RECORD OF DECISION

MISSISSIPPI COASTAL IMPROVEMENTS PROGRAM
HANCOCK, HARRISON, and JACKSON COUNTIES, MISSISSIPPI

The Final Mississippi Coastal Improvements Program (MsCIP) Comprehensive Plan Report, which includes an Integrated Programmatic Environmental Impact Statement (EIS), dated June, 2009, describes a Comprehensive Plan to support of the long-term recovery of Hancock, Harrision and Jackson Counties, Mississippi from the devastation caused by the hurricanes of 2005. Based on the report, the reviews of other Federal, State, and local agencies, input from the public, and the review of my staff, I find the Comprehensive Plan to be technically feasible, cost-effective, in compliance with applicable environmental statutes, and in the public interest.

The MsCIP study was conducted under the authority of the Department of Defense Appropriations Act of 2006 (P.L. 109-148), dated December 30, 2005. The U.S. Army Corps of Engineers, along with the State of Mississippi acting as the non-Federal sponsor, developed the MsCIP Comprehensive Plan to address cost-effective solutions for hurricane and storm damage risk reduction, salt water intrusion, shoreline erosion, and preservation of fish and wildlife. The MsCIP Comprehensive Plan utilized a multiple lines-of-defense approach through barrier islands restoration, and employing shoreline damage reduction, wetland restoration, and floodplain evacuation. The report identifies 12 elements to aid recovery of coastal Mississippi. Structural elements include restoring protective beaches, restoring native habitats, and raising an existing levee. Non-structural elements include removing structures from floodplains or raising structures that are highly vulnerable to storm damage. The following elements are recommended for construction:

- High Hazard Area Risk Reduction Program (HARP) consists of acquisition of approximately 2,000 tracts which are at the highest risk of being damaged by storm surge, demolition of existing structures, and retention of acquired tracts in an open space condition. The number of tracts was based on an estimate of what could be acquired during a five-year period following the execution of the Project Partnership Agreement for implementation of this element. To the extent practicable, acquisition would be on a willing seller basis, but eminent domain could be utilized when determined to be warranted. The tracts would include residential, commercial and unimproved tracts. In addition, buildings owned by the City of Moss Point that are used for municipal purposes will be replaced with buildings out of the Federal Emergency Management Agency (FEMA) designated Velocity Zone.

- Waveland Floodproofing consists of elevating approximately 25 residential structures in the City of Waveland, Hancock County that are determined to be eligible for floodproofing by elevation out of the 1-percent chance storm event inundation level.

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- Forrest Heights Levee consists of modification of an existing locally built levee around the Forrest Heights community, Gulfport, Harrison County, consistent with levee certification guidelines for a 0.2-percent probability storm occurrence. Approximately 6,500 linear feet of an existing non-Federal levee would be raised to a levee crest elevation of 21 feet North Atlantic Vertical Datum of 1988 (NAVD-88). An existing publicly owned park with a surface elevation of 12 to 14 feet NAVD-88 would be included in the plan to serve as a water detention area for temporary containment of rainfall during storm events. This element will require the acquisition of two residential properties within the existing community. Unavoidable adverse environmental impacts have been identified and mitigation would include the acquisition and restoration of approximately three acres of non-tidal wetlands.

- Turkey Creek Ecosystem Restoration consists of the restoration of 689 acres of an undeveloped site of degraded wet pine savannah habitat. Measures required to restore hydrology and natural vegetation on the site include filling drainage ditches, road removal, and controlled burning.

- Dantzler Ecosystem Restoration consists of restoration of 385 acres of severely degraded wet pine savannah. Measures required to restore hydrology and natural vegetative habitat to the site include removal of existing hurricane debris and sedimentation, filling drainage ditches, road removal, control of non-native species, and controlled burning.

- Franklin Creek Ecosystem Restoration consists of restoration of hydrology and native habitats by removing ditches, excavating and removing existing roadbeds, installing culverts under U.S. Highway 90, control of non-native species, and controlled burning to restore 149 acres located north and south of U.S. Highway 90 with critical wet pine savannah habitat.

- Bayou Cumbest Ecosystem Restoration consists of the acquisition of approximately 61 tracts, removal of 19 structures, excavation and removal of fill material from former home sites and adjacent lands, filling drainage ditches, control of non-native species, and planting with native emergent wetland species. Following acquisition of these tracts, 148 acres would be restored to emergent wetland (110 acres) and coastal scrub shrub habitat (38 acres).

- Admiral Island Ecosystem Restoration consists of restoration of a severely degraded 123-acre tidal wetland area. Measures required to restore hydrology and native habitat to the area include excavating fill material, filling ditches, control of non-native species and planting native tidal emergent species.

- Deer Island Ecosystem Restoration consists of actions that will complement existing Federal restoration projects by minimizing the fracturing of biodiversity. Measures include restoration of a portion of the northern and southern shorelines of the island, and new stone training dikes to prevent future erosion.

- Submerged Aquatic Vegetation element consists of measures designed to evaluate techniques for restoring submerged aquatic vegetation (SAV), an essential component of an estuarine ecosystem. Specifically, five acres of SAVs in the Grand Bay National Estuary Research Reserve area that were destroyed by Hurricane Katrina will be restored using different techniques. The results will be used to guide and develop other SAV restoration projects that would be undertaken as future authorized elements of the overall Comprehensive Plan.

- Coast-wide Beach and Dune Ecosystem Restoration consists of beach and dune improvements to approximately 30 miles of the 60 miles of existing beaches on the mainland coast. These improvements would include construction of 60-foot wide vegetated dune fields approximately 50 feet seaward of the existing seawalls.

- Barrier Island Restoration consists of the placement of approximately 22 million cubic yards of sand within the National Park Service's Gulf Islands National Seashore, Mississippi unit. Approximately 13 million cubic yards of sand would be used to close a gap between East Ship Island and West Ship Island, originally opened by Hurricane Camille, through the construction of a low level dune system. The remaining 9 million cubic yards of sand would be placed in the littoral zones at the eastern ends of Ship and Petit Bois Islands. In accordance with the requests of the National Park Service, the closure of the Ship Island gap and placement of sand into the littoral zones would be undertaken only once, and would not be nourished or otherwise maintained in the future.

With the exception of the mitigation that may be required as a result of the improvements to the Forrest Heights levee as described above, there are no other separable mitigation requirements associated with the construction of these elements. The MsCIP Comprehensive Plan will result in significant environmental benefits to coastal Mississippi and the northern Gulf of Mexico region.

In addition to these construction elements, the MsCIP Comprehensive Plan also identifies the need for feasibility studies of additional elements that could provide further improvements in the coastal area of Mississippi if implemented. Further study would consist of a feasibility level analysis to identify cost-effective solutions for hurricane and storm damage risk reduction, salt water intrusion, shoreline erosion, and preservation of fish and wildlife. These follow-on feasibility studies would evaluate the potential for restoration of over 30,000 acres of coastal forest, wetlands, beaches and dunes; structural measures; and floodproofing of structures on, or acquisition of, over 58,000 tracts within the 100-year floodplain. Additional National Environmental Policy Act compliance documentation would be completed as part of these additional studies.

A broad array of alternatives were evaluated in the development of the MsCIP Comprehensive Plan, and those alternatives are hereby incorporated into this Record of Decision by reference. In addition to a "no action" plan, numerous structural alternatives were evaluated for hurricane and storm risk reduction including long linear levee systems of various heights and alignments including surge barriers across the

inland bays. Alternatives to the purchase of approximately 2,000 tracts, including acquisition of a larger number of tracts, were evaluated to determine social and economic impacts. A nonstructural option and a 17-foot levee were also evaluated at Forrest Heights.

Over 1,000 potential environmental restoration areas were screened as possible alternatives. From these, 43 alternative restoration sites were identified as likely to provide the desired environmental and hurricane and storm damage risk reduction benefits. These 43 alternatives were further screened to identify those high priority sites which would provide significant benefits in a relative short period of time. The other alternative sites are retained for future study. At each of the five specific ecosystem restoration sites, alternative restoration methods were evaluated including various means of restoring natural hydrologic characteristics and natural vegetation.

A number of alternative options were considered singly or in combination for the Deer Island restoration including southern shoreline restoration, expansion of the created wetland site and breakwater protection. Large submerged aquatic vegetation restoration projects were evaluated as alternatives to the recommended pilot project. Alternatives evaluated for the restoration of beach and dune included various heights, widths, and alignment of the mainland dunes.

Alternatives to the comprehensive barrier island restoration element included different methods of placement of sand within the system, i.e. direct placement vs. littoral zone placement, restoration of only the Ship Island breach, different configurations for the restoration of the breach, restoration of the islands to an early 20th century footprint, and only restoration of submerged aquatics associated with the existing island footprints.

The Draft MsCIP Comprehensive Plan was circulated for public review for 45 days on February 13, 2009. Public meetings were held on March 16, 18, and 19, 2009 in each of the three coastal counties. All comments submitted were responded to in the Final MsCIP report. Additional comment letters were received on the Final Plan. Strong support for the comprehensive plan was expressed by the U.S. Environmental Protection Agency, Region 4 U.S. Fish and Wildlife Service, National Park Service, and the State of Mississippi. No objections to the program were expressed.

The recommended MsCIP Comprehensive Plan represents a cost-effective and environmentally beneficial solution for a more resilient Mississippi Coast. All practicable means were employed to avoid or minimize the environmental and socioeconomic harm from implementing the Comprehensive Plan. Environmental monitoring and adaptive management will be performed to ensure regulatory compliance, to document the creation of beneficial habitat, to confirm the expected findings of no significant negative impacts, and to provide operational input on the success of habitat creation and potential changes which will increase the value and utilization. The Comprehensive Plan will reduce hurricane and storm damage risk to over 2,000 parcels located within the high velocity zone of the 100-year floodplain of the three coastal counties, improve

flood storage capacity in approximately 1,900 acres of degraded habitat, restore approximately 1,900 acres of mainland wet pine savannah, emergent wetland, submerged aquatic, and island habitat; restore approximately 1,150 acres of offshore barrier island habitat, restore over 30 miles of beach and dune habitat, and reduce coastal erosion. The Comprehensive Plan is consistent with the authorizing legislation and is identified as the environmentally preferable alternative.

The 15 previously authorized interim projects which are nearing completion of construction along with the 12 elements recommended herein provide a fully integrated systems approach to partially addressing the hurricane damage in Mississippi from the storms of 2005, and were developed in concert with the Louisiana Coastal Protection and Restoration study. Furthermore, the activities of other Federal, state and local agencies that are responsible for public education, storm warning, evacuation planning, floodplain management, building codes and local zoning are integral components of efforts to reduce the hurricane risks associated with living in or visiting coastal Mississippi.

Technical, environmental, economic, and risk criteria used in the formulation of alternative plans were those specified in the Water Resource Council's Economic and Environmental Principles for Water and Related Land Resources Implementation Studies, except for deviations specifically directed in the authorizing language. All applicable laws, Executive Orders, regulations and local government plans were considered in the evaluation of the alternatives. Based on review of these evaluations, I find that the public interest would be best served by implementing the recommended Comprehensive Plan. This Record of Decision completes the National Environmental Policy Act process.

Jan. 14, 2010
Date

Jo-Ellen Darcy
Assistant Secretary of the Army
(Civil Works)