

Revised Biological Opinion and Conference Report for Issuance of an
Incidental Take Permit Section 10 (a)(1)(B) Gulf State Park Hotel and
Convention Center Demolition and Reconstruction
Gulf Shores and Orange Beach, Baldwin County, Alabama

Prepared by:
U.S. Fish and Wildlife Service
Daphne Field Office, Alabama
November 15, 2006



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Memorandum

To: Assistant Regional Director, ES, Southeast Region

From: Field Supervisor, Daphne, Alabama *William Pearson*

Date: November 15, 2006

Subject: Revised Biological Opinion and Conference Report for Issuance of an Amendment to Incidental Take Permit Under Section 10(a)(1)(B) of the Endangered Species Act of 1973, as amended, for Gulf State Park Hotel and Convention Center Demolition and Reconstruction between Gulf Shores and Orange Beach, Baldwin County, Alabama (TE-072831-2).

This memorandum constitutes amendment two, to the Biological Opinion (BO) and Conference Report of the Fish and Wildlife Service (Service), initially issued on December 22, 2004, concerning the proposed Gulf State Park (GSP) Convention Center, Hotel, and Fishing Pier in Baldwin County, Alabama. This amended BO considers the additional impacts this project will have on the endangered Alabama beach mouse (*Peromyscus polionotus ammobates*) (ABM) and habitat proposed for critical habitat designation; three endangered or threatened species of sea turtles: green, (*Chelonia mydas*) (endangered); loggerhead, (*Caretta caretta*) (threatened); and Kemp's ridley, (*Lepidochelys kempii*) (endangered); and the threatened piping plover (*Charadrius melodus*) under section 7 of the Endangered Species Act of 1973 (Act), as amended (16 United States Code 1531 *et seq.*). These additional impacts will result in a lower level of incidental take to the ABM than were allowed for the original proposal. Changes to the original BO are detailed below. This BO is prepared under authority of and is limited to the consultation requirements of section 7 of the Act.

Add the following section on "Consultation History" to the end of that section in the original BO.

Consultation History

April 6, 2005 The Service's Acting Deputy Regional Director of the Southeast Region Office (SRO) signs a modification of HCP Incidental Take Permit (ITP) TE-072831-0 for adjusting footprint of the GSP beach pavilion and parking lot.

March 14, 2006 The Service's Daphne Field Office (FO) receives draft lighting plan for proposed replacement of GSP fishing pier.

March 31, 2006 The Service's Daphne FO receives Army Corps of Engineers Permit Notice for Application SAM-2006-612-JAM to replace hurricane damaged GSP fishing pier.

April 11, 2006 The Service's Daphne FO sends request to Army Corps of Engineers to hold permit application SAM-2006-612-JAM in abeyance pending our concurrence with a sea turtle friendly lighting plan for the pier and revision to GSP's habitat conservation plan (HCP/ITP) to include revising the GSP hotel and convention center construction footprint, and demolition and reconstruction of the fishing pier. 2006-FA-0156

April 12, 2006 The Service's Daphne FO conducts reconnaissance visit to Pensacola Pier for viewing sea turtle friendly lighting.

April 14, 2006 The Service's Daphne FO receives recommendations on GSP pier lighting plan from Lorna Patrick, Panama City FO.

April 18, 2006 The Service's Daphne FO holds first meeting with GSP, Federal Emergency Management Agency, Alabama Department of Conservation and Natural Resources (ADCNR), Service (Service-Daphne and Panama City FOs) on GSP's changes to proposed convention center/hotel/pier replacement and provided hard copy of Service (Lorna Patrick, Panama City FO) recommendations.

May 9, 2006 The Service's Daphne FO sends copy of Service recommendations on lighting plan to Thompson Engineering via e-mail.

May 18, 2006 The Service's Daphne FO holds second meeting with GSP, ADCNR, Service to discuss details of Service recommendations for pier lighting plans.

June 19, 2006 The Service's Daphne FO receives request from ADCNR for demolition of land portion of GSP pier.

June 19, 2006 The Service's Daphne FO receives request from ADCNR for modification to HCP/ITP to include adjustment of building footprint of proposed hotel and convention center, and pier replacement.

July 7, 2006 The Service's Daphne FO receives revised draft lighting plan for GSP pier from Thompson Engineering.

July 11, 2006 The Service's Daphne FO sends copy of revised pier lighting plan to Lorna Patrick, Panama City FO via express mail.

July 18, 2006 The Service's Daphne FO receives lighting plan comments from Lorna Patrick.

July 38, 2006 The Service's Daphne FO sends a few remaining questions on lighting plan to Thompson Engineering via e-mail.

<u>July 31, 2006</u>	The Service's Daphne FO receives response from Thompson Engineering via e-mail.
<u>August 8, 2006</u>	The Service's Daphne FO sends correspondence to Thompson Engineering and GSP concurring final lighting plans for pier. 2006-TA-0542
<u>August 8, 2006</u>	The Service's Daphne FO sends correspondence to ADCNR concurring with demolition of land portion of pier. 2006-TA-0816
<u>September 6, 2006</u>	The Service's Daphne FO sends HCP/ITP TE-072831-1 modification package to SRO to initiate amendment including application, letter requesting modification, and map of revised plan.
<u>September 14, 2006</u>	The Service's Daphne FO receives sample ITP and memos from Aaron Valenta via email.
<u>October 31, 2006</u>	The Service's Daphne FO sends draft BO to the SRO for comment via e-mail.
<u>November 1, 2006</u>	The Service's Daphne FO receives comments from Aaron Valenta via e-mail.
<u>November 7, 2006</u>	The Service's Daphne FO receives comments from Joe Johnston via e-mail.
<u>November 15, 2006</u>	The Service's Daphne FO submits final amendment 2 package to the SRO for approval.

BIOLOGICAL OPINION

Add the following at the end of the "DESCRIPTION OF PROPOSED ACTION" section of the original BO.

DESCRIPTION OF PROPOSED ACTION

Figure 1 shows the general location of the project, Baldwin County, Alabama. Changes to the proposed action consist of revising the footprint of the proposed GSP Hotel and Convention Center development, and the addition of the demolition of hurricane-damaged Gulf State Park Fishing Pier and parking lot, and relocation of the pier 250 feet east of the original location (**Figure 2**). The changes to the project area restore 8.0 acres of ABM habitat, but impacts an additional 6.2 acres of habitat, for a total gain of 1.8 acres of ABM habitat restored. The restored acres will be contoured and revegetated to create a natural dune feature. The additional 6.2 acres of impacted habitat result from moving the south boundary of the project area further south to the Coastal Construction Control Line and moving a small section of the northeast boundary of the

project area further north to Alabama Highway 182 right-of-way (6.0 acres), and relocating the pier (0.2 acres). The 8.0 acres of restored ABM habitat results from relocating the fishing pier and parking lot project 250 feet east to a more stable location.

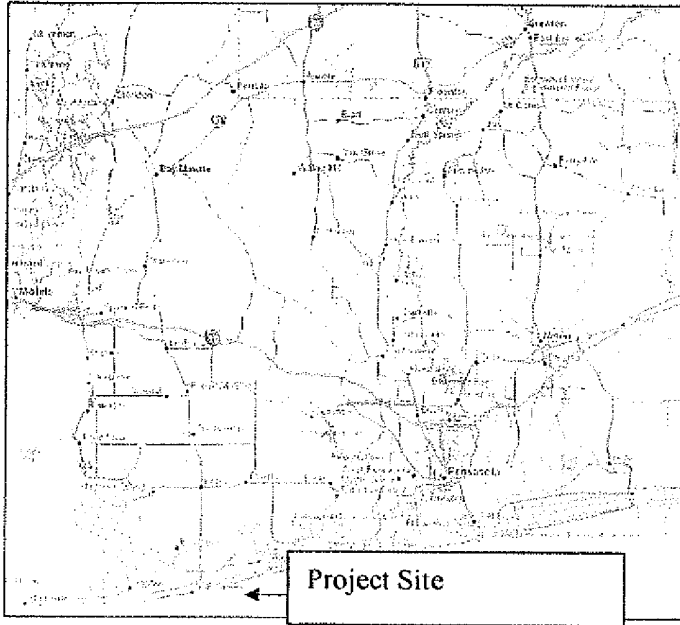


Figure 1. General location of project site, Baldwin County, Alabama.

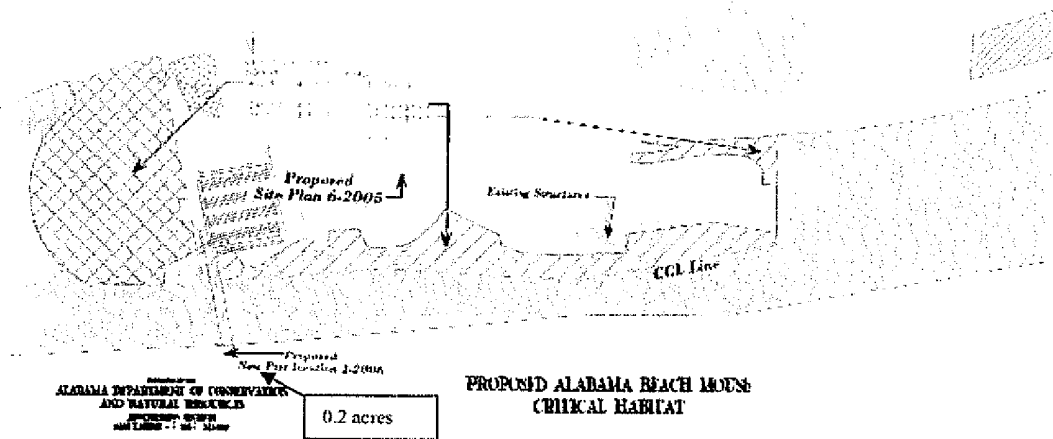


Figure 2. Current HCP boundary (solid red outline), proposed project site boundary (purple dashed outline), proposed new pier location, and proposed critical habitat (blue swirl), Gulf State Park, Gulf Shores, Alabama.

The permittee's HCP provides conservation measures that minimize the adverse effects of construction and human occupation on the ABM and to avoid adverse effects to nesting sea turtles. Should unforeseen or changed circumstances arise, the plan includes adaptive management procedures. The specific conservation measures, monitoring, and adaptive management features provided in the permittee's HCP are incorporated by reference.

The following "Action Area" should replace the same section in the original BO.

Action Area

The 137.8 acre action area for the original BO remains unchanged for this amendment. With this revision, the disturbed land within the project area is reduced from 44.3 to 42.5 acres (1.8 acres). The revised construction activities proposed by this amendment increase the project boundary to the south and north by 6.2 acres, while reducing the project boundary on the west end by 8.0 acres and restoring it as ABM habitat, which results in a 1.8 acre net gain of ABM habitat.

The following six paragraphs should be placed at the end of the "Analysis..." section in the original BO.

Analysis of the species/critical habitat likely to be affected

The ABM population within the action area would be directly and indirectly affected by the proposed project. Affects to ABM would be from loss of natural habitat due to project construction and/or permanent infrastructure and associated effects including lighting; the presence of humans using the property; beach access and use; presence of trash and refuse; predators and competition; and habitat fragmentation.

This biological opinion and conference report does not rely on the regulatory definition of "destruction or adverse modification" of critical habitat at 50 CFR §402.02. Instead, we have relied upon the statutory provisions of the Act to complete the following analysis with respect to critical habitat. All GSP lands (191 acres) south of Alabama Highway 182 are designated as ABM critical habitat. Some of this area, however, has been disturbed by paving, building construction, etc., and does not exhibit the constituent elements of critical habitat. Within the 137.8 acre project area, only 90.2 acres exhibited constituent elements of critical habitat prior to landfall of Hurricane Ivan.

Prior to landfall of Hurricane Ivan on September 16, 2004, this critical habitat area was occupied due to successful ABM reintroductions by the Service in 1998. On February 1, 2006, we published a proposed rule to re-designate critical habitat for the ABM (Service 2006), revising the original (1985) designation for the subspecies (Service 1985). The proposed rule includes a portion of GSPs action area.

The original HCP considered the fishing pier as continuing to exist in the project area, and had no impacts on ABM. In 2006, Federal Emergency Management Agency agreed to provide funding to ADCNR for the pier replacement project, provided it was shifted slightly eastward to

a more stable location (within the HCP). The new pier would be wider and longer than the original; however, its appearance, use, and impacts on the human environment would be the same as the original. Through recent meetings with Gulf State Park and Daphne Field Office staffs, a landmark sea turtle friendly lighting plan for the replacement pier was favorably resolved, as the lighting on the former pier was not sea turtle friendly. Additionally, there was agreement to construct the pier outside of sea turtle nesting season.

The evaluation of the effects of the proposed action on sea turtles and piping plovers under section 7 of the Act also remains unchanged in this amendment. The proposed action should have “no effect” on piping plovers and a “not likely to adversely affect” for the green sea turtle, loggerhead sea turtle, and Kemp’s ridley sea turtle.

Hurricanes

The landfall of Hurricane Ivan on September 16, 2004, impacted the majority of habitat throughout the entire range of ABM. Comparisons of aerial photographs taken before and after the storm show ABM habitat was reduced and/or reconfigured in most areas. A significant portion of primary and secondary dunes was flattened, and suspected ABM tracks were observed in a limited number of places. After Hurricane Ivan, we believe ABM were reduced in distribution, and likely reduced in density, compared to pre-hurricane levels and that ABM were possibly extirpated in much of the low-lying habitat within their range, including GSP.

Several weather events in 2005 had varying degrees of additional impact on the remaining ABM habitat. Tropical Storms Arlene and Cindy, and Hurricane Dennis caused some storm surge flooding in the general area; Hurricane Katrina’s storm surge elevations were nearly that of Hurricane Ivan in 2004. However, these storms had little additional impact on ABM habitat in GSP. The majority of scrub habitat was not substantially altered and much of the dune vegetation that had reestablished after 2004 remained. Sea turtles were also impacted by the 2004 and 2005 storms. Loss of nests occurred and storm surge may have affected nest viability. In addition, threats to sea turtles and ABM from predators continue to be present.

The following two paragraphs should be added to the original BO in the identified sections.

ENVIRONMENTAL BASELINE

Status of the species within the action area

The combined effects of repeated hurricanes in 2005, and predation, have likely not changed the status of ABM at GSP. ABM trapping conducted after Hurricane Ivan led us to determine there were no beach mice present at GSP. Since then, several storms coupled with the continued existence of predators lead us to determine ABM are still not present.

Factors affecting species environment within the action area

This amendment provides an additional 1.8 acres of ABM habitat to be restored within the action area. These habitat enhancement/restoration efforts will hasten recovery of the dune ecosystem

which was impacted by Hurricane Ivan. Reintroduction to these enhanced/restored habitats can be undertaken in the future to aid in recovery of ABM.

The following seven paragraphs should be added to the original BO in the identified sections.

EFFECTS OF THE ACTION

Factors to be considered

For those species with fluctuating populations, such as ABM, impacts cannot be accurately assessed on the sole basis of numbers affected. To overcome this limitation we will continue to use a corresponding measure, the amount of ABM habitat lost due to construction, to determine the impact to ABM for this project.

Construction activities proposed by this project cover 42.5 acres and will result in adverse impacts to 17.8 acres of pre-Hurricane Ivan ABM habitat. Conservation measures offered by the permittee include the restoration of another 22.7 acres of dune habitat within the 137.8 acre action area. Thus, upon completion of the entire project, a net gain of 4.9 acres of pre-Hurricane Ivan ABM habitat would have been realized. However, since Hurricane Ivan altered virtually all available ABM habitat in GSP, the suitable habitat acreage lost to the project is currently 0. The project will restore a total of 22.7 acres of suitable habitat for the ABM, all of which is a net gain when compared to the current post-Hurricane Ivan condition of 0 acres.

Table 1. Comparison of acreages to be impacted by project construction.

	Habitat Suitable for ABM in GSP (acres)	ABM Habitat Lost to Construction Previous Proposal (acres)	ABM Habitat Lost to Construction Current Proposal (acres)	ABM Habitat to be Restored Previous Proposal (acres)	ABM Habitat To Be Restored Current Proposal (acres)	Net Gain in ABM Habitat Previous Proposal (acres)	Net Gain in ABM Habitat Current Proposal (acres)
Pre-Hurricane Ivan Conditions	110	11.6	17.8	14.7	22.7	3.1	4.9 (3.1+1.8)
Post-Hurricane Ivan Conditions (Existing Conditions)	0	0	0	14.7	22.7	14.7	22.7

Analysis for the effects of the action

Beneficial effects

Once the project is complete and the 22.7 acres of ABM habitat is restored, the action area will provide better habitat than post-hurricane conditions. As amended, the project will provide a 4.9

acre net gain in ABM habitat (3.1 acres from previous design plus 1.8 acre net gain from current proposal).

Direct Effects

If present, ABM may be injured or killed by becoming entombed or crushed in their burrows during site preparation for construction. If present, the activities of individual ABM may be altered by construction noise and/or lighting and the presence of construction equipment and stockpiled materials. However, due to the effects of Hurricane Ivan and later storm events, it is possible that currently ABM are not present at the site. Limited, visual observation surveys completed at GSP since Hurricane Ivan have not documented the presence of ABM. The number of ABM actually killed or injured cannot be accurately predicted because their density cannot accurately be determined. Habitat alterations, including features within designated and proposed critical habitat associated with project development, would disturb dune plants and sites used by ABM for feeding, burrowing, sheltering, and nesting on 17.8 acres during project construction. Additionally, 22.7 acres of dune habitat will be restored through project implementation and should provide suitable ABM habitat once restoration is complete. Therefore, as dune habitats continue to recover post-Ivan, ABM habitat would experience a net gain of 4.9 acres compared to pre-Hurricane Ivan levels and an even greater gain compared to the situation immediately post-Hurricane Ivan (+22.7 acres). Restoration of dune habitat should hasten recovery of the ecosystem and will be particularly important to ABM persistence in the aftermath of destruction caused by Hurricane Ivan and later storms.

Indirect Effects

Indirect effects typically include support of potential competitors through inadequate refuse management; introduction of artificial lighting; the introduction of predators such as the domestic/feral cat; and fragmentation of ABM habitat. All of these factors would reduce the ABM population in this area if ABM still exist or are reintroduced to the area later. The permittee has proposed actions that would minimize the likelihood of potential competition from house mice, the introduction of artificial lighting, and support of predators.

Habitat fragmentation is not an issue at the proposed project site, which lies on the eastern edge of ABM habitat. GSP is publicly owned and is unlikely to experience further development of the coastal dune system.

Species' response to a proposed action

The proposed action would render 17.8 acres of ABM habitat in the action area unavailable (by building construction) to ABM, followed by 22.7 acres of dune habitat restoration, thus resulting in a net gain of 4.9 acres of habitat available for occupancy by ABM. Adverse impacts to species recovery and long term resilience because of the project are not significant. The restoration of dune habitat should enhance persistence of ABM by hastening recovery of dunes damaged/destroyed by Hurricane Ivan. Indirect effects due to illumination from lighting associated with the project as well as other indirect effects identified above have been minimized.

The following paragraph should be added to the original BO in the identified section.

CUMULATIVE EFFECTS

Cumulative effects include the impacts of future State, local, or private actions that are reasonably certain to occur in the action area considered in this biological opinion. Future Federal actions that are unrelated to the proposed action are not considered in this section because they require separate consultation under section 7 of the Act. The action area is owned by ADCNR and is unlikely to experience further development of its coastal dune system. Any future actions would likely be covered under section 7 consultation or section 10 permit reviews and, therefore, are not considered here.

The following two paragraphs should be added to the original BO in the identified section.

CONCLUSION

After reviewing the current status of ABM, the environmental baseline for the action area, the effects of the amended proposed project, and the cumulative effects, it is the Service's biological opinion that the project, as proposed, is not likely to jeopardize the continued existence of the ABM. Based on the foregoing analysis, it is the Service's Conference Report that the actions, as proposed, are not likely to destroy or adversely modify ABM CH or proposed CH. Areas of GSP, which provided habitat for ABM prior to Hurricane Ivan, have been reconfigured and individual ABM have likely been displaced and/or eliminated. Initial post-storm habitat assessments revealed the severe alteration of ABM habitat within the action area. Additionally, no ABM tracks were found in the remaining beach dune areas. The Service has assumed, based on current conditions and experience with the ABM population at GSP, that ABM may have been extirpated from this area. Additional tropical storms and hurricanes in 2005, did not substantially change these habitat conditions. Reintroduction of ABM to GSP will likely be required in the near future to reestablish this population. The proposed project will aid those efforts by restoring habitat to a condition capable of supporting ABM, and will ultimately result in a net gain of ABM habitat. With implementation of this proposed project, designated and proposed critical habitat will remain functional for the species.

Of the 90.2 acres of CH in the action area prior to Hurricane Ivan, 17.8 acres will be impacted by the footprint of the project. However, dune habitat restoration on 22.7 acres will result in habitat suitable for use by ABM, which is an increase of 22.7 acres over the current amount of habitat available for ABM. As post-Ivan dune habitats recover, ABM habitat will experience a net gain of 4.9 acres compared to project implementation under pre-Ivan conditions, and an even greater gain compared to the situation immediately post-Ivan (+22.7 acres). Critical habitat, both designated and proposed, will continue to serve the intended conservation role for the species.

The following paragraph should be added to the original BO in the identified section.

AMOUNT OR EXTENT OF TAKE ANTICIPATED

The Service anticipates that incidental take of this species during construction will be difficult to detect in that ABM may not be currently present (subsequent to Hurricane Ivan), and even if ABM were present, it is unlikely that a dead or impaired individual would be found. Therefore, the maximum level of anticipated incidental take is based on the amount of ABM habitat to be impacted by the project. If take occurs, it would likely occur on the 17.8 acres that will be constructed and would likely be in the form of wounding, killing, harming, or harassment. If ABM remain or are reintroduced to the area, additional incidental take may occur later during habitat restoration on 22.7 acres, and through occupancy of the new construction. Such take would likely be in the form of wounding, killing, harming, or harassment due to disturbance and habitat destruction. Thus, the anticipated maximum level of take of ABM that could occur is on a total of 40.5 acres due to initial construction and subsequent habitat restoration efforts because of issuance of the Incidental Take Permit for this project. Take is anticipated for all individual ABM that may occur within the 40.5 acres of habitat, which would be disturbed. With implementation of this proposed project, the entire designated critical habitat will remain functional for the species. The proposed project will not adversely impact more than 40.5 acres of ABM habitat.

Table 2. Summary Explanation of Acreages

Acreages	Definition	Source
8.0	Reconfigured project footprint removes 8 acres from project by restoring former pier parking lot to ABM habitat.	GSP 6/16/2006 letter
6.2	Reconfigured project footprint adds 6 acres to south and north of project plus 0.2 acres for replacement of pier.	GSP 6/16/2006 letter
1.8	Acres gained by reconfigured project footprint.	$8.0 - 6.2 = 1.8$
42.5	Recalculated Action Area with reconfigured project footprint.	$44.3 (2004 \text{ B.O.}) - 1.8 = 42.5$
17.8	Recalculated adverse impacts to ABM habitat.	$11.6 (2004 \text{ B.O.}) + 6.2$
22.7	Recalculated conservation measures with reconfigured project footprint.	$14.7 (2004 \text{ B.O.}) + 8.0$
4.9	Recalculated net gain of ABM habitat with reconfigured project footprint.	$3.1 (2004 \text{ B.O.}) + 1.8 = 4.9$
40.5	Recalculated anticipated maximum level of take of ABM with reconfigured project footprint.	$22.7 (2004 \text{ B.O.}) + 17.8$

The following paragraph should be added to the original BO in the identified section.

EFFECT OF TAKE

In the accompanying BO, the Service determined that this level of expected take is not likely to result in jeopardy to the species or permanent destruction or adverse modification of CH.

The following paragraph should be added to the original BO just before the "CONSERVATION RECOMMENDATION" section.

The Service believes that no more than a total of 40.5 acres of ABM habitat will be disturbed during facility construction, habitat restoration, and facility occupancy. All ABM within the

40.5 acres would be incidentally taken because of our issuance of an ITP for this project. The 17.8 acres of habitat to be destroyed by construction will then be followed by restoration of 22.7 acres of dune habitat in the action area. As post-Ivan dune habitats recover, ABM habitat would experience a net gain of 4.9 acres compared to project implementation under pre-Ivan conditions, and an even greater gain is realized when compared to the situation immediately post-Ivan (+22.7 acres). We would expect the amount of incidental take from indirect impacts to be insignificant (as defined by the Service handbook) at this time. If, during the course of these actions this level of incidental take is exceeded (i.e. increased acreage of disturbed areas), such incidental take represents new information requiring reinitiation of consultation and review of the reasonable and prudent measures provided. The permittee must immediately provide the Service with an explanation of the causes of the taking and review with the Service the need for possible modification of the reasonable and prudent measures.

The following three paragraphs should replace those in the original BO following the "REINITIATION NOTICE."

REINITIATION NOTICE

This concludes formal consultation on the action outlined in the request. As written in 50 CFR §402.16, reinitiation of formal consultation is required where discretionary Service involvement or control over the actions has been retained (or is authorized by law) and if:

- (1) the amount or extent of incidental take authorized by this BO is exceeded;
- (2) new information reveals effects of the Service's action that may affect listed species or designated CH in a manner or to an extent not considered in this BO;
- (3) the Service's action is subsequently modified in a manner that causes an effect to the listed species or designated CH not considered in this opinion; or
- (4) a new species is listed or CH designated that may be affected by the actions.

In instances where the amount or extent of incidental take is exceeded, any operations causing such take must cease until reinitiation of consultation is completed.

For this BO, the incidental take would be exceeded when the take exceeds 17.8 acres of ABM habitat or take of any ABM located outside of these acres, which is what, has been exempted from the prohibitions of section 9 of the Act by this opinion.

Thank you for your assistance. If you have any questions or need additional information, please contact Ms. Dianne Ingram at (251) 441-5839.

Sincerely,



William J. Pearson
Field Supervisor

Add the following literature cited to the original BO.

LITERATURE CITED

U.S. Fish and Wildlife Service. 2006. Endangered and Threatened Wildlife and Plants: Proposed Rule for Revising Critical Habitat for the Alabama Beach Mouse. Federal Register 71:5515-5546.