United States Department of the Interior

FISH AND WILDLIFE SERVICE
South Florida Ecological Services Office
1339 20th Street
Vero Beach, Florida 32960

December 11, 2006

Colonel Paul L. Grosskruger
District Commander
U.S. Army Corps of Engineers
701 San Marco Boulevard, Room 372
Jacksonville, Florida 32207-8175

Service Federal Activity Code: 41420-2006-FA-0885
Section 7 Activity Code: 41420-2006-F-0884
Corps Application No.: SAJ-2006-3929 (NW-MAE)
Formal Consultation Initiation Date: October 5, 2006
Applicant: Southwest Florida Land 163, LLC
Project: Chapel Creek Development
County: Lee

Dear Colonel Grosskruger:

This document transmits the Fish and Wildlife Service's (Service) biological opinion for a residential and commercial development known as Chapel Creek (project), which is located in Lee County, Florida, and its effects on the bald eagle (*Haliaeetus leucocephalus)* nest LE-068 in accordance with section 7 of the Endangered Species Act of 1973, as amended (Act) (87 Stat. 884; 16 U.S.C. 1531 et seq.).

This biological opinion is based on information available on nest LE-068 provided to the U.S. Army Corps of Engineers' (Corps), a Bald Eagle Management Plan (BEMP), and biological analyses prepared by the environmental consultant for this project, telephone conversations, meetings, and other sources of information. A complete administrative record of this consultation is on file in the South Florida Ecological Services Office, Vero Beach, Florida.

Consultation History

On July 20, 2006, the Corps requested written concurrence with the determination of "may affect, but is not likely to adversely affect" the bald eagle.

On July 25, 2006, the Service met with project representatives to review the proposed bald eagle management and site plans for the Chapel Creek project. Based on the proposed construction plans, the Service determined this project needed to undergo formal consultation and requested the Corps a revised determination for the bald eagle.

On September 1, 2006, the Service received additional information and a revised bald eagle management plan.

On November 30, 2006, the Corps provided a revised "may affect" determination for the bald eagle. By this same correspondence the Corps requested initiation of formal consultation.

BIOLOGICAL OPINION

DESCRIPTION OF PROPOSED ACTION

The applicant proposes to construct a mixed-use development. The project includes construction of residential and commercial units and associated infrastructure. The 143-acre project parcel is located in Lee County, Florida (Figure 1). The 18.5 acres of wetlands on-site are composed of 9.11 acres of mixed wetlands hardwoods, 2.86 acres of freshwater marshes, 2.07 acres of streams and waterways (Chapel Creek), 1.52 acres of Cypress (*Taxadium spp.*) wetlands, 1.45 acres of Cypress-Pine (*Pinus spp.*)-Cabbage Palm (*Sabal palmetto*), and 0.26 acre of exotic wetland hardwoods. The 124 acres of uplands on-site are composed of 59.41 acres of sod farm, 16.6 acres of palmetto (*Serenoa/Sabal spp.*) prairie, 12.58 acres of pine flatwoods, and 13.13 acres of cabagge palm. Other upland cover types are represented in smaller proportions. The applicant proposes to discharge 2,500 cubic yards of fill material in 0.42 acre of jurisdictional wetlands. As compensatory mitigation for wetlands impacts, the applicant proposes on-site compensation that includes the preservation, restoration, and enhancement of 15.35 acres of wetlands and 21.27 acres of uplands. The project parcel is bounded on the north by the proposed Oak Creek residential development, on the east by a railroad grade, industrial park, and undeveloped lands, on the south by Bayshore Road, and on the west by undeveloped lands, in Section 20, Township 43 South, Range 25 East, Lee County, Florida

Bald eagle nest LE-068 constructed during the 2001-2002 nesting season in a live slash pine is (*Pines elliottii*) located approximately 700 feet north of Bayshore Road (Figure 2). Information obtained from Lee County Division of Environmental Sciences indicated that during the 2001-2002 nesting season two young successfully fledged. During the 2002-2003 nesting season three young successfully fledged. During the 2003-2004 nesting season, the nest was active, however fledgling success was not observed. During the 2004-2005 nesting season one juvenile was observed in April. During the 2005-2006 nesting season one juvenile was observed in the nest during April 2006.

The applicant proposes to construct residential housing units between 350 and 660-foot radius from the nest. These units will be multi-family units that are approximately 35 feet in height. A wetland and upland preserve area is located to the west of the eagle nest extending to the west approximately 750 feet. Additional, multi-family units will also be constructed, along with a small commercial component adjacent to Bayshore Road, outside of the 660-foot radius. These buildings will also be approximately 35 feet in height. A water management lake is proposed within 300 feet radius from the nest. Residential housing units and driveways will be built along with water management lake facilities between 350 and 660-foot radius from the nest.

To minimize the potential effects of this project on nest LE-068 the applicant proposes to adopt conservation measures as follow:

1) Infrastructure associated with the Chapel Creek project within 660 feet of the nest will be initiated during the non-nesting season (May 16 through September 30) shortly after the fledging of the eaglets. If construction work within 350 and 660 feet of LE-068 is not completed by the beginning of the subsequent nesting season, construction activities may occur during the nesting season (October 1 through May 15) while the nest is being monitored with a protocol consistent with the Bald Eagle Monitoring Guidelines (Service 2006). The purpose of monitoring shall be to document the nesting activity at nest LE-068, and to ensure nesting activity is not disrupted by construction activities. All other construction, outside of the 660-foot radius may occur at any time.

2) The applicant will establish an eagle nest preservation buffer around LE-068 as depicted on Figure 2. Within a 330-foot radius of the LE-068 nest tree, no development other than construction of a storm water management lake will occur. The applicant may construct the storm water management lake beyond the drip-line and 265 feet to the east, north, and south of the LE-068 nest tree. The applicant also will establish a native vegetation buffer to the north of the LE-068 nest tree in the southern end of the Project, along the boundaries of and between the multi-family residential areas and the nest tree.

3) The applicant will not remove native vegetation within the eagle nest preservation. The applicant will conduct exotic removal and other maintenance activities within this area only during the non-nesting season. The applicant will provide supplemental plantings of slash pine (*Pinus elliottii*) trees at the southern end of the Project, to buffer the residential units and the clubhouse, from the eagle nest. This buffer will consist of 10-foot tall slash pines, planted on 20-foot centers. In addition, the applicant will plant slash pine trees in the eagle nest buffer/preserve area to provide additional buffering to LE-068. Approximately 305 slash pines or live oak (*Quercus virginiana*) will be planted on 20-foot centers within the 2.8-acre buffer to the north of the nest tree. The installation of these plantings will be concurrent with the commencement of Project construction.

4) The applicant will place signs at the perimeter of the eagle nest preservation area in the vicinity of the residential development to alert the public of nest LE-068. The applicant's signage will advise against entry into the preserve area during the nesting season.

5) The applicant will prohibit use of chemicals known to be potentially toxic to wildlife within all designated preserve areas.

6) The applicant will shield and direct outdoor lighting in the Project away from the eagle nest tree.

7) The applicant will make a donation of $35,100 to help support and augment funds available to the FWC to undertake more aerial reconnaissance of bald eagle nests for the regional population in central Florida, which includes Lee County. The cost of $35,100 was determined based on the following calculation:

$650/hour (includes salary and flight costs)	X	18 hours (estimated time to fly Lee County per year)	X	3 years	=	$35,100

The applicant will contribute $35,100 to FWC within 10 business days of issuance of the Corps permit. The applicant will notify the Service on this transaction by sending the Service a copy of the deposit form and check to document the delivery of payment to the FWC.

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STATUS OF THE SPECIES

This section summarizes the bald eagle biology and ecology as well as information regarding the status and trends of the bald eagle throughout its entire range. The Service uses this information to assess whether a Federal action is likely to jeopardize the continued existence of above mentioned species. The "Environmental Baseline" section summarizes information on status and trends of the bald eagle specifically within the action area. This summary provides the foundation for the Service's assessment of the effects of the proposed action, as presented in the "Effects of the Action" section.

The bald eagle was listed as endangered on March 11, 1967, due to significant population declines (32 FR 4001). On July 12, 1995, the bald eagle's status was downgraded from endangered to threatened, due to substantial population increases following conservation efforts, including the banning of DDT and other organochlorine pesticides (60 FR 36010). No critical habitat has been designated for this species. At the time of this writing, the Service is evaluating public comment on the proposed delisting of the bald eagle under the Act, addition of a definition of "disturb" to the Bald and Golden Eagle Protection Act (BGEPA), and implementation of National Bald Eagle Management Guidelines.

Distribution

The bald eagle was historically found throughout the North American continent from the Aleutian Islands and western Alaska to the Maritime Provinces of Canada and south to the Florida Keys, the Gulf Coast, and Baja California (Curnutt 1996). Apart from Alaska, most nesting bald eagles were found in Florida, the Chesapeake Bay area, the Great Lakes region, Maine, and the Pacific Northwest. In Florida, eagles were historically found throughout the State, although they were probably most abundant along large rivers and lakes. Eagles were probably never numerous in the panhandle or extreme southeastern Florida. Today, bald eagle

nesting is prevalent along the south coast, the Gulf Coast from Pinellas County north to the Suwannee River, the St. Johns/Oklawaha River basins, and the Kissimmee River valley including Polk and Osceola Counties (Curnutt 1996).

Habitat

Bald eagles are considered a water-dependent species typically found near estuaries, large lakes, reservoirs, major rivers and some seacoast habitats (Service 1999). Their distribution is influenced by the availability of suitable nest and perch sites near large, open water-bodies, typically with high amounts of water-to-land edge.

Nesting habitat includes the nest tree, perch and roost sites, and adjacent high use areas, but does not include foraging areas. The nest, perch, roost sites, and use areas around the nest tree comprise the nesting territory. The size and shape of a defended nesting territory varies greatly depending on the terrain, vegetation, food availability, and eagle density in the area. Generally, bald eagle nesting habitat is adjacent to, or near large bodies of water that are used for foraging (Service 1999). Nest sites must also provide good visibility, and a clear flight path to the nest (Montana Bald Eagle Working Group 1991).

In Florida, nests are often in the ecotone between forest and marsh or water, and are constructed in dominant or co-dominant living pines (*Pinus spp.*) or bald cypress (*Taxodium distichum*) (McEwan and Hirth 1979). About 10 percent of eagle nests are located in dead pine trees while two to three percent occur in other species such as Australian pine (*Casuarina equisetifolia*) and live oak (*Quercus virginiana*). The stature of nest trees decreases from north to south (Wood *et al.* 1989) and in extreme southwest Florida, eagles nest in black (*Avicennia germinans*) and red mangroves (*Rhizophora mangle*), half of which are snags (Curnutt and Robertson 1994). Nest trees in South Florida are smaller and shorter than reported elsewhere; however, eagles nesting here select the largest trees available (Wood et al. 1989, Hardesty 1991). The small size of nest trees in South Florida relative to other nest sites throughout its range is due to the naturally smaller stature of *Pinus elliottii*, *P. taeda*, *P. Palustris*, and *P. clausa* in south Florida.

Reproduction

Most breeding eagles construct nests within several hundred yards of open water (Service 1998). In Florida, most nests are located within 2 miles of open water, substantially further than other reported distances (McEwan and Hirth 1979, Wood *et al.* 1989).

In the southeastern United States bald eagles nest once a year, with the mated pair returning to the same breeding/nest area beginning in early September or October, refurbishing their nest during November and December, and egg laying in December or January. Depending on the geographic area, incubation may be initiated as early as November or as late as March, with the eggs requiring about 35 days for incubation. Clutches usually consist of one or two eggs, but occasionally three are laid. In Florida, the eaglets will grow to the size of the adult birds within 10 to 12 weeks, at which time they typically fledge (Wood 1997). Parental care may extend four to 6 weeks after fledging even though young eaglets are fully developed and may not remain at the nest after fledging.

The immature bald eagle lacks the white head, neck and tail, and has a dark beak and dark eyes. The overall color of young eaglets is dark to light brown with light-colored base feathers that give a blotchy appearance. The white head and tail plumage may not appear complete until the eagle is 4 to 5 years of age.

Foraging

The bald eagle is an opportunistic feeder. Accordingly, its diet varies tremendously, depending on the time of year and habitat. Most studies indicate that fish are an important component of the eagle's diet, while birds and mammals account for the bulk of the remaining foods (Johnsgard 1990). During the winter, reduced availability of prey resulting from frozen waters require interior-based eagle populations to switch from a predominantly fish diet to one of birds and mammals. Carrion is taken by many eagles and is also a substantial portion of the diet, especially for coastal eagles dependent on post-spawning salmonids. Non-coastal populations may also rely heavily on carrion particularly during the late winter and early spring.

In the southeastern United States the bulk of the diet is fish. Broley (1947) found catfish (*Ictalurus spp.*), mullet, and turtles to be the most common food items found at nests in Florida. He also found that the variety of prey items differ among individual pairs. McEwan (1977) reported 79 percent fish and 17 percent bird prey, by occurrence, based on 788 animal remains recovered from nests. Of these, the dominant items were catfish and the American coot (*Fulica americana*).

Movements

Adult birds in coastal Alaska, Canada, the Pacific Northwest, Florida, and the Chesapeake Bay areas do not migrate, although dispersal of young may occur seasonally from some of these areas. Juvenile birds fledged in Florida are highly migratory, with more than one-third of the recoveries made 1,000 miles or more north of Florida, all during the non-nesting season (Broley 1947). If paired, it is assumed these birds remain in Florida, as do most other paired adults. If not paired, it is not clear whether these birds continue to migrate north during summer or remain in Florida with the breeding adults. Most radio-collared juveniles return to nesting areas each year, but a small proportion remain away for 2 to 3 years.

In Florida, bald eagles breed and nest during the temperate winter. Contrary to changes in habitat use exhibited by northern U.S. bald eagle populations, eagles in the Southern United States do not substantially alter habitat use throughout the year. Some adults may remain in and defend their nesting territory outside of the breeding season (Palmer 1988), use or defend portions of their territory, or disperse and congregate at predictable food sources such as landfills. Of those adults that do not maintain territories throughout the year, most are not thought to leave the State. Conversely, following fledging, many juvenile eagles disperse north and summer from along the Atlantic Coast west to the Appalachian Mountains and north as far as Canada (Broley 1947, Wood and Callopy 1995).

Status and trends

Bald eagle nesting in Florida has been widely studied and published accounts are available from a variety of sources. Broley (1947) was the first to document a decline in eagle nesting in the

late 1940s. A further decline from 73 to 43 active nesting areas was reported for west central Florida between 1936 and 1956. Howell (1973) reported a decline in nesting around Merritt Island from 24 nests in 1935 to four nests in 1971. An excellent summary was provided by Peterson and Robertson (1978), in which they characterized the bald eagle population of the 1970s as less than 50 percent of historic numbers with continued, yet slow decreases.

In the early 1950s, State natural resource agencies, and conservation organizations initiated surveys for nesting bald eagles which revealed bald eagle numbers declined from historic numbers in many locations. A nationwide survey by the Service, several State wildlife agencies, and conservation groups in 1974 indicated eagle numbers and their reproductive success in certain areas were low enough to warrant protective actions.

In Florida, bald eagle nesting and productivity has increased dramatically since the early 1970s. Florida currently supports the highest number of breeding eagles of any southeastern state, supporting approximately 70 percent of the occupied territories in this region (Nesbitt 1995). Although numbers and productivity of bald eagles are increasing in Florida, concerns remain about the cumulative impacts associated with continued agricultural, residential, and commercial development (Wood 1987, Nesbitt 1995).

As shown in the table below, there has been a steady increase in the number of bald eagle nests in Florida since 1982.

YEAR	No. OF NESTS
1982	340
1984	375
1987	391
1988	399
1989	439
1990	535
1991	601
1992	652
1993	667
1994	764
1995	831
1996	847
1997	912
1998	980
1999	1,043
2000	1,069
2001	1,102
2002	1,133
2003	1,133

Threats

A primary threat to bald eagles after World War II was the widespread use of the pesticide DDT for mosquito control (Broley 1950). It was sprayed directly into wetlands, entered the food chain, and resulted in eggshell thinning. This caused massive reproduction failure which became evident in the 1960s. Peterson and Robertson (1978) indicated the eagle population decreased by 50 percent in a 30-year period. In response, the Federal Government banned the use of DDT in 1972.

A major threat to eagles remains habitat loss and degradation from human alteration of the environment (Heinzman 1961, 1962 and G. Smith 1969). This is especially true along coasts and waterways where development has increased. An additional hazard to eagles occurs predominantly in the western U.S., and involves death from lead and chemical poisoning. Lead poisoning originates from lead shot that remains in dead or dying birds, and chemical poisoning from the intentional poisoning of nuisance animals. The effects to the eagles are secondary.

ENVIRONMENTAL BASELINE

Status of the species within the action area

The action area (area) is defined as the 143-acre site of the proposed project and includes all habitat features of the area that may be utilized presently or in the future by bald eagles occupying this territory for nesting, foraging, roosting and/or perching. As noted in the Description of the Proposed Action, eagle pair at territory LE-068 has been active since the 2001-2002 nesting season when three young successfully fledged. During the 2003-2004 nesting season, the nest was active, however fledgling success was not observed. During the 2004-2005 nesting season one juvenile was observed in April. During the 2005-2006 nesting season one juvenile was observed in the nest during April 2006. It is presumed most foraging occurs in lakes at various distances from the project site.

Factors affecting the species within the action area

The project parcel is bounded on the north by the proposed Oak Creek residential development, on the east by a railroad grade, industrial park, and undeveloped lands, on the south by Bayshore Road, and on the west by undeveloped lands.

Currently the project parcel is a mixture of abandoned sod farm and undisturbed lands. When the eagles return to nest, they could be disturbed by the presence of cleared areas, residential development and construction work within 350 feet. This pair of eagles has not been exposed to human activity within 350 feet from the nest during the nesting season.

EFFECTS OF THE ACTION

This section includes an analysis of the direct and indirect effects of the proposed action on the species and critical habitat and its interrelated and interdependent activities. To determine

whether the proposed action is likely to jeopardize the continued existence of threatened or endangered species in the Action Area, we focus on consequences of the proposed action that affect rates of birth, death, immigration, and emigration because the probability of extinction in plant and animal populations is most sensitive to changes in these areas.

Factors to be considered

Individual bald eagles react differently to human activities, but it has become clear as numbers of nesting bald eagles increase in Florida that urbanized eagles are much more adaptive to human activities, habitat alterations, and what previously was assumed to be disturbance than biologists originally perceived. The increase in population numbers likely is due, in part, to the fact survival rates and reproductive performance has responded under the management and conservation efforts of the past 3 decades. It also is due to the presence of adequate nesting habitat or structures, sufficient food sources for rearing young in some necessary proximity nesting sites, and an existing degree of protection from human related disturbance that is less than originally perceived but yet not fully understood or measurable. This reality has become increasingly more evident as bald eagles have constructed new nests and successfully fledged young in conjunction with established and on-going residential developments during recent nesting seasons, especially in the south Florida area.

The Service always recommends a proposed project conform with the Service's *Clearance to Proceed with Construction Activities Adjacent to Bald Eagle Nests – 2006 revision* letter dated June 5, 2006, (Clearance Letter) to the greatest extent possible to minimize the disturbance to the bald eagles on the nest. The applicant has redesigned certain features of the project to minimize effects to the eagles. The project design conforms to certain provisions of the Clearance Letter, but certain provisions that pertain to distances of activities from the nest could only be partially accommodated by redesign.

Analysis for the effects of the action

Beneficial Effects - To minimize and compensate for potential adverse effects to bald eagles in the action area and the bald eagle population in south Florida, the applicant proposes to provide a long-term conservation benefit. The applicant has agreed to contribute $35,100 to help support and augment funds available to the FWC to undertake more aerial reconnaissance of bald eagle nests for the regional population in south Florida, which includes Lee County.

Direct Effects – Bald eagles occupying the action area are likely to be adversely affected by the proposed action. The project may result in direct "take" of the eagles through harm and harassment as a result of the noise and disturbance generated from site work, construction of infrastructure and increased human activities after the project has been constructed. These direct effects could cause the eagles to abandon the nest prior to egg laying, abandon the nest while eggs are in the nest, which would result in embryo mortality, or abandon the nest when chicks are in the nest, which would result in chick mortality.

Project construction will permanently alter much of the remaining habitat beyond 660 feet of nest LE-068. Bald eagles usually are thought to select nest sites that are removed from human disturbance and tend to relocate nests or nesting territories away from encroaching disturbance, if suitable habitat exists (Broley 1947; Fraser et al. 1985). It is anticipated the restrictions placed on construction activities during the nesting season will reduce the effects of construction-related disturbance on this nesting pair.

The applicant has proposed to conduct construction incrementally avoiding potential disturbance of nesting eagles within 350 feet during the nesting season. Most site clearing, roadways, storm water ponds, wetland mitigation areas, and power line right-of-way between 350 and 660 feet will be constructed during the non-nesting season. Existing native vegetative screen will be maintained between LE-068 and the development. The applicant has agreed to implement a phased construction schedule that minimizes disturbance to the eagles during the nesting season (see Description of the Proposed Action). However, given the final construction plans and increased sources and levels of disturbance to eventually be within 350 feet of the nest tree, the impacts may result in nest site abandonment.

Interrelated and Interdependent Actions

There are no interrelated or interdependent actions associated with the proposed action expected to impact bald eagles.

Indirect Effects - Indirect effects are caused by or result from the proposed action, are later in time, and are reasonably certain to occur. Indirect effects may occur outside the area directly affected by the action. Indirect effects may include other Federal actions that have not undergone section 7 consultation but will result from the action under consideration. The types of indirect effects that could result in harm or harassment to the bald eagles from the proposed action could include the following:

(1) The noise and other activities associated with the construction and later occupancy, (activities associated with residential and commercial building) and access roads (automobiles, garbage trucks, and motorcycles) of the proposed development may potentially disturb the eagles nesting at territory LE-068. However, there is vegetated buffer screen between the location of the eagle nest and the proposed residences and buildings. To further isolate the proposed project from the bald eagle nest, this vegetative screen will be thickened by additional planting of trees and appropriate landscaping proposed between the nest tree and the residences.

(2) The increased artificial lighting from the proposed development may adversely affect nesting bald eagles. All lighting around the 350-foot buffer zone is expected to create a glare that could potentially disturb the nesting eagles. However, the existing vegetative screen and additional landscaping is likely to prevent excessive lighting. Additionally, the applicant proposes to shield all lighting from the eagle's nest.

(3) Human activities within close proximity of the nest tree may alter the eagles' nesting behavior. Expected events include pedestrian traffic associated with the presence of proposed development in close proximity of the nest. However, the increment of this activities will be phased allowing the eagle the opportunity of becoming habituated to these disturbances. Additionally, the applicant proposes to install signs strategically located to inform and educate pedestrians on the presence and sensitive periods of a bald eagle's nesting cycle.

(4) Future development at close proximity of the nest may disturb the nesting eagles. Bald eagle nest LE-068 territory and a buffer zone with a 350-foot radius will be preserved and managed in perpetuity.

These indirect effects could cause the eagles to abandon the nest prior to egg laying, abandon the nest while eggs are in the nest, which would result in embryo mortality, or abandon the nest when chicks are in the nest, which would result in chick mortality. However, the measures proposed are likely to minimize the indirect effects of noise, artificial lighting, human activities near the nest, and future development on the nesting eagles.

Species Response to the Proposed Action

Bald eagles generally are more vulnerable to disturbance early in the nesting season, *i.e.*, during courtship, nest building, egg laying, incubation, and brooding (roughly the first 12 weeks of the nesting cycle), and disturbance during this critical period may lead to nest abandonment and/or chilled or overheated eggs or young. Human activity near the nest later in the nesting cycle may cause the eaglet(s) to fledge prematurely, thereby reducing the likelihood of fledgling survival. The Service believes human activity, as outlined in the applicant's BEMP and at the proposed conservation measures in the site plan, will help reduce the probability of resulting in one or more of these negative effects.

In spite of conservation measures proposed, project implementation may result in the eventual abandonment of nest LE-068. The loss of productivity (assuming nest productivity equaled the 10-year statewide average of 1.57) would represent about 0.002 percent of the average annual statewide bald eagle production (Nesbitt 1999). Disturbance associated with the project could result in an immediate one-time abandonment of the nest site based on the construction activities.

Species response to the proposed action

The bald eagle population has recovered in the lower 48 states. Threats to the species have been reduced or eliminated, and reproductive success has significantly increased. The eagle pair at the action area is located adjacent to the proposed RV Resort. The eagle nest predates the proposed project. Accordingly, this eagle pair is likely to respond negatively to the proposed action.

CUMMULATIVE EFFECTS

Cumulative effects include the effects 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 pursuant to section 7 of the Act. The Service has considered cumulative effects of this project on this eagle nest and, in this instance, there are no cumulative effects.

CONCLUSION

After reviewing the current status of the bald eagle, the environmental baseline for the action area, the effects of the proposed action and the cumulative effects, it is the Service's biological opinion the project as proposed, is not likely to jeopardize the continued existence of bald eagles. No critical habitat has been designated for the bald eagle; therefore, none will be affected.

Since 1982, the number of bald eagle nests in Florida has more than doubled. While human disturbance may lead to abandonment of this nest, the eagles will probably build a new nest elsewhere. While the loss of this nest, including eggs or chicks, will not appreciably affect the overall survival and recovery of the bald eagle in Florida, the Service believes that given the protective measures adopted, this bald eagle territory is likely to remain productive and available to bald eagles for many years.

INCIDENTAL TAKE STATEMENT

Sections 4(d) and 9 of the Act, as amended, prohibit taking (harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect or to attempt to engage in any such conduct) of listed species of fish or wildlife without a special exemption. "Harm" and "harass" are further defined in Service regulations (50 CFR 17.3). "Harm" is defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns such as breeding, feeding or sheltering. "Harass" is defined as an intentional or negligent act or omission which creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns, which include, but are not limited to, breeding, feeding or sheltering.

Under the terms of sections 7(b)(4) and 7(o)(2), taking that is incidental to and not intended as part of the agency action is not considered a prohibited taking provided that such taking is in compliance with the terms and conditions of this incidental take statement. The measures described below are non-discretionary, and must be implemented by the agency so that they become binding conditions of any grant or permit issued to the applicant, as appropriate, in order for the exemption in section 7(o)(2) to apply. The Federal agency has a continuing responsibility to regulate the activity that is covered by this incidental take statement. If the agency (1) fails to require the applicant to adhere to the terms and conditions of the incidental take statement through enforceable terms that are added to the permit or grant document or (2) fails to retain oversight to ensure compliance with these terms and conditions, the protective coverage of section 7(o)(2) may lapse.

AMOUNT OR EXTENT OF TAKE

The Service has reviewed the biological information for this species, information presented by the applicant's consultants, and other available information relevant to this action, and based on our review, incidental take, in the form of harm or harassment, is anticipated for the adult bald eagles, their eggs or their young at the LE-068 nest. Harm or harassment may result in the eagles abandoning the nest prior to egg laying, abandoning the nest while eggs are in the nest, which

would result in embryo mortality or abandoning the nest when chicks are in the nest, which would result in chick mortality. Incidental take as described above may occur during the 2007-2008 nesting season and/or subsequent nesting seasons for the life of the project. Nesbitt (1995) analyzed Florida bald eagle nesting data collected from 1973 through 1995 and reported an average of 1.05 bald eagle chicks produced per nesting territory. Using Nesbitt's estimation of bald eagle productivity, the project may result in the take of 1.05 nestlings per year, for those nesting seasons occurring between the time of abandonment and construction a new nest.

EFFECT OF THE TAKE

In the accompanying biological opinion, the Service determined this level of anticipated take is not likely to result in jeopardy to the species.

REASONABLE AND PRUDENT MEASURES

When providing an incidental take statement, the Service is required to give reasonable and prudent measures it considers necessary or appropriate to minimize the take, along with terms and conditions that must be complied with to implement the reasonable and prudent measures. Furthermore, the Service must also specify procedures to be used to handle or dispose of any individuals taken. The Service believes the following reasonable and prudent measures are necessary and appropriate to reduce take and to minimize the direct and indirect effects of the proposed project on the bald eagles, their eggs or their young, and their nesting territory:

The applicant shall implement the following conditions:

> For the duration of the project, the applicant must take all necessary steps to minimize the potential for incidental take of bald eagles during each nesting season. During the construction of the project, the applicant must make reasonable effort to prolong the integrity of the bald eagle nest tree, the nest, and the surrounding habitat. Per the guidance in the *Clearance to Proceed with Construction Activities Adjacent to Bald Eagle Nests* (Service 2006), no monitoring of the eagle nest is necessary for projects occurring beyond 660 feet from the nest.

TERMS AND CONDITIONS

To implement the above reasonable and prudent measures, the Service has outlined the following terms and conditions for incidental take. In accordance with the Interagency Cooperation Regulation (50 CFR 402), these terms and conditions must be complied with to implement the reasonable and prudent measure(s) for incidental take. To implement the reasonable and prudent measures the applicant has agreed to phasing the project construction and implanting the terms and conditions and follows:

1. Infrastructure associated with the Chapel Creek project within 660 feet of the nest will be initiated during the non-nesting season (May 16 through September 30) shortly after the fledging of the eaglets. If construction work within 350 and 660 feet of LE-068 is not

completed by the beginning of the subsequent nesting season, construction activities may occur during the nesting season (October 1 through May 15) while the nest is being monitored with a protocol consistent with the Bald Eagle Monitoring Guidelines (Service 2006). The purpose of monitoring shall be to document the nesting activity at nest LE-068, and to ensure nesting activity is not disrupted by construction activities. All other construction, outside of the 660-foot radius may occur at any time.

2. The applicant will establish an eagle nest preservation buffer around LE-068 as depicted on Figure 2. Within a 330-foot radius of the LE-068 nest tree, no development other than construction of a storm water management lake will occur. The applicant may construct the storm water management lake beyond the drip-line and 265 feet to the east, north, and south of the LE-068 nest tree. The applicant also will establish a native vegetation buffer to the north of the LE-068 nest tree in the southern end of the Project, along the boundaries of and between the multi-family residential areas and the nest tree.

3. The applicant will not remove native vegetation within the eagle nest preservation. The applicant will conduct exotic removal and other maintenance activities within this area only during the non-nesting season. The applicant will provide supplemental plantings of slash pine (*Pinus elliottii*) trees at the southern end of the Project, to buffer the residential units and the clubhouse, from the eagle nest. This buffer will consist of 10-foot tall slash pines, planted on 20-foot centers. In addition, the applicant will plant slash pine trees in the eagle nest buffer/preserve area to provide additional buffering to LE-068. Approximately 305 slash pines or live oak (*Quercus virginiana*) will be planted on 20-foot centers within the 2.8-acre buffer to the north of the nest tree. The installation of these plantings will be concurrent with the commencement of Project construction.

4. The applicant will place signs at the perimeter of the eagle nest preservation area in the vicinity of the residential development to alert the public of nest LE-068. The applicant's signage will advise against entry into the preserve area during the nesting season.

5. The applicant will prohibit use of chemicals known to be potentially toxic to wildlife within all designated preserve areas.

6. The applicant will shield and direct outdoor lighting in the Project away from the eagle nest tree.

7. The applicant will make a donation of $35,100 to help support and augment funds available to the FWC to undertake more aerial reconnaissance of bald eagle nests for the regional population in central Florida, which includes Lee County. The cost of $35,100 was determined based on the following calculation:

$650/hour (includes salary and flight costs)	X	18 hours (estimated time to fly Lee County per year)	X	3 years	=	$35,100

The applicant will contribute $35,100 to FWC within 10 business days of issuance of the Corps permit. The applicant will notify the Service on this transaction by sending the Service a copy of the deposit form and check to document the delivery of payment to the FWC.

Kathleen Hampton
Wildlife Foundation of Florida, Inc.
620 S. Meridian St.
Bryant Building, Room 138
Tallahassee, Florida 32399-1600
850-922-1066 phone
850-921-5788 fax
www.wildlifefoundationofflorida.com

If a dead, injured or sick bald eagle is found at the project site, the initial notification must be made to the Service's South Florida Ecological Services Office immediately at 772-562-3909. The reasonable and prudent measures with their implementing terms and conditions are designated to minimize the impact of individual take that might otherwise result from the proposed action. The Service believes no more than 1.05 nestling, per-year, will be incidentally taken as a result of the proposed action. If, during the course of the action, this level of incidental take is exceeded, such incidental take represents new information requiring initiation of consultation and review of the reasonable and prudent measures provided. The Federal agency must immediately provide and explanation of the causes of the taking and review with the Service the need for possible modifications of the reasonable and prudent measure.

COORDINATION OF INCIDENTAL TAKE STATEMENT WITH OTHER LAWS, REGULATIONS, AND POLICIES

To the extent that this statement concludes take of any threatened or endangered species of migratory bird will result from the agency action for which consultation is being made, the Service will not refer the incidental take of any such migratory bird or bald eagle for prosecution under the Migratory Bird Treaty Act of 1918, as amended (16 U.S.C. §§ 703-712), or the Bald and Golden Eagle Protection Act of 1940, as amended (16 U.S.C. §§ 668-668d), if such take is in compliance with the terms and conditions (including amount and/or number) specified herein.

CONSERVATION RECOMMENDATIONS

Section 7(a)(1) of the Act directs Federal agencies to use their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help carry out recovery plans, or to develop information. To minimize the risk of incidental take, the applicant has agreed to implement the following conservation recommendations:

1. Infrastructure associated with the Chapel Creek project within 660 feet of the nest will be initiated during the non-nesting season (May 16 through September 30) shortly after the

fledging of the eaglets. If construction work within 350 and 660 feet of LE-068 is not completed by the beginning of the subsequent nesting season, construction activities may occur during the nesting season (October 1 through May 15) while the nest is being monitored with a protocol consistent with the Bald Eagle Monitoring Guidelines (Service 2006). The purpose of monitoring shall be to document the nesting activity at nest LE-068, and to ensure nesting activity is not disrupted by construction activities. All other construction, outside of the 660-foot radius may occur at any time.

2. The applicant will establish an eagle nest preservation buffer around LE-068 as depicted on Figure 2. Within a 330-foot radius of the LE-068 nest tree, no development other than construction of a storm water management lake will occur. The applicant may construct the storm water management lake beyond the drip-line and 265 feet to the east, north, and south of the LE-068 nest tree. The applicant also will establish a native vegetation buffer to the north of the LE-068 nest tree in the southern end of the Project, along the boundaries of and between the multi-family residential areas and the nest tree.

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4. The applicant will place signs at the perimeter of the eagle nest preservation area in the vicinity of the residential development to alert the public of nest LE-068. The applicant's signage will advise against entry into the preserve area during the nesting season.

5. The applicant will prohibit use of chemicals known to be potentially toxic to wildlife within all designated preserve areas.

6. The applicant will shield and direct outdoor lighting in the Project away from the eagle nest tree.

REINITIATION NOTICE – CLOSING STATEMENT

This concludes formal consultation on the action outlined in the request. As provided in 50 CFR Section 402.16, reinitiation of formal consultation is required when discretionary Federal agency involvement or control over the action has been retained and if: (1) the amount or extent of incidental take is exceeded, (2) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this biological opinion, (3) the agency action is subsequently modified in a manner that causes an effect to the

listed species or critical habitat not considered in this biological opinion, or (4) a new species is listed or critical habitat designated that may be affected by the action. In instances where the amount or extent of incidental take is exceeded, any operations causing such take must cease pending reinitiation.

Thank you for your cooperation and effort in protecting fish and wildlife resources. If you have any questions regarding this project, please contact Al Begazo at 772-562-3909, extension 234.

Sincerely yours,

Paul Souza
Field Supervisor
South Florida Ecological Services Office

cc:
Corps, Fort Myers, Florida (Melissa Ellis)
EPA, West Palm Beach, Florida
FWC, Punta Gorda, Florida (Jim Beever)
FWC, Tallahassee, Florida (Brad Gruver)
Service, Atlanta, Georgia (Joe Johnston) electronic copy only
Service, Jacksonville, Florida (Bald Eagle Species Lead)

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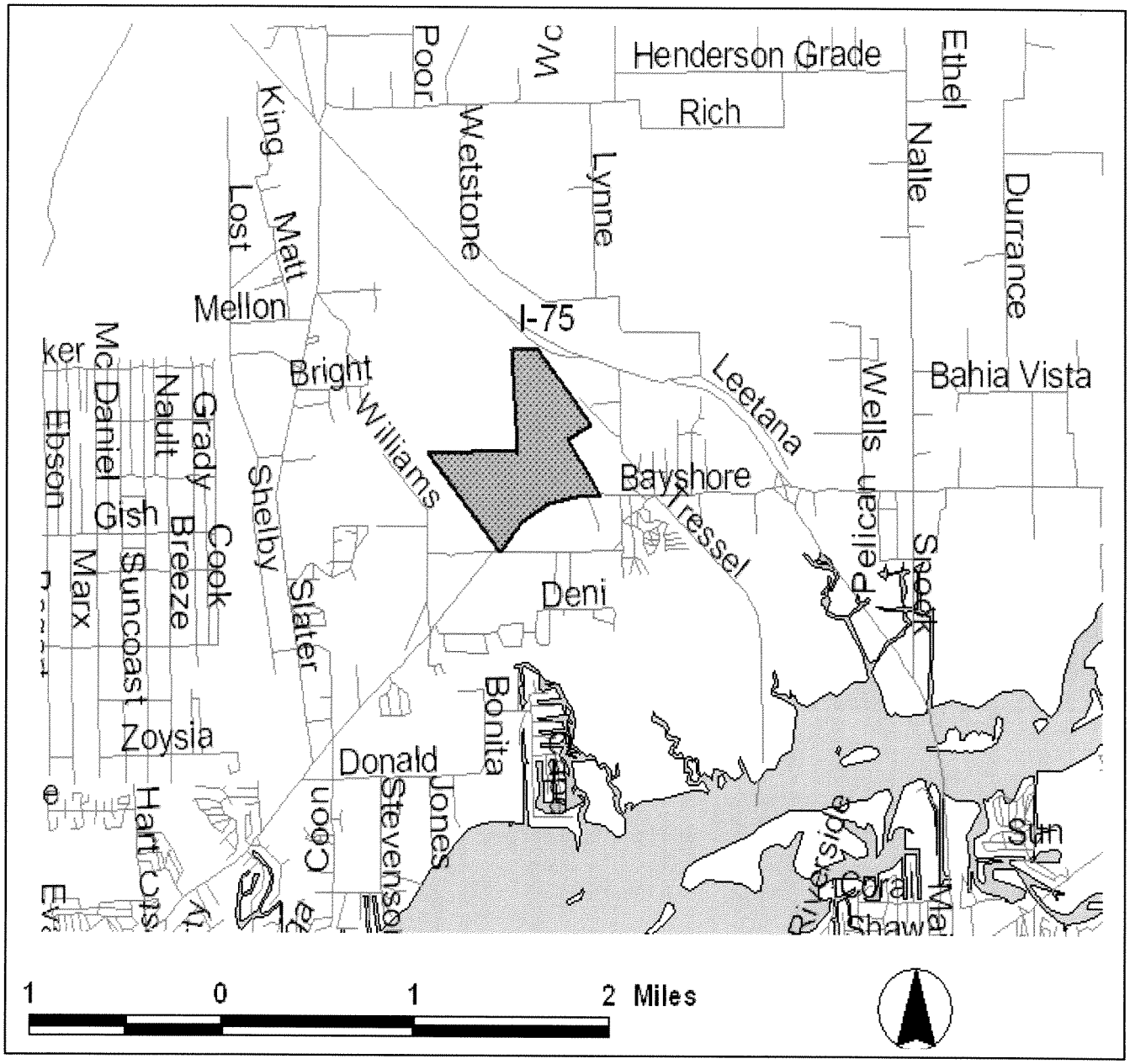

Figure 1. Map of project location in Lee County, Florida.

Figure 2. Site plan showing the location of the proposed project relative to the nest LE-068