

**STATE OF MISSISSIPPI COASTAL IMPACT ASSISTANCE PLAN
TIER 1 PROJECT DESCRIPTION**

1. PROJECT TITLE: Aquatic Invasive Species Coordination, Assessment and Control Plan Implementation

2. LEAD ORGANIZATION/AGENCY: Mississippi Department of Marine Resources

3. FEDERAL TAX ID NUMBER:

4. PROJECT LEAD/POINT OF CONTACT:

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5. PROJECT SUMMARY

LOCATION OF PROPOSED PROJECT: Statewide - Project will be conducted in and along the waterways of Coastal Mississippi.

DURATION OF PROPOSED PROJECT: 3 to 4 Years; funding is requested in FY 2007.

PROPOSED START DATE: October 2007

PROPOSED END DATE: December 2010

PROJECT GOAL: The spread of aquatic invasive species through intentional or inadvertent transport by man has become an extremely serious threat to native plants and animals worldwide. Negative economic effects of invasions or introductions of non-native species in the US alone were estimated at 97 billion dollars in 1991. That figure continues to rise as our understanding of the crisis is more fully understood. An effective, coordinated response to address the effects of such invasions is urgently needed and must be based on detailed knowledge of the biology and behavior of these species. This project will provide for a coordinated effort to monitor, survey, identify and eradicate where possible aquatic invasive species in Mississippi.

PROJECT OBJECTIVES: Invasive species thrive when habitats that contain native species are disturbed. Hurricane Katrina and the cleanup efforts that followed the storm have caused significant habitat alterations, and we are already seeing a significant upsurge in certain populations of invasive aquatic plants. Efforts will be focused on activities that will have the greatest impact on reducing invasive species in the proposed area. The following are our objectives for this project:

1. Control the spread and negative economic impact of a minimum of 5% of the approximately 60 species of aquatic invasive species documented in Mississippi waterways using herbicides or manual control measures as appropriate.
2. Monitoring, survey, eradicate new or established aquatic invasive species wherever possible with a minimum of 500 man hours of field work per year throughout the project period.
3. Educate user groups (land managers, land owners, agencies) about prevention and control of aquatic invasive species of which prevention of introduction is a major component. Provide learning opportunities at a minimum of three environmental awareness fairs per year. All educational materials will also be posted on the MDMR website.
4. Coordinate all aquatic invasive species management activities and programs within Mississippi and collaborate with regional, national and international aquatic invasive species programs including the Gulf and South Atlantic Regional Panel on Aquatic Invasive Species (GSARP) and the Southeast Aquatic Resource Partnership (SARP), U.S. Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS).

PROJECT SUMMARY: The purposes of this project are to quantify the distribution of invasive aquatic species in Mississippi and to apply appropriate control measures wherever possible. Invasive aquatic plants found in Mississippi include, but are not limited to, alligator weed (*Alternanthera philoxeroides*), common salvinia (*Salvinia mimima*), Eurasian watermilfoil (*Myriophyllum spicatum*), giant salvinia (*Salvinia molesta*), hydrilla (*Hydrilla verticillata*), parrot feather (*Myriophyllum aquaticum*), torpedo grass (*Panicum repens*), water hyacinth (*Eichhornia crassipes*) and water primrose (*Ludwigia uruguayensis*).

Job 1: There has been an ongoing effort to develop a statewide management plan to deal with aquatic invasive species. This effort started with the Mississippi Aquatic Invasive Species Task Force in the spring of 2004 at the request of Governor Musgrove. They completed their work in 2007 with a strategic plan and recommendations. The Mississippi Department of Environmental Quality was designated as the lead agency for plan development. Agencies and organizations participating include Grand Bay National Estuary Research Reserve, Gulf Coast Research Laboratory at University of Southern Mississippi, Mississippi Department of Agriculture and Commerce, Mississippi Department of Environmental Quality, Mississippi Department of Wildlife, Fisheries, and Parks, Mississippi State University, Mississippi Department of Marine Resources, Mississippi Farm Bureau, Gulf States Marine Fisheries Commission and United States Environmental Protection Agency. This plan covers all aspects of aquatic invasive species management and meets the requirements of the National Aquatic Invasive Species Task Force.

Personnel for Job 1 includes a statewide coordinator who will serve as liaison and information clearinghouse between all agencies and organizations involved in combating aquatic invasive in the state. The primary function of this position will be to make sure that the Mississippi Management Plan for Aquatic Invasive Species (MMPAIS) is implemented and that Mississippi has a coordinated approach in dealing with this serious environmental problem. The Mississippi Management Plan for Aquatic Invasive Species (MMPAIS) will be the guiding document for the coordinator to follow. MMPAIS is pending approval by the National Aquatic Nuisance Species Task Force (NANSTF). Upon approval, MMPAIS will be a federally approved Management plan that supports CIAP authorized use # 4. The coordinator will work to prevent overlapping efforts of other agencies as well as promote uniformity in data collection related to aquatic invasive species. This comparable data will provide the means for comparing treatment success as well as developing treatment guidelines based on seasonal or other environmental or geographic conditions. This position of coordinator will be assigned to the Mississippi Department of Wildlife Fisheries and Parks (MDWFP) through a sub-grant agreement with the MDMR.

Job 1 will cover the entire four years of this CIAP cycle and will be implemented as soon as funding is available. There are no controversial aspects to Job 1 and the project has the support of the members of the MSMPAIS team.

Job 2: This project will be a continuation of an ongoing effort started on October 1, 2006, funded through the Mississippi's Hurricane Katrina Disaster Restoration, Enhancement and Monitoring Program to Study the Recovery of Gulf Fisheries covering all aspects of aquatic invasive species work in the three coastal counties (prevention, control, monitoring and education). This program currently employs two employees, for 25 hours a week, working exclusively on aquatic invasive species issues and is funded through Sept. 30, 2008. The National Oceanographic and Atmospheric Association (NOAA) is the funding agency.

Control measures will consist of herbicide treatment, manual removal, biological controls or other methods as deemed appropriate under the state management plan. Contract workers will be certified herbicide applicators and will observe all local, state and federal laws and apply chemicals only in accordance with federally approved uses.

Educating user groups on how they can prevent the spread of aquatic invasive species will be an important component of the project. This will be accomplished by distributing literature, posting informational signs at boat launches, issuing press releases and conducting presentations at schools and user group meetings.

Vehicles (trucks and boats) already purchased with previous invasive species grants will be used to search for and locate new and existing infestations.

Data collected will include: mapping of infested areas, species located, population density estimates, size estimates of the infested area, type and amounts of herbicide or manual control method used. Photographs taken before, during and after the treatment process will aid in assessing progress and communicating results.

Job 2 will start in the second year of this CIAP cycle. There are no controversial aspects associated with this job and we anticipate significant positive effects by restoring and protecting native species. Mississippi Coastal Preserve Program is supportive of Job 2 and has pledged to cooperate on invasive species issues. To continue this program, funding will be needed for years 2-4.

PARTNERS/COLLABORATORS: (The following will be involved through the MMPAIS in oversight of implementation of this project):

Grand Bay National Estuary Research Reserve
 Gulf Coast Research Laboratory at University of Southern Mississippi
 Mississippi Department of Agriculture and Commerce
 Mississippi Department of Environmental Quality
 Mississippi Department of Wildlife, Fisheries, and Parks
 Mississippi State University
 Mississippi Coastal Preserve Program
 Mississippi Aquatic Invasive Species Task Force
 Gulf States Marine Fisheries Commission
 Mississippi Farm Bureau

BUDGET AND SPENDING ESTIMATE BY YEAR:

Table 1: CIAP Project Estimated by Calendar Year

Budget Category	2007	2008	2009	2010	Total
Total Allocation FY 2007	\$40,346	\$114,034	\$111,126	\$112,251	\$377,757
Total Budget Amount					\$377,757

Total estimated expense by calendar year:

2007 \$ 40,346
 2008 \$114,034
 2009 \$111,126
 2010 \$112,251

6. AUTHORIZED USES:

WHAT IS THE PRIMARY PURPOSE OF THIS PROJECT (AUTHORIZED USE)?

Table 2: Primary Authorized Use

Mark one	Authorized Uses of CIAP Funds (as specified by law)
X	1. Project and activities for the conservation, protection, or restoration of coastal areas, including wetland
	2. Mitigation of damage to fish, wildlife, or natural resources.
	3. Planning assistance and administrative costs of complying with CIAP (for DMR, Harrison, Hancock and Jackson County Administrative Projects only).

	4. Implementation of a federally-approved marine, coastal, or comprehensive conservation management plan.
	5. Mitigation of the impact of OCS activities through funding of onshore infrastructure projects and public service needs.

HOW IS THIS PROJECT CONSISTENT WITH ONE OR MORE OF CIAP'S AUTHORIZED USES?

This project is consistent with CIAP Authorized Use 1 Because it will support the implementation of recommendations in the Mississippi Management Plan for Aquatic Invasive Species such as monitoring, identification and eradication of nuisance plants species that out compete native species for resources which diminish biodiversity and cause fish mortality.

Invasive aquatic plant and animal species have deleterious effects on Mississippi's ecology and economy. Excessive populations of aquatic plants can quickly flourish and hinder navigation. Recreational fishing, marine habitat and flood control efforts are also negatively impacted, thereby decreasing the economic activity generated by sport fishing, commercial fisheries and reducing property values.

Employees hired under this project will work with all aspects of addressing invasive species which includes early detection and rapid response to new invasions. Aquatic plant invasions will be treated, where possible, by removal by hand, mechanical means or with pesticides. The major goal in removing the invasives species is to conserve, protect and restore native species.

Education is another major component of this project. Project personnel will educate resource users on measures they can take to avoid the spread of aquatic invasive species.

According to the United States Department of Agriculture Cooperative State Research, Education and Extension Service, invasive species are organisms that are non-native to an ecosystem and whose introduction causes economic, social, or environmental harm. Nearly every terrestrial, wetland, and aquatic ecosystem in the United States has been invaded by non-native species, with economic losses estimated at \$137 billion per year. Invasive species constitute one of the most serious economic, social, and environmental threats of the 21st century.

This project is also consistent with authorized use 4: Implementation of a federally-approved marine, coastal, or comprehensive conservation management plan. This project is recommended in the federally approved Mississippi Coastal Program. Also, when the *Mississippi Management Plan for Aquatic Invasive Species* is approved by the National Aquatic Invasive Species Task Force, it will be a federally approved management plan (Job 1).

7. WILL CIAP FUNDS BE USED FOR COST SHARING OR MATCHING PURPOSES FOR ANOTHER FEDERAL PROGRAM? ___ YES __X__ NO.