

Commissioner Warren Yeager, Jr.

Board of Commissioners

Gulf County, Florida

Testimony before the U.S. House of Representatives

Fisheries, Wildlife, Oceans and Insular Affairs Subcommittee

Committee on Natural Resources

Legislative Hearing on H.R.4222

April 8, 2014

Good afternoon, Chairman Fleming, Ranking Member Sablan, and Members of the Subcommittee, my name is Warren Yeager, Jr., and I serve as a Commissioner on the Gulf County (Florida) Board of Commissioners. Thank you for the opportunity to appear before you today to discuss H.R.4222, a bill to correct the boundaries of the John H. Chafee Coastal Barrier Resources System (CBRS) units in Florida, and for other purposes.

Gulf County, Florida is a small county with a population of 16,100, located in Florida's Panhandle. Because we are a small county all land use decisions impact our ability to raise revenue, which has a significant impact on our budget.

Gulf County Supports H.R. 4222

I am here today to testify in support of H.R.4222, a very narrowly focused bill that in our opinion corrects the CBRS by removing only the lands on Cape San Blas (CBRS Unit P-30) that should never have been placed in the CBRS in the first place. H.R.4222 would remove only the 942.6 acres of developed and planned development properties out of a total of 2,431 fast land acres in CBRS Unit P-30 and none out of CBRS Unit FL-92 (Attachment 1 – 2013 GIS Map). The total of 44,010 acres of aquatic habitat would remain in the CBRS untouched as well.

H.R. 4222 only removes a small part of Units P-30 and FL-92 from CBRS, totaling less than 2.5% of the total Gulf County CBRS footprint, by correctly removing the 942.6 acres on Cape San Blas (CBRS Unit P-30) that were already developed or planned to be developed prior to designation in 1982, and leaving the remaining 46,000+ acres within the units.

The reasons Gulf County is interested in the enactment of H.R. 4222 are threefold. First, after spending a substantial amount of local and State of Florida tax dollars (\$21 million) on a 2008 state and federally permitted beach habitat and storm surge berms rebuilding project on Cape San Blas CBRS Unit P-30, Hurricane Gustav severely damaged the 70% completed restoration project late in 2008. Federal emergency funding in the amount of approximately \$15 million was secured through the Federal Emergency Management Agency (FEMA), yet the U.S. Fish and Wildlife Service (USFWS) vetoed this funding, on the basis that it did not meet the requirements of the exceptions outlined for projects within the CBRS (44 CFR 206), even though in the past they had permitted similar requests within Unit P-30, including the issuance of a biological opinion on a similar project under the federal Endangered Species Act (ESA) in 2007.

If federal assistance for storm damage to the beaches of Unit P-30 do not currently meet any of the exceptions allowed under the CBRS rules (44 CFR 206), then we have no choice but to support H.R. 4222 to remove the 942.6 acres of developed or planned to be developed fast lands of Unit P-30 in order to access these emergency funds in the future. The habitats created by these beach restoration (and emergency storm rehabilitation) projects are extremely important to

endangered species of turtles, shorebirds, and beach mice, and to our County's ecotourism economy, which would not exist if these habitats were left unmanaged and in a state of disrepair.

Second, these developed or planned to be developed fast lands in CBRS Unit P-30 should never have been included in CBRS in the first place, as the backbone public infrastructure (i.e. roads, power, water, telephone, and Florida Department of Health allowed septic systems) and subdivision development plans were in existence, including about 100 housing units, at the time Unit P-30 was placed into CBRS, a clear contradiction with CBRS conditions for inclusion.

Finally, we believe our residents who own homes in the subdivision developments on CBRS Unit P-30 that existed at the time of CBRS inclusion should be able to participate and benefit from the same federal flood insurance and emergency beach restoration programs as their neighbors in Franklin County who live on lands that were correctly NOT included in the CBRS, and especially in the adjacent CBRS Unit FL-92 in Gulf County where similar lands that were developed or planned to be developed existed and were correctly excluded from the CBRS.

Inconsistent Application of CBRS Exclusions Prohibit FEMA Funding

In 2008, a 7.5 mile permitted beach and habitat maintenance project, "St. Joseph Peninsula Beach Restoration Project," was authorized under Florida Department of Environmental Protection (DEP) Permit Number 0266819-001-JC and the U.S. Army Corps of Engineers (USACE) Permit Number SAJ-2006-447 and consisted of: 1) the northern 1.6 mile "State Park Segment" located within the St. Joseph Peninsula State Park between DEP Monuments R-67 and R-74.8; and 2) the southern 5.9 mile "County Beach Segment" between DEP Monuments R-74.8 and R-105. The project was designed to withstand a 30-year storm return interval with storm surge elevation of approximately 6 feet, and to "mimic enhance, and restore natural stabilization systems" (i.e. beach and dune.) In March 2008, Gulf County had started work on beach maintenance using about \$21 million of local funding, after the community voted to issue bonds to fund the project.

The beach restoration project was under construction when Hurricane Gustav entered the Gulf of Mexico. The project was about 70% complete when Hurricane Gustav hit Gulf County. On October 27, 2008 a Declaration of "Public Assistance" and "Hazard Mitigation Grant Program" (DR-1806-FL) was issued the by Federal Emergency Management Agency (FEMA). Gulf County's beaches received extensive damage to approximately 4 miles of shoreline within the county-maintained portion of St. Joseph Peninsula Beach in Gulf County, Florida. The net result of this event was that the beach was effectively destroyed throughout much of the affected 4 miles of shoreline. As a County improved and maintained beach, FEMA worked with the County on a FEMA Project Worksheet for restoration of the beach following the Gustav event. The Worksheet, to repair storm-induced erosion, sand fencing and beach vegetation, and return the damaged facility (beach) to its pre-disaster condition, was submitted to FEMA along with an engineering study that determined that the beach could be restored with minimal adverse impact

on the natural ecosystem of the beach itself. On May 8, 2009 (Attachment 2 – May 8, 2009 FEMA Letter to USFWS), FEMA wrote to the USFWS stating that it determined that this project met the criteria for a CBRA exception under 44 CFR 206.347 (c) (4), nonstructural facilities that are designed to mimic, enhance or restore natural shoreline stabilization systems, in consultation with the USFWS as required by 44 CFR 206.348. USFWS indicated on May 27, 2009 that they did not concur with FEMA’s determination. However, in the USFWS response (Attachment 3 – May 27, 2009 USFWS Response to FEMA) the CBRS exception requested for CBRS Unit P-30 was not addressed nor referenced.

Furthermore, it should be noted that, as a result of Hurricane Ivan (in 2004), Gulf County received FEMA reimbursement for DR-1551, PW 20 for emergency berm work done within the same referenced CBRS Unit P-30. In a consultation letter from USFWS dated February 24, 2005 the USFWS states, “Section (6)(a)(6)(G) allows for nonstructural projects for shoreline stabilization systems.” The Service concurs in this letter that the proposed activities were consistent with CBRA policy (Attachment 4 – February 24, 2005 USFWS Letter).

Gulf County had also previously consulted with USFWS for work in CBRS Unit P-30. The St. Joseph Peninsula Erosion Control Project received a biological opinion from USFWS on May 17, 2007 and an amendment on July 18, 2007. In their letter USFWS states, “.....the Service determined that this level of anticipated take (from the project) is not likely to result in jeopardy to the piping plover species or destruction or adverse modification of its critical habitat.”

When Gustav hit in 2008, Gulf County went through the same process as above, but received a much different outcome. Not only did the USFWS veto FEMA participation with the restoration of the beach, it vetoed the project on our appeal to FEMA, even after a County-commissioned Cape San Blas biological report (Attachment 5 – Biological Report) determined that the effects of the project had actually improved habitat and numbers of shoreline species (endangered turtles, shorebirds, and beach mice).

The County is extremely concerned that if USFWS continues to determine that beach habitat restoration does not meet the exceptions for federal emergency funding established for such work in CBRS, they will not be able to keep this habitat protected and ecotourism to the County will diminish. The County’s interests are not to negatively impact the barrier peninsula; on the contrary, the County is interested in ensuring that future storms do not negatively impact the beach habitat the USFWS is interested in protecting or negatively impact residents who have already spent significant local funds to protect these beaches.

Portions of CBRS Unit P-30 Included in Error

Cape San Blas and Indian Peninsula (CBRS units P-30 and FL-92) in Gulf County, Florida were included in the CBRS by the Fish and Wildlife Service in 1982 and 1991 respectively. According to our records, these 2 CBRS units total over 47,000 acres. Cape San Blas (CBRS Unit P-30) consists of 2,431 acres of fast land and 43,010 acres of aquatic habitat. Indian

Peninsula (CBRS Unit FL-92) consists of 438 acres of fast land and 1,052 acres of aquatic habitat. However, in 1982, a full complement of infrastructure for each lot was already in place on Cape San Blas (CBRS Unit P30): FDOT-constructed roadway, water service since 1981, Florida Department of Health approved septic systems, power and telephone service since 1967.

In the case of Indian Peninsula (CBRS Unit FL-92), the Fish and Wildlife Service (FWS) excluded the most developed areas on Indian Peninsula in an effort to keep densities low for the CBRS designation. FWS maps show that the Service intentionally left the two most densely populated areas on the Indian Peninsula out of the CBRS. These areas are in the middle of the Peninsula, not on either end. In 1991, when the Peninsula was designated as an undevelopable coastal barrier under CBRS, a full complement of infrastructure was already in place for these lands: roadway, water, Florida Department of Health approved septic systems, power and telephone.

As we understand it, the intent of the undeveloped coastal barrier designation is to deter development on those landscapes. H.R.4222 would remove 942.6 acres from CBRS Unit P-30 that never should have been included in the CBRS since they were already developed or were planned (add the word “permitted” ?) to be developed at the time of their CBRS designation, and possessed a full complement of infrastructure that supported continued development. I’d like to re-emphasize in detail that in 1982 the following infrastructure was already in place to each lot on Cape San Blas (P-30): FDOT-constructed and paved roadway and connecting driveways for existing homes, water service, power and telephone service and availability of septic tank permits for sewage (Attachment 6 – 1983 aerial map). In 1991, when Indian Peninsula (CBRS Unit FL-92) was designated an undevelopable coastal barrier, the following infrastructure was also in place: roadway, water, power, telephone and availability of septic tank permits for sewage. In this case, the developed or planned to be developed fast lands were excluded from CBRS in Unit FL-92.

County Residents Unfairly Disadvantaged by CBRS

The County is supportive of a change to the CBRS footprint that corrects the unfair provision in CBRS that prevents homeowners within the CBRS Unit P-30 from purchasing federal flood insurance. Because of the CBRS prohibition on federal flood insurance for private inholdings, homeowners had been purchasing insurance through private sector insurers through 2002. But, in November 2002, FEMA designated Gulf County as a higher risk flood zone. Since FEMA’s 2002 determination, private sector insurers have stopped offering insurance in these areas, preventing many residents from obtaining flood insurance of any kind. However, in nearby Franklin County, St. George Island was originally (and correctly) excluded from the CBRS, yet it had the same basic infrastructure supporting developed or planned to be developed properties that Unit P-30 had in 1982. Franklin County residents can still get flood insurance and our residents cannot, which puts our residents at an unfair disadvantage by allowing no access to any flood insurance at all. Also, Franklin County has benefited from FEMA emergency funding in

the past as well for post-storm beach restoration projects while Gulf County has been denied access to the same emergency programs.

Our community on CBRS Unit P-30 has grown tremendously since 1982 when the Unit was placed into the CBRS. As a result of the existing backbone infrastructure in 1982, Cape San Blas (CBRS Unit P-30) has grown 10 fold --from 100 homes in 1982 to 1023 homes today. And, development on Indian Peninsula (CBRS Unit FL-92) has doubled from 89 homes in 1991 to 182 today. While the future growth in these established developments on CBRS Unit P-30 is minimal, existing homeowners in CBRS Unit P-30 deserve uniform treatment and should not be disadvantaged by inclusion in the CBRS and the inconsistent approach taken by USFWS in managing the program.

Removing these existing lands that are developed or planned to be developed from CBRS Unit P-30 will not increase density or growth in these areas – it will simply preserve the development that already exists. Three quarters of Cape San Blas will never be developed and will remain in the CBRS. The 942.6 acres removed from the CBRS by H.R. 4222 are already 100% subdivided and platted, and are already 75% built out. Gulf County has density restrictions that only allow for 2 units per acre on the St. Joseph Bay side of the peninsula and 3 units per acre on the Gulf of Mexico side. Gulf County has been good stewards of the land and environment and has made a choice to stay low-rise and low-density with rigid height restrictions because the environment is a draw for locals and tourists alike.

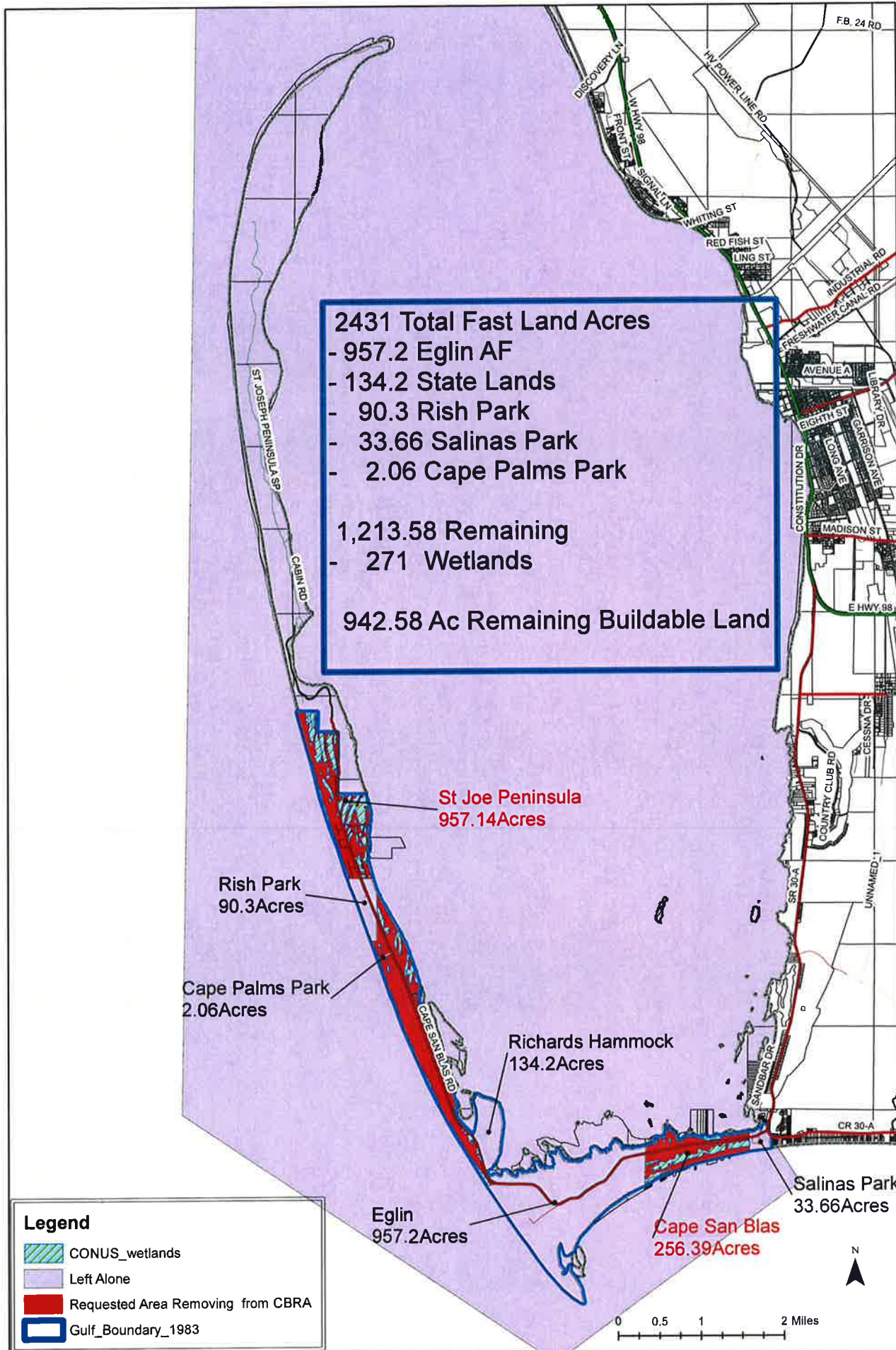
Under Florida law, all development must be consistent with the state-approved comprehensive plan (Chapter 163.3194 of the Florida Statutes). Currently, the adopted comprehensive plan of Gulf County allows for either 2 or 3 dwelling units per acre within the privately-held sections of the St. Joseph Peninsula, depending on the exact location of the subject property. This provision in the County's pre-existing land use regulations effectively means that approximately 95% of the existing parcels within the St. Joseph Peninsula are already built out to the maximum possible density allowed under the regulations. This limitation through the comprehensive plan was negotiated between the County and the State of Florida as a result of a 1992 challenge to the local comprehensive plan, and would require the approval of both the state land planning agency, as well as the courts, to change.

Conclusion

Gulf County believes the lands H.R. 4222 would remove from the CBRS should never have been included in the CBRS. H.R. 4222 does not remove the entire CBRS units from the system, but only makes a small correction, totaling less than 2.5% of the total Gulf County CBRS footprint, by correctly removing the 942.5 acres on Cape San Blas (CBRS Unit P-30) that were already developed prior to designation in 1982, and leaving the remaining 46,000+ acres within CBRS Units P-30 and FL-92. This correction will restore eligibility for FEMA disaster assistance and allow for County residents of the St. Joseph Peninsula Unit P-30 to protect the beach habitat

important to endangered and threatened species as well as have fair and equal access to federal flood insurance within this small developed area, all while leaving 97.5% of the existing CBRS acreage untouched. By removing these lands from CBRS Unit P-30, H.R. 4222 would also remove the costs, uncertainty and frustrations associated with the USFWS' inconsistent application of the CBRS rules and exceptions for FEMA funding to help repair future storm damage to our residents' investments in important beach habitat.

On behalf of Gulf County, Florida, I very much appreciate the opportunity to testify before the Subcommittee in support of H.R. 4222, and I would be happy to answer any questions you may have at this time.



Disclaimer- Gulf County GIS provides this GIS data as a public service. NO WARRANTY for the availability or accuracy is given. Dec. 2013

Proposed CBRA Area Removal Gulf County, Florida



FEMA

May 8, 2009

U.S. Fish & Wildlife Service
Panama City Fish and Wildlife Service Office
Ms. Melody Ray-Culp, Biologist
1601 Balboa Avenue
Panama City, FL 32405

Subject: Coastal Barrier Resource Act Consultation for Gulf County for St. Joseph Peninsula Beach
Locations: FDEP Range Monuments R-74.8 (29.7593, -85.4024) and R-95.3 (29.7044, -85.3806)
FEMA's DR-1806-FL, PW 14

Dear Ms. Ray-Culp,

Pursuant to the Coastal Barrier Resources Act and 44 CFR 206.340-349, the Federal Emergency Management Agency (FEMA) has determined that the above referenced projects require coordination with the U.S. Fish and Wildlife Service. A copy of the scope of work for the proposed Federal action is attached.

FEMA has determined:

The project is not subject to CBRA because it is not located within a CBRS unit, and does not provide access to a CBRS unit.

Emergency Assistance. The project is limited to emergency assistance under 44 CFR 206.346. This memorandum constitutes notification as required by 44 CFR 206.347(b)(2).

Essential Link. The project is for replacement, reconstruction, or repair, but not the expansion of, roads, structures, or facilities that are essential links in a larger network or system. This memorandum constitutes a request for consultation pursuant to 44 CFR 206.348, and for your concurrence that the proposed action meets the criteria for a CBRA exception. Attachment A identifies the project impacts and the proposed mitigation measures.

Permanent Restoration Assistance. The project meets the criteria for a CBRA exception and is consistent with the purposes of CBRA. This memorandum constitutes a request for consultation pursuant to 44 CFR 206.348, and for your concurrence that the proposed action (1) meets the criteria for a CBRA exception and (2) is consistent with the purposes of CBRA.

May 8, 2009
U.S. Fish & Wildlife Service
Subject: CBRA Consultation: Gulf County, DR-1806-FL, PW 14
- page 2 -

Attachment A identifies the project impacts and presents the proposed mitigation measures and conservation measures.

We are hereby asking for your concurrence with our finding. If you have any questions or wish to discuss this project, please contact Heather Batson at 386-341-7918 (cell). We thank you for your support.

Sincerely,

Heather D. Batson
Environmental Team Lead/Advisor
FEMA Joint Field Office (JFO)
The Koger Center/Forrest Bldg.
Joint Field Office
2728 Centerview Drive
Tallahassee, Florida 32301
Phone: 386-341-7918

CBRA: Please indicate as appropriate:

I concur with the above determination. I do not concur with the above determination.

Unless FEMA receives a response within 12 working days from the date of this notification, FEMA will assume USFWS concurs with the CBRA determination indicated above and FEMA will proceed as appropriate.

U.S. Fish and Wildlife Service Approving Official

Date

ATTACHMENT A. CBRA CONSULTATION SUPPORTING INFORMATION

CBRS Unit: Cape San Blas Unit P30/P30P (see attached CBRA unit map)

Description of Facility and Proposed Repair Work:

Gulf County has applied for a grant to cover lost beach sands between DEP markers R-74.8 to R-95.3. Gulf County is proposing to replace lost sand on the beach for a total of 4 miles that occurred as a result of Hurricane Gustav (see attached topo map).

A portion of the work will occur within a CBRA Unit that was identified in 1990. Previous beach nourishment and dune installation occurred in 2008, under the "St. Joseph Peninsula Erosion Control Project. FEMA has determined that the project qualifies for exception as a "Special-Purpose Facility" under 44 CFR 206.347 (c)(4), and is therefore exempt from the requirement to be an existing facility in order to receive federal funding.

Justification as CBRA Exception:

FEMA believes that the project qualifies for the "repair of facilities: the study, management, protection, and enhancement of fish and wildlife resources and recreational projects...fish and wildlife and other research, development and applications; and nonstructural facilities that are designed to mimic, enhance or restore natural shorelines stabilization systems..." exception (44 CFR 206.345 (b) (4). Additionally, FEMA believes that this project qualifies as an Other Public Facility (44 CFR 206.347 (c) (5), and therefore can be funded with disaster assistance grants.

FEMA has determined that Gulf County's beach renourishment and dune installation qualifies for this exception because the project was designed to stabilize the vertical cliff that had developed along the beach as a result of earlier hurricanes. The purpose of the project was to provide a sloped sandy dune line suitable for turtle nesting and habitat for shorebirds.

Proposed Federal Funding:

The proposed scope of work is estimated to cost \$15,113,160.00, of which \$11,334,870.00 would come from the FEMA grant.

Additional Mitigation Measures Required:

The project restores the facility to its pre-disaster condition. The applicant is also proposing the planting of 301,00 sea oats (*Uniola paniculata*) to stabilize the beach against future erosion from wind, rainfall, storm generated waves and storm surge.

Consistency with Purposes of CBRA:

See Attachment B

**ATTACHMENT B. SUPPORTING INFORMATION
CBRA CONSISTENCY DETERMINATION**

Impact Identification:

Risks to human life: The project is located along publicly owned beach shoreline; adequate facilities for public use along the shore are consistent with the intent of CBRA as it relates to recreation.

Risks of damage to facility being repaired or replaced: There are risks to the facility should another hurricane of equal or greater strength occur in the project area. Similar damages would occur if another hurricane was experienced. The replacement of the facility is consistent with the exceptions as outlined in 44 CFR 206.340 subpart J.

Risks of damage to other structures: There are no risks of damage to other related structures.

Risks of damage to fish, wildlife, and other natural resources: There are no risks to wildlife or other natural resources. Work will be done under the U.S. Army Corps of Engineers permit number SAJ-2006-4471 (IP-DEB). The U.S. Fish & Wildlife has also provided comments and Biological Opinions (BO) under log number 4-P-07-056 as amended, issued 07/18/2007 and FDEP Joint Coastal Permit 0266819-001-JC as amended issues 04/2007 expires 12/04/2012. All terms and conditions and reasonable and prudent measures required by the U.S. Army Corps of Engineers permit and provided by U.S. Fish and Wildlife Service will be conditioned within the FEMA-approved project.

Condition of existing development served by the facility and degree to which its redevelopment would be encouraged: The project is located along the Gulf of Mexico. The work within the CBRA Unit will occur within a moderately developed area; development is limited to constructed roadways which provide access to various beaches and residencies.

Because the land is publicly owned, the facility protects the land from development.

Encouragement of new development: No new development would result from this reconstruction. FEMA does not believe that new development would be encouraged by the project.

Proposed Mitigation Measures: The applicant is also proposing the planting of 301,000 sea oats (*Uniola paniculata*) to stabilize the improved beach against future erosion from wind, rainfall, storm generated waves and storm surge. Terms and Conditions and Reasonable and Prudent Measures provided by the U.S. Army Corps of Engineers permit

and U.S. Fish and Wildlife should allow the project to avoid impacts to wildlife and natural resources.

Proposed Conservation Measures: There are no conservation measures proposed for this project.

Finding: FEMA has concluded that the above project is consistent with the purposes of CBRA and qualifies for the exception discussed above.



IN REPLY REFER TO:

United States Department of the Interior

FISH AND WILDLIFE SERVICE

Field Office
1601 Balboa Avenue
Panama City, FL 32405-3721

Tel: (850) 769-0552
Fax: (850) 763-2177

May 27, 2009

Ms. Heather Batson
Federal Emergency Management Agency
The Koger Center/Forrest Bldg.
Joint Field Office
2728 Centerview Drive
Tallahassee, Florida 32301

Re: FEMA's DR-1806-FL, PW 14
St. Joseph Peninsula Beach Nourishment and
Dune Installation
Coastal Barrier Resources Act
Gulf County, Florida

Dear Ms. Batson:

Thank you for your letter to the Fish and Wildlife Service (Service) dated May 8, 2009, requesting consultation under the Coastal Barrier Resources Act (CBRA) for beach nourishment and dune installation along St. Joseph Peninsula Beach between FDEP Range Monuments R-74.8 and R-95.3. This project will occur in CBRA unit P30.

The Service does not concur with your determination that this project is consistent with the purpose of CBRA to minimize damage to fish, wildlife, and other natural resources. How this project will minimize such damage has not been fully described or quantified. Beach nourishment is likely to result in adverse affects to the federally threatened piping plover. The geomorphic characteristics of barrier islands, peninsulas, beaches, dunes, overwash fans, and inlets are critical to a variety of fish and wildlife resources and influence a barrier beach's ability to respond to wave action, including natural storm overwash and sediment transport. The protection or persistence of these important natural land forms, processes, and wildlife resources, however, is often in conflict with long-term, large-scale beach stabilization projects and their indirect effects, such as 1) increases in residential development, infrastructure, and public recreational uses, and 2) preclusion of overwash and creation of inlet formations.

The constructed dunes and beach will impede overwash to the bayside flats as is their intention, thereby causing successional advances in the habitat that will preclude its use by piping plovers. The short-term effects are to foraging and resting habitats of migrating and wintering piping plovers, which may decrease their survival rates. Additional effects to piping plover include

Ms. Heather Batson

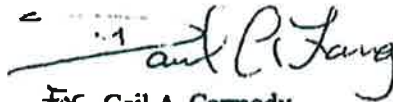
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long-term habitat degradation and loss because of the change in barrier island morphology due to the elimination or reduction of washover from the presence of the sand disposal to form a dune system and widened beach.

Beach replenishment frequently leads to more development in greater density within shorefront communities which are then faced with the need for future replenishment or more drastic stabilization measures (Pilkey and Dixon 1996). The very existence of a beach nourishment project can encourage more development in coastal areas (Dean 1999). Foraging on suboptimal habitat on the non-breeding grounds by migrating and wintering piping plovers may reduce the fitness of individuals.

Thank you for your efforts in support of CBRA. If you have any questions, please contact Melody Ray-Culp of this office at extension 232.

Sincerely,

A handwritten signature in black ink, appearing to read "Gail A. Carmody". The signature is written in a cursive style with a long horizontal stroke extending to the left.

For Gail A. Carmody
Project Leader

cc:

Cynthia Bohn, FWS, Regional Office, Atlanta, GA

Katie Niemie, FWS, 4401 N. Fairfax Dr., Room 860A, Arlington, Virginia 22203

Citations:

Dean, C. 1999. *Against the tide: the battle for America's beaches*. Columbia University Press; New York, New York.

Pilkey, O.H. and K.L. Dixon. 1996. *The Corps and the shore*. Island Press; Washington, D.C.



IN REPLY REFER TO:

United States Department of the Interior

FISH AND WILDLIFE SERVICE

Field Office

1601 Balboa Avenue

Panama City, FL 32405-3721

Tel: (850) 769-0552

Fax: (850) 763-2177

February 24, 2005

Gulf County Board of County Commissioners
c/o Mr. Marshall Nelson
Emergency Management Coordinator
1000 Cecil G. Costin, Sr. Boulevard
Port St. Joe, FL 32156

Re: FWS Log No. 4-P-05-132
Date Started: February 15, 2005
Applicant: Gulf County
Project Title: Emergency Storm Construction
Location: Gulf of Mexico Beachfront
Ecosystem: NE Gulf
County: Gulf County, Florida

Dear Commissioners:

The Fish and Wildlife Service (FWS) received your letter on February 13, 2005, concerning the proposed emergency berm construction in Gulf County, Florida. The berm is to provide storm protection along the Gulf of Mexico beachfront following Hurricane Ivan. The work is to be funded by the Federal Emergency Management Agency (FEMA) under the public assistance program for natural disasters. FEMA requires consultation with the Service concerning federally protected species and the Coastal Barrier Resources System (CBRS). Our comments are provided in accordance with the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1351 et seq.) and expedited consultation procedures (§50 CFR 402.05).

Project Description

The proposed emergency work will consist of constructing a berm along approximately 1.4 miles of Gulf of Mexico beachfront to replace sand eroded during the hurricane. The berm will be placed at 11 locations between reference monuments R-75 and R-104. The berm is intended to withstand a 5-year storm event and may be up to 5 feet in height and approximately 56 feet in width with 3H: 1V slopes. The total quantity of material to be placed is about 6,900 cubic yards. The material is to be compatible with the existing beach sand. Temporary beach access will be designated: 1) 180 feet and 210 feet north of R-104, and 2) 480 feet and 510 feet north of R-84.

Gulf County has received their Final Order from the State of Florida (Permit number GU-422 E for the proposed work). The permit expires May 9, 2005, but may be extended up to 90 days, if

requested. Special conditions to protect the dune ecosystem and protected species have been incorporated into the State permit.

Coastal Barrier Resources System (CBRS)

Our review of the CBRS maps for Gulf County indicates that the proposed emergency berm is located in CBRS unit P30 Cape San Blas. Consultation under CBRS is required for the funding of the work by FEMA. Section 6 of the Coastal Barrier Resources Act (CBRA) outlines specific exemptions to the general prohibitions of federal assistance. Under section (b) (a) (b) certain activities are allowed if the activity is consistent with the purposes of CBRA. Purposes of the CBRA are to minimize the loss of human life, wasteful federal expenditures and damage to fish and wildlife. Section (6) (a) (6) (G) allows for nonstructural projects for shoreline stabilization that are designed to mimic, enhance, or restore natural stabilization systems (planting of dune vegetation or beach nourishment).

The proposed berm will minimize the potential for loss of life by protecting erosion threatened structures on the Gulf of Mexico beachfront; minimize wasteful federal expenditures by providing temporary storm protection for the upcoming storm season; and minimize damage to fish and wildlife by replacing and accelerating the natural dune system used by species such as nesting sea turtles, shorebirds, and beach mice. Thus, the Service concurs that the proposed activities are consistent with CBRA. No further consultation is required.

Endangered Species Act

Nesting by four species of sea turtles has been documented on Gulf of Mexico beaches in northwest Florida:

- Loggerhead sea turtle *Caretta caretta* (FWS - T; Florida - T) all counties
- Green sea turtle *Chelonia mydas* (FWS - E; Florida - E) all counties
- Leatherback sea turtle *Dermochelys coriacea* (FWS - E; Florida - E) all counties
- Kemp's ridley sea turtle *Lepidochelys kempi* (FWS - E; Florida - E) Escambia County

There are four subspecies of beach mice that occur on the dunes along the Gulf of Mexico in northwest Florida:

- Perdido Key beach mouse *Peromyscus polionotus trissyllepsis* (FWS - E; Florida - E) Escambia County
- Choctawhatchee beach mouse *Peromyscus polionotus allophrys* (FWS - E; Florida - E) Walton and Bay counties (historic Okaloosa County)
- St. Andrew beach mouse *Peromyscus polionotus peninsularis* (FWS - E; Florida - E) Bay and Gulf counties
- Santa Rosa beach mouse *Peromyscus polionotus leucocephalus* (FWS - species of concern; Florida- not listed) Okaloosa, Santa Rosa, and Escambia counties

Piping plover *Charadrius melodus* (FWS - T; Florida - T) occur during the non-breeding season from June to April along the Gulf of Mexico and Bay/Sound shorelines and coastal inlets in northwest Florida.

Snowy plover *Charadrius alexandrinus tenuirostris* (FWS - species status under review; Florida - T) resident shorebird, breeds on open sandy beaches throughout NW Florida beaches.

To ensure protection of federally protected and other coastal species, the following conservation measures should be incorporated into all emergency activities to qualify for informal consultation under section 7 of the Endangered Species Act of 1973, as amended. Implementation of these measures would result in a determination of not likely to adversely affect (NLEA). Therefore, coordination and possibly formal consultation with the Service will be needed.

1. Five-year temporary berms.

Appropriate personnel of the Florida Department of Environmental Protection (FDEP), in conjunction with County personnel, shall identify and approve all berm locations, staging, construction, and access sites. Berm material shall be placed as far landward as possible to minimize interference with sea turtle nesting. *The berm should be placed seaward of the toe of the existing dune. The date of issuance issued the Final Order for permit GU-422E for the proposed work.*

2. Project timing.

- A. **Sea turtles:** No activity shall occur on the beach during the sea turtle nesting season from May 1 through November 1. *The State of Florida permit allows work until May 9, 2005. With the following caveat, we concur with the time extension because it is highly unlikely that the work would affect sea turtle nesting during this period. Work after that time will require additional coordination with the Service.*

If work is going to be conducted between May 1 and 9, 2005, the beach must be surveyed daily for sea turtle nesting before project work may begin. No work shall be allowed on the beach until the surveys are completed and nests, if any, are protected.

All nest surveys, nest relocations, and screenings activities shall be conducted only by persons with a valid permit from the Florida Fish and Wildlife Conservation Commission (FWC). For information concerning the authorized permit tee for the subject work area, contact the FWC, Imperiled Species Management Section at (561) 575-5455.

Any nests deposited in an area not requiring relocation for conservation purposes shall be left in situ. All nests shall be appropriately marked by the sea turtle surveyor.

- B. **Wintering piping plover:** Non-breeding piping plover prefer intertidal beaches and flats and associated dune systems and flats. While the proposed berm site

does not occur in designated critical habitat for the plover, non-breeding plovers may use the area for foraging, roosting, or sheltering between the months of July and May. If piping plovers are spotted during berm, construction work should immediately cease until the birds have moved out of the vicinity. Notification of the presence of the plovers should be made to Mr. Denny Kelly, Fish and Wildlife Supervisor, Panama City, Florida (850) 769-0552, ext. 228.

- C) **Shorebird nesting:** Between March and August, coordination with the Florida Fish and Wildlife Conservation Commission (FWC) is needed concerning the protection of shorebird nesting areas. Contact: Mr. Bradley Smith, FWC, Panama City, Florida at (850) 265-3677.
3. **Equipment storage.** No overnight storage of equipment or work materials shall occur on the beach or dunes during any time of the year.
4. **Dune disturbance.** No activity shall occur on existing healthy (vegetated) dunes during any time of the year.
5. **Temporary beach access points:** Temporary beach access will be designated; 1) 180 feet and 210 feet north of R-104 and 2) 480 feet and 510 feet north of R 89. The access shall be gated to restrict access at night and between construction events. The dune vegetation at the access points shall be restored upon completion of the berm work and appropriate barriers put in place to increase protection of the dune at these sites.
6. **Sand Material.** All material to be used for beach berm or dune construction or beach nourishment shall be compatible with existing beach sand as determined by the FDEP; shall not contain more than 10 percent fines; and shall be free of cobbles, gravel, or debris. In the event that the fill material is documented to adversely impact sea turtle nesting, beach mouse habitation, or wintering piping plover, remediation may be required including, but not limited to, tilling.
7. **Boardwalks.** All beach access boardwalks or dune walkovers shall be constructed at a height to accommodate natural dune growth and associated vegetation.
8. **Sand fence.** Minimal use of sand fence shall be encouraged. When used, the fence shall be used for restoration of dune blowouts.
9. **Pedestrian beach access.** Suitable sites should be marked with post and rope until boardwalks can be installed. Important wildlife areas should also be marked with post and rope to exclude pedestrian use.
10. **Dune vegetation.** All dune vegetation to be used in dune restoration shall be grown from northwest Florida plant stock. If seedlings are to be planted, they shall be at least 1 inch by 1 inch with a 2.5-inch "pot." Vegetation shall be planted with an appropriate amount of fertilizer and desiccant material as

appropriate for the plant size. Planting should be on 18-inch centers throughout the created dune; however, 24-inch centers may be acceptable depending on the area to be planted (enclosed).

If the above conditions cannot be met, then the FEMA will need to initiate formal consultation of the FEMA Regional Office in Panama City. Please contact the FEMA Regional Office at ext. 229 if you have any questions regarding these comments.

Sincerely yours,

Innot Miami
Deputy Field Supervisor

Enclosures:

Coastal Plant List for Gulf County, FL
Native Nursery Supplier List

cc:

Sandy MacPherson, FWS, Jacksonville, FL
Leita Hulmes, FEMA, Orlando, FL
Bradley Smith, FWC, Wildlife Diversity, Panama City, FL
Robbin Trindell, FWC, BISP, Tallahassee, FL
Terry Doonan, FWC, Wildlife Diversity, Lake City, FL
Kim Wren, Apalachicola National Estuarine Reserve, Eastpoint, FL
Don butler, gulf County administrator, Port St. Joe, FL
Gulf Coast Conservation Association, Port St. Joe, FL

Panama City FOI: Patrick:lap:ip:kh:02-18-05:850-769-0552:229:wp4&FEMA\Hurricane Ivaz Gulf Co harm.doc

Native Plant List for Coastal Beaches and Dunes Franklin, Gulf, and Bay Counties, Florida

Scientific Name	Common Name	Height	Primary & Secondary Dune	Inter-dunal	Scrub dune
Trees					
<i>Sabal palmetto</i>	Cabbage palm	20'-60'*			X
<i>Magnolia grandiflora</i>	Southern Magnolia	3'-10'*			X
<i>Osmanthus americanus</i>	Wild Olive	5'-20'*			X
<i>Pinus clausa</i>	Sand Pine	3'-20'*			X
<i>Pinus elliotii</i>	Slash Pine	3'-30'*			X
<i>Quercus geminata</i>	Sand Live Oak	5'-15'*			X
<i>Quercus myrtifolia</i>	Myrtle Oak	5'-15'*			X
<i>Quercus virginiana maritima</i>	Sand Live Oak	5'-15'*			X
Medium to Large Shrubs & Small Trees					
<i>Callicarpa americana</i>	Beautyberry	5'			X
<i>Erythrina herbacea</i>	Eastern Coralbean	4' (25')	X		X
<i>Ilex vomitoria</i>	Yaupon Holly	20'			X
<i>Iva frutescens</i>	Marsh-Elder	11'		X	
<i>Rhus copallina</i>	Winged Sumac	10' (30')		X	X
<i>Sarcocoea repens</i>	Saw Palmetto	10' (30')			X
Small Shrubs & Ground Covers					
<i>Schizanthus scoparium</i> (formerly <i>maritimum</i>)	Bluestem		X		
<i>Asclepias humistrata</i>	Sandhill Milkweed				X
<i>Bignonia capreolata</i>	Cross Vine				X
<i>Cakile constricta</i>	Sea Rocket		X		
<i>Ceratiola ericoides</i>	Seaside Rosemary				X
<i>Chrysosoma pauciflorosula</i>	Seaside Goldenrod		X		X
<i>Chrysopsis gossypina trichophylla</i>	Golden Aster		X		X
<i>Conradina canescens</i>	Beach Heather		X		X
<i>Cyperus sp.</i>	Sedge			X	
<i>Heterotheca subaxillaris</i>	Aster (Camphor weed)		X		X
<i>Hydrocotyle bonariensis</i>	Pennywort		X	X	X
<i>Ipomoea pes-caprae</i>	Railroad Vine		X		
<i>Ipomoea imperati</i> (formerly <i>stolonifera</i>)	Beach Morning Glory		X		
<i>Licania michauxii</i>	Gopher Apple				X

Panicum amarum	Beach Grass		X		
(E) Polygonella macrophylla	Large-leaved Jointweed				X
Tradescantia ohioensis	Spiderwort				X
Urolopa paniculata	Sca Oats		X		

Native Plant Nurseries – Northwest Florida

<p>CNPS, Inc. 5951 Olgeby Road Milton, Fl. 32570 (850) 623-6287 Contact: Sarah Davis cmsalr@aol.com www.sea-oats.com Specializes in Sea Oats and native coastal plants</p>	<p>Rancho La Orquidea, Inc. 1124 Pearson Road Milton, Fl. 32583 (850) 983-8948 Contact: Alisa Lemaire e-mail orchidfarm@aol.com Wholesale only. Supplies plants for mitigation projects. Specializes in trees, shrubs, wildflowers, herbs, orchids, ferns, ornamental grasses, wircgrass, vines</p>
<p>Southern Native Plants Specialties, Inc. 6322 Mary Kitchens Road Milton, Florida 32583 (850) 983-9121 Contact: Paul Humbert e-mail sonative@yahoo.com Large selection of native upland, coastal and emergent plants.</p>	<p>The Garden Gate 3268 Fordham Parkway Gulf Breeze, FL 32561 (850) 932-9066 Contact: Emily, Elizabeth & Eleanor Peterson Large selection of native plants, gardening supplies and lawn and garden decorations</p>
<p>The Gourd Garden & Curiosity Shop 4808 East County Road 30-A Santa Rosa Beach, Fl. (850) 231-2007 Contact: Randy Harelson www.gourdgarden.com Specializes in native perennials and herbs</p>	<p>Evergreen Landscaping, Inc. P.O. box 2270 Santa Rosa Beach, Fl. 32459 (850) 267-1717 Contact: Toni Wheeler e-mail evergreen@gnt.net Specializes in landscape maintenances and retail native plants, like saw palmetto, wax myrtle, ornamental grasses, and goldenrod.</p>
<p>Apalachee Native Nursery Rt. 3, Box 156 Monticello, FL 32344 (850) 997-8976 Contact: William Dickerson Specializes in large trees aplnative@aol.com specializes in large trees</p>	<p>Emerald Coast Growers 7410 Klondike Road Pensacola, Fl 32526 (850) 944-0808 Contact: Paul Babikow www.ecogrowers.com Wholesale to the trade only. Specializes in ornamental grasses.</p>
<p>Morningstar Nursery Jim Morningstar 2207 Stacy Road Cantonment, Fl. 32533 (850) 968-2251</p>	<p>Niceville's Garden Center Dan & Tammy Winchenbach 1502 John Sims Parkway Niceville, Fl 32578 (850) 678-4105 Large selection of native plants.</p>
<p>E.A. Hauss Nursery Alabama Wildlife Nursery 4165 Ross Rd. Atmore, Al 36502 (334) 368-4854</p>	<p>Joshua Timberlands Nursery 29650 Comstock Rd. Elberta, Al 36530 (334) 986-5210</p>
<p>The Echo Center 1055 Echo Circle Pensacola, Fl 32514 Contact: Ed & Fern Penniman (850) 478-1985 e-mail echocenter@yahoo.com Specializes in native trees, shrubs, ornamentals, herbs and education. by appointment only.</p>	<p>Superior Trees P.O. Box 9325 Lce, Fl. 32059 Contact: Alan Webb (850) 971-5159 Wholesale only. Specializes in native trees and shrubs, ornamentals and ferns</p>

<p>Greenup Santa Rosa Santa Rosa Clean Community System Gardens 304 Park Ave., NE Milton, FL 32570 Contact: John Tonkin (850) 623-1930 e-mail greenupsr@aol.com Nice selection of native trees and perennials.</p>	<p>Santa Rosa Gardens P.O. Box 1187 Gulf Breeze, FL 32562 Contact: Paul Babikow www.santarosagardens.com Specializes in Perennials, hostas, irises, dryillies Order On-line or by fax. Ship UPS.</p>
<p>Florida Department of Environmental Protection Ecosystem Restoration Greenhouse Ellyson Field Pensacola, Florida (850) 475-5590 Contact: Cary Levins e-mail cary.levins@dep.state.fl.us Restoration projects and propagation of native fresh and saltwater emergent plants.</p>	<p>Dune Doctors Contact: Frederique Perret (850) 939-7737 Coastal dune restoration and erosion control Consultant, and plant broker www.DuneDoctors.com</p>
<p>University of Florida Milton Gardens P.O. Box 3634 Milton, Florida 32572 Contact: Dr. Mack Thetford (850) 985-2632 e-mail thetford@ufl.edu</p>	<p>Greenbriar Farms Nursery 170 Underwood Road Monticello, FL 32344 (850) 997-8343 cell (850) 933-0805 greenbriarfarms@hotmail.com Large selection of native plants.</p>
<p>Mail Order Native P.O. Box 9366 Lee, FL 32059 Contact: Amy Webb (850) 973-4688 Retail supplier of hard to find native plants. Mail order only, ship UPS.</p>	<p>Trillium Gardens 3532 Trillium Court Tallahassee, FL 32312 Contact: Dan Miller (850) 893-3757 e-mail dsmillerfl@aol.com Specializes in wildflowers of the deep south, native trees and shrubs</p>

Resources:

<http://www.afnn.org/>

Florida Native Nursery directory

<http://www.fnai.org/>

The Florida Natural Areas Inventory. good info about natural communities and endangered species are listed by county!

<http://www.plantatlas.usf.edu/default.asp>

good guide to vascular plants of Florida. contains pictures, descriptions and occurrences

<http://biologynatural.gov/>

U.S. Geological Service, lots of good natural resource info

<http://www.inflorida.org/>

The Nature Conservancy, natural resource and conservation information

Books:

Author Name	Date	Title	Publisher	Volume and pages
Dressler, Robert L., et al	1987	Identification Manual for Wetland Plant Species of Florida	University of Florida, IFAS, Gainesville, Florida	397 pps
Farrand, John Jr,	1988	Eastern Birds: An Audubon Handbook	McGraw-Hill, New York, New York	495 pps
Gilbert, Katherine M., et al	1995	Florida Wetlands Delineation Manual	Florida Department of Environmental Protection, Tallahassee, Florida	197 pps
Stewart, Maria V., et al	1996	Florida Freshwater Plants: A Handbook of Common Aquatic Plants in Florida Lakes	University of Florida: IFAS, Gainesville, Florida	264 pps
Martin Alexander C. et al	1987	A Guide to Wildlife Food Plants	McGraw-Hill, New York, New York	500 pps
Tobe, John D., et al	1998	Florida Wetland Plants: An Identification Manual	Florida Department of Environmental Protection, Tallahassee, Florida	398 pps
Taylor, Walter Kingsley	1993	The Guide to Florida Wildflowers	Taylor Publishing Dallas, Texas	320 pps.

VIA EMAIL

September 20, 2012

Mr. Donald Butler, Chief Administrator
Gulf County Board of County Commissioners
1000 Cecil G. Costin, Sr. Boulevard
Port St. Joe, Florida 32456



Subject: St. Joseph Peninsula Beach Project, Gulf County, Florida
Environmental Benefits

Dear Mr. Butler,

The following summarizes the environmental benefits of the St. Joseph Peninsula Beach Project.

BACKGROUND

The shoreline along St. Joseph Peninsula in Gulf County, Florida has suffered from years of long-term and storm related erosion resulting in the continued reduction in beach width and loss of dunes. Prior to 2008/2009, the average dry beach berm width was typically less than 50 feet with many "hot spots" eroded back into the dunes. St. Joseph Peninsula provides a unique ecosystem that promotes both diversity and sustainability for a wide array of wildlife species. However, due to the loss of dry beach width and dunes had significantly reduced nesting and foraging habitat for species that depend on the beach.

The St. Joseph Peninsula Beach Restoration Project was constructed in 2008/2009 by placing approximately 3.6 million cubic yards of sand over 7.5 miles shoreline which included a 1.6 mile section within the St. Joseph Peninsula State Park. The project widened the "adjusted" beach between 75 and 200 feet, and enhanced the natural dune with the addition of beach quality sand and native dune vegetation. One of the primary project goals included the restoration of nesting and foraging habitat.

PROJECT PERFORMANCE

Since the completion of the beach restoration project in 2009, the dune has naturally increased in size due to aeolian transport of available sand in the system. Annual monitoring of the dune and beach system has shown moderate growth in the dune system providing essential habitat for beach mice and other flora and fauna. Additionally, it has been observed that the overall beach width has increased along the northern section of the project increasing available habitat for turtle nesting, ghost crabs and colonizing vegetative species.

BIOLOGICAL MONITORING

The biological monitoring of the wild life species diversity has been occurring since the early 1990's by various agencies. The St. Joseph Peninsula State Park has been conducting infrequent shorebird surveys as well as daily sea turtle nesting surveys during the nesting seasons.

Shorebird Surveys

Shorebird surveys were conducted daily between February 2008 and April 2008 to establish a baseline condition for the shorebirds of concern as outlined in USFWS's Biological Opinion for the project. These species include: Piping Plover (*Charadrius melodus*), the Snowy Plover (*Charadrius nivosus*), and the Red Knot (*Calidris canutus*).

Since February 2009, bi-monthly shorebird survey data has been collected for the three main shorebird species of concern. The data shows that since the completion of construction there has been an increase in Red Knot sightings. Sightings for both snowy and piping plovers have remained strong over the years. Also an abundance of other shorebird species have been documented by the surveys showing a large diversity in avian species utilizing the intertidal zone and or the existing dune and beach system. All of this data is reported in Ebird.org.

Sea Turtle Nesting

Since the completion of the project, the number of documented Loggerhead (*C. caretta*) nests have more than doubled (452) over the last post-construction four year period (2009 to 2012) compared to the previous pre-construction four year period (2005 to 2008) which totaled 207. In fact, only half way through the 2012 season 226 sea turtle nests were documented - the most over the last 12 year record.

Sea turtle nesting activity has been monitored since the late 1990's. Over that time period several storms have impacted the St. Joseph Peninsula shoreline. Hurricanes Ivan (2004) and Dennis (2005) resulted in a large loss of nests. The most significant impact was the loss of beach width resulting in numerous residential structures sitting on the beach thereby reducing nesting habitat. There was also an increase in the number of coastal structures installed such as geotextile tubes and seawalls to protect these upland structures which further reduced nesting habitat. During the construction of the PROJECT in 2008 three named storms impacted the St. Joseph Peninsula coastline. Within the PROJECT limits there was the complete loss of approximately 36% of the laid sea turtle nests and an additional 20% were inundated by the storm surge causing premature mortality. In 2008, nests laid on the nourished beach did exceptionally well, with an 81% hatching success while those nests laid on the non-nourished beach only had a 46% success rate. Recently, Tropical Storm Debbie had lasting effects on the peninsula for over three days during the month of June 2012. Survey data indicate that T.S. Debbie only attributed to a total of 36 nests lost or 17% of the laid nests. This is a significant reduction in total nests lost due to storm events and is attributed to the success of the beach nourishment project.

LOCAL MEASURES

Several measures have been implemented by Gulf County to protect the environmentally sensitive beach and dune ecosystem. These measures include the development and adoption of ordinances addressing beach driving, animal control, outdoor lighting, as well as posting imperiled species signs at beach accesses for public awareness and installing predator proof trash receptacles. In addition, Gulf County no longer rakes the beach to remove detritus or disturb the wrack line which has been determined as essential habitat for foraging shorebirds. These ordinances have been enforced by the local code enforcement agent specifically hired to track infractions and help educate the public about the importance of maintaining and protecting the sensitive habitat that is St. Joseph Peninsula's beach.

CONCLUSIONS

The following conclusions are based on the findings of the environmental monitoring programs being implemented for the St. Joseph Peninsula Beach Restoration Project by Gulf County:

- The project provides additional nesting habitat to support a significant number of sea turtles which would not be possible had the restoration project not been constructed. Without the project, the beach widths would continue to narrow, the construction of coastal structures would have increased, and the low-lying berm height and width would have provided a low level of storm protection all of which would have decreased nesting habitat and increased the loss of nests from erosion and storm events.

- The initial and future re-nourishment projects will continue to enhance the dune and beach system that supports numerous wildlife species, and increase the suitable habitat for nesting and foraging species.
- Survey data for sea turtles and shorebirds indicate that the initial restoration project has had an overall positive benefit to these species. Increases in sea turtle nests as well as observations of foraging shorebirds which can be attributed to a healthy and sustaining beach.
- The environmental field personal that has monitored the peninsula for over the past 10+ years have observed a dramatic increase in ghost crabs after the construction of the project which indicates a diverse and healthy ecological system.
- The monitoring program will continue to document the success and survivability of the existing species that consider St. Joseph Peninsula their home. Gulf County will continue its role in protecting the existing beach and dune habitat through applicable monitoring programs and successful beach re-nourishment projects.

Should you have any questions regarding this matter, please contact me at 850.654.1555.

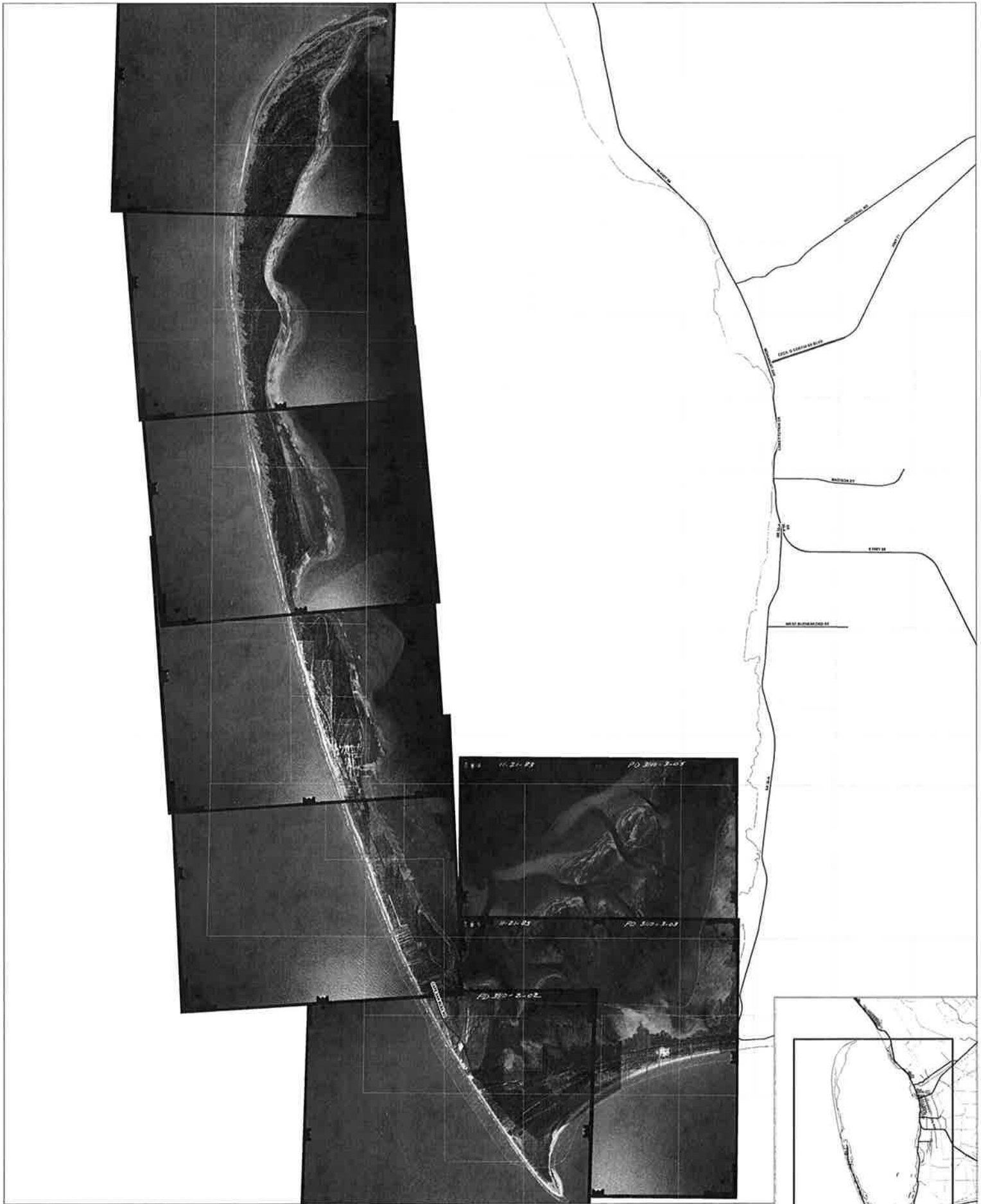
Sincerely,

mrd associates, inc.



Michael R. Dombrowski, P.E.
Principal Engineer

Cc: Lynn Lanier, Deputy Administrator



GIS Department
 1200 W. Highway 90, Suite 100
 St. Joseph, FL 32088
 904.330.0012

Legend	Scale
Coastline	1:20,000
State Highway	1:20,000
Local Road	1:20,000
Water	1:20,000
Parcel	1:20,000
Parcel ID	1:20,000
Parcel Date	1:20,000
Parcel Area	1:20,000
Parcel Perimeter	1:20,000
Parcel Type	1:20,000
Parcel Value	1:20,000
Parcel Status	1:20,000
Parcel Owner	1:20,000
Parcel Address	1:20,000
Parcel Description	1:20,000
Parcel Notes	1:20,000

St Joseph Peninsula Gulf County, Florida

Overview Map with 1983 Aerials
 Cobra Project



1 inch = 2,000 feet

