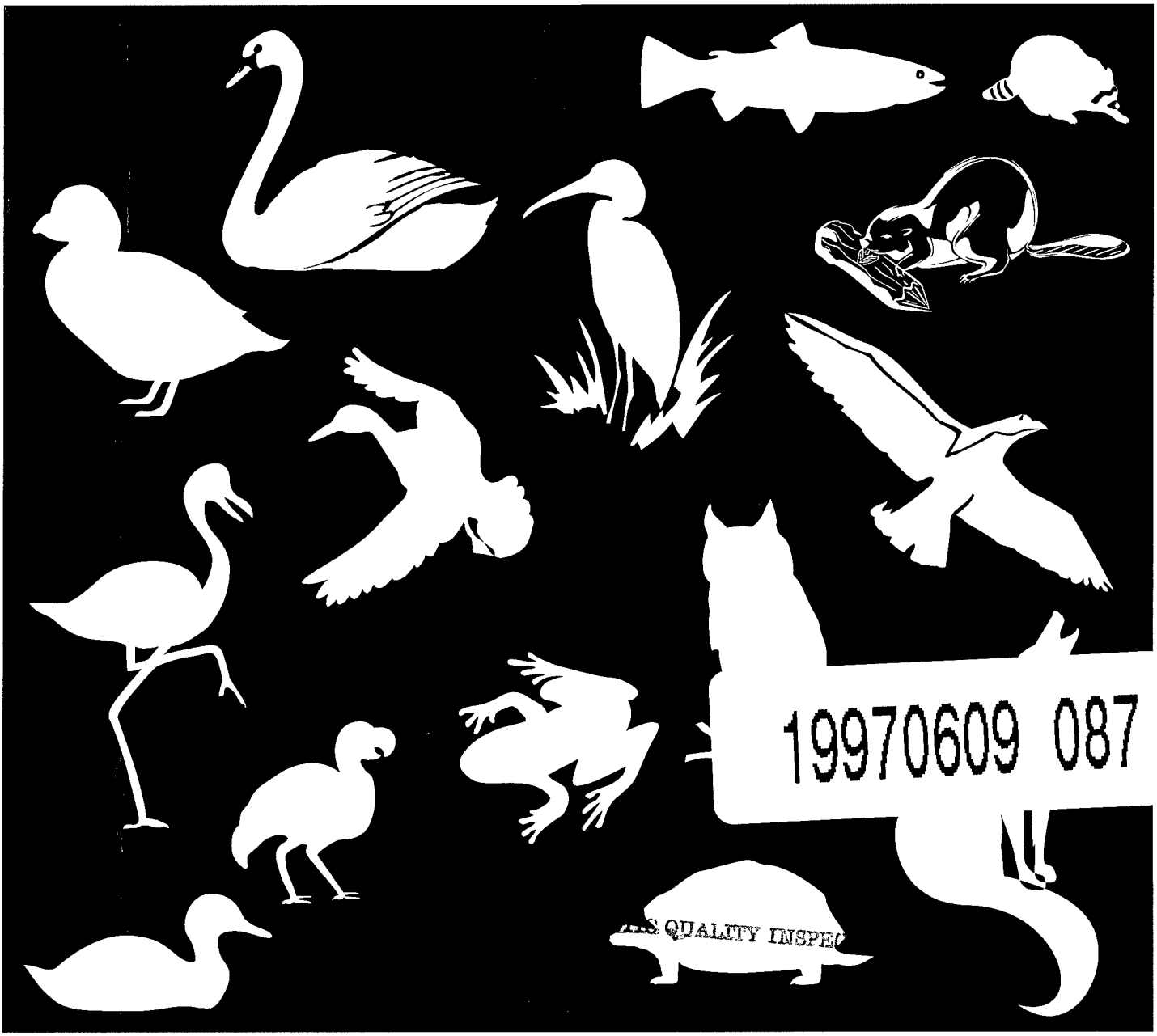
US Army Corps
of Engineers®
Water Resources Support Center
Institute for Water Resources

DISTRIBUTION STATEMENT A
Approved for public release;
Distribution Unlimited

Endangered Species and North American Waterfowl Management Plan Joint Venture Areas



19970609 087

QUALITY INSPE

ENDANGERED SPECIES AND NORTH AMERICAN WATERFOWL MANAGEMENT PLAN JOINT VENTURE AREAS

Information in Support of Refining the Natural Resources Performance Measures

October 1996

Prepared by

KARLA ALLRED

Prepared For

U.S. Army Corps Engineers, Headquarters
Civil Works Directorate
20 Massachusetts Avenue, N.W.
Washington, D.C. 20314-1000

October 1996 **IWR Report 96-R-22**

DTIC QUALITY INSPECTED 3

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, WATER RESOURCES SUPPORT CENTER
INSTITUTE FOR WATER RESOURCES
CASEY BUILDING
FORT BELVOIR, VIRGINIA 22060-5586

REPLY TO
ATTENTION OF

CEWRC-IWR

04 June 97

MEMORANDUM FOR COMMANDER, Defense Technical Information Center, Cameron Station, Alexandria, VA 22314

SUBJECT: Transmittal of

1. Reference AR 70-31.

2. Two copies of "Endangered Species and North American Waterfowl Management Plan Joint Venture Areas," IWR Report 96-R-22, have hereby been submitted.

3. Initial distribution of this report has been made to appropriate Corps of Engineers agencies. It is recommended that copies of this report be forwarded to the National Technical Information Center.

4. Request for the DTIC Form 50 (Incl 2) be completed and returned to WRSC-IWR.

FOR THE DIRECTOR:

Kyle E. Schilling
Director

Enclosures

ACKNOWLEDGMENTS

I would like to thank Dave Harrelson of the FWS in Arlington, VA, who was a tremendous help. Together, we sorted and photocopied many recovery plans. The entire Endangered Species Office of the FWS was extraordinarily helpful and accommodating. I would also like to thank Mark Koneff of the NAWMP Office of the FWS for providing me with data on Joint Venture Areas and GIS-generated maps. Mark Dunning, Jim Comiskey, and Bill Hansen of IWR also provided valuable comments and suggestions.

TABLE OF CONTENTS

ACKNOWLEDGMENTS iii
EXECUTIVE SUMMARY vii

CHAPTER 1 - INTRODUCTION 1
Environmental Performance Measures 1
Endangered Species Recovery Plans 3
North American Waterfowl Joint Venture Areas 4
Databases 5

CHAPTER 2 - RESULTS 7
Changes since Preliminary Report (December 1995) 7
Listed Species with Final Recovery Plans 7
Listed Species with Draft Recovery Plans 10
Corps Projects with Endangered Species 12
Recovery Plan Specifications 15
Nawmp Joint Venture Areas and Corps Projects 16

CHAPTER 3 - CONCLUSIONS 21

APPENDIX A - RECOVERY ACTIONS FOR THE CORPS PROJECTS 23

APPENDIX B - JOINT VENTURE AREAS AND THE CORPS 45

APPENDIX C - ALL CORPS PROJECTS POSSIBLY INVOLVED WITH RECOVERY PLANS/JOINT VENTURE AREAS 51

LIST OF FIGURES
Figure 1. Number of Listed Species for Which the Corps Is Responsible in Each Corps Division 9

Figure 2. Number of Corps Projects with Endangered Species in Each Corps Division 13

Figure 3. North American Waterfowl Management Plan Habitat Joint Venture Areas 17

Figure 4. Corps Projects Within NAWMP Joint Venture Areas 19

Figure 5. Corps Division Project Acres in NAWMP Joint Venture Areas 20

LIST OF TABLES

Table 1. List of Created Databases 6
Table 2. Species for Which the Corps Has Recovery Responsibilities Listed by Taxa 8
Table 3. Species with Draft Recovery Plans for Which The Corps Has a Recovery Responsibility 11
Table 4. Corps Acres in Fish and Wildlife Service Recovery Plans 14
Table 5. Listed Species Involving Unknown Corps Projects 15

EXECUTIVE SUMMARY

In accordance with GPRA (Government Performance and Review Act) and the study of the Operations and Maintenance Program, the Natural Resources Management Branch of the Corps has set out to develop performance measures. The development of two such measures is dependent on the acquisition of further information. Specifically, information is needed regarding the percent of Corps acreage included in Fish and Wildlife Service (FWS) Endangered Species Recovery Plans that meet the recovery plan requirements; and the percent of Corps acreage included within North American Waterfowl Management Joint Venture Implementation Plans where proposed work has been accomplished. This report seeks to provide this information.

In summary, the Corps has recovery responsibilities for 65 listed species with final recovery plans and for 11 listed species with draft recovery plans. Nearly 40% of those species with final recovery plans are found within the South Atlantic Division. There are an estimated 312 Corps projects which are involved in such recovery plans. The Corps has an estimated 7,480,000 acres of land and waters possibly involved in final recovery plans. Over 20% of this area (1,673,000 acres) is found within the Omaha District. Recovery responsibilities of the Corps range from the highly involved (e.g., monitoring populations, developing management strategies; modifying habitat) to ones that are limited in scope (e.g., ensuring that 404 permits do not adversely harm species).

The Corps also has significant land holdings which fall within NAWMP Joint Venture Areas (JVAs). The Corps manages 1,697,000 acres of lands within JVAs. This acreage represents 15.4% of the total land and waters owned or leased by the Corps (11.9 million acres) and 8.8% of lands included in JVAs (19,178,559 acres). Most of this area (40%) is in the Lower Mississippi JVA. There are 66 Corps projects within eight of the JVAs. The Southwestern Division contains the greatest amount of Corps lands included in JVAs (406,300 acres) and the New England Division the least (9,200 acres).

CHAPTER 1. INTRODUCTION

Environmental Performance Measures

More than 460 projects totaling nearly 12 million acres of water and land are administered by the U.S. Army Corps of Engineers (Corps) for a variety of purposes. The natural resource program mission calls for the Corps to "promote awareness of environmental values and adhere to sound environmental stewardship, protection, compliance, and restoration practices". With an annual budget of $69 million, the Corps has an active and important role to play in "managing" natural resources.

Underlying all activities undertaken by the Corps, or any federal agency, is the responsibility to perform efficiently. In 1988, performance indicators were first introduced to the Corps of Engineers under the leadership of the Operations, Construction and Readiness Division. This process moved the Corps community forward and filled a management void for monitoring performance. In 1991, a comprehensive study of the Operations and Maintenance Program was performed. This Study indicated a need to develop Corps-wide standards of information management and performance measurement compatibility.

Recently, there have been several Federal Government initiatives directed toward improving government performance. The report of the National Performance Review (Gore 1993) recommends many actions to be taken by specific agencies to reduce costs, improve productivity, and provide better levels of service to the American public. This call for change includes establishing performance goals and related performance measures for the conduct of all "business" within federal agencies. The Government Performance and Results Act (GPRA) initiates internal management reforms within the federal government by requiring that agencies establish program objectives and measure program performance against these objectives. Each federal agency must submit a strategic plan for FY97 to the Director of the Office of

Management and Budget that includes a description of how performance objectives are to be achieved and measured.

In accordance with GPRA and the Study of the Operations and Maintenance Program, the Natural Resources Management Branch of the Corps has set out to develop performance measures. There are currently twelve performance measures for environmental stewardship:

1. Percent of mitigation lands (acres) meeting the requirements in the authorizing legislation or relevant Corps of Engineers decision document.
2. Percentage of Corps acreage included within North American Waterfowl Management Plan (NAWMP) Joint Venture Implementation Plans where work has been accomplished in support of Implementation Plan goals.
3. Percent of Federally listed species with final Fish and Wildlife Service (FWS)/National Marine Fisheries Service (NMFS) Recovery Plan requirements divided by the number of species for which the Corps has recovery requirements specified in final FWS/NMFS Recovery Plans.
4. Percent of fish hatchery capacity designated for mitigation which is achieving the requirements of authorizing legislation or relevant Corps decision document.
5. Percent of Corps project wetland acres actually producing wetland values.
6. Percent of fish and wildlife habitat that is optimally producing a diversity of fish and wildlife on a sustained basis, as described in the Operational Management Plan (OMP).
7. Percent of forested lands optimally producing forest values as described in the Operations Management Plan (OMP).
8. Percent of grassland acres optimally producing grassland values as described in the Operations Management Plan (OMP), on a sustained basis.
9. Percent of Corps project lands with physically stable soil cover.
10. Percent of fish successfully passed upstream.

11. Percent cultural resources sites and associated information, as defined by relevant cultural resources legislation, protected.
12. Ratio of mitigation lands to non mitigation lands in new Corps projects.

Endangered Species Recovery Plans

There are currently 959 species listed as either endangered or threatened within the United States. Of these species, 79% are listed as endangered and 21% as threatened. There are 320 animal and 434 plant species listed as endangered and 114 animal and 92 plant species listed as threatened.

Section 4(f) of the Endangered Species Act (the Act) calls for the development and implementation of recovery plans for species listed as endangered or threatened unless such plans would not contribute to their conservation. Recovery plans are documents prepared for listed species that detail the specific tasks needed to recover those species. Specific federal, state, and other agencies are mentioned in the recovery plans as having recovery tasks. The purpose of these plans is to "recover" the threatened or endangered species (s). Recovery is the process by which the decline of a threatened or endangered species is reversed, and threats neutralized so that its survival in the wild can be ensured. The goal of the Endangered Species Act is the recovery of listed species to levels where protection under the Act is no longer necessary.

Recovery plans work by identifying a wide range of actions that, when implemented, will help recover the species. These may include reintroduction of the species into formerly occupied habitat, land acquisition and management, or landowner agreements that preserve or enhance habitat, captive breeding, habitat restoration, population assessment, and public education. Not every listed species gets a recovery plan. Because of policy changes in 1994, the FWS is encouraging the development of multi-species recovery plans focusing on ecosystem initiatives. There are currently 519 approved recovery plans and 176 draft recovery plans.

North American Waterfowl Management Plan Joint Venture Areas

On May 14, 1986, the U.S. Secretary of the Interior and the Canadian Minister of the Environment signed the North American Waterfowl Management Plan (NAWMP). The NAWMP was designed in response to significant losses and degradation of wetlands across the continent. The plan was to address the need for protecting, restoring, and managing wetlands of importance to waterfowl and other wildlife. There are thirty-four waterfowl "Habitat Areas of Major Concern" identified by the U.S. and Canada.

One of the provisions of the plan is the formation of partnerships between state and Federal governments, and private organizations to develop and implement conservation and restoration projects in the "Habitat Areas of Major Concern". These partnerships are called "Joint Ventures". The NAWMP has identified thirteen Joint Venture Areas (JVAs), eleven of which occur in the United States (Eastern Habitat and Prairie Habitat Joint Venture Areas occur only in Canada). These JVAs cover 19,178,559 acres within the United States.

In January 1989, the Secretary of the Interior and the Assistant Secretary of the Army (Civil Works) signed a three year Cooperative Agreement (Agreement) supporting the North American Waterfowl Plan. In the Agreement, the Corps and the FWS agreed to develop internal and joint reporting and coordination procedures. In March 1989, Corps field staff responded to a questionnaire which surveyed the number of acres of waterfowl management areas; waterfowl use areas; and areas that have potential for waterfowl habitat management. It was found that the Corps has 1.7 million acres within nine of the designated "Habitat Areas of Major Concern" and has 1.4 million acres within the five "High Priority Areas of Major Concern". One of the purposes of this study is to update these findings using current information. In 1992, the Joint Venture Area boundaries were revised. These revisions were not included in the previous analysis.

Databases

To determine all of the listed species for which the Corps has recovery responsibilities, they consulted the Fish and Wildlife Service Endangered Species Office in Arlington, Va. The FWS does not yet have a complete set of recovery plans in electronic format so manual entry of their files was necessary. Recovery tasks and responsibilities of the Corps as specified in the recovery plans were also photocopied. In addition, the Final Regulations for all the listed aquatic species were copied to determine any Corps regulatory responsibilities. While this is outside of the scope of the current study, it should be useful for the development of regulatory performance measures.

Based on the above information, several databases using Excel, Version 2.5 were developed. Table 1 summarizes and briefly describes these databases. Endangered species recovery plan information was obtained from Mr. Dave Harrelson at the Fish and Wildlife Service, Endangered Species Office, Arlington, VA. In each recovery plan, the species range targeted for recovery is discussed. This range is included as counties in the endangered species database (current.xls). The Natural Resource Management System of Corps projects was provided by Bill Irwin (CECW-ON). Counties in this NRMS database (nrms.xls) were cross-referenced with counties in the endangered species database (county.xls) to come up with the final database of all species involving the Corps and the associated Corps projects (projend.xls). However, there were several recovery plans which mention the Corps as a responsible agency but do not include Corps projects in the species range targeted for recovery. This may be due to the fact that Corps projects outside of the species recovery range are impacting the status of the species. Dredging, for example, can have deleterious impacts several miles from the actual Corps project site. Species for which there is no known Corps project within the recovery distribution are denoted in the *results* section.

Information on Joint Venture Areas was obtained by Mr. Mark Koneff at the Fish and Wildlife Service, North American Waterfowl Management Office, Arlington, VA. Mr. Koneff

provided a GIS generated map of the Joint Venture Areas and Corps Reservoir Projects as well as raw data. The counties covered in each Joint Venture Area (jvcounty.xls) were cross referenced with the counties containing Corps projects. The total number of Corps projects (and associated areas) in each Joint Venture area were then determined (jvcorps.xls).

Table 1. List of created databases.

DATABASES
Current.xls-master list of all recovery plans and associated species, dates listed, counties, states. Data provided by Dave Harrelson of the FWS.
Nrms.xls-database of all Corps projects including name, county, state and project area.
County.xls-database of endangered species with recovery plans for which the Corps has recovery responsibilities, sorted by county.
Projend.xls-database of Corps projects, county, state, total area, and the endangered species for which they have recovery responsibilities.
Jvcounty.xls-database of all counties included in NAWMP Joint Venture Areas
Jvcorps.xls-database of all Corps projects and associated total area included in NAWMP Joint Venture Areas.

CHAPTER 2 - RESULTS

Changes Since Preliminary Report (December 1995)

In the original analysis dated December 1995, only the number of Corps reservoir projects included in the NAWMP Joint Venture Areas was determined. That analysis has subsequently been expanded to include all Corps Projects included in the Natural Resources Management Systems database; these projects include both Corps reservoirs and lock and dam projects. The original analysis has also been expanded to include Endangered Species Recovery Plans as well as Joint Venture Areas. In addition to the final recovery plans, draft recovery plans are also examined to determine those species for which the Corps has responsibilities.

Listed Species With Final Recovery Plans

In summary, there are 65 species for which the Corps has recovery responsibilities as specified in FWS final recovery plans. Table 2 is a complete list of these species by taxa. Please note that two species, the humpback whale and the right whale, are protected by the National Marine Fisheries Services and were, therefore, not included in this analysis.

Of the 65 species for which the Corps has FWS recovery responsibilities, there is a near equal proportion of fish, plants, aquatic invertebrates, and bird species (Figure 1). Most of these species live in or around water. There are 15 species of mammals and reptiles, collectively, and 2 species of insects for which the Corps has recovery responsibilities. Endangered plants are the most common taxa for which the Corps has recovery responsibilities.

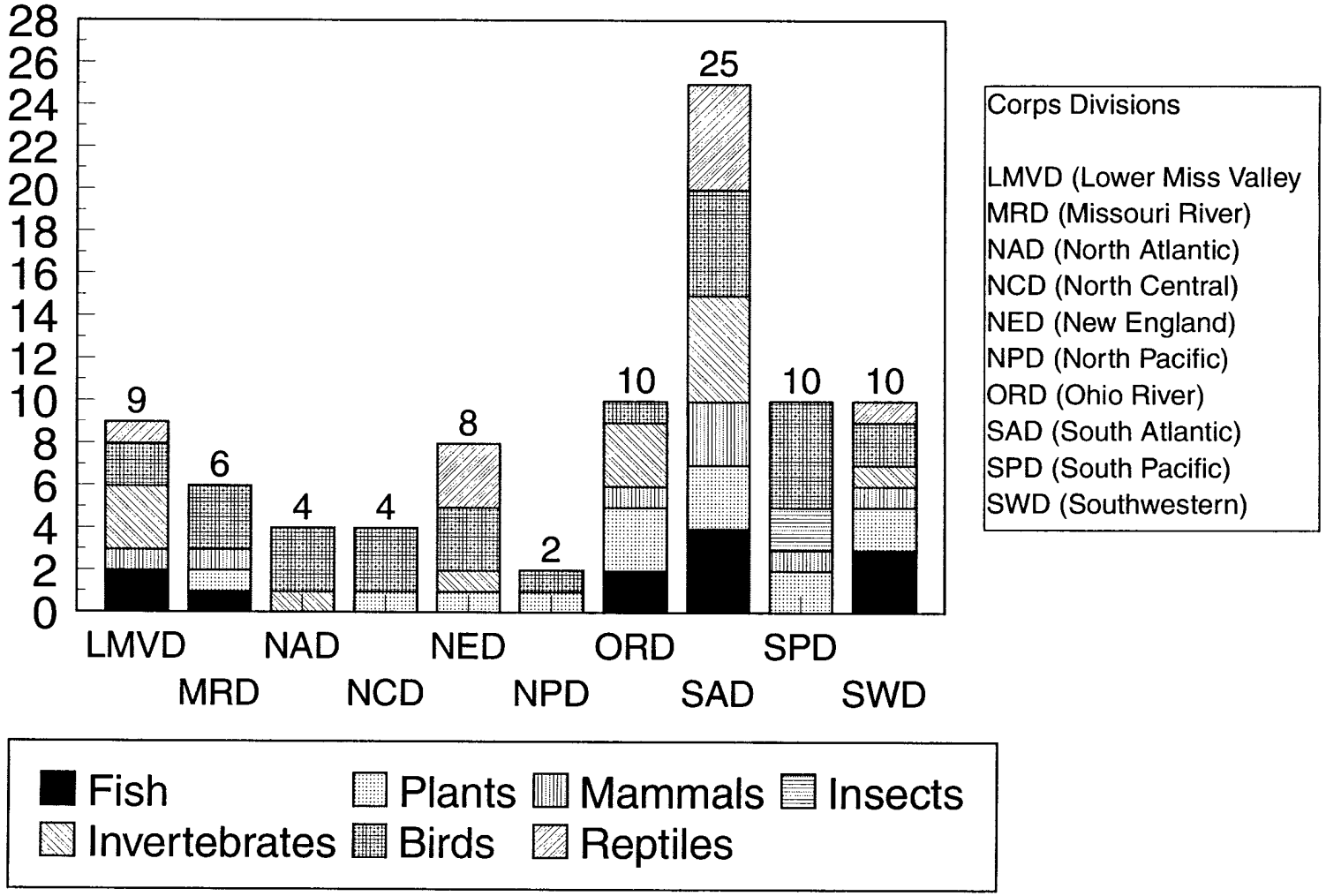
The number of listed species for which the Corps has recovery responsibilities is greatest in the South Atlantic Division (Figure 1). This Division has more than twice the number of species (25 species) than in any other Division. This Division as well as the Southwestern Division have the greatest variety of taxa (6 different taxa). The North Pacific Division has the least number of species; (2 species).

Table 2. Species for which the Corps has recovery responsibilities listed by taxa.

Fishes	**Birds**
Bayou Darter (*Etheostoma rubrum*)	Great Lakes Piping Plover (Charadrius melodus
Chihuahua Chub (*Gila nigrescens*)	Northern Great Plains Piping Plover
Neosho Madtom (*Noturus placidus*)	California Least Tern (*Sterna antillarum browni*)
Cahaba Shiner (*Notropis cahabae*)	Florida Snail Kite (*Rostrhamus sociabilis plumbeus*)
Duskytail Darter (*Etheostoma catonotus*)	Whooping Crane (*Grus americana*)
Cape Fear Shiner (*Notropis mekistocholas*)	Least Bell's Vireo (*Vireo bellii pusillus*)
Pallid sturgeon (*Scaphirhynchus albus*)	Roseate Tern (*Sterna dougallii dougallii*)
Pygmy Madtom (*Notorus stanauli*)	Pacific Peregrin Falcon (*Falco peregrinus anatum*)
Waccamaw Silverside (*Menidia extensa*)	Bald Eagle, Northeastern, Pacific, and Southeastern (*Haliaeetus leucocephalus*)
Gulf Sturgeon (*Acipenser oxyrhynchus desotoi*)	Wood Stork (*Mycteria americana*)
Blue Shiner (*Cyprinella caerulea*)	California Clapper Rail (*Rallus longirostris obsoletus*)
Plants	**Mammals**
Contra Costa Wallflower (*Erysimum capitatum angusta*)	Anastasia IslandBeach Mouse (*Peromyscus polionotus phasma*)
Bradshaw's Lomatium (*Lomatium bradshawii*)	Southeastern Beach Mouse (*Peromyscus polionotus niveivent*)
Antioch Dunes Evening-Primrose (*Oenothera deltoides howell*)	Choctawhatchee Beach Mouse (*Peromyscus polionotus allophrys*)
Maguire Primrose (*Primula maguirei*)	Perdido Key Beach Mouse (*Peromyscus polionotus trissylle*)
Texas Dawn-flower *(Hymenoxys texana)*	Alabama Beach Mouse (*Peromyscus polionotus ammobates*)
Decurrent False Aster (*Boltonia decurrens*)	Salt Marsh Harvest Mouse (*Reithrodontomys raviventris*)
Jesup's milk-vetch (*Astragulus robbinsii jesupi*)	Gray Bat (*Myotis grisescens*)
Northeastern Bulrush (*Scirpus ancistrochaetus*)	**Aquatic Invertebrates**
Price's Potato Bean (*Apios priceana*)	Tar Spinymussel (*Elliptio steinstansana*)
Geocarpon minimum	Inflated Heelspitter (*Potamilus inflatus*)
Virginia Spiraea (*Spiraea virginiana*)	Curtis' Pearly Mussel (*Epioblasma florentina curtisi)*
White haired goldenrod (*Solidago albopilosa*)	Royal Snail (*Pyrgulopsis ogmorhaphe*)
Smooth Coneflower (*Echinacea laevigata*)	Purple Cat's Paw Pearly Mussel (*Epioblasma obliquata obliquata*)
Florida Torreya (*Torreya taxifolia*)	Dwarf Wedge Mussel (*Alasmidonta heterodon*)
Key Tree Cactus *(Pilocereus robinii*)	Speckled Pocketbook Mussel (*Lampsilis streckeri*)
Reptiles	Curtus' Pearly Mussel (*Pleurobema curtum*)
Yellow-Blotched Map Turtle (*Graptemys flavimaculata*)	Marshall's Pearly Mussel (*Pleurobema marshalli*)
Ringed Sawback Turtle (*Graptemys oculifera*)	Arkansas Fatmucket Mussel (*Lampsilis powelli*)
Leatherback Sea Turtle (*Dermochelys coriacea*)	James River Spiny Mussel *(Pleurobema collina)*
Hawksbill Sea Turtle (*Eretmochelys imbricata*)	Speckled Pocketbook Mussel (*Lampsilis streckeri*)
Green Sea Turtle (*Chelonia mydas*)	Kentucky Cave Shrimp (*Palaemonias ganteri*)
Loggerhead Turtle (*Caretta caretta*)	**Insects**
Concho Water Snake (*Nerodia paucimaculata*)	Lange's Metalmark Butterfly (*Apodemia mormo langei*)
San Francisco Garter Snake (*Thamnophis sirtalis tetrataenia*)	Valley Eldeberry Longhorn Beetle (*Desmocerus californicus dimorphicus*)

Figure 1

of Listed Species For Which the Corps Is Responsible In Each Corps Division



Note that, in Figure 1, individual species overlap different Divisions and are counted more than once. For example, the bald eagle has a large range which includes many different Corps Divisions. Therefore, the combined total of all species for which the Corps has recovery responsibilities in each Division is greater than the 65 species.

Listed Species with Draft Recovery Plans

The Corps also has recovery responsibilities for 11 listed species as specified in draft recovery plans. These are plans that have not yet been finalized by the Fish and Wildlife Service but will be soon. Table 3 lists these species and their population ranges. The Corps is explicitly identified as an active participant in the recovery of these 11 species. Please note that there is a draft recovery plan for 13 invertebrate species in the Mobile River Basin but FWS was unable to provide the Corps of a copy of this plan. These species include the fine-lined pocketbook, goldline darter, Alabama moccasinshell, ovate clubshell, southern clubshell, southern acornshell, upland combshell, triangular kidneyshell, Coosa moccasinshell, and southern pigtoe. It is likely that the Corps is involved in the recovery of these species because there are several Corps projects in this area. Another likely endangered species for which the Corps has some responsibility is the delta smelt. This species has a draft recovery plan but there was no copy of this report in the FWS file room.

Table 3. Species with draft recovery plans for which the Corps has a recovery responsibility.

Species	Current Population Distribution
Relict Darter	Bayou du Chien system in western Kentucky
Louisiana Black Bear	Tensas River Basin in Franklin, Madison, and Tensas Parishes in northeastern Louisiana Atchaflaya River Basin in Iberia and St. Mary Parish in south-central Louisiana
Amargosa Vole	Tecopa Lake and Amargosa, Nevada
Carolina Heelspitter	Catawba River System, Goose Creek, Flat Creek, and Lynches River in Union County North Carolina
Idaho Springsnail	Mainstream Snake River, Idaho
Utah Valvata Snail	Mainstream Snake River in southern Idaho
Snake River Physa Snail	Mainstream Snake River in southern Idaho
Bliss Rapids Snail	Mainstream Snake River, Idaho
Banbury Springs Lanx	Banbury Springs, Thousand Springs, and Box Canyon Spring, Idaho
Sensitive Joint Vetch	Somerset County, Maryland Cumberland County, New Jersey Salem County, New Jersey Hyde County, North Carolina Beaufort, County, North Carolina New Kent, Virginia Charles City, Virginia King William, Virginia Stafford, Virginia Richmond, Virginia

Corps Projects with Endangered Species

There are a total of 312 Corps projects that possibly have endangered species with final recovery plans. The Southwestern Division has the greatest number of projects with endangered species (Figure 2). Over a fourth of the total projects with endangered species are in this Division (84 projects, 27% of total). The North Atlantic Division has the fewest number of projects (10 projects; 3.2% of total) with endangered species. The remaining districts have from 6.7% (21 projects, SPD) to 12.5% (39 projects, ORD) of the total projects with specified recovery activities.

The Corps has 7,479,571 acres (total area including land and water) included in the Fish and Wildlife Service endangered species recovery plans. This is two-thirds of the 11.9 million acres owned or leased by the Corps. As shown in Table 4, the Omaha District has the largest acreage included in FWS endangered species recovery plans (1,672,731 acres; 22% of total owned or leased by Corps). The Little Rock District has the second largest acreage included in these recovery plans (748,210 acres; 10% of total owned or leased by Corps). All other districts have less than 10% of the total acreage owned or leased by the Corps.

It is important to note that the estimated acreage of Corps lands included in FWS recovery plans may be conservative. There were several recovery plans which name the Corps as an active participant but whose area identified for recovery activities does not include a Corps project. This is most likely due to far-reaching impacts of some Corps activities which extend well beyond the actual project area. There are 14 such species (Table 5).

Figure 2
of Corps Projects with Endangered Species In Each Corps Division

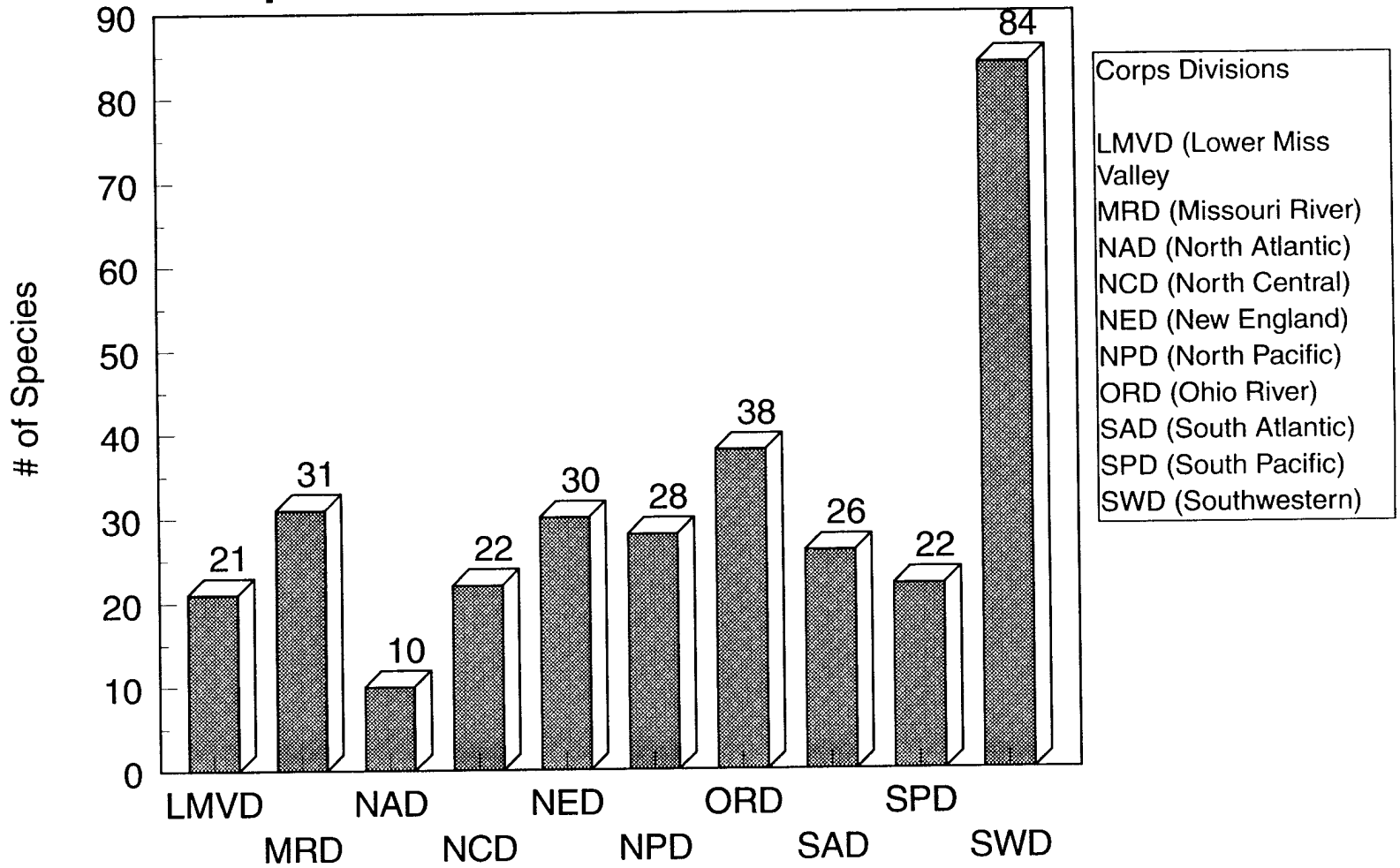


Table 4. Corps Acres in Fish and Wildlife Service Recovery Plans.

Corps District	Total Corps Acres	% of Total Corps Acres
St. Louis	252,574	3.38
Vicksburg	666,190	8.91
Kansas City	80,183	1.07
Omaha	1,672,731	22.36
Baltimore	94,674	1.27
Norfolk	7,969	0.11
Philadelphia	15,739	0.21
Detroit	974	0.01
Rock Island	370,847	4.96
St. Paul	213,158	2.85
New England	72,816	0.97
Portland	105,663	1.41
Seattle	68,568	0.92
Walla Walla	164,238	2.20
Huntington	135,804	1.82
Louisville	323,308	4.32
Nashville	353,435	4.73
Pittsburgh	76,936	1.03
Jacksonville	477,377	6.38
Mobile	512,996	6.86
Savannah	135,861	1.82
Wilmington	219,862	2.94
Los Angeles	54,966	0.73
Sacramento	68,147	0.91
San Francisco	30	**negligible**
Albuquerque	97,558	1.30
Forth Worth	462,451	6.18
Galveston	26,306	0.35
Little Rock	748,210	10.00
TOTAL	**7,479,571**	**100.00**

Table 5. Listed Species Involving Unknown Corps Projects.

Listed Species	State	Counties
Alabama Beach Mouse	AL	Baldwin, Mobile
Bayou Darter	MS	Claiborne, Copiah
Cahaba Shiner	AL	Ribb, Perry, Grant, Shelby
Chihuahua Chub	NM	Grant
Duskytail Darter	TN	Sullivan, Monroe
Inflatted Heelspitter	AL	Washington, Choctaw, Clarke Marengo, Greene, Hale
Key Tree Cactus	FL	Monroe
Pygmy Madtom	TN	Hancock, Hickman
Royal Snail	TN	Marion
Speckeled Pocketbook Mussel	AR	Stone, Van Buren
Tar Spinymussel	NC	Swift, Edgecomb, Franklin
Waccamaw Silverside	NC	Columbus
Yellow-Blotched Map Turtle	MS	Covington, Clarke

Recovery Plan Specifications

For each recovery plan, detailed actions are specified for all participating agencies. Appendix A summarizes the actions for which the Corps is responsible as discussed in the FWS recovery plans. As mentioned earlier, there are several species for which there are no known associated Corps projects. In Appendix A, these are noted with a question mark. Recovery distributions for the bald eagle and the whooping crane span several states and involve many Corps projects (92 for the bald eagle and 34 for the whooping crane). In contrast, species such as the Decurrent False Aster occur in only one county and involves only one Corps project. Recovery responsibilities range from the highly involved (e.g., monitoring populations, developing

management strategies; modifying habitat) to ones that are limited in scope (e.g., ensuring that 404 permits do not adversely harm species).

NAWMP Joint Venture Areas and Corps Projects

There are thirteen North American Waterfowl Joint Venture Areas (JVAs) identified in the United States and Canada (Figure 3). The Corps has Civil Works Projects in eight of these JVAs: Atlantic Coast, Central Valley, Intermountain West, Lower Mississippi Valley, Pacific Coast, Playa Lakes, U.S. Prairie Potholes, and the Upper Mississippi.

Based on current (1996) Joint Venture Area boundaries, the Corps has 1,697,047 acres (land and water) within eight NAWMP JVAs. This acreage represents 15.4% of the total land owned or leased by the Corps (11.9 million) and 8.8% of the land included in JVAs within the United States (19,178,559 acres). As shown in Figure 4, the Lower Mississippi Valley Joint Venture Area includes nearly 40% of the total acreage of Corps lands included in JVAs (650,095 acres). The Joint Implementation Plan for the Lower Mississippi Valley calls for active participation by the Corps. Specifically, this JVA mentions the following actions to be pursued:

- Develop and implement plans for the conservation, development, and management of waterfowl and wetlands on lands associated with the Corps Civil Works Projects in accordance with a January 1989 Cooperative Agreement between the Department of the Interior and the Army;
- In cooperation with State and Federal wildlife agencies and Ducks Unlimited, use engineering design and construction capabilities of the USACE to construct water control features to restore, develop, and manage wetland hydrology on the national Wildlife Refuge System and State Wildlife Management areas;
- Coordinate waterfowl management activities between related public areas and coordinate public management with that occurring on adjacent private lands.

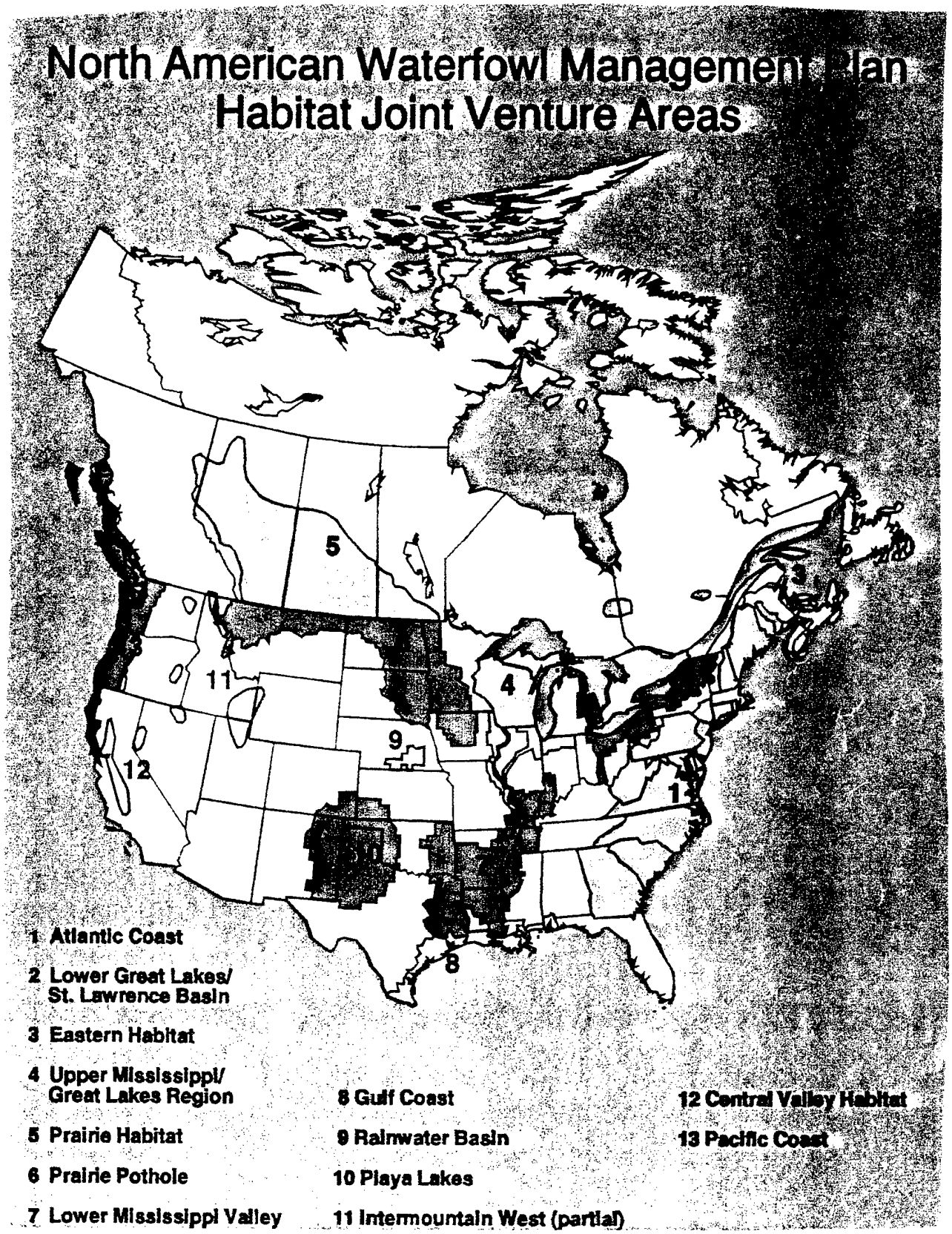


Figure 3. North American Waterfowl Management Plan Habitat Joint Venture Areas, 1996.

The LMV Joint Venture proposes that Congress give the Corps a specific environmental mission in the LMV-that of a "wetland engineer". The primary focus of this mission would be for the Corps to work with State wildlife agencies, the FWS and Ducks Unlimited in restoring and enhancing wetlands and waterfowl habitat on public lands.

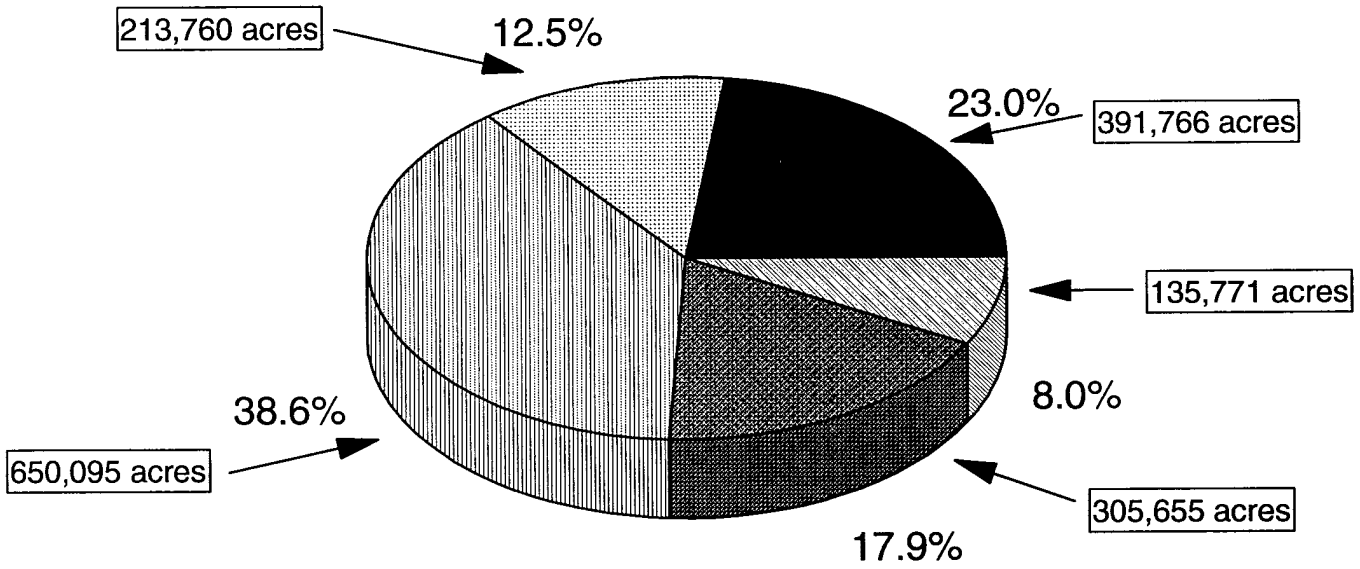
The Corps also has significant holdings in the Intermountain West, Upper Mississippi, and Atlantic Coast JVAs; combined totaling over 900,000 acres (Figure 4). There are four joint venture areas, the Central Valley, Pacific Coast, Playa Lakes, and U.S. Prairie Potholes which each have less than 2% of the total Corps acreage included in joint venture areas. Combined, these four JVAs account for only 8% of the total acreage of Corps lands included in JVAs (1,697,047).

As shown in Figure 5, the Southwestern Division contains the greatest amount of Corps lands included in JVAs (406,290 acres). This Division encompasses three different JVAs: the Intermountain West, the Playa Lakes, and the Lower Mississippi Valley covering over 400,000 acres. The SAD and the NCD each have over 300,000 acres included in JVAs. Combined, these three Divisions contain nearly two-thirds (65%) of all Corps lands which occur in JVAs. In total, the Corps has 66 projects which are involved in JVAs. See Appendix B for a complete list of all Corps projects.

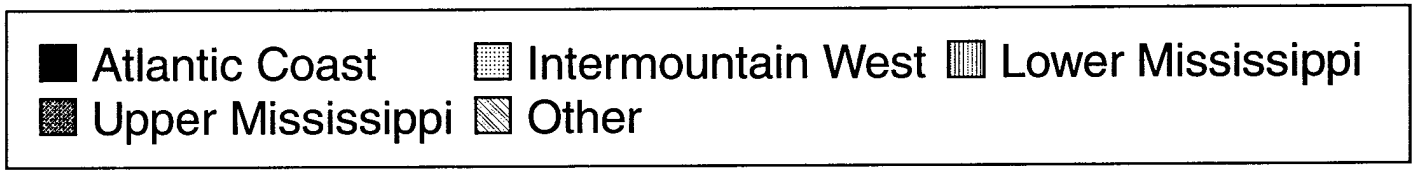
There are approximately 19,178,000 acres included in existing Joint Venture Areas for the continental United States. In summary, the Corps manages 8.8% of all lands or 1,679,047 acres located within the eight existing Joint Venture Areas. Table 4 compares the amount of lands located within each Joint Venture and identifies percentages under Corps management.

Figure 4.

Corps Projects Within NAWMP Joint Venture Areas



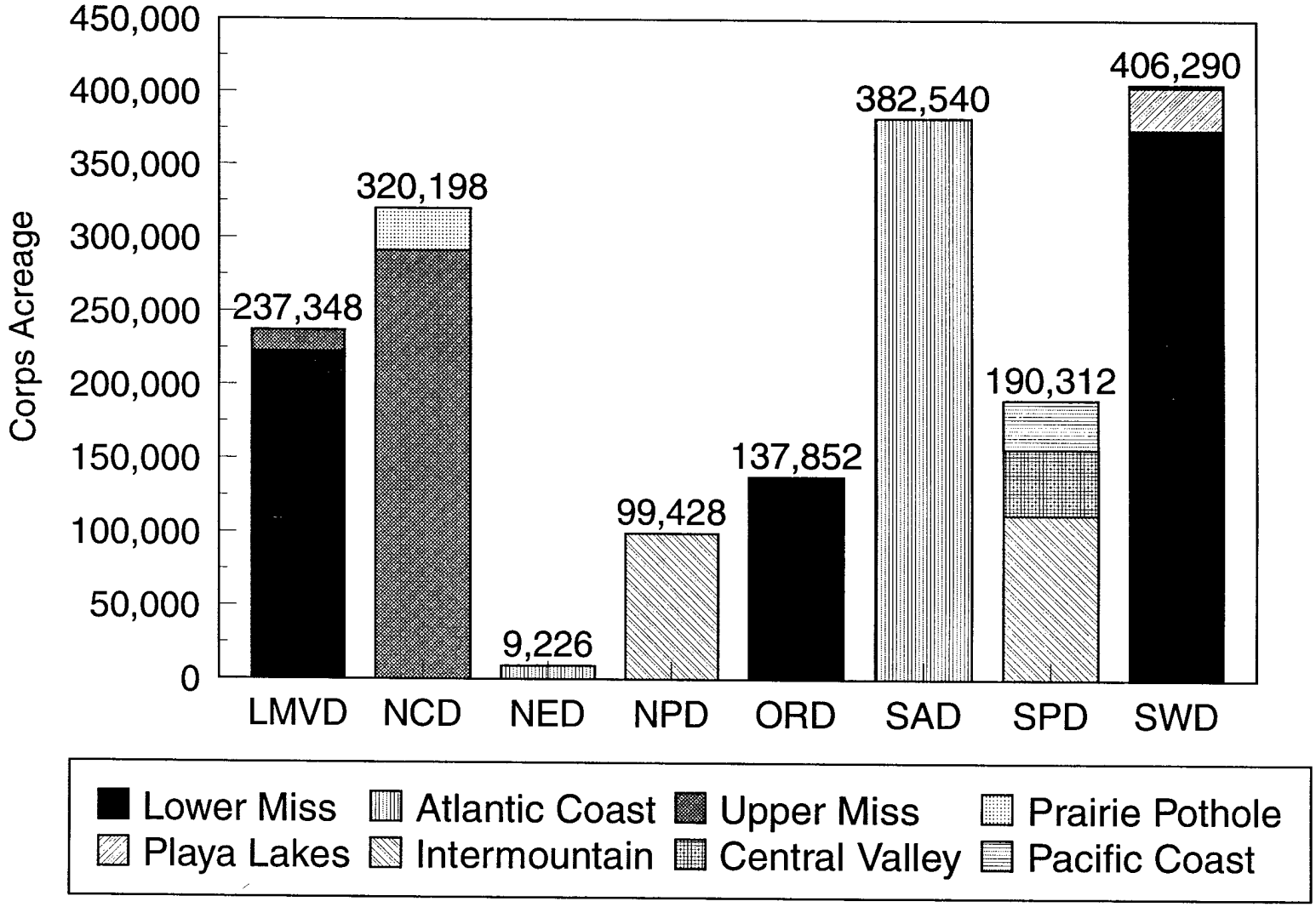
Total acreage of Corps lands included in Joint Venture Areas = 1,697,047



Other includes the Central Valley, Pacific Coast, Playa Lakes, and U.S. Prairie Potholes

Figure 5.

Corps Division Project Acres in NAWMP Joint Venture Areas



CHAPTER 3 - CONCLUSIONS

In conclusion, the Corps has an important role to play as an environmental steward of public lands. With nearly 12 million acres of public lands owned or leased by the Corps, over two-thirds of these lands impacted by endangered species recovery plans and 15% involved in Joint Venture Areas, the Corps has an enormous responsibility. The formation of performance measures is to ensure that these responsibilities are being met. While this report provides the initial information needed to develop accurate performance measures, more information from Corps projects is needed to fulfill the latter portions of the performance measures. For example,:

1. Percentage of Corps acreage included in Fish and Wildlife Service (FWS) Endangered Species Recovery Plans *that meet the recovery plan requirements*; and
2. Percentage of Corps acreage included within North American Waterfowl Management Plan (NAWMP) Joint Venture Implementation Plans *where proposed work has been accomplished.*

It is recommended that managers of projects which are specified in Appendix A be contacted to determine their project's involvement in endangered species recovery plans, with special attention given to the South Atlantic Division and the Omaha District. Similarly, managers of projects listed in Appendix B should be consulted to determine their involvement in the JVAs. For a summary of all Corps projects possibly involved in endangered species recovery plans and/or NAWMP Joint Venture Areas see Appendix C.

APPENDIX A

RECOVERY ACTIONS FOR THE CORPS AS SPECIFIED IN FWS RECOVERY PLANS

Species/Recovery Plan	Corps Action(s)	State and Counties Within Recovery Distribution		Corps Project(s)
PLANTS				
Antioch Dunes	Rebuild natural dune topography with dredge spoil sand	CA	Contra Costa	San Francisco Bay
Maguire Primrose	Manage water development activities	UT	Cache	?
Texas Prairie Flower	Establish protected sites on public lands. Implement a long range management plan. Enforce laws and regulations. Monitor populations. Develop public awareness.	TX	Harris	Addicks Dam Barker Dam
Decurrent False Aster	Management for Columbia Bottoms population. Management plan for Spatterdock Bottom populations.	IL	Tazewell	Farmdale Dam
Jesup's Milk-Vetch	Ensure continuation of river dynamics.	VT	Windsor	North Hartland Lake North Springfield Lake
Northeastern Bulrush	Ensure that permits issued do not adversely affect extant populations.	PA VT	Monroe Windham	Beltzville Lake Francis E. Walter Dam Ball Mountain Lake Townshend Lake Alvin R. Bush-Kettle Creek Raystown Lake Gathright Dam-Lake Moomaw
Price's Potato Bean	Develop management plans.	KY KY TN	Livingston Lyon Dekalb	Barkley Lock and Dam Center Hill Lake
Geocarpon minimum	Protect populations.	AR MO	Franklin Cedar	Ozark Lake Stockton Lake

Species/Recovery Plan	Corps Action(s)	State and Counties Within Recovery Distribution	Corps Project(s)
PLANTS			
Virginia Spriaea	Identify and monitor threats to each existing population. Conduct range-wide searches for additional populations. Conduct site-specific manipulation to maintain existing populations. Monitor clonal size and distribution in a disturbed and in a natural system. Conduct long-term demographic studies.	KY Laurel VA Dickenson VA Wise WV Nicholas	Laurel River Lake John W. Flannagan Dam North Fork of Pound River Lake Summersville Lake
White-Haired Goldenrod	Ensure species' protection if Red River is dammed.	KY Menifee	Cave Run Lake
Smooth Coneflower	Implement protective management for extant populations. Enforce laws protecting the species and its habitat. Monitor existing populations. Prepare and distribute news releases and informational brochures. Annually assess success of recovery efforts for the species.	VA Franklin	Philpott Lake
Florida Torreya	Manage existing biological preserves. Protect habitat from activities within preserves. Protect habitat from activities outside preserves.	FL Gadsden FL Jackson	Lake Seminole
Key Tree Cactus	Prevent surface mining. Control habitat alteration. Prevent lowering of water table. Prevent subsurface salt water intrusion.	FL Monroe	?

Species/Recovery Plan	Corps Action(s)	State and Counties Within Recovery Distribution	Corps Project(s)
	PLANTS		
Bradshaw's Lomatium	Determine genetic variability. Determine impact of seed collections. Collect seeds and store them at established seed bank facility. Identify potential habitat in North Central Wilamette Valley. Identify potential habitat in Central Valley. Identify potential habitat in southeastern recovery area. Select 12 management areas (3 in each recovery area). Delineate boundaries of the management areas. Secure the habitat supporting each population. Examine secondary succession or potential habitat modification. Examine effects of competition. Examine affects of tree roots on hardpan maintenance. Determine impact of fungal diseases. Determine insects impacts on plants. Determine human impacts. Determine herbicide impacts. Determine grazing impacts. Determine impacts of exotic plants. Determine hydrologic requirements. Examine inbreeding depression. Examine pollinator availability. Examine seed predators or parasites. Determine micro habitat for germination. Write site specific management plan for each management area. Implement site specific management plans. Establish permanent monitoring plots, photopoints, and sampling techniques. Conduct periodic monitoring.	OR Lane OR Marion	Blue River Lake Cottage Grove Lake Cougar Lake Dexter Lake Dorena Lake Fall Creek Lake Fern Ridge Lake Hills Creek Lookout Point Lake Foster Lake Green Peter Lake Detroit Lake

Species/Recovery Plan	Corps Action(s)	State and Counties Within Recovery Distribution	Corps Project(s)
	BIRDS		
Piping Plovers	Survey, census and monitor reproductive success of breeding populations. Survey and census winter populations. Quantify and evaluate winter habitat. Restrict human and vehicular access to nests. Apply protection and management practices on breeding habitat. Establish liaison to protect breeding habitat. Develop river management plans. Determine effects of river hydraulics and sediment discharge on breeding habitat; identify flow regimes to protect habitat. Modify and/or eliminate construction activities that impact breeding habitat. Protect and manage winter habitat. Establish liaisons for winter habitat; revise or establish laws; develop priorities for habitat protection. Modify and/or eliminate construction activities that impact winter habitat. Inform and educate the general public. Inform and educate public resource management agencies.	FL Pinellas MI Chippewa MN St. Louis MT Garfield MT Mccone MT Valley ND Mclean ND Mercer ND Mountrail ND Stutsman SD Charles Mix SD Bon Homme SD Yankton SD Hughes SD Potter SD Stanley SD Sully	Four River Basins St Marys River Duluth-superior Harbor Fort Peck Project Garrison Dam Lake Sakakawea Pipestem Lake Fort Randall Dam Lake Francis Case Gavins Point Project Oahe Dam Lake Oahe
California Least Tern	Preserve and manage Sweetwater Marsh site (D Street). Protect existing feeding grounds and non-nesting, roosting habitat. Acquire and manage Santa Ana River Mouth breeding area; improve fish feeding area.	CA Orange CA Los Angeles	Brea Dam Fullerton Dam Hansen Dam Santa Fe Dam Sepulveda Dam Whittier Narrows Dam

Species/Recovery Plan	Corps Action(s)	State and Counties Within Recovery Distribution	Corps Project(s)
	BIRDS		
Florida Snail Kite	Determine reproductive response to wetland management strategies. Identify ecological relationships. Manage wetlands for snail production. Develop snail management plan. Develop drought-related habitat protection plans. Ensure permit application review. Map wetland habitat topographically. Evaluate vegetation mapping. Develop habitat protection plans. Control exotic plants. Develop control techniques. Cooperative exotic plant control program.	FL Hillsborough FL Glades FL Hendry FL Lee FL Martin FL Okeechobee FL Palm Beach FL St. Lucie FL Dade	Four River Basins Lake Okeechobee and Waterway Miami Harbor

Species/Recovery Plan	Corps Action(s)	State and Counties Within Recovery Distribution	Corps Project(s)
	BIRDS		
Whooping Crane	Ensure compliance with regulations relating to petrochemical production, storage, and transportation. Relocate the segment of GIWW that transects Backjack Peninsula (Texas). Control public access. Apply management practices. Establish liaison with all agencies and organizations that have land and water management responsibilities. Preserve and enhance habitat on wintering grounds. Provide habitat protection. Prevent physical and chemical damage to existing habitat. Reduce boat wake erosion of marsh by relocating a segment of the GIWW. Evaluate alternative deposition of dredge spoil. Prevent physical or hydrologic damage to marshes and flats due to mineral development, dredging, or other activities. Reduce danger of chemical and petroleum contamination of wintering habitat. Create new habitat. Study feasibility of creating new habitat within or adjacent to current crane use areas. Create freshwater marshes on natural substrates. Create saltwater marsh using dredged material as fill. Create saltwater or brackish marsh by lowering elevation of lands.	TX Hill OK Oklahoma TX Ellis TX Bell TX Tarrant SD Buffalo OK Osage ND Bowman OK Blaine OK Washington KS Morris KS Butler OK Mcintosh OK Okmulgee OK Pittsburg SD Brule SD Charles Mix Sd Gregory SD Lyman ND Dunn ND Mclean ND Mercer ND Mountrail TX Denton TX Tarrant OK Alfalfa NE Harlan OK Creek OK Osage OK Blaine OK Tulsa TX Denton KS Marion KS Geary Tx Navarro SD CAMPBELL SD HUGHES SD POTTER	Aquilla Dam & Lake Arcadia Lake Bardwell Lake Belton Lake Benbrook Lake Big Bend Dam Lake Sharpe Birch Lake Bowman Haley Lake Canton Lake Copan Lake Council Grove El Dorado Lake Eufaula Lake Fort Randall Dam Garrison Dam Lake Grapevine Lake Great Salt Plains Harlan County Lake Heyburn Lake Hulah Lake Kaw Lake Keystone Lake Lewisville Lake Marion Reservoir Milford Lake Navarro Mills Lake Oahe Dam Lake Oahe Pipestem Lake Ray Roberts Lake Sardis Lake Skiatook Lake Somerville Lake Stillhouse Hollow Reservoir Waurika Lake Webbers Falls Whitney Lake WHITNEY LAKE WILSON LAKE

Species/Recovery Plan	Corps Action(s)	State and Counties Within Recovery Distribution	Corps Project(s)
	BIRDS		
Least Bell's Vireo	Develop and implement HMP for Prado Dam-Santa Ana River. Determine reproductive success in non-degraded and degraded habitats. Determine impact of parasitism on vireo reproductive success. Investigate responses of vireos to cowbird nest parasitism. Develop and evaluate strategies to minimize impact of cowbird parasitism. Implement procedures to reduce cowbird nest parasitism.	CA Los Angeles CA San Bernardino	Hansen Dam Mojave River Dam Prado Dam Santa Fe Dam Sepulveda Dam Whittier Narrows Dam
Roseate Tern	Create and expand nesting habitats.	MA Barnstable CT New Haven	Cape Cod Canal Hop Brook Lake
Northern Bald Eagle	Annually inventory breeding areas. Determine distribution of non-breeding population. Winter surveys and habitat utilization. Assess breeding habitat. Assess winter habitat. Territory plans and potential habitat plans. Winter area plans and potential habitat plans. Agency coordinators and clerical and technical staff.	MI Houghton, MI Chippewa MN Chippewa MN Dakota MN Goodhue MN Hennepin MN Lac qui Parle MN Otter Tail MN St. Louis MN Wabasha MN Winona MT McCone MT Phillips MT Valley MT Lincoln ND Barnes ND Mercer ND Mountrail, ND Stutsman WI Pierce WI St. Croix WI Crawford WI Door	Keweenaw Waterway St Marys River Lac Qui Parle Lake Mississippi River Pool No 2 Mississippi River Pool No 3 Mississippi River Pool U+l St Anthony Falls Mississippi River Pool No 1 Lac Qui Parle Lake Orwell Lake Duluth-superior Harbor Mississippi River Pool No 4 Mississippi River Pool No 5 Mississippi River Pool No 5a Mississippi River Pool No 7 Fort Peck Project Libby Dam and Lake Koocanusa Baldhill Dam Lake Ashtabula Garrison Dam Lake Sakakawea Pipestem Lake Eau Galle Flood Control Project Mississippi River Pool No 9 Sturgeon Bay and Lake Michigan Ship Canal

Species/Recovery Plan	Corps Action(s)	State and Counties Within Recovery Distribution	Corps Project(s)
	BIRDS		
Pacific Bald Eagle	Locate and describe nests, roosts, foraging and migrating areas. Assess suitability of habitat not presently occupied. Secure significant habitat through lease, trade, easement, cooperative agreement, or purchase. Establish reserves and management areas. Incorporate habitat guidelines in agency land use plans. Design and implement plans to secure specific nest sites, roosts, and foraging areas. Establish a framework for recovery plan implementation. Manage inland and anadromous fish populations and habitats to maintain and enhance adequate food for eagles. Maintain and enhance avian and mammalian food sources. Maintain forested habitat that is presently used by eagles. Maintain and develop habitat for future use by eagles. Restrict human disturbance at eagle use areas. Monitor threats and changes to habitat. Complete identification of important characteristics of nesting habitat. Complete identification of important characteristics of communal roosting habitat. Document diets and foraging requirements of bald eagles and requirements of their main prey species. Identify migratory pathways and habitat requirements of migrating and non-breeding eagles. Investigate the influence of human disturbance on bald eagles. Identify and monitor the size and distribution of wintering populations. Locate and study populations of nonbreeding eagles during the breeding season. Document mortality rates of eagles.	CA Tehama CA Mendocino CA Tulare CA Mendocino CA Sonoma CA Nevada CA Calaveras CA Fresno CA Riverside ID Clearwater OR Multnomah OR Marion OR Jackson OR Clackamas OR Morrow WA Benton WA Douglas WA King WA Kitsap WA Klickitat WA Okanogan WA Pierce WA Walla Walla WA Whitman	Black Butte Lake Carbon Canyon Dam Lake Kaweah Lake Mendocino Lake Sonoma Martis Creek Lake New Hogan Lake Pine Flat Lake Prado Dam Success Lake Dworshak Dam & Reservoir Bonneville Lock and Dam Detroit Lake Lost Creek Lake Willamette Falls Locks Willow Creek Mcnary Lock & Dam, Lake Wallula Chief Joseph Dam and Rufus Woods Lake Mud Mountain Dam Project White River Lake Crockett/keystone Harbor/ft Casey The Dalles Lock and Dam, Lake Celilo Chief Joseph Dam and Rufus Woods Lake Mud Mountain Dam Project White River Ice Harbor Lock & Dam, Lake Sacajawea Lower Monumental Lock & Dam, Lake West Mill Creek Lake Little Goose Lock & Dam, LAKE BRYAN LOWER GRANITE LOCK & DAM

Species/Recovery Plan	Corps Action(s)	State and Counties Within Recovery Distribution	Corps Project(s)
	BIRDS		
Southeastern Bald Eagle	Implement and adhere to "Management Guidelines for the Bald Eagle in the Southeast Region". Develop specific management plans for each breeding area. Identify and incorporate essential habitat in land use plans and planning. Develop management plans for feeding and roosting sites. Utilize Section 10/104 authority to conserve eagle habitat. Protect wintering eagle habitat. Identify and quantify effects of disturbance on nesting eagles and incorporate into management plans. Identify and quantify impact of disturbance on feeding and roosting sites and incorporate into management plans. Maintain/augment active enforcement of existing laws. Reduce incidental trapping mortality. Prevent mortality by regulating use of poisons for predator control.	AR Arkansas AR Baxter AR Clark AR Cleburne AR Conway AR Faulkner AR Franklin AR Garland AR Howard AR Jefferson AR Little River AR Pike AR Pulaski AR Sebastian AR Sevier AR Union AR Yell FL Citrus FL Dade FL Gadsden FL Lake FL Lee FL Marion FL Martin FL Okeechobee FL Orange FL Palm Beach FL Pasco FL Pinellas FL St. Lucie GA Clay GA Early GA Elbert GA Forsyth GA Hart GA Henry	Wilbur D. Mills Lock and Dam-ark.riv.nav.sys Norrell Lock and Dam - Ark.riv.nav.sys Bull Shoals Lake Norfork Lake Degray Lake Greers Ferry Lake Rockefeller Lake-ormand L & D-ark.riv.nav.sys Toad Suck Ferry Lock and Dam-ark.riv.nav.sys Ozark Lake - Ark.riv.nav.sys Lake Ouachita Gillham Lake Pool 3 Lock and Dam Ark Riv. Pool 4 Lock and Dam Ark Riv. Pool 5 Lock and Dam Ark Riv. Millwood Lake Lake Greeson David D. Terry Lock and Dam Murray Lock and Dam - Ark.riv.nav.sys Hammerschmidt Lake Dequeen Lake Dierks Lake Ouachita-Black Rivers (4 L&d, Calion Pool) Ouachita-black Rivers (4 L&d, Felsenthal Pool Blue Mountain Lake Dardanelle Lake - Ark.riv.nav.sys Nimrod Lake

Species/Recovery Plan	Corps Action(s)	State and Counties Within Recovery Distribution		Corps Project(s)
BIRDS				
Southeastern Bald Eagle (con't).		LA	Caddo	Four River Basins
		LA	Natichitoches	Lake Okeechobee
		MS	Grenada	Lake Seminole
		MS	Lafayette	Miami Harbor
		MS	Panola	George W. Andrews Lake
		MS	Tate	Hartwell Lake
		MS	Yalobusha	Lake Sidney Lanier
		TN	Cheatham	New Savannah Bluff L&D
		TN	Clay	Richard B Russell Lake
		TN	Dekalb	Walter F. George Lake
		TN	Smith	West Point Lake
				Caddo Lake
				Red River Waterway (5 Locks & Dams, Pool 3)
				Arkabutla Lake
				Enid Lake
				Grenada Lake
				Center Hill Lake
				Cheatham Lock and Dam
				Cordell Hull Dam and Reservoir
				Dale Hollow Lake

Species/Recovery Plan	Corps Action(s)	State and Counties Within Recovery Distribution	Corps Project(s)
	BIRDS		
Wood Stork	Implement favorable water management. Evaluate wetland management activities.	AL Lowndes AL Monroe AL Monroe AL Wilcox FL Citrus FL Dade FL Gadsden FL Jackson FL Marion FL Nassau FL Okeechobee FL Orange FL Palm Beach FL Pasco FL Pinellas FL St. Lucie FL Sumter GA Early GA Stewart	Alabama River Lakes Woodruff Alabama River Lakes Claiborne Black Warrior and Tombigbee Lakes Alabama River Lakes Dannelly Fernandina Harbor Four River Basins Lake Okeechobee and Waterway Lake Seminole Miami Harbor George W. Andrews Lake Walter F. George Lake
California Clapper Rail/Salt Marsh Harvest Mouse	Develop and implement a program of conservation education.	CA Sonoma	Lake Sonoma
	REPTILES		
Leatherback Sea Turtle	Regulate spoil dumping, dredging seafloor mining, harmful fishing practices and oil spills. Investigate and monitor the occurrence of mortality from entrainment and entrapment.	FL Dade FL Nassau FL Palm Beach FL Pasco FL Pinellas FL St. Lucie	Fernandina Harbor Four River Basins Lake Okeechobee and Waterway Miami Harbor

Species/Recovery Plan	Corps Action(s)	State and Counties Within Recovery Distribution	Corps Project(s)
	REPTILES		
Hawksbill Sea Turtle	Regulate spoil dumping, dredging seafloor mining, harmful fishing practices and oil spills. Investigate and NMFS monitor the occurrence of mortality from entrainment and entrapment.	FL Dade FL Nassau FL Palm Beach FL Pasco FL Pinellas FL St. Lucie	Miami Harbor Fernandina Harbor Lake Okeechobee and Waterway Four River Basins
Green Sea Turtle	Monitor draghead and water intakes.	FL Citrus FL Dade FL Nassau FL Palm Beach FL Pasco FL Pinellas FL St. Lucie	Fernandina Harbor Four River Basins Lake Okeechobee and Waterway Miami Harbor
Loggerhead Turtle	Monitor draghead and water intakes.	MA Barnstable FL Citrus FL Dade FL Nassau MA Norfolk FL Palm Beach FL Pasco FL Pinellas FL St. Lucie	Cape Cod Canal Charles River Project Fernandina Harbor Four River Basins Lake Okeechobee and Waterway Miami Harbor
Yellow-Blotched Map Turtle	Protect habitat.	MS Clarke MS Covington	?

Species/Recovery Plan	Corps Action(s)	State and Counties Within Recovery Distribution	Corps Project(s)
REPTILES			
Ringed Sawback Turtle	Determine sex ration, size and age at maturity, age structure, survival rates by sex and age classes. Estimate number of ringed sawback turtles in each of study reaches. Determine activity periods and behavior. Protect two river reaches. Develop and implement a monitoring plan.	MS Copiah MS Lawrence MS Leake MS Madison MS Marion MS Neshoba MS Pearl River MS Rankin MS Scott MS Simpson LA St. Tammany LA Washington	?
Concho Water Snake	Protect and assure adequate instream flows range-wide. Enforce existing laws and regulations. Protect through section 7 consultation.	TX Coleman TX Tom Green	Hords Creek Lake O.C. Fisher Lake
San Francisco Garter Snake	Minimize degradation and/or loss of habitat.	CA Tom Green	San Francisco Bay
MAMMALS			
Anastasia Island and Southeastern Beach Mice	Protect beach mice through ESA provisions.	FL St. Lucie	Lake Okeechobee and Waterway
Choctawhatchee, Perdido Beach, and Alabama Beach Mice	Develop cooperative agreements with other agencies (Alabama and Perdido Beach). Develop cooperative programs to reestablish beach dunes for Alabama and Perdido Beach Mice.	AL Baldwin AL Mobile	?

Species/Recovery Plan	Corps Action(s)	State and Counties Within Recovery Distribution		Corps Project(s)
MAMMALS				
Gray Bat	Modify fence, sign and levee.	AR	Carroll	Beaver Lake
	Modify fence, prevent flooding.	FL	Jackson	Lake Seminole
	Maintain gate and sign.	GA	Bartow	Allatoona Lake
	Maintain gate and sign.	GA	Murray	Carters Lake
	Maintain ½ gate.	IL	Pope	Smithland Lock and Dam
	Modify fence, prevent flooding.	KS	Labette	Pearson-skubitz Big Hill Lake
		KY	Allen,	Barkley Lock and Dam Lake
		KY	Barren	Barkley
		KY	Breckinridge,	Barren River Lake
		KY	Carter	Grayson Lake
		KY	Greenup	Greenup Locks and Dam
		KY	Harlan	Laurel River Lake
		KY	Jefferson	Martins Fork Lake
		KY	Livingston	Mcalpine Lock and Dam
		KY	Whitley	Rough River Lake
		MO	Benton	Harry S Truman Dam and Reservoir
		MO	Hickory	Pomme De Terre Lake
		MO	Ralls	Clarence Cannon Dam and Mark
		MO	Reynolds	Twain Lake
		TN	Clay	Clearwater Lake
		TN	Dekalb	Dale Hollow Lake
		TN	Smith	Center Hill Lake
				Cordell Hull Dam and Reservoir

Species/Recovery Plan	Corps Action(s)	State and Counties Within Recovery Distribution	Corps Project(s)
	INSECTS		
Valley Elderberry Longhorn Beetle	Protect American River sites. Protect Merced River site. Protect Putah Creek site. Survey Sacramento River. Survey Calaveras River. Preserve and protect newly discovered (VELB) habitat to provide suitable conditions for the species.	CA Fresno CA Tehama	Pine Flat Lake Black Butte Lake
Lange's Metalmark Butterfly	Rebuild natural dune topography with dredge spoil sand.	CA Contra Costa	San Francisco Bay
	FISHES		
Pygmy Madtom	Continue to utilize existing legislation and regulations to protect species and its habitat. Meet with local governmental officials and business interests and elicit their support for recovery. Develop an information and education program and present. Develop techniques, select sites, reintroduce the species back into historic habitat, and evaluate and protect any populations established. Conduct research necessary for species management and recovery; i.e., habitat requirements, biology, and threat analysis. Based on biological and threat analyses, investigate the need for management and implement where needed. Develop cooperative ventures with private landowners to restore riparian habitat. Search for additional populations and suitable habitat. Develop and implement a monitoring program. Determine the number of individuals required to maintain a viable population.	TN Hancock TN Hickman TN Humphreys	?
Bayou Darter	Prevent further headcutting. Ensure sand and gravel operations comply with state and federal regulations. Study fluvial geomorphic processes.	MS Claiborne MS Copiah MS Hinds	?

Species/Recovery Plan	Corps Action(s)	State and Counties Within Recovery Distribution	Corps Project(s)
	FISHES		
Chihuahua Chub	Provide flood protection consistent with habitat need for the chub. Recreate chub habitat. Provide irrigation diversions which are consistent with chub needs.	NM Grant	?
Neosho Madtom	Protect minimum streamflows. Determine streamflow requirements. Spawning habits and habitat selection. Determine tolerance to siltation. Effects of riffle degradation. Study impacts of tributary watershed dams.	KS Coffey KS Labette KS Marion KS Morris KS Woodson	John Redmond Reservoir Pearson-skubitz Big Hill Lake Marion Reservoir Council Grove Toronto Lake
Cahaba Shiner	Restore and protect historic habitat.	AL Bibb AL Perry AL Shelby	?
Duskytail Darter	Continue to utilize existing legislation and regulations to protect species and its habitat. Develop information and education program and present. Conduct research necessary for species management and recovery; i.e., habitat requirements, biology, and threat analysis. Based on biological and threat analysis, investigate need for management and implement where needed. Develop cooperative ventures with private landowners to restore riparian habitat. Develop techniques, select sites, reintroduce the species back into historic habitat, and evaluate and protect any populations established. Meet with local governmental officials and business interests and elicit their support for recovery. Determine number of individuals required to maintain viable population. Search for additional populations and suitable habitat. Develop and implement a monitoring program. Annually assess recovery program and modify program and plan where required.	TN Sullivan TN Blount TN Monroe TN Scott VA Scott	?

Species/Recovery Plan	Corps Action(s)	State and Counties Within Recovery Distribution	Corps Project(s)
	FISHES		
Waccamaw Silverside	Utilize existing legislation and regulations to protect species and its habitat. Work with appropriate federal and state agencies to identify sections that could negatively affect the species and incorporate protective measures into such actions. Encourage establishment of outstanding resource water designations and other protective strategies as a means of protecting the species. Meet with local government officials and business interests and elicit their support for recovery. Based on biological and threat analysis, investigate need for management and implement where needed.	NC Columbus	?

Species/Recovery Plan	Corps Action(s)	State and Counties Within Recovery Distribution	Corps Project(s)
AQUATIC INVERTEBRATES			
Tar Spinymussel	Utilize existing legislation and regulations to protect species and its habitats. Work with appropriate federal and state agencies to identify actions that could negatively affect the species and incorporate protective measures into such actions. Meet with local governmental officials and business interests and elicit their support for recovery. Encourage establishment of mussel sanctuaries, high quality resource water designations, and other protective strategies as a means of protecting present and reintroduced populations. Based on biological and threat analysis, investigate need for management and implement where needed.	NC Swift NC Edgecombe NC Franklin NC Nash NC Pitt	?
Tombigbee River Mussels/Curtus' Pearly Mussel and Marshall's Pearly Mussel	Status survey to determine current range. Determine habitat requirements. Conduct life history studies. Determine ecological requirements. Solicit assistance of other agencies.	MS Monroe MS Itawamba MS Lowndes	Tennessee-Tombigbee Aberdeen Tennessee-Tombigbee Aliceville Tennessee-Tombigbee Bay Springs Tennessee-Tombigbee Columbus Tennessee-Tombigbee Canal Section
Inflated Heelspitter	Protect known populations. Characterize habitat. Develop and implement monitoring plan. Determine species associates. Develop life history data. Implement plan to restore habitat.	AL Washington AL Choctaw AL Choctaw AL Clarke AL Greene AL Hale AL Marengo AL Pickens AL Sumter AL Tuscaloosa	?

Species/Recovery Plan	Corps Action(s)	State and Counties Within Recovery Distribution	Corps Project(s)
	AQUATIC INVERTEBRATES		
Speckled Pocketbook Mussel	Conduct population surveys. Use legislation to protect habitat. Characterize habitat. Determine associate species. Develop life history data. Develop plan to restore historic habitat. Develop plan for reestablishing mussel populations. Implement plan to restore historic habitat. Implement plan to reestablish populations in historic habitat. Determine minimum population levels. Develop plan to monitor populations. Implement monitoring plan.	AR Stone AR Van Buren	?
Arkansas Fatmucket Mussel	Use legislation to protect habitat. Develop and implement plan to protect habitat. Characterize habitat. Determine associate species. Develop life history data. Develop plan to restore historic habitat. Develop plan for reestablishing mussel populations. Implement plan to restore historic habitat. Implement plan to reestablish populations in historic habitat. Determine minimum population levels. Develop plan to monitor populations. Implement monitoring plan.	AR Clark AR Pike AR Garland	Degray Lake Lake Greeson Lake Ouachita
Royal Snail	Utilize existing legislation and regulations to protect species and its habitat. Work with appropriate federal and state agencies to identify actions that could negatively affect the species and incorporate protective measures into such actions. Encourage the establishment of outstanding resource water designations and other protective strategies as a means of protecting the species. Based on the biological data and threat analysis, investigate the need for management and implement where needed. Meet with local government officials and business interests and solicit their support for recovery.	TN Marion	?

Species/Recovery Plan	Corps Action(s)	State and Counties Within Recovery Distribution	Corps Project(s)
AQUATIC INVERTEBRATES			
Curtis' Pearly Mussel	Review habitat impacting proposals. Protect riparian zone. Eliminate limiting factors in former range.	MO Wayne	?
Purple Cat's Paw Pearlymussel	Develop and maintain captive populations of species. Develop techniques, select sites, reintroduce the species back into historic habitat, and evaluate and protect any populations established. Continue to utilize existing legislation and regulations to protect species and its habitat. Meet with local governmental officials and business interests and elicit their support for recovery. Develop information and education program and present. Consider use of land acquisition to protect the species.\ Conduct research necessary for species management and recover; i.e., habitat requirements, biology, and threat analysis. Based on biological threat analysis, investigate need for management and implement where needed. Determine number of individuals required to maintain viable population. Search for additional populations and suitable habitat. Develop and utilize cryopreservation techniques. Develop and implement a monitoring program. Annually assess recovery program and modify program and plan where required.	TN Smith	Cordell Hull Dam and Reservoir
Dwarf Wedge Mussel	Continue to utilize existing legislation and regulations to protect the species.	NC Wake	B Everett Jordan Dam and Lake Falls Lake

APPENIDIX B

JOINT VENTURE AREAS AND CORPS PROJECTS

CORPS PROJECT	DIVISION	DISTRICT	JOINT VENTURE
CARLYLE LAKE	LMVD	ST. LOUIS	LOWER MISS
DEGRAY LAKE	LMVD	VICKSBURG	LOWER MISS
LAKE GREESON	LMVD	VICKSBURG	LOWER MISS
LAKE OUACHITA	LMVD	VICKSBURG	LOWER MISS
OUACHITA-BLACK RIVERS (4 L&D, CALION POOL)	LMVD	VICKSBURG	LOWER MISS
OUACHITA-BLACK RIVERS (4 L&D, FELSENTHAL POOL	LMVD	VICKSBURG	LOWER MISS
REND LAKE	LMVD	ST. LOUIS	LOWER MISS
RIVERLANDS - ILLINOIS	LMVD	ST. LOUIS	UPPER MISSISSIPPI VALLEY
SAYLORVILLE LAKE	NCD	ROCK ISLAND	U.S. PRAIRIE POTHOLES
FARMDALE DAM	NCD	ROCK ISLAND	UPPER MISSISSIPPI VALLEY
ILLINOIS WATERWAY	NCD	ROCK ISLAND	UPPER MISSISSIPPI VALLEY
MISSISSIPPI RIVER POOL NO 10	NCD	ST. PAUL	UPPER MISSISSIPPI VALLEY
MISSISSIPPI RIVER POOLS 11-22	NCD	ROCK ISLAND	UPPER MISSISSIPPI VALLEY
BLACK ROCK LAKE	NED	NEW ENGLAND	ATLANTIC COAST
COLEBROOK RIVER LAKE	NED	NEW ENGLAND	ATLANTIC COAST
HANCOCK BROOK LAKE	NED	NEW ENGLAND	ATLANTIC COAST
HOP BROOK LAKE	NED	NEW ENGLAND	ATLANTIC COAST
MANSFIELD HOLLOW LAKE	NED	NEW ENGLAND	ATLANTIC COAST
NORTHFIELD BROOK LAKE	NED	NEW ENGLAND	ATLANTIC COAST

CORPS PROJECT	DIVISION	DISTRICT	JOINT VENTURE
THOMASTON DAM	NED	NEW ENGLAND	ATLANTIC COAST
WEST THOMPSON LAKE	NED	NEW ENGLAND	ATLANTIC COAST
ALBENI FALLS DAM AND LAKE PEND OREILLE	NPD	SEATTLE	INTERMOUNTAIN WEST
CAGLES MILL LAKE	ORD	LOUISVILLE	LOWER MISSISSIPPI VALLEY
LOCK & DAM 52 + OHIO RIVER	ORD	LOUISVILLE	LOWER MISSISSIPPI VALLEY
LOCK & DAM 53 + OHIO RIVER	ORD	LOUISVILLE	LOWER MISSISSIPPI VALLEY
SMITHLAND LOCK AND DAM +OHIO RIVER	ORD	LOUISVILLE	LOWER MISSISSIPPI VALLEY
ALLATOONA LAKE	SAD	MOBILE	ATLANTIC COAST
CARTERS LAKE	SAD	MOBILE	ATLANTIC COAST
GEORGE W. ANDREWS LAKE	SAD	MOBILE	ATLANTIC COAST
HARTWELL LAKE	SAD	SAVANNAH	ATLANTIC COAST
LAKE SIDNEY LANIER	SAD	MOBILE	ATLANTIC COAST
NEW SAVANNAH BLUFF LOCK AND DAM	SAD	SAVANNAH	ATLANTIC COAST
RICHARD B RUSSELL DAM AND LAKE	SAD	SAVANNAH	ATLANTIC COAST
WALTER F. GEORGE LAKE	SAD	MOBILE	ATLANTIC COAST
WEST POINT LAKE	SAD	MOBILE	ATLANTIC COAST
BLACK BUTTE LAKE	SPD	SACRAMENTO	CENTRAL VALLEY
EASTMAN LAKE	SPD	SACRAMENTO	CENTRAL VALLEY
HARRY L ENGLEBRIGHT LAKE	SPD	SACRAMENTO	CENTRAL VALLEY
HENSLEY LAKE	SPD	SACRAMENTO	CENTRAL VALLEY

CORPS PROJECT	DIVISION	DISTRICT	JOINT VENTURE
LAKE KAWEAH	SPD	SACRAMENTO	CENTRAL VALLEY
PINE FLAT LAKE	SPD	SACRAMENTO	CENTRAL VALLEY
STANISLAUS RIVER PARKS	SPD	SACRAMENTO	CENTRAL VALLEY
SUCCESS LAKE	SPD	SACRAMENTO	CENTRAL VALLEY
PAINTED ROCK DAM	SPD	LOS ANGELES	INTERMOUNTAIN WEST
ALAMO LAKE	SPD	LOS ANGELES	INTERMOUNTAIN WEST
MOJAVE RIVER DAM	SPD	LOS ANGELES	INTERMOUNTAIN WEST
CARBON CANYON DAM	SPD	LOS ANGELES	PACIFIC COAST
LAKE MENDOCINO	SPD	SACRAMENTO	PACIFIC COAST
LAKE SONOMA	SPD	SACRAMENTO	PACIFIC COAST
PRADO DAM	SPD	LOS ANGELES	PACIFIC COAST
MARTIS CREEK LAKE	SWD	TULSA	INTERMOUNTAIN WEST
BLUE MOUNTAIN LAKE	SWD	LITTLE ROCK	LOWER MISSISSIPPI VALLEY
DARDANELLE LAKE -	SWD	LITTLE ROCK	LOWER MISSISSIPPI VALLEY
DAVID D. TERRY LOCK AND DAM	SWD	LITTLE ROCK	LOWER MISSISSIPPI VALLEY
DEQUEEN LAKE	SWD	LITTLE ROCK	LOWER MISSISSIPPI VALLEY
DIERKS LAKE	SWD	LITTLE ROCK	LOWER MISSISSIPPI VALLEY
GILLHAM LAKE	SWD	LITTLE ROCK	LOWER MISSISSIPPI VALLEY
MILLWOOD LAKE	SWD	LITTLE ROCK	LOWER MISSISSIPPI VALLEY
MURRAY LOCK AND DAM	SWD	LITTLE ROCK	LOWER MISSISSIPPI VALLEY
NIMROD LAKE	SWD	LITTLE ROCK	LOWER MISSISSIPPI VALLEY

CORPS PROJECT	DIVISION	DISTRICT	JOINT VENTURE
NORRELL LOCK AND DAM - ARK.RIV.	SWD	LITTLE ROCK	LOWER MISSISSIPPI VALLEY
OZARK LAKE -ARK.RIV.	SWD	LITTLE ROCK	LOWER MISSISSIPPI VALLEY
POOL 3 LOCK AND DAM -	SWD	LITTLE ROCK	LOWER MISSISSIPPI VALLEY
POOL 4 LOCK AND DAM - ARK.RIV.	SWD	LITTLE ROCK	LOWER MISSISSIPPI VALLEY
POOL 5 LOCK AND DAM - ARK.RIV.	SWD	LITTLE ROCK	LOWER MISSISSIPPI VALLEY
ROCKEFELLER LAKE L & D	SWD	LITTLE ROCK	LOWER MISSISSIPPI VALLEY
TOAD SUCK FERRY LOCK AND DAM	SWD	LITTLE ROCK	LOWER MISSISSIPPI VALLEY
JOHN MARTIN DAM	SWD	ALBUQUERQUE	PLAYA LAKES
TRINIDAD LAKE	SWD	ALBUQUERQUE	PLAYA LAKES

APPENDIX C

ALL CORPS PROJECTS POSSIBLY INVOLVED IN RECOVERY PLANS AND/OR JOINT VENTURE AREAS

Corps Projects	State	District	Species/Recovery Plan	Joint Venture Areas
ABIQUIU DAM	NM	SWD	EAGLE, BALD	
ADDICKS DAM	TX	SWD	FLOWER, TEXAS PRAIRIE DAWN	
ALABAMA RIVER LAKES CLAIBORNE	AL	SAD	STORK, WOOD	
ALABAMA RIVER LAKES DANNELLY	AL	SAD	STORK, WOOD	
ALABAMA RIVER LAKES WOODRUFF	AL	SAD	STORK, WOOD	
ALAMO LAKE	AZ	SPD	EAGLE, BALD	INTERMOUNTAIN
ALBENI FALLS DAM AND LAKE PEND OREILLE	WA	NPD		INTERMOUNTAIN
ALLATOONA LAKE	GA	SAD	BAT, GRAY	ATLANTIC COAST
ALVIN R BUSH - KETTLE CREEK	PA	NAD	BULRUSH, NORTHEASTERN	
AQUILLA DAM & LAKE	TX	SWD	EAGLE, BALD	
AQUILLA DAM & LAKE	TX	SWD	WHOOPING CRANE	
ARCADIA LAKE	OK	SWD	EAGLE, BALD	
ARCADIA LAKE	OK	SWD	WHOOPING CRANE	
ARKABUTLA LAKE	MS	LMVD	EAGLE, BALD	
B EVERETT JORDAN DAM AND LAKE	NC	SAD	BALD EAGLE AND DWARF WEDGE MUSSEL	
B EVERETT JORDAN DAM AND LAKE	NC	SAD	SHINER, CAPE FEAR	
BALDHILL DAM LAKE ASHTABULA	ND	NCD	BALD EAGLE AND NORTHEASTERN BULRUSH	
BALL MOUNTAIN LAKE	VT	NED	BALD EAGLE AND NORTHEASTERN BULRUSH	
BARDWELL LAKE	TX	SWD	WHOOPING CRANE	
BARKER DAM	TX	SWD	FLOWER, TEXAS PRAIRIE DAWN	
BARKLEY LOCK AND DAM LAKE BARKLEY	KY	ORD	BAT, GRAY	
BARKLEY LOCK AND DAM LAKE BARKLEY	KY	ORD	EAGLE, BALD	
BARKLEY LOCK AND DAM LAKE BARKLEY	KY	ORD	POTATO-BEAN, PRICE'S	
BARRE FALLS DAM	MA	NED	BALD EAGLE	
BARREN RIVER LAKE	KY	ORD	BAT, GRAY	
BARREN RIVER LAKE	KY	ORD	SHRIMP, KENTUCKY CAVE	
BAYOU BODCAU RESERVOIR	LA	LMVD	STURGEON, PALLID	
BEAVER LAKE	AR	SWD	BAT, GRAY	
BELTON LAKE	TX	SWD	EAGLE, BALD	
BELTON LAKE	TX	SWD	WHOOPING CRANE	
BELTZVILLE LAKE	PA	NAD	BALD EAGLE AND NORTHEASTERN BULRUSH	
BENBROOK LAKE	TX	SWD	WHOOPING CRANE	
BERLIN LAKE	OH	ORD	EAGLE, BALD	
BIG BEND DAM LAKE SHARPE	SD	MRD	STURGEON, PALLID	
BIG BEND DAM LAKE SHARPE	SD	MRD	WHOOPING CRANE	
BIRCH HILL DAM	MA	NED	BALD EAGLE	
BIRCH LAKE	OK	SWD	EAGLE, BALD	

Corps Projects	State	District	Species/Recovery Plan	Joint Venture Areas
BIRCH LAKE	OK	SWD	WHOOPING CRANE	
BLACK BUTTE LAKE	CA	SPD	BEETLE, VALLEY ELDERBERRY LONGHORN	SACRAMENTO
BLACK BUTTE LAKE	CA	SPD	EAGLE, BALD	SACRAMENTO
BLACK ROCK LAKE	CT	NED	EAGLE, BALD	ATLANTIC COAST
BLACK WARRIOR AND TOMBIGBEE LAKES	AL	SAD	STORK, WOOD	
BLACKWATER DAM	NH	NED	EAGLE, BALD	
BLACK ROCK LAKE		NED		ATLANTIC COAST
BLUE MOUNTAIN LAKE	AR	SWD	EAGLE, BALD	LOWER MISS
BLUE RIVER LAKE	OR	NPD	EAGLE, BALD AND LOMATIUM'S BRADSHAW	
BONNEVILLE LOCK AND DAM	OR	NPD	EAGLE, BALD	
BOWMAN HALEY LAKE	ND	MRD	WHOOPING CRANE	
BREA DAM	CA	SPD	LEAST TERN	
BREA DAM	CA	SPD	VIREO, LEAST BELL'S	
BROKEN BOW LAKE	OK	SWD	EAGLE, BALD	
BROOKVILLE LAKE	IN	ORD	EAGLE, BALD	
BUFFUMVILLE LAKE	MA	NED	BALD EAGLE	
BULL SHOALS LAKE	AR	SWD	EAGLE, BALD	
CADDO LAKE	LA	LMVD	EAGLE, BALD	
CAGLES MILL LAKE	IN	ORD	EAGLE, BALD	LOWER MISS
CANNELTON LOCK AND DAM +OHIO RIVER	IN	ORD	EAGLE, BALD	
CANTON LAKE	OK	SWD	EAGLE, BALD	
CANTON LAKE	OK	SWD	WHOOPING CRANE	
CAPE COD CANAL	MA	NED	EAGLE, BALD	
CAPE COD CANAL	MA	NED	TERN, ROSEATE	
CARBON CANYON DAM	CA	SPD	EAGLE, BALD	PACIFIC COAST
CARLYLE LAKE	IL	LMVD	EAGLE, BALD	LOWER MISS
CARTERS LAKE	GA	SAD	BAT, GRAY	LOWER MISS
CARTERS LAKE	GA	SAD	SHINER, BLUE	ATLANTIC COAST
CAVE RUN LAKE	KY	ORD	EAGLE, BALD	
CAVE RUN LAKE	KY	ORD	GOLDENROD, WHITE-HAIRED	
CECIL M. HARDEN LAKE	IN	ORD	EAGLE, BALD	
CECIL M. HARDEN LAKE	IN	ORD	EAGLE, BALD	
CENTER HILL LAKE	TN	ORD	BAT, GRAY	
CENTER HILL LAKE	TN	ORD	EAGLE, BALD	
CENTER HILL LAKE	TN	ORD	POTATO-BEAN, PRICE'S	
CHATFIELD LAKE	CO	NED	EAGLE, BALD	
CHEATHAM LOCK AND DAM	TN	ORD	EAGLE, BALD	

Corps Projects	State	District	Species/Recovery Plan	Joint Venture Areas
CHIEF JOSEPH DAM AND RUFUS WOODS LAKE	WA	NPD	EAGLE, BALD	
CHOUTEAU LOCK AND DAM 17	OK	SWD	EAGLE, BALD	
CLARENCE CANNON DAM AND MARK TWAIN LA	MO	LMVD	BAT, GRAY	
CLEARWATER LAKE	MO	SWD	BAT, GRAY	
CLEARWATER LAKE	MO	SWD	EAGLE, BALD	
CLINTON LAKE	KS	MRD	EAGLE, BALD	
COCHITI LAKE	NM	SWD	EAGLE, BALD	
COLD BROOK LAKE	SD	MRD	EAGLE, BALD	
COLEBROOK RIVER LAKE	CT	NED	EAGLE, BALD	ATLANTIC COAST
CONANT BROOK DAM	MA	NED	EAGLE, BALD	
CONCHAS LAKE	NM	SWD	EAGLE, BALD	
COPAN LAKE	OK	SWD	EAGLE, BALD	
COPAN LAKE	OK	SWD	WHOOPING CRANE	
CORALVILLE LAKE	IA	NCD	EAGLE, BALD	
CORDELL HULL DAM AND RESERVOIR	TN	ORD	BAT, GRAY	
CORDELL HULL DAM AND RESERVOIR	TN	ORD	EAGLE, BALD	
CORDELL HULL DAM AND RESERVOIR	TN	ORD	PURPLE CAT'S PAW PEARLY MUSSEL	
COTTAGE GROVE LAKE	OR	NPD	EAGLE, BALD AND LOMATIUM'S BRADSHAW	
COTTONWOOD SPRINGS LAKE	SD	MRD	EAGLE, BALD	
COUGAR LAKE	OR	NPD	EAGLE, BALD AND LOMATIUM'S BRADSHAW	
COUNCIL GROVE	KS	SWD	EAGLE, BALD	
COUNCIL GROVE	KS	SWD	MADTOM, NEOSHO	
COUNCIL GROVE	KS	SWD	WHOOPING CRANE	
COWANESQUE LAKE	PA	NAD	EAGLE, BALD	
DALE HOLLOW LAKE	TN	ORD	BAT, GRAY	
DALE HOLLOW LAKE	TN	ORD	EAGLE, BALD	
DARDANELLE LAKE - ARK.RIV.NAV.SYS	AR	SWD	EAGLE, BALD	LOWER MISS
DAVID D. TERRY LOCK AND DAM - ARK.RIV.NAV.	AR	SWD	EAGLE, BALD	LOWER MISS
DEGRAY LAKE	AR	LMVD	ARKANSAS FATMUCKET	LOWER MISS
DEGRAY LAKE	AR	LMVD	EAGLE, BALD	LOWER MISS
DEQUEEN LAKE	AR	SWD	EAGLE, BALD	LOWER MISS
DETROIT LAKE	OR	NPD	EAGLE, BALD	
DETROIT LAKE	OR	NPD	LOMATIUM, BRADSHAW'S	
DEXTER LAKE	OR	NPD	EAGLE, BALD AND LOMATIUM'S BRADSHAW	
DIERKS LAKE	AR	SWD	EAGLE, BALD	LOWER MISS
DORENA LAKE	OR	NPD	EAGLE, BALD AND LOMATIUM'S BRADSHAW	
DULUTH-SUPERIOR HARBOR	MN	NCD	EAGLE, BALD	

Corps Projects	State	District	Species/Recovery Plan	Joint Venture Areas
DULUTH-SUPERIOR HARBOR	MN	NCD	PIPING PLOVERS	
DWORSHAK DAM & RESERVOIR	ID	NPD	EAGLE, BALD	
EAST BRIMFIELD LAKE	MA	NED	BALD EAGLE	
EASTMAN LAKE	CA	SPD	BALD EAGLE, LONGHORN ELDEBERRY BEETLE	CENTRAL VALLEY
EASTMAN LAKE	CA	SPD	PIAUTE CUTTHROAT TROUT	CENTRAL VALLEY
EAU GALLE FLOOD CONTROL PROJECT	WI	NCD	EAGLE, BALD	
EAU GALLE FLOOD CONTROL PROJECT	WI	NCD	EAGLE, BALD	
EDWARD MACDOWELL LAKE	NH	NED	MUSSEL, DWARF WEDGE	
EL DORADO LAKE	KS	SWD	EAGLE, BALD	
EL DORADO LAKE	KS	SWD	WHOOPING CRANE	
ELK CITY LAKE	KS	SWD	EAGLE, BALD	
ENID LAKE	MS	LMVD	EAGLE, BALD	
ENID LAKE	MS	LMVD	EAGLE, BALD	
EUFAULA LAKE	OK	SWD	WHOOPING CRANE	
FALL CREEK LAKE	OR	NPD	EAGLE, BALD AND LOMATIUM'S BRADSHAW	
FALL RIVER LAKE	KS	SWD	EAGLE, BALD	
FALLS LAKE	NC	SAD	BALD EAGLE, DWARF WEDGE MUSSEL	
FARMDALE DAM	IL	NCD	ASTER, DECURRENT FALSE and EAGLE, BALD	UPPER MISS
FERN RIDGE LAKE	OR	NPD	EAGLE, BALD AND LOMATIUM'S BRADSHAW	
FERNANDINA HARBOR	FL	SAD	STORK, WOOD	
FERNANDINA HARBOR	FL	SAD	TURTLE, GREEN SEA	
FERNANDINA HARBOR	FL	SAD	TURTLE, HAWKSBILL SEA	
FERNANDINA HARBOR	FL	SAD	TURTLE, LEATHERBACK SEA	
FERNANDINA HARBOR	FL	SAD	TURTLE, LOGGERHEAD SEA	
FERRELLS BRIDGE DAM LAKE O' THE PINES	TX	SWD	EAGLE, BALD	
FORT GIBSON LAKE	OK	SWD	EAGLE, BALD	
FORT GIBSON LAKE	OK	SWD	EAGLE, BALD	
FORT PECK PROJECT	MT	MRD	EAGLE, BALD	
FORT PECK PROJECT	MT	MRD	PIPING PLOVERS	
FORT PECK PROJECT	MT	MRD	STURGEON, PALLID	
FORT RANDALL DAM LAKE FRANCIS CASE	SD	MRD	EAGLE, BALD	
FORT RANDALL DAM LAKE FRANCIS CASE	SD	MRD	PIPING PLOVERS	
FORT RANDALL DAM LAKE FRANCIS CASE	SD	MRD	STURGEON, PALLID	
FORT RANDALL DAM LAKE FRANCIS CASE	SD	MRD	WHOOPING CRANE	
FORT RANDALL DAM LAKE FRANCIS CASE	SD	MRD	WHOOPING CRANE	
FORT RANDALL DAM LAKE FRANCIS CASE	SD	MRD	WHOOPING CRANE	
FORT RANDALL DAM LAKE FRANCIS CASE	SD	MRD	WHOOPING CRANE	

Corps Projects	State	District	Species/Recovery Plan	Joint Venture Areas
FORT SUPPLY LAKE	OK	SWD	EAGLE, BALD	
FOSTER LAKE	OR	NPD	EAGLE, BALD, LOMATIUM, BRADSHAW'S	
FOUR RIVER BASINS	FL	SAD	EAGLE, BALD	
FOUR RIVER BASINS	FL	SAD	FLORDIA SNAIL KITE	
FOUR RIVER BASINS	FL	SAD	PIPING PLOVERS	
FOUR RIVER BASINS	FL	SAD	STORK, WOOD	
FRANCIS E WALTER DAM	PA	NAD	BALD EAGLE AND NORTHEASTERN BULRUSH	
FRANKLIN FALLS DAM	NH	NED	EAGLE, BALD	
FULLERTON DAM	CA	SPD	LEAST TERN	
FULLERTON DAM	CA	SPD	VIREO, LEAST BELL'S	
GALISTEO DAM	NM	SWD	STURGEON, PALLID	
GARRISON DAM LAKE SAKAKAWEA	ND	MRD	EAGLE, BALD	
GARRISON DAM LAKE SAKAKAWEA	ND	MRD	EAGLE, BALD	
GARRISON DAM LAKE SAKAKAWEA	ND	MRD	PIPING PLOVERS	
GARRISON DAM LAKE SAKAKAWEA	ND	MRD	STURGEON, PALLID	
GARRISON DAM LAKE SAKAKAWEA	ND	MRD	WHOOPING CRANE	
GATHRIGHT DAM-LAKE MOOMAW	VA	NAD	EAGLE, BALD	
GATHRIGHT DAM-LAKE MOOMAW	VA	NAD	SPINYMUSSEL, JAMES RIVER	
GAVINS POINT PROJECT	SD	MRD	BALD EAGLE AND PALLID STURGEON	
GAVINS POINT PROJECT	SD	MRD	PIPING PLOVERS	
GAVINS POINT PROJECT	SD	MRD	PIPING PLOVERS	
GAVINS POINT PROJECT	SD	MRD	STURGEON, PALLID	
GEORGE W. ANDREWS LAKE	GA	SAD	EAGLE, BALD and 'STORK, WOOD	ATLANTIC COAST
GILLHAM LAKE	AR	SWD	EAGLE, BALD	LOWER MISS
GLENN CUNNINGHAM LAKE	NE	MRD	EAGLE, BALD	
GRAPEVINE LAKE	TX	SWD	WHOOPING CRANE	
GRAYSON LAKE	KY	ORD	BAT, GRAY	
GREAT SALT PLAINS	OK	SWD	EAGLE, BALD	
GREAT SALT PLAINS	OK	SWD	WHOOPING CRANE	
GREEN PETER LAKE	OR	NPD	EAGLE, BALD, LOMATIUM, BRADSHAW'S	
GREEN RIVER LAKE	KY	ORD	EAGLE, BALD	
GREENRIVER +2 LOCKS	KY	ORD	EAGLE, BALD	
GREENUP LOCKS AND DAM <OHIO R>	KY	ORD	BAT, GRAY	
GREERS FERRY LAKE	AR	SWD	EAGLE, BALD	
GRENADA LAKE	MS	LMVD	EAGLE, BALD	
HANCOCK BROOK LAKE	CT	NED	EAGLE, BALD	ATLANTIC COAST
HANSEN DAM	CA	SPD	LEAST BELL'S VIREO, BALD EAGLE	

Corps Projects	State	District	Species/Recovery Plan	Joint Venture Areas
HANSEN DAM	CA	SPD	LEAST TERN	
HARLAN COUNTY LAKE	NE	MRD	EAGLE, BALD	
HARLAN COUNTY LAKE	NE	MRD	WHOOPING CRANE	
HARRY L ENGLEBRIGHT LAKE	CA	SPD	BALD EAGLE, ELDEBERRY LONGHORN BEETLE	CENTRAL VALLEY
HARRY S TRUMAN DAM AND RESERVOIR	MO	MRD	BAT, GRAY	
HARTWELL LAKE	GA	SAD	EAGLE, BALD	ATLANTIC COAST
HENSLEY LAKE	CA	SPD	BALD EAGLE, ELDEBERRY BEETLE	CENTRAL VALLEY
HENSLEY LAKE	CA	SPD	PIAUTE CUTTHROAT TROUT	CENTRAL VALLEY
HEYBURN LAKE	OK	SWD	EAGLE, BALD	
HEYBURN LAKE	OK	SWD	WHOOPING CRANE	
HILLS CREEK	OR	NPD	EAGLE, BALD AND LOMATIUM'S BRADSHAW	
HILLSDALE LAKE	KS	MRD	EAGLE, BALD	
HODGES VILLAGE DAM	MA	NED	BALD EAGLE	
HOP BROOK LAKE	CT	NED	EAGLE, BALD AND TERN, ROSEATE	ATLANTIC COAST
HOPKINTON-EVERETT LAKE	NH	NED	EAGLE, BALD	
HORDS CREEK LAKE	TX	SWD	CONCHO WATER SNAKE	
HUGO LAKE	OK	SWD	EAGLE, BALD	
HULAH LAKE	OK	SWD	EAGLE, BALD	
HULAH LAKE	OK	SWD	WHOOPING CRANE	
HUNTINGTON LAKE	IN	ORD	EAGLE, BALD	
ICE HARBOR LOCK & DAM, LAKE SACAJAWEA	WA	NPD	EAGLE, BALD	
ILLINOIS WATERWAY		NCD		UPPER MISS
IWW DELAWARE R TO CHESAPEAKE BAY C + D	MD	NAD		
JEMEZ CANYON DAM	NM	SWD	EAGLE, BALD	
JOHN H KERR DAM AND RESERVOIR	VA	SAD	EAGLE, BALD	
JOHN MARTIN DAM	CO	SWD	EAGLE, BALD	PLAYA LAKES
JOHN PAUL HAMMERSCHMIDT LAKE	AR	SWD	EAGLE, BALD	
JOHN REDMOND RESERVOIR	KS	SWD	MADTOM, NEOSHO	
JOHN W FLANNAGAN DAM AND RESERVOIR	VA	ORD	SPIRAEA, VIRGINIA	
KANOPOLIS LAKE	KS	MRD	EAGLE, BALD	
KAW LAKE	OK	SWD	EAGLE, BALD	
KAW LAKE	OK	SWD	WHOOPING CRANE	
KEWEENAW WATERWAY	MI	NCD	EAGLE, BALD	
KEYSTONE LAKE	OK	SWD	EAGLE, BALD	
KEYSTONE LAKE	OK	SWD	WHOOPING CRANE	
KINZUA DAM AND ALLEGHENY RESERVOIR	PA	ORD	EAGLE, BALD	
KNIGHTVILLE DAM	MA	NED	EAGLE, BALD	

Corps Projects	State	District	Species/Recovery Plan	Joint Venture Areas
LAC QUI PARLE LAKE	MN	NCD	EAGLE, BALD	
LAC QUI PARLE LAKE	MN	NCD	EAGLE, BALD	
LAKE CROCKETT/KEYSTONE HARBOR/FT CASE	WA	NPD	EAGLE, BALD	
LAKE GREESON	AR	LMVD	ARKANSAS FATMUCKET and 'EAGLE, BALD	LOWER MISS
LAKE KAWEAH	CA	SPD	EAGLE, BALD	CENTRAL VALLEY
LAKE MENDOCINO	CA	SPD	EAGLE, BALD	PACIFIC COAST
LAKE OKEECHOBEE AND WATERWAY	FL	SAD	EAGLE, BALD	
LAKE OKEECHOBEE AND WATERWAY	FL	SAD	FLORDIA SNAIL KITE	
LAKE OKEECHOBEE AND WATERWAY	FL	SAD	MOUSE, SOUTHEASTERN BEACH	
LAKE OKEECHOBEE AND WATERWAY	FL	SAD	STORK, WOOD	
LAKE OUACHITA	AR	LMVD	ARKANSAS FATMUCKET and 'EAGLE, BALD	LOWER MISS
LAKE RED ROCK	IA	NCD	EAGLE, BALD	
LAKE SEMINOLE	FL	SAD	BAT, GRAY	
LAKE SEMINOLE	FL	SAD	EAGLE, BALD	
LAKE SEMINOLE	FL	SAD	STORK, WOOD	
LAKE SEMINOLE	FL	SAD	TORREYA, FLORIDA	
LAKE SHELBYVILLE	IL	LMVD	EAGLE, BALD	
LAKE SIDNEY LANIER	GA	SAD	EAGLE, BALD	ATLANTIC COAST
LAKE SONOMA	CA	SPD	EAGLE, BALD, MOUSE, SALT MARSH HARVEST	PACIFIC COAST
LAKE SONOMA	CA	SPD	RAIL, CALIFORNIA CLAPPER	
LAUREL RIVER LAKE	KY	ORD	BAT, GRAY	
LAUREL RIVER LAKE	KY	ORD	EAGLE, BALD	
LAUREL RIVER LAKE	KY	ORD	SPIRAEA, VIRGINIA	
LEWISVILLE LAKE	TX	ORD	WHOOPING CRANE	
LIBBY DAM AND LAKE KOOCANUSA	MT	NPD	EAGLE, BALD	
LITTLE GOOSE LOCK & DAM, LAKE BRYAN	WA	NPD	EAGLE, BALD	
LOCK & DAM 52 + OHIO RIVER	IL	ORD	EAGLE, BALD	LOWER MISS
LONG BRANCH LAKE	MO	MRD	EAGLE, BALD	
LOOKOUT POINT LAKE	OR	NPD	EAGLE, BALD AND LOMATIUM'S BRADSHAW	
LOST CREEK LAKE	OR	NPD	EAGLE, BALD	
LOWER GRANITE LOCK & DAM	WA	NPD	EAGLE, BALD	
LOWER MONUMENTAL LOCK & DAM, LAKE WES	WA	NPD	EAGLE, BALD	
MANSFIELD HOLLOW LAKE	CT	NED	EAGLE, BALD	ATLANTIC COAST
MARION RESERVOIR	KS	SWD	EAGLE, BALD	
MARION RESERVOIR	KS	SWD	MADTOM, NEOSHO	
MARION RESERVOIR	KS	SWD	WHOOPING CRANE	
MARTINS FORK LAKE	KY	SWD	BAT, GRAY	

Corps Projects	State	District	Species/Recovery Plan	Joint Venture Areas
MARTIS CREEK LAKE	CA	SWD	EAGLE, BALD	INTERMOUNTAIN
MCALPINE LOCK AND DAM +OHIO RIVER	KY	ORD	BAT, GRAY	
MCNARY LOCK & DAM, LAKE WALLULA	WA	NPD	EAGLE, BALD	
MELVERN LAKE	KS	MRD	EAGLE, BALD	
MIAMI HARBOR	FL	SAD	EAGLE, BALD	
MIAMI HARBOR	FL	SAD	FLORDIA SNAIL KITE	
MIAMI HARBOR	FL	SAD	FLORDIA SNAIL KITE	
MIAMI HARBOR	FL	SAD	STORK, WOOD	
MIAMI HARBOR	FL	SAD	TURTLE, GREEN SEA	
MIAMI HARBOR	FL	SAD	TURTLE, HAWKSBILL SEA	
MIAMI HARBOR	FL	SAD	TURTLE, LEATHERBACK SEA	
MIAMI HARBOR	FL	SAD	TURTLE, LOGGERHEAD SEA	
MICHAEL J KIRWAN DAM AND RESERVOIR	OH	ORD	EAGLE, BALD	
MILFORD LAKE	KS	MRD	EAGLE, BALD	
MILFORD LAKE	KS	MRD	WHOOPING CRANE	
MILL CREEK LAKE	WA	NPD	EAGLE, BALD	
MILLWOOD LAKE	AR	SWD	EAGLE, BALD	LOWER MISS
MISSISSINEWA LAKE	IN	ORD	EAGLE, BALD	
MISSISSIPPI RIVER POOL U+L ST ANTHONY FA	MN	NCD	EAGLE, BALD	
MISSISSIPPI RIVER POOL NO 1	MN	NCD	EAGLE, BALD	
MISSISSIPPI RIVER POOL NO 2	MN	NCD	EAGLE, BALD	
MISSISSIPPI RIVER POOL NO 3	MN	NCD	EAGLE, BALD	
MISSISSIPPI RIVER POOL NO 4	MN	NCD	EAGLE, BALD	
MISSISSIPPI RIVER POOL NO 5	MN	NCD	EAGLE, BALD	
MISSISSIPPI RIVER POOL NO 5A	MN	NCD	EAGLE, BALD	
MISSISSIPPI RIVER POOL NO 7	MN	NCD	EAGLE, BALD	
MISSISSIPPI RIVER POOL NO 9	WI	NCD	EAGLE, BALD	
MISSISSIPPI RIVER POOL NO 10	IA	NCD	EAGLE, BALD	UPPER MISS
MISSISSIPPI RIVER POOLS 11-22	IL	NCD	EAGLE, BALD	UPPER MISS
MOJAVE RIVER DAM	CA	SPD	LEAST BELL'S VIREO, BALD EAGLE	INTERMOUNTAIN
MOSQUITO CREEK LAKE	OH	ORD	EAGLE, BALD	
MUD MOUNTAIN DAM PROJECT WHITE RIVER	WA	NPD	EAGLE, BALD	
MURRAY LOCK AND DAM - ARK.RIV.NAV.SYS	AR	SWD	EAGLE, BALD	LOWER MISS
NAVARRO MILLS LAKE	TX	SWD	WHOOPING CRANE	
NEW HOGAN LAKE	CA	SPD	EAGLE, BALD	
NEW SAVANNAH BLUFF LOCK AND DAM	GA	SAD	EAGLE, BALD	ATLANTIC COAST
NEWT GRAHAM LOCK AND DAM 18	OK	SWD	EAGLE, BALD	

Corps Projects	State	District	Species/Recovery Plan	Joint Venture Areas
NIMROD LAKE	AR	SWD	EAGLE, BALD	LOWER MISS
NORFORK LAKE	AR	SWD	EAGLE, BALD	
NORRELL LOCK AND DAM - ARK.RIV.NAV.SYS	AR	SWD	EAGLE, BALD	LOWER MISS
NORTH FORK OF POUND RIVER LAKE	VA	ORD	SPIRAEA, VIRGINIA	
NORTH HARTLAND LAKE	VT	NED	EAGLE, BALD, MILK-VETCH, JESUP'S,	
NORTH HARTLAND LAKE	VT	NED	MUSSEL, DWARF WEDGE	
NORTH SPRINGFIELD LAKE	VT	NED	MUSSEL, DWARF WEDGE	
NORTH SPRINGFIELD LAKE	VT	NED	EAGLE, BALD, MILK-VETCH, JESUP'S	
NORTHFIELD BROOK LAKE	CT	NED	EAGLE, BALD	ATLANTIC COAST
O.C. FISHER LAKE	TX	SWD	CONCHO WATER SNAKE AND BALD EAGLE	
OAHE DAM LAKE OAHE	SD	MRD	EAGLE, BALD	
OAHE DAM LAKE OAHE	SD	MRD	PIPING PLOVERS	
OAHE DAM LAKE OAHE	SD	MRD	STURGEON, PALLID	
OAHE DAM LAKE OAHE	SD	MRD	WHOOPING CRANE	
OOLOGAH LAKE	OK	SWD	EAGLE, BALD	
OPTIMA LAKE	OK	SWD	EAGLE, BALD	
ORWELL LAKE	MN	NCD	EAGLE, BALD	
OTTER BROOK LAKE	NH	NED	MUSSEL, DWARF WEDGE	
OUACHITA-BLACK RIVERS (4 L&D, CALION POOL	AR	LMVD	EAGLE, BALD	LOWER MISS
OUACHITA-BLACK RIVERS (4 L&D, COLUMBIA P	LA	LMVD	STURGEON, PALLID	
OUACHITA-BLACK RIVERS (4 L&D, FELSENTHAL	AR	LMVD	EAGLE, BALD	LOWER MISS
OUACHITA-BLACK RIVERS (4 L&D, JONESVILLE	LA	LMVD	STURGEON, PALLID	
OUACHITA-BLACK RIVERS (4 L&D, JONESVILLE	LA	LMVD	STURGEON, PALLID	
OZARK LAKE - ARK.RIV.NAV.SYS	AR	SWD	EAGLE, BALD	LOWER MISS
OZARK LAKE - ARK.RIV.NAV.SYS	AR	SWD	GEOCARPON MINIMUM	
PAINTED ROCK DAM	AZ	ORD	EAGLE, BALD	INTERMOUNTAIN
PAT MAYSE LAKE	TX	SWD	EAGLE, BALD	
PATOKA LAKE	IN	ORD	EAGLE, BALD	
PEARSON-SKUBITZ BIG HILL LAKE	KS	SWD	BAT, GRAY	
PEARSON-SKUBITZ BIG HILL LAKE	KS	SWD	EAGLE, BALD	
PEARSON-SKUBITZ BIG HILL LAKE	KS	SWD	MADTOM, NEOSHO	
PERRY LAKE	KS	MRD	EAGLE, BALD	
PHILPOTT LAKE	VA	SAD	CONEFLOWER, SMOOTH	
PINE CREEK LAKE	OK	SWD	EAGLE, BALD	
PINE FLAT LAKE	CA	SPD	BEETLE, ELDERBERRY LONGHORN	CENTRAL VALLEY
PINE FLAT LAKE	CA	SPD	BALD EAGLE	CENTRAL VALLEY
PIPESTEM LAKE	ND	MRD	EAGLE, BALD	

Corps Projects	State	District	Species/Recovery Plan	Joint Venture Areas
PIPESTEM LAKE	ND	MRD	PIPING PLOVERS	
PIPESTEM LAKE	ND	MRD	WHOOPING CRANE	
POMME DE TERRE LAKE	MO	MRD	BAT, GRAY	
POMONA LAKE	KS	MRD	EAGLE, BALD	
POOL 3 LOCK AND DAM - ARK.RIV.NAV.SYS	AR	SWD	EAGLE, BALD	LOWER MISS
POOL 4 LOCK AND DAM - ARK.RIV.NAV.SYS	AR	SWD	EAGLE, BALD	LOWER MISS
POOL 5 LOCK AND DAM - ARK.RIV.NAV.SYS	AR	SWD	EAGLE, BALD	LOWER MISS
PRADO DAM	CA	SPD	LEAST BELL'S VIREO, BALD EAGLE	PACIFIC COAST
PROMPTON LAKE	PA	NAD	EAGLE, BALD	
RATHBUN LAKE	IA	MRD	EAGLE, BALD	
RAY ROBERTS LAKE	TX	SWD	WHOOPING CRANE	
RAYSTOWN LAKE	PA	NAD	BULRUSH, NORTHEASTERN	
RED RIVER WATERWAY (POOL 1)	LA	LMVD	STURGEON, PALLID	
RED RIVER WATERWAY (POOL 3)	LA	LMVD	EAGLE, BALD	
RED RIVER WATERWAY (POOL 3)	LA	LMVD	STURGEON, PALLID	
REND LAKE	IL	LMVD	EAGLE, BALD	LOWER MISS
RICHARD B RUSSELL DAM AND LAKE	GA	SAD	EAGLE, BALD	ATLANTIC COAST
RIVERLANDS - ILLINOIS		LMVD		UPPER MISS
ROBERT S. KERR, LOCK AND DAM 15	OK	SWD	EAGLE, BALD	
ROCKEFELLER LAKE-ORMAND L & D-ARK.RIV.N	AR	SWD	EAGLE, BALD	LOWER MISS
ROUGH RIVER LAKE	KY	ORD	BAT, GRAY	
S F BAY MODEL REGIONAL VISITOR CENTER	CA	SPD	ANTIOCH DUNES EVENING PRIMROSE	
SALAMONIE LAKE	IN	ORD	EAGLE, BALD	
SAM RAYBURN RESERVOIR	TX	SWD	EAGLE, BALD	
SANTA FE DAM	CA	SPD	LEAST BELL'S VIREO, BALD EAGLE	
SANTA FE DAM	CA	SPD	LEAST TERN	
SANTA ROSA DAM AND LAKE	NM	SWD	EAGLE, BALD	
SARDIS LAKE	OK	LMVD	EAGLE, BALD	
SARDIS LAKE	OK	LMVD	WHOOPING CRANE	
SAYLORVILLE LAKE	IA	NCD	EAGLE, BALD	PRAIRIE POTHOLE
SEPULVEDA DAM	CA	SPD	LEAST BELL'S VIREO, BALD EAGLE	
SEPULVEDA DAM	CA	SPD	LEAST TERN	
SHENANGO RIVER LAKE	PA	ORD	EAGLE, BALD	
SKIATOOK LAKE	OK	SWD	EAGLE, BALD	
SKIATOOK LAKE	OK	SWD	WHOOPING CRANE	
SMITHLAND LOCK AND DAM +OHIO RIVER	IL	ORD	BAT, GRAY AND BALD EAGLE	
SMITHVILLE LAKE	MO	MRD	STURGEON, PALLID	LOWER MISS

Corps Projects	State	District	Species/Recovery Plan	Joint Venture Areas
SOMERVILLE LAKE	TX	SWD	WHOOPING CRANE	
ST MARYS RIVER	MI	NCD	EAGLE, BALD	
ST MARYS RIVER	MI	NCD	PIPING PLOVERS	
STANISLAUS RIVER PARKS		SPD		CENTRAL VALLEY
STANDING BEAR LAKE	NE	MRD	EAGLE, BALD	
STILLHOUSE HOLLOW RESERVOIR	TX	SWD	EAGLE, BALD	
STILLHOUSE HOLLOW RESERVOIR	TX	SWD	WHOOPING CRANE	
STOCKTON LAKE	MO	MRD	GEOCARPON MINIMUM	
STURGEON BAY AND LAKE MICHIGAN SHIP CAN	WI	NCD	EAGLE, BALD	
SUCCESS LAKE	CA	SPD	EAGLE, BALD	CENTRAL VALLEY
SUMMERSVILLE LAKE	WV	ORD	SPIRAEA, VIRGINIA	
SURRY MOUNTAIN LAKE	NH	NED	MUSSEL, DWARF WEDGE	
TABLE ROCK LAKE	MO	SWD	BALD EAGLE AND GRAY BAT	
TENKILLER FERRY LAKE	OK	SWD	EAGLE, BALD	
TENNESSEE-TOMBIGBEE ABERDEEN	MS	SAD	CURTUS' PEARLY MUSSEL	
TENNESSEE-TOMBIGBEE ABERDEEN	MS	SAD	MARSHALL'S PEARLY MUSSEL	
TENNESSEE-TOMBIGBEE ALICEVILLE	MS	SAD	CURTUS' PEARLY MUSSEL	
TENNESSEE-TOMBIGBEE ALICEVILLE	MS	SAD	MARSHALL'S PEARLY MUSSEL	
TENNESSEE-TOMBIGBEE BAY SPRINGS	MS	SAD	CURTUS' PEARLY MUSSEL	
TENNESSEE-TOMBIGBEE BAY SPRINGS	MS	SAD	MARSHALL'S PEARLY MUSSEL	
TENNESSEE-TOMBIGBEE CANAL SECTION	MS	SAD	MARSHALL'S PEARLY MUSSEL	
TENNESSEE-TOMBIGBEE COLUMBUS	MS	SAD	CURTUS' PEARLY MUSSEL	
TENNESSEE-TOMBIGBEE COLUMBUS	MS	SAD	MARSHALL'S PEARLY MUSSEL	
TEXOMA LAKE	TX	SWD	EAGLE, BALD	
THE DALLES LOCK AND DAM, LAKE CELILO	WA	NPD	EAGLE, BALD	
THOMASTON DAM	CT	NED	EAGLE, BALD	ATLANTIC COAST
TIOGA-HAMMOND LAKES	PA	NAD	EAGLE, BALD	
TIONESTA LAKE	PA	ORD	EAGLE, BALD	
TOAD SUCK FERRY LOCK AND DAM-ARK.RIV.NA	AR	SWD	EAGLE, BALD	LOWER MISS
TORONTO LAKE	KS	SWD	EAGLE, BALD	
TORONTO LAKE	KS	SWD	MADTOM, NEOSHO	
TOWN BLUFF DAM B.A. STEINHAGEN LAKE	TX	SWD	EAGLE, BALD	
TOWNSHEND LAKE	VT	NED	BALD EAGLE AND NORTHEASTERN BULRUSH	
TRINIDAD LAKE	CO	SWD	EAGLE, BALD	PLAYA LAKES
TULLY LAKE	MA	NED	BALD EAGLE	
TUTTLE CREEK LAKE	KS	MRD	EAGLE, BALD	
TWO RIVERS DAM	NM	MRD	EAGLE, BALD	

Corps Projects	State	District	Species/Recovery Plan	Joint Venture Areas
UNION CITY DAM	PA	ORD	EAGLE, BALD	
UNION VILLAGE DAM	VT	NED	EAGLE, BALD	
UNIONTOWN LOCK AND DAM +OHIO RIVER	IN	ORD	EAGLE, BALD	
W KERR SCOTT DAM AND RESERVOIR	NC	SAD	FALCON, AMERICAN PEREGRINE	
WALLACE LAKE	LA	LMVD	STURGEON, PALLID	
WALTER F. GEORGE LAKE	GA	SAD	EAGLE, BALD, STORK, WOOD	ATLANTIC COAST
WAPPAPELLO LAKE	MO	LMVD	CURTIS' PEARLY MUSSEL	
WAURIKA LAKE	OK	SWD	EAGLE, BALD, 'WHOOPING CRANE	
WD MAYO LOCK AND DAM 14	OK	SWD	EAGLE, BALD	
WEBBERS FALLS LOCK AND DAM 16	OK	SWD	EAGLE, BALD, 'WHOOPING CRANE	
WEHRSPANN LAKE	NE	MRD	EAGLE, BALD	
WEST FORK OF MILL CREEK LAKE	OH	ORD	EAGLE, BALD	
WEST HILL DAM	MA	NED	BALD EAGLE	
WEST POINT LAKE	GA	SAD	EAGLE, BALD	ATLANTIC COAST
WEST THOMPSON LAKE	CT	NED	EAGLE, BALD	ATLANTIC COAST
WESTVILLE LAKE	MA	NED	BALD EAGLE	
WHITNEY LAKE	TX	NAD	EAGLE, BALD	
WHITNEY LAKE	TX	NAD	EAGLE, BALD	
WHITNEY LAKE	TX	NAD	WHOOPING CRANE	
WHITNEY LAKE	TX	NAD	WHOOPING CRANE	
WHITTIER NARROWS DAM	CA	SPD	LEAST BELL'S VIREO, BALD EAGLE	
WHITTIER NARROWS DAM	CA	SPD	LEAST TERN	
WILBUR D. MILLS LOCK AND DAM-ARK.RIV.NAV.	AR	SWD	EAGLE, BALD	
WILLAMETTE FALLS LOCKS	OR	NPD	EAGLE, BALD	
WILLOW CREEK	OR	NPD	EAGLE, BALD	
WILSON LAKE	KS	MRD	EAGLE, BALD	
WILSON LAKE	KS	MRD	WHOOPING CRANE	
WOLF CREEK DAM LAKE CUMBERLAND	KY	ORD	EAGLE, BALD	
WRIGHT PATMAN DAM AND LAKE	TX	SWD	EAGLE, BALD	
WRIGHT PATMAN DAM AND LAKE	TX	SWD	EAGLE, BALD	
YOUGHIOGHENY RIVER LAKE	PA	ORD	EAGLE, BALD	
ZORINSKY LAKE	NE	MRD	EAGLE, BALD	

REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

Public reporting burden for this information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate and any other aspect of this collection of information, including suggestions for reducing this burden, to Washington headquarters Service, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204 Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.

1. AGENCY USE ONLY (*Leave blank*)	2. REPORT DATE	3. REPORT TYPE AND DATES COVERED
	October 1996	Final

4. TITLE AND SUBTITLE
Endangered Species and North American Waterfowl Management Plan Joint Venture Areas

5. FUNDING NUMBERS

6. AUTHOR(S)
Karla Allred

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES
USACE, Water Resources Support Center
Institute for Water Resources
Casey Building, 7701 Telegraph Road
Alexandria, VA 22315-3868

8. PERFORMING ORGANIZATION REPORT NUMBER
IWR Report 96-R-22

9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)
Headquarters, U. S. Army Corps of Engineers
Directorate of Civil Works
20 Massachusetts Avenue, NW
Washington, DC 20314-1000

10. SPONSORING/MONITORING AGENCY REPORT NUMBER

11. SUPPLEMENTARY NOTES
Available from the National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161, (703) 487-4650

12a. DISTRIBUTION/ AVAILABILITY STATEMENT
Approved for public release; distribution unlimited

12b. DISTRIBUTION CODE

13. ABSTRACT (Maximum 200 words)
In Accordance with the Government Performance and Review Act and its on-going implementation in the Corps of Engineers Operations and Maintenance Program, the Natural Resources Branch of this same agency has instituted a plan of action to develop performance standards in the management of lands and water areas around Corps water resources development projects. As part of a data base utilized to provide quantitative information on performance measures, this report contains information on the percentage of Corps reservoir acreage included in Fish and Wildlife Service Endangered Species Recovery Plans meeting plan requirements and amount of similar Corps acreage included in North American Waterfowl Management Joint Venture Implementation Plans.

14. SUBJECT TERMS
Corps of Engineers, fish and Wildlife, Endangered species, recovery plans, waterfowl management, Fish and Wildlife Service, natural resources management.

15. NUMBER OF PAGES
72

16. PRICE CODE

17. SECURITY CLASSIFICATION OF REPORT	18. SECURITY CLASSIFICATION OF THIS PAGE	19. SECURITY CLASSIFICATION OF ABSTRACT	20. LIMITATION OF ABSTRACT
Unclassified	Unclassified	Unclassified	Unlimited

IWR
INSTITUTE FOR
WATER RESOURCES

IWR Report 96-R-22
October 1996