APPENDIX G: RONS AND MMS PROJECTS

RONS AND MMS PROJECTS 1

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RONS Projects for Anahuac, McFaddin and Texas Point NWRs

Refuge	Project Title	RONS #	Project Description	Initial YR Cost ($1,000s)	Recurring Cost ($1,000s)	FTEs	Rank
Anahuac NWR	Restore Native Coastal Tallgrass Prairie	97009	Restore 5,000 acres of fallowed cropland on the refuge to native coastal prairie. Less than 1% of the Texas Gulf Coast's historical tallgrass prairie now remains due to conversion for agricultural uses and urban development. This important coastal prairie ecosystem component will be restored through removal and control of exotic brush species (Chinese tallow, McCartney Rose). Natural hydrology will be restored by reestablishing former contours and elevations, and seed drilling and hay mulching using native grass species. Refuge grasslands provide important habitat for several declining bird species such as Henslow's and Le Conte's sparrows, dickcissel, black rail, and white-tailed kite, and vital nesting habitat for the resident Mottled Duck. Another goal of prairie restoration is to ultimately provide an additional release site for the endangered Attwater's prairie chicken.	15	77	0	3
Anahuac NWR	Restore and Manage Freshwater Coastal Wetlands	97008	Provide freshwater wetland habitat through the management of 1,000 acres of seasonal wetlands. Shallow freshwater wetlands have suffered the greatest decline of all wetland types on the Texas Gulf Coast and remain most susceptible to ongoing drainage and conversion to other land uses. The presence of high quality shallow freshwater wetlands on the refuge has become increasingly important as cultivated rice acreage has declined significantly in the area. Fallowed croplands quickly convert to monotypic stands of exotic Chinese tallow which provide little or no value to waterfowl and other migratory birds. Project includes purchase of a pump, installation of culverts, water control structures, and levees, and support for annual operations.	70	60	0	5

RONS Projects for Anahuac, McFaddin and Texas Point NWRs

Refuge	Project Title	RONS #	Project Description	Initial YR Cost ($1,000s)	Recurring Cost ($1,000s)	FTEs	Rank
Anahuac NWR	Conduct Wildlife and Habitat Surveys	97058	Provide biological staff to conduct essential wildlife and habitat surveys and monitoring. Coastal wetland ecosystems are extremely dynamic, requiring systematic monitoring to understand relationships between management practices, natural disturbances and wildlife habitat responses. This biological staff position will provide the scientific information needed to guide refuge management practices including water management, prescribed burning, controlled grazing, and wetland and grassland restoration. This coastal refuge's marshes, prairies, and woodlands provide vital habitats for wintering and migrating waterfowl, shorebirds, wading birds, neotropical migrants and raptors, and important nursery habitat for many fish and shellfish species which support Galveston Bay's extensive recreational and commercial fishing industries.	65	63	1	6
Anahuac NWR	Expand Native Prairie Restoration Program	98059	Acquire basic equipment needed for native prairie restoration. Less than 1% of the Texas Gulf Coast's historical native tall grass prairie remains today, as most have been converted for agricultural uses and urban development. Equipment needs include a round baler, round bale mulcher, grass drill, bale unroller, crimper, harrow, hydro-axe, seed drier, seed cleaner, and 115-horsepower tractor. Native coastal grasslands are extremely important migrational habitats for many declining grassland songbird species, and provide vital nesting habitat for the resident Mottled Duck. This project will greatly increase opportunities for partnerships with private landowners to accomplish native grassland restoration on a landscape scale.	190	15	0	7

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Refuge	Project Title	RONS #	Project Description	Initial YR Cost ($1,000s)	Recurring Cost ($1,000s)	FTEs	Rank
Anahuac NWR	Enhance Prairie Restoration and Controlled Grazing Programs	98034	Prairie restoration and grazing programs will be expanded and enhanced through the establishment of a Plant Ecologist position, purchase of equipment to develop prairie plant propagation techniques, and increased habitat monitoring (including data collection and computer analyses). Less than 1% of the Texas Gulf Coast's historical tallgrass prairie now remains, as most has been converted for agricultural uses and urban development. Techniques need to be developed to help restore this native prairie that provides important habitat for several declining grassland songbird species and nesting habitat for the resident Mottled Duck. This project will greatly enhance partnership opportunities with private landowners, many of whom are interested in restoring native grasslands and refining grazing practices to benefit wildlife.	65	89	1	8
Anahuac NWR	Improve Coastal Wetlands Management	98003	Develop a water management plan for the refuge complex. Alterations of natural hydrology have restricted freshwater inflows and increased saltwater intrusion in the Texas coastal marshes, negatively impacting their ecological integrity. Active management and restoration are necessary to maintain fish and wildlife values. Watersheds and water management infrastructure will be mapped, monitoring of water usage will be conducted, additional water rights needs and water rights amendments evaluated and adjudicated, and a GIS will be used to model water management regimes and identify future project needs. Coastal marshes on the Texas Chenier Plain Refuge Complex provide vital habitat for wintering Central Flyway waterfowl, shorebirds and wading birds, and for many of Galveston Bay's and Sabine Lake's important fish and shellfish species.	115	9	0	9

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Refuge	Project Title	RONS #	Project Description	Initial YR Cost ($1,000s)	Recurring Cost ($1,000s)	FTEs	Rank
Anahuac NWR	Support for Wetland Restoration	98004	Provide a Geographic Information System (GIS) specialist to develop mapping capabilities at Texas Chenier Plain Refuge Complex. Expansion of this 105,000-acre Refuge Complex and the dynamic nature of this coastal ecosystem have created new management challenges and responsibilities. Advanced GIS technologies and expertise have become prerequisite tools for effectively managing the Complex and meeting conservation priorities of this coastal ecosystem. GIS technologies and a GIS computer specialist position will support management and restoration of coastal wetlands, ongoing land acquisition, and Comprehensive Conservation Planning (CCP). The Refuge Complex CCP and associated Environmental Impact Statement were initiated in FY 1999, and this project will directly support these efforts.	65	89	1	10
Anahuac NWR	Conduct Non-game Bird Surveys	97014	Conduct surveys of migratory songbirds in coastal woodlots, riparian corridors, prairies, and seasonal wetlands on the refuge. These habitats provide important wintering and migrational habitats for songbirds, shorebirds and wading birds. Several are listed species or species of management concern, including Henslow's sparrow, piping plover, and reddish egret. Population and habitat use data is needed to maintain and manage public uses on the refuge, including wildlife observation and environmental education, to ensure that these priority uses remain compatible. Improved biological data will also allow refinement of refuge habitat management activities aimed at benefiting these sensitive species. This monitoring effort supports the bi-national Gulf Crossings Project, a cooperative project between Mexico and the U.S.		23	0	11

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Refuge	Project Title	RONS #	Project Description	Initial YR Cost ($1,000s)	Recurring Cost ($1,000s)	FTEs	Rank
Anahuac NWR	Restore Coastal Wetlands	97006	Restore 100 acres of emergent coastal wetlands on the refuge by constructing wave barriers and planting smooth cordgrass. Shoreline erosion along East Galveston Bay has resulted in extensive wetland losses, and threatens over 15,000 acres of wetlands on this coastal refuge. Alterations of hydrology through construction of navigation channels, channelization of bayous and interruption of freshwater inflows have greatly increased erosion rates. Additional benefits include protecting existing wetlands by slowing or preventing additional shoreline erosion and restoring wetland habitats. This project expands upon proven methods and highly successful partnerships with the Galveston Bay Foundation, Natural Resources Conservation Service, industry, and volunteers.		117	0	12
Anahuac NWR	Improve Refuge Habitat Management Program	7	Provide an entry-level Refuge Operations Specialist position to improve habitat management activities in wetlands, resource protection through law enforcement, conservation easement monitoring, fire management, and overall administration of refuge public use programs. Habitats on these coastal refuges are intensively managed through water level management, prescribed burning, grazing and farming, and restoration of native grasslands and wetlands. Annual visitation to Anahuac NWR exceeds 70,000 annually, for uses including hunting, fishing, and wildlife observation. Moody NWR consists of 3,500 acres of coastal wetlands and prairie under a conservation easement. This trainee position will provide a full spectrum of refuge management and program administration experiences, and an opportunity to increase workforce diversity through the placement of Student Career Employment Program (SCEP) students.	65	75	1	13

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Refuge	Project Title	RONS #	Project Description	Initial YR Cost ($1,000s)	Recurring Cost ($1,000s)	FTEs	Rank
Anahuac NWR	Manage Refuge Oil and Gas Activities	98011	Provide a GS-9 Resource Specialist to manage oil and gas activities, including environmental compliance, permitting, program oversight, and restoration. Oil and gas activity on this 102,946 acre coastal Refuge Complex includes two sizable active fields with all support facilities, over 25 small active and inactive wells, 20 pipelines, and several storage facilities. Additionally, oil and gas exploration through 3-D seismic activity is increasing on the Texas Gulf Coast. Over 40,000 acres of the Complex lands have been surveyed over the last 3 years, three new drilling programs have been implemented, and additional development activities are being planned. Without adequate oversight and coordination of oil and gas exploration and development activities within this fragile wetland environment, severe adverse impacts to valuable fish and wildlife habitats will occur.	65	75	1	14
Anahuac NWR	Improve and expand moist soil management program	98060	Enhance moist soil management capabilities for wetland restoration and management by acquiring needed equipment. Shallow freshwater wetlands along the upper Texas Gulf Coast have suffered the highest historical rate of wetland loss and continue to decline. An ongoing decline in cultivated rice acreage has exacerbated this trend. Equipment needed to conduct moist soil management includes a harrow, mower, fuel tank, scratcher/blade, roller/chopper, land level, and levee plow. This coastal refuge hosts hundreds of thousands of wintering waterfowl of the Central Flyway and management of moist soil units and cultivated rice is critical to maintaining high quality habitat for these species. These units also provide vital habitat for shorebirds.	113	9	0	1

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Refuge	Project Title	RONS #	Project Description	Initial YR Cost ($1,000s)	Recurring Cost ($1,000s)	FTEs	Rank
Anahuac NWR	Protect refuge visitors and enhance resource protection	98007	Visitor safety and resource protection will be enhanced by establishing a refuge officer position for the Anahuac NWR. Resource values are threatened by trespass, migratory bird violations, alligator poaching, and facilities by vandalism and theft. Much of this coastal Refuge is remote and accessible only by boat, posing dangers to recreational fisherman, boaters, and hunters and logistical difficulties for law enforcement activities. Enhancing the safety and quality of experience of its over 105,000 annual visitors and the protection of its natural and cultural resources are the focus of the Refuge Complex law enforcement program.	65	68	1	2
Anahuac NWR	Conduct longterm studies on Mottled Duck populations	97018	Conduct as series of long term investigations to evaluate causative factors leading to the decline of Mottled Ducks in Upper Texas Coast marshes. The Mottled Duck is a resident species of the Texas Gulf Coast, and refuge habitats provide critical year-round habitat for nesting, brood rearing, molting, and wintering. This project involves a long term study to classify habitat characteristics of currently occupied habitats including landscape level preferences, predator relationships on nest and brood success, locate sources of current lead contamination, measure breeding pair density responses to intensive management and habitat improvements, and banding work to provide information on population dynamics, survival rates and seasonal distribution of Mottled Ducks. Information will be collected through research contracts, seasonal hires, purchase of research equipment, fuel, and supplies.	14	39	0	3

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Refuge	Project Title	RONS #	Project Description	Initial YR Cost ($1,000s)	Recurring Cost ($1,000s)	FTEs	Rank
Anahuac NWR	Enhance controlled grazing program through habitat monitoring	98048	Improve management of controlled grazing program. Information is needed to assess the overall ecological effects of grazing to ensure a holistic management approach using this important tool. Over 18,000 acres of the Anahuac National Wildlife Refuge are grazed on a rotational basis to maintain habitats in early successional stages favorable to many waterfowl species, to enhance and maintain plant diversity, to control exotic woody plants, and to enhance the vigor of grasslands. New and expanded surveys of plant community successional changes and wildlife response on grazed units will be conducted. Wetlands and prairie on this coastal Refuge support over 200,000 wintering ducks and geese annually, and equally impressive numbers of shorebirds, wading birds, neotropical migratory songbirds, and raptors.	16	15	0	4
Anahuac NWR	Monitor marsh elevation change relative to fire, grazing and water management	97021	This is a long-term study will monitor marsh elevation changes in response to various refuge management practices including fire, water and grazing management. Relative sea level rise poses serious long-term threats to coastal marshes. The ability of marshes to gain elevation or accrete vertically is critical to their health and survival. Monitoring will be conducted to determine fire effects under differing burn frequencies and intensities, burn timing, and among marsh types, grazing intensities and water management.		49	0	5

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Refuge	Project Title	RONS #	Project Description	Initial YR Cost ($1,000s)	Recurring Cost ($1,000s)	FTEs	Rank
Anahuac NWR	Enhance education and interpretive opportunities for refuge visitors	98037	To maximize benefits to refuge visitors, informational brochures for hunting, fishing, mammals, reptiles and amphibians, and plants, wildflowers, butterfly habitat and Willows map, will be developed, and the new general brochure and bird list will be updated and printed regularly to keep up with high demand. Over 70,000 people visit this coastal refuge annually to fish, hunt, observe and photograph wildlife, and to participate in environmental education activities. The refuge is within a 1-hour drive of over 6 million people in the Houston Metroplex and Golden Triangle areas, and visitation is increasing each year. Written information provides an effective and efficient means of providing information, and this project will ensure that these resources are always available to refuge visitors.	29	15	0	6
Anahuac NWR	Enhance visitor and resource protection	98067	Enhance safety and quality of experience of over 70,000 annual visitors and protection of natural and cultural resources. Much of the refuge is remote and accessible only by boat, posing dangers to recreational fisherman, boaters, and hunters and logistical difficulties for LE activities. Resource values are threatened by trespass, migratory bird violations, alligator poaching, and facilities by vandalism and theft. This project involves the purchase of needed equipment and supplies to support law enforcement activities including: 1) computer, GPS unit, radio and software for full time LEO; 2) canoe for waterfowl patrols; 3) all-terrain vehicle and trailer; 4) cellular phones for improved communications; 5) security system for refuge facilities; 6) radar gun and drug and alcohol test equipment 7) freezer for evidence storage; and 8) gun safe. Reoccurring base needs includes uncontrolled overtime for officers, training and travel costs and annual supplies.	85	16	0	7

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Refuge	Project Title	RONS #	Project Description	Initial YR Cost ($1,000s)	Recurring Cost ($1,000s)	FTEs	Rank
Anahuac NWR	Protect refuge resources by enhancing biological data collection and analysis	98056	Acquire basic equipment and supplies needed to fully implement the Anahuac NWR biological program. Coastal ecosystems are highly complex and dynamic, and sound scientific data is needed to track changes in plant communities, trends in habitat quality and quantity, and fish and wildlife response to habitat changes and management practices. Equipment needs include lap top computers, data loggers, GPS units, spotting scopes, four-wheel all-terrain vehicle, airboat, banding supplies, and publications and other information resources. This coastal refuge hosts thousands of Central Flyway waterfowl each winter, and provides vital habitat for other migratory birds including shorebirds, wading birds, songbirds, and raptors. Listed migratory bird species found on the Refuge include the endangered piping plover and brown pelican.	39	10	0	8
Anahuac NWR	Restore coastal woodlot	98035	Restore a 15-acre coastal wood lot on the Anahuac NWR. Development, sand and gravel mining, conversion to pasture and invasive species such as the exotic Chinese tallow have significantly impacted coastal woodlots in the Chenier Plain region of southwestern Louisiana and southeast Texas. This project involves Chinese tallow control, restoring natural hydrology, and purchase of trees and planting. Coastal woodlots provide vital migrational habitat for many neotropical songbirds, especially in spring when these habitats represent the first landfall for hundreds of thousands making nonstop flights across the Gulf of Mexico from Mexico's Yucatan Peninsula. Migratory songbirds utilize these wooded habitats for resting and foraging, to restore energy reserves prior to continuing their northward migration.	30	0	0	9

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Refuge	Project Title	RONS #	Project Description	Initial YR Cost ($1,000s)	Recurring Cost ($1,000s)	FTEs	Rank
Anahuac NWR	Enhance shorebird management through monitoring	98052	Implement surveys to determine numbers and species of shorebirds using the Refuge, timing of use by individual species, and habitat preferences. Ongoing losses of shallow freshwater habitat due to declines in the rice industry have increased the importance of implementing shorebird management activities on the Refuge. This project involves a 3-year shorebird monitoring in rice fields, moist soil units, and natural wetlands. Using the information collected, current shorebird management practices involving water level manipulation will be refined to provide maximum benefits to this important avian resource. Refuge habitats support over 100,000 shorebirds annually during spring and fall migrations. Thirty-five species of shorebirds have been recorded on the Refuge.	36	3	0	10
Anahuac NWR	Develop Interpretive displays for public use facilities	3001	Develop interpretive displays, slide programs, videos, and an interactive video display using a remote microwave camera for use in public use facilities on the refuge. Topics to be interpreted include coastal wetlands, prairies, habitat management tools (fire, water, moist soil, grazing and restoration), rails, alligators, cultural and historic resources, and exotic and invasive species. This coastal refuge is within one hour's drive of over 6 million people including the Houston Metroplex, resulting in high demand for recreational and educational opportunities. The current annual visitation of the refuge exceeds 70,000 and is expanding rapidly.	89	0	0	11

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Refuge	Project Title	RONS #	Project Description	Initial YR Cost ($1,000s)	Recurring Cost ($1,000s)	FTEs	Rank
Anahuac NWR	Enhance controlled grazing habitat management program	99055	Improve the Refuge grazing program. Grazing is used to maintain and enhance grassland and wetland habitats on over 70,000 acres of the Texas Chenier Plain Refuge Complex. Needed improvements to ensure continued compatibility of this management tool include revising rotational grazing units by installing fences and cattle guards, and improving water availability through development of water wells. Controlled livestock grazing is an important wildlife management tool on this coastal refuge, providing a cost-effective means of maintaining quality habitat for wintering waterfowl, shorebirds, and grassland songbirds. Anahuac NWR host up to 200,000 Central Flyway ducks and geese annually and equally impressive numbers of shorebirds, wading birds, and neotropical songbirds.	85	7	0	12
Anahuac NWR	Conduct Wildlife Habitat Management Workshops for Private Landowners	2002	Conduct five workshops for private landowners and other agency personnel in Chambers, Jefferson and Galveston Counties to demonstrate marsh management and restoration, moist soil management , prairie restoration and management and woodlot management and restoration techniques. Highlight all available private lands programs and grant opportunities. Provide on going technical assistance to landowners wishing to restore wetland, woodlot or grassland habitat. Develop a demonstration program and interpretive signs on the refuge for private landowners. The effort will involve producing print materials signs and course materials for the program by working with area State and County Extension, Texas Parks and Wildlife, Ducks Unlimited and Fish and Wildlife ecological Services offices. We estimate over 5,500 acres of wildlife habitat will be enhance or restored as a result of this outreach and technical assistance effort and over 200 private landowners will benefit from these services.	20	8	0	13

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Refuge	Project Title	RONS #	Project Description	Initial YR Cost ($1,000s)	Recurring Cost ($1,000s)	FTEs	Rank
Anahuac NWR	Enhance restoration of native prairie through study and monitoring	98049	Establish systematic monitoring program of prairie restoration projects on Anahuac NWR. Over 5,000 acres of fallowed crop land will be restored to grassland habitat on the refuge over the next 25 years. Monitoring plant community and wildlife responses is needed to assess the success of various restoration methodologies. Information will be used to guide future prairie restoration efforts and will provide baseline information for use in providing technical assistance to private landowners. Grassland restoration to support grazing operations will be a viable alternative to the loss of rice agriculture for many area ranchers and farmers, and there is great partnership potential between the USFWS and landowners using the Partners for Fish and Wildlife program.	107	0	0	14
Anahuac NWR	Conduct Yellow Rail study	98047	Study the wintering and migration habitat utilization and ecology of the yellow rail on Anahuac NWR. Little is known of this secretive marsh species in its wintering habitat along the Texas Gulf Coast. Densities of this species on the Refuge are apparently the greatest of any area in the region, and Refuge and surrounding coastal marshes are likely critical to the survival of this species. The Refuge is intensively managed to provide quality wintering and migrational habitat for waterfowl, and information on other sensitive migratory bird species is needed to ensure holistic management in this dynamic coastal wetland and prairie ecosystem. This project has high partnership potential with several universities, Friends of Anahuac Refuge, and local volunteers.	69	0	0	15

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Refuge	Project Title	RONS #	Project Description	Initial YR Cost ($1,000s)	Recurring Cost ($1,000s)	FTEs	Rank
Anahuac NWR	Control invasive plants in marsh and prairie habitats	2001	Common reed, cattail, giant cut-grass, California bulrush alligator weed and rattlebox occur in open water habitats in marshes on the refuge. These invasive plants establish along pond periphery and if not controlled encroach into open water areas forming dense homogeneous stands covering open water areas. This encroachment impacts waterfowl use, reduces the quality of available Mottled Duck breeding pair ponds and reduces use by other wetland waterbirds. Seacoast sump weed, big leaf sump weed, and eastern baccharis have become invasive in native and salty prairie habitats on the refuge. High densities of these invasive plants reduce use by many avian species such as Mottled Ducks, seaside sparrows, black rail, yellow rail, sedge wren, LeConte's sparrow and Sprague's Pipit. This project will purchase the needed equipment to mechanically mow pond boundaries, modifying water control structure to utilize salinities to manage nuisance plants and utilize an integrated approach of mowing, fire, grazing and herbicides to reduce the nuisance plant dominance in upland prairie habitats.	187	17	0	16
Anahuac NWR	Conduct study on black water impacts on submerged aquatic plants	97022	Conduct longterm research study to determine the causes of the "black water" phenomenon in refuge and surrounding coastal marshes. Periodic occurrences of this phenomenon, characterized by low dissolved oxygen and high water temperatures, result in a loss of aquatic vegetation, fish kills, and other detrimental impacts. This study will examine other factor limiting the establishment and growth of submerged aquatic plants. Under these conditions, habitat quality for wintering and migrating waterfowl and other migratory birds is significantly reduced. Information on causative factors will facilitate development of management practices to prevent or minimize its occurrence. This coastal refuge's marshes provide vital wintering and migration habitat for migratory birds including Central Flyway waterfowl, shorebirds and wading birds, and nursery habitat for many recreationally and commercially important fish and shellfish.		45	0	17

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Refuge	Project Title	RONS #	Project Description	Initial YR Cost ($1,000s)	Recurring Cost ($1,000s)	FTEs	Rank
Anahuac NWR	Develop trail and interpretive signs for Butterfly Habitat and Willows Area	3000	Develop an new accessible trail system and interpretive materials for the Butterfly and Hummingbird Habitat and the Willows. This project involves developing an interpretive trail system with trail guide including: 1)plant identification label system; 2)landscaping for butterfly and hummingbirds with native plants brochure; 3)trial guide brochure; 4)interpretive panels; and 5) concrete accessible trail. This coastal refuge is within one hour's drive of over 6 million people including the Houston Metroplex, resulting in high demand for recreational and educational opportunities. The current annual visitation of the refuge exceeds 70,000 and is expanding rapidly. The new Butterfly Habitat and the Willows woodlot are among the most popular sites on the refuge for wildlife observation and photography and important components of our environmental education program.	76	0	0	18
Anahuac NWR	Increase biological monitoring and habitat management with expanded volunteer program	4	Enhance the Anahuac NWR Volunteer Program by providing needed operational support. Volunteers have become the lifeblood of the refuge, contributing over 11,000 hours annually to a variety of refuge programs. General supplies including personal protective equipment is needed, and equipment and facility needs include two vehicles, computers, printer, software and office furniture and supplies. Reoccurring base needs include stipends for intern program, fuel, utilities, phones, awards, drinking water, safety equipment and boots. Volunteers conduct habitat and wildlife surveys, conduct tours for visitors, coordinate the environmental education program, and assist with habitat management. Community involvement has bred pride and commitment to the refuge, and vice versa. Great opportunities exist for bringing non-local volunteers to the refuge to further develop this successful program.	70	20	0	19

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Refuge	Project Title	RONS #	Project Description	Initial YR Cost ($1,000s)	Recurring Cost ($1,000s)	FTEs	Rank
Anahuac NWR	Conduct baseline inventory of refuge amphibians and reptiles	97012	Conduct essential inventory of reptiles and amphibians on the Anahuac NWR. Data on amphibians and reptiles, including species composition and relative abundance, are currently lacking. Threats to these sensitive species, which are often early indicators of declining ecosystem health, include loss of freshwater wetlands and contaminants (primarily agricultural pesticides). Species of concern include the smooth green snake, Texas diamondback terrapin, and the alligator snapping turtle. Enhanced biological data gained through systematic surveys will be used to evaluate population status of reptiles and amphibians occurring on the refuge, and to ensure that refuge management practices are consistent with maintaining viable populations. This project will be implemented through a partnership with a university or the Biological Resources Division of the U.S. Geological Survey.	48	0	0	20
Anahuac NWR	Install interpretive exhibits at waterfowl hunt check station	5	Install interpretive exhibits at the waterfowl hunt check station to provide hunter education and orientation. This facility provides information to the over 3,000 hunters using the East Unit Hunt Area each year, and is used to collect important biological data. This project will equip this new facility with two interpretive panels, two exhibits, television, VCR, and computer. Exhibits will include information on the white goose overpopulation problem, hunter ethics, and declining coastal wetlands, as well as partnership programs aimed at restoring and protecting habitats on private and public lands in the region. Educational videos will be shown, and the computer will allow the check station attendant to enter harvest and aerial waterfowl data and display this information.	46	0	0	21

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Refuge	Project Title	RONS #	Project Description	Initial YR Cost ($1,000s)	Recurring Cost ($1,000s)	FTEs	Rank
Anahuac NWR	Conduct study to determine population densities and habitat utilization by black rails	98051	Determine habitat use by and relative abundance of black rails on Anahuac NWR. Relatively little is known of this secretive marsh bird's wintering habitat requirements, and it also may be a nesting species on the Anahuac NWR. Additional scientific information is needed to ensure conservation of this sensitive species, and to ensure that refuge habitat management practices are consistent with its habitat needs. This two-year study will include conducting call surveys, and capture and radio marking rails to determine habitat utilization and nesting status. The black rail is state-listed as a Threatened species in Texas, and is a Federal Species of Concern. Shallow freshwater marshes and wet prairies, believed to be the black rail's preferred habitats, are locally rare and declining habitat types.	89	0	0	22
Anahuac NWR	Improve coastal marsh management capabilities with specialized equipment	2	Purchase specialized equipment to provide access for coastal marsh management on Anahuac NWR. Coastal marsh habitats are highly sensitive and easily damaged, and specialized equipment which minimizes plant damage and soil compaction are required for routine management operations including prescribed burning, water management, habitat monitoring and wildlife surveys. A low ground pressure amphibious aluminum tracked buggy and amphibious all terrain vehicle will be purchased. The Refuge's coastal marshes support high biological diversity, including several threatened and endangered species, a variety of migratory birds, and many of Galveston Bay's recreationally and commercially important fish and shellfish.	262	21	0	23

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Anahuac NWR	Enhance and expand public outreach and education with professional audio/visual programs	98040	Enhance interpretation of the Refuge, its resources, management activities, and visitor opportunities by increasing the quality and quantity of off-site presentations. Rapidly expanding nature tourism along the Texas Coast has created a critical need for additional outreach through interpretation and environmental education, both on and off-site. A video will be produced and audio visual equipment needed for outreach programs purchased. The Refuge's location within one hour's drive from over 6 million people in the Houston Metroplex and Golden Triangle region provides an ideal opportunity for highly effective outreach and education.	32	0	0	24
Anahuac NWR	Develop an audio tour route program and mobile interpretive exhibit	98036	Develop audio interpretive system for vehicles and mobile interpretive exhibit to be used a various festivals and expos. The audio system and mobil exhibit would interpret the variety of coastal habitat types including wetlands, grasslands, and woodlands, fish and wildlife resources, cultural resources, and management of the refuge. The refuge auto tour route provides visitors excellent opportunities to view a variety of wildlife and habitats. The audio interpretive system and mobile exhibits will add significantly to interpretive facilities on the Refuge, will be a highly effective outreach and educational tool, and will enhance refuge on-site and off-site outreach capabilities. Based on the latest Fish and Wildlife Service data available, the additional visitors to this area are expected to contribute $25,513 annually to the local economy. Project has high partnership potential with Friends of Anahuac Refuge.	41	0	0	25

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Refuge	Project Title	RONS #	Project Description	Initial YR Cost ($1,000s)	Recurring Cost ($1,000s)	FTEs	Rank
Anahuac NWR	Enhance waterfowl disease contingency response capabilities	97011	Enhance preparedness and response capabilities to minimize deleterious impacts of waterfowl disease outbreaks, including the protection of public safety. Disease outbreaks in these habitats are regularly documented, and have potential to impact extremely large numbers of migratory waterfowl and other migratory birds. The project ensures that materials/equipment and personnel preparedness are maintained according to approved Disease Contingency Plan, and supports aerial monitoring to provide early detection of disease problems. The coastal marshes and rice prairies of southeast Texas provide wintering and migration habitat for millions of ducks and geese of the Central Flyway.	15	10	0	26
Anahuac NWR	Support expanding environmental education program	98043	Maintain and enhance high quality environmental education program. The Refuge Environmental Education program is expanding rapidly, and now reaches approximately 1,000 students per year. Audiovisual programs, interactive displays, written materials will be purchased to update and expand curricula for primary and secondary through high school educational use. Materials will interpret coastal wetland, prairie, woodland and bottomland forest habitats and resources. Volunteer participation and community partnerships are the mainstay of this important refuge program. The Friends of Anahuac Refuge are an established partner on this project.	22	10	0	27

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Refuge	Project Title	RONS #	Project Description	Initial YR Cost ($1,000s)	Recurring Cost ($1,000s)	FTEs	Rank
Anahuac NWR	Enhance and expand recreational and educational opportunities	98012	Expand and enhance the Refuge environmental education and interpretation programs, liaison with the Refuge Friends group, community outreach, and law enforcement programs by establishing an entry level Outdoor Recreation Planner position. This coastal Refuge is within one hour's drive of over 4 million people in the Houston Metroplex, resulting in high demand for recreational and educational opportunities. Annual visitation to this coastal refuge exceeds 70,000 and is expanding rapidly. Public uses occur year round and include wildlife observation, environmental education and interpretation, recreational fishing, and waterfowl hunting. The Refuge's environmental education program now serves over 1,500 students annually through on and off-site programs and activities.	65	91	1	28
Anahuac NWR	Increase interagency coordination	10	Increase interagency coordination on significant issues affecting habitats and fish and wildlife resources on these coastal refuges. These include coastal erosion, beneficial uses of dredged material, wetland and native prairie restoration, oil and gas development and right-of-way proposals for roads and pipelines. A Deputy Project Leader position for the Texas Chenier Plain Refuge Complex will be established to increase coordination with state agencies including the Texas General Land Office, Texas Parks and Wildlife Department, and federal agencies including the U.S. Army Corps of Engineers, National Marine Fisheries Service, and Federal Highway Administration. This Refuge Complex protects and manages over 103,000 acres of coastal wetlands, prairies, and woodlots.	65	121	1	29

RONS Projects for Anahuac, McFaddin and Texas Point NWRs

Refuge	Project Title	RONS #	Project Description	Initial YR Cost ($1,000s)	Recurring Cost ($1,000s)	FTEs	Rank
Anahuac NWR	Native prairie and coastal woodland restoration	98016	Enhance and increase native prairie and coastal woodlot restoration and management activities on Anahuac NWR through the addition of a Tractor Operator position. Operation of farm machinery is required for restoration activities, including tractors, discs, scrapers, mowers, and augers. Most of the historical 9-million acre tallgrass coastal prairie of Texas and Louisiana has been lost through conversion to other land uses, and several species of grassland birds which winter in the region are in decline. Species of concern include Henslow's and Le Conte's sparrows, dickcissel, and black rail. Coastal woodlots of the Chenier Plain region provide vital habitats as the first landfall for many neotropical migratory songbirds making a Trans-Gulf migrations.	65	71	1	30
Anahuac NWR	Enhance and expand public outreach	98010	To increase cooperation and coordination with elected officials, other governmental agencies, the media, and the public, an outreach specialist position will be established serving the Texas Chenier Plain Refuge Complex. The natural resources of the upper Texas Gulf Coast are a national treasure, and the importance of conservation here has long been recognized. Ongoing expansion of this coastal Refuge Complex, implementation of the Texas Chenier Plain Habitat Stewardship Program (a multi-partner habitat conservation effort on 185,000 acres), and the Texas State Highway 87 reconstruction project are among the major issues related to USFWS activities in this region.	65	107	1	31

RONS Projects for Anahuac, McFaddin and Texas Point NWRs

Refuge	Project Title	RONS #	Project Description	Initial YR Cost ($1,000s)	Recurring Cost ($1,000s)	FTEs	Rank
Anahuac NWR	Improve visitor services through expanded environmental education program	1	Meet the growing demand for environmental education and visitor services at Anahuac NWR by establishing an environmental education specialist position. Refuge volunteers administer the Refuge's extremely successful environmental education program. The rapid expansion of this program has resulted in a need for full-time staff oversight and participation--over 1,000 students are now involved in on-site environmental education programs each year. This coastal Refuge's ideal location within a 1-hour drive of over 4 million people in the Houston Metroplex has created a great demand for environmental education and visitor services. The environmental education program has also dramatically increased community involvement in and support for the Refuge and its overall mission.	65	67	1	32
Anahuac NWR	Enhance refuge management activities and staff and public safety	98069	Purchase and install two remote weather stations on the Anahuac NWR. Weather greatly affects ecological processes in this dynamic coastal ecosystem, and collection of weather data is an important component in overall ecological monitoring. Currently, assessment of local weather conditions is not possible. Availability of accurate local weather data can also have major impacts on refuge management activities and program safety. For example, monitoring wind and weather conditions while suppressing wildfires and conducting prescribed burns is critical to ensuring staff and public safety, as well as to ensure maximum natural resource benefits of this management activity.	32	3	0	33

RONS Projects for Anahuac, McFaddin and Texas Point NWRs

Refuge	Project Title	RONS #	Project Description	Initial YR Cost ($1,000s)	Recurring Cost ($1,000s)	FTEs	Rank
Anahuac NWR	Increase visitor services	98017	Enhance visitor services by establishing a maintenance worker position to provide timely and improved maintenance of public use facilities on Anahuac NWR. Facilities including observation platforms and boardwalks, trails, comfort stations, interpretive and directional signage, boat ramps, boundary signage, and fencing require regular maintenance for protecting visitor safety and enhancing visitor experiences. Regular upkeep is necessitated by the harsh marine environment. Annual visitation to this coastal Refuge currently exceeds 70,000 and is expanding. A wide variety of wildlife-dependent recreational and educational uses including all six priority public uses are ongoing on the Refuge: wildlife observation and photography, recreational fishing, waterfowl hunting, and environmental education and interpretation.	65	71	1	34
Anahuac NWR	Conduct baseline cultural resource survey	9	Conduct baseline cultural resource survey on Anahuac NWR. A formal inventory of Refuge cultural resources has not been completed. This coastal refuge's marshes and prairies were once inhabited by Atakapa and Karankawa Indians, and several shell middens along bayou and bay shorelines containing Paleo-Indian artifacts remain. Identification and cataloging of these sites are critical to their long-term protection.	65	0	0	35
McFaddin NWR	Protect Coastal Wetlands	1	Reduce wetland loss due to ongoing coastal erosion on McFaddin NWR. The Gulf shoreline along this Refuge is retreating at an average rate of 10-15 per year, resulting in 20 acres of wetland loss annually. Coastal scientists believe that the primary reason for this rapid rate of land loss is the loss of sediment input to the Gulf. Upstream dams and navigation jetties and channels prevent or restrict the transport of sediments which formerly fed shorelines in this coastal region. This project will restore the historic dune system along 14 miles of Refuge shoreline, slowing erosion and protecting refuge wetlands. Dune restoration will also benefit biological diversity. This project will expand an ongoing partnership with the Texas General Land Office and Texas A&M University.		135	0	1

RONS Projects for Anahuac, McFaddin and Texas Point NWRs

Refuge	Project Title	RONS #	Project Description	Initial YR Cost ($1,000s)	Recurring Cost ($1,000s)	FTEs	Rank
McFaddin NWR	Improve Coastal Freshwater Wetlands Management	98004	Enhance coastal wetlands by restoring freshwater habitats on McFaddin NWR. Shallow freshwater wetlands along the Texas Gulf Coast have suffered the highest historical rate of wetland loss and continue to decline due to changing agricultural practices. Freshwater inflows to most of the Refuge were eliminated by construction of the Gulf Intracoastal Waterway. In periods of drought, surface freshwater is completely lacking. Five fresh water wells and related levees will be installed on the Refuge to provide habitat for migratory birds and resident wildlife, including nesting and brood-rearing areas for resident Mottled Ducks. Populations of this resident waterfowl species are declining in Texas. This coastal refuge hosts over 200,000 Central Flyway ducks and geese annually, and equally impressive numbers of shorebirds, wading birds, and neotropical songbirds.	140	11	0	2
McFaddin NWR	Control Invasive Exotic Species	2	Control invasive exotic plants on McFaddin and Texas Point NWRs. Coastal marshes, prairies and woodlots on these refuges provide vital wintering habitat for waterfowl, shorebirds, neotropical songbirds and raptors. Exotic plants impacting these refuges include water hyacinth, McCartney rose and Chinese tallow. Another new invasive plant, giant salvinia, occurs locally and threatens freshwater wetland habitats on McFaddin NWR. These fast growing exotics are highly invasive and out compete native plant species while providing little or no benefit to native wildlife. Invasion by exotic plants is a great threat to native biological diversity and ecosystem function on these refuges. Integrated pest management strategies, including herbicide application, water level and salinity manipulation, mechanical removal, burning and grazing will be used to help control these species.		26	0	3

RONS Projects for Anahuac, McFaddin and Texas Point NWRs

Refuge	Project Title	RONS #	Project Description	Initial YR Cost ($1,000s)	Recurring Cost ($1,000s)	FTEs	Rank
McFaddin NWR	Enhance Coastal Wetlands Management	97004	Enhance wetlands management in the 5000-acre Wild Cow Bayou Marsh Unit. Unit is part of a large-scale hydrologic restoration project in the Salt Bayou watershed aimed at restoring and maintaining historic plant and animal communities associated with less saline coastal marsh types. Channelization of these marshes and elimination of freshwater inflows have increased saltwater intrusion, resulting in loss of emergent marshes through conversion to open water and a loss of overall biological diversity. Two water control structures will be installed for improved water level and salinity management. The refuge annually supports over 200,000 Central Flyway ducks and geese, and this unit is one the most productive on McFaddin NWR. High partnership potential with organizations such as Ducks Unlimited is expected.	119	10	0	4
McFaddin NWR	Protect refuge visitors and enhance resource protection	98007	Visitor safety and resource protection will be enhanced by establishing a refuge officer position for the McFaddin and Texas Point NWRs. Resource values are threatened by trespass, migratory bird violations, alligator poaching, and facilities by vandalism and theft. Much of these coastal Refuge are remote and accessible only by boat, posing dangers to recreational fisherman, boaters, and hunters and logistical difficulties for law enforcement activities. Enhancing the safety and quality of experience of its over 105,000 annual visitors and the protection of its natural and cultural resources are the focus of the Refuge Complex law enforcement program.	65	68	1	1

RONS Projects for Anahuac, McFaddin and Texas Point NWRs

Refuge	Project Title	RONS #	Project Description	Initial YR Cost ($1,000s)	Recurring Cost ($1,000s)	FTEs	Rank
McFaddin NWR	Restore coastal wetlands through hydrologic restoration	16	Restore 1,200 acres of coastal marshes. Channels and ditches formerly used to access oil and gas developments are resulting in wetland loss and degradation on McFaddin NWR. Saltwater intrusion and erosion are converting productive and biologically diverse emergent marshes to open water. Several rock weirs will be installed in waterways on the Refuge to reduce these impacts and reverse these trends. These structures have proven highly effective and cost efficient for preventing wetland loss and degradation and promoting recovery of degraded marshes in coastal Louisiana. These structures also allow passage of juvenile fish and shellfish to and from marsh nursery habitats. This project has high partnership potential with the Texas General Land Office, conservation organizations, and volunteers.	85	0	0	2
McFaddin NWR	Restore and protect coastal wetlands	17	Restore and protect coastal marshes on McFaddin NWR by reducing erosion along the Gulf Intracoastal Waterway. Erosion along the GIWW is claiming wetlands and threatening over 80,000 acres on and adjacent to this coastal refuge. Saltwater intrusion and erosion are converting productive and biologically diverse emergent marshes to open water. A pilot project to reduce erosion along the GIWW will be implemented, using innovative techniques developed in Louisiana. Rock wave breaks have been installed, existing cutbanks sloped and erosion mats installed. This project will purchase and transplant smooth cordgrass to restore emergent marsh habitat and further protect the GIWW from erosion. Coastal marshes on the refuge provide vital habitat for wintering waterfowl of the Central Flyway, and recreational opportunities for over 30,000 people annually that come to waterfowl hunt, fish and observe wildlife. This project has high partnership potential with the Texas General Land Office.	50	0	0	3

RONS Projects for Anahuac, McFaddin and Texas Point NWRs

Refuge	Project Title	RONS #	Project Description	Initial YR Cost ($1,000s)	Recurring Cost ($1,000s)	FTEs	Rank
McFaddin NWR	Provide vital operational support to refuge law enforcement program	5	Acquire needed equipment for law enforcement programs on McFaddin and Texas Point NWRs. These coastal refuges are remote and mostly accessible only by boat, posing dangers to recreational fisherman, boaters and hunters. Boats, airboats and specialized marsh vehicles are utilized by refuge staff conducting law enforcement activities. Resource values are threatened by trespass, migratory bird violations, alligator poaching, unauthorized cultural resource collection, and facilities by vandalism and theft. Equipment needs include: all-terrain vehicle and trailer; security system for refuge facilities; night surveillance equipment; gun safe; and boating supplies. The refuge law enforcement program focuses on safety and quality of experience of over 35,000 annual visitors and protection of natural and cultural resources.	22	8	0	4
McFaddin NWR	Control invasive plants in open water wetland habitats	2002	Control invasive plants in open water habitats on McFaddin and Texas Point NWRs. Native pest plants currently impacting these refuges include California bulrush and Roseau cane. Both of these plants tolerate a wide range of salinities and grow in wide range of water depth. Once established they eventually fill in open water ponds and waterways forming dense stands that provide little benefit to wildlife. Large areas that once provided important habitat for wintering waterfowl are now covered by thick stands of these plants. Invasion by native pest plants is a great threat to biological diversity and ecosystem function on these refuges. Integrated pest management strategies including herbicide application, mechanical removal, burning, and grazing will be used to help control these species. Coastal marshes and prairies on these refuges provide vital wintering habitat for waterfowl, shorebirds, neotropocial songbirds, and raptors.	0	26	0	5

RONS Projects for Anahuac, McFaddin and Texas Point NWRs

Refuge	Project Title	RONS #	Project Description	Initial YR Cost ($1,000s)	Recurring Cost ($1,000s)	FTEs	Rank
McFaddin NWR	Restore and enhance coastal woodlots and control exotics	3004	Restore and enhance 50 acres of coastal woodlots on the McFaddin and Texas Point NWRs. Development, sand and gravel mining, conversion to pasture and invasive species such as the exotic Chinese tallow have significantly impacted coastal woodlots in the Chenier Plain region of southwestern Louisiana and southeast Texas. This project involves Chinese tallow control, restoring natural hydrology, and purchase of trees and planting. Coastal woodlots provide vital migrational habitat for many neotropical songbirds, especially in spring when these habitats represent the first landfall for hundreds of thousands making nonstop flights across the Gulf of Mexico from Mexico's Yucatan Peninsula. Migratory songbirds utilize these wooded habitats for resting and foraging, to restore energy reserves prior to continuing their northward migration.	30	5	0	6
McFaddin NWR	Conduct long-term monitoring of fire effects in coastal wetlands and prairies	13	This 3-year study will determine soil, vegetation, and wildlife response to fire on McFaddin and Texas Point NWRs. Fire effects on marsh accretion rates will also be assessed. Although fire is a natural component of this coastal ecosystem, many ecological effects of fire in coastal wetland and prairie habitats remain poorly understood. Monitoring will be conducted to determine fire effects under differing burn frequencies and intensities, burn timing and among marsh types. Natural wildfire and prescribed burning are key components of the refuge's habitat management program, as fire is critical to maintaining native biological diversity and habitat values for migratory birds including waterfowl, raptors and songbirds. Fire is an important tool in control efforts for Chinese tallow, an exotic which provides few benefits for wildlife and reduces native biological diversity.	90	0	0	7

RONS Projects for Anahuac, McFaddin and Texas Point NWRs

Refuge	Project Title	RONS #	Project Description	Initial YR Cost ($1,000s)	Recurring Cost ($1,000s)	FTEs	Rank
McFaddin NWR	Enhance refuge biological program	4	Acquire basic equipment and supplies needed to fully implement biological programs on McFaddin and Texas Point NWRs. Coastal ecosystems are highly complex and dynamic, and sound scientific data is needed to track changes in plant communities, trends in habitat quality and quantity, and fish and wildlife response to habitat changes. Equipment needs include spotting scopes and binoculars, GPS units, two lap top computers, surveying equipment, and bird banding supplies. These coastal refuges host over 200,000 Central Flyway ducks and geese annually, and provide vital habitat for other migratory birds including shorebirds, wading birds, songbirds and raptors. Listed species using the refuges include the endangered piping plover and brown pelican.	39	10	0	8
McFaddin NWR	Enhance grassland and wetland management through controlled grazing program	6	Improve grazing programs on McFaddin and Texas Point NWRs. Grazing is used to maintain grassland and wetland habitats on over 70,000 acres of the Texas Chenier Plain Refuge Complex. Needed improvements to ensure the continued compatibility of this management tool include revising rotational grazing units with new fencing and cattle guard installation, and improving water availability through development of water wells. Controlled grazing is a cost-efficient habitat management tool on these refuges which helps maintain quality habitat for wintering waterfowl, shorebirds and grassland songbirds. These refuges winter over 200,000 Central Flyway ducks and geese annually, and impressive numbers of shorebirds, wading birds and neotropical songbirds.	45	2	0	9

RONS Projects for Anahuac, McFaddin and Texas Point NWRs

Refuge	Project Title	RONS #	Project Description	Initial YR Cost ($1,000s)	Recurring Cost ($1,000s)	FTEs	Rank
McFaddin NWR	Enhance controlled grazing program through habitat monitoring	9	Improve management of controlled grazing program. Information is needed to assess overall ecological effects of grazing to ensure a holistic management approach using this tool. Over 70,000 acres of the Texas Chenier Plain Refuge Complex are grazed on a rotational basis to maintain habitats in early successional stages favorable to many waterfowl species, to enhance and maintain plant diversity, to control exotic woody plants, and to enhance the vigor of grasslands. New and expanded surveys of plant community successional changes and wildlife response will be conducted. Wetlands and prairie on these coastal refuges support over two hundred thousand wintering ducks and geese annually, and equally impressive numbers of shorebirds, wading birds, neotropical migratory songbirds and raptors. Coastal marshes also serve as nursery habitat for many marine fish and shellfish species.	16	15	0	10
McFaddin NWR	Restore native prairie	3003	Enhance 100 acres of native prairie on the North Unit of McFaddin NWR and 15 acres on Texas Point NWR by sprigging native grasses and forbs. Native prairie plants will be purchased or salvaged and planted within existing stands of native prairie to increase the diversity of prairie plant communities on the refuges. Less than 1 percent of historical 9 million-acre coastal tallgrass prairie in Texas and Louisiana remains intact due to conversion to other land uses. This rare component of the western Gulf Coast coastal ecosystem supports wintering and breeding grassland songbirds, many species of which are in decline. This project will benefit several priority grassland species of concern including Henslow's sparrow, LeConte's sparrows, dickcissel, and Sprague's pipit, and well as other priority species including black rails and Mottled Ducks.	26	0	0	11

RONS Projects for Anahuac, McFaddin and Texas Point NWRs

Refuge	Project Title	RONS #	Project Description	Initial YR Cost ($1,000s)	Recurring Cost ($1,000s)	FTEs	Rank
McFaddin NWR	Conduct neotropical migratory bird surveys	11	Conduct surveys of neotropical migratory birds in coastal wood lots, prairies, and marshes on McFaddin and Texas Point NWRs. These habitats provide important wintering and migrational habitats for neotropical migratory songbirds, shorebirds and wading birds. Several are listed species, or species of management concern, including Henslow's sparrow, piping plover, and reddish egret. Population and habitat use data is needed to maintain and manage public uses on the Refuge, including wildlife observation and environmental education, to ensure that these priority uses remain compatible. Improved biological data will also allow refinement of refuge habitat management activities aimed at benefiting these sensitive species. This monitoring effort supports the bi-national Gulf Crossings Project, a cooperative project between Mexico and the U.S.	36	5	0	12
McFaddin NWR	Conduct comprehensive alligator population survey utilizing DNA sampling	2001	Conduct a 5-year mitochondrial DNA study to improve estimates of alligator populations and improve tracking of alligator population trends. One egg from each alligator nest would be analyzed, and through DNA testing, the nesting female would be identified. By analyzing one egg from every nest for 5 years, the breeding population of alligators can be determined, and a population estimate derived through age-class distribution models. Accurate population estimates are needed to effectively manage alligator populations. Enhanced population data will be used to evaluate current management practices to ensure that they are consistent with maintaining a viable population of alligators. DNA analysis will be conducted by a university lab.	8.5	12	0	13

RONS Projects for Anahuac, McFaddin and Texas Point NWRs

Refuge	Project Title	RONS #	Project Description	Initial YR Cost ($1,000s)	Recurring Cost ($1,000s)	FTEs	Rank
McFaddin NWR	Conduct American Bittern Study	3005	Conduct a 3-year study to determine habitat use and survival of American Bitterns in upper Texas coastal wetlands. Evaluate habitat preferences and characteristics, body condition and survival rates of American Bitterns using telemetry and banding. Birds will be captured, banded and radio collared with satellite transmitters. American Bittern populations are declining throughout most of their range, and this species has been identified as a priority waterbird in need of conservation action. Very little information is available on the wintering ecology of American Bitterns. Initial work on the refuge to compliment ongoing telemetry studies in breeding areas has documented the importance of the refuge to wintering American Bitterns. Researchers will also evaluate burning frequency and timing as related to American Bittern habitat selection and survival.	101	0	0	14
McFaddin NWR	Develop grit sites for Mottled Ducks	3002	Two grit sites will be developed in the Wild Cow Bayou Unit. Mottled duck populations are declining in Texas. Lead poisoning continues to negatively impact this species as demonstrated by high lead shot ingestion rates. Lead shot ingestion occurs primarily through foraging for grit, and natural grit is very scarce in most coastal marsh habitats in Texas. Two grit sites with appropriate sized grit will be established in the Wild Cow Bayou Unit, which provides key pair bonding, nesting and brood rearing habitat for Mottled Ducks. Providing grit may reduce the incidence of lead poisoning and will improve overall habitat conditions for this important resident waterfowl species.	29	0	0	15

RONS Projects for Anahuac, McFaddin and Texas Point NWRs

Refuge	Project Title	RONS #	Project Description	Initial YR Cost ($1,000s)	Recurring Cost ($1,000s)	FTEs	Rank
McFaddin NWR	Enhance education and interpretive opportunities for refuge visitors	12	To maximize benefits to McFaddin and Texas Point NWR visitors, new informational brochures will be designed and produced. Nature tourism is expanding rapidly in the region and is becoming increasingly important to local and regional economies. These refuges play an important role in providing recreational and educational opportunities for the visiting public. Over 30,000 people visit McFaddin and Texas Point NWRs annually to fish, hunt, observe and photograph wildlife, and to participate in environmental education activities. The refuges are premier sites on the Great Texas Birding Trail. The refuge's general brochure and bird list will be revised to meet new USFWS standards, and new brochures for hunting, fishing, and flora and fauna lists will be developed and printed regularly to keep up with demand.	20	9	0	16
McFaddin NWR	Conduct baseline inventory of refuge amphibians and reptiles	7	Conduct an inventory of reptiles and amphibians on the McFaddin and Texas Point NWRs. Data on amphibians and reptiles, including species composition and relative abundance, are currently lacking for these coastal refuges. Threats to these sensitive species, which are often early indicators of declining ecosystem health, include loss of freshwater wetlands and contaminants (primarily agricultural pesticides). Species of concern include the smooth green snake, pig frog, and alligator snapping turtle. Enhanced biological data gained through systematic surveys will be used to evaluate population status of reptiles and amphibians occurring on the refuge, and to ensure that refuge management practices are consistent with maintaining viable population of these species.	48	0	0	17

RONS Projects for Anahuac, McFaddin and Texas Point NWRs

Refuge	Project Title	RONS #	Project Description	Initial YR Cost ($1,000s)	Recurring Cost ($1,000s)	FTEs	Rank
McFaddin NWR	Enhance and expand recreational and educational opportunities	14	Develop environmental education and interpretation programs, a new Refuge Friends group, and enhance community outreach and law enforcement programs by establishing an entry level GS-5/7/9 Outdoor Recreation Planner position. This coastal Refuge is within two hours' drive of over 4 million people in the Houston Metroplex, resulting in high demand for recreational and educational opportunities. Annual visitation to this coastal refuge exceeds 30,000. Public uses occur year round and include wildlife observation, environmental education and interpretation, recreational fishing, and waterfowl hunting.	75	86	1	18
McFaddin NWR	Enhance and expand refuge habitat management program	18	Establish an entry level GS 5/7/9 Refuge Operations Specialist position to improve and expand habitat management activities in wetlands, resource protection through law enforcement, conservation easement monitoring, fire management, and overall administration of refuge public use programs. Habitats on these coastal refuges are intensively managed through water level management, prescribed burning, grazing and farming, and restoration of native grasslands and wetlands. Annual visitation to McFaddin and Texas Point NWRs exceeds 35,000 annually, for uses including hunting, fishing and wildlife observation. Over 8000 acres of conservation easements are administered. This trainee position will provide the incumbent with a full spectrum of refuge management and program administration experiences.	75	86	1	19

RONS Projects for Anahuac, McFaddin and Texas Point NWRs

Refuge	Project Title	RONS #	Project Description	Initial YR Cost ($1,000s)	Recurring Cost ($1,000s)	FTEs	Rank
McFaddin NWR	Increase visitor services	15	Enhance visitor services by establishing a maintenance worker position to provide timely and improved maintenance of public use facilities on McFaddin and Texas Point NWRs. Facilities including observation platforms and boardwalks, trails, comfort stations, interpretive and directional signage, boat ramps, boundary signage and fencing require regular maintenance for protecting visitor safety and enhancing visitor experiences. Regular upkeep is necessitated by the harsh marine environment. Annual visitation to these coastal Refuges currently exceeds 35,000. A wide variety of wildlife-dependent recreational and educational uses including all six priority public uses are ongoing on the Refuges: wildlife observation and photography, recreational fishing, waterfowl hunting, environmental education and interpretation.	75	78	1	20
McFaddin NWR	Investigate McFaddin Beach Clovis Point cultural site	98001	The McFaddin Beach site is an important Clovis Point cultural site where human artifacts are found in association with Pleistocene fossils of extinct mammals, and is many thousands of years old. This site has yielded many excellent Clovis points to individual collectors over the past several decades, and is in need of investigation, documentation, and has exhibition potential. The proposed Highway 87 rebuilding effort would require a cultural investigation, as would the dune restoration project elsewhere identified as a RONS project. Currently, the cultural resources are being lost into the gulf via erosion and are being collected by unauthorized, illegal means.	205	116	1	21
McFaddin NWR	#NAME?	3006	This specific site is approximately one-half acre in size and is a Least Tern nesting area. In addition, it is known that the brine (waste) water from the production process was released on the site and has effectively destroyed the native vegetation and contaminated the topsoil resulting in sparse non-native vegetation establishment. The objectives of this project are: (1) remove the remaining machinery/equipment; and (2) reclaim the site with native vegetation. Reclamation of the site will require excavation of the contaminated soil, soil replacement and re-seeding of area.	83	5	0	999

RONS Projects for Anahuac, McFaddin and Texas Point NWRs

Refuge	Project Title	RONS #	Project Description	Initial YR Cost ($1,000s)	Recurring Cost ($1,000s)	FTEs	Rank
Texas Point NWR	Restore Coastal Wetland Habitats	1	Provide a heavy equipment operator position to restore coastal wetlands on Texas Point and McFaddin NWRs. Productive and biologically diverse emergent marshes on these refuge are converting to open water due to saltwater intrusion, erosion, and land subsidence. Restoration and protection of these coastal resources require intensive management, most of which requires the use of specialized heavy equipment. This individual will install and maintain water management infrastructure including rock weirs, water control structures and levees to help reverse this trend. Coastal marshes on these refuges support over 200,000 Central Flyway ducks and geese annually, and equally impressive numbers of shorebirds, wading birds, raptors, and songbirds. Tidally influenced marshes provide nursery habitat for juvenile fish and shellfish, and contribute to the local economy through recreational and commercial fishing.	65	68	1	1
Texas Point NWR	Restore Coastal Wetlands Through Hydrologic Restoration	2	Restore 2,500 acres of coastal marshes. Channels and ditches formerly used to access oil and gas developments are resulting in wetland loss and degradation on Texas Point NWR. Saltwater intrusion and erosion are converting productive and biologically diverse emergent marshes to open water. Several rock weirs will be installed in waterways on the Refuge to reduce these impacts and reverse these trends. These structures have proven highly effective and cost efficient for preventing wetland loss and degradation in Louisiana. These structures also allow passage of juvenile fish and shellfish to and from marsh nursery habitats. This project has high partnership potential with the Texas General Land Office, conservation organizations, and volunteers.	125	10	0	2

RONS Projects for Anahuac, McFaddin and Texas Point NWRs

Refuge	Project Title	RONS #	Project Description	Initial YR Cost ($1,000s)	Recurring Cost ($1,000s)	FTEs	Rank
Texas Point NWR	Restore Coastal Woodlots	95005	Restore and enhance 25 acres of coastal woodlots on Texas Point NWR. Development, sand and gravel mining, conversion to pasture and invasive species such as Chinese tallow have impacted coastal woodlots in the Chenier Plain region of southwestern Louisiana and southeast Texas. Coastal woodlots at the refuge will be restored and enhanced by control of exotic plants with approved herbicide treatment combined with planting native trees. Coastal woodlots provide vital migrational habitat for many songbirds, especially in spring when these woodlots represent the first landfall for hundreds of thousands of birds making nonstop flights across the Gulf of Mexico from Mexico's Yucatan Peninsula. Migratory songbirds use these wooded habitats for resting and foraging, to restore energy reserves prior to continuing their northward migration. These areas also provide spectacular recreational bird watching and provide great economic benefits to local communities through tourism.	28	7	0	3

CONSTRUCTION MMS REPORT FOR ANAHUAC NWR

Work Order #	Project Title and Cost	Project Description
03126473	Construct an addition to the visitor contact station. $277,000	Plan design and construct an addition to the visitor contact station to increase visitor services to the public. The small visitor contact station is not sufficient to provide services needed by the public. It does not have sufficient room to install interpretive displays, storage areas and sales area for the nature store. This facility is currently the only contact point the refuge has with the public. Visitor use on the refuge has increased by almost 10,000 visitors since the visitor information station was opened. Additional space is needed to develop adequate interpretive and informational displays to improve the quality of visitor experiences. This facility is within one hour drive of over 5 million people in the Houston and Beaumont, Texas Metroplex.
03126486	Construct a native prairie seed storage and drying facility. $128,000	Construct a native prairie seed storage and drying facility to increase refuge capabilities to restore native coastal prairie. Wet humid and high rodent populations make it difficult to store native prairie seeds. Rot and rodent damage can significantly reduce the amount of useable prairie seed available for restoration. The refuges storage capabilities are restricted to ten 40 gallon drums and limit the amount of native prairie that can be planted each year. Seed that is harvested is very valuable for restoration purposes because of the rarity of the seed. It is critical that the valuable seed that is harvested is properly stored so new prairies can be created from the valuable prairies that remain. The facility will need electricity to operate dryers, ventilation and lights.
03126444	Construct water pipeline from County line to the refuge (Shop). $221,000	Construct a water pipeline from the County (Trinity Bay Conservation District) pipeline located 6 miles from the refuge to the refuge shop. The refuge currently does not have a drinking water system. The remote location of the refuge and extreme heat during the summer makes it critical to have drinking water on the refuge for staff and visitors. The refuge currently purchases bottled water at great cost for the staff to drink. The public has no access to water except in emergencies. Connecting the refuge with the county water system will eliminate the need for the current shop well and pumping system and the purchase of bottled water. It will also provide critically needed drinking water to staff and visitors.
03126445	Construct a water pipeline from the County pipeline. $245,000	Construct a water pipeline from the County pipeline located 4 miles from the refuge to the refuge shop. The refuge currently does not have a drinking water system. The remote location of the refuge and extreme heat throughout the year make it critical to have drinking water on the refuge for staff, volunteers and visitors. The refuge currently purchases bottled water at great cost for the staff and volunteers to drink. The public has no access to water except in emergencies. Connecting the refuge with the county water system will eliminate the need for the current shop well and pumping system and the purchase of bottled water. It will also provide critically needed drinking water to staff, volunteers and visitors.

CONSTRUCTION MMS REPORT FOR ANAHUAC NWR

Work Order #	Project Title and Cost	Project Description
03126626	Large Rehabilitate East Bay bayou Tract roads and parking areas. $403,000	Rehabilitate East Bay bayou Tract roads and parking areas to improve access and make roads safer for visitors. Expand the current one lane road to a two lane gravel road. Elevate and resurface parking areas and lower portions of road. Existing ditches and levees will need to be moved to facilitate road width expansion. The current road requires visitors to pull over on a very steep slope to allow cars to pass each other. Larger vehicles can not pull over far enough to allow opposing traffic to pass. This tract of the refuge facilitates tens of thousands visitors annually. It is within one hours drive of over five million people including Houston, Texas the fourth largest city in the nation. This project will require more than one year to design, plan and complete construction contracting.
03126558	Construct an observation tower on the East Bay Bayou Tract. $113,000	Construct an accessible observation tower and photo blind at the East Bay Bayou Tract to improve visitors experiences. The tower would be constructed within the existing tree line at the canopy level. A photo blind would be constructed at the top of the tower to allow photographers to get pictures of migrant songbirds in the canopy of trees or wading birds, shorebirds or waterfowl in the adjacent moist soil units. The facility will be constructed so it is accessible to all refuge users. This unit is currently used by over ten thousand visitors annually. It is within one hours drive of over five million people including Houston, Texas the fourth largest city in the nation. Improvement of visitor facilities on this unit will attract thousands of new visitors to appreciate refuge resources. Planning, design and construction contracting can be accomplished in one year.
03126505	Construct boat ramp at refuge shop. $89,000	Design and construct a new boat ramp and extend the existing boat canal at the refuge shop to allow staff to launch boats to conduct refuge management and law enforcement. Public boat ramps at the refuge are very limited in capacity for launching and parking. The extension of the boat canal and construction of a small boat but secure boat launch for refuge staff would reduce conflicts between staff and the public for limited space at the existing boat ramp. Construction would involve excavating a 200 x 25 foot canal with 4:1 slopes, pouring a 50 x 14 foot concrete pad, installation of a security light and fence on the boat canal. This development would improve law enforcement and refuge management efficiency and effectiveness. Boats are the primary tool used by refuge staff to manage and protect marsh habitats and wildlife. Electricity for lights would be necessary to facilitate night time launching. Planning, design and construction contracting could be completed in one year.
03126633	Construct kiosk and interpretive signs (East Bay Bayou Tract). $27,000	Construct a kiosk and interpretive signs on the East Bay Bayou Tract to provide information about the refuge management. This unit serves a demonstration area to landowners, hunt clubs, outfitters and farmers. It also supports ten of thousand of visitors each year. Construction of an informational kiosk and installing five interpretive signs will improve visitors experiences on the unit. This unit is located within one hours drive of over five million people including Houston, Texas the fourth largest community in the nation. Planning, design and construction contracting can be accomplished in one year.

CONSTRUCTION MMS REPORT FOR ANAHUAC NWR

Work Order #	Project Title and Cost	Project Description
03126636	Construct a new environmental education building. $511,000	Construct a new environmental education building on the refuge to provide training facilities to areas schools and communities. Construct a 5000 square foot environmental education facility and install interpretive displays. This facility will be used to support the growing outdoor education program, Youth Waterfowl Expo programs and provide a meeting area on the refuge. Currently over one thousand school children attend environmental education programs on the refuge annually. Thousands of additional school children could attend these programs if indoor classrooms were available to provide a all weather training facility. Thousands of dollars are spent annually to rent tents for the refuge Youth Waterfowl Expo. This facility could provide classrooms for seminars for large events. Planning, design and construction can be accomplished in one year.
03126495	Construct a storage building for hurricane evacuation. $369,000	Construct a storage building for storing equipment and files evacuated from the refuge during hurricanes and tropical storms. During tropical storms and hurricanes equipment, files and vehicles are relocated to higher areas protected from winds and water. The refuge currently does not have a storage building to relocate valuable files, electronics, airboats and other boats necessary to access the refuge during flooding events. Loss of information and tools could cripple the refuge for many years. Most of the refuge equipment can be stored in safe high locations on the refuge. The problem exists in getting back to protected areas on the refuge when roads are flooded. It is necessary to store boats and amphibious equipment to access the refuge at protected locations away from the refuge so that we have the ability to access the refuge during high water to protect resources from damage. Accessing the refuge with tradition vehicles during high water is dangerous and can damage equipment. Construction of a storage facility capable of storing two air boats, a jon boat, marsh buggy, files, generators and electronic equipment on an elevated site is needed. This facility will need electricity a back up generator system and a fuel storage area.
98123696	Construct trails, boardwalks and interpretive displays. $216,000	Develop public use facilities on Anahuac NWR. This refuge is within one hour's drive of over 4 million people in the Houston Metroplex. Expanding annual visitation to this coastal refuge now exceeds 70,000, although public use facilities remain minimal. Information kiosks, interpretive and directional signs, observation platforms, boardwalks and trails will be installed to improve visitors experience. Public use on this Refuge includes all six of the priority uses - wildlife observation, environmental education and interpretation, recreational fishing, and waterfowl hunting. Based on the latest USFWS data available, the additional visitors to this area are expected to contribute $51,026 annually to the local economy. All aspects of this project have high partnership potential with the Friends of Anahuac Refuge, industry, and volunteers.
03126549 Cont. on next page	Construct two new primitive boat ramps on the East Unit. $72,000	Construct two primitive boat ramps on the East Unit to facilitate law enforcement and wetland management on the East side of the refuge. The County public boat launch was closed on the east side of the refuge in 2002. This public launch facilitated public and staff access to the east side of the refuge. It now requires at least a 14-20 mile boat ride to access eastern portions of the refuge. Two small

CONSTRUCTION MMS REPORT FOR ANAHUAC NWR

Work Order #	Project Title and Cost	Project Description
03126549 Cont.		concrete ramps would be installed. One on the Gulf Intracoastal waterway and the other Jackson Ditch. Tens of thousands of marsh on Anahuac and McFaddin refuge would become much more accessible for management and limited public access. Planning, design and construction contracting can be accomplished in one year.
98122763	Construct facility to increase volunteerism. $224,000	Construct a building containing a meeting room, restroom, shower, and laundry facility next to existing volunteer RV sites. Funding will be used to purchase materials; supply electricity, water, and septic; provide facilities needed by volunteers. Purchase materials and appliances. Volunteers have become essential to refuge operations, contributing over 10,000 hours annually to various programs by conducting tours; coordinating the environmental education program; improving access for waterfowl hunters, anglers, and bird watchers; and assisting with habitat management and wildlife surveys. This project has high partnership potential with the Friends of Anahuac Refuge, and construction will be handled entirely by volunteers.
98122760	Construct 12-bay vehicle storage facility. $214,000	This project involves the construction of a 12-bay vehicle storage facility for the Anahuac NWR and Texas Chenier Plain Refuge Complex vehicle and boat fleets. The refuge currently has limited covered storage for vehicles and boats. A storage building will protect vehicles and boats from corrosive damages from excessive exposure to sun, saltwater and occasional but regularly occurring flooding in low-lying coastal areas. Overall cost efficiency will be maximized by decreasing maintenance costs and increasing the equipment's working lifespan.
98122768	Construct boat ramp at refuge shop. $40,000	Design and construct interpretive displays for placement in the Houston Intercontinental, Hobby, and Jefferson County airports, two major Interstate 10 rest areas in Chambers and Jefferson Counties, and a mobile display to be used in a variety of special events. Expanding nature tourism in the region and the ability to reach millions of people annually in the major population centers of Houston and Beaumont, Texas, provide an ideal setting for effective outreach. The materials would interpret Gulf Coast ecosystems and resources, and the region's national wildlife refuges and their management programs.
98110197	Rehabilitate levees on GIWW- Middleton. $783,000	Rehab levees along the Gulf Intercoastal Water Way. The coastal wetlands on this portion of the refuge are currently threatened by GIWW erosion. These wetlands are among the most productive and diverse on the upper Texas Coast. Erosion along the GIWW has resulted significant erosion to the levees along the GIWW. Wetland loss, salt water intrusion and conversion of emergent marsh to open water has resulted in a loss of biological diversity and declining habitat quality for a variety of migratory birds. To reverse these trends, rehabilitation of levees along the GIWW is needed.
01110194 Cont. on next page	Office Building Replacement [p/d/cc] $2,000,000	Plan, design and construct an Administrative Headquarters office for Texas Chenier Plain Refuge Complex. This four-refuge coastal Refuge Complex includes the Anahuac, McFaddin, Texas Point and Moody NWRs. The facility will greatly increase logistical capabilities for administering natural resource protection and public use programs by providing centrally-located office and meeting space for 18

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Work Order #	Project Title and Cost	Project Description
01110194 Cont.		permanent Refuge Complex and Anahuac NWR staff and seasonal staff and volunteers, and by providing secure parking and storage outside of flood-prone areas for vehicle and boat fleets. The existing 2,200 square foot headquarters building, leased through the General Services Administration, does not provide adequate office, storage, and meeting space and parking facilities. No suitable leasing alternatives exist in this rural area. Health and safety concerns in this forty-year old building include office overcrowding, pest problems, heating and cooling system and electrical deficiencies, and inadequate parking which requires on-street parking of private vehicles. Site development will include an access road, and vehicular parking for staff (20 spaces) and visitors (20 spaces). Additional secured parking for government vehicles (10 spaces) and a 4-bay storage building will also be developed. Water and septic will be needed on-site; telephone and electric service will be run from nearby utility lines. Planning, design, and construction contracting can be accomplished in one year.
97110195	Construct heavy equipment storage facility. $865,000	Construct a new 6-bay, 3500 square foot equipment storage building (metal). Anahuac NWR is located in a low-lying coastal area which is subject to flooding during hurricane and tropical storm events. Storage facilities for equipment must either be located off-Refuge or raised to appropriate elevations using fill materials. Current storage facilities serving the Refuge are inadequate, and some equipment is regularly exposed to harsh marine climate. Land on high ground in High Island, Texas, currently proposed as a donation to the USFWS, would provide an ideal location for this facility.
98110196	Construct an access road along the Gulf Intracoastal Waterway. $1017,000	This project involves two options for providing public and management access to the newly acquired Middleton Tract of Anahuac NWR: 1)the construction of an access road along the Gulf Intracoastal Waterway to East Bay Bayou from State Highway 124; or 2) the construction of a bridge across East Bay Bayou and a road to connect with the existing access road on the East Unit. This tract requires management access to facilitate habitat management activities including water management and prescribed burning. Public access is needed to support compatible wildlife-dependent uses including waterfowl hunting and wildlife viewing.
98110198	Construct three single-family residence. $703,000	Construct three single-family residence. Off-refuge housing is limited. Refuge law enforcement and public use personnel would be much more effective if they resided on-station. This project involves the construction of three single-family homes to provide refuge housing for Anahuac NWR staff.
2005168461	Replace otter slough water control Structure	
2005178666	Rehabilitate East Bay Bayou Levee	Clean, slope and elevate East Bay Bayou levee on the East Bay Bayou Unit of the East Unit Tract. Protect and bulkhead the East Bay Bayou saltwater barrier. This levee system protects and facilitates management of over 4,100 acre or fresh & intermediate marsh on the refuge and the attached salt water barrier protects 1000's of acres of private land from saltwater intrusion. Significant erosion from tropical storms Allison in 2001 has eroded around the saltwater barrier & has reduced the elevation of the levee.

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Work Order #	Project Title and Cost	Project Description
2005191191	Rehabilitate the Oyster Bayou (Boat Canal) boat ramp.	Rehabilitate the Oyster Bayou (Boat Canal) boat ramp to improve accessibility. The current launch will be expanded and improved to allow two boats to be launched at the same time, install a solar powered light, and modify the dock to make it accessible in variable tide conditions. The current launch is not lighted and visitors have damaged supports while launching at night.
2006331801	Construct boat ramp at refuge shop. $89,000	Design and construct a new boat ramp and extend the existing boat canal at the refuge shop to allow staff to launch boats to conduct refuge management and law enforcement. Public boat ramps at the refuge are very limited in capacity for launching and parking. The extension of the boat canal and construction of a small boat but secure boat launch for refuge staff would reduce conflicts between staff and the public for limited space at the existing boat ramp. Construction would involve excavating a 200 x 25 foot canal with 4:1 slopes, pouring a 50 x 14 foot concrete pad, installation of a security light and fence on the boat canal. This development would improve law enforcement and refuge management efficiency and effectiveness. Boats are the primary tool used by refuge staff to manage and protect marsh habitats and wildlife. Electricity for lights would be necessary to facilitate night time launching. Planning, design and construction contracting could be completed in one year.
2006331795	Construct boat ramp at refuge shop. $40,000	Design and construct interpretive displays for placement in the Houston Intercontinental, Hobby, and Jefferson County airports, two major Interstate 10 rest areas in Chambers and Jefferson Counties, and a mobile display to be used in a variety of special events. Expanding nature tourism in the region and the ability to reach millions of people annually in the major population centers of Houston and Beaumont, Texas, provide an ideal setting for effective outreach. The materials would interpret Gulf Coast ecosystems and resources, and the region's national wildlife refuges and their management programs.
2006331800	Construct trails, boardwalks and interpretive displays. $216,000	Develop public use facilities on Anahuac NWR. This refuge is within one hour's drive of over 4 million people in the Houston Metroplex. Expanding annual visitation to this coastal refuge now exceeds 70,000, although public use facilities remain minimal. Information kiosks, interpretive and directional signs, observation platforms, boardwalks and trails will be installed to improve visitors experience. Public use on this Refuge includes all six of the priority uses - wildlife observation, environmental education and interpretation, recreational fishing, and waterfowl hunting. Based on the latest USFWS data available, the additional visitors to this area are expected to contribute $51,026 annually to the local economy. All aspects of this project have high partnership potential with the Friends of Anahuac Refuge, industry, and volunteers.
2005238569 Cont. on next page	Repair or replace boat rollers on the Middleton Tract. $27,000	Repair or replace boat rollers on the Middleton Tract to facilitate boat access into hunt units of the refuge. Boat rollers provide access to hunters over levees into waterfowl hunt units of the refuge. Boat rollers facilitate almost a one thousand use days for refuge hunters. Wooden supports galvanized and pvc rollers need to be replaced. The existing rollers need to be extended and winch posts need to be

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Work Order #	Project Title and Cost	Project Description
2005238569 Cont.		installed to facilitate access during low tide events. Planning, design and construction contracting can be accomplished in one year.
2006332625	Construct kiosk and interpretive signs (East Bay Bayou Tract). $27,000	Construct a kiosk and interpretive signs on the East Bay Bayou Tract to provide information about the refuge management. This unit serves a demonstration area to landowners, hunt clubs, outfitters and farmers. It also supports ten of thousand of visitors each year. Construction of an informational kiosk and installing five interpretive signs will improve visitors experiences on the unit. This unit is located within one hours drive of over five million people including Houston, Texas the fourth largest community in the nation. Planning, design and construction contracting can be accomplished in one year.
2006332344	Construct two new primitive boat ramps on the East Unit. $72,000	Construct two primitive boat ramps on the East Unit to facilitate law enforcement and wetland management on the East side of the refuge. The County public boat launch was closed on the east side of the refuge in 2002. This public launch facilitated public and staff access to the east side of the refuge. It now requires at least a 14-20 mile boat ride to access eastern portions of the refuge. Two small concrete ramps would be installed. One on the Gulf Intracoastal waterway and the other Jackson Ditch. Tens of thousands of marsh on Anahuac and McFaddin refuge would become much more accessible for management and limited public access. Planning, design and construction contracting can be accomplished in one year.
2006332569	Construct an observation tower on the East Bay Bayou Tract. $113,000	Construct an accessible observation tower and photo blind at the East Bay Bayou Tract to improve visitors experiences. The tower would be constructed within the existing tree line at the canopy level. A photo blind would be constructed at the top of the tower to allow photographers to get pictures of migrant songbirds in the canopy of trees or wading birds, shorebirds or waterfowl in the adjacent moist soil units. The facility will be constructed so it is accessible to all refuge users. This unit is currently used by over ten thousand visitors annually. It is within one hours drive of over five million people including Houston, Texas the fourth largest city in the nation. Improvement of visitor facilities on this unit will attract thousands of new visitors to appreciate refuge resources. Planning, design and construction contracting can be accomplished in one year.
2006506144	Rehabilitate the tan equipment storage building (Red Wolf). $115,000	Rehabilitate the tan (Red Wolf) equipment storage building to protect refuge equipment. Portion of the existing floor needs to be covered with concrete, additional lighting is needed, several doors need to be repaired to properly secure the building and make it safe for staff entry during night time hours. Industrial shelving is needed to protect and properly store specific refuge equipment.
2006506118 Cont. on next page	Rehabilitate boat canal banks with shoreline protection. $429,000	Rehabilitate the boat canal banks with shoreline protection. The boat canal banks have experience significant erosion from boat wakes. Erosion has increased the size of the boat canal by five feet. The banks are threatening to erode into the adjacent property owners land. Canal banks will be sloped and

CONSTRUCTION MMS REPORT FOR ANAHUAC NWR

Work Order #	Project Title and Cost	Project Description
2006506118 Cont.		armored with cable block and felt. This canal provides boat access to refuge and state waters for tens of thousands of fisherman, hunters and nature enthusiast annually.
2006506099	Construct a new environmental education building. $511,000	Construct a new environmental education building on the refuge to provide training facilities to areas schools and communities. Construct a 5000 square foot environmental education facility and install interpretive displays. This facility will be used to support the growing outdoor education program, Youth Waterfowl Expo programs and provide a meeting area on the refuge. Currently over one thousand school children attend environmental education programs on the refuge annually. Thousands of additional school children could attend these programs if indoor classrooms were available to provide a all weather training facility. Thousands of dollars are spent annually to rent tents for the refuge Youth Waterfowl Expo. This facility could provide classrooms for seminars for large events. Planning, design and construction can be accomplished in one year.
2006506222	Construct a native prairie seed storage and drying facility. $128,000	Construct a native prairie seed storage and drying facility to increase refuge capabilities to restore native coastal prairie. Wet humid and high rodent populations make it difficult to store native prairie seeds. Rot and rodent damage can significantly reduce the amount of useable prairie seed available for restoration. The refuges storage capabilities are restricted to ten 40 gallon drums and limit the amount of native prairie that can be planted each year. Seed that is harvested is very valuable for restoration purposes because of the rarity of the seed. It is critical that the valuable seed that is harvested is properly stored so new prairies can be created from the valuable prairies that remain. The facility will need electricity to operate dryers, ventilation and lights.
2006506224	Construct a native prairie seed storage and drying facility. $128,000	Construct a native prairie seed storage and drying facility to increase refuge capabilities to restore native coastal prairie. Wet humid and high rodent populations make it difficult to store native prairie seeds. Rot and rodent damage can significantly reduce the amount of useable prairie seed available for restoration. The refuges storage capabilities are restricted to ten 40 gallon drums and limit the amount of native prairie that can be planted each year. Seed that is harvested is very valuable for restoration purposes because of the rarity of the seed. It is critical that the valuable seed that is harvested is properly stored so new prairies can be created from the valuable prairies that remain. The facility will need electricity to operate dryers, ventilation and lights.
2006508106	Windmill Rd & parking (Rte 11, 6.7 mi) $ 2382,000	Construction. Repair 9 miles of roads and parking areas in the Old Anahuac Unit from the shop to Frozen Point (Windmill Road). Project will include restoring and crowning roadbeds, regraveling and cleaning road ditches. These roads provide recreational opportunities for over 60,000 visitors annually and provide the only public access to the north side of East Galveston Bay.

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Work Order #	Project Title and Cost	Project Description
2006508109	Windmill Rd & parking (Rte 11, 6.7 mi) $ 2382,000	Construction. Repair 9 miles of roads and parking areas in the Old Anahuac Unit from the shop to Frozen Point (Windmill Road). Project will include restoring and crowning roadbeds, regraveling and cleaning road ditches. These roads provide recreational opportunities for over 60,000 visitors annually and provide the only public access to the north side of East Galveston Bay.
2006506232	Rehabilitate East Bay Bayou walking trail. $68,000	Rehabilitate the East Bay Bayou walking trail to improve visitor use and experiences. Improvements of this trail are sure to allow more visitors to appreciate wildlife resources on the refuge. The existing trail system needs to be crowned and resurfaced with rock to improve walking conditions. Existing culverts need to be replaced and additional culverts installed to reduce flooding, erosion and the tripping hazards along portions of the trail. Directional and interpretive signs will be installed to direct visitors along the trail.
2006506240	Construct a storage building for hurricane evacuation. $369,000	Construct a storage building for storing equipment and files evacuated from the refuge during hurricanes and tropical storms. During tropical storms and hurricanes equipment, files and vehicles are relocated to higher areas protected from winds and water. The refuge currently does not have a storage building to relocate valuable files, electronics, airboats and other boats necessary to access the refuge during flooding events. Loss of information and tools could cripple the refuge for many years. Most of the refuge equipment can be stored in safe high locations on the refuge. The problem exists in getting back to protected areas on the refuge when roads are flooded. It is necessary to store boats and amphibious equipment to access the refuge at protected locations away from the refuge so that we have the ability to access the refuge during high water to protect resources from damage. Accessing the refuge with tradition vehicles during high water is dangerous and can damage equipment. Construction of a storage facility capable of storing two air boats, a jon boat, marsh buggy, files, generators and electronic equipment on an elevated site is needed. This facility will need electricity a back up generator system and a fuel storage area.
2006507534	Construct an access road along the Gulf Intracoastal Waterway. $1017,000	This project involves two options for providing public and management access to the newly acquired Middleton Tract of Anahuac NWR: 1)the construction of an access road along the Gulf Intracoastal Waterway to East Bay Bayou from State Highway 124; or 2) the construction of a bridge across East Bay Bayou and a road to connect with the existing access road on the East Unit. This tract requires management access to facilitate habitat management activities including water management and prescribed burning. Public access is needed to support compatible wildlife-dependent uses including waterfowl hunting and wildlife viewing.
2006506242 Cont. on next page	Construct a storage building for hurricane evacuation. $369,000	Construct a storage building for storing equipment and files evacuated from the refuge during hurricanes and tropical storms. During tropical storms and hurricanes equipment, files and vehicles are relocated to higher areas protected from winds and water. The refuge currently does not have a storage building to relocate valuable files, electronics, airboats and other boats necessary to access the refuge during

CONSTRUCTION MMS REPORT FOR ANAHUAC NWR

Work Order #	Project Title and Cost	Project Description
2006506242 Cont.		flooding events. Loss of information and tools could cripple the refuge for many years. Most of the refuge equipment can be stored in safe high locations on the refuge. The problem exists in getting back to protected areas on the refuge when roads are flooded. It is necessary to store boats and amphibious equipment to access the refuge at protected locations away from the refuge so that we have the ability to access the refuge during high water to protect resources from damage. Accessing the refuge with tradition vehicles during high water is dangerous and can damage equipment. Construction of a storage facility capable of storing two air boats, a jon boat, marsh buggy, files, generators and electronic equipment on an elevated site is needed. This facility will need electricity a back up generator system and a fuel storage area.
2006506254	Replace the New Ditch water control structure. $144,000	Replace the New Ditch water control structure and bulkheads. The current structure is insufficient for the water shed that it supports. This structure makes it possible to manage water levels, salinities and water quality in 6,500 acres of the Deep Marsh Unit. This marsh supports hundreds of thousands of waterfowl use days annually and is important habitat for wading birds, shorebirds and other marsh wildlife. Species of conservation concern which will benefit from the replacement of this structure include White Ibis, American Bittern, Northern Harrier, Yellow and Black Rails, Whimbrel, Long-billed Curlew, Hudsonian Godwit, Stilt Sandpiper, Short-billed Dowitcher and Seaside Sparrows. The structure will be relocated and replaced with a larger aluminum box culvert with vinyl bulkheads. Planning and design is underway and the construction can be completed in one year.
2006506261	Construct an addition to the visitor contact station. $277,000	Plan design and construct an addition to the visitor contact station to increase visitor services to the public. The small visitor contact station is not sufficient to provide services needed by the public. It does not have sufficient room to install interpretive displays, storage areas and sales area for the nature store. This facility is currently the only contact point the refuge has with the public. Visitor use on the refuge has increased by almost 10,000 visitors since the visitor information station was opened. Additional space is needed to develop adequate interpretive and informational displays to improve the quality of visitor experiences. This facility is within one hour drive of over 5 million people in the Houston and Beaumont, Texas Metroplex.
2006506265	Construct an addition to the visitor contact station. $277,000	Plan design and construct an addition to the visitor contact station to increase visitor services to the public. The small visitor contact station is not sufficient to provide services needed by the public. It does not have sufficient room to install interpretive displays, storage areas and sales area for the nature store. This facility is currently the only contact point the refuge has with the public. Visitor use on the refuge has increased by almost 10,000 visitors since the visitor information station was opened. Additional space is needed to develop adequate interpretive and informational displays to improve the quality of visitor experiences. This facility is within one hour drive of over 5 million people in the Houston and Beaumont, Texas Metroplex.

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Work Order #	Project Title and Cost	Project Description
2006506641	Rehabilitate levees on GIWW- Middleton. $783,000	Rehab levees along the Gulf Intercoastal Water Way. The coastal wetlands on this portion of the refuge are currently threatened by GIWW erosion. These wetlands are among the most productive and diverse on the upper Texas Coast. Erosion along the GIWW has resulted significant erosion to the levees along the GIWW. Wetland loss, salt water intrusion and conversion of emergent marsh to open water has resulted in a loss of biological diversity and declining habitat quality for a variety of migratory birds. To reverse these trends, rehabilitation of levees along the GIWW is needed.
2006506287	Construct water pipeline from County line to the refuge (Shop). $221,000	Construct a water pipeline from the County (Trinity Bay Conservation District) pipeline located 6 miles from the refuge to the refuge shop. The refuge currently does not have a drinking water system. The remote location of the refuge and extreme heat during the summer makes it critical to have drinking water on the refuge for staff and visitors. The refuge currently purchases bottled water at great cost for the staff to drink. The public has no access to water except in emergencies. Connecting the refuge with the county water system will eliminate the need for the current shop well and pumping system and the purchase of bottled water. It will also provide critically needed drinking water to staff and visitors.
2006506100	Construct a new environmental education building. $511,000	Construct a new environmental education building on the refuge to provide training facilities to areas schools and communities. Construct a 5000 square foot environmental education facility and install interpretive displays. This facility will be used to support the growing outdoor education program, Youth Waterfowl Expo programs and provide a meeting area on the refuge. Currently over one thousand school children attend environmental education programs on the refuge annually. Thousands of additional school children could attend these programs if indoor classrooms were available to provide a all weather training facility. Thousands of dollars are spent annually to rent tents for the refuge Youth Waterfowl Expo. This facility could provide classrooms for seminars for large events. Planning, design and construction can be accomplished in one year.
2006508000	CN Oyster Bayou Rd (Rte 103, 2.1 mi) $1094,000	Construction. Rebuild and regravel 4 miles of Oyster Bayou Road. This road is currently closed to the public due to its deteriorated condition. Reopening this road will provide recreational opportunities for over 20,000 visitors annually.
2006507995	CN Oyster Bayou Rd (Rte 103, 2.1 mi) $1094,000	Construction. Rebuild and regravel 4 miles of Oyster Bayou Road. This road is currently closed to the public due to its deteriorated condition. Reopening this road will provide recreational opportunities for over 20,000 visitors annually.
2006507463 Cont. on next page	Office Building Replacement [p/d/cc] $2,000,000	Plan, design and construct an Administrative Headquarters office for Texas Chenier Plain Refuge Complex. This four-refuge coastal Refuge Complex includes the Anahuac, McFaddin, Texas Point and Moody NWRs. The facility will greatly increase logistical capabilities for administering natural resource protection and public use programs by providing centrally-located office and meeting space for 18 permanent Refuge Complex and Anahuac NWR staff and seasonal staff and volunteers, and by providing secure parking and storage outside of flood-prone areas for vehicle and boat fleets. The

CONSTRUCTION MMS REPORT FOR ANAHUAC NWR

Work Order #	Project Title and Cost	Project Description
2006507463 Cont.		existing 2,200 square foot headquarters building, leased through the General Services Administration, does not provide adequate office, storage, and meeting space and parking facilities. No suitable leasing alternatives exist in this rural area. Health and safety concerns in this forty-year old building include office overcrowding, pest problems, heating and cooling system and electrical deficiencies, and inadequate parking which requires on-street parking of private vehicles. Site development will include an access road, and vehicular parking for staff (20 spaces) and visitors (20 spaces). Additional secured parking for government vehicles (10 spaces) and a 4-bay storage building will also be developed. Water and septic will be needed on-site; telephone and electric service will be run from nearby utility lines. Planning, design, and construction contracting can be accomplished in one year.
2006507467	Office Building Replacement [p/d/cc] $2,000,000	Plan, design and construct an Administrative Headquarters office for Texas Chenier Plain Refuge Complex. This four-refuge coastal Refuge Complex includes the Anahuac, McFaddin, Texas Point and Moody NWRs. The facility will greatly increase logistical capabilities for administering natural resource protection and public use programs by providing centrally-located office and meeting space for 18 permanent Refuge Complex and Anahuac NWR staff and seasonal staff and volunteers, and by providing secure parking and storage outside of flood-prone areas for vehicle and boat fleets. The existing 2,200 square foot headquarters building, leased through the General Services Administration, does not provide adequate office, storage, and meeting space and parking facilities. No suitable leasing alternatives exist in this rural area. Health and safety concerns in this forty-year old building include office overcrowding, pest problems, heating and cooling system and electrical deficiencies, and inadequate parking which requires on-street parking of private vehicles. Site development will include an access road, and vehicular parking for staff (20 spaces) and visitors (20 spaces). Additional secured parking for government vehicles (10 spaces) and a 4-bay storage building will also be developed. Water and septic will be needed on-site; telephone and electric service will be run from nearby utility lines. Planning, design, and construction contracting can be accomplished in one year.
2006507478	Construct heavy equipment storage facility. $865,000	Construct a new 6-bay, 3500 square foot equipment storage building (metal). Anahuac NWR is located in a low-lying coastal area which is subject to flooding during hurricane and tropical storm events. Storage facilities for equipment must either be located off-Refuge or raised to appropriate elevations using fill materials. Current storage facilities serving the Refuge are inadequate, and some equipment is regularly exposed to harsh marine climate. Land on high ground in High Island, Texas, currently proposed as a donation to the USFWS, would provide an ideal location for this facility.
2006507539 Cont. on next page	Construct an access road along the Gulf Intracoastal Waterway. $1017,000	This project involves two options for providing public and management access to the newly acquired Middleton Tract of Anahuac NWR: 1)the construction of an access road along the Gulf Intracoastal Waterway to East Bay Bayou from State Highway 124; or 2) the construction of a bridge across East Bay Bayou and a road to connect with the existing access road on the East Unit. This tract requires management access to facilitate habitat management activities including water management and

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Work Order #	Project Title and Cost	Project Description
2006507539 Cont.		prescribed burning. Public access is needed to support compatible wildlife-dependent uses including waterfowl hunting and wildlife viewing.
2006508165	Remove old levees and rehab main levee in Granberry Tract. $167,000	Grub and remove old levees on the west side of the Granberry tract. Rehab bottom levee by removing brush, elevating, grading, sloping and install 3 new water control structures. This project will remove 10,500 of unused levees. The proposed project will facilitate restoration of 205 acres of native coastal prairie and shallow fresh water wetlands in the unit. Planning, design and construction can be accomplished in one year.
2006506639	Rehabilitate levees on GIWW- Middleton. $783,000	Rehab levees along the Gulf Intercoastal Water Way. The coastal wetlands on this portion of the refuge are currently threatened by GIWW erosion. These wetlands are among the most productive and diverse on the upper Texas Coast. Erosion along the GIWW has resulted significant erosion to the levees along the GIWW. Wetland loss, salt water intrusion and conversion of emergent marsh to open water has resulted in a loss of biological diversity and declining habitat quality for a variety of migratory birds. To reverse these trends, rehabilitation of levees along the GIWW is needed.
2006507397	Repair East Unit farm roads. $1191,000	Repair East Unit farm roads by restoring and crowning roadbed and cleaning road ditches. These roads provide access for rice farming and moist soil management, two practices aimed at providing high quality habitat for wintering waterfowl and for public waterfowl hunting. Maintenance will increase the longevity of these roads, and provide cost-savings by preventing the need for major repairs.
2006506295	Construct water pipeline from County line to the refuge (Shop). $221,000	Construct a water pipeline from the County (Trinity Bay Conservation District) pipeline located 6 miles from the refuge to the refuge shop. The refuge currently does not have a drinking water system. The remote location of the refuge and extreme heat during the summer makes it critical to have drinking water on the refuge for staff and visitors. The refuge currently purchases bottled water at great cost for the staff to drink. The public has no access to water except in emergencies. Connecting the refuge with the county water system will eliminate the need for the current shop well and pumping system and the purchase of bottled water. It will also provide critically needed drinking water to staff and visitors.
2006506301	Construct a water pipeline from the County pipeline. $245,000	Construct a water pipeline from the County pipeline located 4 miles from the refuge to the refuge shop. The refuge currently does not have a drinking water system. The remote location of the refuge and extreme heat throughout the year make it critical to have drinking water on the refuge for staff, volunteers and visitors. The refuge currently purchases bottled water at great cost for the staff and volunteers to drink. The public has no access to water except in emergencies. Connecting the refuge with the county water system will eliminate the need for the current shop well and pumping system and the purchase of bottled water. It will also provide critically needed drinking water to staff, volunteers and visitors.

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Work Order #	Project Title and Cost	Project Description
2006506302	Construct a water pipeline from the County pipeline. $245,000	Construct a water pipeline from the County pipeline located 4 miles from the refuge to the refuge shop. The refuge currently does not have a drinking water system. The remote location of the refuge and extreme heat throughout the year make it critical to have drinking water on the refuge for staff, volunteers and visitors. The refuge currently purchases bottled water at great cost for the staff and volunteers to drink. The public has no access to water except in emergencies. Connecting the refuge with the county water system will eliminate the need for the current shop well and pumping system and the purchase of bottled water. It will also provide critically needed drinking water to staff, volunteers and visitors.
2006519168	Construct facility to increase volunteerism. $224,000	Construct a building containing a meeting room, restroom, shower, and laundry facility next to existing volunteer RV sites. Funding will be used to purchase materials; supply electricity, water, and septic; provide facilities needed by volunteers. Purchase materials and appliances. Volunteers have become essential to refuge operations, contributing over 10,000 hours annually to various programs by conducting tours; coordinating the environmental education program; improving access for waterfowl hunters, anglers, and bird watchers; and assisting with habitat management and wildlife surveys. This project has high partnership potential with the Friends of Anahuac Refuge, and construction will be handled entirely by volunteers.
2006519129	Construct 12-bay vehicle storage facility. $214,000	This project involves the construction of a 12-bay vehicle storage facility for the Anahuac NWR and Texas Chenier Plain Refuge Complex vehicle and boat fleets. The refuge currently has limited covered storage for vehicles and boats. A storage building will protect vehicles and boats from corrosive damages from excessive exposure to sun, saltwater and occasional but regularly occurring flooding in low-lying coastal areas. Overall cost efficiency will be maximized by decreasing maintenance costs and increasing the equipment's working lifespan.
2006534275	Rehabilitate Elm and East Bay Bayou Levees. $478,000	Rehabilitate Elm and East Bay Bayou Levees (Middleton). Clear, slope and elevate levees on Elm and East Bay Bayou on the Middleton Tract. Protect and bulkhead the saltwater barrier attached to the Elm Bayou levee. This levee system protects and facilitates the management of over 3,500 acres of fresh and intermediate marsh on the refuge and protects 1000s of acres of private land from salt water intrusion. Significant erosion occurred near the salt water barrier and reduced the elevation in key areas of the levee.

CONSTRUCTION MMS REPORT FOR MCFADDIN NWR

Work Order #	Project Title and Cost	Project Description
03126647	Construct new Water Control Structure at O-Ditch and GIWW. $153,000	Plan, design, and construct a new water control structure on O-Ditch at the Intracoastal Waterway, to improve our water management capabilities in the 8,000-acre Wild Cow Bayou Unit. Man-made changes off refuge in the watershed have increased drainage time in this unit which has adversely affected the health of the marsh. This structure would allow us to more effectively manage water by releasing it at the top of the watershed during extreme high water conditions. Structure would be a forty-foot long, 60"" pipe with concrete headers, a flap-gate at the outfall, a screwgate, and a half-round riser on the inside. Planning, design, and construction contracting can be accomplished in one year.
03126651	Construct new Water Control Structure at Willow Lake Outfall Ditch and GIWW. $153,000	Plan, design, and construct a water control structure on the Willow Lake outfall Ditch at the Intracoastal Waterway to improve our water management capabilities in the 8,000-acre Wild Cow Bayou Unit. Man-made changes off refuge in the watershed have increased drainage time in this unit which has adversely affected the health of the marsh. This structure would allow us to more effectively manage water by releasing it at the top of the watershed during extreme high water conditions. Structure would be forty-feet long, 60"" pipe with concrete headers, a flap-gate at the outfall, a screwgate, and a half-round riser on the inside. Planning, design, and construction contracting can be accomplished in one year.
00123697	Construct Fishing piers, boat docks and ramps, parking areas and waterway access. $181,000	Improve access and enhance opportunities for public waterfowl hunting and fishing on McFaddin NWR. Facilities which improve access for public recreation are a critical need to support this Refuge's growing public use program. Fishing piers, boat docks and ramps, parking areas and waterway access will be developed to support these popular activities. Families visit this coastal refuge daily to enjoy excellent recreational fishing and crabbing, and the Refuge also hosts the largest public waterfowl hunt in Texas, serving over 6,000 hunters annually. This project has high partnership potential with local outdoor organizations and volunteers. Based on the latest Fish and Wildlife Service data available, the additional visitors are expected to contribute $91,698 to the local economy.
00122722	Develop interpretive and wildlife observation facilities. $130,000	Enhance visitor services on McFaddin NWR by developing interpretive and wildlife observation facilities. Nature tourism is expanding rapidly on the Texas Gulf Coast, and although this coastal refuge provides great opportunities for wildlife observation and nature interpretation, facilities are minimal. Public use occurs year-round and includes all six priority uses - wildlife observation and photography, fishing, waterfowl hunting, environmental education and interpretation. The Refuge is a prime site on the Great Texas Birding Trail. To commemorate the Refuge System Centennial, facilities including a kiosk with interpretive panels, observation platforms, and boardwalks will be developed. All aspects of this project have high partnership potential with conservation organizations, industry and local agencies.
R3117106 Cont. on next page	Bridge Rehabilitation/Replacement [p/d/cc]. $1013,000	This project includes the planning, design, and construction to replace one bridge and rehabilitate a second bridge at McFaddin NWR. Currently, the condition of both bridges represents a significant safety hazard. Specifically, the Ten-Mile Cut Bridge will be replaced and the Star Lake Corps Structure Bridge will be rehabilitated to include safety features and guardrails. The Ten-Mile Cut Bridge is deteriorated

CONSTRUCTION MMS REPORT FOR MCFADDIN NWR

Work Order #	Project Title and Cost	Project Description
R3117106 Cont.		and worn to the point that rehabilitation is not an option as the wood supports are rotted and deteriorated. The Star Lake Corps Structure Bridge is hazardous to users because of the structural and safety deficiencies including deteriorated substructures and bridge decks, and nonexistent or inadequate guardrails and signs.
95110199	Construct new administrative facility for McFaddin/Texas Point NWRs. $920,000	Construct a new administrative office facility for McFaddin/Texas Point NWR staff. This 3,500 square foot facility will house the 10 person refuge staff, and contain a 400 square foot area for providing visitor services and information. Electrical, telephone and water utilities will be provided through adjacent city utility lines; septic will have to be developed on-site. Current administrative is a very old retrofitted hunting club. The building is greater than 50 years old and falling apart. This new building will negate health and safety hazards posed by the current facility and meet required Refuge operational goals and objectives.
00110200	Construct three residences to house refuge staff. $2088,000	Construct three residences to house refuge staff of McFaddin and Texas Point NWRs. These three bedroom, double garage residences will house refuge management and biological staff. Likely location for the residences is within the community of Sabine Pass, adjacent to Texas Point NWR. Electrical, water, and telephone service is available from existing utility infrastructure along State Highway 87; septic systems will have to be developed on-site. There is only one residence currently located on McFaddin National Wildlife Refuge. The closest (12 miles) town is Sabine Pass, which is very small and does not offer real estate opportunities. The next closest (25 miles) town to the Refuge is Port Arthur. Due to the distance from the Refuge to the closest place for employees to live, many individuals will not seek employment at McFaddin National Wildlife Refuge. Construction on Refuge residences will facilitate staffing and recruitment opportunities for McFaddin and Texas Point National Wildlife Refuges.
2005170812	Repair eroded segment of South GIWW Levee East	Repair, stabilize and armor highly eroded earthen Intracoastal Waterway Levee along the Star Lake Road Stretch. Wakes from large barges and other water craft have undercut and eroded most of the levee and threatens the road. This project will protect the refuge's Five Mile Cut Unit which would degrade this area's freshwater wetland habitat. This project would also protect the only access road to the most heavily used unit by the public. This unit has about 4,000 acres of wetlands, and supports over 100,000 wintering waterfowl annually.
2005180373	Repair the central section of GIWW levee on the North Unit	Repair, stabilize and armor highly eroded earthen Intracoastal Waterway Levee along the North Unit. Wakes from large barges and other water craft have caused the bank to be undercut and erode away most of the levee. This project will protect the refuge's North Unit from saltwater intrusion which would degrade this area's freshwater marsh. This unit contains 8,000 acres supporting over 100,000 wintering waterfowl annually.
2005190393 Cont. on next page	Repair North Unit's GIWW levee, west 1 mile section	Repair North Unit's levee, west 1 mile section. Stabilize and armor highly eroded earthen Gulf Intracoastal Waterway levee along the North Unit. Waves from large barges and other water craft have caused banks to be undercut and erode most of the levee. This project will protect the refuge's north unit

CONSTRUCTION MMS REPORT FOR MCFADDIN NWR

Work Order #	Project Title and Cost	Project Description
2005190393 Cont.		from saltwater intrusion, which would degrade this area's fresh marshes. This unit contains over 8,000 acres supporting over 100,000 wintering waterfowl and other species of concern.
2005240832	Rehabilitate LeBlanc's Reservoir levees. $221,000	Rehabilitate LeBlanc's Reservoir levees. These levees have eroded from storms, flooding, and damage from alligators. The levees are breached in numerous places and water management capabilities have been lost. As a result, high quality aquatic plant production has been lost, resulting in a reduction in the availability of quality wintering habitat for numerous waterfowl and wading birds. This project will reestablish levees of this freshwater impoundment which will allow salinity levels to be reduced.
2005240881	Replace boundary fence on western units of McFaddin NWR. $156,000	Replace 3 miles of refuge boundary fence on western units of McFaddin NWR. Existing fences have been damaged during storms and through vandalism, and are subject to a corrosive environment. These fences mark the refuge boundaries, control trespass and damage of sensitive habitats, and designate pastures used in the refuge's rotational grazing program. Project includes signing and surveying where needed.
2005267329	Develop interpretive and wildlife observation facilities. $130,000	Enhance visitor services on McFaddin NWR by developing interpretive and wildlife observation facilities. Nature tourism is expanding rapidly on the Texas Gulf Coast, and although this coastal refuge provides great opportunities for wildlife observation and nature interpretation, facilities are minimal. Public use occurs year-round and includes all six priority uses - wildlife observation and photography, fishing, waterfowl hunting, environmental education and interpretation. The Refuge is a prime site on the Great Texas Birding Trail. To commemorate the Refuge System Centennial, facilities including a kiosk with interpretive panels, observation platforms, and boardwalks will be developed. All aspects of this project have high partnership potential with conservation organizations, industry and local agencies.
2005260636	Large Bridge Rehabilitation/Replacement [p/d/cc]. $1013,000	This project includes the planning, design, and construction to replace one bridge and rehabilitate a second bridge at McFaddin NWR. Currently, the condition of both bridges represents a significant safety hazard. Specifically, the Ten-Mile Cut Bridge will be replaced and the Star Lake Corps Structure Bridge will be rehabilitated to include safety features and guardrails. The Ten-Mile Cut Bridge is deteriorated and worn to the point that rehabilitation is not an option as the wood supports are rotted and deteriorated. The Star Lake Corps Structure Bridge is hazardous to users because of the structural and safety deficiencies including deteriorated substructures and bridge decks, and nonexistent or inadequate guardrails and signs.
2006513218	Construct new Water Control Structure at Barnett Lake Outfall and GIWW. $153,000	Plan, design, and construct a new water control structure on Barnett Lake outfall ditch at the Gulf Intracoastal Waterway, to improve our water management capabilities in the 8,000-acre Wild Cow Bayou Unit. Man-made changes off refuge in the watershed have increased drainage time in this unit which has adversely affected the health of the marsh. This structure would allow us to more effectively manage water by releasing it at the top of the watershed during extreme high water conditions. Structure would be forty-feet long, 60"" pipe with concrete headers, a flap-gate at the outfall, a screwgate, and a half-round riser on the inside. Planning, design, and construction contracting can be accomplished in 1 year.

CONSTRUCTION MMS REPORT FOR MCFADDIN NWR

Work Order #	Project Title and Cost	Project Description
2006513221	Construct new Water Control Structure at Willow Lake Outfall Ditch and GIWW. $153,000	Plan, design, and construct a water control structure on the Willow Lake outfall Ditch at the Intracoastal Waterway to improve our water management capabilities in the 8,000-acre Wild Cow Bayou Unit. Man-made changes off refuge in the watershed have increased drainage time in this unit which has adversely affected the health of the marsh. This structure would allow us to more effectively manage water by releasing it at the top of the watershed during extreme high water conditions. Structure would be forty-feet long, 60"" pipe with concrete headers, a flap-gate at the outfall, a screwgate, and a half-round riser on the inside. Planning, design, and construction contracting can be accomplished in one year.
2006519024	Construct new Water Control Structure at O-Ditch and GIWW. $153,000	Plan, design, and construct a new water control structure on O-Ditch at the Intracoastal Waterway, to improve our water management capabilities in the 8,000-acre Wild Cow Bayou Unit. Man-made changes off refuge in the watershed have increased drainage time in this unit which has adversely affected the health of the marsh. This structure would allow us to more effectively manage water by releasing it at the top of the watershed during extreme high water conditions. Structure would be a forty-foot long, 60"" pipe with concrete headers, a flap-gate at the outfall, a screwgate, and a half-round riser on the inside. Planning, design, and construction contracting can be accomplished in one year.
2006519066	Construct new administrative facility for McFaddin/Texas Point NWRs. $920,000	Construct a new administrative office facility for McFaddin/Texas Point NWR staff. This 3,500 square foot facility will house the 10 person refuge staff, and contain a 400 square foot area for providing visitor services and information. Electrical, telephone and water utilities will be provided through adjacent city utility lines; septic will have to be developed on-site. Current administrative is a very old retrofitted hunting club. The building is greater than 50 years old and falling apart. This new building will negate health and safety hazards posed by the current facility and meet required Refuge operational goals and objectives.
2006519059	Construct three residences to house refuge staff. $2088,000	Construct three residences to house refuge staff of McFaddin and Texas Point NWRs. These three bedroom, double garage residences will house refuge management and biological staff. Likely location for the residences is within the community of Sabine Pass, adjacent to Texas Point NWR. Electrical, water, and telephone service is available from existing utility infrastructure along State Highway 87; septic systems will have to be developed on-site. There is only one residence currently located on McFaddin National Wildlife Refuge. The closest (12 miles) town is Sabine Pass, which is very small and does not offer real estate opportunities. The next closest (25 miles) town to the Refuge is Port Arthur. Due to the distance from the Refuge to the closest place for employees to live, many individuals will not seek employment at McFaddin National Wildlife Refuge. Construction on Refuge residences will facilitate staffing and recruitment opportunities for McFaddin and Texas Point National Wildlife Refuges.
2006535867	Rehabilitate and retrofit old and deteriorating office building. $380,000	Rehabilitate and expand the existing administrative building. The building has experienced significant deterioration that has been accelerated due to the influence of saltwater. The electrical system, roof, and siding need to be replaced. This 1,694 square foot building provides office space for seven staff members. Due to insufficient space, staff members are forced to share offices, and storage space insufficient. The buildings present conditions present numerous health and safety hazards.

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Work Order #	Project Title and Cost	Project Description
2006535718	Construct Fishing piers, boat docks and ramps, parking areas and waterway access. $181,000	Improve access and enhance opportunities for public waterfowl hunting and fishing on McFaddin NWR. Facilities which improve access for public recreation are a critical need to support this Refuge's growing public use program. Fishing piers, boat docks and ramps, parking areas and waterway access will be developed to support these popular activities. Families visit this coastal refuge daily to enjoy excellent recreational fishing and crabbing, and the Refuge also hosts the largest public waterfowl hunt in Texas, serving over 6,000 hunters annually. This project has high partnership potential with local outdoor organizations and volunteers. Based on the latest Fish and Wildlife Service data available, the additional visitors are expected to contribute $91,698 to the local economy.

CONSTRUCTION MMS REPORT FOR TEXAS POINT NWR

Work Order #	Project Title and Cost	Project Description
00123698	Construct interpretive and wildlife observation facilities. $78,000	Enhance visitor services on Texas Point NWR by developing interpretive and wildlife observation facilities. Nature tourism is expanding rapidly on the Texas Gulf Coast, and although this coastal refuge provides great opportunities for wildlife observation and nature interpretation, facilities are minimal. Public use occurs year-round and includes all six priority uses - wildlife observation and photography, fishing, waterfowl hunting, environmental education and interpretation. The Refuge is a prime site on the Great Texas Birding Trail. To commemorate the Refuge System Centennial, facilities including a kiosk with interpretive panels, an observation platform, and a boardwalk will be developed. All aspects of this project have high partnership potential with conservation organizations, industry and local agencies.
97122668	Develop volunteer housing for McFaddin and Texas Point NWR. $158,000	Recruitment and retention of non-permanent staff and volunteers at these refuges is negatively affected by lack of housing. Housing opportunities in the nearby community of Sabine Pass are extremely limited, and most staff must reside in the nearest communities, located one hour or more commuting distance from Refuge headquarters. A mobile/prefab bunkhouse facility will be installed on Texas Point NWR, and connected to Sabine Pass municipal services.
00115512	Replace One-Quarter Mile Watchable Wildlife Trail. $26,000	Replace the present dirt public use trail with a wooden boardwalk trail. The trail is heavily utilized by bird watchers. It is constructed of earthen material. Heavy rains and tropical storms have caused significant erosion of the trail. Due to frequent rains and storms the trail stays in a condition of disrepair. A wooden boardwalk will built over the entire length of the 0.25 mile trail in order to eliminate reoccurring maintenance needs and provide an adequate trail for public use.
2006510862	Develop volunteer housing for McFaddin and Texas Point NWR. $158,000	Recruitment and retention of non-permanent staff and volunteers at these refuges is negatively affected by lack of housing. Housing opportunities in the nearby community of Sabine Pass are extremely limited, and most staff must reside in the nearest communities, located one hour or more commuting distance from Refuge headquarters. A mobile/prefab bunkhouse facility will be installed on Texas Point NWR, & connected to Sabine Pass municipal services.
2005171350	Replace Barbed wire Fence at Texas Point NWR	Replace 10 miles of damaged barbed wire fence. This fence has been severely damaged by storms and fires. All of the fence posts have rotted and no longer support the wire. Barbed-wire has deteriorated to rusting. This fence provides the only barrier between adjacent private lands and the refuge. The fence will no longer hold cattle. Therefore, the refuge has not been able to implement its grazing program. Adjacent landowners trespass on the refuge, due to the deteriorated fence. Illegal grazing is adversely affecting habitat conditions on the refuge.
2005267301	Replace One-Quarter Mile Watchable Wildlife Trail. $26,000	Replace the present dirt public use trail with a wooden boardwalk trail. The trail is heavily utilized by bird watchers. It is constructed of earthen material. Heavy rains and tropical storms have caused significant erosion of the trail. Due to frequent rains and storms the trail stays in a condition of disrepair. A wooden boardwalk will built over the entire length of the 0.25 mile trail in order to eliminate reoccurring maintenance needs and provide an adequate trail for public use.

CONSTRUCTION MMS REPORT FOR TEXAS POINT NWR

Work Order #	Project Title and Cost	Project Description
2006535986	Construct interpretive and wildlife observation facilities. $78,000	Enhance visitor services on Texas Point NWR by developing interpretive and wildlife observation facilities. Nature tourism is expanding rapidly on the Texas Gulf Coast, and although this coastal refuge provides great opportunities for wildlife observation and nature interpretation, facilities are minimal. Public use occurs year-round and includes all six priority uses - wildlife observation and photography, fishing, waterfowl hunting, environmental education and interpretation. The Refuge is a prime site on the Great Texas Birding Trail. To commemorate the Refuge System Centennial, facilities including a kiosk with interpretive panels, an observation platform, and a boardwalk will be developed. All aspects of this project have high partnership potential with conservation organizations, industry and local agencies.

DEFERRED MAINTENANCE MMS REPORT FOR ANAHUAC NWR

Work Order #	Project Title and Cost	Project Description
04134744	Remove existing bridge and water control structure. $243,500	The existing structure has damage gates that are allowing salt water and flood water to cross to the adjacent watershed. Adjoining land owners have complained about the impacts of this structure allowing water to cross watershed boundaries. We propose to remove the existing failed structure and replace with bulkheads and an earthen crossing. Recent Bridge inspections conclude that the bridge is currently safe for public crossing. Removal of this structure will prevent salt water from impacting over 600 acres freshwater wetlands in the adjacent watershed and will restore the natural hydrology to this area.
03126441	Rehabilitate East Bay Bayou Levee. $270,000	Rehabilitate East Bay Bayou Levee (East Bay Bayou Unit) Clean, slope and elevate East Bay Bayou levee on the East Bay Bayou Unit of the East Unit Tract. Protect and bulkhead the East Bay Bayou saltwater barrier. This levee system protects and facilitates management of over 4,100 acre or fresh and intermediate marsh on the refuge and the attached salt water barrier protects 1000's of acres of private land from saltwater intrusion. Significant erosion from tropical storms Allison in 2001 has eroded around the saltwater barrier and has reduced the elevation of the levee.
03126450	Replace the boat canal water control structure and bulkheads.	The current structure has failed. This structure makes it possible to manage water levels, salinities and water quality in 3,900 acres of the Deep Marsh Unit. This marsh supports hundreds of thousands of waterfowl use days annually and is important habitat for wading birds, shorebirds and other marsh wildlife. Species of conservation concern which will benefit from the replacement of this structure include White Ibis, American Bittern, Northern Harrier, Yellow and Black Rails, Whimbrel, Long-billed Curlew, Hudsonian Godwit, Stilt Sandpiper, Short-billed Dowitcher and Seaside Sparrows. This structure was damaged during tropical storm Frances. Repair efforts in 2002 were not successful because the structure had totally washed out underneath the supports. The structure will be relocated and replaced with an aluminum box culvert with vinyl bulkheads.
03126440	Rehabilitate Elm and East Bay Bayou Levees. $478,000	Clear, slope and elevate levees on Elm and East Bay Bayou on the Middleton Tract. Protect and bulkhead the saltwater barrier attached to the Elm Bayou levee. This levee system protects and facilitates the management of over 3,500 acres of fresh and intermediate marsh on the refuge and protects 1000s of acres of private land from salt water intrusion. Significant erosion occurred near the salt water barrier and reduced the elevation in key areas of the levee.
03126640	Remove abandoned oil pads in Gator Marsh (LJH). $47,000	Remove abandoned oil pads in Gator Marsh (LJH) and the 480 units. Pads remain after production ceased. These well pads were present when the refuge purchased these units. We propose to create shallow fresh water wetlands from pad spoil. The wetlands will provide pair pond habitat for declining Mottled Duck populations while removing unwanted infrastructure from valuable wetland habitat. Planning, design and construction contracting can be completed in one year.

DEFERRED MAINTENANCE MMS REPORT FOR ANAHUAC NWR

Work Order #	Project Title and Cost	Project Description
03126638	Rehabilitate Gator Trail ditch and spoil levee. $110,000	Rehabilitate the Gator Trail ditch and levee to improve protect this crucial water management infrastructure. Ditch banks are eroding from recent storm flooding and alligator burrowing. Side slope of the ditch needs to be sloped and the spoil removed from ditch work needs to be crowned and sloped. The levee created from construction of this ditch is used to access important water control structures on Oyster Bayou. Over 900 acres of fresh water and intermediate marsh are managed through this ditch systems. It maintain habitat for marsh and wading birds and wintering waterfowl. Planning, design and construction contracting can be accomplished in one year.
03126639	Repair Snipe Prairie levees and remove spoil. $80,000	Repair Snipe Prairie levees and remove spoil from ponds in the unit to improve water level management. Outside levees have been eroded from flooding. Levees need to be raised and sloped to improve water management within the 100 acre unit. Old spoil areas from dugout ponds should be removed and used to elevate exterior levees. Interior and exterior borrow ditches will be cleaned an sloped. This unit provides excellent habitat for wading birds, shorebirds and wintering waterfowl. It is one of the most popular waterfowl hunting locations on the East Unit Public Hunting area. Restoration will increase wildlife use of the unit and improve hunting opportunities in the fall.
03126637	Replace Coon Creek water control structure. $188,000	Replace the Coon Creek water control structure. This structure has failed. One half of the structure has filled with silt. Timbers have significantly eroded. This structure will be replaced with a simple rock weir with a shutoff valve to protect inland marshes from oil spills in the Galveston Bay system. A simpler structure will reduce future maintenance while still maintaining the integrity of interior brackish and saline marsh systems. It will improve movement of marine organisms. This structure is adjacent to an prehistoric village site. Special precautions will be necessary to protect archeological resources. The proposed structure replacement will reduce impacts to historic values of the site and will reduce impacts in the future by reducing maintenance.
03126542	Rehabilitate boat canal banks with shoreline protection. $	Rehabilitate the boat canal banks with shoreline protection. The boat canal banks have experience significant erosion from boat wakes. Erosion has increased the size of the boat canal by five feet. The banks are threatening to erode into the adjacent property owners land. Canal banks will be sloped and armored with cable block and felt. This canal provides boat access to refuge and state waters for tens of thousands of fisherman, hunters and nature enthusiast annually.
03126543	Rehabilitate the tan equipment storage building (Red Wolf). $115,000	Rehabilitate the tan (Red Wolf) equipment storage building to protect refuge equipment. Portion of the existing floor needs to be covered with concrete, additional lighting is needed, several doors need to be repaired to properly secure the building and make it safe for staff entry during night time hours. Industrial shelving is needed to protect and properly store specific refuge equipment.
03126544 Cont. on next page	Replace washed out culverts on Westline road ditch. $89,000	Replace washed out culverts on Westline road ditch used to access yellow Rail Prairie. These culverts were washed out during tropical storm Frances. These culverts provide important access to the Coon Creek and Yellow Rail Prairie units. The culverts will be relocated south of the current location across from the access road to Gator Marsh. They will be protected with vinyl bulkheads to prevent future

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03126544 Cont.		washouts. The existing structures need to be removed to prevent visitors from falling into the large hole which has developed between the two culverts. Planning, design and construction contracting can be accomplished in one year.
03126546	Rehabilitate ditches and spoil banks in Gator Marsh (LJH) Tract. $219,000	Rehabilitate the ditches and spoil banks in the Gator Marsh (LJH) Tract to improve water management, native prairie habitat and grazing management in the 1800 acre unit. This tract currently is suffering from poor drainage in the northern portion of the unit. The poor drainage has degraded native prairie habitat, reduced the value of fresh water wetland habitat and the ability to use cattle to meet management objectives within the unit. Approximately 10,000 feet of ditches need to be cleaned. Spoil from the ditch clean outs will need to be removed or sloped and crowned to facilitate water management and improve cattle utilization of the unit. Several existing culverts will need to be replaced and several new culverts are needed to meet the management objectives within the unit. This unit provides hundreds of thousands of waterfowl use days, it is within critical nesting and brood habitat for Mottled Ducks, it is heavily utilized by shorebirds, wading birds, grassland songbirds and other marsh birds. Planning, design and construction contracting can be accomplished in one year.
03126550	Repair or replace boat rollers on the Middleton Tract. $27,000	Repair or replace boat rollers on the Middleton Tract to facilitate boat access into hunt units of the refuge. Boat rollers provide access to hunters over levees into waterfowl hunt units of the refuge. Boat rollers facilitate almost a one thousand use days for refuge hunters. Wooden supports galvanized and pvc rollers need to be replaced. The existing rollers need to be extended and winch posts need to be installed to facilitate access during low tide events. Planning, design and construction contracting can be accomplished in one year.
03126552	Rehabilitate East Bay Bayou walking trail. $68,000	Rehabilitate the East Bay Bayou walking trail to improve visitor use and experiences. Improvements of this trail are sure to allow more visitors to appreciate wildlife resources on the refuge. The existing trail system needs to be crowned and resurfaced with rock to improve walking conditions. Existing culverts need to be replaced and additional culverts installed to reduce flooding, erosion and the tripping hazards along portions of the trail. Directional & interpretive signs will be installed to direct visitors along the trail.
03126557	Rehabilitate East Bay Bayou Tract moist soil levees. $103,000	East Bay Bayou Tract moist soil units are used to demonstrate rice farming and moist soil management techniques to improve wetland wildlife habitat. The existing interior levees in fields 116, 64 and 63 need to be surveyed and reconstructed to improve water management within each field. Outside levees need to be improved and structures installed to improve the services ability to manipulate water levels for shorebird management. It is difficult to prepare the current fields in early spring for shorebird management because of poor levee condition and placement which makes it difficult to drawdown fields. These fields provide important opportunities for landowners, duck clubs, farmers and outfitters to learn about freshwater wetland management techniques which can be used to improve wildlife habitat and individual land management operations. Tens of thousands of visitors visit this tract to view wildlife and fish each year. These fields also provide tens of thousands of use days for waterfowl, shorebirds and wadingbirds each year. Design and construction contracting can be accomplished in one year.

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03126564	Rehabilitate interior ditches in the Middleton Tract. $37,000	Rehabilitate the interior ditches in the Middleton tract used to facilitate water management and access to hunt units. These ditches are critical to the water management of 3,700 acres of marsh habitat and facilitating access for waterfowl hunting each fall. Ditches provide boat access to hundreds of waterfowl hunters each fall and winter. Ditches will be cleaned by removing vegetation and accumulated sediments using mud boats supported by a backhoe. These ditches are used to flood and dewater, manage salinities, flush to improve water quality and remove flood waters within the unit. Marsh habitat on the Middleton Tract is important to migrating & wintering waterfowl, nesting Mottled Ducks & marsh wildlife species. Planning, design & construction contracting can be completed in 1 year.
03126612	Rehabilitate Unit One Rice Field ditches on the East Unit. $151,000	Rehabilitate Unit One Rice Field ditches to improve water management capabilities in rice fields and moist soil units. Approximately 6500 feet of ditches need to have vegetation cleared and spoil areas crowned and sloped to improve water management capabilities on this 670 acres unit. These units provide important migratory and wintering habitat for waterfowl and shorebirds. Planning, design and construction contracting can be accomplish in one year.
03126506	Rehabilitate the Oyster Bayou boat ramp. $122,000	Rehabilitate the Oyster Bayou (Boat Canal) boat ramp to improve accessibility. The current launch will be expanded and improved to allow two boats to be launched at the same time, install a solar powered light, and modify the dock to make it accessible in variable tide conditions. The current launch is not lighted and visitors have damaged supports while launching at night.
03126634	Repair and protect levees on the East Unit. $423,000	Repair and protect levees along the Gulf Intracoastal waterway (GIWW) on the lower end of the East Unit to protect inland marshes and roads. These levees are eroding at very rapid rates. Repair of low areas along the GIWW and shoreline protection are critical to protecting thousands of acres wetland habitat and one mile of road. These marshes are valuable habitat for migratory waterfowl, shorebirds, wading birds, nesting Mottled Ducks and other marsh birds. Protection of and sloping of levees with rock barriers and cordgrass plantings will protect 6000 acres of marsh from saltwater intrusion and marsh loss. Planning, design and construction engineering can be completed in one year.
03126635	Repair levees along the GIWW (Roberts Mueller and Pace Tracts). $496,000	Repair and protect levees along the Gulf Intracoastal waterway(GIWW) on the Roberts Mueller and Pace Tracts to protect inland marshes and roads. These levees are eroding at very rapid rates. Repair of low areas along the GIWW and shoreline protection are critical to protecting thousands of acres wetland habitat and one mile of road. These marshes are valuable habitat for migratory waterfowl, shorebirds, wading birds, nesting Mottled Ducks and other marsh birds. These units receive over a million waterfowl use day annually. They are one of the most important wintering and migratory waterfowl rest areas on the Gulf Coast. Protection of and sloping of levees with rock barriers and cordgrass plantings will protect 4000 acres of marsh from saltwater intrusion and marsh loss. Planning, design and construction engineering can be completed in one year. These levee and spoil areas are not under easement with the US Army Corps of Engineers.

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03126468	Replace the Otter Slough water control structure and bulkheads	Replace the Otter Slough water control structure and bulkheads. The current structure has failed. This structure makes it possible to manage water levels, salinities and water quality in 4,500 acres of the Deep Marsh Unit. This marsh supports hundreds of thousands of waterfowl use days annually and is important habitat for wading birds, shorebirds and other marsh wildlife. Species of conservation concern which will benefit from the replacement of this structure include White Ibis, American Bittern, Northern Harrier, Yellow and Black Rails, Whimbrel, Long-billed Curlew, Hudsonian Godwit, Stilt Sandpiper, Short-billed Dowitcher and Seaside Sparrows. This structure was damaged during tropical storm Frances. Repair efforts in 2002 were not successful because the structure had totally washed out underneath the supports. The structure will be relocated and replaced with an aluminum box culvert with vinyl bulkheads.
03126469	Replace the New Ditch water control structure. $144,000	Replace the New Ditch water control structure and bulkheads. The current structure is insufficient for the water shed that it supports. This structure makes it possible to manage water levels, salinities and water quality in 6,500 acres of the Deep Marsh Unit. This marsh supports hundreds of thousands of waterfowl use days annually and is important habitat for wading birds, shorebirds and other marsh wildlife. Species of conservation concern which will benefit from the replacement of this structure include White Ibis, American Bittern, Northern Harrier, Yellow and Black Rails, Whimbrel, Long-billed Curlew, Hudsonian Godwit, Stilt Sandpiper, Short-billed Dowitcher and Seaside Sparrows. The structure will be relocated and replaced with a larger aluminum box culvert with vinyl bulkheads. Planning and design is underway and the construction can be completed in one year.
03126548	Replace the old wooden bridge on the east side. $78,000	Replace the old wooden bridge on the east side of Gator Marsh road. Bridge inspections have revealed that this bridge is no longer safe to cross. Closure of this bridge has limited access to this portion marsh for grazing and small vehicle access reducing the value for wetland wildlife. The proposed project would remove the existing condemned bridge and replace it with a culvert crossing. Replacing the wooden bridge with a simple culvert would reduce future management costs and facilitate grazing access to meet marsh management objectives for the unit. Southern portions of this unit provide hundreds of thousands of waterfowl use days, it is within critical nesting and brood habitat for Mottled Ducks, it is heavily utilized by shorebirds, wadingbirds, grassland songbirds and other marsh birds. Improving access to the northern portion of the tract could create favorable conditions found in the southern portion of the unit. Planning, design and construction contracting can be accomplished in one year.
02116082	Rehabilitate over 30,000 feet of drainage ditches on Pintail Marsh Unit. $359,000	Rehabilitate over 30,000 feet of drainage ditches. Grade and slope spoil to facilitate management of refuge rice farming and moist soil program. This drainage system facilitates water management on over 900 acres of the refuge cooperative rice farming program, 80 acres of moist soil units, and 350 acres of native prairie. The current drainage ditch does not allow effective water management in rice units and is preventing sheet flow into wetlands and away from native prairie. Cleaning ditches, replacing 14 culverts, grading, and sloping of spoil areas will significantly improve the water management of this unit. NOTE: Work will not require engineering assistance. Work will be accomplished through a requirements contract for services.

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02116460	Remove shop and boat storage buildings soon be replaced. $108,000	Remove old shop and boat storage buildings which will soon be replaced. These buildings will need to be removed to facilitate construction of the boat storage building in 2005. The refuge water system is located in the old shop building. It will need to be elevated and protected during demolition and construction. The removal of these buildings will allow the refuge to continue operations that are critical to all aspects of refuge management.
02116456	Entrance road (Rte 10, 3.2 mi)	Construction. Repair the main entrance road to the refuge. We propose placing an alternative surface to the road to reduce the amount of dust and improve driving conditions for the visiting public. Dust from the constant travel of visitors make driving hazardous during dry summer months. This road is traveled by over 70,000 visitors annually. It is the most traveled and visible road on the refuge. Paving or placing an alternative surface to this road will improve driving conditions and reduce the possibility for collisions.
02116191	Replace 18' Wooden Water Control Structure (Salt Barrier), East Unit. $95,000	Replace the 18-foot wooden water control structure on the East Bay Bayou Tract located on the East Unit. The structure serves as a saltwater barrier to reduce movement of salt water through a major drainage ditch to fresh water wetlands upstream. The structure has been damaged by flooding and marine burrowing worms. The structure was temporarily repaired in FY2000 however will soon fail again. Replacement of this structure is critical to facilitating protection and management of over 1800 acres of fresh and intermediate marsh.
02116435	Repair and Move Refuge Above Ground Fuel Tanks. $47,000	Repair and Move Refuge Above Ground Fuel Tanks. Unleaded and diesel pumps, exterior vents and fill pipes are in poor condition. The pumps require an assessment to determine if they will need to be replaced. The pumping system needs to be moved and modified to meet requirements of the refuge spill prevention, contingency and counter measure plan. The pump system is located in an area prone to flooding. Moving the tanks will reduce the potential for flooding fueling areas and limit the impacts if a fuel spill were to occur.
02116071	Replace the 48-inch by 30-foot, double, aluminum water control structure. $90,000	Replace the 48-inch by 30-foot, double, aluminum water control structure located on the west end of the Mitigation Area Unit. This structure has significantly deteriorated because of erosion and decay. The structure manages water levels in 300 acres of saline marsh. If this structure is not replaced, portions of an important access road will no longer provide critical access to staff.
97110189	Remove abandoned drill pads, pipelines, and misc equipment. $1,150,000	The Roberts-Mueller oil field will be cleaned and restored by removing abandoned drill pads, pipelines, and miscellaneous equipment. This infrastructure, abandoned by previous oil field operations, reduces habitat quality and presents safety hazards to refuge staff. The project will eliminate safety hazards, directly restore 50 acres, and enhance over 300 acres of coastal wetlands.
97110190	Windmill Rd & parking (Rte 11, 6.7 mi) $ 2382,000	Construction. Repair 9 miles of roads and parking areas in the Old Anahuac Unit from the shop to Frozen Point (Windmill Road). Project will include restoring and crowning roadbeds, re-graveling and cleaning road ditches. These roads provide recreational opportunities for over 60,000 visitors annually and provide the only public access to the north side of East Galveston Bay.

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90110192	Repair East Unit farm roads. $1191,000	Repair East Unit farm roads by restoring and crowning roadbed and cleaning road ditches. These roads provide access for rice farming and moist soil management, two practices aimed at providing high quality habitat for wintering waterfowl and for public waterfowl hunting. Maintenance will increase the longevity of these roads, and provide cost-savings by preventing the need for major repairs.
98107382	Replace washed-out Pace Tract culverts. $165,000	Replace water control structures and repair wash outs on the Pace Tract. These structures are corroded and erosion has occurred due to repeated flooding. Structures are needed to minimize harmful impacts of salt water intrusion and erosion in adjacent wetlands. Replacing structures will protect and enhance 1,400 acres of important waterfowl habitat.
96110191	Oyster Bayou Rd (Rte 103, 2.1 mi) $1094,000	Construction. Rebuild and re-gravel 4 miles of Oyster Bayou Road. This road is currently closed to the public due to its deteriorated condition. Reopening this road will provide recreational opportunities for over 20,000 visitors annually.
99107421	Repair bridge access crossing East Bay Bayou by repairing washouts. $38,046	Repair bridge access crossing East Bay Bayou by repairing washouts. Erosion on both sides of the bridge threatens its integrity, and it has not been signed according to Federal safety standards. It may soon become a safety hazard and could wash out during another significant storm event if not repaired. This bridge is regularly used by staff for operations and law enforcement, and by over 10,000 visitors annually. It is also used as an accessible fishing and nature observation area.
97107398	Repair East Bay boat ramp parking area. $28,000	Repair East Bay boat ramp parking area by restoring base and re-gravelling surface. This parking area has been damaged by flooding and heavy use. Visitors been stuck and vehicles damaged in the parking area increasing the risk for injury. A smoother surface also makes the parking area usable to visitors in wheelchairs. It receives year-round use by over 25,000 visitors annually. The boat ramp is also used by law enforcement agencies during emergencies. The refuge's East Bay boat ramp provides the only public access to the north side of East Galveston Bay.
97107408	Repair East Unit reservoir levees and water control structures. $92,000	Rehabilitate eroded East Unit reservoir levees and water control structures. Replace inoperable structures, slope and crown levees, rehabilitate pump station, and control exotic Chinese tallow trees. This infrastructure facilitates manipulation of water levels to enhance migratory bird habitat in this 200-acre freshwater impoundment. This wetland also supports numerous resident fish and wildlife species.
97107409	Rehabilitate Alice Jackson White and Granberry unit roads. $491,000	Rehabilitate 10 miles of deteriorating Alice Jackson White and Granberry unit roads by restoring and crowning roadbeds, cleaning road ditches, and replacing culverts. These roads provide management access to water control structures, grazing units, and prairie restoration sites. Maintenance will increase the longevity of these roads and provide cost savings by preventing the need for major repairs.
97107410	Remove old cattle shelters from Jackson/White and Old Anahuac. $43,000	Remove old cattle shelters from Jackson/White and Old Anahuac by tearing down wooden and sheet metal structures and disposing of materials. These structures are severely deteriorated, no longer function, and pose a safety hazard to staff and refuge permittees. Removal of the cattle shelters will eliminate the safety hazards and enhance the natural resources.
97107412	Replace eroded Middleton Tract water control structure. $340,000	Replace eroded Middleton Tract water control structures along East Bay Bayou by removing existing aluminum structures and installing new structures. Washouts below and around these structures are threatening their integrity and limiting management capabilities. This project will protect and enhance 3,400 acres of important coastal wetland and prairie habitats.

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97107414	Replace Shop Complex security fence. $35,000	Replace the Shop Complex chain-link security fence with a new fence. This fence is deteriorated to the point that it no longer serves as a barrier to outside entry. Vandalism and theft of government property is an ongoing problem at the Shop.
97107415	Repair Boat Canal public boat ramp and parking area. $27,000	Repair Boat Canal public boat ramp and parking area by re-gravelling the ramp runway and parking area, and replacing the concrete boat ramp. This popular public boat ramp provides access to Oyster Bayou and East Galveston Bay for recreational fishing, waterfowl hunting, and wildlife viewing. It serves over 20,000 visitors annually and is used by refuge staff to conduct law enforcement and other operations.
98107416	Rehabilitate Robert's Mueller spoil area levee. $117,000	Rehabilitate Robert's Mueller spoil area levee which is severely eroded and nonfunctional by repairing washouts, resloping and crowning the levee, and removing Chinese tallow trees. This project will restore a 25-acre wetland and allow the reestablishment of a colonial nesting water bird rookery.
96107419	Rehabilitate Old Anahuac pump station. $66,000	Rehabilitate Old Anahuac pump station by replacing pump and repairing support infrastructure. The existing pump requires constant repairs, and the supports have excessive rust and wear. This equipment supplies water to the Oyster Bayou Moist Soil Unit, which is the site of a partnership project with Ducks Unlimited. This 400-acre wetland provides excellent habitat for waterfowl and other migratory birds.
2006508111	Shoveler Pond Rd (Rte 12, 3.4mi). $736,000	Construction. Repair Shoveler Pond Road by restoring and crowning roadbed, re-gravelling surface and cleaning road ditches. The roadbed is eroded and flooding has removed surface gravel. This road is part of the refuge auto tour loop and provides access to Shoveler Pond and the Willows, two popular wildlife viewing areas. These facilities are visited by over 40,000 people annually.
98107457	Shoveler Pond Rd (Rte 12, 3.4mi). $736,000	Construction. Repair Shoveler Pond Road by restoring and crowning roadbed, re-gravelling surface and cleaning road ditches. The roadbed is eroded and flooding has removed surface gravel. This road is part of the refuge auto tour loop and provides access to Shoveler Pond and the Willows, two popular wildlife viewing areas. These facilities are visited by over 40,000 people annually.
97107394	Remove abandoned buildings, trailers, equipment and trash. $53,000	Remove abandoned buildings, trailers, equipment and trash from the Middleton Tract. These materials were left when this tract was acquired in 1995 and pose a threat to public safety . The Middleton Tract is part of the refuge public waterfowl hunting program. The project will remove this hazard, any threat of pollution, and enhance aesthetics.
96107396	Rehabilitate levees and water delivery system to Rail Reservoir Moist Soil Unit. $71,000	Rehabilitate 26,000 feet of levees and water delivery system to Rail Reservoir Moist Soil Unit by sloping, controlling tallow, and replacing culverts. This infrastructure facilitates water management on this 100-acre freshwater wetland, which in turn creates quality habitat for waterfowl, shorebirds, and wading birds, and for many resident fish and wildlife species.
96107397	Replace foot bridge to East Unit reservoir. $53,000	Replace foot bridge to East Unit reservoir. This bridge was completely destroyed by flooding and is closed. Replacement will improve access to the reservoirs on the popular East Unit public waterfowl hunt area, which serves over 6,000 hunters annually.

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Work Order #	Project Title and Cost	Project Description
99107495	Replace Lone Tree Bayou bridge/water control structure. $104,000	Replace Lone Tree Bayou bridge/water control structure (Property #0087). Erosion on both sides of this structure threatens its integrity. The bridge will become a safety hazard if erosion continues. Bridge provides staff access for law enforcement, fire management, and habitat management activities. Water control structure protects 2,100 acres of coastal wetlands.
97107448	Repair East Unit Road. $253,032	Repair deteriorated main East Unit road by restoring the roadbed, crowning and re-gravelling the surface, and cleaning road ditches. This road provides access to the popular East Unit public waterfowl hunting area, which serves over 6,000 hunters annually. This project will increase safety, and provide long-term cost savings by preventing additional deterioration.
97107449	Cross & West Line Rds (Rte 101, 102; 3 mi) $658,000	Repair 2.2 miles of East Bay Bayou Tract roads and parking areas by restoring and crowning roadbeds, re-gravelling surfaces and cleaning road ditches. This area provides recreational opportunities for over 25,000 visitors annually. This tract was recently opened to the public through a multi-partner project involving several conservation groups, industry, and individuals. This portion of the Refuge provides high quality birding, recreational fishing, and general wildlife observation opportunities.
96107385	Rehabilitate levees and replace water control structures and culverts. $131,000	Rehabilitate 3 miles of levees and replace water control structures and culverts. Management capabilities are severely hindered by current state of disrepair. This 150 acre freshwater wetland provides valuable habitat for waterfowl, shorebirds, and wading birds, including important brood-rearing and molting habitat for the resident Mottled Duck.
90107386	Replace 6 rusted and worn cattle guards. $31,000	Replace 6 rusted and worn cattle guards that have deteriorated to the point where cows used in the refuge grazing program could exit grazing units onto refuge and county roads, where they pose a significant hazard to motorists. This project will reduce potential for conflicts with refuge visitors, enhance public safety, and protect sensitive habitats where grazing is not allowed.
97107388	Rehabilitate flood damaged refuge boat canal. $172,000	Rehabilitate flood damaged refuge boat canal by removing silt, repairing levees, and replacing a 36 inch culvert and water control structure. The boat canal provides access to quality recreational fishing, waterfowl hunting, and wildlife observation for over 10,000 refuge visitors annually and for staff conducting law enforcement and other operations.
90107389	Replace deteriorated boat and vehicle storage building. $460,000	Replace deteriorated boat and vehicle storage building. This 1,250 square foot, 35-year old building has rusted structural supports, has a leaky roof, and is rodent infested. Inside storage for equipment is a critical need to prevent deterioration caused by high moisture and high salt environment on the Texas Gulf Coast. Adequate storage facilities will improve longevity of equipment and result in cost savings.
90107390	Replace fences on the Gator Marsh, Granberry, and Mitigation Area units. $70,000	Replace 6 miles of deteriorated fences on the Gator Marsh, Granberry, and Mitigation Area units. Fences require constant repair to remain functional, and conditions could result in a public safety hazard on refuge roads if cattle escape. This project will reduce potential for conflicts with refuge visitors and neighboring landowners, and protect sensitive habitats where grazing is not allowed.
97107391	Rehabilitate 4 miles of Jackson Ditch. $180,000	Rehabilitate 4 miles of Jackson Ditch by repairing a washout at the water control structure and removing excess silt. Bank erosion and siltation at the water control structure is impairing its function and threatens its stability. Maintenance of this drainage infrastructure will protect over 8,000 acres of coastal wetland habitats.

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Work Order #	Project Title and Cost	Project Description
97107392	Replace and repair fences on the Middleton Tract. $70,000	Replace and repair 8 miles of deteriorated fences on the Middleton Tract. Fences require constant repair to remain functional, and conditions could result in a public safety hazard on State Highway 124 if cattle escape. This project will also reduce potential for conflicts with neighboring landowners and protect sensitive habitats where grazing is not allowed.
99107424	Repair bridge near Boat Canal by repairing washouts. $84,000	Repair bridge near Boat Canal by repairing washouts. Erosion on both sides of this structure threatens its integrity will become a safety hazard if it continues. Bridge provides access for law enforcement, fire management, and habitat management activities. Water control structure protects 6,500 acres of coastal wetlands.
99107425	Replace restroom facilities on Oyster Bayou and East Bay Boat Ramp. $57,000	Replace restroom facilities on Oyster Bayou and East Bay Boat Ramp. These facilities are over 25 years-old and are no longer functioning because of damage from tropical storms and excessive wear. Visitors are inconvenienced by the restrooms' closure as they are located in popular recreational, but remote, areas. These facilities will be used by over 20,000 refuge visitors annually.
97107444	Replace damaged East Unit 4,000 square foot metal storage building. $450,000	Replace damaged East Unit 4,000 square foot metal storage building which is 20-years-old, has a leaky roof, is rusted and rodent-infested. Inside storage for equipment is a critical need to prevent deterioration caused by high moisture/high salt marine environment on the Texas Gulf Coast. Adequate storage facilities will improve longevity of equipment and result in significant cost savings.
96107399	Rehabilitate levees on White-fronted Goose Moist Soil Unit. $50,000	Rehabilitate levees on White-fronted Goose Moist Soil Unit by sloping, removing tallow trees, and replacing water control structures. This infrastructure facilitates water management on this 200 acre freshwater wetland, which in turn creates quality habitat for wintering waterfowl, shorebirds, and wading birds. These habitats also provide brood-rearing and molting habitat for Mottled Ducks.
97107400	Replace Middleton Tract boat ramp and dock with new facilities. $27,000	Replace Middleton Tract boat ramp and dock with new facilities. Severe erosion has destroyed the ramp and the wooden dock is severely deteriorated. This project will enhance visitor safety and improve access to the Middleton Tract for over 2,000 waterfowl hunters annually.
96107401	Rehabilitate levees and water control structures on the Otter Pond Unit. $133,000	Rehabilitate levees and water control structures on the Otter Pond Unit by sloping, controlling exotic Chinese tallow trees, and replacing culverts. This infrastructure facilitates water management on this 40-acre freshwater wetland, which in turn creates high quality habitat for waterfowl, shorebirds, and wading birds, and for resident fish and wildlife. Water control structures in this unit also facilitate water management in the 200 acres Shoveler Pond and 100 acres of freshwater wetlands in previous agricultural fields on the Granberry Tract. If structures are not replaced soon it could impact safe travel on Granberry and Shoveler Pond roads.
96107402	Rehabilitate levees and water control structures. 100,000	Rehabilitate levees and water control structures on Water Moccasin Pond by sloping, controlling exotic Chinese tallow trees, and replacing culverts. This infrastructure facilitates water management on this 100-acre freshwater wetland, which in turn creates quality habitat for waterfowl, shorebirds, and wading birds, and for many resident fish and wildlife species.
96107403	Rehabilitate levees on Whimbrel Rice Mngmnt. Unit. $30,000	Rehabilitate levees on by sloping, controlling tallow, and replacing culverts. This infrastructure facilitates fall and winter flooding of this unit, creating high quality habitat for waterfowl, shorebirds, and wading birds. This project has high partnership potential with Ducks Unlimited and other conservation groups.

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Work Order #	Project Title and Cost	Project Description
97107404	Remove levees, canals and ditch spoil. $135,000	Remove levees, canals and ditch spoil adjacent to Middleton Tract rice fields. This tract is no longer farmed, and levees, canals and spoil interrupt sheet flows to important marsh and prairie habitats. This project will remove infrastructure which is no longer needed, restore natural hydrology and facilitate resource protection and habitat restoration of rare native prairie grasses on over 250 acres.
91107405	Repair East Bay erosion control bulkheads. $194,000	Rehabilitate damaged erosion control bulkheads on East Galveston Bay shoreline. Loss or damage of these structures has resulted in increased rates of shoreline erosion and associated wetland loss. Damaged structures will be replaced with offshore rock barriers which reduce erosion and restore wetland habitats by facilitating establishment of emergent marsh vegetation.
90107407	Repair inoperable windmills in Old Anahuac Unit. $88,000	Repair inoperable windmills in Old Anahuac Unit by replacing broken parts, cleaning wells, and replacing pumps. Loss of windmills has decreased freshwater supply for the refuge's controlled grazing program and for wetland enhancement projects. This project will benefit management of prairie and wetland habitats on the refuge.
96107451	Replace deteriorated waterfowl hunter foot bridges. $47,000	Replace deteriorated waterfowl hunter foot bridges. These wooden bridges have deteriorated due to the harsh marine environment. Structural soundness is questionable, posing safety risks to the public and staff. This project will enhance public safety and visitor services on the popular East Unit public waterfowl hunting area, which serves 6,000 users annually. It has high partnering potential.
97107454	Repair deteriorated East Unit reservoir road. $84,000	Repair deteriorated East Unit reservoir road (Property #0273) by restoring the roadbed, crowning and re-gravel surface, and cleaning road ditches. This road provides access to the popular East Unit public waterfowl hunting area, which serves over 6,000 hunters annually. This project will increase safety, and provide long-term cost savings by preventing additional deterioration.
98107456	Boat Ramp Rd (Rte 100, 0.24mi) $55,000	Construction. Rehabilitate Boat Ramp Road by restoring and crowning roadbed, re-gravel surface and cleaning road ditches. This road provides access to the popular Boat Canal public boat ramp, which provides access to Oyster Bayou and East Galveston Bay for fishing, waterfowl hunting and wildlife viewing.
90107450	Replace Refuge entrance sign. $24,000	Replace deteriorated Refuge entrance sign. The area's harsh marine environment has faded sign, eroded its rock base, and rotted wooden supports. Located on heavily traveled roadway, this highly visible sign is an important milepost which both informs visitors and promotes the refuge.
2006506111	Rehabilitate boat canal banks with shoreline protection. $	Rehabilitate the boat canal banks with shoreline protection. The boat canal banks have experience significant erosion from boat wakes. Erosion has increased the size of the boat canal by five feet. The banks are threatening to erode into the adjacent property owners land. Canal banks will be sloped and armored with cable block and felt. This canal provides boat access to refuge and state waters for tens of thousands of fisherman, hunters and nature enthusiast annually.
2005158594	Replace butler Building $318,000	Replace Butler office building at the refuge shop complex. This 35-year old building has rusted structural supports, rusted and failing flooring, a leaky roof, and is rodent infested. Persistent leaking of the roof has created a significant mold problem inside the building. It provides office space and facilities, lunch room, and restrooms for maintenance staff and fire crew. This project will alleviate safety concerns related to the condition of the current building.

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Work Order #	Project Title and Cost	Project Description
2005158604	Replace Otter Slough water structure $104,000	Replace the Otter Slough water control structure and bulkheads. The current structure has failed. This structure makes it possible to manage water levels, salinities and water quality in 4,500 acres of the Deep Marsh Unit. This marsh supports hundreds of thousands of waterfowl use days annually and is important habitat for wading birds, shorebirds and other marsh wildlife. Species of conservation concern which will benefit from the replacement of this structure include White Ibis, American Bittern, Northern Harrier, Yellow and Black Rails, Whimbrel, Long-billed Curlew, Hudsonian Godwit, Stilt Sandpiper, Short-billed Dowitcher and Seaside Sparrows. This structure was damaged during tropical storm Frances. Repair efforts in 2002 were not successful because the structure had totally washed out underneath the supports. The structure will be relocated and replaced with an aluminum box culvert with vinyl bulkheads.
2005172074	Replace Butler Building $51,000	Replace Butler office building at the refuge shop complex. This 35-year old building has rusted structural supports, rusted and failing flooring, a leaky roof, and is rodent infested. Persistent leaking of the roof has created a significant mold problem inside the building. It provides office space and facilities, lunch room, and restrooms for maintenance staff and fire crew. This project will alleviate safety concerns related to the condition of the current building.
2005167936	Replace butler building $267,000 Anahuac	Replace Butler office building at the refuge shop complex. This 35-year old building has rusted structural supports, rusted and failing flooring, a leaky roof, and is rodent infested. Persistent leaking of the roof has created a significant mold problem inside the building. It provides office space and facilities, lunch room, and restrooms for maintenance staff and fire crew. This project will alleviate safety concerns related to the condition of the current building. Critical health and safety issues have increased due to mold conditions inside the building.
2005168644	Entrance Road (Rte 10) DM pt2	FHWA Construction project costs based upon engineers estimate. Construction. Repair the main entrance road to the refuge. We propose placing an alternative surface to the road to reduce the amount of dust and improve driving conditions for the visiting public. This part of the project is for resurfacing the roadway. Dust from the constant travel of visitors make driving hazardous during dry summer months. This road is traveled by over 70,000 visitors annually. It is the most traveled and visible road on the refuge. Paving or placing an alternative surface to this road will improve driving conditions and reduce the possibility for collisions.
2005177764	Repair deteriorated main East Unit road.	Repair deteriorated main East Unit road by restoring the roadbed, crowning and re-gravelling the surface, and cleaning road ditches. This road provides access to the popular East Unit public waterfowl hunting area, which serves over 6,000 hunters annually. This project will increase safety, and provide long-term cost savings by preventing additional deterioration.
2005177774	Repair deteriorated main East Unit road.	Repair deteriorated main East Unit road by restoring the roadbed, crowning and re-gravelling the surface, and cleaning road ditches. This road provides access to the popular East Unit public waterfowl hunting area, which serves over 6,000 hunters annually. This project will increase safety, and provide long-term cost savings by preventing additional deterioration.

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Work Order #	Project Title and Cost	Project Description
2005178664	Rehabilitate East Bay Bayou Levee (East Bay Bayou Unit)	Rehabilitate East Bay Bayou Levee (East Bay Bayou Unit) Clean, slope and elevate East Bay Bayou levee on the East Bay Bayou Unit of the East Unit Tract. Protect and bulkhead the East Bay Bayou saltwater barrier. This levee system protects and facilitates management of over 4,100 acre or fresh and intermediate marsh on the refuge and the attached salt water barrier protects 1000's of acres of private land from saltwater intrusion. Significant erosion from tropical storms Allison in 2001 has eroded around the saltwater barrier and has reduced the elevation of the levee.
2005180778	Replace eroded Middleton Tract water control structure	Replace eroded Middleton Tract water control structures along East Bay Bayou by removing existing aluminum structures and installing new structures. Washouts below and around these structures are threatening their integrity and limiting management capabilities. This project will protect and enhance 3,400 acres of important coastal wetland and prairie habitats.
2005180597	Rehabilitate eroded East Unit reservoir levees and	Rehabilitate eroded East Unit reservoir levees and water control structures. Replace inoperable structures, slope and crown levees, rehabilitate pump station, and control exotic Chinese tallow trees. This infrastructure facilitates manipulation of water levels to enhance migratory bird habitat in this 200-acre freshwater impoundment. This wetland also supports numerous resident fish and wildlife species.
2005180785	Replace eroded Middleton Tract water control structures	Replace eroded Middleton Tract water control structures along East Bay Bayou by removing existing aluminum structures and installing new structures. Washouts below and around these structures are threatening their integrity and limiting management capabilities. This project will protect and enhance 3,400 acres of important coastal wetland and prairie habitats.
2005190451	Rehabilitate the Oyster Bayou (Boat Canal) boat ramp.	Rehabilitate the Oyster Bayou (Boat Canal) boat ramp to improve accessibility. The current launch will be expanded and improved to allow two boats to be launched at the same time, install a solar powered light, and modify the dock to make it accessible in variable tide conditions. The current launch is not lighted and visitors have damaged supports while launching at night.
2005191199	Rehabilitate the Oyster Bayou (Boat Canal) boat ramp.	Rehabilitate the Oyster Bayou (Boat Canal) boat ramp to improve accessibility. The current launch will be expanded and improved to allow two boats to be launched at the same time, install a solar powered light, and modify the dock to make it accessible in variable tide conditions. The current launch is not lighted and visitors have damaged supports while launching at night.
2005196687	Anahuac FY05 Roads & Parking Lots	
2005197717	Anahuac PE Cross and Westline Roads (RTE 101,102)	Preliminary engineering. Provide planning and design of public use Cross and West Line Roads. This project will include site visits surveying needs and site assessment and upon completion will identify design, specifications, and a cost estimate for the proposed roads. These roads are part of East Bay Bayou Tract that was recently opened to the public through a multi-partner project involving several conservation groups, industry, and individuals. This portion of the Refuge provides high quality birding, recreational fishing, and general wildlife observation opportunities.
2005199061	Entrance Road (Rte 10) DM pt1	

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Work Order #	Project Title and Cost	Project Description
2005227452	Rehabilitate damaged erosion control bulkheads.	Rehabilitate damaged erosion control bulkheads on East Galveston Bay shoreline. Loss or damage of these structures has resulted in increased rates of shoreline erosion and associated wetland loss. Damaged structures will be replaced with offshore rock barriers which reduce erosion and restore wetland habitats by facilitating establishment of emergent marsh vegetation.
05139623	Grub and remove old levees on the west side of the	Grub and remove old levees on the west side of the Granberry tract. Rehab bottom levee by removing brush, elevating, grading, sloping and install 3 new water control structures. This project will remove 10,500 of unused levees. The proposed project will facilitate restoration of 205 acres of native coastal prairie and shallow fresh water wetlands in the unit. Planning, design and construction can be accomplished in one year.
05139624	Repair Waterfowl Check Station. $35,000	Repair roof and wall leak in the Refuge Waterfowl Check Station. Replace water damaged interior ceiling and wall boards, damaged exterior siding, flooring and insulation. Sand and treat flooring. Replace exterior doors and construct new parking area to make facility wheel chair accessible. Treat remaining exterior siding and replace heating and cooling units. Replace information and education displays. Remove exterior skirting and seal bottom of trailer to prevent rodent from entering. These repairs will reduce mold and rodent infestation and make the facility more accessible to the public. This facility is used by thousands of visitors annually. If the facility is not repaired soon rehab cost will significantly increase. Planning, design and construction contracting can be accomplished in one year.
97107411	Repair East Unit concrete storage building. $68,000	Repair East Unit concrete storage building by replacing doors and repairing concrete frames. Inside storage for equipment is a critical need to prevent deterioration caused by the high moisture and high salt marine environment on the Texas Gulf Coast. The roof of this facility needs to be resurfaced to prevent water damage to equipment stored in the building. The lighting needs to be improved to facilitate safe access to the building and additional storage shelving is needed. Maintaining existing storage facilities will improve the longevity of equipment and result in cost savings.
2005232291	Rehabilitate 3 miles of levees and replace water control structures and culverts. $131,000	Rehabilitate 3 miles of levees and replace water control structures and culverts. Management capabilities are severely hindered by current state of disrepair. This 150 acre freshwater wetland provides valuable habitat for waterfowl, shorebirds, and wading birds, including important brood-rearing and molting habitat for the resident Mottled Duck.
2005239311	Replace fences on the Gator Marsh, Granberry, and Mitigation Area units. $70,000	Replace 6 miles of deteriorated fences on the Gator Marsh, Granberry, and Mitigation Area units. Fences require constant repair to remain functional, and conditions could result in a public safety hazard on refuge roads if cattle escape. This project will reduce potential for conflicts with refuge visitors and neighboring landowners, and protect sensitive habitats where grazing is not allowed.
2005239328	Rehabilitate levees and water delivery system to Rail Reservoir Moist Soil Unit. $71,000	Rehabilitate 26,000 feet of levees and water delivery system to Rail Reservoir Moist Soil Unit by sloping, controlling tallow, and replacing culverts. This infrastructure facilitates water management on this 100-acre freshwater wetland, which in turn creates quality habitat for waterfowl, shorebirds, and wading birds, and for many resident fish and wildlife species.

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Work Order #	Project Title and Cost	Project Description
2005232293	Replace 6 rusted and worn cattle guards. $31,000	Replace 6 rusted and worn cattle guards that have deteriorated to the point where cows used in the refuge grazing program could exit grazing units onto refuge and county roads, where they pose a significant hazard to motorists. This project will reduce potential for conflicts with refuge visitors, enhance public safety, and protect sensitive habitats where grazing is not allowed.
2005239902	Repair Boat Canal public boat ramp and parking area. $27,000	Repair Boat Canal public boat ramp and parking area by re-gravelling the ramp runway and parking area, and replacing the concrete boat ramp. This popular public boat ramp provides access to Oyster Bayou and East Galveston Bay for recreational fishing, waterfowl hunting, and wildlife viewing. It serves over 20,000 visitors annually and is used by refuge staff to conduct law enforcement and other operations.
2005232330	Remove old cattle shelters from Jackson/White and Old Anahuac	Remove old cattle shelters from Jackson/White and Old Anahuac by tearing down wooden and sheet metal structures and disposing of materials. These structures are severely deteriorated, no longer function, and pose a safety hazard to staff and refuge permittees. Removal of the cattle shelters will eliminate the safety hazards and enhance the natural resources.
2005232389	Replace deteriorated Refuge entrance sign. $24,000	Replace deteriorated Refuge entrance sign. The area's harsh marine environment has faded sign, eroded its rock base, and rotted wooden supports. Located on heavily traveled roadway, this highly visible sign is an important milepost which both informs visitors and promotes the refuge.
2005239293	Rehabilitate flood damaged refuge boat canal. $172,000	Rehabilitate flood damaged refuge boat canal by removing silt, repairing levees, and replacing a 36 inch culvert and water control structure. The boat canal provides access to quality recreational fishing, waterfowl hunting, and wildlife observation for over 10,000 refuge visitors annually and for staff conducting law enforcement and other operations.
2005239317	Rehabilitate 4 miles of Jackson Ditch. $180,000	Rehabilitate 4 miles of Jackson Ditch by repairing a washout at the water control structure and removing excess silt. Bank erosion and siltation at the water control structure is impairing its function and threatens its stability. Maintenance of this drainage infrastructure will protect over 8,000 acres of coastal wetland habitats.
2005239321	Replace and repair 8 miles of deteriorated fences on the Middleton Tract.	Replace and repair 8 miles of deteriorated fences on the Middleton Tract. Fences require constant repair to remain functional, and conditions could result in a public safety hazard on State Highway 124 if cattle escape. This project will also reduce potential for conflicts with neighboring landowners and protect sensitive habitats where grazing is not allowed.
2005239435	Rehabilitate levees on White-fronted Goose Moist Soil Unit. $50,000	Rehabilitate levees on White-fronted Goose Moist Soil Unit by sloping, removing tallow trees, and replacing water control structures. This infrastructure facilitates water management on this 200 acre freshwater wetland, which in turn creates quality habitat for wintering waterfowl, shorebirds, and wading birds. These habitats also provide brood-rearing and molting habitat for Mottled Ducks.
2005239441	Replace Middleton Tract boat ramp and dock with new facilities. $27,000	Replace Middleton Tract boat ramp and dock with new facilities. Severe erosion has destroyed the ramp and the wooden dock is severely deteriorated. This project will enhance visitor safety and improve access to the Middleton Tract for over 2,000 waterfowl hunters annually.

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Work Order #	Project Title and Cost	Project Description
2005239947	Remove old shop and boat storage buildings which will soon be replaced. $108,000	Remove old shop and boat storage buildings which will soon be replaced. These buildings will need to be removed to facilitate construction of the boat storage building in 2005. The refuge water system is located in the old shop building. It will need to be elevated and protected during demolition and construction. The removal of these buildings will allow the refuge to continue operations that are critical to all aspects of refuge management.
2005239926	Repair bridge access crossing East Bay Bayou by repairing washouts. $38,046	Repair bridge access crossing East Bay Bayou by repairing washouts. Erosion on both sides of the bridge threatens its integrity, and it has not been signed according to Federal safety standards. It may soon become a safety hazard and could wash out during another significant storm event if not repaired. This bridge is regularly used by staff for operations and law enforcement, and by over 10,000 visitors annually. It is also used as an accessible fishing and nature observation area.
2005239933	Replace restroom facilities on Oyster Bayou and East Bay Boat Ramp. $57,000	Replace restroom facilities on Oyster Bayou and East Bay Boat Ramp. These facilities are over 25 years-old and are no longer functioning because of damage from tropical storms and excessive wear. Visitors are inconvenienced by the restrooms' closure as they are located in popular recreational, but remote, areas. These facilities will be used by over 20,000 refuge visitors annually.
2005238515	Repair or replace boat rollers on the Middleton Tract. $27,000	Repair or replace boat rollers on the Middleton Tract to facilitate boat access into hunt units of the refuge. Boat rollers provide access to hunters over levees into waterfowl hunt units of the refuge. Boat rollers facilitate almost a one thousand use days for refuge hunters. Wooden supports galvanized and pvc rollers need to be replaced. The existing rollers need to be extended and winch posts need to be installed to facilitate access during low tide events. Planning, design and construction contracting can be accomplished in one year.
2005239287	Replace washed-out Pace Tract culverts. $165,000	Replace water control structures and repair wash outs on the Pace Tract. These structures are corroded and erosion has occurred due to repeated flooding. Structures are needed to minimize harmful impacts of salt water intrusion and erosion in adjacent wetlands. Replacing structures will protect and enhance 1,400 acres of important waterfowl habitat.
2005239500	Rehabilitate levees and water control structures on the Otter Pond Unit. $133,000	Rehabilitate levees and water control structures on the Otter Pond Unit by sloping, controlling exotic Chinese tallow trees, and replacing culverts. This infrastructure facilitates water management on this 40-acre freshwater wetland, which in turn creates high quality habitat for waterfowl, shorebirds, and wading birds, and for resident fish and wildlife. Water control structures in this unit also facilitate water management in the 200 acres Shoveler Pond and 100 acres of freshwater wetlands in previous agricultural fields on the Granberry Tract. If structures are not replaced soon it could impact safe travel on Granberry and Shoveler Pond roads.
2005239511	Repair inoperable windmills in Old Anahuac Unit. $88,000	Repair inoperable windmills in Old Anahuac Unit by replacing broken parts, cleaning wells, and replacing pumps. Loss of windmills has decreased freshwater supply for the refuge's controlled grazing program and for wetland enhancement projects. This project will benefit management of prairie and wetland habitats on the refuge.

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Work Order #	Project Title and Cost	Project Description
2005239800	Rehabilitate 10 miles of deteriorating Alice Jackson White and Granberry unit roads. $491,000	Rehabilitate 10 miles of deteriorating Alice Jackson White and Granberry unit roads by restoring and crowning roadbeds, cleaning road ditches, and replacing culverts. These roads provide management access to water control structures, grazing units, and prairie restoration sites. Maintenance will increase the longevity of these roads and provide cost savings by preventing the need for major repairs.
2005239812	Rehabilitate Old Anahuac pump station by replacing pump and repairing support infrastructure. $66,000	Rehabilitate Old Anahuac pump station by replacing pump and repairing support infrastructure. The existing pump requires constant repairs, and the supports have excessive rust and wear. This equipment supplies water to the Oyster Bayou Moist Soil Unit, which is the site of a partnership project with Ducks Unlimited. This 400-acre wetland provides excellent habitat for waterfowl and other migratory birds.
2005239504	Rehabilitate levees on Whimbrel Rice Management Unit. $30,000	Rehabilitate levees on Whimbrel Rice Management Unit by sloping, controlling tallow, and replacing culverts. This infrastructure facilitates fall and winter flooding of this unit, creating high quality habitat for waterfowl, shorebirds, and wading birds. This project has high partnership potential with Ducks Unlimited and other conservation groups.
2005252497	Repair deteriorated East Unit reservoir road. $84,000	Repair deteriorated East Unit reservoir road (Property #0273) by restoring the roadbed, crowning and re-gravel surface, and cleaning road ditches. This road provides access to the popular East Unit public waterfowl hunting area, which serves over 6,000 hunters annually. This project will increase safety, and provide long-term cost savings by preventing additional deterioration.
2005252512	Replace Lone Tree Bayou bridge/water control structure. $104,000	Replace Lone Tree Bayou bridge/water control structure (Property #0087). Erosion on both sides of this structure threatens its integrity. The bridge will become a safety hazard if erosion continues. Bridge provides staff access for law enforcement, fire management, and habitat management activities. Water control structure protects 2,100 acres of coastal wetlands.
2005252522	Replace deteriorated boat and vehicle storage building. $460,000	Replace deteriorated boat and vehicle storage building. This 1,250 square foot, 35-year old building has rusted structural supports, has a leaky roof, and is rodent infested. Inside storage for equipment is a critical need to prevent deterioration caused by high moisture and high salt environment on the Texas Gulf Coast. Adequate storage facilities will improve longevity of equipment and result in cost savings.
2005252523	Remove abandoned buildings, trailers, equipment and trash. $53,000	Remove abandoned buildings, trailers, equipment and trash from the Middleton Tract. These materials were left when this tract was acquired in 1995 and pose a threat to public safety . The Middleton Tract is part of the refuge public waterfowl hunting program. The project will remove this hazard, any threat of pollution, and enhance aesthetics.
2005252525	Rehabilitate levees and water control structures. 100,000	Rehabilitate levees and water control structures on Water Moccasin Pond by sloping, controlling exotic Chinese tallow trees, and replacing culverts. This infrastructure facilitates water management on this 100-acre freshwater wetland, which in turn creates quality habitat for waterfowl, shorebirds, and wading birds, and for many resident fish and wildlife species.
2005252530	Repair bridge near Boat Canal by repairing washouts. $84,000	Erosion on both sides of this structure threatens its integrity will become a safety hazard if it continues. Bridge provides access for law enforcement, fire management, and habitat management activities. Water control structure protects 6,500 acres of coastal wetlands.

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Work Order #	Project Title and Cost	Project Description
2005252532	Replace damaged East Unit 4,000 square foot metal storage building. $450,000	Replace damaged East Unit 4,000 square foot metal storage building which is 20-years-old, has a leaky roof, is rusted and rodent-infested. Inside storage for equipment is a critical need to prevent deterioration caused by high moisture/high salt marine environment on the Texas Gulf Coast. Adequate storage facilities will improve longevity of equipment and result in significant cost savings.
2005252526	Rehabilitate Robert's Mueller spoil area levee. $117,000	Rehabilitate Robert's Mueller spoil area levee which is severely eroded and nonfunctional by repairing washouts, resloping and crowning the levee, and removing Chinese tallow trees. This project will restore a 25-acre wetland and allow the reestablishment of a colonial nesting water bird rookery.
2005252552	Replace Lone Tree Bayou bridge/water control structure. $104,000	Replace Lone Tree Bayou bridge/water control structure (Property #0087). Erosion on both sides of this structure threatens its integrity. The bridge will become a safety hazard if erosion continues. Bridge provides staff access for law enforcement, fire management, and habitat management activities. Water control structure protects 2,100 acres of coastal wetlands.
2005252547	Repair deteriorated East Unit reservoir road. $84,000	Repair deteriorated East Unit reservoir road (Property #0273) by restoring the roadbed, crowning and re-gravel surface, and cleaning road ditches. This road provides access to the popular East Unit public waterfowl hunting area, which serves over 6,000 hunters annually. This project will increase safety, and provide long-term cost savings by preventing additional deterioration.
2005252310	Replace deteriorated boat and vehicle storage building. $460,000	Replace deteriorated boat and vehicle storage building. This 1,250 square foot, 35-year old building has rusted structural supports, has a leaky roof, and is rodent infested. Inside storage for equipment is a critical need to prevent deterioration caused by high moisture and high salt environment on the Texas Gulf Coast. Adequate storage facilities will improve longevity of equipment and result in cost savings.
2005252323	Repair East Bay boat ramp parking area. $28,000	Repair East Bay boat ramp parking area by restoring base and re-gravelling surface. This parking area has been damaged by flooding and heavy use. Visitors been stuck and vehicles damaged in the parking area increasing the risk for injury. A smoother surface also makes the parking area usable to visitors in wheelchairs. It receives year-round use by over 25,000 visitors annually. The boat ramp is also used by law enforcement agencies during emergencies. The refuge's East Bay boat ramp provides the only public access to the north side of East Galveston Bay.
2005252329	Rehabilitate levees and water control structures. 100,000	Rehabilitate levees and water control structures on Water Moccasin Pond by sloping, controlling exotic Chinese tallow trees, and replacing culverts. This infrastructure facilitates water management on this 100-acre freshwater wetland, which in turn creates quality habitat for waterfowl, shorebirds, and wading birds, and for many resident fish and wildlife species.
2005252316	Remove abandoned buildings, trailers, equipment and trash. $53,000	Remove abandoned buildings, trailers, equipment and trash from the Middleton Tract. These materials were left when this tract was acquired in 1995 and pose a threat to public safety . The Middleton Tract is part of the refuge public waterfowl hunting program. The project will remove this hazard, any threat of pollution, and enhance aesthetics.
2005252317	Replace foot bridge to East Unit reservoir. $53,000	Replace foot bridge to East Unit reservoir. This bridge was completely destroyed by flooding and is closed. Replacement will improve access to the reservoirs on the popular East Unit public waterfowl hunt area, which serves over 6,000 hunters annually.

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Work Order #	Project Title and Cost	Project Description
2005252330	Remove levees, canals and ditch spoil. $135,000	Remove levees, canals and ditch spoil adjacent to Middleton Tract rice fields. This tract is no longer farmed, and levees, canals and spoil interrupt sheet flows to important marsh and prairie habitats. This project will remove infrastructure which is no longer needed, restore natural hydrology and facilitate resource protection and habitat restoration of rare native prairie grasses on over 250 acres.
2005252336	Rehabilitate Robert's Mueller spoil area levee. $117,000	Rehabilitate Robert's Mueller spoil area levee which is severely eroded and nonfunctional by repairing washouts, resloping and crowning the levee, and removing Chinese tallow trees. This project will restore a 25-acre wetland and allow the reestablishment of a colonial nesting water bird rookery.
2005252337	Rehabilitate Robert's Mueller spoil area levee. $117,000	Rehabilitate Robert's Mueller spoil area levee which is severely eroded and nonfunctional by repairing washouts, resloping and crowning the levee, and removing Chinese tallow trees. This project will restore a 25-acre wetland and allow the reestablishment of a colonial nesting water bird rookery.
2005252343	Repair bridge near Boat Canal by repairing washouts. $84,000	Repair bridge near Boat Canal by repairing washouts. Erosion on both sides of this structure threatens its integrity will become a safety hazard if it continues. Bridge provides access for law enforcement, fire management, and habitat management activities. Water control structure protects 6,500 acres of coastal wetlands.
2005252351	Replace damaged East Unit 4,000 square foot metal storage building. $450,000	Replace damaged East Unit 4,000 square foot metal storage building which is 20-years-old, has a leaky roof, is rusted and rodent-infested. Inside storage for equipment is a critical need to prevent deterioration caused by high moisture/high salt marine environment on the Texas Gulf Coast. Adequate storage facilities will improve longevity of equipment and result in significant cost savings.
2005252352	Replace deteriorated waterfowl hunter foot bridges. $47,000	Replace deteriorated waterfowl hunter foot bridges. These wooden bridges have deteriorated due to the harsh marine environment. Structural soundness is questionable, posing safety risks to the public and staff. This project will enhance public safety and visitor services on the popular East Unit public waterfowl hunting area, which serves 6,000 users annually. It has high partnering potential.
2005255880	Cross and Westline Roads (RTE 101,102)	Preliminary engineering. Provide planning and design of public use Cross and West Line Roads. This project will include site visits surveying needs and site assessment and upon completion will identify design, specifications, and a cost estimate for the proposed roads. These roads are part of East Bay Bayou Tract that was recently opened to the public through a multi-partner project involving several conservation groups, industry, and individuals. This portion of the Refuge provides high quality birding, recreational fishing, and general wildlife observation opportunities.
2005260709	Large Rehabilitate East Bay bayou Tract roads and parking areas. $403,000	Rehabilitate East Bay bayou Tract roads and parking areas to improve access and make roads safer for visitors. Expand the current one lane road to a two lane gravel road. Elevate and resurface parking areas and lower portions of road. Existing ditches and levees will need to be moved to facilitate road width expansion. The current road requires visitors to pull over on a very steep slope to allow cars to pass each other. Larger vehicles can not pull over far enough to allow opposing traffic to pass. This tract of the refuge facilitates tens of thousands visitors annually. It is within one hours drive of over five million people including Houston, Texas the fourth largest city in the nation. This project will require more than one year to design, plan and complete construction contracting.

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Work Order #	Project Title and Cost	Project Description
2006394477	Rehabilitate 10 miles of deteriorating Alice Jackson White and Granberry unit roads. $491,000	Rehabilitate 10 miles of deteriorating Alice Jackson White and Granberry unit roads by restoring and crowning roadbeds, cleaning road ditches, and replacing culverts. These roads provide management access to water control structures, grazing units, and prairie restoration sites. Maintenance will increase the longevity of these roads and provide cost savings by preventing the need for major repairs.
2006394516	Repair bridge access crossing East Bay Bayou by repairing washouts. $38,046	Repair bridge access crossing East Bay Bayou by repairing washouts. Erosion on both sides of the bridge threatens its integrity, and it has not been signed according to Federal safety standards. It may soon become a safety hazard and could wash out during another significant storm event if not repaired. This bridge is regularly used by staff for operations and law enforcement, and by over 10,000 visitors annually. It is also used as an accessible fishing and nature observation area.
2006506112	Rehabilitate boat canal banks with shoreline protection. $429,000	Rehabilitate the boat canal banks with shoreline protection. The boat canal banks have experience significant erosion from boat wakes. Erosion has increased the size of the boat canal by five feet. The banks are threatening to erode into the adjacent property owners land. Canal banks will be sloped and armored with cable block and felt. This canal provides boat access to refuge and state waters for tens of thousands of fisherman, hunters and nature enthusiast annually.
2006508097	Windmill Rd & parking (Rte 11, 6.7 mi) $ 2382,000	Construction. Repair 9 miles of roads and parking areas in the Old Anahuac Unit from the shop to Frozen Point (Windmill Road). Project will include restoring and crowning roadbeds, re-graveling and cleaning road ditches. These roads provide recreational opportunities for over 60,000 visitors annually and provide the only public access to the north side of East Galveston Bay.
2006506142	Rehabilitate the tan equipment storage building (Red Wolf). $115,000	Rehabilitate the tan (Red Wolf) equipment storage building to protect refuge equipment. Portion of the existing floor needs to be covered with concrete, additional lighting is needed, several doors need to be repaired to properly secure the building and make it safe for staff entry during night time hours. Industrial shelving is needed to protect and properly store specific refuge equipment.
2006506810	Replace 18' Wooden Water Control Structure (Salt Barrier), East Unit. $95,000	Replace the 18-foot wooden water control structure on the East Bay Bayou Tract located on the East Unit. The structure serves as a saltwater barrier to reduce movement of salt water through a major drainage ditch to fresh water wetlands upstream. The structure has been damaged by flooding and marine burrowing worms. The structure was temporarily repaired in FY2000 however will soon fail again. Replacement of this structure is critical to facilitating protection and management of over 1800 acres of fresh and intermediate marsh.
2006506230	Rehabilitate East Bay Bayou walking trail. $68,000	Rehabilitate the East Bay Bayou walking trail to improve visitor use and experiences. Improvements of this trail are sure to allow more visitors to appreciate wildlife resources on the refuge. The existing trail system needs to be crowned and resurfaced with rock to improve walking conditions. Existing culverts need to be replaced and additional culverts installed to reduce flooding, erosion and the tripping hazards along portions of the trail. Directional and interpretive signs will be installed to direct visitors along the trail.

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Work Order #	Project Title and Cost	Project Description
2006506248	Replace the New Ditch water control structure. $144,000	Replace the New Ditch water control structure and bulkheads. The current structure is insufficient for the water shed that it supports. This structure makes it possible to manage water levels, salinities and water quality in 6,500 acres of the Deep Marsh Unit. This marsh supports hundreds of thousands of waterfowl use days annually and is important habitat for wading birds, shorebirds and other marsh wildlife. Species of conservation concern which will benefit from the replacement of this structure include White Ibis, American Bittern, Northern Harrier, Yellow and Black Rails, Whimbrel, Long-billed Curlew, Hudsonian Godwit, Stilt Sandpiper, Short-billed Dowitcher and Seaside Sparrows. The structure will be relocated and replaced with a larger aluminum box culvert with vinyl bulkheads. Planning and design is underway and the construction can be completed in one year.
2006508257	Repair Waterfowl Check Station. $35,000	Repair roof and wall leak in the Refuge Waterfowl Check Station. Replace water damaged interior ceiling and wall boards, damaged exterior siding, flooring and insulation. Sand and treat flooring. Replace exterior doors and construct new parking area to make facility wheel chair accessible. Treat remaining exterior siding and replace heating and cooling units. Replace information and education displays. Remove exterior skirting and seal bottom of trailer to prevent rodent from entering. These repairs will reduce mold and rodent infestation and make the facility more accessible to the public. This facility is used by thousands of visitors annually. If the facility is not repaired soon rehab cost will significantly increase. Planning, design and construction contracting can be accomplished in one year.
2006508131	Cross & West Line Rds (Rte 101, 102; 3 mi) $658,000	Repair 2.2 miles of East Bay Bayou Tract roads and parking areas by restoring and crowning roadbeds, re-gravelling surfaces and cleaning road ditches. This area provides recreational opportunities for over 25,000 visitors annually. This tract was recently opened to the public through a multi-partner project involving several conservation groups, industry, and individuals. This portion of the Refuge provides high quality birding, recreational fishing, and general wildlife observation opportunities.
2006508260	Repair Waterfowl Check Station. $35,000	Repair roof and wall leak in the Refuge Waterfowl Check Station. Replace water damaged interior ceiling and wall boards, damaged exterior siding, flooring and insulation. Sand and treat flooring. Replace exterior doors and construct new parking area to make facility wheel chair accessible. Treat remaining exterior siding and replace heating and cooling units. Replace information and education displays. Remove exterior skirting and seal bottom of trailer to prevent rodent from entering. These repairs will reduce mold and rodent infestation and make the facility more accessible to the public. This facility is used by thousands of visitors annually. If the facility is not repaired soon rehab cost will significantly increase. Planning, design and construction contracting can be accomplished in one year.
2006508264	Repair East Unit concrete storage building. $68,000	Replace doors and repair concrete frames. Storage for equipment prevents deterioration caused by the high moisture and high salt marine environment on the Texas Gulf Coast. The roof needs to be resurfaced to prevent water damage to equipment stored inside. The lighting needs to be improved to facilitate safe access to the building and additional storage shelving is needed. Maintaining existing storage facilities will improve the longevity of equipment and result in cost savings.

DEFERRED MAINTENANCE MMS REPORT FOR ANAHUAC NWR

Work Order #	Project Title and Cost	Project Description
2006508143	Boat Ramp Rd (Rte 100, 0.24mi) $55,000	Construction. Rehabilitate Boat Ramp Road by restoring and crowning roadbed, re-gravel surface and cleaning road ditches. This road provides access to the popular Boat Canal public boat ramp, which provides access to Oyster Bayou and East Galveston Bay for fishing, waterfowl hunting and wildlife viewing.
2006507394	Repair East Unit farm roads. $1191,000	Repair East Unit farm roads by restoring and crowning roadbed and cleaning road ditches. These roads provide access for rice farming and moist soil management, two practices aimed at providing high quality habitat for wintering waterfowl and for public waterfowl hunting. Maintenance will increase the longevity of these roads, and provide cost-savings by preventing the need for major repairs.
2006507977	Oyster Bayou Rd (Rte 103, 2.1 mi) $1094,000	Construction. Rebuild and re-gravel 4 miles of Oyster Bayou Road. This road is currently closed to the public due to its deteriorated condition. Reopening this road will provide recreational opportunities for over 20,000 visitors annually.
2006508158	Remove old levees and rehab main levee in Granberry Tract. $167,000	Grub and remove old levees on the west side of the Granberry tract. Rehab bottom levee by removing brush, elevating, grading, sloping and install 3 new water control structures. This project will remove 10,500 of unused levees. The proposed project will facilitate restoration of 205 acres of native coastal prairie and shallow fresh water wetlands in the unit. Planning, design and construction can be accomplished in one year.
2006534266	Rehabilitate Elm and East Bay Bayou Levees. $478,000	Rehabilitate Elm and East Bay Bayou Levees (Middleton). Clear, slope and elevate levees on Elm and East Bay Bayou on the Middleton Tract. Protect and bulkhead the saltwater barrier attached to the Elm Bayou levee. This levee system protects and facilitates the management of over 3,500 acres of fresh and intermediate marsh on the refuge and protects 1000s of acres of private land from salt water intrusion. Significant erosion occurred near the salt water barrier and reduced the elevation in key areas of the levee.
2006534271	Rehabilitate Elm and East Bay Bayou Levees. $478,000	Rehabilitate Elm and East Bay Bayou Levees (Middleton). Clear, slope and elevate levees on Elm and East Bay Bayou on the Middleton Tract. Protect and bulkhead the saltwater barrier attached to the Elm Bayou levee. This levee system protects and facilitates the management of over 3,500 acres of fresh and intermediate marsh on the refuge and protects 1000s of acres of private land from salt water intrusion. Significant erosion occurred near the salt water barrier and reduced the elevation in key areas of the levee.
2006535293	Remove abandoned oil pads in Gator Marsh (LJH). $47,000	Remove abandoned oil pads in Gator Marsh (LJH) and the 480 units. Pads remain after production ceased. These well pads were present when the refuge purchased these units. We propose to create shallow fresh water wetlands from pad spoil. The wetlands will provide pair pond habitat for declining Mottled Duck populations while removing unwanted infrastructure from valuable wetland habitat. Planning, design and construction contracting can be completed in one year.

DEFERRED MAINTENANCE MMS REPORT FOR MCFADDIN NWR

Work Order #	Project Title and Cost	Project Description
04135352	Rehabilitate old shop building. $223,000	Rehabilitate old shop building to make it weather proof and provide a safe and secure facility to maintain and store refuge heavy equipment. Original metal building was erected in 1981, and has been subjected to salt air, wind, and storms. Roof and sides leak, and roll up doors need maintenance. Steel frame is still sound, however, siding and roof are full of holes, and electricity is sporadic. Rehab could be accomplished in one year.
04135353	Replace Shop building constructed in 2000. $300,000	Replace Shop building to ensure that refuge maintenance facilities remain safe for maintenance staff and for storing equipment. This wood framed building with metal siding was constructed in 2000 but has taken a beating over the years in this harsh environment of salt air, hurricanes, and violent thunderstorms. This is the primary building for maintenance of refuge heavy equipment, and it houses the maintenance crew offices. It may take 2 years to plan and construct a new shop.
04134683	Repair and stabilize eroded south Gulf Intracoastal Water Way levee. $550,000	Repair and stabilize the highly eroded south Gulf Intercoastal Water Way levee from Clam Lake Road to 1.5 miles west. The access road to Star Lake, which is heavily used for public recreation access, is being threatened by erosion. Wakes from tugboats, barges, and other water craft have undercut and eroded most of the levee. Rock breakwaters will be constructed in front of the bank to protect it from wave action.
03126426	Repair eroded segment of south GIWW levee, east of White's levee. $540,000	Repair, stabilize and armor highly eroded earthen Intracoastal Waterway Levee east of White's Levee. Wakes from large barges and other water craft have undercut and eroded most of the levee. This project will protect the refuge's Central Unit from saltwater intrusion which would degrade this area's freshwater marshes. This unit contains over 8,000 acres of wetlands and supports over 100,000 wintering waterfowl annually.
03126425	Repair, stabilize, and armor levee on North Unit. $437,000	Repair, stabilize and armor highly eroded earthen Intracoastal Waterway Levee along the North Unit. Wakes from large barges and other water craft have caused the bank to be undercut and erode away most of the levee. This project will protect the refuge's North Unit from saltwater intrusion which would degrade this area's freshwater marsh. This unit contains 8,000 acres supporting over 100,000 wintering waterfowl annually.
03126576	Repair, stabilize and armor highly eroded earthen	Repair, stabilize and armor highly eroded earthen Intracoastal Waterway Levee along the Star Lake Road Stretch. Wakes from large barges and other water craft have undercut and eroded most of the levee and threaten the road. This project will protect the refuge's Five Mile Cut Unit which would degrade this area's freshwater wetland habitat. This project would also protect the only access road to the most heavily used unit by the public. This unit has about 4,000 acres of wetlands, and supports over 100,000 wintering waterfowl annually.
03126585	Rehabilitate Eroded E Ditch. $34,000	Rehabilitate eroded E Ditch. The ditch is silted in and grown over, making the canal impassable and creating a navigational hazard. The project will eliminate silt buildup in the ditch. The ditch canal provides the only possible access to waterfowl hunting areas by the public using boats. If ditches are not maintained, hunters will not be able to access areas for hunting. In addition, silted-in stretches of ditch, can strand boats or cause accidents creating unsafe situations.

DEFERRED MAINTENANCE MMS REPORT FOR MCFADDIN NWR

Work Order #	Project Title and Cost	Project Description
03126698	Rehabilitate eroded White's levee. $141,000	This project would repair the eroded White's Levee. This levee has eroded due to storm surges and subsidence. This 3.5 mile levee is critical for water management of 15,000 acres of wetlands. These wetlands support over 100,000 wintering waterfowl and numerous other wildlife species. This levee also provides access for recreational waterfowl hunters.
03126705	Repair eroded spillways along North bank of Gulf Intracoastal Waterway. $220,000	Repair eroded spillways along North bank of Gulf Intracoastal Waterway to protect large freshwater marsh from saltwater intrusion. The 2 spillways allow freshwater to drain from the marsh while keeping saltwater out. Erosive tugboat and barge wakes have eroded the dirt bank around the ends of the spillways threatening to allow saltwater into the marsh. Project would rebuild the bankline and place riprap or concrete mats on the bank to stop the erosion. Loss of the use of these spillways would eliminate our ability to manage the area as a freshwater marsh. Planning, design, and construction contracting can be accomplished in one year.
03126409	Repair North Unit's GIWW levee. $500,000	Repair North Unit's levee, west 1 mile section. Stabilize and armor highly eroded earthen Gulf Intracoastal Waterway levee along the North Unit. Waves from large barges and other water craft have caused banks to be undercut and erode most of the levee. This project will protect the refuge's north unit from saltwater intrusion, which would degrade this area's fresh marshes. This unit contains over 8,000 acres supporting over 100,000 wintering waterfowl and other species of concern.
03124386	Reservoir Road (Rte 100). $125,000	Construction and rehabilitation of Reservoir Road (Rte 100, 0.5 mi). The project is needed to provide improved public access for refuge visitors and to reduce safety hazards. FHWA included the road in the 2001 inventory and condition assessment.
03124387	Ring Levee Road (Rte 200) and parking lot (904). $334,000	Construction and rehabilitation of Ring Levee Road (Rte 200, 0.7 mi) and parking lot 904. The project is needed to provide improved public access for refuge visitors and to reduce safety hazards. FHWA included the road in the 2001 inventory and condition assessment.
02122012	Clam Lake Road (RTE 10)	Preliminary Engineering. Provide planning and design of public use Clam Lake Road at NWR. This project will include site visits surveying needs and site assessment and upon completion will identify design, specifications, and a cost estimate for the proposed road and parking lots at NWR.
01115492	Rehabilitate Wild Cow Bayou Levee. $206,000	Rehabilitate approximately 5 miles of levee that has deteriorated. This levee impounds water within a 5,600 acre freshwater wetland management unit. It also serves a barrier to saltwater. Due to a lack of maintenance and storm events, the levee has developed numerous breeches that allow saltwater to enter the impoundment. As a consequence, 5,600 acres of valuable freshwater wetland habitat is in jeopardy of becoming highly fragmented, resulting in significant loss of valuable fish and wildlife habitat.
01115458	Rehabilitate and retrofit old and deteriorating office building. $380,000	Rehabilitate and expand the existing administrative building. The building has experienced significant deterioration that has been accelerated due to the influence of saltwater. The electrical system, roof, and siding need to be replaced. This 1,694 square foot building provides office space for seven staff members. Due to insufficient space, staff members are forced to share offices. Storage space for administrative files and refuge equipment is insufficient. The buildings present conditions present numerous health and safety hazards.

DEFERRED MAINTENANCE MMS REPORT FOR MCFADDIN NWR

Work Order #	Project Title and Cost	Project Description
01115499	Rehabilitate the one-mile Grit Site Road. $47,000	This is an earthen levee road that has eroded. Levee will be enhanced & road will be reshaped. This road is the only means for access to the station's grit site, which is vital for wintering waterfowl.
01115485	Rehabilitate Ring Levee Road. $42,000	Rehabilitate the one mile length of Ring Levee Road on NWR. The road has not been resurfaced for more than ten years. Due to the lack of gravel, the road has become rutted and pothole. The road is heavily utilized for refuge management purposes and also critical for operation of oil facility inholdings. Funding will be used to purchase gravel necessary to adequately repair this road.
01115474	Replace two deteriorated aluminum culverts. $80,000	Replace two deteriorated aluminum culverts located within Perkin's levee. The culverts have rusted through and are about to collapse. A service road crosses these culverts, and when they collapse, it will result in the closure of 2.5 miles of administrative road. This road is critical to refuge operations. The culverts also provide for water level manipulation within a 16,000 acre wetland impoundment. Without these culverts water levels will no longer be able to be effectively manipulated in this impoundment, which will result in the degradation of 16,000 acres of valuable wildlife habitat.
01115477	Rehabilitate Reservoir Road. $45,000	Repair and reshape one mile of existing public use road that is used year around by the public for fishing and bird watching. The road provides the only access to significant portions of the station's land that are available for public hunting. This road has deteriorated and needs additional gravel and reshaping. This project will provide funding necessary to contract work and purchase gravel.
01115480	8.8 miles Clam Lake Road (Rte 10)	Construction and rehabilitation of Clam Lake Road (Rte 010, 8.8 mi). The project is needed to provide improved public access for refuge visitors and to reduce safety hazards. This road provides the primary means for accessing NWR by the public. It is heavily utilized and has not been rehabilitated for almost ten years. The road holds surface water and as a result has significant rutting and potholes. It provides the only means for hunters to access approximately 15,000 acres of refuge land that are open to hunting. The present condition of this road results in damages to motor vehicles.
97107459	Headquarters, Star Lake, Levee 6/7 Route 11,101,102 parking lots 905,906.	CN Headquarters, Star Lake, Levee 6/7 Route 11,101,102 parking lots 905,906 Regrade and regravel .6 of a mile.
99107500	Rehabilitate eroded F Ditch Canal. $29,000	Rehabilitate eroded F Ditch Canal. The canal is silted in and grown over, making the canal impassable and creating navigation hazards. Project will eliminate silt from the canal. This ditch canal provides boating access for the public to a remote portion of the refuge's permit waterfowl hunt area.
97107431	Replace boundary fence on western units of NWR. $156,000	Replace 3 miles of refuge boundary fence on western units of NWR. Existing fences have been damaged during storms and through vandalism, and are subject to a corrosive environment. These fences mark the refuge boundaries, control trespass and damage of sensitive habitats, and designate pastures used in the refuge's rotational grazing program. Project includes signing and surveying where needed.

DEFERRED MAINTENANCE MMS REPORT FOR MCFADDIN NWR

Work Order #	Project Title and Cost	Project Description
96107432	Rehabilitate overgrown, silted-in boat canals in the White Unit. $43,000	Rehabilitate overgrown, silted-in boat canals in the White Unit to allow boating access for the refuge waterfowl hunt program. Ditches are silted in and overgrown with vegetation, posing navigational hazards. Hunters whose boats become hung up in the canals can be stranded for extended periods.
98107490	Remove Pond 6 Oil Field Levee. $52,000	Remove old oil field infrastructures including levees from Pond 6 . The oil field is not active and structures need removal to return the marsh to original habitat conditions. Removal will involve potentially contaminated well pads. This project will provide the ability to effectively manage habitat resources.
91107433	Replace damaged original refuge boundary fences. $365,000	Replace worn boundary fences on the original refuge. These fences have been damaged by storm surge and the corrosive marine environment and by vandalism. These fences are essential to manage cattle in support of the grazing management program which promotes food resources for waterfowl. Trespassing cattle are detrimental to this management program and are a hazard to visitors using the refuge.
91107426	Replace waterfowl hunt check station. $29,000	Replace waterfowl hunt check station. The check station is a very old 10 X 25 ft. prefabricated building. This facility is used to implement a permit reservation system, for hunter check-in and check-out, to provide information and education, and for collection of biological data and specimens for study. The check station serves over two thousand hunters annually. The building is not sufficient in size to adequately administer the station's hunt program. There are numerous health and safety issues, including: faulty wiring that poses a fire hazard, no heat or AC, no insulation, leaky walls and roof, numerous access points for spiders, roaches, mice and rats. The building would be replaced with a similar sized, prefabricated building with electricity, water, and a data collection area.
98107427	Repair North Unit Gulf Intracoastal Waterway levee. $475,000	Repair and stabilize eroding North Unit Gulf Intracoastal Waterway levee starting from the east boundary and working West. This levee is quickly eroding from wake action generated by barge traffic. Low areas of the levee that have already eroded through will be rebuilt with material obtained onsite. The Intracoastal Waterway bankline will then be stabilized by building a rock breakwater on the shallow water shelf within the GIWW. Because of access problems, all the work will be performed from a barge in the Intracoastal Waterway. Refuge lands located on the south bank of the Intracoastal Waterway have been protected from erosion in this way and it has been successful.
98107428	Repair, stabilize and armor earthen Intracoastal Waterway Levee. $503,000	Repair, stabilize and armor highly eroded earthen Intracoastal Waterway Levee along the Wild Cow Bayou reach of the South Unit north of Pond 7. Wakes from large barges and other water craft have undercut and eroded most of the levee. This project will protect the refuge's Wild Cow Bayou Marsh Unit from saltwater intrusion, which would degrade this area's fresh marshes. This unit contains over 5,000 wetland acres supporting over 100,000 wintering waterfowl annually.
95107429	Rehabilitate LeBlanc's Reservoir levees. $221,000	Rehabilitate LeBlanc's Reservoir levees. These levees have eroded from storms, flooding, and damage from alligators. The levees are breached in numerous places and water management capabilities have been lost. As a result, high quality aquatic plant production has been lost, resulting in a reduction in the availability of quality wintering habitat for numerous waterfowl and wading birds. This project will reestablish levees of this freshwater impoundment which will allow salinity levels to be reduced.

DEFERRED MAINTENANCE MMS REPORT FOR MCFADDIN NWR

Work Order #	Project Title and Cost	Project Description
91107437	Rehabilitate Perkins Levee. $90,000	Levee has been subject to erosion from storm surge tides, rain, and damaged by feral hogs and alligators. This levee prevents saltwater intrusion and degradation of emergent coastal marshes in the 15,000-acre Star Lake Unit. This unit receives heavy use by wintering waterfowl. Perkins Levee also provides management access for staff and public access for waterfowl hunting.
97107434	Repair vehicular bridge at Star Lake. $29,000	Repair vehicular bridge at Star Lake, including approach rails, signing, and reflectors, as per bridge safety report inspections. This bridge is used by refuge staff, the public, and inholding owners or leasers to access Star Lake and the central portion of the refuge.
95107435	Repair deficient headquarters parking area. $31,000	Rehabilitate headquarters parking area by adding gravel and repairing barriers. This parking area includes a repoured concrete area that doubles as a helicopter pad for fire operations. The parking area is used by refuge staff and visitors. It is also the primary parking site for waterfowl hunters using the Permit hunt unit.
99107442	Replace worn automatic entrance gate. $48,000	Replace the front entrance gate at with new model. Gate is 200 yards from the gulf, and salt air and spray erodes metal and electronic security gate. Automatic timer opens and closes the refuge entrance at daylight and dark, providing essential security and safety for the refuge and resident staff after hours. Programmable function is vital for hunt program openings at 3:00 am.
98107491	Remove abandon infrastructure from West oil field. $55,000	The oil field is not active and structures need removal to return the marsh to original conditions. May contain contaminated well pads. Removal of abandon infrastructure will allow proper management of the resources once original conditions are returned to the marsh.
98107492	Remove abandoned Clam Lake Oil Field infrastructure. $50,000	Remove abandoned Clam Lake Oil Field infrastructure and restore the marsh. Project area is adjacent to Pond 7 and east of 6/7 levee and north of Reservoir Road. Includes levees, ditches, and potentially contaminated well pads. Removal of the oil field infrastructure will allow marsh habitat to be restored and aid in resource management.
2005159380	Repair S. GIWW Levee - Star Lake East $450,000 McFaddin	Repair, stabilize and armor highly eroded earthen Intracoastal Waterway Levee along the Star Lake Road Stretch. Wakes from large barges and other water craft have undercut and eroded most of the levee and threaten the road. This project will protect the refuge's Five Mile Cut Unit which would degrade this area's freshwater wetland habitat. This project would also protect the only access road to the most heavily used unit by the public. This unit has about 4,000 acres of wetlands, and supports over 100,000 wintering waterfowl annually. This project has high partnership potential with the Texas General Land Office through the Texas Coastal Erosion Planning and Response Act Program.
2005170816	Repair eroded segment of South GIWW Levee East	
2005176653	Rehabilitate 8.8 miles of Clam Lake Road Route 010	The project is needed to provide improved public access for refuge visitors and to reduce safety hazards. This road provides the primary means for accessing NWR by the public. It is heavily utilized and has not been rehabilitated for almost ten years. The road holds surface water and as a result has significant rutting and potholes. It provides the only means for hunters to access approximately 15,000 acres of refuge land that are open to hunting. The present condition of this road results in damages to motor vehicles.

DEFERRED MAINTENANCE MMS REPORT FOR MCFADDIN NWR

Work Order #	Project Title and Cost	Project Description
2005176656	Regrade and Regravel CN Headquarters, Star Lake, Levee 6/7 Route 11,101	CN Headquarters, Star Lake, Levee 6/7 Route 11,101,102 parking lots 905,906 Regrade and regravel .6 of a mile.
2005177564	Remove old oil field infrastructures	Remove old oil field infrastructures including levees from Pond 6 . The oil field is not active and structures need removal to return the marsh to original habitat conditions. Removal will involve potentially contaminated well pads. This project will aid in effectively managing habitat resources.
2005178360	Repair and stabilize eroded south Gulf Intracoastal Water Way levee	Repair and stabilize the highly eroded south Gulf Intracoastal Water Way levee from Clam Lake Road to 1.5 miles west. The access road to Star Lake, which is heavily used for public recreation access, is being threatened by erosion. Wakes from tugboats, barges, and other water craft have undercut and eroded most of the levee. Rock breakwaters will be constructed in front of the bank to protect it from wave action.
2005178082	Remove abandoned Clam Lake Oil Field infrastructure	Remove abandoned Clam Lake Oil Field infrastructure and restore the marsh. Project area is adjacent to Pond 7 and east of 6/7 levee and north of Reservoir Road. Includes levees, ditches, and potentially contaminated well pads. Removal of the oil field infrastructure will allow marsh habitat to be restored and aid in resource management.
2005180788	Rehabilitate eroded F Ditch Canal.	Rehabilitate eroded F Ditch Canal. The canal is silted in and grown over, making the canal impassable and creating navigation hazards. Project will eliminate silt from the canal. This ditch canal provides boating access for the public to a remote portion of the refuge's permit waterfowl hunt area.
2005180365	Repair, stabilize, and armor levee on North Unit	Repair earthen Intracoastal Waterway Levee along the North Unit. Wakes from large barges and other watercraft have caused the bank to be undercut and erode away most of the levee. This project will protect the refuge's North Unit from saltwater intrusion which would degrade this area's freshwater marsh. This unit contains 8,000 acres supporting over 100,000 wintering waterfowl annually.
2005184120	Refuge Rds & Parking Lots	
2005185603	PE Clam Lake Road (RTE 10)	Preliminary Engineering. Provide planning and design of public use Clam Lake Road Route 10 at NWR. This project will include site visits, surveying needs, and site assessment and upon completion will identify design, specifications, and a cost estimate for the proposed road at NWR.
2005186478	Replace two deteriorated water control structure culverts. $80,000	Replace two deteriorated aluminum culverts located within Perkin's levee. The culverts have rusted through and are about to collapse. A service road crosses these culverts, and when they collapse, it will result in the closure of 2.5 miles of administrative road. This road is critical to refuge operations. The culverts also provide for water level manipulation within a 16,000 acre wetland impoundment. Without these culverts water levels will no longer be able to be effectively manipulated in this impoundment, which will result in the degradation of 16,000 acres of valuable wildlife habitat.
2005190389	Repair North Unit's GIWW levee, west 1 mile section	Stabilize and armor highly eroded earthen Gulf Intracoastal Waterway levee along the North Unit. Waves from large barges and other water craft have caused banks to be undercut and erode most of the levee. This project will protect the refuge's north unit from saltwater intrusion, which would degrade this area's fresh marshes. This unit contains over 8,000 acres supporting over 100,000 wintering waterfowl and other species of concern.

DEFERRED MAINTENANCE MMS REPORT FOR MCFADDIN NWR

Work Order #	Project Title and Cost	Project Description
2005194552	Refuge Rds & Parking Lots	
2005225134	Replace Wild Cow Bayou Water Control Structure. $78,000	Replace deteriorated Wild Cow Bayou Water Control Structure. Structure is essential for managing water on 5000-acre unit of refuge that has high value for wintering waterfowl. Structure was built in 1991 and has experienced subsidence and erosion from storms. Culverts and flapgates would be replaced. Bulkheads and earthwork would be redone to stop leaking. Area is an important public recreation area also.
2005225138	Replace Wild Cow Bayou Water Control Structure. $78,000	Replace deteriorated Wild Cow Bayou Water Control Structure. Structure is essential for managing water on 5000-acre unit of refuge that has high value for wintering waterfowl. Structure was built in 1991 and has experienced subsidence and erosion from storms. Culverts and flapgates would be replaced. Bulkheads and earthwork would be redone to stop leaking. Area is an important public recreation area also.
2005227463	Replace waterfowl hunt check station. $29,000	Replace waterfowl hunt check station. The check station is a very old 10 X 25 ft. prefabricated building. This facility is used to implement a permit reservation system, for hunter check-in and check-out, to provide information and education, and for collection of biological data and specimens for study. The check station serves over two thousand hunters annually. The building is not sufficient in size to adequately administer the station's hunt program. There are numerous health and safety issues, including: faulty wiring that poses a fire hazard, no heat or AC, no insulation, leaky walls and roof, numerous access points for spiders, roaches, mice and rats. The building would be replaced with a similar sized, prefabricated building with electricity, water, and a data collection area.
2005227472	Replace waterfowl hunt check station. $29,000	Replace waterfowl hunt check station. The check station is a very old 10 X 25 ft. prefabricated building. This facility is used to implement a permit reservation system, for hunter check-in and check-out, to provide information and education, and for collection of biological data and specimens for study. The check station serves over two thousand hunters annually. The building is not sufficient in size to adequately administer the station's hunt program. There are numerous health and safety issues, including: faulty wiring that poses a fire hazard, no heat or AC, no insulation, leaky walls and roof, numerous access points for spiders, roaches, mice and rats. The building would be replaced with a similar sized, prefabricated building with electricity, water, and a data collection area.
05139231	Rehabilitate worn Middleton Levee hunter access trail. $75,000	Rehabilitate worn Middleton Levee hunter access trail. This levee is used by hunters to walk into the popular Mud Bayou hunt area. It provides important access to hunters without boats. This levee also allows cows to penetrate deeper into the marsh, providing important habitat management benefits. The levee has deteriorated due to storm surges and cattle use. We will contract an amphibious excavator to rebuild this levee.
05139214	Repair deteriorated boat launch (refuge headquarters). $30,000	This boat launch is critical for management of the 5000-acre Wild Cow Bayou unit of the refuge because it is the only boat launch for this unit. The boat launch is also used by several hundred waterfowl hunters every year to access popular hunting areas. The dock associated with the boat launch is in need of repair also. The dock was built in 1992 and deteriorated over the years. We will rebuild the dock, add gravel to the launch area, and dredge the launch area to make it deeper.

DEFERRED MAINTENANCE MMS REPORT FOR MCFADDIN NWR

Work Order #	Project Title and Cost	Project Description
05139241	Rehabilitate eroded B-Ditch in Wild Cow Bayou Unit. $28,000	Rehabilitate eroded B-Ditch in Wild Cow Bayou Unit. Ditch has silted in and become impassable. Ditch is used by waterfowl hunters to access popular waterfowl hunting area. Ditch is also used by refuge personnel to access area for habitat management. Silt and vegetation will be removed.
05139202	Repair Equipment Storage Building (airboat barn). $27,000	Repair worn equipment storage building to protect valuable refuge equipment from weather and provide a secure storage area. Refuge airboats, tractors, and bulldozer are stored in this building, which can be locked. Many of the overhead doors are worn and the tracks are coming apart. Most of the doors can not be locked anymore. The condition assessment in 2002 identified these deficiencies. Since then, the roof and walls have developed leaks in several areas because of severe weather. Repair of this facility will facilitate management of 54,000-acre refuge by protecting equipment that is essential for refuge management.
05139205	Repair worn fishing pier at 10-mile cut bridge. $25,000	Repair worn fishing pier at 10-mile cut bridge. This fishing pier is an extremely popular public use facility used by several hundred people every year for fishing and crabbing. This pier was constructed in 1991 and has experienced deterioration over the years. Many of the nails and screws have rusted off and many boards are loose and broken, which will be a safety hazard to the public if it is not fixed soon. We will replace most of the boards on the deck and rails with new boards. A refurbished fishing pier will serve the public safely for years to come.
05139222	Rehabilitate deteriorated boat launch at the north end of Clam Lake. $29,000	Rehabilitate deteriorated boat launch at the north end of Clam Lake. This boat launch is used by refuge biologists and law enforcement personnel to access the 5-mile cut area, which is an important waterfowl wintering area, and a popular waterfowl hunting area. The boat launch has experienced erosion around the ramp which makes it hard to launch boats. It has also silted in which makes it too shallow to launch many boats. The approach to the ramp is also narrow, with mud on both sides, providing difficult launching conditions. Most waterfowl hunters have abandoned this launch and prefer to use a launch 2 miles away, which entails a much longer boat ride. We will dredge the ramp to make it deeper, put riprap around the ramp to stop the erosion, and fill in around the approach to provide a larger, firmer launch area.
05139225	Repair handicapped accessible hunt blind. $26,000	Repair deteriorated handicapped accessible hunt blind. This blind is used to provide handicapped hunters an opportunity to hunt waterfowl. This blind was built in 1997 and has experienced deterioration since then. The concrete walkway has broken in some areas, many of the nails and screws have rusted off causing many boards to become loose. The camouflage netting over the top has deteriorated as well as the frame that supports the netting. The vegetation has started to close in around the blind reducing the area available for hunting. We will repair the concrete walkway, replace the loose boards and rusted off nails and screws, rebuild the frame for the camouflage netting and replace the netting. We will also spray some of the vegetation with herbicide to open the pond up.
2005232402	Remove abandon infrastructure from former West oil field. $55,000	Remove abandon infrastructure from former West oil field. The oil field is not active and structures need removal to return the marsh to original conditions. May contain contaminated well pads. Removal of abandon infrastructure will allow proper management of the resources once original conditions are returned to the marsh.

DEFERRED MAINTENANCE MMS REPORT FOR MCFADDIN NWR

Work Order #	Project Title and Cost	Project Description
2005232350	Repair and stabilize eroding North Unit Gulf Intracoastal Waterway levee. $475,000	Repair and stabilize eroding North Unit Gulf Intracoastal Waterway levee starting from the east boundary and working West. This levee is quickly eroding from wake action generated by barge traffic. Low areas of the levee that have already eroded through will be rebuilt with material obtained onsite. The Intracoastal Waterway bankline will then be stabilized by building a rock breakwater on the shallow water shelf within the GIWW. Because of access problems, all the work will be performed from a barge in the Intracoastal Waterway. Refuge lands located on the south bank of the Intracoastal Waterway have been protected from erosion in this way and it has been successful.
2005232359	Repair vehicular bridge at Star Lake. $29,000	Repair vehicular bridge at Star Lake, including approach rails, signing, and reflectors, as per bridge safety report inspections. This bridge is used by refuge staff, the public, and inholding owners or leasers to access Star Lake and the central portion of the refuge.
2005230276	Rehabilitate Reservoir Road. $45,000	Repair and reshape one mile of existing public use road that is used year around by the public for fishing and bird watching. The road provides the only access to a significant portion of the station's land that is available for public hunting. This road has deteriorated and needs additional gravel and reshaping. This project will provide funding necessary to contract work and purchase gravel.
2005232384	Rehabilitate Perkins Levee. $90,000	Rehabilitate Perkins Levee. Levee has been subject to erosion from storm surge tides, rain, and damaged by feral hogs and alligators. This levee prevents saltwater intrusion and degradation of emergent coastal marshes in the 15,000-acre Star Lake Unit. This unit receives heavy use by wintering waterfowl. Perkins Levee also provides management access for staff and public access for waterfowl hunting.
2005238933	Repair deteriorated boat launch. $30,000	Repair deteriorated boat launch at refuge headquarters. This boat launch is critical for management of the 5000-acre Wild Cow Bayou unit of the refuge because it is the only boat launch for this unit. The boat launch is also used by several hundred waterfowl hunters every year to access the popular hunting area. The boat launch is in need of gravel around the launch area. The dock associated with the boat launch is in need of repair also. The dock was built in 1992 and deteriorated over the years. Many nails and screws have rusted off and many boards are loose. Some of the hand rails have been broken. We will rebuild the dock, add gravel to the launch area, and dredge the launch area to make it deeper.
2005238922	Repair worn fishing pier at 10-mile cut bridge. $25,000	Repair worn fishing pier at 10-mile cut bridge. This fishing pier is an extremely popular public use facility used by several hundred people every year for fishing and crabbing. This pier was constructed in 1991 and has experienced deterioration over the years. Many of the nails and screws have rusted off and many boards are loose and broken, which will be a safety hazard to the public if it is not fixed soon. We will replace most of the boards on the deck and rails with new boards. A refurbished fishing pier will serve the public safely for years to come.
2005238978	Rehabilitate worn Middleton Levee hunter access trail. $75,000	Rehabilitate worn Middleton Levee hunter access trail. This levee is used by hunters to walk into the popular Mud Bayou hunt area. It provides important access to hunters without boats. This levee also allows cows to penetrate deeper into the marsh, providing important habitat management benefits. The levee has deteriorated due to storm surges and cattle use. We will contract an amphibious excavator to rebuild this levee.

DEFERRED MAINTENANCE MMS REPORT FOR MCFADDIN NWR

Work Order #	Project Title and Cost	Project Description
2005240828	Rehabilitate LeBlanc's Reservoir levees. $221,000	Rehabilitate LeBlanc's Reservoir levees. These levees have eroded from storms, flooding, and damage from alligators. The levees are breached in numerous places and water management capabilities have been lost. As a result, high quality aquatic plant production has been lost, resulting in a reduction in the availability of quality wintering habitat for numerous waterfowl and wading birds. This project will reestablish levees of this freshwater impoundment which will allow salinity levels to be reduced.
2005238962	Rehabilitate deteriorated boat launch at the north end of Clam Lake. $29,000	Rehabilitate deteriorated boat launch at the north end of Clam Lake. This boat launch is used by refuge biologists and law enforcement personnel to access the 5-mile cut area, which is an important waterfowl wintering area, and a popular waterfowl hunting area. The boat launch has experienced erosion around the ramp which makes it hard to launch boats. It has also silted in which makes it too shallow to launch many boats. The approach to the ramp is also narrow, with mud on both sides, providing difficult launching conditions. Most waterfowl hunters have abandoned this launch and prefer to use a launch 2 miles away, which entails a much longer boat ride. We will dredge the ramp to make it deeper, put riprap around the ramp to stop the erosion, and fill in around the approach to provide a larger, firmer launch area.
2005240909	Rehabilitate overgrown, silted-in boat canals in the White Unit. $43,000	Rehabilitate overgrown, silted-in boat canals in the White Unit to allow boating access for the refuge waterfowl hunt program. Ditches are silted in and overgrown with vegetation, posing navigational hazards. Hunters whose boats may become hung up trying to navigate in canals can be stranded for extended periods.
2005240874	Replace boundary fence on western units of NWR. $156,000	Replace 3 miles of refuge boundary fence on western units of NWR. Existing fences have been damaged during storms and through vandalism, and are subject to a corrosive environment. These fences mark the refuge boundaries, control trespass and damage of sensitive habitats, and designate pastures used in the refuge's rotational grazing program. Project includes signing and surveying where needed.
2005255837	Reservoir Road (RTE 100)	Preliminary Engineering. Provide planning and design of public use Reservoir Road at NWR. This project will include site visits, surveying needs, and site assessment and upon completion will identify design, specifications, and a cost estimate for the proposed road at NWR.
2005255842	Reservoir Road (RTE 100)	Preliminary Engineering. Provide planning and design of public use Reservoir Road at NWR. This project will include site visits, surveying needs, and site assessment and upon completion will identify design, specifications, and a cost estimate for the proposed road at NWR.
2005255829	Reservoir Road Route 101	Repair, regravel Reservoir Refuge road. This project will rehabilitate Reservoir Road Route 100 and will include routes 101 and 102. This road provides the primary means for accessing public use areas of NWR. It is heavily utilized and has not been rehabilitated for almost ten years. The road holds surface water and as a result has significant rutting and potholes.
2005255072	Reservoir Road Route 101	Repair, regravel Reservoir Refuge road. This project will rehabilitate Reservoir Road Route 100 and will include routes 101 and 102. This road provides the primary means for accessing public use areas of NWR. It is heavily utilized and has not been rehabilitated for almost ten years. The road holds surface water and as a result has significant rutting and potholes.

DEFERRED MAINTENANCE MMS REPORT FOR MCFADDIN NWR

Work Order #	Project Title and Cost	Project Description
2005260618	Large Bridge Rehabilitation/Replacement [p/d/cc]. $1013,000	This project includes the planning, design, and construction to replace one bridge and rehabilitate a second bridge at NWR. Currently, the condition of both bridges represents a significant safety hazard. Specifically, the Ten-Mile Cut Bridge will be replaced and the Star Lake Corps Structure Bridge will be rehabilitated to include safety features and guardrails. The Ten-Mile Cut Bridge is deteriorated and worn to the point that rehabilitation is not an option as the wood supports are rotted and deteriorated. The Star Lake Corps Structure Bridge is hazardous to users because of the structural and safety deficiencies including deteriorated substructures and bridge decks, and nonexistent or inadequate guardrails and signs.
2006519042	Reservoir Road (Rte 100). $125,000	Construction and rehabilitation of Reservoir Road (0.5 mi) to provide improved public access and to reduce safety hazards. FHWA included the road in the 2001 inventory & condition assessment.
2006519053	Ring Levee Road (Rte 200) and parking lot (904). $334,000	Construction and rehabilitation of Ring Levee Road (Rte 200, 0.7 mi) and parking lot 904. The project is needed to provide improved public access for refuge visitors and to reduce safety hazards. FHWA included the road in the 2001 inventory and condition assessment.
2006535860	Rehabilitate Ring Levee Road. $42,000	Rehabilitate the one mile length of Ring Levee Road on NWR. The road has not been resurfaced for more than ten years. Due to the lack of gravel, the road has become rutted and pothole. The road is heavily utilized for refuge management purposes and also critical for operation of oil facility inholding. Funding will be used to purchase gravel necessary to adequately repair this road.
2006535863	Rehabilitate and retrofit old and deteriorating office building. $380,000	Rehabilitate and expand the existing administrative building. The building has experienced significant deterioration that has been accelerated due to the influence of saltwater. The electrical system, roof, and siding need to be replaced. This 1,694 square foot building provides office space for seven staff members. Due to insufficient space, staff members are forced to share offices. Storage space for administrative files and refuge equipment is insufficient. The buildings present conditions present numerous health and safety hazards.
2006535873	Repair deficient headquarters parking area. $31,000	Rehabilitate headquarters parking area by adding gravel and repairing barriers. This parking area includes a repoured concrete area that doubles as a helicopter pad for fire operations. The parking area is used by refuge staff and visitors. It is also the primary parking site for waterfowl hunters using the Permit hunt unit.
2006535423	Rehabilitate old shop building. $223,000	Rehabilitate old shop building to make it weather proof and provide a safe and secure facility to maintain and store refuge heavy equipment. Original metal building was erected in 1981, and has been subjected to salt air, wind, and storms. Roof and sides leak, and roll up doors need maintenance. Steel frame is still sound, however, siding and roof are full of holes, and electricity is sporadic. Rehab could be accomplished in one year.
2006535425	Rehabilitate old shop building. $223,000	Rehabilitate old shop building to make it weather proof and provide a safe and secure facility to maintain and store refuge heavy equipment. Original metal building was erected in 1981, and has been subjected to salt air, wind, and storms. Roof and sides leak, and roll up doors need maintenance. Steel frame is still sound, however, siding and roof are full of holes, and electricity is sporadic. Rehab could be accomplished in one year.

DEFERRED MAINTENANCE MMS REPORT FOR MCFADDIN NWR

Work Order #	Project Title and Cost	Project Description
2006535443	Replace Shop building constructed in 2000. $300,000	Replace Shop building to ensure that refuge maintenance facilities remain safe for maintenance staff and for storing equipment. This wood framed building with metal siding was constructed in 2000 but has taken a beating over the years in this harsh environment of salt air, hurricanes, and violent thunderstorms. This is the primary building for maintenance of refuge heavy equipment, and it houses the maintenance crew offices. It may take 2 years to plan and construct a new shop.
2006535468	Rehabilitate Eroded E Ditch. $34,000	Rehabilitate eroded E Ditch. The ditch is silted in and grown over, making the canal impassable and creating a navigational hazard. The project will eliminate silt buildup in the ditch. The ditch canal provides the only possible access to waterfowl hunting areas by the public using boats. If ditches are not maintained, hunters will not be able to access areas for hunting. In addition, silted-in stretches of ditch, can strand boats or cause accidents creating unsafe situations.
2006535444	Replace Shop building constructed in 2000. $300,000	Replace Shop building to ensure that refuge maintenance facilities remain safe for maintenance staff and for storing equipment. This wood framed building with metal siding was constructed in 2000 but has taken a beating over the years in this harsh environment of salt air, hurricanes, and violent thunderstorms. This is the primary building for maintenance of refuge heavy equipment, and it houses the maintenance crew offices. It may take 2 years to plan and construct a new shop.
2006535450	Repair eroded spillways along North bank of Gulf Intracoastal Waterway. $220,000	Repair eroded spillways along North bank of Gulf Intracoastal Waterway to protect large freshwater marsh from saltwater intrusion. The 2 spillways allow freshwater to drain from the marsh while keeping saltwater out. Erosive tugboat and barge wakes have eroded the dirt bank around the ends of the spillways threatening to allow saltwater into the marsh. Project would rebuild the bankline and place riprap or concrete mats on the bank to stop the erosion. Loss of the use of these spillways would eliminate our ability to manage the area as a freshwater marsh. Planning, design, and construction contracting can be accomplished in one year.
2006535725	Rehabilitate Wild Cow Bayou Levee. $206,000	Rehabilitate approximately 5 miles of levee that has deteriorated. This levee impounds water within a 5,600 acre freshwater wetland management unit. It also serves a barrier to saltwater. Due to a lack of maintenance and storm events, the levee has developed numerous breeches that allow saltwater to enter the impoundment. As a consequence, 5,600 acres of valuable freshwater wetland habitat is in jeopardy of becoming highly fragmented, resulting in significant loss of valuable fish and wildlife habitat.
2006535457	Rehabilitate eroded White's levee. $141,000	This project would repair the eroded White's Levee. This levee has eroded due to storm surges and subsidence. This 3.5 mile levee is critical for water management of 15,000 acres of wetlands. These wetlands support over 100,000 wintering waterfowl and numerous other wildlife species. This levee also provides access for recreational waterfowl hunters.
2006535899	Replace damaged original refuge boundary fences. $365,000	Replace worn boundary fences on the original refuge. These fences have been damaged by storm surge and the corrosive marine environment and by vandalism. These fences are essential to manage cattle in support of the grazing management program which promotes food resources for waterfowl. Trespassing cattle are detrimental to this management program and are a hazard to visitors using the refuge.

DEFERRED MAINTENANCE MMS REPORT FOR MCFADDIN NWR

Work Order #	Project Title and Cost	Project Description
2006535907	Replace worn automatic entrance gate. $48,000	Replace the front entrance gate at with new model. Gate is 200 yards from the gulf, and salt air and spray erodes metal and electronic security gate. Automatic timer opens and closes the refuge entrance at daylight and dark, providing essential security and safety for the refuge and resident staff after hours. Programmable function is vital for hunt program openings at 3:00 am.
2006535911	Rehabilitate eroded B-Ditch in Wild Cow Bayou Unit. $28,000	Rehabilitate eroded B-Ditch in Wild Cow Bayou Unit. Ditch has silted in and become impassable. Ditch is used by waterfowl hunters to access popular waterfowl hunting area. Ditch is also used by refuge personnel to access area for habitat management. Silt and vegetation will be removed.
2006535919	Repair Equipment Storage Building (airboat barn). $27,000	Repair worn equipment storage building to protect valuable refuge equipment from weather and provide a secure storage area. Refuge airboats, tractors, and bulldozer are stored in this building, which can be locked. Many of the overhead doors are worn and the tracks are coming apart. Most of the doors can not be locked anymore. The condition assessment in 2002 identified these deficiencies. Since then, the roof and walls have developed leaks in several areas because of severe weather. Repair of this facility will facilitate management of 54,000-acre refuge by protecting equipment that is essential for refuge management.
2006535923	Repair handicapped accessible hunt blind. $26,000	Repair deteriorated handicapped accessible hunt blind. This blind is used to provide handicapped hunters an opportunity to hunt waterfowl. This blind was built in 1997 and has experienced deterioration since then. The concrete walkway has broken in some areas, many of the nails and screws have rusted off causing many boards to become loose. The camouflage netting over the top has deteriorated as well as the frame that supports the netting. The vegetation has started to close in around the blind reducing the area available for hunting. We will repair the concrete walkway, replace the loose boards and rusted off nails and screws, rebuild the frame for the camouflage netting and replace the netting. We will also spray some of the vegetation with herbicide to open the pond up.
2006535726	Rehabilitate Wild Cow Bayou Levee. $206,000	Rehabilitate approximately 5 miles of levee that has deteriorated. This levee impounds water within a 5,600 acre freshwater wetland management unit. It also serves a barrier to saltwater. Due to a lack of maintenance and storm events, the levee has developed numerous breeches that allow saltwater to enter the impoundment. As a consequence, 5,600 acres of valuable freshwater wetland habitat is in jeopardy of becoming highly fragmented, resulting in significant loss of valuable fish and wildlife habitat.
2006535729	Rehabilitate the one-mile Grit Site Road. $47,000	Rehabilitate the one-mile Grit Site Road. This is a earthen levee road that has eroded of time. Levee will be enhance and road will be reshaped. This is the only means for refuge personnel to access the station's grit site, which is very important for wintering waterfowl.

DEFERRED MAINTENANCE MMS REPORT FOR TEXAS POINT NWR

Work Order #	Project Title and Cost	Project Description
01115521	Repair One Mile of Deteriorated Cattlewalk Levee. $64,000	This project will repair one mile of a deteriorated portion of Cattlewalk Levee at Texas Point NWR. This section of the levee is too low and is periodically inundated. Due to surface water runoff, the levee has eroded is numerous places. This project will increase the height of the levee to an elevation at which surface water will no longer traverse it. The levee also functions as a USFWS road and public use trail.
01115504	Replace 10 miles of damaged barbed wire fence.	This fence has been severely damaged by storms and fires. All of the fence posts have rotted and no longer support the wire. Barbed-wire has deteriorated to rusting. This fence provides the only barrier between adjacent private lands and the refuge. The fence will no longer hold cattle. Therefore, the refuge has not been able to implement its grazing program. Adjacent landowners trespass on the refuge, due to the deteriorated fence. Illegal grazing is adversely affecting habitat conditions on the refuge.
01115508	Replace deteriorated concrete boat ramp. $64,000	Due to the influences of storms and tidal interchange has completely washed-out. It no longer functions and is completely unsafe for use. It is the only boat ramp by which the public can access the numerous tidal channels and other water bodies within the Refuge. Due to the loss of this ramp, the USFWS can no longer provide the public with adequate access to recreational areas within the Refuge.
2005159436	Replace Barbed wire Fence at Texas Point NWR $48,000	This fence has been severely damaged by storms and fires. All of the fence posts have rotted and no longer support the wire. Barbed-wire has deteriorated to rusting. This fence provides the only barrier between adjacent private lands and the refuge. The fence will no longer hold cattle. Therefore, the refuge has not been able to implement its grazing program. Adjacent landowners trespass on the refuge, due to the deteriorated fence. Illegal grazing is adversely affecting habitat conditions on the refuge. Due to urban encroachment, USFWS can no effectively implement a prescribed burning program on Texas Point NWR. This has placed an emphasis on the importance of grazing for management purposes at the Refuge. Currently, the USFWS is not able to graze most of the Refuge because of the lack of a proper fence. This project will reestablish the boundary fence at Texas Point NWR and allow the USFWS to once again administer an adequate grazing program at the Refuge.
2005186481	Replace the deteriorated concrete boat ramp at Texas Point.	Due to the influences of storms and tidal interchange has completely washed-out. It no longer functions and is completely unsafe for use. It is the only boat ramp by which the public can access the numerous tidal channels and other waterbodies within the Refuge. Due to the loss of this ramp, the USFWS can no longer provide the public with adequate access to recreational areas within the Refuge.
2006535992	Repair One Mile of Deteriorated Cattlewalk Levee. $64,000	This project will repair one mile of a deteriorated portion of Cattlewalk Levee at Texas Point NWR. This section of the levee is too low and is periodically inundated. Due to surface water runoff, the levee has eroded is numerous places. This project will increase the height of the levee to an elevation at which surface water will no longer traverse it. The levee also functions as a USFWS road and public use trail.