UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OCT -3 1994

OFFICE OF
WATER

Honorable John H. Zirschky
Acting Assistant Secretary (Civil Works)
Department of the Army
Washington, DC 20310-0130

Dear Dr. Zirschky:

In accordance with the provisions of the 1992 Memorandum of Agreement (MOA) between the U.S. Environmental Protection Agency (EPA) and the Department of the Army under Section 404(q) of the Clean Water Act (CWA), I am requesting your review of a decision by Colonel Robert H. Griffin, U.S. Army Corps of Engineers (Corps), Mobile District, to issue a Section 10 and a Section 404 permit to Spectrum Gaming/D'Iberville Landing Casino (Spectrum), for a proposed casino complex in the City of D'Iberville, Mississippi. The proposed permit would authorize the discharge of fill material into wetlands and other waters of the United States to build the casino complex and would result in direct and indirect adverse impacts to approximately 12 acres of tidal marsh and scrub-shrub wetlands and approximately one acre of shallow water habitat. The project includes construction of moorings, walkways, a concrete wharf, and stormwater retention pond, bridge and bayou mouth relocation, and dredging. After a thorough review of the available information, EPA has determined that this case warrants elevation in accordance with the criteria under Part IV of the MOA, Elevation of Individual Permit Decisions. With this letter, EPA requests that these issues be further reviewed by the Mobile District based on guidance developed by Corps Headquarters. A detailed discussion of EPA's concerns with the proposed project are found in Enclosure 1.

Recent developments in this case suggest that discussions between EPA and Army during the pendency of your review may be mutually beneficial. On September 29, at the request of Congressman Gene Taylor, EPA Headquarters met with the Congressman, representatives of the applicant, and others, in Washington, DC to discuss the Spectrum casino project. During this meeting, the applicant expressed a willingness to perform additional compensatory mitigation to offset project-related impacts. Although no specific mitigation plans were presented, additional discussion between the applicant, EPA, and the Corps would be appropriate before a final permit decision is reached by the Corps. I suggest that our appropriate representatives meet with the applicant as soon as possible to explore additional compensatory mitigation opportunities.

Beyond this case, and perhaps even more importantly, I suggest that we discuss ways to evaluate future proposed casino projects (and their cumulative impacts) in a more comprehensive process. As you may know, in coastal Mississippi alone, approximately 15 floating casino projects have already been permitted in waters of the United States. In reviewing these projects, EPA has worked with the applicants and the Corps to avoid impacts to coastal wetlands. Now, however, casino development is being proposed for numerous sites along Mississippi's two coastal counties that have approved gaming, including the Back Bay of Biloxi (Spectrum being the first) and further west toward the Bay of St. Louis. These new proposals would be located in primarily undisturbed natural areas and would adversely impact fragile aquatic ecosystems. EPA is extremely concerned about the adverse environmental impacts associated with these proposals, particularly in light of the potential cumulative impacts. I believe this is a critical issue which requires our attention before these aquatic resources of national importance suffer additional avoidable losses. A comprehensive approach has the support of Congressman Taylor, who is willing to play a role in facilitating a dialogue between our agencies, and with the local authorities, to explore ways to evaluate dockside gambling proposals in a comprehensive manner, as opposed to the current case-by-case evaluation. Congressman Taylor represents the Congressional District in which the proposed casino projects would be located. A comprehensive approach also has the strong support of John Hankinson, EPA's top official in Region IV. I believe our agencies need to work together to identify and evaluate potential sites for casino development in a way that recognizes the environmental significance of Mississippi's coastal wetlands and the requirements of the Clean Water Act Section 404(b)(1) Guidelines, while being responsive to the needs of permit applicants and the local communities. I am hopeful that we can quickly agree to ask our field offices to initiate a comprehensive effort to address this matter.

I look forward to discussing these important issues with you directly to address EPA's concerns. I hope that you will also carefully review the record associated with this proposed permit decision, and look forward to your response to our concerns. If my staff can provide assistance during your evaluation of this request, please direct questions to Mr. Gregory E. Peck, of the Wetlands Division, at (202) 260-8794.

Sincerely,

Bob Perciasepe

Robert Perciasepe
Assistant Administrator

Enclosure

ENCLOSURE 1

ASSISTANT ADMINISTRATOR'S EVALUATION
FOR SECTION 404(q) ELEVATION
D'IBERVILLE LANDING CASINO/SPECTRUM GAMING

This referral meets the criteria in Part IV of the 1992 EPA/Army Section 404(q) MOA. EPA finds that the proposed discharge of fill material would result in substantial and unacceptable impacts to coastal wetlands, which are aquatic resources of national importance. Our concerns regarding the adverse effects to coastal wetlands in this case are further heightened because the impacts may be avoidable.

Aquatic Resources of National Importance

Mississippi's coastal marshes, of which the Spectrum site is representative, provide essential habitat for approximately 138 species of birds (Table 1), 43 species of fish/shellfish (Table 2), six species of reptiles (Table 3), and 11 species of mammals (Table 4). Fish and shellfish communities of the Juncus roemerianus marsh are notable both in their species diversity and abundance of individuals. Coastal marshes and associated estuaries provide critical nursery habitat for many sport and commercial fish and shellfish species (e.g., spotted sea trout, menhaden, red drum, flounder, shrimp, oyster and blue crab). The most important area within the estuary is the extremely productive intertidal zone and its adjacent shallow waterbottoms. Many species, such as spotted sea trout, blue crabs and oysters, are dependent on these areas during most of their life span. The associated marshes provide food and protection for these species (Mississippi Bureau of Marine Resources, 1993). In 1992, over 187 million pounds of commercial fish (e.g., menhaden, mackerel, tuna, bluefish, croaker, Atlantic and Gulf flounder, mullet, spotted sea trout, white sea trout) and shellfish (e.g., shrimp, oyster, blue crab) were landed in Mississippi at a value of $31.3 million (NOAA, 1993). Over half of this total commercial fishery value, $16.6 million, was landed (brought to port) in Biloxi (NOAA, 1994). Nearly half of the 1992 total commercial fisheries value ($14.3 million) landed in Mississippi was from harvesting shrimp (NOAA, 1994). Turner and Boesch (1988) have found a positive linear relationship between long-term yields of shrimp and the quantity and quality of intertidal habitats.

Though many marsh fish species are not of direct commercial importance (i.e., they are not harvested), they serve as forage species for numerous commercially important species. The intense utilization of tidal marsh creeks by forage species make them especially important in transferring energy from the marsh to the estuary and coastal waters and thus to commercially valuable species. Nursery species and forage species consume detritus, larvae, and plankton at the base of the food web in the marsh and then introduce these nutrients to the estuarine and nearshore food webs when they leave the marsh (Stout, 1984). Thayer and Ustach (1981) report that as much as 95% of the weight of commercial fish landed and 85% of the weight of the sport catch in the Gulf of Mexico comes from fish that spend a portion of their life cycle in coastal marshes and estuarine habitats like that found at the Spectrum site.

Table 1: Avian species of Mississippi coastal marshes that occur or are likely to occur at the Spectrum site.

SPECIES (waterfowl)	COMMON NAME
Aix sponsa	wood duck
Anas acuta	northern pintail
Anas americana	American wigeon
Anas clypeata	northern shoveler
Anas crecca	green-winged teal
Anas discors	blue-winged teal
Anas fulvigula	mottled duck
Anas platyrhynchos	mallard
Anas rubripes	American black duck
Anas strepera	gadwall
Aythya affinis	lesser scaup
Aythya americana	redhead
Aythya collaris	ring-necked duck
Aythya marila	greater scaup
Branta canadensis	Canada goose
Bucephala albeola	bufflehead
Bucephala clangula	common goldeneye
Chen caerulescens	snow goose
Clangula hyemalis	oldsquaw
Fulica americana	American coot
Gallinula chloropus	common moorhen
Gavia immer	common loon
Lophodytes cucullatus	hooded merganser
Merganser	common merganser
Merganser serrator	red-breasted merganser
Melanitta fusca	white-winged scoter
Melanitta nigra	black scoter
Melanitta perspicillata	surf scoter
Oxyura jamaicensis	ruddy duck
Podiceps auritus	horned grebe
Podiceps nigricollis	eared grebe
Podilymbus podiceps	pied-billed grebe
(wading birds)	
Ajaia ajaja	roseate spoonbill
Ardea herodias	great blue heron
Botaurus lentiginosus	American bittern
Bubulcus ibis	cattle egret
Butorides striatus	green-backed heron
Casmerodius albus	great egret
Egretta caerulea	little blue heron
Egretta rufescens	reddish egret
Egretta thula	snowy egret
Egretta tricolor	tricolored heron
Eudocimus albus	white ibis
Ixobrychus exilis	least bittern
Nycticorax	black-crowned night heron

Table 1: (continued)

SPECIES (wading birds)	COMMON NAME
Nycticorax violaceus	yellow-crowned night heron
Plegadis falcinellus	glossy ibis
Plegadis chihi	white-faced ibis
(shore birds)	
Actitis macularia	spotted sandpiper
Arenaria interpres	ruddy turnstone
Bartramia longicauda	upland sandpiper
Calidris alba	sanderling
Calidris alpina	dunlin
Calidris bairdii	Baird's sandpiper
Calidris canutus	red knot
Calidris fuscicollis	white-rumped sandpiper
Calidris himantopus	stilt sandpiper
Calidris maritima	purple sandpiper
Calidris mauri	western sandpiper
Calidris melanotos	pectoral sandpiper
Calidris minutilla	least sandpiper
Calidris pusilla	semipalmated sandpiper
Catoptrophorus semipalmatus	willet
Charadrius alexandrinus	snowy plover
Charadrius melodus	piping plover

SPECIES	COMMON NAME
Charadrius semipalmatus	semipalmated plover
Charadrius vociferus	killdeer
Charadrius wilsonia	Wilson's plover
Gallinago gallinago	common snipe
Haematopus palliatus	American oystercatcher
Himantopus mexicanus	black-necked stilt
Limnodromus griseus	short-billed dowitcher
Limnodromus scolopaceus	long-billed dowitcher
Limosa fedoa	marbled godwit
Limosa haemastica	Hudsonian godwit
Numenius phaeopus	whimbrel
Phalaropus lobatus	red-necked phalarope
Phalaropus tricolor	Wilson's phalarope
Pluvialis dominica	lesser golden plover
Pluvialis squatarola	black-bellied plover
Recurvirostra americana	American avocet
Tringa flavipes	lesser yellowlegs
Tringa solitaria	solitary sandpiper
Tringa melanoleuca	greater yellowlegs
Tryngites subruficollis	buff-breasted sandpiper

(continued)

Table 1: (continued)

SPECIES (fishing birds)	COMMON NAME
Ceryle alcyon	belted kingfisher
Chlidonias niger	black tern
Larus argentatus	herring gull
Larus atricilla	laughing gull
Larus delawarensis	ring-billed gull
Larus fuscus	lesser black-backed gull
Larus hyperboreus	glaucous gull
Larus marinus	great black-backed gull
Larus philadelphia	Bonaparte's gull
Larus pipixcan	Franklin's gull
Pelacanus erythrorhynchus	American white pelican
Pelacanus occidentalis	brown pelican
Phalacrocorax auritus	double-crested cormorant
Rynchops niger	black skimmer
Sterna antillarum	least tern
Sterna caspia	Caspian tern
Sterna forsteri	Forster's tern
Sterna hirundo	common tern
Sterna maxima	royal tern
Sterna nilotica	gull-billed tern
Sterna sandvicensis	Sandwich tern
(raptors)	
Circus cyaneus	marsh hawk
Elanoides forficatus	American swallow-tailed kite
Falco columbarius	merlin
Falco peregrinus	peregrine falcon
Haliaeetus leucocephalus	bald eagle
Ictinia mississippiensis	Mississippi kite
Pandion haliaetus	osprey
(other marsh birds)	
Agelaius phoeniceus	red-winged blackbird
Ammodramus caudacutus	sharp-tailed sparrow
Ammodramus leconteii	Le Conte's sparrow
Ammodramus maritimus	seaside sparrow
Cistothorus palustris	marsh wren
Corvus ossifragus	fish crow
Coturnicops noveboracensis	yellow rail
Geothlypis trichas	common yellowthroat
Hirundo rustica	barn swallow
Laterallus jamaicensis	black rail
Melospiza georgiana	swamp sparrow
Porphyrula martinica	purple gallinule
Porzana carolina	sora
Protonotaria citrea	prothonotary warbler
Pyrocephalus rubinus	vermilion flycatcher
Quiscalus major	boat-tailed grackle

Table 1: (continued)

SPECIES (other marsh birds)	COMMON NAME
Rallus elegans	king rail
Rallus limicola	Virginia rail
Rallus longirostris	clapper rail
Scolopax minor	American woodcock
Stelgidopteryx serripennis	northern rough-winged swallow

SPECIES	COMMON NAME
Tyrannus tyrannus	eastern kingbird
Tyrannus dominicensis	gray kingbird
Tyrannus forficatus	scissor-tailed flycatcher
Tachycineta bicolor	tree swallow

Table 2: Finfish and commercial shellfish species of Mississippi coastal estuaries and Juncus roemerianus dominated brackish marshes that occur or are likely to occur at the Spectrum site.

SPECIES (finfish)	COMMON NAME
Achirus lineatus	lined sole
Adinia xenica	diamond killifish
Anchoa mitchilli	bay anchovy
Anguilla rostrata	
Archosaurgus probatocephalus	sheepshead
Arius felius	hardhead fish
Brevoortia patronus	gulf menhaden
Cynoscion arenarius	sand seatrout
Cynoscion nebulosus	spotted seatrout
Cyprinodon variegatus	sheepshead minnow
Eleotris pisonis	
Eucinostomus sp.	morjarra
Evorthodus lyricus	

SPECIES	COMMON NAME
Fundulus confluentus	marsh killifish
Fundulus grandis	longnose killifish
Fundulus similis	gulf killifish
Gambusia affinis	mosquitofish
Gobiosoma bosci	
Ictalurus punctatus	channel catfish
Leiostomus xanthurus	spot
Lepisosteus oculatus	spotted gar
Lepomis macrochirus	bluegill
Lepomis microlophus	redear sunfish
Lucania parva	rainwater killifish
Membras martinica	rough silverside
Menidia beryllina	inland silverside

Table 2: (continued)

SPECIES (finfish)	COMMON NAME
Microgobius thalassinus	green goby
Micropogonias undulatus	Atlantic croaker
Micropterus salmoides	largemouth bass
Mugil cephalus	striped mullet
Oligoplites saurus	leatherjacket
Paralichthys albigutta	gulf flounder
Paralichthys lethostigma	southern flounder
Poecilia latipinna	sailfin molly
Pomatomus saltrix	bluefish

SPECIES	COMMON NAME
Sciaenops ocellata	red drum
Strongylura marina	Atlantic needlefish
Syngnathus louisianae	chain pipefish
Synodus foetens	inshore lizardfish
(commercial shellfish)	
Callinectes sapidus	blue crab
Crassostrea virginica	eastern oyster
Penaeus aztecus	brown shrimp
Penaeus setiferus	white shrimp

Table 3: Reptile species of Mississippi coastal marshes that occur or are likely to occur at the Spectrum site.

SPECIES	COMMON NAME
Alligator mississippiensis	American alligator
Malaclemys terrapin pileata	Mississippi diamondback terrapin
Nerodia fasciata clarkii	gulf salt marsh water snake

SPECIES	COMMON NAME
Pseudemys alabamensis	Alabama red-bellied turtle
Pseudemys floridana floridana	Florida cooter
Ophisaurus ventralis	glass lizard

Table 4: Mammal species of Mississippi coastal brackish marshes that occur or are likely to occur at the Spectrum site.

SPECIES	COMMON NAME
Didelphis virginiana	opossum
Lutra canadensis	river otter
Mustela frenata	long-tailed weasel
Mustela vison mink	southern mink
Myocastor coypus	nutria
Ondatra zibethicus rivalicius	Louisiana muskrat

SPECIES	COMMON NAME
Oryzomys palustris	rice rat
Procyon lotor varius	raccoon
Sigmodon hispidus	cotton rat
Sylvilagus palustris	marsh rabbit
Vulpes fulva	red fox

Tidal marshes serve as natural filters that remove organic pollutants, excess nutrients, and sediments from water moving from land to sea. This particular marsh helps to filter the runoff from the adjacent road (Mississippi Bureau of Marine Resources, 1993). In addition, tidal marsh systems are among the earth's most biologically productive natural ecosystems. The Spectrum site is a typical example of a highly productive tidally influenced brackish marsh in coastal Mississippi, dominated by J. roemerianus with Spartina alterniflora and S. patens present. Marshes have historically been viewed as vital primary production sites that serve as the base of detrital food webs (Odum and de la Cruz, 1967; de la Cruz, 1973). Marsh detritus produced by biological decomposition and mechanical breakdown of dead plants is reported as a rich and abundant food source for marine and estuarine organisms (de la Cruz and Gabriel, 1974; de la Cruz and Poe, 1975, de la Cruz, 1975; Kruczynski, 1982). Much of the organic matter produced in tidal marshes is exported to adjacent estuarine systems as detritus (Odum and de la Cruz, 1967).

Coastal wetlands in the Gulf are increasingly susceptible to human encroachment. It has been estimated that in this decade approximately 50% of the population of the United States will reside within 50 miles of the coastline (Howorth and Simpson, 1990). Between 1981 and 1985, the Corps received over 27,000 proposals to alter coastal wetlands in the 14 coastal states from New York to Texas (Mager and Thayer, 1986). NOAA (1990) reports that coastal impacts are directly linked to increased human activities within estuarine watersheds. Serious deterioration in water quality and floral and faunal assemblages is becoming evident in Gulf of Mexico estuaries.

Numerous avian species make use of abundant food sources, resting areas, and refuges within J. roemerianus dominated marshes such as that found at the Spectrum site. In addition to the local resident bird fauna in J. roemerianus marshes of the northeastern Gulf of Mexico, seasonal influxes of species migrating through the Mississippi Flyway are found. Wading birds and shorebirds are likely to feed in the Spectrum site's Juncus marsh intertidal zone, in creeks, or on sandy berms along the shore. Many coastal birds nest in freshwater deltas and utilize marsh habitats similar to the Spectrum site as secondary breeding and dispersal areas. The Juncus marsh of the Spectrum site is likely to provide an ideal environment for breeding birds. Dense vegetation restricts access by predators and small fish; numerous invertebrate species provide food for both adults and young fledglings. All avian species using habitats within the J. roemerianus marshes are somewhat threatened by the limited amount of suitable marsh available and by increasing pressures to develop marshes. Breeding birds are especially susceptible to human disturbances since most are very secretive and require isolation for nesting (Stout, 1984).

In addition to habitat functions, coastal marshes like that at the Spectrum site are recognized for their importance in maintaining and improving water quality, which impacts wildlife, marine life, and the human environment. These marshes have been important filters for runoff waters laden with pollutants such as fertilizers, pesticides,

sewage, etc. They help protect the Back Bay of Biloxi, as well as waters continuing to the Gulf of Mexico, from the negative effects of these pollutants.

Project Compliance with the Section 404(b)(1) Guidelines

EPA Region IV has consistently commented in writing and in discussions with the Corps of Engineers, Mobile District (District), that the project as proposed by Spectrum does not comply with the requirements in the Section 404(b)(1) Guidelines (Guidelines). Specifically, we are concerned that a practicable, less environmentally damaging alternative may be available to the applicant to satisfy the project purpose, and that direct and indirect impacts to 12 acres of tidal and scrub-shrub wetlands will cause or contribute to significant degradation of waters of the United States.

1. Availability of Practicable Alternatives - Section 230.10(a)

Impacts to waters of the U.S. associated with this project are unacceptable because compliance with the requirements of Section 230.10(a) of the Guidelines has not been clearly demonstrated. Section 230.10(a) requires that no discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge which would have a less adverse impact on the aquatic ecosystem.

An alternative, the C.F. Gollott site (Gollott site) would result in no wetland impacts while having similar shallow water impacts as the Spectrum site, appears available to Spectrum, and appears to be consistent with the company's necessary siting criteria. The site is located on the east side of the Interstate 110 bridge. The site complies with Spectrum's market needs relating to site access and "first-off" location (first casino approached heading south on I-110) as it is accessed by the same interchange as the preferred alternative. According to the District's Environmental Assessment (EA), the site is approved for a casino by the City of D'Iberville. Effective on July 1, 1994, the Department of Marine Resources corrected its Coastal Wetlands Use Plan to reflect that the site had been incorrectly zoned for residential use when the site contained a seafood processing plant for many years. This site appears to provide each of the basic elements needed to obtain a license from the Mississippi Gaming Commission and is a less environmentally damaging alternative when compared to Spectrum's preferred site.

A report titled, "Gaming Potential in D'Iberville" was prepared at the request of the City of D'Iberville by Hammer, et al. (December, 1992). The purpose of the report was to examine the possibility of developing a gaming industry in D'Iberville and was the result of public meetings, personal interviews conducted in the County, and an analysis of gaming experiences in other communities and other states. The report includes an overview of the gaming industry and D'Iberville's role, a description of existing/proposed casinos, a D'Iberville market evaluation, an evaluation of potential waterfront sites, general implications to local revenue yields, and recommended development strategies.

It is likely that this report played a significant role in the decision to promote gaming in D'Iberville. Six potential waterfront sites in D'Iberville were examined for casino development potential, including the Gollott site and a site which includes portions of Spectrum's proposed project along the east side of the marsh. The currently proposed Spectrum site along the west side of the marsh was not considered as an alternative in the report. While there was no overall ranking of sites presented, the Gollott site ranked higher than the east Spectrum site for casino development for each of five individual parameters, including environmental constraints, existing land uses, existing transportation network, and ease of development. The Gollott site ranked first among all six sites for existing land use and transportation network. The report states that the Gollott site is preferred because of the greatest potential for spin-off development, existing infrastructure, ease of access, and lack of environmental constraints, in particular, no wetlands. In contrast, Spectrum's preferred east site was identified in the report as "a tough site to develop" and, citing the need for substantial road improvements and wetland impact concerns, the report concluded that "[d]espite its benefits the front end public capital outlay and effort, and the time frame for approvals make this an unlikely development site."

EPA has recommended the Gollott site to Spectrum, City of D'Iberville officials, and the District on numerous occasions during the permit review period. The Mississippi Department of Wildlife, Fisheries and Parks, Bureau of Marine Resources staff also recommended the Gollott site as a viable alternative to their Commission in a response to Spectrum's challenge of the Commission's initial denial of Coastal Zone Management Act (CZMA) consistency for the Spectrum site. CZMA consistency was originally denied because of concerns about impacts to the sensitive wetlands located at the site and the residential (non-commercial) nature of the area. However, Spectrum appealed the CZMA consistency determination and the earlier decision was overturned based on the presence of a bait shop located at the end of a pier.

In their evaluation of the Gollott site, the District concluded that while selection of the site would result in less environmental damages, it was not practicable because "encouraging the use of this site would negatively impact 50+ employees of the ongoing seafood business" (i.e., put people out of work by closing the seafood processing plant). We would agree that loss of jobs is a critical concern in assessing practicability if the conclusion is accurate. However, we understand that the job concern is not a relevant issue. In fact, the owners of the Gollott site have been actively promoting their site for a casino, including surveying their neighbors to determine support for the project. According to one of Gollott's owners, the company is no longer dependent on a waterfront location since greater than 99% of the seafood processed is transported by truck. The owners appear willing to relocate in the nearby area and retain all employees (EPA Region IV, personal communication). The Gollott site has not been adequately considered by the District and may in fact provide a practicable alternative to the applicant that further reduces adverse environmental impacts compared to the current Spectrum site.

2. Adverse Environmental Impacts - Section 230.10(c)

Compliance with the requirements of Section 230.10(c) of the Guidelines has not been clearly demonstrated. Section 230.10(c) requires that no discharge of dredged or fill material shall be permitted which will cause or contribute to significant degradation of the waters of the United States. The Guidelines explicitly require evaluation of all direct, secondary and cumulative impacts reasonably associated with the proposed discharge in determining compliance with Section 230.10(c). In determining significant degradation, the Guidelines direct consideration of effects on such functions and values as wildlife habitat, aquatic ecosystem diversity, stability and productivity, recreation, aesthetics, and economic values. Contrary to the requirements of Section 230.10(c) the proposed permit decision does not adequately reflect consideration of direct, secondary, and cumulative impacts to these functions and values.

Direct Impacts

The direct impacts of the project include the filling of 0.04 acre of tidal marsh for bridge relocation and excavation of 0.27 acre of scrub-shrub wetlands for construction of a stormwater retention pond. In addition to wetlands, approximately one acre of shallow water habitat will be impacted: 0.5 acre will be dredged to provide access for the casino barge and 0.5 acre will be covered by the concrete wharf. These impacts would result in the direct loss of wildlife and marine life habitat, water quality maintenance functions, and shoreline protection.

Secondary Impacts

EPA believes the secondary effects of the casino complex will be harmful to marsh fauna. Traffic flow will substantially increase as a result of the casino construction. Moreover, large increases in noise and light levels will occur as Spectrum operates continuously. The draft Corps permit states that all lights for the facility will be directed to the north and the east. The marsh is located to the east and it is expected that 24 hours of light per day will have adverse effects on wildlife and aquatic life currently utilizing the marsh. Many species of fish preferentially utilize the marsh at night (Stout, 1984) and the continuous light may disrupt their current usage patterns (Mississippi Bureau of Marine Resources, 1993). In addition, pollutants from increased runoff will impact water quality and related wildlife habitat, as will increased human activity. Species least tolerant of human presence, particularly breeding marsh and shore birds (Stout, 1984), will be the most impacted. Other secondary impacts include the increased secondary development around the marsh, increasing the effects of the direct impacts, such as increased human disturbances, increased pollutants, and reduced access to the marsh by wildlife. The marsh will be more closely and completely surrounded by development, much of it with impervious surface, thus isolating it from the surrounding terrestrial environment and reducing or eliminating biotic interchange between these systems. The impervious surfaces will likely lead to increased polluted runoff (oils,

greases, etc.) entering the marsh, especially on the eastern side where the parking lots do not seem to have stormwater retention facilities planned. The overall effect of these secondary impacts will be to further degrade the marsh system and isolate it from ecological interaction with the adjacent uplands, further reducing important fish and wildlife habitat functions.

Information in the record for this project suggests that the District agrees with our concern that increases in secondary impacts will occur if the casino is constructed. Their environmental assessment (EA) identifies impacts to the human environment including disruption of the current residents' lifestyles and concerns with noise, aesthetics, increased traffic and the general incompatibility of the Spectrum project with its surrounding natural and human environment.

Cumulative Impacts

Cumulative impacts to the natural environment, in particular to water quality and wildlife habitat, are increasing with each casino project. Water quality is impacted by increased incidental waste discharges (including petroleum products and litter), marine paints and antifouling agents on the barges, and increased point and nonpoint source discharges (including discharges from sewage and stormwater treatment facilities). Wildlife habitat is being reduced through losses of natural areas, and increased human presence and disturbance resulting in increased noise, pollution, and lighting. As these casino developments increase, they continue to fragment and isolate the natural aquatic and wetland ecosystems, reducing their functions and resulting in loss of value to wildlife. The secondary and cumulative effects which are described in the District's EA are profound and will forever change the Mississippi Gulf Coast.

Conclusion

For the reasons discussed above, we are concerned that the discharges that would be authorized under the proposed permit to Spectrum to construct a casino gaming complex on the preferred site have not been demonstrated to comply with requirements of the Section 404(b)(1) Guidelines. Direct impacts associated with the permitted discharge would adversely affect 0.04 acre of tidal marsh, 0.27 acre of scrub-shrub wetlands, 1.0 acre of subaqueous bottom, and directly and indirectly affect 12 acres of tidal marsh, which are aquatic resources of national importance. We have additional concerns that the cumulative and secondary impacts of this project and others like it will have an adverse impact on the aquatic and human environment. EPA's concerns are amplified by the fact that a practicable alternative may exist that will satisfy the project purpose, provide jobs and economic benefits to the City of D'Iberville, avoid impacts to the aquatic ecosystem, and comply with the Section 404(b)(1) Guidelines.

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