	1	1		2	5
V. High H	1				3	4
High O				1		1
Column Total	5	1	2	5	5	18
	27.8	5.6	11.1	27.8	27.8	100.0

(Continued)

Crosstabulation: INTEREST
By NATIONAL

NATIONAL-> Count / INTEREST	1	2	3	4	5	Row Total
High R				1		1
Column Total	5	1	2	5	5	18
	27.8	5.6	11.1	27.8	27.8	100.0

Number of Missing Observations = 1

Crosstabulation: INTEREST
By STATE_FL

- - - - Page 1 of 2

STATE_FL-> Count / INTEREST	1	2	3	4	5	Row Total
—	1					1
— A			1			1
— C			2			2
High E			1	1	1	3
V. High G				3	2	5
V. Low H	3	1				4
High O				1		1
Column Total	4	1	4	6	3	18
(Continued)	22.2	5.6	22.2	33.3	16.7	100.0

Crosstabulation: INTEREST
By STATE_FL

- - - - Page 2 of 2

STATE_FL-> Count / INTEREST	1	2	3	4	5	Row Total
High R				1		1
Column Total	4	1	4	6	3	18
	22.2	5.6	22.2	33.3	16.7	100.0

Number of Missing Observations = 1

Crosstabulation: INTEREST
By LOCAL_FL

- - - - Page 1 of 2

LOCAL_FL-> Count / INTEREST	1	2	3	4	5	Row Total
-					1	1
- A			1			1
- C			2			2
High (E)			1	1	1	3
High (G)				4	1	5
Low (H)	2	1		1	1	5
- O			1			1
Column Total	2	1	5	7	4	19
	10.5	5.3	26.3	36.8	21.1	100.0

(Continued)

Crosstabulation: INTEREST
By LOCAL_FL

- - - - Page 2 of 2

LOCAL_FL-> Count / INTEREST	1	2	3	4	5	Row Total
High R				1		1
Column Total	2	1	5	7	4	19
	10.5	5.3	26.3	36.8	21.1	100.0

Number of Missing Observations = 0

Crosstabulation: INTEREST
By RELOCATI

RELOCATI-> Count	1	3	4	5	Row Total
INTEREST					
—	1				1
High A			1		1
High C			2		2
High E			2	1	3
High G		1	2	2	5
V. Low H	3	1			4
V. High O				1	1
Column Total	4	2	7	5	18
	22.2	11.1	38.9	27.8	100.0

(Continued)

Crosstabulation: INTEREST
By RELOCATI

RELOCATI-> Count	1	3	4	5	Row Total
INTEREST					
V. High R				1	1
Column Total	4	2	7	5	18
	22.2	11.1	38.9	27.8	100.0

Number of Missing Observations = 1

Crosstabulation: INTEREST
By DISASTER

DISASTER-> Count / INTEREST	1	2	3	4	5	Row Total
-	1					1
V.High A					1	1
Low C		2				2
High E		1		1	1	3
- G		1	2	1	1	5
V.Low H	3			1		4
Low O		1				1
Column Total	4	5	2	3	4	18
	22.2	27.8	11.1	16.7	22.2	100.0

(Continued)

Crosstabulation: INTEREST
By DISASTER

DISASTER-> Count / INTEREST	1	2	3	4	5	Row Total
V.High R					1	1
Column Total	4	5	2	3	4	18
	22.2	27.8	11.1	16.7	22.2	100.0

Number of Missing Observations = 1

Crosstabulation: INTEREST
By WETLAND

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WETLAND•> Count	1	3	4	5	Row Total
INTEREST					
—	1				1
— A		1			1
High C		1	1		2
High E			2	1	3
V. High G			1	4	5
— H	2		1	1	4
V. High O				1	1
Column Total	3	3	5	7	18
(Continued)	16.7	16.7	27.8	38.9	100.0

Crosstabulation: INTEREST
By WETLAND

- - - - Page 2 of 2

WETLAND•> Count	1	3	4	5	Row Total
INTEREST					
— R		1			1
Column Total	3	3	5	7	18
	16.7	16.7	27.8	38.9	100.0

Number of Missing Observations = 1

Crosstabulation: INTEREST
By AGRICULT

AGRICULT-> Count	1	2	3	4	5	Row Total
INTEREST						
—	1					1
V.High A					1	1
Low C		2				2
Low E		2	1			3
— G		2	1		2	5
V.Low H	3				1	4
High O				1		1
Column Total	4	6	3	1	4	18
(Continued)	22.2	33.3	16.7	5.6	22.2	100.0

Crosstabulation: INTEREST
By AGRICULT

AGRICULT-> Count	1	2	3	4	5	Row Total
INTEREST						
— R			1			1
Column Total	4	6	3	1	4	18
	22.2	33.3	16.7	5.6	22.2	100.0

Number of Missing Observations = 1

Crosstabulation: INTEREST
By FLOOD_FI

- - - - Page 1 of 2

FLOOD_FI-> Count / INTEREST	1	2	3	4	5	Row Total
—	1					1
V. High A					1	1
Low C		1	1			2
— E		1		1		2
High G	1		1	1	1	4
— H		1	2		1	4
— O			1			1
Column Total	2 (12.5)	3 (18.8)	6 (37.5)	2 (12.5)	3 (18.8)	16 (100.0)

(Continued)

Crosstabulation: INTEREST
By FLOOD_FI

- - - - Page 2 of 2

FLOOD_FI-> Count / INTEREST	1	2	3	4	5	Row Total
— R			1			1
Column Total	2 (12.5)	3 (18.8)	6 (37.5)	2 (12.5)	3 (18.8)	16 (100.0)

Number of Missing Observations = 3

Crosstabulation: INTEREST
By REMOVE

REMOVE-> Count / INTEREST	1	2	3	4	5	Row Total
–	1					1
Low A		1				1
Low C		2				2
High E			1	2		3
– G	1	1	1	2		5
Low H	1	1	1		1	4
High O				1		1
Column Total	3 16.7	6 33.3	3 16.7	5 27.8	1 5.6	18 100.0

(Continued)

Crosstabulation: INTEREST
By REMOVE

REMOVE-> Count / INTEREST	1	2	3	4	5	Row Total
Low R		1				1
Column Total	3 16.7	6 33.3	3 16.7	5 27.8	1 5.6	18 100.0

Number of Missing Observations = 1

Crosstabulation: INTEREST
By AG_LEVEE

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AG_LEVEE→ Count		1	2	3	4	5	Row Total
INTEREST							
—		1					1
High	A				1		1
—	C			2			2
High	E		1		1	1	3
High	G			2	2	1	5
Low	H		2	2			4
—	O			1			1
	Column Total	1 5.6	4 22.2	7 38.9	4 22.2	2 11.1	18 100.0

(Continued)

Crosstabulation: INTEREST
By AG_LEVEE

- - - - Page 2 of 2

AG_LEVEE→ Count		1	2	3	4	5	Row Total
INTEREST							
Low	R		1				1
	Column Total	1 5.6	4 22.2	7 38.9	4 22.2	2 11.1	18 100.0

Number of Missing Observations = 1

Crosstabulation: INTEREST
By UNIFORM_

UNIFORM_ → Count / INTEREST	1	2	3	4	5	Row Total
–	1					1
– A			1			1
Low C		1	1			2
– E	1		1	1		3
– G			3	1	1	5
Low H	1	1	2			4
~ O			1			1
Column Total	3 16.7	3 16.7	9 50.0	2 11.1	1 5.6	18 100.0

(Continued)

Crosstabulation: INTEREST
By UNIFORM_

UNIFORM_ → Count / INTEREST	1	2	3	4	5	Row Total
Low R		1				1
Column Total	3 16.7	3 16.7	9 50.0	2 11.1	1 5.6	18 100.0

Number of Missing Observations = 1

Crosstabulation: INTEREST
By RAISE_AG

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RAISE_AG-> Count		1	2	3	4	Row Total
INTEREST						
—		1				1
High	A				1	1
Low	C		2			2
Low	E	1	1	1		3
V. Low	G	3	1	1		5
V. Low	H	2		2		4
—	O			1		1
Column Total		7 (38.9)	5 (27.8)	5 (27.8)	1 (5.6)	18 (100.0)

(Continued)

Crosstabulation: INTEREST
By RAISE_AG

- - - - Page 2 of 2

RAISE_AG-> Count		1	2	3	4	Row Total
INTEREST						
Low	R		1			1
Column Total		7 (38.9)	5 (27.8)	5 (27.8)	1 (5.6)	18 (100.0)

Number of Missing Observations = 1

Crosstabulation: INTEREST
By RAISE_UR

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RAISE_UR-> Count	1	2	3	4	Row Total
INTEREST					
—	1				1
— A			1		1
— C		1		1	2
— E		1	2		3
— G	1	1	3		5
Low H	1	1	2		4
— O			1		1
Column Total	3 (16.7)	4 (22.2)	9 (50.0)	2 (11.1)	18 (100.0)

(Continued)

Crosstabulation: INTEREST
By RAISE_UR

- - - - Page 2 of 2

RAISE_UR-> Count	1	2	3	4	Row Total
INTEREST					
High R				1	1
Column Total	3 (16.7)	4 (22.2)	9 (50.0)	2 (11.1)	18 (100.0)

Number of Missing Observations = 1

Crosstabulation: INTEREST
By PROTECT

PROTECT-> Count	3	4	5	Row Total
INTEREST				
—			1	1
— A	1			1
High C		2		2
V. High E		1	2	3
V. High G		2	3	5
— H	3	1		4
High O		1		1
Column Total	4	7	7	18
	22.2	38.9	38.9	100.0

(Continued)

Crosstabulation: INTEREST
By PROTECT

PROTECT-> Count	3	4	5	Row Total
INTEREST				
V. High R			1	1
Column Total	4	7	7	18
	22.2	38.9	38.9	100.0

Number of Missing Observations = 1

Crosstabulation: INTEREST
By UPLAND_R

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UPLAND_R-> Count / INTEREST	1	2	3	4	5	Row Total
–	1					1
High A				1		1
– C			2			2
V. High E				1	2	3
V. High G				2	3	5
– H			2	1		3
V. High O					1	1
Column Total	1 5.9	1 5.9	4 23.5	5 29.4	6 35.3	17 100.0

(Continued)

Crosstabulation: INTEREST
By UPLAND_R

- - - - Page 2 of 2

UPLAND_R-> Count / INTEREST	1	2	3	4	5	Row Total
Low R		1				1
Column Total	1 5.9	1 5.9	4 23.5	5 29.4	6 35.3	17 100.0

Number of Missing Observations = 2

Crosstabulation: INTEREST
By OPINION

- - - - Page 1 of 2

OPINION-> Count		NO	YES	Row Total
INTEREST				
—		1		1
No's	A	1		1
—	C	1	1	2
No's	E	2	1	3
No's	G	4	1	5
?'s	H	3	2	5
Yes	O		1	1
Column Total		4 (21.1)	9 (47.4)	6 (31.6)	19 (100.0)

(Continued)

Crosstabulation: INTEREST
By OPINION

- - - - Page 2 of 2

OPINION-> Count		NO	YES	Row Total
INTEREST				
?'s	R	1		1
Column Total		4 (21.1)	9 (47.4)	6 (31.6)	19 (100.0)

Number of Missing Observations = 0

Rock Island District April Meetings Summary

SUMMARY OF
ROCK ISLAND DISTRICT APRIL FPMA MEETINGS

The final round of public meetings for the FPMA were held on April 18th, 19, and 20th in Moline, IL; Burlington, IA; and Quincy, IL. The announcement for the meetings included an executive summary of the major findings and conclusions. It was sent to about 350 people from a mailing compiled at the start of the study and expanded as meetings were held and more people became interested in the study. In addition, copies of pertinent chapters with the findings and conclusions was sent to a list of 50 people who showed a strong interest in the study or who were officials of levee districts or government agencies.

After the presentation, questions were answered and the attendees were asked to complete the pre-formatted comment sheet. this sheet was designed by the Public Involvement Team top solicit a response that could be tabulated to identify the desires and priorities of the people attending the meeting.

The results of the tabulation indicated the following information:

	Responses received	attendees	% of attendees	% of total attendees
Moline	38.	42	91%	26%
Burlington	48	53	91%	33%
Quincy	59	72	82%	41%
Total	145	167	87%	100%

Primary interest of respondents

Agriculture	61%
Government	10%
Home owner	10%
Environment	6%
Other	13%

Where respondents live

Protected agricultural flood plain	47%
Outside of flood plain	37%
Unprotected urban flood plain	8%
Other	8%

The attendees were asked to consider that the goal of flood plain management is to minimize the vulnerability of people to floods, reduce flood damage and costs, and improve sustainability of the flood plain environment. Given those goals, they were asked to indicate the priority they would give to the following policies and alternatives.

Priority given to policy issues	Low	Neutral	High

National flood insurance	23%	9%	25%	19%	19%
State flood plain management	25	6	19	30	19
Local flood plain management	18	9	16	28	28
Relocation and mitigation	33	15	23	13	15
Disaster relief programs	21	16	30	15	17
Flood plain wetland restoration	50	12	14	5	17
Agricultural support policies	20	7	28	17	28
Priority given to alternatives					
Limit flood fighting	67%	5%	12%	4%	8%
Remove agricultural levees	75	3	7	4	8
Agricultural levee setbacks	40	18	20	10	8
Uniform levee height	14	7	17	23	35
Raise agricultural levees	15	6	10	8	60
Raise urban levees	14	3	21	14	43
Protect critical facilities	3	1	9	22	59
Upland retention	3	2	10	25	57

Totals may not add to 100% due to rounding and no answers.

The priorities on the policy issues were fairly mixed. Only local flood plain management received a high rating with more than 50% of the respondents listing this policy as a 4 or 5. Only relocation and mitigation and Flood plain wetland restoration received low ratings.

The opinions on alternatives were more clear cut. This was primarily because the issues were more understandable and could be perceived as having a more direct effect on the respondents. Levee setbacks received the only low rating while all of the others received high ratings. Clearly, raising levees, protecting critical facilities and upland retention were the preferred alternatives.

About half of the attendees had attended previous public meetings for the FPMA. About 6% indicated that the information presented at the meeting resulted in them changing their previous opinion of the issues.

The results varied somewhat by meeting site.

	Moline	Burlington	Quincy
National flood insurance		Low	High
State flood plain management	High	Low	High
Local flood plain management	High		High
Relocation and mitigation		Low	Low
Disaster relief programs			
Flood plain wetland restoration		Low	V Low
Agricultural support policies			High
Limit flood fighting		V low	V low

Remove agricultural levees		V low	V low
Agricultural levee setbacks		V low	Low
Uniform levee height		V high	High
Raise agricultural levees		V high	V high
Raise urban levees		High	V high
Protect critical facilities	High	V high	V high
Upland retention	V high	V high	V high

High or low indicates that more than 50% rated the issue above or below neutral, Very high or very low indicate that more than 50% rated the issue 5 or 1.

A correlation between the primary interest and the issue ranking also showed differences in opinions.

	Agric.	Govt.	Home
Flood Insurance			
State flood plain mgmt.		High	High
Local flood plain mgmt.		V high	V high
Relocation/mitigation	V high	High	High
Disaster relief			High
Flood plain wetlands	V low		
Ag. support policies		High	
Limit flood fight	V low		
Remove ag. levees	V low		Low
Levee setbacks	Low		
Uniform height	High		High
Raise ag. levees	V high		High
Raise urban levees	V high		
Protect critical facilities	V high	High	V high
Upland retention	V high	High	V high

High or low indicates that more than 50% rated the issue above or below neutral, Very high or very low indicate that more than 50% rated the issue 5 or 1.

It must be cautioned that the numbers for those who indicated a primary interest other than agriculture are relatively small and the above results do not necessarily reflect the attitude of a larger population.
??

[127] From: NCRPDC (NCRPDC) at SRV6 4/21/95 3:08PM (873 bytes: 1 ln)
To: Karen Y Nagengast at ncsim
Receipt Requested
cc: SUZANNE R SIMMONS, GEORGE F GITTER
Subject: Public Meetings
---------- Message Contents ----------

The meetings are over and went well. Major comments related to the need to have limitations and uncertainties prominently described at the beginning of the report. Also findings need to be more specific when they do not apply to all reaches. Need to assure that findings are supported by data in the report. Draft has a lot of conjecture. Most other questions related to hydraulics. Attendance was about 55, 65, & 85 in Moline, Burlington, & Quincy. We received many comments on our presentation and willingness to listen.

Moline

I am glad to hear the recognition that allowing leveed areas to revert to natural condition is economically infeasible.

Serious consideration should be given to elevating levee height by the use of dredge material.

Upland storage by use of ponds, terraces, reservoirs, etc. should be funded and constructed.

The Mississippi River is a one of a kind in the world the most important issue is the quality of the waterway. This must be protected above all other issues.

It is not the governments fault that it floods. Suggest these people move to higher ground. Hey, RIVERS FLOOD! O.K.

Quincy

I would appreciate fairness in this study. Consider everything--don't be like the three (3) blind men touching and describing the elephant. At least, have someone who can see everything (entire picture). Seems the levee south of Cairo works, What is wrong with us having one like that?

You all had a tough job to do. We would defiantly like to see the levees raised support ag. there aren't many of us left.

MAY-18-95 THU 08:58 CORP OF ENG ECON-SOC FAX NO. 3097946174 P. 01

SUMMARY OF 59 FORMS

(1) Check the box which indicates the city this meeting is in.

Frequencies (Percents):

100.0%	Quincy	0.0%	Moline	0.0%	Burlington	0.0%	No Answer

Statistics: Forms 59

(2) Check the one box that best reflects the interest that you represent.

Frequencies (Percents):

81.4%	Agriculture	1.7%	Other	0.0%	Regional Planning
6.8%	Industry	0.0%	Commercial	1.7%	No Answer
5.1%	Home Owner	0.0%	Environment		
3.4%	Government	0.0%	Recreation		

Statistics: Forms 59

(3) Check the one box that describes where you live.

Frequencies (Percents):

59.3%	Agricultural flood plain	0.0%	Agricultural flood plain
35.6%	Outside of the flood plai	0.0%	Urban flood plain behind
3.4%	Urban flood plain without	1.7%	No Answer

Statistics: Forms 59

(4) What state do you live in?

Written answers: [51] IL ... [8] MO

(5) What county do you live in?

Written answers: [30] PIKE ... [17] ADAMS ... [4] MARION ... [3] HANCOCK ... [2] RALLS ... [2] CLARK ... SANGAMON

(6) National flood insurance programs

Frequencies (Percents):

10.2%	Low 1	28.8%	Neutral 3	27.1%	High 5
3.4%	Rated 2	25.4%	Rated 4	5.1%	No Answer

Statistics: Forms 59; Mean 3.59

(7) State flood plain management programs

Frequencies (Percents):

15.3%	Low 1	27.1%	Neutral 3	16.9%	High 5
5.1%	Rated 2	33.9%	Rated 4	1.7%	No Answer

MAY-18-95 THU 08:58 CORP OF ENG ECON-SOC FAX NO. 3097946174 P.02

Statistics: Forms 59; Mean 3.33

(8) Local flood plain management programs

Frequencies (Percents):

13.6% Low 1	23.7% Neutral 3	28.8% High 5
5.1% Rated 2	27.1% Rated 4	1.7% No Answer

Statistics: Forms 59; Mean 3.53

(9) Relocation and mitigation programs

Frequencies (Percents):

39.0% Low 1	18.6% Neutral 3	11.9% High 5
18.6% Rated 2	10.2% Rated 4	1.7% No Answer

Statistics: Forms 59; Mean 2.36

(10) Disaster relief programs

Frequencies (Percents):

23.7% Low 1	37.3% Neutral 3	10.2% High 5
8.5% Rated 2	16.9% Rated 4	3.4% No Answer

Statistics: Forms 59; Mean 2.81

(11) Flood plain wetland restoration programs

Frequencies (Percents):

67.8% Low 1	10.2% Neutral 3	3.4% High 5
15.3% Rated 2	1.7% Rated 4	1.7% No Answer

Statistics: Forms 59; Mean 1.55

(12) Agricultural support policies

Frequencies (Percents):

22.0% Low 1	22.0% Neutral 3	35.6% High 5
5.1% Rated 2	15.3% Rated 4	0.0% No Answer

Statistics: Forms 59; Mean 3.37

(13) Limit flood fighting on agricultural levees

Frequencies (Percents):

83.1% Low 1	3.4% Neutral 3	5.1% High 5
5.1% Rated 2	0.0% Rated 4	3.4% No Answer

Statistics: Forms 59; Mean 1.33

MAY-18-95 THU 08:58 CORP OF ENG ECON-SOC FAX NO. 3097946174 P.03

(14) Remove agricultural levees

Frequencies (Percents):

93.2% Low 1	1.7% Neutral 3	0.0% High 5
1.7% Rated 2	0.0% Rated 4	3.4% No Answer

Statistics: Forms 59; Mean 1.05

(15) Agricultural levee setbacks

Frequencies (Percents):

39.0% Low 1	15.3% Neutral 3	6.8% High 5
32.2% Rated 2	3.4% Rated 4	3.4% No Answer

Statistics: Forms 59; Mean 2.04

(16) Uniform height on agricultural levees

Frequencies (Percents):

15.3% Low 1	15.3% Neutral 3	37.3% High 5
5.1% Rated 2	23.7% Rated 4	3.4% No Answer

Statistics: Forms 59; Mean 3.65

(17) Raise agricultural levees

Frequencies (Percents):

5.1% Low 1	3.4% Neutral 3	83.1% High 5
0.0% Rated 2	6.8% Rated 4	1.7% No Answer

Statistics: Forms 59; Mean 4.66

(18) Raise urban levees

Frequencies (Percents):

1.7% Low 1	18.6% Neutral 3	55.9% High 5
1.7% Rated 2	13.6% Rated 4	8.5% No Answer

Statistics: Forms 59; Mean 4.31

(19) Protect critical facilities

Frequencies (Percents):

1.7% Low 1	6.8% Neutral 3	67.8% High 5
1.7% Rated 2	16.9% Rated 4	5.1% No Answer

Statistics: Forms 59; Mean 4.55

(20) Upland retention and additional watershed measures

MAY-18-95 THU 08:59 CORP OF ENG ECON-SOC FAX NO. 3097946174 P.04

Frequencies (Percents):

1.7% Low 1	11.9% Neutral 3	50.8% High 5
0.0% Rated 2	32.2% Rated 4	3.4% No Answer

Statistics: Forms 59; Mean 4.35

(21) Did the information presented at this meeting change your opinion?

Frequencies (Percents):

93.2% No	1.7% Yes	5.1% No Answer

Statistics: Forms 59

(22) Did you attend the November 1994 FPMA meeting?

Frequencies (Percents):

71.2% Yes	27.1% No	1.7% No Answer

Statistics: Forms 59

(23) Did you attend the June 1994 FPMA meeting?

Frequencies (Percents):

55.9% Yes	40.7% No	3.4% No Answer

Statistics: Forms 59

MAY-18-95 THU 08:59 CORP OF ENG ECON-SOC FAX NO. 3097946174 P. 05

SUMMARY OF 48 FORMS

(1) Check the box which indicates the city this meeting is in.

Frequencies (Percents):

100.0%	Burlington	0.0%	Moline	0.0%	Quincy	0.0%	No Answer

Statistics: Forms 48

(2) Check the one box that best reflects the interest that you represent.

Frequencies (Percents):

52.1%	Agriculture	4.2%	Commercial	0.0%	Recreation
14.6%	Government	4.2%	Regional Planning	0.0%	No Answer
14.6%	Home Owner	2.1%	Industry		
6.2%	Environment	2.1%	Other		

Statistics: Forms 48

(3) Check the one box that describes where you live.

Frequencies (Percents):

47.9%	Agricultural flood plain	2.1%	Agricultural flood plain
33.3%	Outside of the flood plai	0.0%	Urban flood plain behind
8.3%	Urban flood plain without	8.3%	No Answer

Statistics: Forms 48

(4) What state do you live in?

Written answers: [42] IA ... [6] IL

(5) What county do you live in?

Written answers: [27] DESM ... [7] LEE ... [6] HEND ... [4] LOUISA ... [2] JOHNS ... BENTON ... JEFF

(6) National flood insurance programs

Frequencies (Percents):

41.7%	Low 1	14.6%	Neutral 3	14.6%	High 5
14.6%	Rated 2	12.5%	Rated 4	2.1%	No Answer

Statistics: Forms 48; Mean 2.43

(7) State flood plain management programs

Frequencies (Percents):

45.8%	Low 1	8.3%	Neutral 3	16.7%	High 5
10.4%	Rated 2	16.7%	Rated 4	2.1%	No Answer

Statistics: Forms 48; Mean 2.47

(8) Local flood plain management programs

Frequencies (Percents):

29.2% Low 1	12.5% Neutral 3	22.9% High 5
14.6% Rated 2	18.8% Rated 4	2.1% No Answer

Statistics: Forms 48; Mean 2.91

(9) Relocation and mitigation programs

Frequencies (Percents):

37.5% Low 1	16.7% Neutral 3	10.4% High 5
16.7% Rated 2	16.7% Rated 4	2.1% No Answer

Statistics: Forms 48; Mean 2.45

(10) Disaster relief programs

Frequencies (Percents):

29.2% Low 1	16.7% Neutral 3	25.0% High 5
14.6% Rated 2	12.5% Rated 4	2.1% No Answer

Statistics: Forms 48; Mean 2.89

(11) Flood plain wetland restoration programs

Frequencies (Percents):

47.9% Low 1	16.7% Neutral 3	18.8% High 5
10.4% Rated 2	2.1% Rated 4	4.2% No Answer

Statistics: Forms 48; Mean 2.30

(12) Agricultural support policies

Frequencies (Percents):

25.0% Low 1	22.9% Neutral 3	31.2% High 5
8.3% Rated 2	10.4% Rated 4	2.1% No Answer

Statistics: Forms 48; Mean 3.15

(13) Limit flood fighting on agricultural levees

Frequencies (Percents):

70.8% Low 1	12.5% Neutral 3	8.3% High 5
2.1% Rated 2	4.2% Rated 4	2.1% No Answer

Statistics: Forms 48; Mean 1.74

(14) Remove agricultural levees

Frequencies (Percents):

75.0% Low 1	4.2% Neutral 3	8.3% High 5
4.2% Rated 2	6.2% Rated 4	2.1% No Answer

Statistics: Forms 48; Mean 1.66

(15) Agricultural levee setbacks

Frequencies (Percents):

50.0% Low 1	18.8% Neutral 3	10.4% High 5
6.2% Rated 2	10.4% Rated 4	4.2% No Answer

Statistics: Forms 48; Mean 2.22

(16) Uniform height on agricultural levees

Frequencies (Percents):

12.5% Low 1	10.4% Neutral 3	52.1% High 5
6.2% Rated 2	16.7% Rated 4	2.1% No Answer

Statistics: Forms 48; Mean 3.91

(17) Raise agricultural levees

Frequencies (Percents):

14.6% Low 1	6.2% Neutral 3	64.6% High 5
6.2% Rated 2	8.3% Rated 4	0.0% No Answer

Statistics: Forms 48; Mean 4.02

(18) Raise urban levees

Frequencies (Percents):

14.6% Low 1	25.0% Neutral 3	50.0% High 5
0.0% Rated 2	8.3% Rated 4	2.1% No Answer

Statistics: Forms 48; Mean 3.81

(19) Protect critical facilities

Frequencies (Percents):

8.3% Low 1	10.4% Neutral 3	62.5% High 5
0.0% Rated 2	16.7% Rated 4	2.1% No Answer

Statistics: Forms 48; Mean 4.28

(20) Upland retention and additional watershed measures

Frequencies (Percents):

6.2% Low 1	6.2% Neutral 3	68.8% High 5
0.0% Rated 2	16.7% Rated 4	2.1% No Answer

Statistics: Forms 48; Mean 4.45

(21) Did the information presented at this meeting change your opinion?

Frequencies (Percents):

83.3% No	6.2% Yes	10.4% No Answer

Statistics: Forms 48

(22) Did you attend the November 1994 FPMA meeting?

Frequencies (Percents):

47.9% Yes	47.9% No	4.2% No Answer

Statistics: Forms 48

(23) Did you attend the June 1994 FPMA meeting?

Frequencies (Percents):

47.9% Yes	47.9% No	4.2% No Answer

Statistics: Forms 48

SUMMARY OF 38 FORMS

(1) Check the box which indicates the city this meeting is in.

Frequencies (Percents):

100.0%	Moline	0.0%	Burlington	0.0%	Quincy	0.0%	No Answer

Statistics: Forms 38

(2) Check the one box that best reflects the interest that you represent.

Frequencies (Percents):

39.5%	Agriculture	7.9%	Other	2.6%	Regional Planning
15.8%	Government	2.6%	Commercial	0.0%	No Answer
13.2%	Environment	2.6%	Industry		
13.2%	Home Owner	2.6%	Recreation		

Statistics: Forms 38

(3) Check the one box that describes where you live.

Frequencies (Percents):

44.7%	Outside of the flood plai	5.3%	Urban flood plain behind
26.3%	Agricultural flood plain	0.0%	Agricultural flood plain
13.2%	Urban flood plain without	10.5%	No Answer

Statistics: Forms 38

(4) What state do you live in?

Written answers: [23] IL ... [15] IA

(5) What county do you live in?

Written answers: [15] RI ... [13] SCOTT ... [2] MERCER ... LEE ... BUREAU ... CASS ... HENRY ... BLKHWK ... WHITE

(6) National flood insurance programs

Frequencies (Percents):

21.1%	Low 1	31.6%	Neutral 3	13.2%	High 5
10.5%	Rated 2	18.4%	Rated 4	5.3%	No Answer

Statistics: Forms 38; Mean 2.92

(7) State flood plain management programs

Frequencies (Percents):

13.2%	Low 1	18.4%	Neutral 3	26.3%	High 5
0.0%	Rated 2	42.1%	Rated 4	0.0%	No Answer

Statistics: Forms 38; Mean 3.68

(8) Local flood plain management programs

Frequencies (Percents):

10.5% Low 1	7.9% Neutral 3	34.2% High 5
7.9% Rated 2	39.5% Rated 4	0.0% No Answer

Statistics: Forms 38; Mean 3.79

(9) Relocation and mitigation programs

Frequencies (Percents):

18.4% Low 1	36.8% Neutral 3	23.7% High 5
7.9% Rated 2	13.2% Rated 4	0.0% No Answer

Statistics: Forms 38; Mean 3.16

(10) Disaster relief programs

Frequencies (Percents):

5.3% Low 1	36.8% Neutral 3	15.8% High 5
28.9% Rated 2	13.2% Rated 4	0.0% No Answer

Statistics: Forms 38; Mean 3.05

(11) Flood plain wetland restoration programs

Frequencies (Percents):

26.3% Low 1	15.8% Neutral 3	34.2% High 5
10.5% Rated 2	13.2% Rated 4	0.0% No Answer

Statistics: Forms 38; Mean 3.18

(12) Agricultural support policies

Frequencies (Percents):

10.5% Low 1	44.7% Neutral 3	10.5% High 5
7.9% Rated 2	26.3% Rated 4	0.0% No Answer

Statistics: Forms 38; Mean 3.18

(13) Limit flood fighting on agricultural levees

Frequencies (Percents):

36.8% Low 1	26.3% Neutral 3	13.2% High 5
7.9% Rated 2	10.5% Rated 4	5.3% No Answer

Statistics: Forms 38; Mean 2.53

(14) Remove agricultural levees

Frequencies (Percents):

44.7% Low 1	18.4% Neutral 3	18.4% High 5
5.3% Rated 2	7.9% Rated 4	5.3% No Answer

Statistics: Forms 38; Mean 2.47

(15) Agricultural levee setbacks

Frequencies (Percents):

28.9% Low 1	28.9% Neutral 3	5.3% High 5
10.5% Rated 2	21.1% Rated 4	5.3% No Answer

Statistics: Forms 38; Mean 2.61

(16) Uniform height on agricultural levees

Frequencies (Percents):

13.2% Low 1	28.9% Neutral 3	10.5% High 5
10.5% Rated 2	28.9% Rated 4	7.9% No Answer

Statistics: Forms 38; Mean 3.14

(17) Raise agricultural levees

Frequencies (Percents):

28.9% Low 1	26.3% Neutral 3	18.4% High 5
13.2% Rated 2	10.5% Rated 4	2.6% No Answer

Statistics: Forms 38; Mean 2.76

(18) Raise urban levees

Frequencies (Percents):

31.6% Low 1	21.1% Neutral 3	13.2% High 5
10.5% Rated 2	21.1% Rated 4	2.6% No Answer

Statistics: Forms 38; Mean 2.73

(19) Protect critical facilities

Frequencies (Percents):

0.0% Low 1	10.5% Neutral 3	42.1% High 5
2.6% Rated 2	36.8% Rated 4	7.9% No Answer

Statistics: Forms 38; Mean 4.29

(20) Upland retention and additional watershed measures

Frequencies (Percents):
2.6% Low 1
7.9% Rated 2
13.2% Neutral 3
23.7% Rated 4
50.0% High 5
2.6% No Answer

Statistics: Forms 38; Mean 4.14

(21) Did the information presented at this meeting change your opinion?

Frequencies (Percents):
78.9% No
13.2% Yes
7.9% No Answer

Statistics: Forms 38

(22) Did you attend the November 1994 FPMA meeting?

Frequencies (Percents):
76.3% No
21.1% Yes
2.6% No Answer

Statistics: Forms 38

(23) Did you attend the June 1994 FPMA meeting?

Frequencies (Percents):
63.2% No
28.9% Yes
7.9% No Answer

Statistics: Forms 38

Omaha District April Meeting Summary and Statistics

FPMA Questions/Issues
MRO Public Meeting - Nebraska City, NE
April 26, 1995

1. How much of the $12-60 million dollars in damage was attributed to this region (southeastern Nebraska)?

2. Describe the 25-year notch. How big would the notch in the levee be and where would the water go? What is the effect of the notch; what are the conclusions?

3. What are the goals and objectives of the COE in floodplain management?

4. What about damage to infrastructure? Highway 2, Highway 36? What about raising them above flood level?

5. Why don't the Feds focus on pollution in the big cities on the east coast and the Great Lakes, for example, instead of picking on Nebraska farmers? Midwest is being unfairly picked on by environmentalists.

6. Does the Corps have any jurisdiction over the Platte River? Platte River is the cause of most of the floding in the reach from Omaha to Rulo.

7. Where is the COE taking this study? What is the purpose of this study with respect to findings? What was it trying to accomplish?

8. What is the FPMA report going to initialize?

9. Do you think that the endangered species act is being manipulated to control the operation of the reservoirs? Are upstream States using environmental concerns to manipulate the Corps operations.

10. Why isn't the focus of reservoir operation on flood control instead of T&E or is it?

11. What is the purpose of this meeting? Are our comments going to affect the outcome of the Master Manual?

12. Who made the decision on the Master Manual? Who will make the final decision on which alternative is chosen for the Master Manual?

13. Where is the Master Manual plan going? Will there be condemnation of land?

14. What about aggradation in front of the levees?

15. Is water quality an issue for the T&E birds and fish?

16. National flood insurance? Disaster programs? Earthquake insurance? Why should only the people in the floodplain be penalized?

17. What was the '93 flood rated for frequency of event?

18. What was the maximum flow at Omaha?

19. Where were the aggradation measurements between the levee and the river taken? Were the differences noted for proximity to cropland vs. timber?

20. What would happen if someone took it upon himself to raise the Federal levee?

21. How are damages calculated? Is there any way to estimate the potential income loss from lost business days due to flooding? Are there damages and benefits that aren't included in the calculation in typical Corps projects?

22. How would power generation (other than hydropower) be affected without the levees or with notched levees? What was hydropower generation's role in the '93 flood?

23. How much at risk was Cooper Nuclear Plant in '93?

24. There is a great deal of sedimentation between the levees and the river. What do we do about reduced capacity?

25. What height would have saved the levee by Brownville?

26. Gaging stations are at bridges where flow is constricted; does that affect the readings?

27. The Corps misdesigned the levees below the Nishnabotna River. The levees should have been higher. The flow of the river was greatly underestimated.

28. What will come out of this meeting/report?

29. What is the comment period?

30. How many more studies will be done on the '93 flood?

31. How do we obtain copies of the report?

32. Why isn't there a court reporter present? How much weight has been given our comments? Are you (COE) getting a true picture of what the people really want for the rivers? Will you really do

anything with our comments?

33. Why haven't local people been consulted before the outcome of these studies?

34. Why do people in Omaha and Lincoln dictate what will be done with the river? Why isn't it up to the people on the river?

35. What are the effects of urban runoff on the river stages?

36. Why are the stages so high now and for the past two weeks? What will the immediate future bring?

37. What are the effects of the tributaries on the level of protection?

38. Has the Corps changed its goals in the last 20 years away from flood control?

39. Need to mark off the '93 flood as done and get on with finding an acceptable compromise with environmental constraints.

40. Have all the costs been counted (e.g. infrastructure) in the levee removal alternative

WRITTEN:

2: Excellent information in a well conducted meeting.

2: The Pick-Sloan plan originally called for a 3,000 foot floodway from Sioux City to Kansas City. Present floodway averages 700 feet. Plan called for a 5,000 foot floodway from KC to St. Louis. Present floodway averages 1,200 feet. How would these floodways affected the 1993 flood at the width of the original plan?

5: Small percentage conversion of agricultural land can result in large percentage increase in natural floodplain acres.

8: We need to cooperate.

16: Comment questions are very deceptive.

16: Why are rural residents being victimized by our own government agencies?

16: I favor programs that will benefit people--not fish, birds or beauracrats!

18: I am in favor of less disaster programs and more insurance if is done fairly across the USA. IE: Include hurricane and earthquake areas as well as floodplain.

19: There should be uniform insurance for disasters throughout the U.S.--for hurricanes and earthquakes as well.

19: Need to raise levees to restore earlier levels of protection before siltation made protection levels decline.

20: Quit buying land along the river and creating areas to retain silt and sand., it is decreasing the capacity of the missouri flood basin, at the same time costing lots of tax dollars.

26: The Missouri River Mainstem System is a tremendous system, built at great expense by the citizens of the United States. Its contribution to our country is considerable. Let us not tear it down to satisfy selfish interests but maintain it at a high level.

26: Your information was interesting and well presented.

27: Priority questions do not relate to presentation. Not helpful. Evaluation of the numbers would mean much.

34: Perhaps best compromise is "string of beads."

rs. s - Split or stock dividend of
e past 52 weeks. The high-low
the old stock. Dividend begins
tock dividend. st - Stamped. t -
ing 12 months, estimated cash
x-distribution date.
n - Units. v - Trading halted on
bankruptcy or receivership or
the Bankruptcy Act, or securi-
panies.
wi - When issued. wt - War-
s. xw - Without warrants.
rights. y - Ex-dividend and
l.

2	viSkyIndP	2⅛ — ¼
¾	Sodak	14⅜ + 9-16
	Softkey	25⅜ — ½
⅛	SouldCp h	4 7-32 — 1-16
6	Southtrst.80	20⅞
¼	SovBcp.10b	8 9-16 — 1-16
¼	SpclDv	18½ + ⅜
½	viSpecTc	13-32 — 3-32
¼	SpctSig	7 + ⅛
	SportM	5⅜ + ⅛
⅜	SptTch	2 7-32 + 5-32
	StacElec	6⅜
	Staceys	1⅛ — 1-16
¼	StafBld	4 5-16 — 1-16
	StdFincl	12⅜ + ⅜
⅜	StdMic	17 + ⅜
	Staples s	24⅜ + ¾
¼	Starbcks	23½ — ⅛
6	StatnCas	11⅜ + ⅞
6	SteinMrt	11⅛ + ⅛
8	Steris	40½ + ⅜
	StwStv.28	38¼ + ½
	Stratcm s	40 — 1
	StrtgDist	4⅛ — ¼
	Strattecn	11⅞ + ⅞
	StrucD	10⅞ — 1
	Stryker.08e	46¾ + ⅜
	SubMicr	8 + ½
	SummaF	22¾ + ⅜
	SumitB.84b	19¼ — ⅛
	SumitTc	32¼ + 1¼
	SunMic	39½ + 1⅞
	SunTV.04	8½ + ⅛
	SunGrd	45¾ — ½
	Sunglss s	27⅝ + 1 5-16
	SunBcNY.15e	24⅜ + ⅜
	Suprtex	9⅜ + ⅛
	SyQstTc	11½ + ¾
	Sybase	24⅜ — ½
	Sybron	13⅜ + ⅞
	Symntc	24⅛ + 1⅜
	Symetric	17⅜ — ½
	Synogra	25-32 + 1-32
	Synopsys	52 9-16 — 15-16
	Syntlct	5⅝ — ⅜
	SystSftw.12	24⅝ + ½
	SystmSft	10 7-16 + ¼
	—T—	
	TNT Frt.37	23½ — ¼
	TacoCab	5⅜ — 1-16
	Tatham	5⅜
	TechData	11¼ + ⅞
	TeeCom	5⅞ + 29-64
	Telco	10½ + ⅜
	TelCmA	18⅞ + 1¼
	Telebit	6⅞ + ⅛
	TelefMex.06e	1 19-32 + 1-32
	Teletek	1½ + 1-16
	Tellabs	70 + 3¼
	Telxon.01	16 + ¾
	Tencor	64¾ + 13⅜
	Tetra	13¼ + 1⅜
	Teva.26e	35⅜ + 1-16
	TheraTx	15⅜ — ½
	Thrgen	4⅞ + 5-16
	3Com s	56 1-16 + 9-16
	3D Sys	5¼ + ½
	3DO Co	14⅛ + ⅛
	TivoliSy n	36¼ + 2½
	TodayM	13⅛
	TokosMd	6⅜ + ¼
	Topps	6⅜ + ⅛
	TowrAir.16	6½ — ¾
	TracrPt	31-32 — 1-32
	Tracor	12¾ + ¼
	TrnsWstn	¾ + 3-16
	Trnmedia.04	12⅛
	TranstxGs	13⅛ + 1¼
	TwldHH	17½ + ⅛
	Tricord	4¼ + ⅛
	TridMic	15¼
	Trimble	18⅜ — ⅛
	Triquint	12½ + 1¼
	Tseng.20	6¼ — ¼
	Tubscp	6⅞ — ¼
	TylanG n	12⅛ — ⅜
	Tyson.08	23⅛ — ⅛
	—U—	
	US OtcP n	13¼
	US Wats	11-16 + 1-16
	UST Cp	11
	UltraStep	58⅛ + 1¾
	Unigen	2 + ⅛
	Unilab	5 — ⅛
	UnBnk1.40	39¼
	UnryITc	3⅜ + ⅜
	UnitC wt	⅜
	UtdLeisr	2⅜ + ⅛
	US BcOR1.00	27⅛ — ¼
	US HlthC1.00	28½ — ¼

Victoria Vaughan, who oversees the centers, said 11 of those 20 schools are scheduled to have an intervention room next year.

The board members also talked about making schools safer.

Five more security aides could be

The district has four alternative schools. Students are assigned there for various reasons, including disruptive behavior, emotional or physical problems and suspension for drug and alcohol violations. The school day is shorter than at a regular school, and the curriculum is basic.

Corps Says Flood-Control Plans Must Consider Multistate Impact

BY KENDRICK BLACKWOOD
WORLD-HERALD STAFF WRITER

Nebraska City, Neb. — Flood control along the Missouri River must be considered from a systemwide perspective, says a preliminary report by the Omaha District of the Army Corps of Engineers.

If levees had been higher during the 1993 flood to protect key locations, some areas farther downriver would have suffered, the report said.

More than 50 people gathered to discuss the report Wednesday night at the Lied Conference Center in Nebraska City. Known as the Floodplain Management Assessment of the Upper Mississippi and Lower Missouri Rivers, the report was requested by Congress and is to be completed in June.

"The one thing we learned from all this . . . was how important a systemic evaluation is," said David Brandon, who coordinated the report. "You really have to look at the whole river."

The information in the report came from a computer program called UNET, which simulated the results of the 1993 flood based on certain variables over an eight-state region.

Variables included:

■ What if there had been no levees at all?

■ What if the levees were set at a uniform 25-year flood level?

■ What if there were no reservoir dams in the northern portion of the Missouri River?

■ What if area farmers at higher elevations had taken steps to reduce runoff?

■ What if the levees were raised high enough to have contained the 1993 flood?

The report was not created as a step toward taking specific action, but rather as a reference for future plans, Brandon said.

"Hopefully this will be some good, solid foundation to do further evaluation," Brandon said. "We're not project-oriented at this point. It's best seen as a study."

The report disputed the assumption that more wetlands in the higher elevations would have made a difference along the river because more water would have been held back, Brandon said. The amount of rain preceding the flood had left the wetlands saturated to the point that they could not help by holding more water, he said.

The model did attest to the importance of dams along the north edge of Nebraska, Brandon said.

Without the reservoirs, the high-water mark would have been even higher almost all along the river, the report said.

"The reservoirs did a lot of good, no doubt about it," Brandon said.

The landowners in the audience were concerned about the idea of establishing a uniform 25-year levee level along the river. But corps officials said that such a change wouldn't have done a better overall job of controlling the 1993 flood.

Car Accident Injures 3 Pupils

96

BY GARY NEWMAN
COUNCIL BLUFFS BUREAU

Master Patrol Officer Ed Kaftan said a southbound 1985 Ford

MRO Public Mtg 4/26

Sheet1

I.D.	INTEREST	STATE	COUNTY	LOCATION	NATIONAL FLOOD INSURANCE	STATE FLOODPLAIN MANAGEMENT	LOCAL FLOODPLAIN MANAGEMENT	RELOCATION & MITIGATION	DISASTER RELIEF	WETLAND RESTORATION	AGRICULTURAL SUPPORT	LIMITED FLOOD FIGHTING ON AGRICULT	REMOVE AGRICULTURAL LEVEES	AGRICULTURAL LEVEE SET BACKS	UNIFORMA HEIGHT ON AGRICULTURAL LEVEES	RAISE AGRICULTURAL LEVEES	RAISE URBAN LEVEES	PROTECT CRITICAL FACILITIES	UPLAND RETENTION & MORE WATERSHED MEASUR	DID THE MEETING CHANGE YOUR OPINION?	COMMENTS?
MRO_1	A	MO	ATCHISON	AFPWL	1	5	5	2	5	1	5	1	1	3	4	4	4	3	5	NO	NO
MRO_2	G	NE	OTOE	OFP	3	4	4	5	2	4	1	2	4	5	3	1	1	4	5	NO	YES
MRO_3	A	MO	ATCHISON	AFPWL	3	5	5	1	2	1	3	1	1	3	4	5	5	5	5	NO	NO
MRO_4	A	MO	ATCHISON	AFPWL	2	1	1	3	3	4	2	3	1	3	4	5	5	4	4	NO	NO
MRO_5	H	NE	NEMAHA	OFP	4	5	5	2	1	2	4	1	1	1	4	4	4	4	5	NO	YES
MRO_6	E	NE	NEMAHA	OFP	4	5	5	1	4	4	4	1	1	1	5	5	5	5	5	NO	NO
MRO_7	A	IA	FREMONT	OFP	1	5	5	1	3	1	5	1	1	1	5	5	5	5	5		NO
MRO_8	A	IA	FREMONT	AFPWL	2	4	5	3	2	3	2	3	1	1	4	3	3	4	5	YES	YES
MRO_9	G	NE	LANCASTER	OFP	5	5	5	4	3	3	4	4	2	3	3	1	1	5	4	NO	NO
MRO_10	G	NE	LANCASTER	OFP	5	5	5	5	3	5	3	4	3	1	4	1	4	5	5	NO	NO
MRO_11	C	NE	OTOE	OFP	3	4	4	3	2	2	3	3	1	2	3	4	3	4	5	NO	NO
MRO_12	A	MO	ATCHISON	AFPWL	4	1	1	1	5	1	5	1	1	1	5	3	3	4	5	NO	NO
MRO_13	A	IA	FREMONT	OFP	3	4	4	3	3	2	3	1	1	1	4	3	3		4	NO	NO
MRO_14	A	NE	NEMAHA	AFPWL	3	5	5	1		1	5		1		5	5			5		NO
MRO_15	A	NE	OTOE	AFPWL	3	3	3	2	3	3	3	3	1	1	3	4	4	4	5		NO
MRO_16	A	MO	ATCHISON	AFPWL																NO	YES
MRO_17	A	IA	FREMONT	AFPWL	1	3	5	1	5	1	3	1	1	1	3	3	3	5	4	NO	NO
MRO_18	A	IA	FREMONT	AFPWL	1	3	5	1	5	4	5	1	1	4	5	5	5	5	5	NO	YES
MRO_19	A	MO	ATCHISON	AFPWL	5	2	2	2	5	1	1	5		1	4	5	5	5	5	NO	YES
MRO_20	A	NE	RICHARDSON	OFP	3	3	5	1	3	1	4	5	1	3	3	3	2	3	5	YES	YES
MRO_21	A	NE	NEMAHA	AFPWL	5	3	3	2	5	1	5	1	1	1	1	1	1	1	1	NO	NO
MRO_22	A	NE	OTOE	AFPWOL	4	1	1	3	5	1	4	1	1	1	3	2	1	1	5	NO	NO
MRO_23	A	IA	FREMONT	AFPWL	2	2	2	1	3	1	5	1	1	2	2	3	3	4	4	NO	NO
MRO_24	I	IA	FREMONT	OFP	3	1	1	4	4	1	4	1	1	1	4	5	5	5	5	NO	NO
MRO_25	I	IA	FREMONT	OFP	3	1	1	4	4	1	4	1	1	1	4	5	5	5	5	NO	NO
MRO_26	A	NE	OTOE	OFP	1	3	3	1	3	1	5	1	1	1	4	4	4	5	5	NO	YES
MRO_27	G	IA	FREMONT	OFP	1	3	3	4	4	3	5	4	1	4	4	3	3	4	5	NO	YES
MRO_28	A	MO	ATCHISON	AFPWL	3	3	3	4	3	1	5	1	1	1	1	5	5	5	5		NO
MRO_29	A	MO	ATCHISON	AFPWL	5	5	5	1	3	1	5	1	1	2	3	5	5	5	3	NO	NO
MRO_30	A	MO	ATCHISON	AFPWL	4	5	5	2	5	1	5	1	1	3	4	4	4	3	1	NO	NO
MRO_31	A	MO	ATCHISON	AFPWL	5	5				1	5	1	1			5		5			NO
MRO_32	A	IA	FREMONT	OFP	3	4	4	3	1	1	4	3	1	4	5	5	5	5	5	NO	NO
MRO_33	AER	IA	FREMONT	OFP	5	3	5	1	1	1	3	1	1	3	5	5	5	5	5	NO	NO
MRO_34	A	MO/IA	ATCHISON/FREMONT	AFPWL	5	5	5	1	1	3	5	1	1	1	3	5	5	5	5	NO	YES
MRO_35	A	NE	OTOE	OFP	3	3	5	1	3	1	5	5	1	1	1	3	3	3	3	NO	NO
MRO_36	A	NE	OTOE	AFPWOL	4	4	4	5	3	2	3	5	1	1	5	5	5	5	5	NO	NO
MRO_37	A	NE	OTOE	AFPWOL	5	2	2	1	4	1	5	1	1	1	2	3	3	3	5	NO	NO

	MRO PUBLIC MEETING APRIL 26, 1995	AVERAGES:				COUNT TOTALS:			
		LOCATION				LOCATION			
INTERES	Data	AFPWL	AFPWOL	OFP	Grand Tot	AFPWL	AFPWOL	OFP	Grand Tot
A	Average of RAISE AGRICULTURAL LEVEES	4.1	3.3	3.8	4.0	17	3	6	26
	Average of LOCAL FLOODPLAIN MANAGEMENT	3.8	2.3	4.3	3.7	16	3	6	25
	Average of UNIFORMA HEIGHT ON AGRICULTURAL LEVEES	3.4	3.3	3.7	3.5	16	3	6	25
	Average of STATE FLOODPLAIN MANAGEMENT	3.5	2.3	3.7	3.4	17	3	6	26
	Average of DISASTER RELIEF	3.7	4.0	2.7	3.5	15	3	6	24
	Average of NATIONAL FLOOD INSURANCE	3.2	4.3	2.3	3.1	17	3	6	26
	Average of RELOCATION & MITIGATION	1.8	3.0	1.7	1.9	16	3	6	25
	Average of LIMITED FLOOD FIGHTING ON AGRICULTURAL LEVEE	1.6	2.3	2.7	2.0	16	3	6	25
	Average of AGRICULTURAL LEVEE SET-BACKS	1.9	1.0	1.8	1.8	17	3	6	26
	Average of WETLAND RESTORATION	1.7	1.3	1.2	1.5	17	3	6	26
	Average of REMOVE AGRICULTURAL LEVEES	1.0	1.0	1.0	1.0	16	3	6	25
AER	Average of RAISE AGRICULTURAL LEVEES	#DIV/0!	#DIV/0!	5.0	5.0	0	0	1	1
	Average of LOCAL FLOODPLAIN MANAGEMENT	#DIV/0!	#DIV/0!	5.0	5.0	0	0	1	1
	Average of UNIFORMA HEIGHT ON AGRICULTURAL LEVEES	#DIV/0!	#DIV/0!	5.0	5.0	0	0	1	1
	Average of STATE FLOODPLAIN MANAGEMENT	#DIV/0!	#DIV/0!	3.0	3.0	0	0	1	1
	Average of DISASTER RELIEF	#DIV/0!	#DIV/0!	1.0	1.0	0	0	1	1
	Average of NATIONAL FLOOD INSURANCE	#DIV/0!	#DIV/0!	5.0	5.0	0	0	1	1
	Average of RELOCATION & MITIGATION	#DIV/0!	#DIV/0!	1.0	1.0	0	0	1	1
	Average of LIMITED FLOOD FIGHTING ON AGRICULTURAL LEVEE	#DIV/0!	#DIV/0!	1.0	1.0	0	0	1	1
	Average of AGRICULTURAL LEVEE SET-BACKS	#DIV/0!	#DIV/0!	3.0	3.0	0	0	1	1
	Average of WETLAND RESTORATION	#DIV/0!	#DIV/0!	1.0	1.0	0	0	1	1
	Average of REMOVE AGRICULTURAL LEVEES	#DIV/0!	#DIV/0!	1.0	1.0	0	0	1	1
C	Average of RAISE AGRICULTURAL LEVEES	#DIV/0!	#DIV/0!	4.0	4.0	0	0	1	1
	Average of LOCAL FLOODPLAIN MANAGEMENT	#DIV/0!	#DIV/0!	4.0	4.0	0	0	1	1
	Average of UNIFORMA HEIGHT ON AGRICULTURAL LEVEES	#DIV/0!	#DIV/0!	3.0	3.0	0	0	1	1
	Average of STATE FLOODPLAIN MANAGEMENT	#DIV/0!	#DIV/0!	4.0	4.0	0	0	1	1
	Average of DISASTER RELIEF	#DIV/0!	#DIV/0!	2.0	2.0	0	0	1	1
	Average of NATIONAL FLOOD INSURANCE	#DIV/0!	#DIV/0!	3.0	3.0	0	0	1	1
	Average of RELOCATION & MITIGATION	#DIV/0!	#DIV/0!	3.0	3.0	0	0	1	1
	Average of LIMITED FLOOD FIGHTING ON AGRICULTURAL LEVEE	#DIV/0!	#DIV/0!	3.0	3.0	0	0	1	1
	Average of AGRICULTURAL LEVEE SET-BACKS	#DIV/0!	#DIV/0!	2.0	2.0	0	0	1	1
	Average of WETLAND RESTORATION	#DIV/0!	#DIV/0!	2.0	2.0	0	0	1	1
	Average of REMOVE AGRICULTURAL LEVEES	#DIV/0!	#DIV/0!	1.0	1.0	0	0	1	1
E	Average of RAISE AGRICULTURAL LEVEES	#DIV/0!	#DIV/0!	5.0	5.0	0	0	1	1
	Average of LOCAL FLOODPLAIN MANAGEMENT	#DIV/0!	#DIV/0!	5.0	5.0	0	0	1	1
	Average of UNIFORMA HEIGHT ON AGRICULTURAL LEVEES	#DIV/0!	#DIV/0!	5.0	5.0	0	0	1	1
	Average of STATE FLOODPLAIN MANAGEMENT	#DIV/0!	#DIV/0!	5.0	5.0	0	0	1	1
	Average of DISASTER RELIEF	#DIV/0!	#DIV/0!	4.0	4.0	0	0	1	1
	Average of NATIONAL FLOOD INSURANCE	#DIV/0!	#DIV/0!	4.0	4.0	0	0	1	1
	Average of RELOCATION & MITIGATION	#DIV/0!	#DIV/0!	1.0	1.0	0	0	1	1
	Average of LIMITED FLOOD FIGHTING ON AGRICULTURAL LEVEE	#DIV/0!	#DIV/0!	1.0	1.0	0	0	1	1
	Average of AGRICULTURAL LEVEE SET-BACKS	#DIV/0!	#DIV/0!	1.0	1.0	0	0	1	1
	Average of WETLAND RESTORATION	#DIV/0!	#DIV/0!	4.0	4.0	0	0	1	1
	Average of REMOVE AGRICULTURAL LEVEES	#DIV/0!	#DIV/0!	1.0	1.0	0	0	1	1
G	Average of RAISE AGRICULTURAL LEVEES	#DIV/0!	#DIV/0!	1.5	1.5	0	0	4	4
	Average of LOCAL FLOODPLAIN MANAGEMENT	#DIV/0!	#DIV/0!	4.3	4.3	0	0	4	4
	Average of UNIFORMA HEIGHT ON AGRICULTURAL LEVEES	#DIV/0!	#DIV/0!	3.5	3.5	0	0	4	4
	Average of STATE FLOODPLAIN MANAGEMENT	#DIV/0!	#DIV/0!	4.3	4.3	0	0	4	4
	Average of DISASTER RELIEF	#DIV/0!	#DIV/0!	3.0	3.0	0	0	4	4
	Average of NATIONAL FLOOD INSURANCE	#DIV/0!	#DIV/0!	3.5	3.5	0	0	4	4
	Average of RELOCATION & MITIGATION	#DIV/0!	#DIV/0!	4.5	4.5	0	0	4	4
	Average of LIMITED FLOOD FIGHTING ON AGRICULTURAL LEVEE	#DIV/0!	#DIV/0!	3.5	3.5	0	0	4	4
	Average of AGRICULTURAL LEVEE SET-BACKS	#DIV/0!	#DIV/0!	3.3	3.3	0	0	4	4
	Average of WETLAND RESTORATION	#DIV/0!	#DIV/0!	3.8	3.8	0	0	4	4
	Average of REMOVE AGRICULTURAL LEVEES	#DIV/0!	#DIV/0!	2.5	2.5	0	0	4	4
H	Average of RAISE AGRICULTURAL LEVEES	#DIV/0!	#DIV/0!	4.0	4.0	0	0	1	1
	Average of LOCAL FLOODPLAIN MANAGEMENT	#DIV/0!	#DIV/0!	5.0	5.0	0	0	1	1
	Average of UNIFORMA HEIGHT ON AGRICULTURAL LEVEES	#DIV/0!	#DIV/0!	4.0	4.0	0	0	1	1
	Average of STATE FLOODPLAIN MANAGEMENT	#DIV/0!	#DIV/0!	5.0	5.0	0	0	1	1
	Average of DISASTER RELIEF	#DIV/0!	#DIV/0!	1.0	1.0	0	0	1	1
	Average of NATIONAL FLOOD INSURANCE	#DIV/0!	#DIV/0!	4.0	4.0	0	0	1	1
	Average of RELOCATION & MITIGATION	#DIV/0!	#DIV/0!	2.0	2.0	0	0	1	1
	Average of LIMITED FLOOD FIGHTING ON AGRICULTURAL LEVEE	#DIV/0!	#DIV/0!	1.0	1.0	0	0	1	1
	Average of AGRICULTURAL LEVEE SET-BACKS	#DIV/0!	#DIV/0!	1.0	1.0	0	0	1	1
	Average of WETLAND RESTORATION	#DIV/0!	#DIV/0!	2.0	2.0	0	0	1	1
	Average of REMOVE AGRICULTURAL LEVEES	#DIV/0!	#DIV/0!	1.0	1.0	0	0	1	1
I	Average of RAISE AGRICULTURAL LEVEES	#DIV/0!	#DIV/0!	5.0	5.0	0	0	2	2
	Average of LOCAL FLOODPLAIN MANAGEMENT	#DIV/0!	#DIV/0!	1.0	1.0	0	0	2	2
	Average of UNIFORMA HEIGHT ON AGRICULTURAL LEVEES	#DIV/0!	#DIV/0!	4.0	4.0	0	0	2	2
	Average of STATE FLOODPLAIN MANAGEMENT	#DIV/0!	#DIV/0!	1.0	1.0	0	0	2	2
	Average of DISASTER RELIEF	#DIV/0!	#DIV/0!	4.0	4.0	0	0	2	2
	Average of NATIONAL FLOOD INSURANCE	#DIV/0!	#DIV/0!	3.0	3.0	0	0	2	2
	Average of RELOCATION & MITIGATION	#DIV/0!	#DIV/0!	4.0	4.0	0	0	2	2
	Average of LIMITED FLOOD FIGHTING ON AGRICULTURAL LEVEE	#DIV/0!	#DIV/0!	1.0	1.0	0	0	2	2
	Average of AGRICULTURAL LEVEE SET-BACKS	#DIV/0!	#DIV/0!	1.0	1.0	0	0	2	2
	Average of WETLAND RESTORATION	#DIV/0!	#DIV/0!	1.0	1.0	0	0	2	2
	Average of REMOVE AGRICULTURAL LEVEES	#DIV/0!	#DIV/0!	1.0	1.0	0	0	2	2
Total Average of RAISE AGRICULTURAL LEVEES		4.1	3.3	3.6	3.8	17	3	16	36
Total Average of LOCAL FLOODPLAIN MANAGEMENT		3.8	2.3	4.0	3.7	16	3	16	35
Total Average of UNIFORMA HEIGHT ON AGRICULTURAL LEVEES		3.4	3.3	3.8	3.6	16	3	16	35
Total Average of STATE FLOODPLAIN MANAGEMENT		3.5	2.3	3.6	3.5	17	3	16	36
Total Average of DISASTER RELIEF		3.7	4.0	2.8	3.3	15	3	16	34
Total Average of NATIONAL FLOOD INSURANCE		3.2	4.3	3.1	3.3	17	3	16	36
Total Average of RELOCATION & MITIGATION		1.8	3.0	2.7	2.3	16	3	16	35
Total Average of LIMITED FLOOD FIGHTING ON AGRICULTURAL LEVEES		1.6	2.3	2.4	2.0	16	3	16	35
Total Average of AGRICULTURAL LEVEE SET-BACKS		1.9	1.0	2.1	1.9	17	3	16	36
Total Average of WETLAND RESTORATION		1.7	1.3	2.1	1.8	17	3	16	36
Total Average of REMOVE AGRICULTURAL LEVEES		1.0	1.0	1.4	1.2	16	3	16	35

			INTEREST							
LOCATIO	COUNTY	Data	A	AER	C	E	G	H	I	Grand Total
AFPWL	ATCHISON	Count of LOCATION	10	0	0	0	0	0	0	10
		Count of COUNTY	10	0	0	0	0	0	0	10
	ATCHISON/FREMO	Count of LOCATION	1	0	0	0	0	0	0	1
		Count of COUNTY	1	0	0	0	0	0	0	1
	FREMONT	Count of LOCATION	4	0	0	0	0	0	0	4
		Count of COUNTY	4	0	0	0	0	0	0	4
	NEMAHA	Count of LOCATION	2	0	0	0	0	0	0	2
		Count of COUNTY	2	0	0	0	0	0	0	2
	OTOE	Count of LOCATION	1	0	0	0	0	0	0	1
		Count of COUNTY	1	0	0	0	0	0	0	1
AFPWL Count of LOCATION			18	0	0	0	0	0	0	18
AFPWL Count of COUNTY			18	0	0	0	0	0	0	18
AFPWOL	OTOE	Count of LOCATION	3	0	0	0	0	0	0	3
		Count of COUNTY	3	0	0	0	0	0	0	3
AFPWOL Count of LOCATION			3	0	0	0	0	0	0	3
AFPWOL Count of COUNTY			3	0	0	0	0	0	0	3
OFP	FREMONT	Count of LOCATION	3	1	0	0	1	0	2	7
		Count of COUNTY	3	1	0	0	1	0	2	7
	LANCASTER	Count of LOCATION	0	0	0	0	2	0	0	2
		Count of COUNTY	0	0	0	0	2	0	0	2
	NEMAHA	Count of LOCATION	0	0	0	1	0	1	0	2
		Count of COUNTY	0	0	0	1	0	1	0	2
	OTOE	Count of LOCATION	2	0	1	0	1	0	0	4
		Count of COUNTY	2	0	1	0	1	0	0	4
	RICHARDSON	Count of LOCATION	1	0	0	0	0	0	0	1
		Count of COUNTY	1	0	0	0	0	0	0	1
OFP Count of LOCATION			6	1	1	1	4	1	2	16
OFP Count of COUNTY			6	1	1	1	4	1	2	16
Total Count of LOCATION			27	1	1	1	4	1	2	37
Total Count of COUNTY			27	1	1	1	4	1	2	37

Omaha

INTEREST

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
		1	2.7	2.7	2.7
	A	27	73.0	73.0	75.7
	C	1	2.7	2.7	78.4
	E	1	2.7	2.7	81.1
	G	4	10.8	10.8	91.9
	H	1	2.7	2.7	94.6
	I	2	5.4	5.4	100.0
	TOTAL	37	100.0	100.0	

Valid Cases 37 Missing Cases 0

STATE

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	IA	11	29.7	29.7	29.7
	MO	10	27.0	27.0	56.8
	MO/IA	1	2.7	2.7	59.5
	NE	15	40.5	40.5	100.0
	TOTAL	37	100.0	100.0	

Valid Cases 37 Missing Cases 0

COUNTY

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	ATCHISON	11	29.7	29.7	29.7
	FREMONT	11	29.7	29.7	59.5
	LANCASTE	2	5.4	5.4	64.9
	NEMAHA	4	10.8	10.8	75.7
	OTOE	8	21.6	21.6	97.3
	RICHARDS	1	2.7	2.7	100.0
	TOTAL	37	100.0	100.0	

Valid Cases 37 Missing Cases 0

LOCATION

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	AFPWL	18	48.6	48.6	48.6
	AFPWOL	3	8.1	8.1	56.8
	OFP	16	43.2	43.2	100.0
	TOTAL	37	100.0	100.0	

Valid Cases 37 Missing Cases 0

NATIONAL

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1	6	16.2	16.7	16.7
	2	3	8.1	8.3	25.0
	3	12	32.4	33.3	58.3
	4	6	16.2	16.7	75.0
	5	9	24.3	25.0	100.0
	9	1	2.7	MISSING	
	TOTAL	37	100.0	100.0	

Mean 3.250 Std Dev 1.381 Minimum 1.000
Maximum 5.000

Valid Cases 36 Missing Cases 1

LEVEL_NA

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
		13	35.1	35.1	35.1
	high	15	40.5	40.5	75.7
	low	9	24.3	24.3	100.0
	TOTAL	37	100.0	100.0	

Valid Cases 37 Missing Cases 0

STATE_FL

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1	5	13.5	13.9	13.9
	2	3	8.1	8.3	22.2
	3	10	27.0	27.8	50.0
	4	6	16.2	16.7	66.7
	5	12	32.4	33.3	100.0
	9	1	2.7	MISSING	
	TOTAL	37	100.0	100.0	

Mean 3.472 Std Dev 1.404 Minimum 1.000
Maximum 5.000

Valid Cases 36 Missing Cases 1

LEVEL_ST

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
		11	29.7	29.7	29.7
	high	18	48.6	48.6	78.4
	low	8	21.6	21.6	100.0
	TOTAL	37	100.0	100.0	

Valid Cases 37 Missing Cases 0

LOCAL_FL

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1	5	13.5	14.3	14.3
	2	3	8.1	8.6	22.9
	3	5	13.5	14.3	37.1
	4	5	13.5	14.3	51.4
	5	17	45.9	48.6	100.0
	9	2	5.4	MISSING	
	TOTAL	37	100.0	100.0	

Mean 3.743 Std Dev 1.502 Minimum 1.000
Maximum 5.000
Valid Cases 35 Missing Cases 2

LEVEL_LC

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
		7	18.9	18.9	18.9
	high	22	59.5	59.5	78.4
	low	8	21.6	21.6	100.0
	TOTAL	37	100.0	100.0	

Valid Cases 37 Missing Cases 0

RELOCATI

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1	15	40.5	42.9	42.9
	2	6	16.2	17.1	60.0
	3	6	16.2	17.1	77.1
	4	5	13.5	14.3	91.4
	5	3	8.1	8.6	100.0
	9	2	5.4	MISSING	
	TOTAL	37	100.0	100.0	

Mean 2.286 Std Dev 1.384 Minimum 1.000
Maximum 5.000

Valid Cases 35 Missing Cases 2

LEVEL_RL

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
		8	21.6	21.6	21.6
	high	8	21.6	21.6	43.2
	low	21	56.8	56.8	100.0
	TOTAL	37	100.0	100.0	

Valid Cases 37 Missing Cases 0

DISASTER

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1	4	10.8	11.8	11.8
	2	4	10.8	11.8	23.5
	3	13	35.1	38.2	61.8
	4	5	13.5	14.7	76.5
	5	8	21.6	23.5	100.0
	9	3	8.1	MISSING	
	TOTAL	37	100.0	100.0	

Mean 3.265 Std Dev 1.286 Minimum 1.000
Maximum 5.000

Valid Cases 34 Missing Cases 3

LEVEL_DI

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
		16	43.2	43.2	43.2
	high	13	35.1	35.1	78.4
	low	8	21.6	21.6	100.0
	TOTAL	37	100.0	100.0	

Valid Cases 37 Missing Cases 0

WETLAND

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1	22	59.5	61.1	61.1
	2	4	10.8	11.1	72.2
	3	5	13.5	13.9	86.1
	4	4	10.8	11.1	97.2
	5	1	2.7	2.8	100.0
	9	1	2.7	MISSING	
	TOTAL	37	100.0	100.0	

Mean 1.833 Std Dev 1.207 Minimum 1.000
Maximum 5.000
Valid Cases 36 Missing Cases 1

LEVEL_WE

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
		6	16.2	16.2	16.2
	high	5	13.5	13.5	29.7
	low	26	70.3	70.3	100.0
	TOTAL	37	100.0	100.0	

Valid Cases 37 Missing Cases 0

AGRICULT

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1	2	5.4	5.6	5.6
	2	2	5.4	5.6	11.1
	3	8	21.6	22.2	33.3
	4	8	21.6	22.2	55.6
	5	16	43.2	44.4	100.0
	9	1	2.7	MISSING	
	TOTAL	37	100.0	100.0	

Mean 3.944 Std Dev 1.194 Minimum 1.000
Maximum 5.000

Valid Cases 36 Missing Cases 1

LEVEL_AG

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
		9	24.3	24.3	24.3
	high	24	64.9	64.9	89.2
	low	4	10.8	10.8	100.0
	TOTAL	37	100.0	100.0	

Valid Cases 37 Missing Cases 0

FLOOD_FI

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1	22	59.5	62.9	62.9
	2	1	2.7	2.9	65.7
	3	5	13.5	14.3	80.0
	4	3	8.1	8.6	88.6
	5	4	10.8	11.4	100.0
	9	2	5.4	MISSING	
	TOTAL	37	100.0	100.0	

Mean 2.029 Std Dev 1.485 Minimum 1.000
Maximum 5.000

Valid Cases 35 Missing Cases 2

LEVEL_FL

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
		7	18.9	18.9	18.9
	high	7	18.9	18.9	37.8
	low	23	62.2	62.2	100.0
	TOTAL	37	100.0	100.0	

Valid Cases 37 Missing Cases 0

REMOVE

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1	32	86.5	91.4	91.4
	2	1	2.7	2.9	94.3
	3	1	2.7	2.9	97.1
	4	1	2.7	2.9	100.0
	9	2	5.4	MISSING	
	TOTAL	37	100.0	100.0	

Mean 1.171 Std Dev .618 Minimum 1.000
Maximum 4.000
Valid Cases 35 Missing Cases 2

LEVEL_RM

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
		3	8.1	8.1	8.1
	high	1	2.7	2.7	10.8
	low	33	89.2	89.2	100.0
	TOTAL	37	100.0	100.0	

Valid Cases 37 Missing Cases 0

AG_LEVEE

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1	20	54.1	58.8	58.8
	2	3	8.1	8.8	67.6
	3	7	18.9	20.6	88.2
	4	3	8.1	8.8	97.1
	5	1	2.7	2.9	100.0
	9	3	8.1	MISSING	
	TOTAL	37	100.0	100.0	

Mean 1.882 Std Dev 1.200 Minimum 1.000
Maximum 5.000

Valid Cases 34 Missing Cases 3

LEVEL_AL

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
		10	27.0	27.0	27.0
	high	4	10.8	10.8	37.8
	low	23	62.2	62.2	100.0
	TOTAL	37	100.0	100.0	

Valid Cases 37 Missing Cases 0

UNIFORM_

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1	3	8.1	8.6	8.6
	2	2	5.4	5.7	14.3
	3	9	24.3	25.7	40.0
	4	13	35.1	37.1	77.1
	5	8	21.6	22.9	100.0
	9	2	5.4	MISSING	
	TOTAL	37	100.0	100.0	

Mean 3.600 Std Dev 1.168 Minimum 1.000
Maximum 5.000

Valid Cases 35 Missing Cases 2

LEVEL_UN

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
		11	29.7	29.7	29.7
	high	21	56.8	56.8	86.5
	low	5	13.5	13.5	100.0
	TOTAL	37	100.0	100.0	

Valid Cases 37 Missing Cases 0

RAISE_AG

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1	4	10.8	11.1	11.1
	2	1	2.7	2.8	13.9
	3	9	24.3	25.0	38.9
	4	6	16.2	16.7	55.6
	5	16	43.2	44.4	100.0
	9	1	2.7	MISSING	
	TOTAL	37	100.0	100.0	

Mean 3.806 Std Dev 1.348 Minimum 1.000
Maximum 5.000
Valid Cases 36 Missing Cases 1

LEVEL_RA

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
		10	27.0	27.0	27.0
	high	22	59.5	59.5	86.5
	low	5	13.5	13.5	100.0
	TOTAL	37	100.0	100.0	

Valid Cases 37 Missing Cases 0

RAISE_UR

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1	4	10.8	11.8	11.8
	2	1	2.7	2.9	14.7
	3	9	24.3	26.5	41.2
	4	6	16.2	17.6	58.8
	5	14	37.8	41.2	100.0
	9	3	8.1	MISSING	
	TOTAL	37	100.0	100.0	

Mean 3.735 Std Dev 1.355 Minimum 1.000
Maximum 5.000

Valid Cases 34 Missing Cases 3

LEVEL_UR

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
		12	32.4	32.4	32.4
	high	20	54.1	54.1	86.5
	low	5	13.5	13.5	100.0
	TOTAL	37	100.0	100.0	

Valid Cases 37 Missing Cases 0

PROTECT

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1	2	5.4	5.9	5.9
	3	5	13.5	14.7	20.6
	4	9	24.3	26.5	47.1
	5	18	48.6	52.9	100.0
	9	3	8.1	MISSING	
	TOTAL	37	100.0	100.0	

Mean 4.206 Std Dev 1.095 Minimum 1.000
Maximum 5.000

Valid Cases 34 Missing Cases 3

LEVEL_PR

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
		8	21.6	21.6	21.6
	high	27	73.0	73.0	94.6
	low	2	5.4	5.4	100.0
	TOTAL	37	100.0	100.0	

Valid Cases 37 Missing Cases 0

UPLAND_R

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1	2	5.4	5.7	5.7
	3	2	5.4	5.7	11.4
	4	5	13.5	14.3	25.7
	5	26	70.3	74.3	100.0
	9	2	5.4	MISSING	
	TOTAL	37	100.0	100.0	

Mean 4.514 Std Dev 1.040 Minimum 1.000
Maximum 5.000
Valid Cases 35 Missing Cases 2

LEVEL_RN

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
		4	10.8	10.8	10.8
	high	31	83.8	83.8	94.6
	low	2	5.4	5.4	100.0
	TOTAL	37	100.0	100.0	

Valid Cases 37 Missing Cases 0

OPINION

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
		5	13.5	13.5	13.5
	NO	30	81.1	81.1	94.6
	YES	2	5.4	5.4	100.0
	TOTAL	37	100.0	100.0	

Valid Cases 37 Missing Cases 0

Omaha (Interest)

Crosstabulation: INTEREST
By NATIONAL

NATIONAL-> Count	1	2	3	4	5	Row Total
INTEREST						
—	.	.	.	.	1	1
— A	5	3	8	4	6	26
— C	.	.	1	.	.	1
High E	.	.	.	1	.	1
V. High G	1	.	1	.	2	4
High H	.	.	.	1	.	1
— I	.	.	2	.	.	2
Column Total	6 16.7	3 8.3	12 33.3	6 16.7	9 25.0	36 100.0

Number of Missing Observations = 1

Crosstabulation: INTEREST
By STATE_FL

STATE_FL-> Count	1	2	3	4	5	Row Total
INTEREST						
—	.	.	1	.	.	1
— A	3	3	8	4	8	26
High C	.	.	.	1	.	1
V. High E	.	.	.	.	1	1
V. High G	.	.	1	1	2	4
V. High H	.	.	.	.	1	1
V. Low I	2	.	.	.	.	2
Column Total	5 13.9	3 8.3	10 27.8	6 16.7	12 33.3	36 100.0

Number of Missing Observations = 1

Crosstabulation: INTEREST
By LOCAL_FL

LOCAL_FL-> Count / INTEREST	1	2	3	4	5	Row Total
–					1	1
High A	3	3	4	3	12	25
High C				1		1
V. High E					1	1
V. High G			1	1	2	4
V. High H					1	1
V. Low I	2					2
Column Total	5	3	5	5	17	35
	14.3	8.6	14.3	14.3	48.6	100.0

Number of Missing Observations = 2

Crosstabulation: INTEREST
By RELOCATI

RELOCATI-> Count / INTEREST	1	2	3	4	5	Row Total
–	1					1
V. Low A	13	5	5	1	1	25
– C			1			1
V. Low E	1					1
V. High G				2	2	4
Low H		1				1
High I				2		2
Column Total	15	6	6	5	3	35
	42.9	17.1	17.1	14.3	8.6	100.0

Number of Missing Observations = 2

Crosstabulation: INTEREST
By DISASTER

DISASTER-> Count	1	2	3	4	5	Row Total
INTEREST						
–	1					1
– (A)	2	2	11	1	8	24
Low C		1				1
High E				1		1
– (G)		1	2	1		4
V. Low H	1					1
High (I)				2		2
Column Total	4	4	13	5	8	34
	11.8	11.8	38.2	14.7	23.5	100.0

Number of Missing Observations = 3

Crosstabulation: INTEREST
By WETLAND

WETLAND-> Count	1	2	3	4	5	Row Total
INTEREST						
–	1					1
V. Low (A)	19	2	3	2		26
Low C		1				1
High E				1		1
High (G)			2	1	1	4
Low H		1				1
V. Low (I)	2					2
Column Total	22	4	5	4	1	36
	61.1	11.1	13.9	11.1	2.8	100.0

Number of Missing Observations = 1

Crosstabulation: INTEREST
By AGRICULT

AGRICULT-> Count / INTEREST	1	2	3	4	5	Row Total
-			1			1
V.Low A	15	2	5	2		24
Low C		1				1
V. Low E	1					1
High G	1		1	1	1	4
V.Low H	1					1
V.Low I	2					2
Column	20	3	7	3	1	34
Total	58.8	8.8	20.6	8.8	2.9	100.0

Number of Missing Observations = 3

Crosstabulation: INTEREST
By FLOOD_FI

FLOOD_FI-> Count / INTEREST	1	2	3	4	5	Row Total
-	1					1
V.Low A	17		4		4	25
- C			1			1
V.Low E	1					1
igh G		1		3		4
V. Low H	1					1
V. Low I	2					2
Column	22	1	5	3	4	35
Total	62.9	2.9	14.3	8.6	11.4	100.0

Number of Missing Observations = 2

Crosstabulation: INTEREST
By REMOVE

REMOVE-> Count / INTEREST	1	2	3	4	Row Total
-	1				1
V.Low (A)	25				25
V.Low C	1				1
V.Low E	1				1
Low (G)	1	1	1	1	4
V.Low H	1				1
V.Low (I)	2				2
Column Total	32	1	1	1	35
	91.4	2.9	2.9	2.9	100.0

Number of Missing Observations = 2

Crosstabulation: INTEREST
By AG_LEVEE

AG_LEVEE-> Count / INTEREST	1	2	3	4	5	Row Total
-			1			1
V. High (A)	1	2	5	3	15	26
- C			1			1
High E				1		1
High (G)	1		1	1	1	4
High H				1		1
High (I)				2		2
Column Total	2	2	8	8	16	36
	5.6	5.6	22.2	22.2	44.4	100.0

Number of Missing Observations = 1

Crosstabulation: INTEREST
By UNIFORM_

UNIFORM_ Count	1	2	3	4	5	Row Total
INTEREST						
–					1	1
High (A)	3	2	6	8	6	25
– C			1			1
V. High E					1	1
High (G)			2	2		4
High H				1		1
High (I)				2		2
Column	3	2	9	13	8	35
Total	8.6	5.7	25.7	37.1	22.9	100.0

Number of Missing Observations = 2

Crosstabulation: INTEREST
By RAISE_AG

RAISE_AG Count	1	2	3	4	5	Row Total
INTEREST						
–					1	1
High A	1	1	8	4	12	26
High C				1		1
V. High E					1	1
V. Low G	3		1			4
High H				1		1
V. High I					2	2
Column	4	1	9	6	16	36
Total	11.1	2.8	25.0	16.7	44.4	100.0

Number of Missing Observations = 1

Crosstabulation: INTEREST
By RAISE_UR

RAISE_UR-> Count / INTEREST	1	2	3	4	5	Row Total
–					1	1
High A	2	1	7	4	10	24
– C			1			1
V.High E					1	1
V.Low G	2		1	1		4
High H				1		1
V.High I					2	2
Column Total	4	1	9	6	14	34
	11.8	2.9	26.5	17.6	41.2	100.0

Number of Missing Observations = 3

Crosstabulation: INTEREST
By PROTECT

PROTECT-> Count / INTEREST	1	3	4	5	Row Total
–				1	1
V.High A	2	5	5	12	24
High C			1		1
V.High E				1	1
V.High G			2	2	4
High H			1		1
V.High I				2	2
Column Total	2	5	9	18	34
	5.9	14.7	26.5	52.9	100.0

Number of Missing Observations = 3

Crosstabulation: INTEREST
By UPLAND_R

UPLAND_R-> Count	1	3	4	5	Row Total
INTEREST					
-				1	1
V.High A	2	2	4	17	25
V.High C				1	1
V.High E				1	1
V.High G			1	3	4
V.High H				1	1
V.High I				2	2
Column Total	2 5.7	2 5.7	5 14.3	26 74.3	35 100.0

Number of Missing Observations = 2

Crosstabulation: INTEREST
By OPINION

OPINION-> Count	NO	YES	Row Total
INTEREST			
-	1		1
NO's A	5	20	2	27
No C	1		1
No E	1		1
NO's G	4		4
No H	1		1
NO's I	2		2
Column Total	5 13.5	30 81.1	2 5.4	37 100.0

Number of Missing Observations = 0

St. Louis District April Meetings Summary and Statistics

CELMS-PD-F 28 April 1995

SUBJECT: FPMA Public Meeting, East Alton, 18 Apr 95

1. The following information is the informal meeting notes taken by CELMS-PD-F, Mr. Dave Leake.

2. Peak Attendance: 30

Q: May 5th confirmed as cutoff for comments.

Q: Bensman asked basis for our conclusion that wetlands had no impact.

A: Computer modeling; 5 & 10% flow reduction scenarios; also coordinated with authors of ISWS Report.

Q(Jim Powell): Who defines the Base Flood Elev?

A: FEMA with help of Corps (or A/E's).

Q: How can we comment on expanding boundary of 100-year flood when we don't know where that boundary is?

(Powell comment): FEMA looks at Cabins riverside of levee as being at same risk as those landside of levee.

A(Perulfi): Explains pre-FIRM and past-FIRM and eventual progression toward an actuarily based system. Explains pre-FIRM damaged 3 times more often than post-FIRM structures.

Q(Robb): Is the Corps advocating that no one be allowed to raise his house on fill? We want a report to state that in sparsely populated areas, it's acceptable to build on fill.

We're spending $54m in Vallmeyer area when Corps' own report says we could have raised levee for $8-9m and prevented all damage. PUT THESE FACTS IN REPORT.

Q: If East St. Louis Levee District did the work, then levee could be certified.

A: Not knowledgeable on this issue.

C: Oil CO's should monitor their pipelines.

C(Robb): EMP has not been effective because these rivers are in a state of crisis. Why can't you display in dollars what the EMP has produced for its millions?

C: If damages in Age areas are relatively insignificant, why is everyone "pointing a gun" at us.

C(Robb): Media doesn't see enough of report.

Bensman: FWS should administer the EMP.

Robb: Chapter 8, page 28, Subsidy Programs: Need to compare payouts for floods to leveed areas and payouts to upland areas for droughts.

Robb: $1.8 billion would raise levee 6-8' (5:1 backslopes) using dredged material. We think Corps costs are way too high.

C(Robb): Page 40, Dennis S. indicates report is currently being revised.

Powell: You should be showing a benefit to large traffic for levees on the lower Illinois. This is also probably true of other river reaches. <u>This needs to be noted in the report.</u>

A(John P.): Quotes Simons and Li saying middle Miss is more stable than lower Miss.

Dave R: On the MO river, levees are very important.

C: People should not be allowed to build so close lakeside.

Does report cover filling in wetlands?

Considerable discussion regarding effects of 25-year agr levee action alt and the effects of timing.

Robb: Comments on page 37.

C: Question wisdom of using '93 Flood <u>only</u> as a basis for policy development.

Powell: "Floodplain Assessment" is a misnomer, it should be a basin assessment.

Powell: He feels that he shouldn't be required to have flood insurance.

C: Disagrees that people in floodplain should pay for entire problem.

3. Considerable discussion and exchange of views occurred with the meeting lasting 7 p.m. to 9 p.m., with about a half hour additional discussion.

CELMS-PD-F 28 April 1995

SUBJECT: FPMA Public Meeting Waterloo, IL, 19 April 1995

1. The following information is the informal meeting notes taken by CELMS-PD-F, Mr. Dave Leake.

2. Peak Attendance: 81

Q: Do changes in FIP apply to Agr buildings also?

C: Person should have right to build anything he wants on his own land if he signs a waiver saying he will not seek or accept money from Federal Government.

Q: Why don't you address effects of urban sprawl? You reward urban areas with high levels.

Q: Why didn't you look at a plan that dredged river and also removed rock (dikes)?

A: We formulated plans around changes to flood control features, not nav. features. Anyway, in '93 there was so much water, dike removal and dredging would have made little difference.

Q: What was major difference in '73 flood and '93 flood?

A: Amount of rain.

Q: What makes the river fluctuate so much more today?

A: Speculate that it's speed of runoff.

C: Developers should have to pay tax to help pay for our flood insurance.

Q: How much money was spent by Government in '93 and how much of that was spent in f.p. itself? I've heard about $5 - 51/2 billion in f.p. yet, it only costs $5.7 billion to raise levees from Cairo to St. Louis. Is this solution too simple? Also, why not use dredged material to build up levees?

A: See columns in the matrix table provided.

Q: Did anyone calculate what it would cost to relocate everyone vs cost of raising all levees?

A: Yes, see rows 24 and 25 in matrix table provided.

Q: Is your buyout different from FEMA's buyout where they only bought out your house leaving sheds, etc there?

A: yes, we have costed buying out entire farm.Q: Is Agr not one of most important factors in equation?

A: Yes.

Q: Was one of your conclusions that Agr. is a logical use of floodplain?

A: Yes

Q: Why can't Agr. be given special consideration?

C: I don't feel bad because my Government spent tens of billions protecting me in the floodplain. Look at amount spent in foreign aid.

C: The regulations applied to urban areas shouldn't be applied in sam way to Agr. areas.

Q: What is risk of flooding in Lower Mississippi compared to Upper Mississippi.

A: Much less in Lower Mississippi River.

Q: Is it possible to design and build a similar system for upper river?

C: It's immoral for FEMA to blackmail local Governments into zoning Agr. out of bottomland.

Q: What's happening with Missouri River Master manual?

A: It's going to court.

Q: Who does forecasting for river?

A: NWS, Forecasts are getting poorer.

Q: Are you looking at waste in Federal programs? Roughly 25% of dollars expended in disaster relief in Monroe County was wasted or subject to fraud.

C: Urbanites and Environmentalists today have so much influence over politicians, we have no hope of controlling our own destiny.

Q: Have you looked at a policy to remove trees from overflow areas riverword of existing levees?

A: No, we'll try to look at it.

Q: It is Corps policy and their control of wetlands that prevents clearing of trees atreservoir projects.

C: They don't make people move out when a tornado or hurricane devastates an area, why do they do this with flood victims?

3. Considerable discussion occurred, with the meeting lasting from 7 p.m. until 11 p.m., with additional discussion beyond closing.

CELMS-PD-F 28 April 1995

SUBJECT: FPMA Public Meeting St. Peters, MO, 20 Apr 95

1. The following information is the informal meeting notes taken by CELMS-PD-F, Mr. Dave Leake.

2. Peak attendance: 70

C: Can only assess significance of scenario to remove all levees if we know how many of these levees were overtopped in "93.

Q: Why did early major floods such as 1844 have as much or more flow but lower stages?

A: Different more accurate gaging capabilities; No urban levees in 1844.

Q: How many acre/feet of water is represented by 10% flow reduction? How much storage (in acre/feet) is included in floodplain?

C: A physical model shows 1844 flows were much lower, 800,000 cfs, per CELMS-PD-HE paper.

Q: Will we ever have this bad a problem again?

A: Yes, probably worse at some point.

C: Proposes a new scenario: higher levees to pass higher early flows, then reservoir storage could be reserved for flood peaks.

C: In Agr levee removal, you didn't look at Hwy or RR embankments in.

Q: Did you estimate cost of Agr levee removal and cost of buying land.

A: Yes, see matrix table provided.

Q: Why don't we have diversionary channels such as they have in New Orleans.

A: In New Orleans, we have relatively new channels and several of them. Therefore, they have natural diversion channels which we can't carve out of limestone bluffs in this reach of the river.

C(Robb): There is simply not enough storage behind the various levees to make any significant difference in St. Louis.

C: In urban environment, overtopping levees causes loss of life; in Agr areas it causes loss of a year's income.

Q: What will happen in the Howard Bend area if a 500-year levee is constructed in Chesterfield.

Q: Would Monarch Levee have overtopped were it not breached?

A: Uncertain.

Q: What are you finding in regard to levee setbacks? Does it make sense to set back levees when bridges continue to be the major restriction?

Q: Is there reservoir storage.

C: No one is suggesting that all AGR levees be removed.

Q: Did you model the impact of the Truman Reservoir?

A: Yes, the Truman Reservoir prevented a flood of similar stage at Chesterfield in 1994.

Q: Didn't see effects of navigation and transportation reflected in report.

A: True, navigation effects weren't included because it would have been a similar loss regardless of the scenario.

Q: Are you going to use the UNET model to make future real time forecasts?

A: Not sure.

Q: Can you address the view that everything would be ok if river is reconnected with its floodplain? We feel that the statement currently in the report is misleading and incorrect and should be removed.

C: It's not only the farmers who use chemicals.

Q: Could model be used to look at removing <u>all</u> the effects of mankind?

A: Yes and we're considering doing that.

C: I'm concerned that your study is not going to make recommendations. Politicians need this guidance. If you're the best organization to make the study; you're probably the best organization to make recommendations.

Q: Are you going to look at effect of width of channel? Say a 3000' bridge opening vs a 4000' opening.

3. Considerable exchange of views and information occurred including the Missouri River Master Manual Review. The meeting lasted from 7 p.m. to 9 p.m. with about an additional hour discussion after the formal close of the meeting.

St. Louis District

ID

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	AL	19	21.6	21.6	21.6
	STP	21	23.9	23.9	45.5
	WA	48	54.5	54.5	100.0
	TOTAL	88	100.0	100.0	

Valid Cases 88 Missing Cases 0

INTEREST

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
		12	13.6	13.6	13.6
	Ag	52	59.1	59.1	72.7
	Envir	3	3.4	3.4	76.1
	Govt	7	8.0	8.0	84.1
	Home	9	10.2	10.2	94.3
	Other?	5	5.7	5.7	100.0
	TOTAL	88	100.0	100.0	

Valid Cases 88 Missing Cases 0

STATE

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	IL	62	70.5	70.5	70.5
	MO	26	29.5	29.5	100.0
	TOTAL	88	100.0	100.0	

Valid Cases 88 Missing Cases 0

COUNTY

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
		1	1.1	1.1	1.1
	FRANKLIN	3	3.4	3.4	4.5
	JACKSON	2	2.3	2.3	6.8
	JERSEY	3	3.4	3.4	10.2
	MACOUPIN	1	1.1	1.1	11.4
	MADISON	7	8.0	8.0	19.3
	MONROE	33	37.5	37.5	56.8
	MONTGOME	1	1.1	1.1	58.0
	PERRY	2	2.3	2.3	60.2
	PHELPS	1	1.1	1.1	61.4
	RANDOLPH	8	9.1	9.1	70.5
	SCOTT	3	3.4	3.4	73.9
	ST. CHAR	6	6.8	6.8	80.7
	ST. CLAI	2	2.3	2.3	83.0
	ST. LOUI	6	6.8	6.8	89.8
	WARREN	8	9.1	9.1	98.9
	WHITESID	1	1.1	1.1	100.0
	TOTAL	88	100.0	100.0	

COUNTY

Valid Cases 88 Missing Cases 0

LOCATION

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
		2	2.3	2.3	2.3
	AFPWL	54	61.4	61.4	63.6
	OFP	27	30.7	30.7	94.3
	UFPWL	5	5.7	5.7	100.0
	TOTAL	88	100.0	100.0	

Valid Cases 88 Missing Cases 0

NATIONAL

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1	13	14.8	16.5	16.5
	2	8	9.1	10.1	26.6
	3	16	18.2	20.3	46.8
	4	18	20.5	22.8	69.6
	5	24	27.3	30.4	100.0
	9	9	10.2	MISSING	
	TOTAL	88	100.0	100.0	

Mean 3.405 Std Dev 1.437 Minimum 1.000
Maximum 5.000

Valid Cases 79 Missing Cases 9

LEVEL_NA

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
		25	28.4	28.4	28.4
	high	42	47.7	47.7	76.1
	low	21	23.9	23.9	100.0
	TOTAL	88	100.0	100.0	

Valid Cases 88 Missing Cases 0

STATE_FL

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1	22	25.0	28.2	28.2
	2	10	11.4	12.8	41.0
	3	13	14.8	16.7	57.7
	4	13	14.8	16.7	74.4
	5	20	22.7	25.6	100.0
	9	10	11.4	MISSING	
	TOTAL	88	100.0	100.0	

Mean 2.987 Std Dev 1.575 Minimum 1.000
Maximum 5.000
Valid Cases 78 Missing Cases 10

LEVEL_ST

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
		23	26.1	26.1	26.1
	high	33	37.5	37.5	63.6
	low	32	36.4	36.4	100.0
	TOTAL	88	100.0	100.0	

Valid Cases 88 Missing Cases 0

LOCAL_FL

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1	12	13.6	15.0	15.0
	2	6	6.8	7.5	22.5
	3	8	9.1	10.0	32.5
	4	20	22.7	25.0	57.5
	5	34	38.6	42.5	100.0
	9	8	9.1	MISSING	
	TOTAL	88	100.0	100.0	

Mean 3.725 Std Dev 1.458 Minimum 1.000
Maximum 5.000

Valid Cases 80 Missing Cases 8

LEVEL_LC

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
		16	18.2	18.2	18.2
	high	54	61.4	61.4	79.5
	low	18	20.5	20.5	100.0
	TOTAL	88	100.0	100.0	

Valid Cases 88 Missing Cases 0

RELOCATI

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1	27	30.7	34.6	34.6
	2	16	18.2	20.5	55.1
	3	16	18.2	20.5	75.6
	4	7	8.0	9.0	84.6
	5	12	13.6	15.4	100.0
	9	10	11.4	MISSING	
	TOTAL	88	100.0	100.0	

Mean 2.500 Std Dev 1.439 Minimum 1.000
Maximum 5.000

Valid Cases 78 Missing Cases 10

LEVEL_RL

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
		26	29.5	29.5	29.5
	high	19	21.6	21.6	51.1
	low	43	48.9	48.9	100.0
	TOTAL	88	100.0	100.0	

Valid Cases 88 Missing Cases 0

DISASTER

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1	17	19.3	21.0	21.0
	2	8	9.1	9.9	30.9
	3	23	26.1	28.4	59.3
	4	17	19.3	21.0	80.2
	5	16	18.2	19.8	100.0
	9	7	8.0	MISSING	
	TOTAL	88	100.0	100.0	

Mean 3.086 Std Dev 1.398 Minimum 1.000
Maximum 5.000
Valid Cases 81 Missing Cases 7

LEVEL_DI

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
		30	34.1	34.1	34.1
	high	33	37.5	37.5	71.6
	low	25	28.4	28.4	100.0
	TOTAL	88	100.0	100.0	

Valid Cases 88 Missing Cases 0

WETLAND

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1	47	53.4	59.5	59.5
	2	14	15.9	17.7	77.2
	3	11	12.5	13.9	91.1
	4	1	1.1	1.3	92.4
	5	6	6.8	7.6	100.0
	9	9	10.2	MISSING	
	TOTAL	88	100.0	100.0	

Mean 1.797 Std Dev 1.202 Minimum 1.000
Maximum 5.000

Valid Cases 79 Missing Cases 9

LEVEL_WE

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
		20	22.7	22.7	22.7
	high	7	8.0	8.0	30.7
	low	61	69.3	69.3	100.0
	TOTAL	88	100.0	100.0	

Valid Cases 88 Missing Cases 0

AGRICULT

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1	17	19.3	20.5	20.5
	2	6	6.8	7.2	27.7
	3	15	17.0	18.1	45.8
	4	9	10.2	10.8	56.6
	5	36	40.9	43.4	100.0
	9	5	5.7	MISSING	
	TOTAL	88	100.0	100.0	

Mean 3.494 Std Dev 1.588 Minimum 1.000
Maximum 5.000

Valid Cases 83 Missing Cases 5

LEVEL_AG

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
		20	22.7	22.7	22.7
	high	45	51.1	51.1	73.9
	low	23	26.1	26.1	100.0
	TOTAL	88	100.0	100.0	

Valid Cases 88 Missing Cases 0

FLOOD_FI

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	0	1	1.1	1.3	1.3
	1	55	62.5	68.8	70.0
	2	3	3.4	3.8	73.8
	3	6	6.8	7.5	81.3
	4	4	4.5	5.0	86.3
	5	11	12.5	13.8	100.0
	9	8	9.1	MISSING	
	TOTAL	88	100.0	100.0	

Mean 1.875 Std Dev 1.504 Minimum .000
Maximum 5.000
Valid Cases 80 Missing Cases 8

LEVEL_FL

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
		15	17.0	17.0	17.0
	high	15	17.0	17.0	34.1
	low	58	65.9	65.9	100.0
	TOTAL	88	100.0	100.0	

Valid Cases 88 Missing Cases 0

REMOVE

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1	63	71.6	81.8	81.8
	2	2	2.3	2.6	84.4
	3	8	9.1	10.4	94.8
	4	1	1.1	1.3	96.1
	5	3	3.4	3.9	100.0
	9	11	12.5	MISSING	
	TOTAL	88	100.0	100.0	

Mean 1.429 Std Dev 1.006 Minimum 1.000
Maximum 5.000

Valid Cases 77 Missing Cases 11

LEVEL_RM

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
		19	21.6	21.6	21.6
	high	4	4.5	4.5	26.1
	low	65	73.9	73.9	100.0
	TOTAL	88	100.0	100.0	

Valid Cases 88 Missing Cases 0

AG_LEVEE

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1	51	58.0	65.4	65.4
	2	6	6.8	7.7	73.1
	3	9	10.2	11.5	84.6
	4	5	5.7	6.4	91.0
	5	7	8.0	9.0	100.0
	9	10	11.4	MISSING	
	TOTAL	88	100.0	100.0	

Mean 1.859 Std Dev 1.355 Minimum 1.000
Maximum 5.000

Valid Cases 78 Missing Cases 10

LEVEL_AL

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
		19	21.6	21.6	21.6
	high	12	13.6	13.6	35.2
	low	57	64.8	64.8	100.0
	TOTAL	88	100.0	100.0	

Valid Cases 88 Missing Cases 0

UNIFORM_

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1	24	27.3	30.0	30.0
	2	9	10.2	11.3	41.3
	3	12	13.6	15.0	56.3
	4	9	10.2	11.3	67.5
	5	26	29.5	32.5	100.0
	9	8	9.1	MISSING	
	TOTAL	88	100.0	100.0	

Mean 3.050 Std Dev 1.660 Minimum 1.000
Maximum 5.000
Valid Cases 80 Missing Cases 8

LEVEL_UN

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
		20	22.7	22.7	22.7
	high	35	39.8	39.8	62.5
	low	33	37.5	37.5	100.0
	TOTAL	88	100.0	100.0	

Valid Cases 88 Missing Cases 0

RAISE_AG

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1	14	15.9	17.3	17.3
	2	4	4.5	4.9	22.2
	3	12	13.6	14.8	37.0
	4	8	9.1	9.9	46.9
	5	43	48.9	53.1	100.0
	9	7	8.0	MISSING	
	TOTAL	88	100.0	100.0	

Mean 3.765 Std Dev 1.551 Minimum 1.000
Maximum 5.000

Valid Cases 81 Missing Cases 7

LEVEL_RA

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
		19	21.6	21.6	21.6
	high	51	58.0	58.0	79.5
	low	18	20.5	20.5	100.0
	TOTAL	88	100.0	100.0	

Valid Cases 88 Missing Cases 0

RAISE_UR

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1	19	21.6	24.4	24.4
	2	2	2.3	2.6	26.9
	3	21	23.9	26.9	53.8
	4	5	5.7	6.4	60.3
	5	31	35.2	39.7	100.0
	9	10	11.4	MISSING	
	TOTAL	88	100.0	100.0	

Mean 3.346 Std Dev 1.602 Minimum 1.000
Maximum 5.000

Valid Cases 78 Missing Cases 10

LEVEL_UR

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
		31	35.2	35.2	35.2
	high	36	40.9	40.9	76.1
	low	21	23.9	23.9	100.0
	TOTAL	88	100.0	100.0	

Valid Cases 88 Missing Cases 0

PROTECT

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1	2	2.3	2.5	2.5
	2	4	4.5	5.0	7.5
	3	9	10.2	11.3	18.8
	4	18	20.5	22.5	41.3
	5	47	53.4	58.8	100.0
	9	8	9.1	MISSING	
	TOTAL	88	100.0	100.0	

Mean 4.300 Std Dev 1.024 Minimum 1.000
Maximum 5.000
Valid Cases 80 Missing Cases 8

LEVEL_PR

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
		17	19.3	19.3	19.3
	high	65	73.9	73.9	93.2
	low	6	6.8	6.8	100.0
	TOTAL	88	100.0	100.0	

Valid Cases 88 Missing Cases 0

UPLAND_R

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	0	1	1.1	1.2	1.2
	1	5	5.7	6.1	7.3
	2	2	2.3	2.4	9.8
	3	8	9.1	9.8	19.5
	4	12	13.6	14.6	34.1
	5	54	61.4	65.9	100.0
	9	6	6.8	MISSING	
	TOTAL	88	100.0	100.0	

Mean 4.280 Std Dev 1.240 Minimum .000
Maximum 5.000

Valid Cases 82 Missing Cases 6

LEVEL_RN

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
		15	17.0	17.0	17.0
	high	66	75.0	75.0	92.0
	low	7	8.0	8.0	100.0
	TOTAL	88	100.0	100.0	

Valid Cases 88 Missing Cases 0

OPINION

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
		13	14.8	14.8	14.8
	N/Y	1	1.1	1.1	15.9
	NO	64	72.7	72.7	88.6
	YES	10	11.4	11.4	100.0
	TOTAL	88	100.0	100.0	

Valid Cases 88 Missing Cases 0

St. Louis
✓ (Interest)

Crosstabulation: INTEREST
By NATIONAL

NATIONAL-> Count / INTEREST	1	2	3	4	5	Row Total
–			2	4	4	10
– (A)	9	8	7	8	14	46
V. Low E	2			1		3
High (G)			1	3	3	7
High (H)			4	2	3	9
Low O	2		2			4
Column Total	13	8	16	18	24	79
	16.5	10.1	20.3	22.8	30.4	100.0

Number of Missing Observations = 9

Crosstabulation: INTEREST
By STATE_FL

STATE_FL-> Count / INTEREST	1	2	3	4	5	Row Total
–	4		1	3	3	11
– (A)	16	8	7	7	7	45
High E	1			1	1	3
V. High (G)			2		5	7
High (H)		2	1	2	3	8
– O	1		2		1	4
Column Total	22	10	13	13	20	78
	28.2	12.8	16.7	16.7	25.6	100.0

Number of Missing Observations = 10

Crosstabulation: INTEREST
By LOCAL_FL

LOCAL_FL-> Count		1	2	3	4	5	Row Total
INTEREST							
—		2			4	6	12
High	A	8	4	5	10	18	45
High	E	1			1	1	3
V. High	G				2	5	7
High	H	1	2	1	2	2	8
High	O			2	1	2	5
Column Total		12 (15.0)	6 (7.5)	8 (10.0)	20 (25.0)	34 (42.5)	80 (100.0)

Number of Missing Observations = 8

Crosstabulation: INTEREST
By RELOCATI

RELOCATI-> Count		1	2	3	4	5	Row Total
INTEREST							
—		3	2	2	1	2	10
Low	A	21	11	6	5	2	45
High	E			1	1	1	3
[illegible]	G		2	2		3	7
Low	H	3	1	2		2	8
—	O			3		2	5
Column Total		27 (34.6)	16 (20.5)	16 (20.5)	7 (9.0)	12 (15.4)	78 (100.0)

Number of Missing Observations = 10

Crosstabulation: INTEREST
By DISASTER

DISASTER-> Count		1	2	3	4	5	Row Total
INTEREST							
-		4	1	2	3	1	11
-	A	8	5	13	11	9	46
-	E	1		1	1		3
High	G	1	1	1	1	3	7
-	H	1	1	4	1	2	9
-	O	2		2		1	5
	Column	17	8	23	17	16	81
	Total	21.0	9.9	28.4	21.0	19.8	100.0

Number of Missing Observations = 7

Crosstabulation: INTEREST
By WETLAND

WETLAND-> Count		1	2	3	4	5	Row Total
INTEREST							
-		5	2	1		3	11
V.Low	A	36	5	4			45
-	E		1			1	2
Low	G	2	3	1	1		7
Low	H	3	2	3		1	9
-	O	1	1	2		1	5
	Column	47	14	11	1	6	79
	Total	59.5	17.7	13.9	1.3	7.6	100.0

Number of Missing Observations = 9

Crosstabulation: INTEREST
By AGRICULT

AGRICULT-> Count		1	2	3	4	5	Row Total
INTEREST							
–		2		2	2	6	12
High	A	5	4	10	4	24	47
V.Low	E	3					3
Low	G	3	1	1	1	1	7
High	H	3	1		2	3	9
–	O	1		2		2	5
Column Total		17	6	15	9	36	83
		20.5	7.2	18.1	10.8	43.4	100.0

Number of Missing Observations = 5

Crosstabulation: INTEREST
By FLOOD_FI

FLOOD_FI-> Count		0	1	2	3	4	Row Total
INTEREST							
–		1	7		1		11
V.Low	A		38	1			46
High	E		1			1	3
–	G		1	1	3	2	7
Low	H		6	1	1	1	9
V.Low	O		2		1		4
Column Total		1	55	3	6	4	80
(Continued)		1.3	68.8	3.8	7.5	5.0	100.0

Crosstabulation: INTEREST
By FLOOD_FI

FLOOD_FI-> Count	5	Row Total
INTEREST		
	2	11
A	7	46
E	1	3
G		7
H		9
O	1	4
Column Total	11 / 13.8	80 / 100.0

Number of Missing Observations = 8

Crosstabulation: INTEREST
By REMOVE

REMOVE-> Count	1	2	3	4	5	Row Total
INTEREST						
—	8		1		1	10
V.Low A	43				1	44
— E		1	2			3
V.Low G	4		3			7
V.Low H	6	1	1	1		9
V.Low O	2		1		1	4
Column Total	63 / 81.8	2 / 2.6	8 / 10.4	1 / 1.3	3 / 3.9	77 / 100.0

Number of Missing Observations = 11

Crosstabulation: INTEREST
By AG_LEVEE

AG_LEVEE-> Count	1	2	3	4	5	Row Total
INTEREST						
–	5	1	1	1	2	10
V.Low A	37	5	2		1	45
V.High E				2	1	3
– G	2		4	1		7
V.Low H	5		1		3	9
V.Low O	2		1	1		4
Column	51	6	9	5	7	78
Total	65.4	7.7	11.5	6.4	9.0	100.0

Number of Missing Observations = 10

Crosstabulation: INTEREST
By UNIFORM_

UNIFORM_-> Count	1	2	3	4	5	Row Total
INTEREST						
–	3	2	2	1	3	11
High A	13	4	5	5	19	46
Low E	1	2				3
– G	1	1	2	2	1	7
V.Low H	5		2	1	1	9
V.High O	1		1		2	4
Column	24	9	12	9	26	80
Total	30.0	11.3	15.0	11.3	32.5	100.0

Number of Missing Observations = 8

Crosstabulation: INTEREST
By RAISE_AG

RAISE_AG-> Count	1	2	3	4	5	Row Total
INTEREST						
–	1	2	2	2	4	11
V.High A	4	1	5	5	32	47
V.Low E	3					3
– G	3		1	1	2	7
– H	2	1	2		4	9
– O	1		2		1	4
Column Total	14	4	12	8	43	81
	17.3	4.9	14.8	9.9	53.1	100.0

Number of Missing Observations = 7

Crosstabulation: INTEREST
By RAISE_UR

RAISE_UR-> Count	1	2	3	4	5	Row Total
INTEREST						
–	1		1	1	7	10
– A	11	1	14	1	18	45
V.Low E	2		1			3
– G	2		2	3		7
V.High H	2	1	1		5	9
– O	1		2		1	4
Column Total	19	2	21	5	31	78
	24.4	2.6	26.9	6.4	39.7	100.0

Number of Missing Observations = 10

Crosstabulation: INTEREST
By PROTECT

PROTECT-> Count / INTEREST	1	2	3	4	5	Row Total
–		1	1	1	7	10
V.High A	1	2	6	11	27	47
V.High E				1	2	3
High G		1		3	3	7
V.High H	1		1	1	5	8
V.High O			1	1	3	5
Column Total	2	4	9	18	47	80
	2.5	5.0	11.3	22.5	58.8	100.0

Number of Missing Observations = 8

Crosstabulation: INTEREST
By UPLAND_R

UPLAND_R-> Count / INTEREST	0	1	2	3	4	Row Total
–		1		2	1	11
V.High A	1	3	2	3	4	48
– E		1		1		3
V.High G					3	6
V.High H				1	3	9
V.High O				1	1	5
Column Total	1	5	2	8	12	82
(Continued)	1.2	6.1	2.4	9.8	14.6	100.0

Crosstabulation: INTEREST
By UPLAND_R

UPLAND_R-> Count / INTEREST	5	Row Total
	7	11
A	35	48
E	1	3
G	3	6
H	5	9
O	3	5
Column Total	54 / 65.9	82 / 100.0

Number of Missing Observations = 6

Crosstabulation: INTEREST
By OPINION

OPINION-> Count / INTEREST	N/Y	NO	YES	Row Total
—	3	1	7	1	12
A	8		42	2	52
E			2	1	3
G	1		4	2	7
H	1		5	3	9
O			4	1	5
Column Total	13 / 14.8	1 / 1.1	64 / 72.7	10 / 11.4	88 / 100.0

No's

No's

No's

No's

No's

Number of Missing Observations = 0

Kansas City District April Meetings Summary and Statistics

CEMRK-EP-PF

25 April 1995

MEMORANDUM FOR RECORD

SUBJECT: Summary of final Public Workshops in Kansas City, Missouri, and Saint Peters, Missouri, for the Floodplain Management Assessment (FPMA).

1. In April of 1995 the Kansas City District conducted 2 workshops to present the findings and conclusions of the FPMA to the public. The workshops were formatted in a manner in which a 30 minute slide show/presentation was given to present the basic findings and conclusions of the FPMA study. Following the presentation the public was given the opportunity to ask any questions and give any comments about the subject study.

2. The Kansas City, Missouri, workshop was conducted on Tuesday, 18 April 95, at the Adams Mark Hotel. Approximately 33 persons attended the workshop and 24 individuals returned comment sheets. The majority of the workshop participants represented the agricultural interests. The workshop lasted from 7:00 p.m. to 9:30 p.m.. Those present from the Corps included:

Chris Erickson, KCD, POC,
Jeanne Musgrave, KCD, Economics,
Mike Wolfender, KCD, Public Involvement,
Robert Ruf, KCD, Environmental,
Robert Pearce, KCD, Hydrology and Hydraulics,
Rebecca Allision, KCD, Hydrology and Hydraulics,
George Hanley, KCD, Public Affairs, and
Roy McAllister, MRD, Missouri River Master Manual.

3. The Jefferson City, Missouri, workshop was conducted on Wednesday, 18 April 95, at the Capital Plaza Hotel. Approximately 75 persons attended the workshop and 52 individuals returned comment sheets. The majority of the workshop participants represented the agricultural interests. The workshop lasted from 7:00 p.m. to 10:00 p.m.. Those present from the Corps included:

Chris Erickson, KCD, POC,
Jeanne Musgrave, KCD, Economics,
Mike Wolfender, KCD, Public Involvement,
Robert Pearce, KCD, Hydrology and Hydraulics,
Larry Crump, KCD, Public Affairs, and
Roy McAllister, MRD, Missouri River Master Manual.

4. Listed below are comments/statements/observations that were received in the workshops. The comments are not listed in any particular order.

a. Participants felt the time to review and comment on the draft report was inadequate.

b. Some participants felt they have not been properly informed of the FPMA study and public meetings.

c. There is concern that the "policy makers" will make specific policy and proposals from this report when it only looks at the extreme 1993 Flood Event.

d. There is some confusion concerning the various activities on the Missouri River. They expected more definite linkage among the FPMA, Missouri River Master Manual, and the Missouri River Mitigation project. Feedback of the public is confusion and anger over the Government spending considerable amount of taxpayer dollars.

e. The public would like to know the specific disposition of the final report. "What is going to happen to this report once completed?"

f. Comments were received as to the accuracy of the UNET model and the perception that this model is so exact. Concern was expressed that a comprehensive physical model needs to be developed for the Missouri and Mississippi River systems.
NOTE: In the report we need to make sure that we discuss that the UNET is a Model, remember a model is an abstraction from reality, it does not represent reality exactly, IT IS ONLY A MODEL.

g. Concern was expressed that the systemic levee set-back alternative will not include an evaluation of the economic, environmental, and risks impacts.

h. The Osage River Group was disappointed that the FPMA did not look at major tributaries, specifically at the Osage River Basin and all associated COE projects.

i. Some organizations and interests stated they would submit formal comments about the study and draft report to Dave Loss, NCS.

In addition, some comments expressed frustration about the current Missouri River Master Manual preferred alternative. These comments were addressed by Mr. Roy McAllister, MRD. Other comments received at the meeting addressed site specific issues beyond the scope of the FPMA.

Chris Erickson

Chris Erickson, FPMA, POC

c:\a\fpma\pub-apr.mtg

Kansas City, Missouri, April 18, 1995

33 persons attended, 24 returned comment sheets.

Identified Interests:

Interest	Agri	Comm	Envi	Gov.	Home Owner	Indus try	Rec.	Reg. Plng.	Other	None
Sample Size 24.00	18	1		3	2					
Percentage 100.00	75.00	4.17	0.00	12.50	8.33	0.00	0.00	0.00	0.00	0.00

Locale:

	Agri.F.P. w/ Levee	Agri. F.P. No Levee	Urban F.P. w/ Levee	Urban F.P. No Levee	Out of Floodplain	None
Sample size 24.00	14		1	2	7	
Percentage 100.00	58.33	0.00	4.17	8.33	29.17	0.00

Program Priorities:

Program Percentage Responding	1 (Low)	2	3 (Neutral)	4	5 (High)
National Flood Insurance	4	1	9	6	3
95.84	16.67	4.17	37.50	25.00	12.50
State Floodplain Management		4	4	7	7
91.68	0.00	16.67	16.67	29.17	29.17
Local Floodplain Management	1	3	3	7	6
83.34	4.17	12.50	12.50	29.17	25.00
Relocation and Mitigation	9	2	4	4	1
83.34	37.50	8.33	16.67	16.67	4.17
Disaster Relief	2	2	8	8	1
87.49	8.33	8.33	33.33	33.33	4.17
Floodplain Wetland Restoration	13	2	3	1	2
87.50	54.17	8.33	12.50	4.17	8.33
Agricultural Support Policies	1		6	6	9
91.67	4.17	0.00	25.00	25.00	37.50

Alternatives Priorities:

Program Percent Responding	1 (Low)	2	3 (Neutral)	4	5 (High)
Limit flood fighting (ag levees)	14		1	1	1
70.84	58.33	0.00	4.17	4.17	4.17
Remove ag levees	17	1		1	
79.17	70.83	4.17	0.00	4.17	0.00
Set back ag levees	10	3	2	4	1
83.34	41.67	12.50	8.33	16.67	4.17
Uniform ag levee height	3	3	5	5	6
91.66	12.50	12.50	20.83	20.83	25.00
Raise ag levees		3	4	4	10
87.51	0.00	12.50	16.67	16.67	41.67
Raised urban levess	2	1	4	6	8
87.50	8.33	4.17	16.67	25.00	33.33
Protect critical facilities			3	5	11
79.16	0.00	0.00	12.50	20.83	45.83
Upland retention and added watershed measures	3	0	4	3	12
91.67	12.50	0.00	16.67	12.50	50.00

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The missing page in this report (Page 155) was misnumbered.
The orginal copy that went to the printer was checked and this was discovered, Per Jean Schmidt of USACE, St. Paul, MN.

Workshop Impact:

Opinions Changed at Meeting	Percentage of Respondents
2	8.33

Jefferson City, Missouri, April 19, 1995

75 persons attended, 52 returned comment sheets.

Identified Interests:

Interest	Agri	Comm	Envi	Gov.	Home Owner	Indus try	Rec.	Reg. Plng.	Other	None
Sample Size (52.00)	39	1	1	3	5		2	1		
Percentage (100.00)	75.00	1.92	1.92	5.77	9.62	0.00	3.85	1.92	0.00	0.00

Locale:

	Agri.F.P. w/ Levee	Agri. F.P. No Levee	Urban F.P. w/ Levee	Urban F.P. No Levee	Out of Floodplain	None
Sample size (52.00)	11	16		6	19	1
Percentage (100.00)	21.15	30.77	0.00	11.54	36.54	1.92

Program Priorities:

Program Percentage Responding	1 (Low)	2	3 (Neutral)	4	5 (High)
National Flood Insurance	11	8	12	12	2
86.54	21.15	15.38	23.08	23.08	3.85
State Floodplain Management	6	4	9	13	12
84.62	11.54	7.69	17.31	25.00	23.08
Local Floodplain Management	2	2	9	13	17
82.70	3.85	3.85	17.31	25.00	32.69
Relocation and Mitigation	12	9	10	6	2
75.01	23.08	17.31	19.23	11.54	3.85
Disaster Relief	6	5	8	17	6
80.77	11.54	9.62	15.38	32.69	11.54
Floodplain Wetland Restoration	29	7	5	3	1
86.54	55.77	13.46	9.62	5.77	1.92
Agricultural Support Policies	5	3	9	7	20
84.62	9.62	5.77	17.31	13.46	38.46

Alternatives Priorities:

Program Percent Responding	1 (Low)	2	3 (Neutral)	4	5 (High)
Limit flood fighting (ag levees)	20	2	10	6	5
82.70	38.46	3.85	19.23	11.54	9.62
Remove ag levees	37	4	4		
86.53	71.15	7.69	7.69	0.00	0.00
Set back ag levees	26	12	5		3
88.47	50.00	23.08	9.62	0.00	5.77
Uniform ag levee height	11	2	9	10	15
90.39	21.15	3.85	17.31	19.23	28.85
Raise ag levees	4	4	13	7	17
86.53	7.69	7.69	25.00	13.46	32.69
Raised urban levess	4	4	13	13	10
84.61	7.69	7.69	25.00	25.00	19.23
Protect critical facilities	2	1	7	12	22
84.62	3.85	1.92	13.46	23.08	42.31
Upland retention and added watershed measures	2	2	13	12	17
88.47	3.85	3.85	25.00	23.08	32.69

Workshop Impact:

Opinions Changed at Meeting	Percentage of Respondents
2	3.85

SERIA	MTG	INTE	STA	COUNTY	LOCALE	FIS	SFP	LFP	RNM	DIS_	WET	AG_	FLD	REM	SET	UNI_	AG_	UR_	CRT	UPL	CHANGE
1	JC	EN	MO	BOONE	OFP	3	0	0	4	0	5	3	0	0	5	5	1	3	0	5	0
2	JC	RP	MO	OSAGE	OFP	0	5	5	5	5	4	2	3	3	3	3	3	3	3	3	0
3	JC	AG	MO	OSAGE	AFPBL	4	5	5	3	4	1	3	5	1	1	4	3	3	4	3	0
4	JC	AG	MO	COLE	OFP	4	5	4	2	4	1	3	1	1	2	4	3	2	4	5	0
5	JC	HO	MO	COLE	UFPWOL	3	5	2	3	4	4	4	3	1	3	5	5	5	4	5	0
6	JC	RE	MO	COLE	UFPWOL	1	5	5	3	3	2	3	3	1	2	3	3	4	4	3	0
7	JC	AG	MO	COLE	OFP	3	4	5	2	3	2	5	1	1	1	5	5	4	5	3	0
8	JC	GO	MO	COLE	OFP	4	4	4	4	1	4	5	3	1	5	5	4	3	5	5	0
9	JC	CO	MO	COLE	OFP	1	5	5	1	1	3	1	3	2	5	5	1	3	5	3	0
10	JC	AG	MO	SALINE	AFPBL	4	4	5	2	5	1	5	2	1	2	5	5	4	5	5	0
11	JC	HO	MO	SALINE	AFPBL	4	5	5	2	4	1	5	1	1	2	5	5	4	5	5	0
12	JC	AG	MO	BOONE	AFPBL	2	2	4	1	2	1	3	1	1	2	3	4	4	4	4	0
13	JC	GO	MO	COLE	OFP	4	4	4	3	2	3	3	1	1	3	4	3	3	4	3	0
14	JC	AG	MO	COLE	OFP	2	3	4	0	4	2	4	3	2	2	4	2	4	5	4	0
15	JC	AG	MO	COLE	AFPWOL	1	3	3	4	3	1	5	1	1	1	1	4	4	4	4	0
16	JC	AG	MO	HOWARD	OFP	1	1	1	2	0	1	0	1	1	1	1	5	1	2	5	1
17	JC	AG	MO	COLE	OFP	3	4	4	4	3	1	4	4	1	1	3	3	2	4	3	0
18	JC	HO	MO	COLE	UFPWOL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	JC	HO	MO	COLE	UFPWOL	3	2	2	3	4	2	2	4	3	3	3	3	3	3	3	0
20	JC	GO	MO	COLE	UFPWOL	2	4	5	5	4	2	4	1	1	1	1	4	5	5	4	0
21	JC	HO	MO	COLE	UFPWOL	0	0	0	0	0	0	0	3	3	1	3	5	5	5	4	0
22	JC	AG	MO	OSAGE	AFPBL	4	3	3	3	4	1	3	1	1	1	1	5	5	5	5	0
23	JC	AG	MO	OSAGE	AFPBL	4	4	5	2	2	1	5	1	1	1	5	5	5	5	5	0
24	JC	AG	MO	COLE	OFP	3	4	4	1	3	1	5	1	1	1	1	5	5	5	5	0
25	JC	AG	MO	CHARITON	AFPBL	1	1	4	0	1	1	1	1	1	1	1	5	4	5	4	0
26	JC	AG	MO	CHARITON	AFPBL	1	1	5	1	4	1	5	1	1	1	1	4	4	4	3	0
27	JC	AG	MO	CALLOWAY	OFP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	JC	AG	MO	CALLOWAY	OFP	2	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0
29	JC	AG	MO	CALLOWAY	OFP	3	3	3	3	3	1	5	5	1	2	5	5	4	4	2	0
30	JC	AG	MO	COLE	OFP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31	JC	AG	MO	CALLOWAY		5	5	5	1	5	1	5	1	1	1	1	5	1	5	5	0
32	JC	AG	MO	CALLOWAY	AFPBL	3	3	0	1	4	1	5	1	1	1	5	1	1	3	5	0
33	JC	AG	MO	COLE	AFPWOL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
34	JC	AG	MO	COLE/OSAGE	AFPWOL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
35	JC	AG	MO	CALLOWAY	AFPBL	5	5	5	1	5	1	5	1	1	3	5	5	5	5	3	0
36	JC	AG	MO	COLE	OFP	3	3	5	1	4	1	5	5	1	1	3	3	3	3	5	0
37	JC	AG	MO	COLE	AFPWOL	4	3	3	3	5	1	4	4	1	2	5	5	5	5	5	0
38	JC	AG	MO	HOWARD	AFPBL	4	4	5	3	4	1	5	1	1	1	3	5	3	5	3	0

39	JC	AG	MO	COLE	AFPWOL	1	1	3	1	1	1	1	3	1	1	5	1	1	5	5	0
40	JC	AG	MO	OSAGE	AFPWOL	3	3	3	2	2	1	5	3	1	1	5	3	5	0	3	0
41	JC	AG	MO	MILLER	AFPWOL	1	1	1	1	1	1	1	5	3	1	3	3	3	1	5	0
42	JC	AG	MO	CHARITON	OFP	1	1	5	1	1	1	5	1	1	1	1	5	5	5	5	0
43	JC	AG	MO	COLE	AFPWOL	4	4	4	4	5	3	5	3	2	2	4	3	3	4	4	1
44	JC	AG	MO	COLE	AFPWOL	4	4	4	4	4	1	5	4	1	2	4	5	4	4	3	0
45	JC	AG	MO	COLE	AFPWOL	2	5	5	2	4	1	3	4	1	1	4	3	3	3	2	0
46	JC	AG	MO	OSAGE	AFPWOL	2	4	4	0	3	1	5	0	1	1	1	2	2	3	4	0
47	JC	AG	MO	COLE	AFPWOL	2	3	4	1	4	1	4	4	1	1	1	0	0	1	1	0
48	JC	AG	MO	COLE	AFPWOL	2	5	4	2	2	3	4	2	2	2	4	2	2	3	4	0
49	JC	AG	MO	COLE	AFPWOL	1	2	3	0	1	1	1	1	1	1	2	2	0	5	1	0
50	JC	AG	MO	COLE	AFPWOL	3	5	5	3	4	2	5	5	1	2	4	4	4	5	4	0
51	JC	RE	MO	COLE	OFP	3	4	3	2	4	3	3	2	1	1	4	4	4	5	4	0
52	JC	AG	MO	COLE	AFPWOL	1	2	3	0	3	2	2	1	1	1	2	3	3	5	4	0

MTG	SERI	INT	STA	COUNTY	LOCALE	FIS	SFP	LFP	RNM	DIS_	WET	AG_	FLD	REM	SET	UNI_	AG_	UR_	CRT	UPL	CHANGE
KC	1	AG	MO	CARROLL	AFPBL	3	0	0	1	3	1	3	1	1	1	1	5	5	5	5	0
KC	2	GO	KS	WYANDOTTE	UFPBL	2	3	4	2	3	0	4	0	1	2	2	5	4	4	3	0
KC	3	GO	MO	JACKSON	UFPWOL	5	5	5	3	1	3	3	5	1	5	3	2	5	5	3	0
KC	4	GO	MO	CLAY	UFPWOL	5	4	4	2	5	1	4	3	1	1	4	4	5	5	3	0
KC	5	AG	KS	SHAWNEE	AFPBL	3	2	4	1	3	3	5	0	1	1	2	4	4	4	5	0
KC	6	AG	MO	CARROLL	AFPBL	3	3	3	1	5	2	4	1	1	1	5	4	4	5	5	0
KC	7	AG	KS	ATCHISON	AFPBL	1	5	1	3	2	1	5	1	1	4	5	3	3	4	5	0
KC	8	AG	MO	JACKSON	OFP	1	2	4	3	3	5	3	0	1	2	5	2	5	5	0	0
KC	9	HO	MO	CARROLL	AFPBL	1	5	5	0	1	1	1	1	1	1	1	5	5	5	1	1
KC	10	AG	MO	BUCHANAN	OFP	4	4	0	1	3	1	5	0	0	0	0	0	0	0	5	1
KC	11	CO	KS	DONIPHAN	AFPBL	1	5	0	0	0	0	5	0	0	0	5	5	0	0	5	0
KC	12	AG	MO	CARROLL	AFPBL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
KC	13	AG	MO	PLATTE	OFP	3	3	4	0	4	1	3	0	1	1	3	3	3	0	1	0
KC	14	AG	MO	PLATTE	OFP	4	4	2	5	3	4	4	1	1	3	3	3	2	3	5	0
KC	15	AG	NE	LANCASTER	OFP	4	5	5	4	3	5	3	4	2	4	2	2	4	5	5	0
KC	16	AG	MO	RAY	AFPBL	5	4	4	1	4	1	3	1	1	3	4	5	1	3	5	0
KC	17	AG	MO	RAY	AFPBL	3	4	3	1	4	1	4	1	1	2	4	5	5	5	3	0
KC	18	AG	MO	CARROLL	AFPBL	3	5	5	1	4	1	4	1	1	1	4	3	1	3	4	0
KC	19	AG	MO	CARROLL	AFPBL	3	2	2	1	4	1	5	1	4	0	3	4	5	5	4	0
KC	20	AG	MO	CARROLL	OFP	4	4	4	4	3	3	5	1	1	4	5	5	4	5	5	0
KC	21	HO	MO	CARROLL	AFPBL	4	5	5	4	4	1	5	1	1	4	5	5	3	4	5	0
KC	22	AG	MO	HOLT	OFP	3	2	2	4	4	1	5	1	1	1	1	5	5	5	1	0
KC	23	AG	MO	BUCHANAN	AFPBL	3	4	5	3	4	2	3	1	1	1	4	5	4	4	5	0
KC	24	AG	MO	BUCHANAN	AFPBL	4	3	3	1	2	1	5	1	1	1	3	3	3	0	4	0

Kansas City District

ID

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	JC	52	68.4	68.4	68.4
	KC	24	31.6	31.6	100.0
	TOTAL	76	100.0	100.0	

Valid Cases 76 Missing Cases 0

INTEREST

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	Ag	57	75.0	75.0	75.0
	Comm	2	2.6	2.6	77.6
	Envir	1	1.3	1.3	78.9
	Govt	6	7.9	7.9	86.8
	H Dme	7	9.2	9.2	96.1
	Rec	2	2.6	2.6	98.7
	RP	1	1.3	1.3	100.0
	TOTAL	76	100.0	100.0	

Valid Cases 76 Missing Cases 0

STATE

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	KS	4	5.3	5.3	5.3
	MO	71	93.4	93.4	98.7
	NE	1	1.3	1.3	100.0
	TOTAL	76	100.0	100.0	

Valid Cases 76 Missing Cases 0

COUNTY

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	ATCHISON	1	1.3	1.3	1.3
	BOONE	2	2.6	2.6	3.9
	BUCHANAN	3	3.9	3.9	7.9
	CALLOWAY	6	7.9	7.9	15.8
	CARROLL	8	10.5	10.5	26.3
	CHARITON	3	3.9	3.9	30.3
	CLAY	1	1.3	1.3	31.6
	COLE	29	38.2	38.2	69.7
	COLE/OSA	1	1.3	1.3	71.1
	DONIPHAN	1	1.3	1.3	72.4
	HOLT	1	1.3	1.3	73.7
	HOWARD	2	2.6	2.6	76.3
	JACKSON	2	2.6	2.6	78.9
	LANCASTE	1	1.3	1.3	80.3
	MILLER	1	1.3	1.3	81.6
	OSAGE	6	7.9	7.9	89.5
	PLATTE	2	2.6	2.6	92.1
	RAY	2	2.6	2.6	94.7

COUNTY

SALINE	2	2.6	2.6	97.4
SHAWNEE	1	1.3	1.3	98.7
WYANDOTT	1	1.3	1.3	100.0
TOTAL	76	100.0	100.0	

Valid Cases 76 Missing Cases 0

LOCATION

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
		1	1.3	1.3	1.3
	AFPWL	25	32.9	32.9	34.2
	AFPWOL	16	21.1	21.1	55.3
	OFP	25	32.9	32.9	88.2
	UFPWL	1	1.3	1.3	89.5
	UFPWOL	8	10.5	10.5	100.0
	TOTAL	76	100.0	100.0	

Valid Cases 76 Missing Cases 0

NATIONAL

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	0	1	1.3	1.4	1.4
	1	15	19.7	21.7	23.2
	2	9	11.8	13.0	36.2
	3	21	27.6	30.4	66.7
	4	18	23.7	26.1	92.8
	5	5	6.6	7.2	100.0
	9	7	9.2	MISSING	
	TOTAL	76	100.0	100.0	

Mean 2.797 Std Dev 1.290 Minimum .000
Maximum 5.000

Valid Cases 69 Missing Cases 7

LEVEL_NA

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
		29	38.2	38.2	38.2
	high	23	30.3	30.3	68.4
	low	24	31.6	31.6	100.0
	TOTAL	76	100.0	100.0	

Valid Cases 76 Missing Cases 0

STATE_FL

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1	6	7.9	9.1	9.1
	2	8	10.5	12.1	21.2
	3	13	17.1	19.7	40.9
	4	20	26.3	30.3	71.2
	5	19	25.0	28.8	100.0
	9	10	13.2	MISSING	
	TOTAL	76	100.0	100.0	

Mean 3.576 Std Dev 1.278 Minimum 1.000
Maximum 5.000
Valid Cases 66 Missing Cases 10

LEVEL_ST

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
		23	30.3	30.3	30.3
	high	39	51.3	51.3	81.6
	low	14	18.4	18.4	100.0
	TOTAL	76	100.0	100.0	

Valid Cases 76 Missing Cases 0

LOCAL_FL

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1	3	3.9	4.8	4.8
	2	5	6.6	7.9	12.7
	3	12	15.8	19.0	31.7
	4	20	26.3	31.7	63.5
	5	23	30.3	36.5	100.0
	9	13	17.1	MISSING	
	TOTAL	76	100.0	100.0	

Mean 3.873 Std Dev 1.143 Minimum 1.000
Maximum 5.000

Valid Cases 63 Missing Cases 13

LEVEL_LC

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
		25	32.9	32.9	32.9
	high	43	56.6	56.6	89.5
	low	8	10.5	10.5	100.0
	TOTAL	76	100.0	100.0	

Valid Cases 76 Missing Cases 0

RELOCATI

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1	21	27.6	35.0	35.0
	2	12	15.8	20.0	55.0
	3	14	18.4	23.3	78.3
	4	10	13.2	16.7	95.0
	5	3	3.9	5.0	100.0
	9	16	21.1	MISSING	
	TOTAL	76	100.0	100.0	

Mean 2.367 Std Dev 1.262 Minimum 1.000
Maximum 5.000

Valid Cases 60 Missing Cases 16

LEVEL_RL

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
		30	39.5	39.5	39.5
	high	13	17.1	17.1	56.6
	low	33	43.4	43.4	100.0
	TOTAL	76	100.0	100.0	

Valid Cases 76 Missing Cases 0

DISASTER

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1	9	11.8	13.8	13.8
	2	7	9.2	10.8	24.6
	3	16	21.1	24.6	49.2
	4	25	32.9	38.5	87.7
	5	8	10.5	12.3	100.0
	9	11	14.5	MISSING	
	TOTAL	76	100.0	100.0	

Mean 3.246 Std Dev 1.225 Minimum 1.000
Maximum 5.000
Valid Cases 65 Missing Cases 11

LEVEL_DI

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
		27	35.5	35.5	35.5
	high	33	43.4	43.4	78.9
	low	16	21.1	21.1	100.0
	TOTAL	76	100.0	100.0	

Valid Cases 76 Missing Cases 0

WETLAND

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1	42	55.3	63.6	63.6
	2	9	11.8	13.6	77.3
	3	8	10.5	12.1	89.4
	4	4	5.3	6.1	95.5
	5	3	3.9	4.5	100.0
	9	10	13.2	MISSING	
	TOTAL	76	100.0	100.0	

Mean 1.742 Std Dev 1.168 Minimum 1.000
Maximum 5.000

Valid Cases 66 Missing Cases 10

LEVEL_WE

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
		18	23.7	23.7	23.7
	high	7	9.2	9.2	32.9
	low	51	67.1	67.1	100.0
	TOTAL	76	100.0	100.0	

Valid Cases 76 Missing Cases 0

AGRICULT

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1	6	7.9	9.0	9.0
	2	3	3.9	4.5	13.4
	3	16	21.1	23.9	37.3
	4	13	17.1	19.4	56.7
	5	29	38.2	43.3	100.0
	9	9	11.8	MISSING	
	TOTAL	76	100.0	100.0	

Mean 3.836 Std Dev 1.286 Minimum 1.000
Maximum 5.000

Valid Cases 67 Missing Cases 9

LEVEL_AG

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
		25	32.9	32.9	32.9
	high	42	55.3	55.3	88.2
	low	9	11.8	11.8	100.0
	TOTAL	76	100.0	100.0	

Valid Cases 76 Missing Cases 0

FLOOD_FI

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1	34	44.7	55.7	55.7
	2	3	3.9	4.9	60.7
	3	11	14.5	18.0	78.7
	4	7	9.2	11.5	90.2
	5	6	7.9	9.8	100.0
	9	15	19.7	MISSING	
	TOTAL	76	100.0	100.0	

Mean 2.148 Std Dev 1.447 Minimum 1.000
Maximum 5.000
Valid Cases 61 Missing Cases 15

LEVEL_FL

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
		26	34.2	34.2	34.2
	high	13	17.1	17.1	51.3
	low	37	48.7	48.7	100.0
	TOTAL	76	100.0	100.0	

Valid Cases 76 Missing Cases 0

REMOVE

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1	56	73.7	84.8	84.8
	2	5	6.6	7.6	92.4
	3	4	5.3	6.1	98.5
	4	1	1.3	1.5	100.0
	9	10	13.2	MISSING	
	TOTAL	76	100.0	100.0	

Mean 1.242 Std Dev .634 Minimum 1.000
Maximum 4.000

Valid Cases 66 Missing Cases 10

LEVEL_RM

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
		14	18.4	18.4	18.4
	high	1	1.3	1.3	19.7
	low	61	80.3	80.3	100.0
	TOTAL	76	100.0	100.0	

Valid Cases 76 Missing Cases 0

AG_LEVEE

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1	36	47.4	54.5	54.5
	2	15	19.7	22.7	77.3
	3	7	9.2	10.6	87.9
	4	4	5.3	6.1	93.9
	5	4	5.3	6.1	100.0
	9	10	13.2	MISSING	
	TOTAL	76	100.0	100.0	

Mean 1.864 Std Dev 1.201 Minimum 1.000
Maximum 5.000

Valid Cases 66 Missing Cases 10

LEVEL_AL

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
		17	22.4	22.4	22.4
	high	8	10.5	10.5	32.9
	low	51	67.1	67.1	100.0
	TOTAL	76	100.0	100.0	

Valid Cases 76 Missing Cases 0

UNIFORM_

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	0	1	1.3	1.4	1.4
	1	14	18.4	20.0	21.4
	2	5	6.6	7.1	28.6
	3	14	18.4	20.0	48.6
	4	15	19.7	21.4	70.0
	5	21	27.6	30.0	100.0
	9	6	7.9	MISSING	
	TOTAL	76	100.0	100.0	

Mean 3.300 Std Dev 1.536 Minimum .000
Maximum 5.000
Valid Cases 70 Missing Cases 6

LEVEL_UN

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
		21	27.6	27.6	27.6
	high	36	47.4	47.4	75.0
	low	19	25.0	25.0	100.0
	TOTAL	76	100.0	100.0	

Valid Cases 76 Missing Cases 0

RAISE_AG

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1	4	5.3	6.0	6.0
	2	7	9.2	10.4	16.4
	3	18	23.7	26.9	43.3
	4	11	14.5	16.4	59.7
	5	27	35.5	40.3	100.0
	9	9	11.8	MISSING	
	TOTAL	76	100.0	100.0	

Mean 3.746 Std Dev 1.259 Minimum 1.000
Maximum 5.000

Valid Cases 67 Missing Cases 9

LEVEL_RA

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
		27	35.5	35.5	35.5
	high	38	50.0	50.0	85.5
	low	11	14.5	14.5	100.0
	TOTAL	76	100.0	100.0	

Valid Cases 76 Missing Cases 0

RAISE_UR

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1	6	7.9	9.2	9.2
	2	5	6.6	7.7	16.9
	3	17	22.4	26.2	43.1
	4	19	25.0	29.2	72.3
	5	18	23.7	27.7	100.0
	9	11	14.5	MISSING	
	TOTAL	76	100.0	100.0	

Mean 3.585 Std Dev 1.236 Minimum 1.000
Maximum 5.000

Valid Cases 65 Missing Cases 11

LEVEL_UR

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
		28	36.8	36.8	36.8
	high	37	48.7	48.7	85.5
	low	11	14.5	14.5	100.0
	TOTAL	76	100.0	100.0	

Valid Cases 76 Missing Cases 0

PROTECT

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1	2	2.6	3.2	3.2
	2	1	1.3	1.6	4.8
	3	10	13.2	15.9	20.6
	4	17	22.4	27.0	47.6
	5	33	43.4	52.4	100.0
	9	13	17.1	MISSING	
	TOTAL	76	100.0	100.0	

Mean 4.238 Std Dev .995 Minimum 1.000
Maximum 5.000
Valid Cases 63 Missing Cases 13

LEVEL_PR

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
		23	30.3	30.3	30.3
	high	50	65.8	65.8	96.1
	low	3	3.9	3.9	100.0
	TOTAL	76	100.0	100.0	

Valid Cases 76 Missing Cases 0

UPLAND_R

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1	5	6.6	7.4	7.4
	2	2	2.6	2.9	10.3
	3	17	22.4	25.0	35.3
	4	15	19.7	22.1	57.4
	5	29	38.2	42.6	100.0
	9	8	10.5	MISSING	
	TOTAL	76	100.0	100.0	

Mean 3.897 Std Dev 1.211 Minimum 1.000
Maximum 5.000

Valid Cases 68 Missing Cases 8

LEVEL_RN

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
		25	32.9	32.9	32.9
	high	44	57.9	57.9	90.8
	low	7	9.2	9.2	100.0
	TOTAL	76	100.0	100.0	

Valid Cases 76 Missing Cases 0

OPINION

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	NO	72	94.7	94.7	94.7
	YES	4	5.3	5.3	100.0
	TOTAL	76	100.0	100.0	

Valid Cases 76 Missing Cases 0

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nansas U.T District (Interes

Crosstabulation: INTEREST
By NATIONAL

NATIONAL-> Count	0	1	2	3	4	Row Total
INTEREST						
[redacted] (A)	1	11	7	17	14	53
V. Low C		2				2
— E				1		1
High (G)			2		2	6
— (H)		1		2	2	5
V. Low R		1		1		2
Column Total	1	15	9	21	18	69
	1.4	21.7	13.0	30.4	26.1	100.0

(Continued)

Crosstabulation: INTEREST
By NATIONAL

NATIONAL-> Count	5	Row Total
INTEREST		
A	3	53
C		2
E		1
G	2	6
H		5
R		2
Column Total	5	69
	7.2	100.0

Number of Missing Observations = 7

Crosstabulation: INTEREST
By STATE_FL

STATE_FL-> Count	1	2	3	4	5	Row Total
INTEREST						
High (A)	6	7	12	15	10	50
V. High C					2	2
High (G)			1	4	1	6
V. High (H)		1			4	5
V. High R				1	1	2
V. High RP					1	1
Column Total	6	8	13	20	19	66
	9.1	12.1	19.7	30.3	28.8	100.0

Number of Missing Observations = 10

Crosstabulation: INTEREST
By LOCAL_FL

LOCAL_FL-> Count	1	2	3	4	5	Row Total
INTEREST						
High (A)	3	3	11	16	15	48
V. High C					1	1
High (G)				4	2	6
V. High (H)		2			3	5
V. High R			1		1	2
V. High RP					1	1
Column Total	3	5	12	20	23	63
	4.8	7.9	19.0	31.7	36.5	100.0

Number of Missing Observations = 13

Crosstabulation: INTEREST
By RELOCATI

RELOCATI-> Count / INTEREST	1	2	3	4	5	Row Total
Low (A)	20	8	9	7	1	45
V.Low C	1					1
High E				1		1
- G		2	2	1	1	6
- H		1	2	1		4
Low R		1	1			2
V.High RP					1	1
Column Total	21	12	14	10	3	60
	35.0	20.0	23.3	16.7	5.0	100.0

Number of Missing Observations = 16

Crosstabulation: INTEREST
By DISASTER

DISASTER-> Count / INTEREST	1	2	3	4	5	Row Total
High A	5	6	14	19	6	50
V.Low C	1					1
Low G	2	1	1	1	1	6
High H	1			4		5
High R			1	1		2
V.High RP					1	1
Column Total	9	7	16	25	8	65
	13.8	10.8	24.6	38.5	12.3	100.0

Number of Missing Observations = 11

Crosstabulation: INTEREST
By WETLAND

WETLAND-> Count	1	2	3	4	5	Row Total
INTEREST						
V.Low (A)	38	6	4	1	2	51
– C			1			1
V. High E					1	1
– (G)	1	1	2	1		5
V. Low (H)	3	1		1		5
Low R		1	1			2
High RP				1		1
Column Total	42	9	8	4	3	66
	63.6	13.6	12.1	6.1	4.5	100.0

Number of Missing Observations = 10

Crosstabulation: INTEREST
By AGRICULT

AGRICULT-> Count	1	2	3	4	5	Row Total
INTEREST						
V. High (A)	4	1	11	9	25	50
– C	1				1	2
– E			1			1
High (G)			2	3	1	6
High (H)	1	1		1	2	5
– R			2			2
Low RP		1				1
Column Total	6	3	16	13	29	67
	9.0	4.5	23.9	19.4	43.3	100.0

Number of Missing Observations = 9

Crosstabulation: INTEREST
By FLOOD_FI

FLOOD_FI-> Count / INTEREST	1	2	3	4	5	Row Total
V.Low A	29	2	4	6	5	46
C			1			1
G	2		2		1	5
V.Low H	3		2	1		6
Low R		1	1			2
RP			1			1
Column Total	34	3	11	7	6	61
	55.7	4.9	18.0	11.5	9.8	100.0

Number of Missing Observations = 15

Crosstabulation: INTEREST
By REMOVE

REMOVE-> Count / INTEREST	1	2	3	4	Row Total
V.Low A	44	4	1	1	50
Low C		1			1
V.Low G	6				6
V. Low H	4		2		6
V.Low R	2				2
RP			1		1
Column Total	56	5	4	1	66
	84.8	7.6	6.1	1.5	100.0

Number of Missing Observations = 10

Crosstabulation: INTEREST
By AG_LEVEE

AG_LEVEE-> Count / INTEREST	1	2	3	4	5	Row Total
V. Low A	31	12	3	3		49
V. High C					1	1
V. High E					1	1
Low G	2	1	1		2	6
Low H	2	1	2	1		6
Low R	1	1				2
— RP			1			1
Column Total	36	15	7	4	4	66
	54.5	22.7	10.6	6.1	6.1	100.0

Number of Missing Observations = 10

Crosstabulation: INTEREST
By UNIFORM_

UNIFORM_-> Count / INTEREST	0	1	2	3	4	Row Total
High A		12	4	9	12	51
V. High C						2
V. High E						1
High G		1	1	1	2	6
— H	1	1		2		7
High R				1	1	2
— RP				1		1
Column Total	1	14	5	14	15	70
(Continued)	1.4	20.0	7.1	20.0	21.4	100.0

Crosstabulation: INTEREST
By UNIFORM_

UNIFORM_-> Count	5	Row Total
INTEREST		
A	14	51
C	2	2
E	1	1
G	1	6
H	3	7
R		2
RP		1
Column	21	70
Total	30.0	100.0

Number of Missing Observations = 6

Crosstabulation: INTEREST
By RAISE_AG

RAISE_AG-> Count	1	2	3	4	5	Row Total
INTEREST						
High A	2	6	14	7	20	49
— C	1				1	2
V. Low E	1					1
High G		1	1	3	1	6
V. High H			1		5	6
High R			1	1		2
— RP			1			1
Column	4	7	18	11	27	67
Total	6.0	10.4	26.9	16.4	40.3	100.0

Number of Missing Observations = 9

Crosstabulation: INTEREST
By RAISE_UR

RAISE_UR-> Count	1	2	3	4	5	Row Total
INTEREST						
High A	6	5	10	15	12	48
- C			1			1
- E			1			1
V. High G			2	1	3	6
V. High H			2	1	3	6
High R				2		2
— RP			1			1
Column Total	6 9.2	5 7.7	17 26.2	19 29.2	18 27.7	65 100.0

Number of Missing Observations = 11

Crosstabulation: INTEREST
By PROTECT

PROTECT-> Count	1	2	3	4	5	Row Total
INTEREST						
V. High A	2	1	8	12	24	47
V. High C					1	1
V. High G				2	4	6
V. High H			1	2	3	6
V. High R				1	1	2
— RP			1			1
Column Total	2 3.2	1 1.6	10 15.9	17 27.0	33 52.4	63 100.0

Number of Missing Observations = 13

Crosstabulation: INTEREST
By UPLAND_R

UPLAND_R-> Count	1	2	3	4	5	Row Total
INTEREST						
A	4	2	9	12	23	50
C			1		1	2
E					1	1
G			4	1	1	6
H	1		1	1	3	6
R			1	1		2
RP			1			1
Column Total	5	2	17	15	29	68
	7.4	2.9	25.0	22.1	42.6	100.0

Number of Missing Observations = 8

Crosstabulation: INTEREST
By OPINION

OPINION-> Count	NO	YES	Row Total
INTEREST			
A	54	3	57
C	2		2
E	1		1
G	6		6
H	6	1	7
R	2		2
RP	1		1
Column Total	72	4	76
	94.7	5.3	100.0

Number of Missing Observations = 0

Institutional Analysis Inventory Data

Floodplain Study - Federal Agencies

Federal Departments, Policies and Programs as listed in "Sharing the Challenge: Floodplain Management into the 21st Century," Interagency Floodplain Management Review Committee, Gerald E. Galloway, Brigadier General, U.S. Army, Executive Director, Washington, D.C. 10503, June 1994. For more detailed information see report as listed above.

U.S. Department of Agriculture (DOA)

Agriculture Stabilization and Conservation service
- Agricultural Conservation Program
- Agricultural Water Quality Protection Program
- Conservation Reserve Program
- Disaster Payments
- Emergency Conservation Program
- Forestry Incentives Program
- Price and Income Support Program
- Sodbuster Provision
- Supply Restriction Programs
- Swampbuster Provision
- Wetlands Reserve Program
- Water Bank Program

Natural Resource Service
- Cooperative River Basin Program
- Emergency Watershed Protection Program
- Emergency Wetland Reserve Program
- Watershed Protection

Farmers Home Administration
- Debt Cancelletation Conservation Easements
- Loans
- Transfers of Inventory Farm Properties to Federal and State Agencies for Conservation Purposes

U.S. Army Corps of Engineers (COE)
- Fish and Wildlife Enhancement
- Flood Emergency Operations and Disaster Assistance
- Floodplain Management Services Program
- Planning Assistance to States
- Project Modifications to Improve Environment
- Regulaion of Dredged or Fill Material into U.S. Waters
- Regulation of Navigable Waters
- Water Resources Development Projects

U.S. Department of Commerce, Economic Development Administration (EDA)
- EDA Flood Relief Program

Floodplain Study - Federal Agencies

Environmental Protection Agency (EPA)
- Control of Non-point Pollution
- Wastewater Treatment Plants
- Wetland Protection

Federal Crop Insurance Corporation (FCIC)
- Federal Crop Insurance Program

Federal Emergency Management Agency (FEMA)
- National Flood Ensurance Program (NFIP)
- Purchase of Floodplain Property

U.S. Department of Housing and Urban Development (HUD)
- Community Development Block Grant Program
- HOME Program
- Section 108 Loan Guarantee Program

U.S. Department of the Interior (DOI)
- Bureau of Reclamation
  - Pick-Sloane Missouri River Basin Program
- Fish and Wildlife Service (FWS)
  - North American Wetlands Conservation Fund
  - Partners for Wildlife
  - Small Wetlands Acquisition Program (SWAP)
- National Park Service
  - Federal Land Transfer, Federal Land-to-Parks Program
  - Rivers and Trails Conservation Program

Small Business Administration (SBA)
- Disaster Loans

Rural Development Administration (RDA)
- Water and Water Disposal Loans and Grants
- Business and Industrial Guaranteed Loans
- Community Facility Loans

Tennessee Valley Authority (TVA)
- Flood Risk Reduction Program

Floodplain Study - State Organizations

Association of State Floodplain Managers, Inc.
*
P.O. Box Madison,
Wisconsin 53701-2051
608-266-1926
Background - Established in Wisconsin in the mid 1980's. States are the primary members with Federal and others as associate members.
Purpose - To coordinate and reinforce a variety of interests, such as flood damage reduction, environmental protection and restoration, economic development, recreation, agriculture, and fisheries.
Programs or Activities - Rivers, Trails and Conservation Assistance Program through multi-objective workshops.

Board of Water and Soil Resources (Minnesota)
*
155 So. Wabasha Street, Suite 104
St. Paul, Minnesota 55107
Background - Formed in 1987 to work with Soil and Water Conservation districts, Watershed districts and counties throughout Minnesota. This board provides financial and technical assistance to their programs; and administer statewide comprehensive local water planning statute.

Department of Agriculture (Illinois)
*
State Fair Grounds
P.O. Box 19281
Springfield, Illinois 62794-9281
217-782-9272
Background -
Purpose - To protect and promote the State's agricultural and natural resources. The agency provides services that benefit consumers, farmers, and agri-businesses.
Programs or Activities - Publications: *Illinois Agricultural Guide*

Department of Agriculture (Minnesota)
*
90 West Plato Boulevard
St. Paul, Minnesota 55107
612-297-2200
Background - Established 1919.
Purpose - Enforces laws to protect the public health, promote family farming and marketing of farm products. Conservation of soil and Water.
Programs or Activities -

Floodplain Study - State Organizations

Department of Agriculture (Missouri)
P.O. Box 630
State Capitol
1616 Missouri
Jefferson City, Missouri 65101
314-751-3222
Background -
Purpose -
Programs or Activities -

Department of Agriculture (Nebraska)
*
301 Centennial Mall South.
P.O. Box 94947
Lincoln, Nebraska 68509
402-471-2341
Background -
Purpose -
Programs or Activities -

Department of Agriculture (Wisconsin)
*
P.O. Box 8911
801 West Badger Road
Madison, Wisconsin 53708
608-266-7100
Background -
Purpose -
Programs or Activities -

Department of Conservation (Illinois)
*
George S. Bellovics, Landscape Architect, 217-782-3715
Division of Planning
Lincoln Tower Plaza
524 South Second Street, Room 310
Springfield, Illinois 62701-1787
217-782-6302
Background -
Purpose - To conserve the natural and cultural resources of Illinois and to provide outdoor recreational opportunities.
Programs or Activities - Publication: *Outdoor Illinois*

Floodplain Study - State Organizations

Department of Conservation (Missouri)
*

P.O. Box 180
Jefferson City, Missouri 65101
314-751-3222
Background -
Purpose -
Programs or Activities - Publication: *Missouri Conservationist*

Department of Energy and Natural Resources (Illinois)
*

325 West Adams Street, Room 300
Springfield, Illinois 62704-1892
217-785-2800
Background - This nonregulatory agency was founded in 1978 to conduct applied environmetnal/economic research to guide government and private-sector energy/natural resource policy decision.
Purpose - The nine divisions provide scientific inquiry and public education to protect, preserve, and develop Illinois natural and cultural resources.
Programs or Activities - Publications: *Illinois Resources; Recycling Update; The Living Museum; The Illinois Natural History Survey Reports*

Department of Environmental Control (Nebraska)
*

301 Centennial mall South
Lincoln, Nebraska 68509
402-471-2341
Background - Created by the Nebraska Environmental Protection Act in 1971
Purpose - Administers and enforces rules and regulations, and monitors the quality of the environment in Nebraska.
Programs or Activities - Publication: *Environmental Update*

Department of Natural Resources (Iowa)
*

Wallace Building
East Ninth and Grand Avenue
Des Moines, Iowa 50319-0034
515-281-5145
Background - Established July 1, 1986. The Natural Resources Commission is a policy and rule setting authority over the Fish and Wildlife Division, Parks, Recreation , and Preserves Division, and the Forestry Division. The Environmental Protection Commission is the policy- and rule-setting authority over the Environmental Protection Division.
Purpose -
Programs or Activities -

Floodplain Study - State Organizations

Department of Natural Resources (Minnesota)
*
500 Lafayette Road
St. Paul, Minnesota 55155-4001
612-296-6157
Background - Created in 1931 as a stewardship of Minnesota's resources, but called The Department of Conservation until 1971.
Purpose - Goal to achieve optimum natural resources planning, protection, and development responsive to public need, consistent with resource potentials, and for the social and economic well-being of both present and future generations.

Department of Natural Resources (Missouri)
*
P.O. Box 176
Jefferson City, Missouri 65102
314-751-3443 (1-800-334-6946)
Background -
Purpose -
Programs or Activities -

Department of Natural Resources (Wisconsin)
*
Box 7921
Madison, Wisconsin 53707
608-266-2621
Background -
Purpose - Long-range planning in the broad fields of outdoor recreation and natural resources. Also responsible for endangered resources protection, air and water pollution control, and enforcement of conservation and environmental laws, floodplain and shoreland zoning.
Programs or Activities -

Department of Water Resources (Nebraska)
*
State House Station
Box 94676
Lincoln, Nebraska 68509
402-471-2363
Background - State Agency
Purpose - Administers and enforces the State water laws and all matters pertaining to water rights.
Programs or Activities - Measuring and recording the flow of various streams and canals; approving plans and specifications for dam construction, inspection of dams, approving plans and specifications for construction activities in floodplains plains, and registration of wells. Publications: *Channels Newsletter, Biennial Report, Hydrographic Report.*

Floodplain Study - State Organizations

Division of Water Resources (Illinois)
*
3215 Executive Park Drive
P.O. Box 194484
Springfield, Illinois 62794
217-782-3397
Background -
Purpose -
Programs or Activities -

Game and Parks Commission (Nebraska)
*
2200 No. 33rd Street
P.O. Box 30370
Lincoln, Nebraska 68503
402-471-0641
Background - State commission
Purpose - Sole charge of State parks, game and fish, and all things pertaining thereto; boating, and administration of the Land and Water conservation Fund.
Programs or Activities - Publications: *Nebraska Land Magazine*

Geological and Natural History Survey
*
University of Wisconsin, Extension
3817 Mineral Point Road
Madison, Wisconsin 53705
608-262-1705
Background - Created by the legislature in 1897.
Purpose - Responsibility to survey the State's geology, mineral, water, soil, plant, animal, and climate resources, and to coordinate topographic mapping.
Programs or Activities -

Geological Survey
*
University of Minnesota
2642 University Avenue
St. Paul, Minnesota 55114
612-627-4780
Background - Established in 1872 as a Geological and Natural History Survey, reconstituted in 1911 under its current nomenclature.
Purpose - Investigate the geology of the State; describe, classify, and map the geological formations and mineral and water resources; and investigate all aspects of the geology affecting the environment.
Programs and Activities - (Publications - not listed)

Floodplain Study - State Organizations

Illinois Environmental Protection Agency
*

2200 Churchill Road
Springfield, Illinois 62794
217-782-3397
Background - Founded in 1970 to administer a variety of programs to protect the air, land, and water.
Purpose - Responsible for implementing the environmental program for the State of Illinois.
Programs or Activities - Publications: *Digester/Over the Spillway; Environmental Progress*

Illinois Natural History Survey Division
*

172 Natural Resources Building
607 East Peabody Drive
Champaign, Illinois 61820
217-333-6880
Background - Founded in 1858 to protect and provide informed use of the State's renewable natural resources.
Purpose - Conducts research to assure the maintenance of biodiversity and sustained economic, educational, and recreational benefits.
Programs or Activities - Publications: *Bulletin; Circular; Biological Notes; INHS Reports*

Illinois State Geological Survey (ISGS)
*

Natural Resources Building
615 East Peabody Drive
Champaign, Illinois 61820
217-333-4747
Background - Founded in 1905. A scientific and professional staff of 200 engaged in research and service on the application of geology, geochemistry, and minerals engineering.
Purpose - To protect the environment and develop the mineral resources of Illinois. Division of the Illinois Department of Energy and Natural Resources and allied agency of the University of Illinois.
Programs or Activities - Reference Library; Publications: *Environmental Geology, Illinois Minerals*

Iowa Association of County Conservation Boards
*

117 Main Street
Elkhart, Iowa 50073
515-367-4000
Background -
Purpose - Promotes the objectives of Iowa's County Conservation Boards, board member education, information exchange, legislation and public awareness.
Programs or Activities - Publications: *Iowa Board Member; IACCB Memo; IACCB Legislative Update*

Floodplain Study - State Organizations

Kansas Biological Survey
*

University of Kansas
Foley Hall
2041 Constant Avenue
Lawrence, Kansas 66047-2906
913-864-7725
Background - Founded in 1959. A research and development branch or the University of Kansas.
Purpose - To survey and inventory the native plants and animals of Kansas, report on its findings, and develop and administer lands for the study and preservation of native animal and plant resources.
Programs or Activities -

Kansas Department of Wildlife and Parks
*

900 Jackson Street, Suite 502
Topeka, Kansas 66612-1220
913-296-2281
Background -
Purpose - Charged with the conservation of State wildlife and fishery resources, provision of environmental services and habitat protection, and park development and management. Administers State boating law, hunter education programs, Land and Water Conservation Funds, and other related functions.
Programs or Activities - Publication: *Kansas Wildlife and Parks*

Kansas Geological Survey
*

Kansas University
Campus West
1930 Constant Avenue
Lawrence, Kansas 66047
913-864-3965
Background - Founded 1989
Purpose - To research and develop information about minerals, water resources, and geologic hazards of Kansas, and to publish reports on those subjects.
Programs or Activities - Publications: *Bulletin; Journals; Maps; Energy Series; Mineral Resources Series; Environmental Geology Series; Subsurface Geology Series; series on Spatial Analysis; Chemical Quality Series; and Ground Water Series.*

Land and Water Resources Bureau (Wisconsin)
*

Department of Agriculture
Trade and Consumer Protection
801 West Badger Road
Madison, Wisconsin 53713
608-267-9788

Floodplain Study - State Organizations

Background -
Purpose - Responsible for administering State Soil and water conservation and farmland preservation programs.
Programs or Activities -

Minnesota Pollution Control Agency MPCA
*
520 Lafayette Road
St. Paul, Minnesota 55155
612-296-6300
Background - Established 1967. Administers the State statues covering water pollution, air pollution, and solid and hazardous waste control.
Purpose -
Programs or Activities -

Nebraska Department of Agriculture
*
301 Centennial Mall South
P.O. Box 94947
Lincoln, Nebraska 68509
402-471-2341
Background -
Purpose -
Programs or Activities -

Nebraska Department of Environmental Quality
*
301 Centennial Mall South
Lincoln, Nebraska 68501
Gale Hutton, Assist. Director, Water Division
402-471-3270
Background -
Purpose -
Programs or Activities -
Programs or Activities -

Nebraska Natural Resources Commission
*
301 Centennial Mall South
P.O. Box 94876
Lincoln, Nebraska 68509
402-471-2081
Background - State Agency
Purpose - Responsible for comprehensive water resources planning, floodplain management, administration of State financial assistance for water resources, flood control, soil and water conservation. It also has advisory and

administrative responsibility for Natural Resources Districts throughout the State.
Programs or Activities -

Nebraska State Historical Society
*
1500 R Street
P.O. Box 82554
Lincoln, Nebraska 68509
402-471-3270
Background -
Purpose -
Programs or Activities -

State and Extension Forestry (Kansas)
*
Kansas State University
Department of Forestry
2610 Claflin Road
Manhattan, Kansas 66502
913-537-7050
Background -
Purpose -
Programs or Activities -

State Extension Services (Illinois)
*
University of Illinois
122 Mumford Hall
1301 West Gregory Drive
Urbana, Illinois 61801
217-333-2660
Background -
Purpose -
Programs or Activities -

State Extension Services (Iowa)
*
Iowa State University
315 Beardshear hall
Ames, Iowa 50011
515-294-6192
Background -
Purpose -
Programs or Activities -

Floodplain Study - State Organizations

State Extension Services (Kansas)
*
Kansas State University
Department of Animal Sciences and Industry
128 Call Hall
Manhattan, Kansas 66506
913-532-5654
Background -
Purpose -
Programs or Activities -

State Extension Services (Minnesota)
*
University of Minnesota
240 Coffey Hall
St. Paul, Minnesota 55108
612-624-2703
Background -
Purpose -
Programs or Activities -

State Extension Services (Missouri)
*
University of Missouri
309 University Hall
Columbia, Missouri 314-882-4444
Background -
Purpose -
Programs or Activities -

State Extension Services (Nebraska)
*
University of Nebraska
Institute of Agriculture and Natural Resources
102 Plant Industry Building
Lincoln, Nebraska 68583-0814
402-472-1467
Background -
Purpose -
Programs or Activities -

Floodplain Study - State Organizations

State Extension Services (Wisconsin)
*
University of Wisconsin Extension
432 North Lake Street
Madison, Wisconsin 53706
608-262-1748
Background -
Purpose -
Programs or Activities -

Water Office (Kansas)
*
109 S.W. 9th Street, Suite 300
Topeka, Kansas 66612-1249
Background - State water planning, policy and coordination agency.
Purpose - Prepares State plan of water resources management; conservation; quality; fish, wildlife, and recreation; development;
Programs or Activities - Review water laws and recommends new or amendatory legislation. Administers State water marketing program.

Wisconsin Cooperative Fishery Research Unit USDI
*
University of Wisconsin
College of Natural Resources
Stevens Point, Wisconsin 54481
715-346-2178
Background - Interagency organization, Federal, State and university, to carry out research, training, and extension in biology and management of fresh water fishery resources.
Purpose -
Programs or Activities -

Wisconsin Cooperative Wildlife Research Unit, USDI
*
University of Wisconsin
Fish and Wildlife Service
Department of Wildlife Ecology
226 Russell Laboratories
Madison, Wisconsin 53706
608-263-6882
Background -
Purpose -
Programs or Activities -

Floodplain Study - Tribal

KANSAS

Iowa of Kansas, Brown County, Kansas
* Missouri Rvr.
Leon Campbell, Chairman
Iowa of Kansas Executive Committee
Route 1, Box 58A
White Cloud, Kansas 66094
913-595-3258

Kickapoo of Kansas, Brown County, Kansas
* Missouri Rvr.
Raul Garza, Chairman
Kickapoo of Kansas Tribal Council
P.O. Box 271
Horton, Kansas 66349
913-486-2131

MINNESOTA

Lower Sioux Indian Community of Minnesota, Redwood County, Minnesota
* Minnesota Rvr. (Mississippi Rvr.)
Joseph Goodthunder, President
Rural Route 1, Box 308
Morton, Minnesota 56270 -9801
507-697-6185

Prairie Island Indian Community of Minnesota, Scott County, Minnesota
* Minnesota Rvr. (Mississippi Rvr.)
Curtis Campbell, Sr., President
Community Council
1158 Island Boulevard
Welch, Minnesota 55089-9540
612-385-2554

Floodplain Study - Tribal

NEBRASKA

Ponca Tribe of Nebraska, Knox County, Nebraska
* Missouri Rvr.
Deb Wright, Chairperson
Ponca Tribe of Nebraska
P.O. Box 288
Niobrara, Nebraska 66760
402-857-3391

Santee Sioux Indian Community of Nebraska, Knox County, Nebraska
* Missouri Rvr.
Richard Kitto, Chairman
Santee Sioux Tribal Council
Route 2
Niobrara, Nebraska 68760
402-857-3302

Winnebago Indian Community of Nebraska, Thurston County, Nebraska
* Missouri Rvr.
Dr. Rudi Mitchell, Chairman
Omaha Tribal Council
P.O. Box 368
Macy, Nebraska 68039
402-837-5391

Floodplain Study - Organizations and Interest Groups

American Fisheries Society, Illinois Chapter
*
Department of Conservation
Division of Fisheries
600 No. Grand Avenue
West Springfield, Illinois 62701
217-782-6424
Background - Founded in 1963. Affiliated with the American Fisheries Society Headquarters in Bethesda, Maryland.
Purpose - To promote the conservation, development, and wise utilization of fisheries, both recreational and commercial.
Programs or Activities -

American Fisheries Society, Missouri Chapter
* 100 members
c/o Mike Kruse, Chapter Secretary
1110 So. College Avenue
Columbia, Missouri 65201
314-882-9880
Background - Founded in 1963.
Purpose - Promotes the scientific management of aquatic resources of the optimum use and enjoyment by the people of Missouri and North America.
Programs or Activities - Publication: Missouri Chapter American Fisheries Society Newsletter

American Rivers
* 10 members
801 Pennsylvania Avenue S.E., #400
Washington, D.C. 20003
202-547-6900 (FAX: 202-543-6142)
Scott Faber, 202-547-6900
Background -
Purpose -
Programs or Activities -

American Waterways Operators, Inc.
* 300+ member companies
Paul J. Werner, Vice President, Midcontinent
11960 Westline Industrial Drive, Suite 255
St. Louis, Missouri 63146
314-434-2534 (FAX: 314-434-3189)
Background - Established in 1944
Purpose - National Trade Association for the Barge and Towing Industry.
Programs or Activities -

The Association of State Wetland Managers, Inc.
*
Jon A. Kusler, Esq.,Executive Director
Box 2463 Berne
New York, NY 12023
518-872-1804 FAX 518872-2171
Scott Hausmann, Chairman
Wisconsin DNR
Box 7921
Madison, Wisconsin 53707
608-266-7360
Background -
Purpose -
Programs or Activities -

Audubon Council of Illinois
* 13,000 members
Keith Blackmore, President
9024 West Grove Road
Forreston, Illinois 61030
815-938-3204
Background - Founded in 1973; Approximately 30 Council delegates represent members statewide. Composed of 15 National Audubon Society chapters.[Organized under the laws of the State of Illinois, pursuant to the provision of "the general Not for Profit Corporation Act" of the State of Illinois.
Purpose - Promoting sound environmental policy to conserve Illinois natural resources and to coordinate efforts of the chapters on statewide environmental issues. The council established an ad hoc committee on Floodplain Management during the summer of 1993.
Programs or Activities - Written report from the ad hoc committee suggesting changes in floodplain development policy.

Audubon Society of Missouri
*
Bob Lewis, President
26 Tangelwood
Farmington, Missouri 63640
314-756-5484
Background - A non profit statewide society affiliated with the National Audubon Society organized in 1901.
Purpose - Dedicated to the preservation and protection of birds and all wildlife forms and habitat. Working toward wise conservation practices related to people and wildlife.
Programs or Activities - Publications: *The Bluebird; Annotated Checklist of the Birds of Missouri; Guide to the Birding Areas of Missouri; Newsletter*

BiState Fleeting Committee
*
Wilfred E. McDonald
919 Roosevelt Street
Clinton, Iowa 52732
Background -
Purpose -
Programs or Activities -

Citizens for Responsible Zoning and Land Owners Rights
*
Ms. Marilyn Haymann
Maiden Rock, Wisconsin 54750
Background -
Purpose -
Programs or Activities -

Citizens Natural Resources Association of Wisconsin, Inc.
*
Route 1, Box 287
Richland Center, Wisconsin 53581
608-538-3180
Background - Organized 1951. Works through legislation, education, and the courts. Initiated and sponsored the action which resulted in the banning of DDT in Wisconsin and two years later in the United States.
Purpose - To protect Wisconsin's natural resources.
Programs or Activities - Protecting and restoring native vegetation along Wisconsin's roads.

Coalition to Restore Urban Waters
*
Central Regional Contacts
Minority Environmental Association
3509 Milar Road
Sandusky, Ohio 44810
419-625-3230
Background - Political Action Committee
Purpose - The promotion of multi-objective floodplain management in which the solutions selected for reducing damages in flood prone communities address the needs for urban quality of life, open space, recreation, environmental education, protection of biodiversity, and restoration of downtown business, cultural institutions and economic interests. The revival of labor intensive environmental restoration technologies and programs and development of new restoration and watershed management methods which restore the natural functions of streams and associated wetlands. The advancement of river restoration methods, promotion of rivers as "greenways," and expansion of the focus of national and State clean water regulatory programs.
Programs or Activities -

Coastal America
*

Background - Recognizing the need to protect, preserve, and restore our living coastal heritage, the President announced the Coastal America initiative in February 1991. This initiative established a partnership for action among the four Federal agencies having primary responsibility for the management, regulation, and stewardship of coastal living resources: the Department of the Army, the Department of the Interior, the Environmental Protection Agency, and the National Oceanic and Atmospheric Administration. The President's Council on Environmental Quality coordinates the partnership. The partners are committed to a national effort which initially contaminated sediments. The initiative focuses on regional activities that provide direct local and watershed action as well as national projects. Membership in the partnership is open to those agencies with statutory responsibilities for coastal resources or whose operational activities affect the coastal environment.
Purpose - To protect, preserve, and restore the Nation's coastal ecosystems through existing Federal capabilities and authorities: to facilitate collaboration and cooperation in the stewardship of coastal living resources by working in partnership with other Federal programs and integrating Federal actions with State, local, and non-governmental efforts; and to provide a framework for action that effectively focuses agency expertise and resources on jointly identified problems to produce demonstrable environmental and programmatic results that may serve as models for effective management of coastal living resources.
Programs or Activities - Coastal America provides a forum for interagency consultation to identify possibilities for collaborative action and facilitate regional action plans to protect, preserve, and restore the Nation's coastal living resources. (A Principals Group, a National Implementation Team (MIT), seven Regional Implemantation Teams (RITs), and a Coastal America office at the President's Council on Environmental Quality).

Conservation Federation of Missouri
* 35,000 members
728 W. Main Street
Jefferson City, Missouri 65101-1543
314-634-2322 (FAX: 314-634-8205)
Background - Established in 1935 this is a representative Statewide organization, affiliated with the National Wildlife Federation. (Incorporated)
Purpose - Devoted to the wise use, conservation, aesthetic appreciation, and restoration of wildlife and other resources.
Programs or Activities - Review and comment on conservation related policies in Missouri. Publication: Missouri Wildlife

Department of Agriculture and Land Stewardship
Division of Soil Conservation
*

Wallace State Office Building
Des Moines, Iowa 50319
515-281-5851
Background - Administers soil and water conservation district laws.
Purpose - Allocates State appropriation to 100 soil and water conservation districts. Oversees erosion control law. Involved with water resources and nonpoint-source pollution control planning.

Floodplain Study - Organizations and Interest Groups

Ducks Unlimited
*
Earl Sunden
545 28th Avenue
East Moline, Illinois 61244
Background -
Purpose -
Programs or Activities -

Environmental Defense Fund
*
Tim Searchinger
1875 Connecticut Avenue N.W.
Washington, D.C. 20009
202-387-0070, Ext. 44,(202-387-3500)
Background -
Purpose -
Programs or Activities -

Environmental Education Association of Illinois
* 600+ members
Western Illinois University
47 Horrabin Hall
Macomb, Illinois 61455
309-298-1777
Background - Founded 1970
Purpose - Environmental literacy it the primary goal as this organization strives to instill a sense of community between the native ecosystems and people.
Programs or Activities - Publication: *Illinois Environmental Education UPDATE*

Freshwater Foundation
*
Boyd Burton, Director/Vice Chair
Spring Hills Center
725 County Road 6
Wayzata, Minnesota 55391
612-449-0092
Background -
Purpose -
Programs or Activities -

Friends of the River
*
128 J Street
Second Floor

Sacramento, California 95814
916-442-3155 (FAX: 916-442-3396)
Background -
Purpose -
Programs or Activities -

Greenway Network
*
Jeanne Heuser
Route 1, Box 4030
Jamestown, Missouri 65046
816-849-2589
Background -
Purpose -
Programs or Activities -

Heritage Corridor Commission (Assoc. /w MRCSC)
*
355 West Franklin Street
West Salem, Wisconsin 54669
608-786-0744
Background - Established by Congress in 1990 to conduct a 3-year study of the feasibility of creating a Mississippi River National Heritage Corridor. The commission includes representatives from 5 Federal agencies and 10 States. The State representatives are appointed by the Governor from among the members of the State's Mississippi River Parkway Commission. The National Park Service provides staff support.
Purpose - The Commission is currently in the process of obtaining agency comments on a draft of the report which will convey its recommendations to Congress.
Programs or Activities -

Heartland Water Resources Coalition
*
Mike Plast, Director
416 Main Street, #828
Peoria, Illinois 61602-1116
Background -
Purpose -
Programs or Activities -

Illinois Association of Conservation District
* 40 members
9313 Bull Valley Road
Woodstock, Illinois 60098
815-338-7664
Ken Fiske, 815-338-7664
Background - Founded in 1972, [not-for-profit Illinois corporation]

Purpose - To promote the objectives and activities of the Conservation District of Illinois as set forth in the Illinois conservation District Act and to cooperate with county, State Federal, and private agencies in resource management.
Programs or Activities - Open space land acquisition and management.

Illinois Association of Soil and Water Conservation Districts
*
Lee Bunting, President
Rural Route 1, 57
Dwight, Illinois 60420
815-934-5573
Background - Established in 1972, [not-for-profit Illinois corporation status]
Purpose - To provide service in open space land acquisition and management.
Programs or Activities -

Illinois Audubon Society
*
P.O. Box 608
White Thorn Road
Wayne, Illinois 60184
708-584-6290
Background - Founded 1897
Purpose - Dedicated to the enjoyment and preservation of wildlife, and to the achievement of an ecologically sound environment.
Programs or Activities - Publications: *Illinois Audubon; The Cardinal News*

Illinois Environmental Council
* 70 groups plus individual members
319 West Cook Street
Springfield, IL 62704
217-544-5954
Background - Founded 1975.
Purpose - This council group lobby's for conservation legislation.
Programs or Activities - Publications: *IEC Bulletin, Action Alert*

Illinois Native Plant Society
* 450 members
Forest Glen Preserve
20301 East 900 No. Road
Westville, Illinois 61883
217-662-2142
Background - Founded in 1982
Purpose - Dedicated to the preservation, conservation, and study of the native plants and vegetation of Illinois.
Programs or Activities - Publications: *Erigenia Journal; Harbinger Newsletter*

Illinois Natural Heritage foundation
*
320 So. Third Street
Rockford, Illinois 61104
815-964-6666
Background - A nonprofit organization founded 1982.
Purpose - To protect Illinois's native flora and fauna, and to encourage wise stewardship of the natural resources that affect them.
Programs or Activities -

Illinois Prairie Path
* 1,500 members
P.O. Box 1086
Wheaton, Wisconsin 60189
312-665-5310
Background - Founded in 1963, Incorporated in 1965. In 1971 designated part of National Trails System.
Purpose - To preserve natural areas and establish footpaths and other protected areas to be used for scientific, educational, and recreational purposes by the public.
Programs or Activities - Promotes development of a 55-mile path for bicycles, hikers, and horseback riders on former railroad right-of-way spanning DuPage County, Kane County, Fox River Valley, Cook County.

Illinois Waterway Carriers Association
*
Delmar Marine
Lamont, Illinois 60439
Background -
Purpose -
Programs or Activities -

Illinois Woodland Owners and Users Association
* 400 members
Rural Route 1, Box 57
Mason, Illinois 62443
618-245-6392
Background - Affiliated with the National Woodland Owners Association.
Purpose - Dedicated to promoting good forestry practices and multiple use of woodlands.
Programs or Activities -

Inland Waterway Users Board
*
2789 Starbuck Road
Wilmington, Ohio 45177
Background -
Purpose -
Programs or Activities -

Iowa Academy of Science
* 2,400 members
University of Northern Iowa
Cedar Falls, Iowa 50614-0508
319-273-2021
Background - Organized in 1875 to further the work of scientists.
Purpose - To facilitate cooperation among scientists and increase public understanding and appreciation of the importance and promise of the methods of science in human progress.
Programs or Activities - A conservation section meets each year as part of an annual convention submitting papers dealing with all conservation happenings.

Iowa Association of County Conservation Boards
*
Elkhart, Iowa 50073
Background -
Purpose -
Programs or Activities -

Iowa Association of Naturalists
* 100 members
Rural Route 1, Box 53
Buthrie Center, Iowa 50115
515-747-8383
Background - Founded 1978. Member represent county, State, Federal and private conservation education agencies, organizations, and facilities.
Purpose - Promoting the professionalism of naturalists through development of standards for interpreters and guidelines for nature centers; recognizing achievement in the field of conservation education through awards programs; and general promotion and publicity for conservation education and interpretation.
Programs or Activities - Development of a series of booklets and posters and slide programs about Iowa's natural resources and environmental issues. Publication of the newsletter for members. Conducting workshops.

Iowa Audubon Council
*
2121 Burnett
Ames, Iowa 50010
515-233-1532
Background - A statewide council of representatives of the 11 National Audubon Society chapters in Iowa founded in 1983.
Purpose - To promote the protection of natural resources through coordinating the efforts of Iowa Audubon chapters and by communicating to Iowans about environmental concerns.
Programs or Activities -

Iowa Conservation Education Council, Inc.
* 800 members

Conservation Education Center
Route 1, Box 53
Guthrie Center, Iowa 50115
515-747-8383
Background - Founded in 1958
Purpose - To encourage and lead the development and practice of a widespread and effective conservation education program in Iowa.
Programs or Activities -

Iowa Natural Heritage Foundation
* 2,980 members
Mark C. Ackelson
Exchange Building, Suite 444
505 Fifth Avenue
Des Moines, Iowa 50309
515-288-1846 (FAX: 515-288-1846)
Background - A private nonprofit organization founded in 1979 by a broad-based group of leading Iowans concerned with the rapid depletion of the State's natural resources.
Purpose - This corporation serves as a catalyst and facilitator in both the preservation and protection of Iowa's natural resources. It builds partnerships and educates Iowans to protect and restore Iowa's natural resources for future generaions.
Programs or Activities - Emphasis on land protection, resource education, and long-range planning and research. Publications: *Iowa Natural Heritage Magazine; The Landowner's Options; Enjoy Iowa's Recreation Trails Guidebook*

Iowa Trails Council
* 1,200 members
P.O. Box 131
Center Point, Iowa 52213
319-849-1844 (FAX: 319-849-1866)
Background - Nonprofit volunteer organization founded in 1983; primarily active in the Midwest. Some of the members serve on national boards of trails organizations.
Purpose - To acquire and convert former railroad rights-of-way into recreational trails. Interested in extending the American Discovery Trail (a nationwide trail) across Iowa without the use of roadways. Also concerned with other land and water trails inside and outside concerned with other land and water trails inside and outside Iowa. Also interested in possible extensions of trails in other areas along the Misssissippi River.
Programs or Activities - Presently working to bring the American Discovery Trail from Muscatine to the Quad Cities on other than Highway 22. Publication: *Trails Advocate; RIBBIT (Ride intriguingly Beautiful and Bodacious Iowa Trails)* booklet with map and information about 12 bike trails, 370 miles

Iowa Wildlife Federation, Inc.
*
3125 Douglas, Suite 103
Des Moines, Iowa 50310
President Joe Wilkinson

319-335-1575
Background - Statewide organization affiliated with the National Wildlife Federation
Purpose - Devoted to the wise use, conservation, aesthetic appreciation, and restoration of wildlife and other natural resources.
Programs or Activities - Publication: *Iowa Wildlife*

Iowa Wildlife Rehabilitators Association
*
P.O. Box 217
1005 Harken Hill Drive
Osceola, Iowa 50036
515-342-2783
Background - A nonprofit organization established in 1986 to disseminate information pertaining to wildlife rehabilitation and medicine to veterinarians, rehabilitators, naturalists, and others.
Purpose - To encourage the public to be more aware of the need to care for the earth and its wild creatures. To communicate and cooperate with State, Federal and private environmental/conservation organizations.
Programs or Activities - Newsletters, educational material, State and Regional conferences, and presentations.

The Izaak Walton League of America
*
Midwest Regional Office
5701 Normandale Road, Suite 317
Minneapolis, Minnesota 55424
612-922-1608
Background - Associated groups in Illinois, Iowa, Kansas, Missouri, Nebraska, and Wisconsin
Purpose -
Programs or Activities -

Kansas Advisory Council for Environmental Education
*
John K. Strickler, President
State and Extension Forestry
Kansas State University
2610 Claflin road
Manhattan, Kansas 66502
913-537-7050
Background - Organized in 1969 this council is made up of representatives of over 135 public and private organizations, institutions, business organizations, and individuals.
Purpose - To promote and support effective environmental education among the citizens of Kansas.
Programs or Activities - Publication: KACEE News

Kansas Association of Conservation Districts
*
Kim Goodnight, President

Rural Route 2, Box 1
Dodge City, Kansas 67801-9501
316-225-0399
Background -
Purpose -
Programs or Activities -

Kansas Audubon Council
*
1748 West Third
Lawrence, Kansas 66044
913-749-3592
Background - Founded in 1974 it is comprised of representatives throughout the State.
Purpose - Supports protection of our natural resources. Encourages members to become informed so that they can act at local and State levels to advocate adoption of sound environmental policy and legislation.
Programs or Activities -

Kansas Wildlife Federation, Inc.
*
P.O. Box 5715
Topeka, Kansas 66605
913-266-6185
Background - A representative statewide organization affiliated with the National Wildlife Federation.
Purpose - Devoted to the wise use, conservation, aesthetic appreciation, and restoration of wildlife and other natural resources.
Programs or Activities - Publication: *Kansas Sportsman*

Lower Mississippi Valley Flood Control Association
*
George C. Grugett, Executive Vice-President
2602 Corporate Avenue, Suite 1
Memphis, Tennessee 38132
901-398-1613 (FAX: 1614)
Background - Established in 1922, reorganized in 1935. Approximately 140 organizations, levee boards, drainage districts, ports and harbors; etc. are members.
Purpose - To provide an agency through which all the people may speak and act jointly on all flood control, bank stabilizaiton, navigation and major drainage problems.
Programs or Activities -

MacBride Raptor Center (IOWA)
*
The University of Iowa
E216 Field House
Iowa City, Iowa 52242
319-335-9293

Background - Founded 1985.
Purpose - Devoted to the preservation of Iowa's birds of prey and their natural habitats through education of the public and research on various aspects of raptor biology.
Programs or Activities - Rehabilitation of sick or injured raptors.

The McKnight Foundation
Suite 600, TCF Tower
121 South Eighth Street
Minneapolis, Minnesota 55402
612-333-4220
Background - The McKnight Foundation is a private charitable foundation and grant making institution established in 1953 by William L McKnight, one of the founders of 3M Company. This foundation seeks to strengthen community and community institutions, to help the disadvantaged, enrich people's lives through the arts and encourage preservation of the natural environment.
Purpose - The foundations environment program seeks to maintain or restore a healthy and sustainable environment in the Mississippi River basin. It seeks to create or strengthen networks which link organizations working to protect the health of the Mississippi River.
Programs or Activities - This agency will support only projects involved in dealing with the entire length of the Mississippi or with its major regions such as the Upper Mississippi River. Grants include support of projects to plan and carry out flood damage reduction strategies that do not depend on environmentally damaging dams and levees. Also support evaluaton of flood damage policies, and advocacy intended to promote more environmentally beneficial policies.

Metropolitan Council Waste Water Services (formerly: Metropolitan Council & Metropolitan Waste Control Commission)
*
Mears Park Center
230 East 5th Street
St. Paul, Minnesota 55101
Background -
Purpose -
Programs or Activities -

MidAmerica Regional Council (MARC)
*
Mr. Dave Garcia, Director of Environmental and Emergency Services
300 Rivergate Center, 600 Broadway
Kansas City, Missouri 64105-1536
816-474-4240
Background - Established in 1972. Comprised of local government in an 8 county area.
Purpose - Coordinate Flood Control Activities.
Programs or Activities -

Midwest Area River Coalition 2000 (MARC)
*
P.O. Box 2716
St. Louis, Missouri 63102-2716
Background -
Purpose -
Programs or Activities -

Minnesota Conservation Federation
1036-B So. Cleveland Avenue
St. Paul, Minnesota 55116
612-690-3077
Background - (Affiliated with National Wildlife Federation)
Purpose - Devoted to the wise use, conservation, aesthetic appreciation, and restoration of wildlife and other natural resources.

Minnesota Cooperative Fish and Wildlife Research Unit
*
200 Hodson Hall
1980 Follwell Avenue
St. Paul, Minnesota 55108
612-624-9288
Background - Established 1987.
Purpose - This research Unit investigates the influence of human impacts on aquatic and terrestrial ecosystems.
Programs or Activities -

Minnesota Forestry Association
* 1,200 members
507 Exchange Building
26 East Exchange Street
St. Paul, Minnesota 55101
612-292-0051
Background - A nonprofit organization affiliated with the National Woodland Owners Association.
Purpose - Promotes the high potential advantages of intensive scientific management of forests, woodlots, and other renewable resources.
Programs or Activities -

Minnesota Herpetological Society
* 300 members
University of Minnesota
James Ford Bell Museum of Natural History
10 Church Street S.E.
Minneapolis, 55455-0104
612-263-7880

Background - Chartered nonprofit organization.
Purpose - Conservation and preservation of reptiles and amphibians, through the education of the members and public as to the value of reptiles and amphibians.
Programs or Activities

Minnesota Native Plant Society
*
University of Minnesota
220 Biological Sciences Center
1445 Gortner Avenue
St. Paul, Minnesota 55108
612-625-1234
Background - A nonprofit organization founded in 1981
Purpose - This society is dedicated to the preservation, conservation, and education of native Minnesota flora.

Minnesota Ornithologists' Union
* 1,200 members
University of Minnesota
James Ford Bell Museum of Natural History
10 Church Street S.E.
Minneapolis, Minnesota 55455
Background - Statewide organization founded in 1937.
Purpose - Working to preserve bird life and bird habitat through contribution of scientific knowledge, stimulating public interest in birds, and through bird observation.
Programs or Activities - Publications: *The Loon; Mouthpiece Newsletter*

Minnesota Rural Partners
*
Marcie McLaughlin, Executive Director
St. Cloud State University
328 Stewart Hall
720 Fourth Avenue South
St. Cloud, Minnesota 56301-4498
612-255-3834
Background - In 1990, the Fereral government, in partnership with the National Governors' Association, began a new rural initiatve. Originally eight States joined in a collaborative approach to solving rural problems. By 1994, 39 States had established State Rural Development Councils. Today representatives of all the partners - Federal, State, local, and tribal governments and the private and non-profit sectors - work together on rural development across the nation.
Purpose - The Partnership addresses complex rural problems in new ways by: 1). building crucial inter- and intragovernmental relationships; 2) promoting strategic development; 3) making better use of existing resources; 4) intervening in a problem-solving role; 5) addressing regulatory and administrative impediments; and 6) representing a new model of governance.
Programs or Activities - Monthly meetings in rural communities.

Minnesota Parks and Trails Council
* 650 members
P.O. Box 26243
St. Paul, Minnesota 55126
612-631-2818
Background - Founded in 1954
Purpose - To further the establishment, development, and enhancement of parks and trails within the State of Minnesota, and to encourage their wise use and protection.
Programs or Activities - Publication: *Newsletter*

Minnesota Wildlife Heritage Foundation, Inc.
*
5701 Normandale Road, Suite 325
Minneapolis, Minnesota 55424
612-925-1923
Background - Formed to promote the idea of charitable giving for conservation purposes.
Purpose - To assist people in making charitable donations of property for wildlife habitat.

Minnesota Waterfowl Association
*
5701 Normandale Road
Edina, Minnesota
612-922-2832
Background -
Purpose -
Programs or Activities -

Minnesota-Wisconsin Boundary Area Commission
* 10 commissioners
619 2nd Street
Hudson, Wisconsin
612-436-7131
Background - Established September 1965 by interstate compact between Minnesota and Wisconsin. Each Governor appoints five citizen commissioners.
Purpose - To assist the two States in cooperative efforts on their "boundary lands, river valleys, and waters." (primarily Mississippi and St. Croix Rivers) Viewed as a liaison between the public and the State and local government agencies. Extensive public education and information program.
Programs or Activities - Conducts studies and makes recommendations on plans, policies, development proposals, public management, uniform laws, and conservation efforts. Current issues of interest include recreational use and development, water quality, blufflands protection, water surface use law enforcement, Stillwater-Houlton bridge, river stewardship, and watershed system issues. Has actively promoted the EMP. FY 1995 budget of $370,000 supported in part by appropriations of $130,000 per State. Four full-time staff in Hudson, Wisconsin.

Mississippi River Basin Alliance
*
Box 3878
St. Louis, Missouri 63122
314-822-4114 (FAX: 314-821-4292)
Background - Incorporated in May 1994; sixty organizations throughout the midwest.[501(c)(3); with by laws]
Purpose - The Alliance's purpose is to "protect and restore the ecological, economic, cultural, historic and recreational resources in the basin; and to eliminate barriers of race, class and economic status that divide us in the quest to achieve these purposes."
Programs or Activities - Sponsors pesticide workshops in conjunction with the National Campaign for Pesticide Policy Reform. Working to implement recommendations from the Galloway Report, securing meaningful Federal wetland parcels, and determining its role concerning the Army Corps of Engineers navigation expansion study. Publication: *Newsletter (One People One System)*

Mississippi River Coordinating Commission
* 22 member
National Park Service
Mississippi National River and Recreation Area
P.O. Box 65456
St. Paul 55165
612-290-4160
Background - Coordinating Commission authorized by Congress is comprised of 22 members including citizens, local officials, State agencies, and federal agencies.
Purpose - Deals with the Twin Cities, Minnesota portion of the river designated as the Mississippi National River and Recreation Area by Congress in November 1988.
Programs or Activities - Commission serves as an advisor for the area and will assist the national Park Service in implementing an integrated resource management plan for this new unit of the national park system. The management plan is currently awaiting approval by the Secretary of the Interior.

Mississippi River Corridor Study Commission (Heritage Corridor Commission)
*
Evan Zantow, Wisconsin Commissioner
355 West Franklin St.
West Salem, Wisconsin 54669
608-786-0744
Background - The commission has involved the general public throughout their process through news letters, press bulletins, newspaper articles, commissioner speaking engagements, and commission meetings.
Purpose - To provide a means and a stimulus to organize, coordinate, and assist individuals, organizations, communities, businesses and governments to identify and reach common goals and visions. To stimulate the full potential of economic development compatible with the environmental health of the corridor. To preserve, restore, and enhance environmental, cultural, agricultural, historic, recreation, and economic resources within the corridor. To improve access to and within the corridor for the use and enjoyment of its resources.
Programs or Activities - The MRCSC is working with numerous entities that reflect the interests of the river valley and that have a great deal of influence on significant aspects of the Mississippi River. Compiling summaries of significant Mississippi River resources within their jurisdictions. Reviewing and

amending heritage corridor issues and functions. Assessing the feasibility of heritage corridor management alternatives and defining their role in potential heritage corridor structures.

Mississippi River Parkway Commission (MRPC)
* 10 members
336 No. Robert Street
St. Paul, Minnesota
612-224-9903
Background - Established in 1938 by the Governors of the 10 States which border the river. Each State has its own Commission. All 10 are consolidated to form the national MRPC. Commission member are established by State statute or appointed by the governor. Generally, they are State legislators, county board members, citizens, or State transportation or tourism agency officials.
Purpose - To coordinate the technical development and promotion of the Great River Road. The commission has expanded its areas of interest to include tourism promotion, recreation, and economic development.
Programs or Activities - The Commission conceived and promoted establishment of the Heritage Corridor Study and Commission. The Great River Road Association is a companion grass roots organization comprised of individuals and businesses with an interest in Great river Road and enhancement of the river's scenic, historic, and recreational resources.

Missouri Association of Soil and Water Conservation Districts
*
President Jeff Otto
Route 1, Box 211
Novelty, Missouri 63460
816-739-4591
Background -
Purpose -
Programs or Activities -

Missouri - Mississippi River Task Force
*
Representative Pat Danner
Sixth Congressional District
Missouri
202-225-7041
Background -
Purpose -
Programs or Activities -

Missouri Native Plant Society
* 470 members
P.O. Box 20073
St. Louis, Missouri 63144-0073
316-235-4740

Background - Founded in 1979 to promote the environmental importance of indigenous vegetation.
Purpose - To educate the public about the values of indigenous vegetation through preservation, conservation, restoration, and study of native flora.
Programs or Activities - Publications: *Missouriensis,; Petal Pusher*

Missouri River Basin Association
*
P.O. Box 9193
Missoula, Montana 59807
Background -
Purpose -
Programs or Activities -

Missouri River Coalition
*
@ American Rivers
Scott Faber, Coordinator
801 Pennsylvania Ave. S.E., Suite 40
Washington, D.C. 20003
202-547-6900
Background -
Purpose - A partnership of commodity, environmental, and conservation groups, government agencies, industry, and individuals helping landowner get the facts about wetlands restoration, conservation, and enhancement. Its mission is to show private landowners that wetlands assets integrated into their management operations can be personally and financially beneficial.
Programs or Activities - The Alliance promotes public and private wetland restoration programs that benefit the environment.

Missouri River Communities Network
* 130 members
Jeanne Heuser
Route 1, Box 4030
Jamestown, Missouri 65046-9775
816-849-2589
Background - A Non-profit corporation established in February 1994.
Purpose - Provide multi-objective river planning and management.
Programs or Activities -

The Nature Conservancy
*
Russell Van Herik, Vice President
1815 No. Lynn Street
Arlington, Virginia 22209
703-841-5394
Background -

Purpose -
Programs or Activities -

National Campers and Hikers Association, Inc.
*
Illinois State Association
Amos or Martha Whitcomb, State Directors
1009 West Madison
Ottawa, Wisconsin 61350
Background - Incorporated 1962.
Purpose - To educate and assist local chapters in the preservation of the beauties of nature in Illinois; to educate and assist members in a campaign of safety in outdoor living; and to promote improvement in public camping and hiking areas where the need exists.
Programs or Activities - Publication: ISA Camper.

National Waterways Foundation
*
3800 No. Fairfax Drive, Suite 7
Arlington, Virginia 22203
Background -
Purpose -
Programs or Activities -

National Wetlands Conservation Alliance
*
509 Capitol Court, NE
Washington, D.C. 20002-4946
202-547-62223
Background -
Purpose -
Programs or Activities -

National Wildlife Federation
*
1400 16th Street N.W.
Washington, D.C. 20036
Region 7, Burnsville, Minnesota 55337
Background -
Purpose -
Programs or Activities -

Natural Land Institute (Illinois)
* 500 members
320 So. Third Street

Rockford, Illinois 61104
815-964-6666
Background - Organized in 1958.
Purpose - A nonprofit organization to preserve natural areas in Illinois and elsewhere.
Programs or Activities - Publication: *Rock River Valley Natural Areas Notes*

The Nature Conservancy
* 18,000 Minnesota members
Minnesota Chapter - Box 110
1313 5th Street S.E.
Minneapolis, Minnesota 55414-1588
612-331-0700
or 19110 Ramsey Road
Deephaven, Minnesota 55319
Background - International membership organization committed to the preservation of natural diversity. The agency was incorporated in 1951 in the District of Columbia for scientific and educational purposes and is a non-profit, tax-exempt corporation. The Minnesota Chapter was formed in 1958. The Conservancy owns more that 1,300 preserves, a system of nature sancturaries. The Minnesota Chapter retains ownership of 59 preserves totaling 18,780 acres and has been involved in the protection of more than 200,000 acres throughout the States.
Purpose - Its mission is to find, protect and maintain the best examples of communities, ecosystems, and endangered species in the natural world. Specifically, the protection of rare plants nad animals and the natural communities that support them.
Programs or Activities - Responsible for the protection of 7.5 million acres in 50 States and Canada. Assisted partnership organizations to preserve millions of acres in Latin America and the Caribbean. The Minnesota Chapter owns and manages about 18,00 acres of land in 52 preserves.

Navigation Study Governors Liaison Committee
*
Background - Representatives designated by the Governors of the five States. Meeting in conjunction with meetings of the Upper Mississippi River Basin Association, the members of which are largely the same.
Purpose - To provide input to the Corps of Engineers on the on-going Upper Mississippi River-Illinois Waterway System Navigation Study.
Programs or Activities -

Nebraska Association of Resources Districts
*
Elden Weseley, President
Route 1
Oakland, Nebraska 68045
402-685-5956
Background -
Purpose -
Programs or Activities -

Nebraska Audubon Council
* 3,500 members
11649 Burt Street, #11
Omaha, Nebraska 68154
402-493-0373
Background - A statewide council of representatives of eight National Audubon Society chapter in Nebraska founded in 1985.
Purpose - To coordinate efforts of the chapters on statewide environmental issues, and advocate protection, preservation and wise use of our soil, water, plants, and wildlife.
Programs or Activities -

Pheasants Forever
*
3522 LaBore Road
Vadnais Heights, Minnesota 55110
612-481-7142
Background -
Purpose -
Programs or Activities -

Quad City Conservation Alliance
*
Muski, Inc., Denny Swenson
5301 11th Avenue, C
Moline, Illinois 61265
309-762-5417
Background -
Purpose -
Programs or Activities -

River Industry Action Council
*
Orgulf Transportation
St. Louis, Missouri 63125
Background -
Purpose -
Programs or Activities -

River Resources Forum
*
Harold E. Taggatz, Co-Chairman
U.S. Army Corps of Engineers
St. Paul District
190 E. Fifth Street
St. Paul, Minnesota 55101-1638

612-290-5311
Background - Formed as an interagency coordination group to continue the cooperative relationship established during the GREAT I study, October 1986, and to facilitate the implementation of the study recommendations. Formerly called the Channel Maintenance Forum. Participants include 6 Federal agencies, 3 Minnesota agencies, and 2 Wisconsin agencies.
Purpose - General area of interest is the Mississippi River in the Corps of Engineers' St. Paul District. This agency provides an opportunity for the member agencies to generally discuss and resolve a variety of interagency issues, the primary focus is the Corps' channel maintenance program and prioritizing EMP habitat projects in the St. Paul District.
Programs or Activities - Most recently the RRF has undertaken development of a comprehensive recreation management plan. Subgroups include: on-site inspection team, fish and wildlife work group, recreation work group, navigation work group, and public information and education work group.

River Resources Coordinating Team
*
U.S. Army Corps of Engineers
Rock Island District
Rock Island, Illinois
Background - Counterpart of the River resources Forum in the Rock Island District, U.S. Army Corps of Engineers. Participants include 6 Federal agencies, 2 Illinois agencies, 2 Iowa agencies, 1 Missouri agency, and 2 Wisconsin agencies.
Purpose - Similar issues and functions of their counterpart, River Resources Forum.
Programs or Activities -

River Network
*
Sue Doroff, Director of River Lands Conservancy
P.O. Box 8787
Portland, Oregon 97207
503-241-3506 (1-800-423-6747)
Background -
Purpose -
Programs or Activities -

RiverWatch Network
*
153 State Street
Montpelier, Vermont 05602
802-223-3840
Background -
Purpose -
Programs or Activities -

Upper Mississippi Flood Control Association
*

John Robb, Director
Route 1, Box 25A
Gladstone, Illinois 61437
309-627-2351
Background -
Purpose -
Programs or Activities -

Upper Mississippi River Basin Association
*

Holly Stoerker
408 St. Peter Street
St. Paul, Minnesota 55102
612-224-2880 (FAX: 612-223-5815)
Background - Association of five State floodplain managers (Illinois, Iowa, Minnesota, Missouri, and Wisconsin).
Purpose - Active participants in the development of legislation in the support of floodplain management.
Programs or Activities - Draft report recommendation, February 1995, in support of a national Floodplain Management Act, which discusses the need for action, national floodplain management goals, and developing cost-sharing agreements between Federal/States.

Upper Mississippi River Conservation Committee (UMRCC)
*

U.S. Fish and Wildlife Service
48th Avenue, Court
Rock Island, Illinois 61201

Background - Formed in 1943 by fish and wildlife biologists and administrators. Membership includes conservation agencies of the five States. Executive Board delegates appointed by Administrator of State conservation agency. Federal agencies are "cooperators."

Purpose - Objectives are "to promote the preservation and wise utilization of the natural and recreational resources" of the UMR and "to formulate policies, plans, and programs for conducting cooperative studies".

Programs or Activites - Activities include cooperative recreation use surveys, commercial fishing statistics, waterfowl and wilslife cooperative studies, education, and water safety enforcement.

Upper Mississippi Waterway Association
*

Box 7006
St. Paul, Minnesota
612-776-3108
Background -

Purpose -
Programs or Activities -

The Wetlands Initiative
*
53 West Jackson Boulevard
Chicago, Illinois 60604-3703
312-922-0777 FAX 312-922-1823
Donald L. Hey, Seniors Vice-President
Mr. Jerry Paulson
Background - Established in January 1994. TWI is an Illinois not-for-profit corporation and charitble organization.
Purpose - Dedicated to restoring our nation's wetland resources to reduce flooding, improve water quality, expand wildlife habitat and conduct research and education.
Programs or Activities - Developing 3 to 4 wetland restoration projects in the Upper Mississippi Rier basin to demonstrate the flood damage reduction potential of restoring wetlands.

Wetlands Research, Inc.
*
53 West Jackson Boulevard, Suite 1015
Chicago, Illinois 60604
312-922-0777 FAX 312-922-1823
Background -
Purpose -
Programs or Activities -

Wildlife Society Illinois Chapter
* 150 members
Douglas R. Dufford, ILDOC
205 E. Seminary
Mt. Carroll, Illinois 61053
815-244-3655
Background - Established in 1964
Purpose - Chapter of the national organization, The Wildlife Society.
Programs or Activities -

Wildlife Society Iowa Chapter
*
9269 So. Avenue
Columbus Jet, Iowa 52738
319-523-8319
Background -
Purpose -
Programs or Activities -

Wildlife Society Missouri Chapter
*
Eric W. Kurzejeski, President
Missouri Department of Conservation
1110 So. College Avenue
Columbia, Missouri 65201
314-882-9880

Wisconsin Aqcltr Association, Inc.
*
Delbert Miller, President
P.O. Box 15
Frederic, Wisconsin 54851-0015
715-653-2271
Background -
Purpose -
Programs or Activities -

Wisconsin Association of Soil and Water Conservation Districts
*
Mr. Glenn Stoddard, Executive Director
University of Wisconsin-Madison
208 Agriculture Hall
1450 Linden Drive
Madison, Wisconsin 53706
Background -
Purpose -
Programs or Activities -

Wisconsin Land Conservation Association
*
George Nettum
404 E. South Street
Viroqua, Wisconsin 54665
608-637-3236
Background -
Purpose -
Programs or Activities -

Wisconsin Park and Recreation Association
* over 900 members
7000 Greenway, Suite 201
Greendale, Wisconsin 53129
414-423-1210
Background - A nonprofit organization affiliated with the National Recreation and Park Association.

Purpose - Working with other groups and organizations to achieve the best in park services and recreational opportunities.
Programs or Activities - Publications Impact Magazine, Leisure Line Newsletter.

The Wisconsin Society for Ornithology, Inc.
* 1,200 members
UW-Madison
Department of Wildlife Ecology
Madison, Wisconsin 53706
608-263-6827
Background - Founded 1939.
Purpose - To stimulate interest in and promote the study of birds in Wisconsin for a better understanding of their biology and basis for their preservation.
Programs or Activities - *Badger Birder; Passenger Pigeon*

Wisconsin Waterfowl Association, Inc.
* 6,100 members
Charles Sauer, Executive Director
131 W. Broadway
P.O. Box 792
Waukesha, Wisconsin 53187-0792
414-524-8460 (FAX: 414-524-8807)
Home Office:
740 Squirrel Lane
Marathon, Wisconsin 54448
715-359-7844
Background - Founded in 1983. A Statewide, nonprofit environmental/educationl organization dedicated to the Improvement of Wisconsin's waterfowl and wetland resources. Non-profit organization under 501 (c)(3)
Purpose - Establishes, promotes, assists, and contributes to conservation, restoration and management of Wisconsin wetlands to perpetuate waterfowl and wildlife.
Programs or Activities - Education/Regulation/Legislation/Habitat Work for the Physically Challenged and Youth.

Wisconsin Wildlife Federation
*
Tranquil Acres
W10788 County I
Reeseville, Wisconsin 53579
414-927-3131
Background - Affiliated with the National Wildlife Federation.
Purpose - The wise use, conservation, aesthetic appreciation, and restoration of wildlife and other natural resources.
Programs or Activities - Unified State voice for regulation/conservation legislation benefiting the protection of wetlands. Educational programs and waterfowl hunting seminars.

World Wildlife Fund
*
Ms. Constance Hunt
1250 24th Street N.W.
Washington, D.C. 20037-1175

Floodplain Study - Levee/Drainage Districts

Illinois

Bay Island Drainage and Levee District No. 1, Mercer County, Illinois
* Mississippi Rvr.
Pool No. 18, left bank, river miles 434.2 to 447.9
Chris Neeld, Chairman
Route 2
New Boston, Illinois 61272
309-587-3237

Big Swan Drainage District, Scott County, Illinois
* Mississippi Rvr.
R. Edward Frost
307 E. Jefferson
Winchester, Illinois 62694

Clear Creek Drainage District, Union County, Illinois
* Mississippi Rvr.
Mitchel McClure
Wolf Lake, Illinois 62998

Coal Creek Drainage and Levee District, Cass County, Illinois
* Mississippi River
Chester Esther, Commissioner
P.O. Box 205
Beardstown, Illinois 62618

Columbia Drainage District, Monroe County, Illinois
* Mississippi Rvr.
Armin Pieper
404 Morrison
Waterloo, Illinois 62298

Consolidated Naples Region, Pike County, Illinois
* Mississippi Rvr. (Illinois Rvr.)
John Williams, Gen'l Manager
P.O. Box 32
Naples, Illinois 62665-0032

Coon Run Drainage District, Morgan County, Illinois
* Mississippi Rvr.
Leland Littig
Route 1, Box 174 D
Meredosia, Illinois 62655

Degognia-Fountain Bluff and Drainage District, Southern Illinois
* Mississippi Rvr.
Tom Bess
Route 2, Box 42A
Ava, Illinois 62907
Barry Wesley, Attorney At Law, Representative
100 Hanson Street
P.O. Box 1029
Murphysbore, Illinois 62966
618-687-4800

Drury Drainage District, Rock Island County, Illinois
* Mississippi Rvr.
Pool No. 17, left bank, river miles 451.0 to 459.0
Geo Stutz, Chairman
Route 2
Illinois City, Illinois 61259
309-537-3158

Floodplain Study - Levee/Drainage Districts

East Cape/McClure Drainage District, Alexander County, Illinois
* Mississippi Rvr.
William E. Coyler, Chairman
Route 1, Box 86
McClure, Illinois 62957
Blake Gerard
Route 1, Box 84
McClure, Illinois 62957

Egyptian Electric Co-op, Randolph County, Illinois
* Mississippi Rvr.
Harry W. Kuhn, Manager
1005 W. Broadway
P.O. Box 38
Steelville, Illinois 62288-0038

Eldred Drainage District, Greene County, Illinois
* Mississippi Rvr.
Dan Wagner
Rural Route 1, Box 40
Junior
Carrollton, Illinois 62016

Farmers Levee and Drainage District, Cass County, Illinois
* Mississippi Rvr.
Oakleigh R. Adkins, President
Route 2, box 19
Chanderville, Illinois 62627

Fish Lake Levee and Drainage District, Monroe County, Illinois
* Mississippi Rvr.
Gary Stumpf
1124 Valmeyer Road
Columbia, Illinois

Fort Chartres Drainage District, Randolph County, Illinois
* Mississippi Rvr.
Gilbert Kinan
Route 2, Box 33
Prairie Du Rocher, Illinois 62277

Harrisonville Drainage District, Monroe County, Illinois
* Mississippi Rvr.
Floyd Niebruegge, President
800 Lee Street
Valmeyer, Illinois 62295

Hartwell Drainage District, Greene County, Illinois
* Mississippi Rvr.
James Powell
Hillview, Illinois 62050

Henderson County Drainage District No. 1, Henderson County, Illinois
* Mississippi Rvr.
Pool No. 19, left bank, river miles 403.2 to 412.3
Stanley Torrance, Chairman
Pike Street
Oquawka, Illinois 61469
Charlie McChesney
Rural Route 1
Gladstone, Illinois 61437

Henderson County Drainage District No. 2, Henderson County, Illinois
* Mississippi Rvr.
Pool No. 19, left bank, river miles 400.8 to 410.2
William F. Stevenson, Chairman
Rural Route 1
Gladstone, Illinois 61437
Larry Russell
Rural Route 1
Gladstone, Illinois 61437

Floodplain Study - Levee/Drainage Districts

Henderson County Drainage District No. 3, Henderson County, Illinois
* Mississippi Rvr.
Howard D. Pruett, President
Route 1
Gladstone, Illinois 61437
James McRell
Rural Route
Dahinda, Illinois 61428

Hillview Drainage District, Scott County, Illinois
* Mississippi Rvr.
Clair Wilson
Route 2, box 250
Winchester, Illinois

Hunt Drainage District, Hancock County, Illinois
* Mississippi Rvr.
Pool No. 20, left bank, river miles 347.2 to 358.6
Lawrence E. Meeker, Chairman
Warsaw, Illinois 62379
647-3511

Indian Grave Drainage District, Adams County, Illinois
* Mississippi Rvr.
Pool No. 21, left bank, river miles 330.0 to 341.7
Duke Lyter, Chairman
Rural Route 2
Quincy, Illinois 62301
222-3440

Jersey County Drainage District No. 3, Jersey County, Illinois
* Mississippi Rvr.
David E. Pheifer
P.O. Box 9
Elsah, Illinois 62028

Kaskaskis Island Drainage and Levee District, Randolph County, Illinois
* Mississippi Rvr.
Emily Lyons
1512 Hyland Road, Route 5
Chester, Illinois 62233-1245
618-826-2667 (FAX: 618-826-5024)

Keach Drainage District, Greene County, Illinois
* Mississippi Rvr. (Illinois Rvr.)
Dan Bland, Commissioner
Eldred, Illinois 62027
Ronal L. York
Route 4
Jacksonville, Illinois 62651

Lima Lake Drainage District, Adams County, Illinois
* Mississippi Rvr.
Pool No.s 20 and 21, left bank, river miles 347.2 to 358.6
Mike Rausch, Chairman
Adwell Corp.
P.O. Box 1107
Jacksonville, Illinois 62651

Lost Creek Levee and Drainage District, Cass County, Illinois
* Mississippi Rvr.
Edwin Hobrock, Chairman
Route 1, Box 27
Beardstown, Illinois 62618

Monroe County Levee District, Monroe County, Illinois
* Mississippi Rvr.
Merrill W. Prange, Treasurer
Court House
Waterloo, Illinois 62298

Floodplain Study - Levee/Drainage Districts

Prairie DuPont Levee District, ? County, Illinois
* Mississippi Rvr.
Lawrence Noethen
1327 Davis Street
E. Carondelet, Illinois 62240

Prairie Du Rocher Drainage District, Randolph County, Illinois
* Mississippi Rvr.
Raymond Rodenberg
1573 Springtown Road
Prairie Du Rocher, Illinois 62279

Scott District Drainage District, Morgan County, Illinois
* Mississippi Rvr.
Robert C. Albers
1906 Mound Road
Jacksonville, Illinois 62650

Sny Island Levee and Drainage District, Pike and Calhoun Counties, Illinois
* Mississippi Rvr.
Pool No.s, 22, 24, and 25; left bank, river miles 264.3 to 515.5
George D. Borrowman, President
Pleasant Hill, Illinois 62366
217-734-2932
Fred Schwartz or Rodney Bushmeyer (Drainage District)
Box 135
Hull, Illinois 62343

South Quincy Drainage District, Adams County, Illinois
* Mississippi Rvr.
Pools No. 21 and 22, left bank, river miles 317.8 to 325.4
Chuck Buehler, President
3301 State Street
Quincy, Illinois 62301
223-0171

Spankey Drainage District, Greene County, Illinois
* Mississippi Rvr.
Stanley R. Brannon
Route 1, Box 87
Eldred, Illinois 62027

Stringtown Levee and Drainage District, Monroe County, Illinois
* Mississippi Rvr.
William R. Minton
609 Morrison Avenue
Waterloo, Illinois 62298

Sub-District No. 1 of Drainage Union No. 1, Rock Island and Mercer Counties, Illinois
* Mississippi Rvr.
Pool No. 17, left bank, river miles 447.7 to 450.9
Merle Bieri
17101 322 Street West
Illinois City, Illinois 61259

Swan Levee and Drainage District, Scott County, Illinois
* Mississippi Rvr.
James R. Brown
Route 1, Box 285
Winchester, Illinois 62694

Floodplain Study - Levee/Drainage Districts

Iowa

Buchanan Drainage District, Fremont County, Iowa
* Missouri Rvr.
Dorothy Woltemath
Route 2, Box 116
Hamburg, Iowa 51640

Des Moines County Drainage District No. 7, Des Moines County, Iowa
* Mississippi Rvr.
Pool No. 18 and 19, right bank, river miles 410.5 to 424.7
Curtis A. Frank, Chairman
Rural Route 1, Box 30
Oakville, Iowa 52646
319-766-2681
Crafton Meeker, President
5597 205th Street
Mediapolis, Iowa 52637

Des Moines County Drainage District No. 8, Des Moines County, Iowa
* Mississippi Rvr.
Pool No. 19, right bank, river miles 405.7 to 410.4
Gilbert Laue, Chairman
Rural Route 2
Burlington, Iowa 52601
319-752-1065

Green Bay Levee and Drainage District No. 2, Lee County, Iowa
* Mississippi Rvr.
Pool No. 19, right bank, river miles 386.6 to 396.0
James Carney, Chairman
R.F.D.
Waver, Iowa 52658
319-372-5054

Iowa River-Flint creek Levee District No. 16, Louisa and Des Moines Counties, Iowa
* Mississippi Rvr.
Pools No. 18 and 19, right bank, river miles 405.7 to 435.5
Curtis Pflum, Chairman
Rural Route 2
Burlington, Iowa 52601

Lewis Drainage District, Fremont County, Iowa
* Missouri Rvr.
Ivan Woltemath
Route 2
Hamburg, Iowa 51640

Louisa-Des Moines County Drainage District No. 4, Louisa and Des Moines Counties, Iowa
* Mississippi Rvr.
Pool No. 18, right bank, river miles 442.1 to 434.5
Richard Siegle, Trustee
Rural Route 1, Box 22
Oakville, Iowa 52646
319-766-3532

Monona County Levee and Drainage District, Monona County, Iowa
* Missouri Rvr.
Bob McFarland
Box 69
Whiting, Iowa 51063

Floodplain Study - Levee/Drainage Districts

Kansas

Buffalo Hollow Drainage District, Doniphan County, Kansas
* Missouri Rvr.
Robyn Johnson
P.O. Box 206
Troy, Kansas 66087

Lowell-Kelly Drainage District, Doniphan County, Kansas
* Missouri Rvr.
Rodney Woodruff
Route Box 6
White Cloud, Kansas 66094

Missouri River Levee S.(MRLS), Leavenworth, Kansas
* Missouri Rvr.
Erik Nieman
Route 1, Box 11
Nortonville, Kansas 66060

Missouri River Levee S.(MRLS), Doniphan, Kansas
* Missouri Rvr., river mile 471-460, left bank
Vernon Laipple
Route 1, Box 222
Wathena, Kansas 66090

Missouri River Levee S.(MRLS), Doniphan County, Kansas
* Missouri River, river mile 482, right bank
William Schultz
P.O. Box 102
Troy, Kansas 66087

Missouri River Levee S.(MRLS), Doniphan County, Kansas
* Missouri Rvr., river mile 500, right bank
Seth Nuzum
P.O. Box 5
White Cloud, Kansas 66094

Pohl Levee, Atchison County, Kansas
* Missouri Rvr.
Henry Pohl
Route 1
Atchison, Kansas 66002

Floodplain Study - Levee/Drainage Districts

Missouri

A-1 Levee Association, Osage County, Missouri
* Missouri Rvr.
Arthur Paulsmeyer, President
Route 1
Chamois, Missouri 65024

Amazonia Levee District, Andrew County, Missouri
*
Mark Sckweizer
Amazonia, Missouri 64421

Atchison Levee District, Atchison County, Missouri
* Missouri Rvr.
Richard Garst, President
Route 4, box 68
Watson, Missouri 64496

Augusta Bottom Levee Association, St. Charles County, Missouri
* Missouri Rvr.
Norbert Struckhoff, President
5266 Hackman Road
Augusta, Missouri 63332
Roman Kochen
1104 E. First Street
Washington, Missouri 63090

Baltimore Island Levee, Carroll County, Missouri
* Missouri Rvr.
William Meyer
Highway 10
Norborn, Missouri 64668

Bean Lake Levee, Platte County, Missouri
* Missouri Rvr.
Donald Tharp
627 Blackhawk
Weston, Missouri 64079

Benton - Rock Creek Levee and Drainage District, Atchison County, Missouri
* Missouri Rvr.
Dan LaHue
Route 1, Box 116
Rock Port, Missouri 64482

Berger Bottoms Levee, Franklin County, Missouri
* Missouri Rvr.
Stuart Kase, Secretary
2095 Etlah Road
New Haven, Missouri 63068

Boggess Levee, Ray County, Missouri
* Missouri Rvr.
Kenneth Crabtree
Route 1, Box 261A
Orrick, Missouri 64077

Bois Brule Levee and Drainage District, Perry County, Missouri
* Missouri Rvr.
Donald Gremaud
Route 4
Perryville, Missouri 63775

Boone Femme Levee District No. 1, Howard County, Missouri
* Missouri Rvr.
Randy Kircher, President
Route 1
New Franklin, Missouri 65274

Floodplain Study - Levee/Drainage Districts

Brunswick Levee District, Chariton County, Missouri
* Missouri Rvr.
Robert W. Schuchman, President
Rural Route 1
Brunswick, Missouri 65236
Sam M. Johnson III
913 County Road
Brunswick, Missouri 65236

Cambridge Levee Association, Inc., Saline County, Missouri
* Missouri Rvr.
Stan Hinnah, President
Rural Route 1
Slater, Missouri 65349

Cannon Drainage District, Holt County, Missouri
* Missouri Rvr.
Wayne Whipple
Route Box 46
Forrest City, Missouri 64451

Capital View Levee and Drainage District, Cole County, Missouri
* Missouri Rvr.
James H. Beck, President
1811 St. Mary's Boulevard
Jefferson City, Missouri 65109

Cedar City Drainage District, Cole County, Missouri
* Missouri Rvr.
Martin Brose, President
320 E. McCarty Street
Jefferson City, Missouri 65101

Chamois Levee Association, Osage County, Missouri
* Missouri Rvr.
Wayne Trachsel, President
Route 1, Box 124
Chamois, Missouri 65024

Cole Junction Levee District, Cole County, Missouri
* Missouri Rvr.
Paul LePage, President
1003 Rock Hill Road
Jefferson City, Missouri 65101

Cooper County Levee District No. 1, Cooper County, Missouri
* Missouri Rvr.
John Clay, President
Route 1, Box 3700
Jamestown, Missouri 65046

Corning Levee and Drainage District No. 2, Atchison, Missouri
* Missouri Rvr.
Kay Rosenbolm
Route 1
Fairfax, Missouri 64446

Crooked River Levee, Ray County, Missouri
* Missouri Rvr.
Robert Letzig
Route 4
Richmond, Missouri 64085

Darst Bottom Levee District, St. Charles County, Missouri
* Mississippi Rvr.
Donald Howell, President
Box 61
Defiance, Missouri 63332

Floodplain Study - Levee/Drainage Districts

Des Moines and Mississippi Levee District No. 1, Clark County, Missouri
* Missouri Rvr.
Pool No. 20, right bank, river miles 357.1 to 359.8
John Winkelman, President
Route 1, Box 58
Alexandria, Missouri 63430
815-754-6696

DeWitt Drainage and Levee District, Chariton County, Missouri
* Missouri Rvr.
Ed Kuhler, President
309 No. Small
Brunswick, Missouri 65236

Dutzow Levee District, Franklin County, Missouri
* Missouri Rvr.
Rich Riegel
5331 No. Goodesmill Road
Washington, Missouri 63090

Dutzow Bottom Levee District, Franklin County, Missouri
* Missouri Rvr.
Robert Ley, President
5321 No. Goodes Mill Road
Washington, Missouri 63090

Elsberry Drainage District, Lincoln County, Missouri
* Mississippi Rvr.
Sammy Mays
319 Broadway
Elsberry, Missouri 63343
Jim Jeitman
Route 2, #134175
Elsberry, Missouri 63343

Fabius River Drainage District, Lewis and Marion Counties, Illinois
* Mississippi Rvr.
Pools No.s 21 and 22, right bank, Lewis and Marion Counties, river miles 323.5 to 323.4
Norman Haerr, President
Taylor, Missouri 63471
314-393-2175

Fairfax Drainage District, Atchison County, Missouri
* Missouri Rvr.
Keth Nemyer
Hwy 59 North
Fairfax, Missouri 64446

Fish Creek Drainage District, Howard County, Missouri
* Missouri Rvr.
Dean Deis
Route 1, Box 99
Gilliam, Missouri 65330

Glasgow-Saline City Levee Association, Howard County, Missouri
* Missouri Rvr.
William Meyer, President
Route 1, Box 86
Gilliam, Missouri 65330

Goser Levee District, Osage County, Missouri
* Missouri Rvr.
Edger M. Lock, President
Box 143
Linn, Missouri 65051

Greens Bottom Levee District No. 2, St. Charles County, Missouri
* Missouri Rvr.
John Ostmann, President
4052 Towers Road
St. Charles, Missouri 63303

Floodplain Study - Levee/Drainage Districts

Gregory Drainage District, Canton County, Missouri
* Missouri Rvr.
Fred Schlotter, Chairman
Rural Route 1
Canton, Missouri 63435
314-288-3344

Griffith Levee, Chariton County, Missouri
* Missouri Rvr.
Dale Griffith
Route 1, Box 101
DeWitt, Missouri 64639

Hartsburg Drainage District, Boone County, Missouri
* Missouri Rvr.
Orion Beckmeyer, President
Route 1
Hartsburg, Missouri 65039

Henderson/Willow Creek, Ray County, Missouri
* Missouri Rvr.
John Letzig
Route 4, Box 100
Richmond, Missouri 64085

Hodge Bottom/Howerton Levee District, Saline, Missouri
* Missouri Rvr.
Ryland Utlaut
Box 112
Grand Pass, Missouri 65339

Holt County Levee District No. 9, Holt County, Missouri
* Missouri Rvr.
William S. Richards
105 S. Washington
Oregon, Missouri 64473

Holt County Levee District No. 10, Holt County, Missouri
* Missouri Rvr.
Bill Stone
Route 1, Box 34B
Forrest City, Missouri 64451

Howard Bend Levee District, St. Charles County, Missouri
* Missouri Rvr.
John Pellet
899 Hog Hollow Road
Chesterfield, Missouri 63017

Howard County Levee District No. 2, Howard County, Missouri
* Missouri Rvr.
Gary Ginter, President
Route 1
Franklin, Missouri 65250

Howard County Levee and Drainage District No. 3, Howard County, Missouri
* Missouri Rvr.
Gentry L. Calvin, President
Route 1
Frankllin, Missouri 65250

Howard County Levee District No. 4, Howard County, Missouri
* Missouri Rvr.
Paul S. Davis, President
P.O. Box 43
Boonville, Missouri 65233

Floodplain Study - Levee/Drainage Districts

Howard County Levee District No. 6, Howard County, Missouri
* Missouri Rvr.
William Lay
Route 3, Box 119
Fayette, Missouri 65248
Richard Carmack
Route 1
Glasgow, Missouri 65254

Jacobs Levee District, Cole County, Missouri
* Missouri Rvr.
Vance Sitton, President
618 Norris Drive
Jefferson City, Missouri 65101

Labadie Bottom Levee District, Franklin County, Missouri
* Missouri Rvr.
Marvin Newman, President
1501 Highway T
Labadie, Missouri 63005

Labadie Bottom Levee Corporation, Franklin County, Missouri
* Missouri Rvr.
Clarence Patke
4217 Highway V
Villa Ridge, Missouri 63089

Linneman-Weekly Levee, Cooper County, Missouri
* Missouri Rvr.
Verdell Linneman, President
Route 1, Box 70
Blackwater, Missouri 65322

Lower Chariton River Levee District, Chariton County, Missouri
* Missouri Rvr.
John Stundebeck
Route 1, Box 265 AB
Salisbury, Missouri 65281

Marion County Drainage District, Marion County, Missouri
* Mississippi Rvr.
Pool No. 22, right bank, river miles 320.7 to 323.5
Brent Hoerr, President
Box 73
Taylor, Missouri 63471
314-769-2874

Merna-Overton Levee, Incorporated, Cooper County, Missouri
* Missouri Rvr.
Clarence Loesing, President
Route 2, box 223
Boonville, Missouri 65233

Miami Levee District No. 1, Saline County, Missouri
* Missouri Rvr.
Rory Franklin, President
1070 So. Layette
Marshall, Missouri 65340

Miles Point Drainage District, Saline County, Missouri
* Missouri Rvr.
Edward P. Cleary
361 W. Arrow Street
Marshall, Missouri 65340

Mill Creek Dyke and Drainage District, Atchison County, Missouri
* Missouri Rvr.
Phil Randall
509 Parkeast Drive
Rock Port, Missouri 644482

Floodplain Study - Levee/Drainage Districts

Mississippi River-Fox River Drainage District, Clarks County, Missouri
* Mississippi Rvr.
Right bank
John Eindelman, President
Alexandria, Missouri 63430
Jim Campbell, Secy/Treas.
Rural Route
Canton, Missouri 63435

Missouri Bottom Levee District, Warren County, Missouri
* Missouri Rvr.
John C. Musterman, President
700 Shelton Road
Warrenton, Missouri 63383

Missouri Bottom Levee and Drainage District, St. Louis County, Missouri
* Missouri Rvr.
Tom Teson
1796 Teson Road
Hazelwood, Missouri 63042

Missouri River Levee S. (MRLS), Section 1, Jackson County, Missouri
* Missouri Rvr.
Everett Bernot
633 Leslie Drive
Independence, Missouri 64050

Missouri River Levee S.(MRLS), Section 2, Howard County, Missouri
* Missouri Rvr., river mile 351, Section 2
Sue Ann Meyers
310 Commerce Street
Glasgow, Missouri 65254

Missouri River Levee S.(MRLS), Jackson County, Missouri
* Missouri Rvr.
Don Morgan
18605 N.W. Jones and Meyer Road
Kansas, Missouri 64152

Missouri River Levee S.(MRLS), Buchanan County, Missouri
* Missouri Rvr., river mile 448-443, left bank
Virgil Crockett
Route 8
St. Joseph, Missouri 64504

Missouri River Levee S.(MRLS), Buchanan County, Missouri
* Missouri Rvr., river mile 455, left bank
T.C. Riley
Route 1, Box 4005
St. Joseph, Missouri 64504

Missouri River Levee S.(MRLS), Holt County, Missouri
* Missouri Rvr., river mile 488, left bank
Dean Hall
Box 33A
Oregon, Missouri 64473

Missouri River Levee S.(MRLS), Andrew County, Missouri
* Missouri Rvr, river mile 476, left bank
Mark Sckweizer
Amazonia, Missouri 64421

Missouri River Levee S.(MRLS), Holt County, Missouri
* Missouri Rvr, river mile 497, left bank
Godfrey Payne
P.O. Box 292
Oregon, Missouri 64473

Floodplain Study - Levee/Drainage Districts

Missouri Valley Levee District, Warren County, Missouri
* Missouri Rvr.
Kenneth Schwoeppe
Missouri Valley Levee District
Marthasville, Missouri 63357

Mokane Levee District, Callaway County, Missouri
* Missouri Rvr.
Irvin P. Ewing, President
Route 1
Mokane, Missouri 65059

Monarch/Chesterfield Levee District, St. Charles County, Missouri
* Missouri Rvr.
Melvin Fick, President
14665 Fox Manor
Florissant, Missouri 63034

Morrison Lower Bottom Levee District, Gasconade County, Missouri
* Missouri Rvr.
Gary Siefert, President
Morrison, Missouri 65061

Nishabotna Drainage District, Atchison County, Missouri
* Missouri Rvr.
Keith Ottmann
Route 1, Box 95
Rock Port, Missouri 64882

North County Levee District, St. Charles County, Missouri
* Missouri Rvr.
Ray Machens, President
14665 Fox Manor
Florissant, Missouri 63034
Marvin H. Meyer
3004 Hollrah Drive
St. Charles, Missouri 63301

North Nishnabotna Drainage District, Atchison County, Missouri
* Missouri Rvr.
Richard Spiegel
Route 4, Box 93 West
Watson, Missouri 64496

Northeastern Saline Levee Association, Howard County, Missouri
* Missouri Rvr.
Jerome Meyer, President
310 Commerce Street
Glasgow, Missouri 65254

Northwest Atchison Levee and Drainage District, Atchison, Missouri
* Missouri Rvr.
Glenn Stenzel
Route 1
Hamburg, Iowa 51640

Oak Grove Levee, Ray County, Missouri
* Missouri Rvr.
Glen Hogan
Box 596
Hardin, Missouri 64035

Phelps City Dyke and Drainage District, Atchison County, Missouri
* Missouri Rvr.
Jim Jochim
Route 4
Rock Port, Missouri 64482

Pickney Bottom Levee District, Warren County, Missouri
* Missouri Rvr.
Orville Banze
2950 W. Highway 94
Marthesville, Missouri 63357

Floodplain Study - Levee/Drainage Districts

Ploy Boay Bend Levee, Moniteau County, Missouri
* Missouri Rvr.
Steven Hees, President
Box 113
Jamestown, Missouri 65046

Ray - Carroll County Levee District No. 2, Ray and Carroll County, Missouri
* Missouri Rvr.
John C. Franken
6 South Folger Street
Carrollton, Missouri 64633

Ray - Lafayette County Levee District, Ray and Lafayaette County, Missouri
* Missouri Rvr.
A. E. Hockmeir
103 Wollard Road
Richmond, Missouri 64085

Reveaux Drainage District, Callaway County, Missouri
* Missouri Rvr.
Roy Boessen, President
Route 1, Box 1792
Holts Summit, Missouri 65043

Rhoades Levee, Cole County, Missouri
* Missouri Rvr.
Stephen Mathis, President
400 East High Street
Jefferson City, Missouri 65101

Riverside Levee, Carroll County, Missouri
* Missouri Rvr.
Fred Sillin
104 Walnut Drive
Carrollton, Missouri 64633

St. Albans Properties Levee C., Franklin County, Missouri
* Missouri Rvr.
Gale Oetrli
P.O. Box 49
St. Albans, Missouri 63073

Ste. Genevieve Levee District, Ste. Genevieve County, Missouri
* Missouri Rvr.
Herman Kraenzle
20959 Highway 32
Ste. Genevieve, Missouri 63670

St. Johns Bottom Association, Franklin County, Missouri
* Missouri Rvr.
Eugene Brinker
6625 Bluff Road
Washington, Missouri 63090

Saline County Levee District No. 2, Saline County, Missouri
* Missouri Rvr.
Joe Clements, Sr., President
Route 1, Box 122
Miami, Missouri 65344

Saline Laffette Levee, Saline County, Missouri
* Missouri Rvr.
John Thorp
Route 2
Grand Pass, Missouri 65331

South River Drainage District, Marion County, Missouri
* Mississippi Rvr.
Pool No. 22, right bank, Marion County, Missouri
J. Paul Bleigh, President
P.O. Box 957
Hannibal, Missouri 63401
314-221-1037

Floodplain Study - Levee/Drainage Districts

Steedman Levee District, Callaway County, Missouri
* Missouri Rvr.
Chester Turner, President
Rural Route
Tebbetts, Missouri 65080

Sugar Tree Bottom Levee District, Carroll County, Missouri
* Missouri Rvr.
Kevin Casner
Route 5, Box 193
Carrollton, Missouri 64633

Tebbetts East Levee, Callaway County, Missouri
* Missouri Rvr.
Andy Smart, President
Box 206
Tebbetts, Missouri 65080

Thompson Levee Association, Saline County, Missouri
* Missouri Rvr.
Walter C. Fletcher
No. Lion Street
Marshal, Missouri 65340

Tri-County Levee District, Gasconade County, Missouri
* Missouri Rvr.
Carl Lensing, President, MLDDA
Route 1
Rhineland, Missouri 65049

Tri-County Levee District, Franklin, Gasconade, and Warren County, Missouri
* Missouri Rvr.
Millmer Erling, Vice President
Route 3, box 130
Hermann, Missouri 65041

Tuque Creek Levee, Warren County, Missouri
* Missouri Rvr.
Leonard Stonebarger, President
105 So. Market Street
Warrenton, Missouri 63383

Union Township Drainage District, Lewis County, Missouri
* Mississippi Rvr.
Robert Richter
La Grange, Missouri 63448

Wainwright Levee and Drainage District, Boone County, Missouri
* Missouri Rvr.
Bill J Troth, President
7316 Northshore Drive
Hartsburg, Missouri 65039

Waterloo Drainage Association, Lafayette County, Missouri
* Missouri Rvr.
Steve Gates
Route 1
Napolean, Missouri 64074

West Langdon Drainage District, Atchison County, Missouri
* Missouri Rvr.
John Eilrs
Route 2, Box 12
Langdon, Missouri 64446
Richard A. Meyerkorth
Route 4, box 194
Rock Port, Missouri 64482

Wolcott Drainage District, Jackson County, Missouri
* Missouri Rvr.
Dennis Harris
P.O. Box 12126
Kansas City, Kansas 66112

Floodplain Study - Levee/Drainage Districts

Yates Levee, Ray County, Missouri
* Missouri Rvr.
Dennis Norris
Route 1, Box 87
Camden, Missouri 64017

Floodplain Study - Levee/Drainage Districts

Other Owners - by State

Illinois

Bruce Brown, Randolph County, Illinois
* Mississippi Rvr.
10 Knollwood Drive
Chester, Illinois 62233

Colusa Elevator, Hancock County, Illinois
* Mississippi Rvr.
Don Griffiths Jr., Gen'l Manager
P.O. Box 354
Ferris, Illinois 62336

Bill Colyer, Alexander County, Illinois
* Mississippi Rvr.
Route 2, Box 86
McClure, Illinois 62957

John Kinscherff, Pike County, Illinois
* Mississippi Rvr.
P.O. Box 26
Nebo, Illinois 62355

John Knupp, Chairman, Jackson County, Illinois
* Mississippi Rvr.
P.O. Box 23
Grand Tower, Illinois 62942

Egyptian Telephone, Randolph County, Illinois
* Mississippi Rvr.
Kevin J. Jacobsen
Stelville, Illinois 62288-0158

Tuchy Villegas, Greene County, Illinois
* Mississippi Rvr.
157 No. Main
Carrollton, Illinois 62016

Iowa

Kenneth Oetken, Burlington County, Iowa
* Mississippi Rvr.
Route 2
Burlington, Iowa 52601

Muscatine Farm Equipment
* Mississippi Rvr.
Tom Poeltler
3309 Lucas Street
Muscatine, Iowa 52761

Oakville, Iowa, Louis County, Iowa
* Mississippi Rvr.
Curtis Frank
3591 250th Street
Oakville, Iowa 52646

Oakville Feed and Grain, Louisa County, Iowa
* Mississippi Rvr.
P.O. Box 68
Oakville, Iowa 52646

Seeley Lodwick, Lee County, Iowa
* Mississippi Rvr.
3836 198th Street
Wever, Iowa 52658

Floodplain Study - Levee/Drainage Districts

Missouri

Gerald Barnes, Jackson, Missouri
* Missouri Rvr.
Route 1, Box 470
Atherton, Missouri 64050

Paul Freeze, Warren County, Missouri
* Missouri Rvr.
50 West Highway 94
Marthesville, Missouri 63357

Dave/Barb Imgarten
* Missouri Rvr.
Route 3, Box 28
Salisbury, Missouri 65281

Gabe Logsdon & Sons, Inc., Clark County, Missouri
* Missouri Rvr.
John Logsdon
Box 308
Wayland, Missouri 63472

Saale Farm and Grain Company, St. Louis County, Missouri
* Mississippi and Missouri Rvrs.
535 Saale Road
West Alton, Missouri 63386-9731
899-0933

Illinois

Ag-Chem
East Empire Street
Bloomington, Illinois 61702
309-663-0561

Agricultural Bldgs Co.
Route 2
Mendota, Illinois 61342-9802
815-539-6721

Agriculture Department
315 No. 6th Street
De Kalb, Il 60115-3403
815-756-5313

Agricultural Minerals Corporation
1047 Wesley Road
Creve Coeur, Ilinois 61611
309-382-3467

Agricultural Transportation Assoc.
1020 No. Center
Forrest, Illinois 61741
815-657-8271

Agriculture, Us Farmers Home Ad
213 W. Pines Road
Oregon, Illinois 61061-90
815-732-2132

Agrigold Research
1035 W. Center Street
Eureka, Illinois 61530-9505

Agri Pro Production Research
600 E. Exchange Street
Geneseo, Illinois 61254-2110
309-944-5332

Agro Systems Corporation
816 Eldorado Road
Bloomington, Illinois 61702
309-663-0591

Basf/Adc Corporation
Route 2
Lexington, Illinois 61753-9802
309-365-2111

Boston Agricultural Mrkt.
Route 3
Earlville, Illinois 60518-9803
815-246-7060

Crop Management Services, Inc.
402 No. Hershey Road
Bloomington, Illinois 61702
309-662-3276

D & S Agriculture Investment
End East Livingston Road
Streator, Illinois 61364
815-249-5002

Ego James & Associates, Inc.
1205 Spear Drive
Normal, Illinois 61761-3168
309-452-3888

Farm Bureau Building Crop Management Services
402 No. Hershey Road
Bloomington, Illinois 61702
309-662-3276

Grace Agricultural
202 S Main Street
Rochelle, Illinois 61068-2018
815-562-7535

Illinois Agri-Women
* 150 members
Eleanor Zimmerlein
518 Baseline Road
La Moille, Illinois 61330
815-638-2050 (FAX: 815-539-3203)
Background - Non-profit organization established in 1974
Purpose - To promote agriculture for the benefit of the American
people and the world.
Programs or Activities -

Mason County Extension Agent
133 S High Street
Havana, Illinois 62644-1421
309-543-3308

Mclean County Farm Bureau Building Crop Management
402 N Hershey Road
Bloomington, Illinois
309-662-3276

Western Illinois University Agriculture Advisor
Macomb, Illinois 61455
309-298-2100

Iowa

Agri Grain Marketing Office
1657 Front St
Blue Grass, Iowa 52726-9658
319-381-4300

Agriculture Agricultural Stabt
8727 Northwest Blvd.
Davenport, Iowa 52806-6420
319-391-3335

Agriculture Scott Co. Soil Cons.
8731 Northwest Blvd
Davenport, Iowa 52806-6420
319-391-1403

Agriculture Scott Cunty Co-Op
875 Tanglefoot Ln
Bettendorf, Iowa 52722-1609
319-359-7577

Crop Tech Services Inc
6801 Ely Road SW
Cedar Rapids, Iowa 52404-7440
319-848-7424

Dostal Farm Enterprises Office
1745 Radio Rd
Marion, Iowa 52302-9675
319-377-2592

Pottawattamie County Ext.
612 No. Hwy
Oakland, Iowa 51560
712-482-6449

Kansas

Agricultural Stabilization &Conservation
3231 Sw Van Buren Street
Topeka, Kansas 66611-2291
913-266-9053

Biotechnica Agriculture, Inc
7300 W 110th Street
Shawnee Mission, Kansas 66210-2332
913-661-0611

County Extension Agent
1205 E Santa Fe Street
Olathe, Kansas 66061-3765
913-764-6300

Kaiser Agricultural Chem
2nd
Lawrence, Kansas 66044
913-842-4256

Kansas Agriculture Board Agriculture
Laborator 2524 W 61
Topeka, Kansas 66600
913-296-3301

Kansas Industrial Agriculture
112 Sw 6th Ave
Topeka, Kansas 66603-3810
913-235-5157

New Uses Council Inc
112 Sw 6th Ave
Topeka, Kansas 66603-3810
913-235-5886

Minnesota

Agmark Agri Marketing Corp
9700 Newton Ave. So. #4
Bloomington, Minnesota 55431 - 2529
612-881-3288

Agricultural Research
University of Minnesota
36 No. Hall
Minneapolis, Minnesota 55455
612-624-4975

Agri Search
7550 France Avenue So
Edina, Minnesota 55435-4761
612-830-1569

Agriculture Stabilization .
219 E. Frontage Road
Waconia, Minnesota 55387-1862
612-442-2106

Missouri

Adair Agricultural Stabilization & Conserva
2416 So. 63 Cutoff
Kirksville, Missouri 63501-4655
816-665-3274

Agriculture Extension Service
414 E Main Street
Union, Missouri 63084-1624
314-583-5141

American Agricultural Movement
381 So. Hwy 51
Puxico, Missouri 63960
314-222-6157

Callaway County Ext Agent
Court House
Fulton, Missouri 65251
314-642-5924

Cape Girardeau County Ext Agt
Southeast Mbl State
Cape Girardeau, Missouri 63701
314-334-5219

Carroll County Ext Agent
Hwy 65 N
Carrollton, Missouri 64633
816-542-1788

Chariton County Ext Agent
Hwy 24
Keytesville, Missouri 65261
816-288-3239

County Extension Agent
Kling Bldg
Monticello, Missouri 63457
314-767-5274

Doane Agricultural Services
* 20,000+ Farmer Subscribers
Joe Dugan, Editor
11701 Borman Drive, Suite 100
St. Louis, Missouri 63146
314-569-2700 (Fax: 314-569-1083)
Background - Privately Owned Company.
Purpose - Follow Legislative and Regulatory Aspects of
Agricultural Floodplain Issues Including River/Barge Level,
Wetland Designation; Etc.
Programs or Activities - Publication: Doane's Agricultural
Report

Holt County Extension Agent
407 PO Box
Oregon, Missouri 64473
816-446-3724

Howard County Extension Agent
Court House
Fayette, Missouri 65248
816-248-2272

Montgomery County Ext Agent
211 E 3rd St
Montgomery City, Missouri 63361-1956
314-564-3733

Osage County Extension Agent
Courthouse
Linn, Missouri 65051
314-897-3648

Ralls County Extension Agent
186 PO Box
New London, Missouri 63459
314-985-3911

Rogers Agricultural Services
206 Oak
Sweet Springs, Missouri 65351
816-335-6368

Scott County Extension Agent
Courthouse
Benton, Missouri 63736
314-545-3516

St Charles County Ext Agent
Rural Route 2
Saint Charles, Missouri 63303
314-623-4513

Nebraska

Agri Associates Inc
10330 Regency Parkway Dr
Omaha, Nebraska 68114-3736
402-397-4410

Agricon
8401 W Dodge Road
Omaha, Nebraska 68114-3493
402-393-8721

Agricultural Management
8401 W Dodge Road
Omaha, Nebraska 68114-3493
402-393-8721

Agri Associates, Inc
10330 Regency Parkway Drive
Omaha, Nebraska 68114-3736
402-397-4410

Agricon
8401 W Dodge Rd
Omaha, Nebraska 68114-3493
402-393-8721

Agricultural Stabilization &Co
301 E 39th Street South
Sioux City, Nebraska 68776-3605
402-494-1950

Dept Agricultural Stabilization & Agriculture
20813 W Dodge Road
Elkhorn, Nebraska 68022-1657
402-289-2561

Cedar County Extension Agent
Hartington, Nebraska 68739
402-254-6821

Dixon County Extension Agent
N E Station
Concord, Nebraska 68728
402-584-2261

Knox County Extension Agent
Center, Nebraska 68724
402-288-4224

Washington County Ext Agent
1657 Front Street
Blair, Nebraska 68008-1642
402-426-9455

Webster Cnty Extension Agent
Post Office
Red Cloud, Nebraska 68970
402-746-3417

Weedcope
1015 N 122nd St
Omaha, Nebraska 68154-1409
402-498-0881

South Dakota

Agricultural & Ind Inv Co
501 N Highway 105 North
Sioux City, South Dakota 57049-3059
605-232-3387

Agricultural Research & Development
Eagle Butte, South Dakota 57625
605-964-3911

Wisconsin

Buffalo County Agent
Courthouse Annex
Alma, Wisconsin 54610
608-685-4560

Phillips Agricultural Center
Highway 80
Platteville, Wisconsin 53818
608-348-9500

University of Wisconsin
Agricultural Research
620 Babcock Drive
Madison, Wi 53706-1503
608-262-2757

Floodplain Study - Recreational Interests

Recreational interests listed for the Upper Mississippi River can be referenced in "Economic Impacts of Recreation on the Upper Mississippi River System," prepared by the U.S. Army Corps of Engineers Waterways Experiment Station and Michigan State University, May 1989. No recreational listing has been compiled for the Missouri river.

RIVER	RIVER MILE	STATE	AREA	ADDRESS	CITY	ZIP	PHONE	NUMBER OF MARINA SLIPS	
CX	0.0	WI	HUDSON SAILBOAT					38	
CX	0.0	MN	POINT DOUGLAS MARINA				NO LISTING	32	
CX	0.0	WI	LEO'S LANDING	137 FRONT ST.	PRESCOTT	54021	715-262-5998	25	
CX	11.0	MN	MINNETONKA BOAT WORKS	PO 549	WAYZATA	55391	612-473-7305	152	
CX	11.1	MN	AFTON MARINA & YACHT CLUB	16071 S. 31ST STREET	AFTON	55001	612-436-8827	186	
CX	11.3	MN	WINDMILL MARINA ASSOC. INC.	16065 S. 32ND STREET	AFTON	55001	612-436-7744	173	
CX	16.3	WI	ST. CROIX MARINA CONDOMINIUMS	16 S. FRONT ST.	HUDSON	54106	715-386-6280	298	
CX	19.0	MN	BAYPORT MARINA	203 MARINER WAY	BAYPORT	55003	612-430-1980	181	
CX	20.0	MN	BEACH HOUSE				NO LISTING	69	
CX	22.0	MN	PORT OF SUNNYSIDE					16	
CX	24.0	MN	RUMPF HARBOR				NO LISTING	169	
CX	24.0	MN	STILLWATER YACHT CLUB				NO LISTING	44	
CX	25.0	MN	SHERRARDS MARINA		STILLWATER		612-439-5658	152	
CX	25.0	MN	DAHL MARINA	9376 ST. CROIX TRAIL	STILLWATER	55082	612-439-4453	13	
CX	25.2	MN	WOLF MARINE				NO LISTING	100	
CX	25.2	MN	MARINE LANDING	514 E. ALDER ST.	STILLWATER	55082	612-439-2341	256	ST. CROIX
								31	SUBTOTAL
									1935
IL	120.1	IL	HAVANA DOCK		HAVANA		NO LISTING	20	
IL	153.0	IL	PEKIN BOAT CLUB	FOOT OF ANN ELIZABETH ST	PEKIN	61554	309-346-9133	20	
IL	153.7	IL	PEORIA BOAT CLUB	FOOT OF SPRING ST	PEORIA	61603	309-676-9485	34	
IL	162.4	IL	U.S. COAST GUARD CUTTER FT. OF	FOOT OF W. WASHINGTON ST.	EAST PEORIA	61611	309-671-7291	5	
IL	163.4	IL	EAST PEORIA BOAT & REC	1401 N MAIN	PEORIA	61611	309-694-9206	40	
IL	163.9	IL	DETWEILLER MARINA	FOOT OF CAROLINE ST	PEORIA	61603	309-673-6523	150	
IL	165.1	IL	CARL SPINDLER MARINA AND CAMP	3701 N. MAIN	EAST PEORIA	61611	309-694-1211	84	
IL	165.3	IL	FOND DU LAC PARK DIST. MARINA			61611	309-699-3549	86	
IL	165.4	IL	WHARF HARBOR SALES	FOOT OF ALEXANDER ST.	PEORIA	61603	309-688-4141	150	
IL	167.7	IL	SODOWSKI BOAT BASIN	4914 N. GALENA RD.	PEORIA	61614	309-688-2526	68	
IL	167.8	IL	ILLIONIS VALLEY YACHT/CANOE	5102 N. GALENA RD	PEORIA	61614	309-682-5419	200	
IL	167.9	IL	RAINBOW COVE MARINA	101 SUNSET DRIVE	EAST PEORIA	61611	309-698-0216	113	
IL	168.2	IL	NATIONAL MARINE SALES	5406 N. GALENA RD	PEORIA	61614	309-688-5513	125	
IL	169.2	IL	WHITE CAP DRIFTERS BOAT CLUB	6802 N. SHAKOTY LAND	PEORIA	61614	309-691-9768	6	
IL	169.5	IL	SEAWAY MARINA	7012 N. GALENA RD	PEORIA	61614	309-691-9267	125	
IL	170.9	IL	DETWEILLER PARK MARINA		PEORIA	61614	309-673-6523	150	
IL	173.8	IL	SPRING BAY MARINA				NO LISTING	49	
IL	178.6	IL	HAMMS HOLIDAY HARBOR	PO BOX 405	ROME	61562	309-676-1233	225	
IL	178.8	IL	WOODFORD CNTY. CONSERVATION		SPRING VALLEY	61362	309-822-8861	10	
IL	180.5	IL	CHILLICOTHE LANDING		CHILICOTHE	61523	309-274-4920	30	
IL	189.0	IL	LACON HARBOR MARINA					24	
IL	196.1	IL	HENRY HARBOR MARINA	210 CROMWELL DRIVE	HENNEPIN	61537	309-364-2181	90	
IL	207.6	IL	HENNEPIN LANDING		HENNEPIN	61537	NO LISTING	10	
IL	218.0	IL	SPRING VALLEY BOAT CLUB	RR1	SPRING VALLEY	61632	NO LISTING	84	
IL	222.0	IL	SOUTH SHORE BOAT CLUB	WATER ST	PERU	61354	815-223-9890	50	
IL	233.5	IL	STARVED ROCK MARINA	DEE BENNET RD	OTTAWA	61350	815-433-4218	225	
IL	239.5	IL	YACHT CLUB				NO LISTING	35	
IL	239.6	IL	OTTAWA MARINE SERVICE	214 LA SALLE	OTTAWA	61350	815-433-3435	1	

RIVER	RIVER MILE	STATE	AREA	ADDRESS	CITY	ZIP	PHONE	NUMBER OF MARINA SLIPS	
IL	242.0	IL	FOUR STAR MARINA	PO BOX 249, CANAL ROAD	OTTAWA	61350	815-434-1553	35	
IL	247.9	IL	MARSEILLES BOAT CLUB		MARSEILLES	61341	815-357-8666	213	
IL	252.8	IL	SPRING BROOK MARINA	BOX 357	SENECA	61630	815-795-5519	100	
IL	253.0	IL	ANCHOR INN MARINA	1 DUPONT RD.	SENECA	61630	815-357-6666	60	
IL	273.5	IL	JACK'S MARINA			61341	NO LISTING	100	
IL	273.7	IL	HARBORSIDE MARINA	ROUTE R, BOX 254	WILMINGTON	60481	815-476-2254	85	ILLINOIS
IL	274.8	IL	THREE RVRS. MARINE SERVICES	DES PLAINES RIVER ROAD	WILMINGTON	60481	815-476-2324	180	SUBTOTAL
									2982
KA	30.0	IL	NEW ATHENS					22	KASKASKIA
KA	19.0	IL	BALDWIN ACCESS					20	SUBTOTAL
									42
MS	863.0	MN	BROOKLYN PARK				NO LISTING	5	
MS	845.0	MN	WATER GATE MARINA	2500 S. MISSISSIPPI R. BLVD.	ST. PAUL	55116	612-698-0738	139	
MS	840.2	MN	HARRIET ISLAND MARINA				NO LISTING	35	
MS	839.7	MN	ST. PAUL YACHT CLUB	HARRIET ISLAND	ST. PAUL		612-291-9624	100	
MS	831.0	MN	CASTAWAY'S MARINA				NO LISTING	42	
MS	830.6	MN	NEWPORT ISLAND YACHT CLUB	4455 E. 64TH ST.	INVER GROVE HTS	55075	612-455-9110	181	
MS	829.5	MN	WILLIE'S HIDDEN HARBOR MARINA	388 9TH AVE.	ST. PAUL PARK	55071	612-459-2129	200	
MS	813.2	MN	HASTING MARINE	1102 1ST. STREET	EAST HASTINGS	55033	612-437-9621	110	
MS	813.0	MN	KINGS COVE INCORPORATED	HIGHWAY 61 NORTH	HASTINGS	55033	612-437-6186	420	
MS	811.0	MN	ST. CROIX BOAT WORKS	225 NELSON ST.	STILLWATER		612-430-1236	21	
MS	811.0	WI	MISS.-CROIX YACHT HARBOR	451 2ND STREET SOUTH	PRESCOTT	54021	715-262-5202	70	
MS	791.4	MN	WEST BAY MARINE INCOR. BAY	POINT PARK	REDWING	55066	612-388-1322	85	
MS	791.2	MN	REDWING YACHT CLUB/BOAT HOUSE		REDWING	55066	612-388-8995	300	
MS	791.2	MS	RED WING MARINA, INC.	890 LEVEE ST.	REDWING	55066	612-388-8995	17	
MS	788.7	MN	BILLY'S BAY MARINA		REDWING	55066	612-388-0481	54	
MS	788.5	MN	OLE MISS MARINA	1000 LEVEE STREET	REDWING		612-388-8643	312	
MS	788.1	WI	GOOSE LAKE RESORT				715-792-2302	14	
MS	786.6	MN	BAY CITY VILLAGE PARK					6	
MS	776.7	MN	HANSEN'S HARBOR	HIGHWAY 61, RR2	LAKE CITY	55041	612-345-3022	70	
MS	773.9	MN	WATERMAN'S	HIGHWAY 61	LAKE CITY	55041	612-345-5353	14	
MS	772.8	MN	LAKE CITY MARINA & ACCESS				715-345-4211	600	
MS	767.1	WI	PEPIN MARINA		PEPIN	54759	715-442-4900	120	
MS	765.5	MN	DIRGIL JOHNSON MARINA				NO LISTING	5	
MS	764.9	MN	CAMP LACUPOLIS RESORT	RR#4C11	WABASHA	55981	612-565-2103	6	
MS	763.1	MN	WYATT'S LANDING READ'S LANDING		WABASHA	55981	612-565-2103	18	
MS	760.6	MN	MISSISSIPPI PARKSIDE MARINA	829 W. 3RD ST.	WABASHA	55981	612-565-3809	185	
MS	759.3	MN	WABASHA MARINA BOATYARD	1009 E. MAIN ST.	WABAHSA	55981	612-565-4747	140	
MS	754.0	WI	ALMA MARINA	125 HIGHWAY 35 N.	ALMA	54610	608-685-3333	80	
MS	753.0	MN	RIES RESORT				NO LISTING	20	
MS	748.0	WI	HIAWATHA MARINA				NO LISTING	12	
MS	736.6	WI	INDIAN CREEK RESORT		FOUNTAIN CITY	54629	608-687-9581	44	
MS	731.5	MN	MINNESOTA CITY BOAT CLUB				NO LISTING	70	
MS	724.9	MN	BOB'S MARINA, INCORPORATED	24 LAIRD ST.	WINONA	55987	NO LISTING	57	

RIVER	RIVER MILE	STATE	AREA	ADDRESS	CITY	ZIP	PHONE	NUMBER OF MARINA SLIPS	
MS	713.8	WI	LARRY'S LDG. (BAIT)						
MS	706.2	WI	COZY CORNER COTTAGES		TREMPEALEAU		608-534-7711	4	
MS	704.5	WI	SCHAFER'S BOAT		ONALASKA		608-781-3792	5	
MS	703.8	WI	REDSAILS RESORT AND CAMPGROUND	7225 N. SHORE DRIVE	ONALASKA	54650	608-781-3100	14	
MS	703.6	WI	LACROSSE SAILING CLUB	7225 N. SHORE DRIVE	ONALASKA	54640	608-783-4661	6	
MS	703.6	WI	LA CROSSE SAILING CLUB		LACROSSE		NO LISTING	30	
MS	701.0	WI	CAPTAINS CRUISES					30	
MS	701.0	WI	MIDWAY MOTOR LODGE	1835 ROSE ST	LA CROSSE		608-784-3088	75	
MS	701.0	WI	COPELAND PARK/FRED MARINA		LACROSSE	54603	608-781-7000	16	
MS	700.5	WI	POLISH YACHT CLUB		LA CROSSE		608-785-1430	12	
MS	700.1	WI	FRENCH ISLAND BOAT CLUB	132 MARINA DRIVE			NO LISTING	20	
MS	700.0	WI	SKIPPER'S BUD MARINA		LACROSSE	54603	608-782-9581	33	
MS	700.0	WI	BOB'S BAIT SHOP		LA CROSSE		608-784-8586	200	
MS	698.0	WI	AMERICAN MARINE /BIKINI YACHT		LACROSSE		608-782-5552	30	
MS	697.7	WI	PETTIBONE BOAT CLUB	BARON ISLAND			608-782-7336	188	
MS	697.4	WI	LACROSSE BOAT HARBOR, INC.		LACROSSE		608-789-7195	150	
MS	695.0	WI	CHUTES LANDING		LACROSSE	54603	608-782-7077	200	
MS	694.0	WI	LOWER BLUFF SLOUGH GRAVELL PIT				608-788-1588	115	
MS	690.5	MN	LAWRENCE LAKE MARINA		MARINA		NO LISTING	20	
MS	688.0	MN	SERRES SAND BAR MARINA		BROWNSVILLE		507-482-6615	25	
MS	685.8	WI	WATER'S EDGE MOTEL	201 N. PEARL ST	BROWNSVILLE		507-482-6226	25	
MS	669.0	WI	GELHF'S PRIVATE LANDING		STODDARD	54658	608-457-9126	30	
MS	663.6	IA	LANSING MARINA LANSING, IA				NO LISTING	20	
MS	662.5	IA	S&S HOUSEBOAT RENTALS INC.	990 S. FRONT ST.			319-538-4474	120	
MS	651.1	WI	HARRIS BOAT HARBOR		LANSING	52151	319-538-4454	65	
MS	646.2	IA	DELPHY MARINA		LYNIVILLE		608-874-4180	18	
MS	646.0	IA	BABE'S BOAT LANDING ELTON		HARPERS FERRY		319-586-2382	50	
MS	645.9	IA	DELPHEY BROTHERS MARINA INC.			52146	319-586-2261	61	
MS	645.0	IA	LUNDS LANDING		HARPERS FERRY	52146	319-586-2382	29	
MS	638.8	WI	LAKEVIEW MARINA		HARPERS FERRY	52146	319-586-2187	10	
MS	638.0	WI	WINNESHIEK MARINA		PRAIRE DU CHIEN	53821	608-326-2711	40	
MS	633.7	IA	BOATEL'S MARINA		PRAIRE DU CHIEN		608-326-2888	48	
MS	633.4	IA	MCGREGOR HARBOR				319-873-3718	60	
MS	633.0	IA	CITY OF MCGREGOR BOAT RAMP				319-873-3444	50	
MS	632.0	IA	BOATEL'S SOUTH MARINA					15	
MS	624.7	IA	BILL'S BOAT LANDING				319-873-3718	55	
MS	622.0	WI	RIVER OF LAKES RESORT		CLAYTON		319-964-2112	80	
MS	620.7	IA	WILLIE'S LANDING				608-996-2275	80	
MS	617.5	IA	ISLAND MARINA		GUTTENBERG		NO LISTING	5	MISS. RIV.
MS	616.0	IA	WINIGER WORKS MARINA	RIVER PARK DRIVE	GUTTENBERG		319-252-2405	20	ST. PAUL
					GUTTENBERG	52052	319-252-2050	250	SUBTOTAL
MS	605.8	WI	EAGLE RESORT						5856
MS	603.6	IA	LOWELL'S LANDING	PO BOX 34	CASSVILLE		608-725-5553	35	
MS	603.3	IA	NORTH BUENA VISTA MARINA		N. BUENO VISTA	52066	319-870-4775	100	
MS	599.9	IA	DON ANTHONY BOAT DOCKING		N. BUENO VISTA	52066	NO LISTING	60	
MS	596.0	IA	FINLEY'S LANDING		WAUPETON		712-552-1015	20	
MS	593.3	WI	POTOSI YACHT CLUB		DUBUQUE	52001	319-552-1591	20	
MS	589.5	IA	ARROWHEAD MARINA	MUD LAKE ROAD				3	
MS	582.4	IA	DUBUQUE MARINA	.6 MI BELOW LOCK 11	DUBUQUE	52001	319-552-2303	111	
					DUBUQUE	52001	319-582-3653	210	

RIVER	RIVER MILE	STATE	AREA	ADDRESS	CITY	ZIP	PHONE	NUMBER OF MARINA SLIPS
MS	580.9	IA	DUBUQUE YACHT BASIN	1630 E. 16TH. ST.		52001	319-556-7708	250
MS	579.2	IL	MID-TOWNE MARINA INC.	MARINA CITY PLACE	EAST DUBUQUE	61025	815-747-3310	250
MS	577.8	IL	BENT PROP LOUNGE HARBOR DRIVE		EAST DUBUQUE	61025	815-747-8860	55
MS	576.1	IL	CHARLIE'S BOAT DOCK	901 W. GILL ROAD	EAST DUBUQUE	61025	NO LISTING	50
MS	576.0	IL	PRENTRESS LAKE MARINE CENTER	183 W. GILL ROAD	EAST DUBUQUE	61025	815-747-3155	300
MS	573.5	IA	MASSEY LANDING				319-556-9799	89
MS	566.4	IL	FERRY LNDG & GALENA BOAT CLUB				815-747-2713	35
MS	559.5	IA	SPRUCE CREEK PARK	HIGHWAY 52	BELLEVUE		319-652-3738	24
MS	559.0	IA	MISSISSIPPI LOUNGE & MARINA				NO LISTING	11
MS	556.2	IA	SHADY HAVEN		BELLEVUE		319-872-4204	6
MS	556.2	IA	POINT PLEASANT					16
MS	539.6	IL	LAZY RIVER MARINA, INC	RR 1	SAVANNA	61074	815-273-2851	40
MS	537.5	IL	SAVANNA MARINA	MAIN STREET	SAVANNA	61074	815-273-2955	75
MS	534.9	IA	ISLAND CITY HARBORS, INC.		SABULA	52070	319-687-2825	194
MS	519.8	IL	WINDMILL MARINA	1800 4TH STREET	FULTON	61252	NO LISTING	55
MS	518.4	IA	ANCHORAGE MARINA				319-242-3600	155
MS	512.4	IA	CAMANCHE HABOR	115 4TH AVENUE	CAMANCHE	52730	319-259-1514	72
MS	507.8	IA	HANSON FARIBANKS DOCK				319-259-1876	118
MS	502.9	IL	CORDOVA RAMP					12
MS	502.5	IA	PRINCETON BEACH MARINA				319-289-5024	30
MS	495.9	IA	CAPTAIN'S QUARTERS DRY STAK	1211 CANAL SHORE DRIVE	LECLAIRE	52753	319-289-5050	150
MS	495.0	IA	GREEN GABLES	2315 CANAL SHORE DRIVE S.W.	LECLAIRE	52753	319-289-5652	72
MS	490.0	IL	ISLAND ANCHORAGE	CAMPBELL'S ISLAND			309-755-0492	0
MS	486.8	IL	BUTTERWORTH MEMORIAL PRKWY		MARINA		NO LISTING	100
MS	484.0	IA	LINDSAY PARK BOAT CLUB	FOOT OF MOUND STREET	DAVENPORT	52803	319-324-1317	150
MS	483.6	IA	LAKE DAVENPORT SAILING CLUB	E. RIVER DRIVE & COLLEGE AVE.	DAVENPORT	52803	319-322-6750	50
MS	480.1	IL	ROCK ISLAND BOAT CLUB	1706 MILL	ROCK ISLAND	61201	309-798-9685	4
MS	479.8	IL	SUNSET PARK HARBOR	1528 3RD AVENUE	ROCK ISLAND	61201	309-793-3498	50
MS	473.0	IL	ANDALUSIA HARBOR					50
MS	471.5	IL	WINTERGREEN HARBOR & INN	13515 78TH AVENUE	ANDALUSIA		309-798-2525	8
MS	463.0	IA	FAIRPORT LANDING		FAIRPORT		319-264-8660	100
MS	455.6	IA	MUSCATINE BOAT CLUB					40
MS	415.2	IL	YELLOW BANKS MARINA		OQUAWKA	61469	309-867-2011	42
MS	415.0	IL	OQUAWKA MARINA				NO LISTING	50
MS	409.9	IA	YAEGER MARINA	RR2, TAMARA DR	BURLINGTON	52601	319-752-5971	78
MS	409.3	IA	COLEMAN MARINA				NO LISTING	50
MS	409.1	IA	WEYLS MARINA				319-752-6931	54
MS	404.5	IA	BLUFF HARBOR MARINA	BLUFF ROAD	BURLINGTON	52601	319-753-2590	109
MS	383.7	IA	RIVER VIEW MARINA		FORT MADISON		319-372-6402	100
MS	383.5	IA	FORT MADISON CITY RAMP					40
MS	375.0	IA	MONTROSE BOAT HARBOR		MONTROSE		NO LISTING	20
MS	366.2	IA	KEOKUK YACHT CLUB	2029 RIVER ROAD	KEOKUK	52632	319-524-9469	50
MS	363.5	IA	SOUTHSIDE BOAT CLUB				319-524-7122	0
MS	359.1	IL	WARSAW BOAT LANDING		WARSAW		NO LISTING	22
MS	327.0	IL	QUINCY MARINA				217-222-4072	222 MISS. RIV.
MS	326.9	IL	SOUTH SIDE BOAT CLUB	640 S. FRONT ST.	QUINCY	62301	217-222-1187	2 ROCK ISLAND
MS	308.8	MO	HANNIBAL MARINA				314-221-9539	110 SUBTOTAL
								4119

RIVER	RIVER MILE	STATE	AREA	ADDRESS	CITY	ZIP	PHONE	NUMBER OF MARINA SLIPS	
MS	285.0	IL	PIKE STATION					50	
MS	283.0	IL	TWO RIVERS MARINA		PIKE		217-437-2321	125	
MS	273.2	MO	CLARKSVILLE BOAT CLUB		CLARKSVILLE, MO	63336	314-242-9693	0	
MS	257.7	MO	TIMBERLAKE MARINA	RT 1 BOX 275	ELSBERRY, MO	63343	314-898-2077	50	
MS	245.2	MO	STAY & PLAY MARINA				NO LISTING	8	
MS	243.0	IL	CALHOUN SPORTSMANS CLUB		BATCHTOWN, IL			0	
MS	241.5	MO	PIRY'S MARINA				NO LISTING	37	
MS	231.5	MO	JOHN'S BOAT HARBOR	2407 HWY C	ST. CHARLES, MO	63301	314-946-2073	100	
MS	227.0	MO	SOUTH SHORE MARINA		KAMPVILLE, MO		314-258-4344	80	
MS	225.5	MO	YACHT CLUB OF ST. LOUIS		MO		314-258-4435	190	
MS	224.5	MO	LAKE CENTER MARINA	P.O. BOX 38	ST. CHARLES, MO	63302	314-946-7500	250	
MS	222.5	MO	NORTH SHORE YACHT CLUB				314-365-0900	185	
MS	222.2	MO	WOODLAND MARINA		ST. CHARLES, MO		314-258-4119	440	
MS	221.5	MO	DUCK CLUB YACHT CLUB	6257 HIGHWAY V	ST. CHARLES, MO	63301	314-946-1427	114	
MS	221.5	MO	ANCHOR MARINE	PO BOX 1441, BAY ST.	ST. CHARLES	63302	314-258-4152	103	
MS	219.0	MO	SHERWOOD HARBOR INC.	29 SHERWOOD		63373	314-258-3201	112	
MS	214.0	MO	HIDE A WAY HARBOR	ROUTE 1, 550 HIDEAWAY PORT		63373	314-899-0066	60	
MS	213.5		VENTIAN HARBOR PROTAGE		DES SIOUX		314-899-0940	160	
MS	213.0		SNUG HARBOR (PRIVATE)	PO BOX 96	OSAGE BEACH	65065	314-348-2321	36	
MS	212.4	MO	MY RIVER HOME BOAT HARBOR, INC	1545 RIVERVIEW ST.	PORTAGE	63373	314-899-0903	200	
MS	212.3	MO	PALISADES YACHT CLUB (PRIVATE)	1670 RIVER VIEW ST.	PORTAGE	63373	314-899-1093	67	
MS	209.5	IL	ALTON BOAT CLUB	LOCKHAVEN ROAD	GODFREY, IL	62035		80	
MS	209.5	IL	PIASA HARBOR WESTERN BOATS	RIVER ROAD	PIASA	62002	618-466-7501	243	
MS	204.3	MO	HARBOR POINT YACHT CLUB	P.O. BOX 370	WEST ALTON, MO	63386	314-899-1513	226	
MS	204.2	MO	PILOT HOUSE YACHT BROKERAGE	P.O. BOX 68	WEST ALTON, MO	63386	314-899-1614	225	MISS. RIV.
MS	204.2	MO	LITTLE JOHN MARINE SERVICE	#1 JAIMIE CIRCLE	WEST ALTON, MO	63386	314-899-0006	0	ST. LOUIS
MS	158.2	MO	HOPPE'S MARINE SERVICE		KIMMSWICK		NO LISTING	15	SUBTOTAL
									3156
									MISSISSIPPI SUBTOTAL
									13131

REGION 1 SUBTOTAL	7791
REGION 2 SUBTOTAL	4119
REGION 3 SUBTOTAL	3198
REGION 4 SUBTOTAL	2982
UMRS GRAND TOTAL	18090