United States Department of the Interior

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

January 23, 2008

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: 41420-2007-FA-1506
Service Consultation Code: 41420-2007-F-0996
Corps Application No.: 199404520 (LP-VBA)
Date Received: January 16, 2003
Project: Big Pine Key Park
County: Monroe

Dear Colonel Grosskruger:

This document transmits the Fish and Wildlife Service's (Service) amendment to our Biological Opinion dated January 12, 2006. Our response is based on our review of information received from Monroe County (County), Florida regarding an error in calculating mitigation for the project. The Biological Opinion evaluated the effects of the proposed Big Pine Key Park Marina located on Big Pine Key, Florida, and its effects on the Key deer (*Odocoileus virginianus clavium*) in accordance with section 7 of the Endangered Species Act of 1973, as amended (Act) (87 Stat. 884; 16 United States Code [U.S.C.] 1531 *et seq.*).

The County notified the Service by email on September 7, 2007, that it believed it had incorrectly calculated the estimated population viability analysis "H-value" of the County's proposed compensation for the Big Pine Key Park recreation development. The H-value is an impact assessment value used for compensation calculations on Big Pine and No Name Keys. It is derived from a mathematical model developed for use in the Big Pine/No Name Key Habitat Conservation Plan (HCP) (Monroe County et al. 2006). About 80 percent of the H-value of a property is a traffic function because traffic-related mortality is the largest component of Key deer mortality. The other 20 percent is a habitat component.

The County stated that the property H-value and the HCP's required compensation originally calculated for the site were based on undeveloped land, but that the site was actually commercially developed. The County originally proposed to account for adverse effects of the proposed park to Key deer by compensating for an H-value of 0.11 for the park site and an H-value of 0.0158 for associated road improvements (see calculations in Appendix 2 of the Biological Opinion [Service 2006]) by acquiring parcels to achieve a 3:1 H-value ratio, *i.e.* the County would acquire one or more parcels with a total H value of 0.3774. The property is

currently zoned as a resort and will be rezoned to recreation use for the park (C. Feagin, personal communication, 2007). The property was purchased by the County for redevelopment as a recreation park in 2002. The County asserts that the previous property use was actually a hotel, marina, two residences, and commercial retail space and that redevelopment into a recreation park was beneficial when calculated according to the H-value formulas in the HCP. The County re-calculated the old and new H-values and calculated the difference in H-value between the old and new uses as described in the HCP to be - 0.6099H (see Appendix 1), a negative value, which the County believes should be applied to the overall maximum H-value of 1.1H allowed for all developments on Big Pine and No Name Key per the HCP.

Historical structures used as a hotel, residences, and commercial retail space, including a 14-slip marina, currently exist on the property. However, the County denied a conditional use permit for redevelopment of the property in 1995 (Resolution Number P71-95) based on evidence that the facilities had not been in commercial/retail use since 1986 and that traffic generated by the site was not included in the 1994 Annual Traffic Report, thus contributing to an inadequate level of service on U.S. Highway 1. The Monroe County Planning Commission also found that redevelopment and reoccupation of the restaurant and hotel constituted "development." The status of the existing marina is similar. A February 24, 1995, Memorandum summarizing findings of the County Development Review Committee's February 14, 1995, meeting states on page 5, under item 2. Permitted Uses (Article VII, Division I), "The marina use was established prior to September 15, 1986. Thus, pursuant to Section 9.5-2 (5) (c), the project is deemed to have conditional use approval for the marina use." The Service nonetheless believes that since the marina, hotel and commercial retail space have not been in use since 1986, more than 20 years ago, and the County determined that reoccupying them would constitute "development" in 1995, they can not be considered to be existing uses. The two residences on the property, one of which is currently occupied, have been in use, although not continuous, throughout the time frame of review and are considered existing uses.

Based on the above discussion, the Service has determined that the existing (old) use of the property is two single-family residences. The new proposed use includes a recreation park and one residence. The Service recalculated the redevelopment H-value for these uses and obtained a 0.089 H-value (Appendix 3), a lesser value than the 0.11 H-value calculated in the 2006 Biological Opinion. Therefore, the Service believes that the County must account for the adverse affects of redevelopment represented by a 0.089 H-value for redevelopment and a 0.0158 H-value for road improvements. The total H-value of the entire project is 0.1048H (0.089H redevelopment + 0.0158H road improvements), and the 3:1 H-value compensation is 0.3144, not 0.3774 as originally calculated.

Therefore, **Term and condition 1** in the Biological Opinion is changed to read:

1. Provide compensation by purchasing conservation lands, equivalent to an H-value of 0.3144 before construction begins on the park or road improvements.

All other terms and conditions of the Biological Opinion remain as originally provided.

In response to the second part of your question, if a project site redevelopment results in a negative H-value, can this negative H-value be applied to the overall maximum H-value of 1.1H allowed for all developments on Big Pine and No Name Key per the HCP. The Service reviewed the criteria for calculating H-values in the HCP and found no reference to a negative H-value being applied to the overall maximum H-value of 1.1H. Apparently, negative H-values are only possible for redevelopments that reduce traffic, intensity, or footprints. This is evident in the formula itself for calculating the H-value of redevelopment (Appendix 2, Table 2.6 in the HCP), in which the multiplier for old development is subtracted from the multiplier of the new development. If the value for old development is larger than the new development, the multiplier and, thus, the H-value could be a negative number, indicating a potential reduction in impacts.

However, since this scenario was not anticipated in the effects analysis conducted for future development on Big Pine and No Name Key, the County should consider an evaluation of this concern through a review and reinitiation of consultation with the Service on the Big Pine and No Name HCP and its corresponding incidental take permit.

Thank you for your cooperation and effort in protecting Key deer. If you have any questions on this project, please contact Winston Hobgood at 772-562-3909, extension 306.

Sincerely yours,

Robert I. Pace
for

Paul Souza
Field Supervisor
South Florida Ecological Services Office

cc:
Corps, Miami, Florida (Paul Kruger)
Monroe County Growth Management, Marathon, Florida (Andrew Trivette)
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LITERATURE CITED

Feagin, C. 2007. Personal Communication. Senior Planner, Monroe County. Marathon, Florida

Monroe County, Florida Department of Transportation, Florida Department of Community Affairs. 2006. Habitat Conservation Plan for Florida Key Deer (*Odocoileus virginianus clavium*) and other Protected Species on Big Pine Key and No Name Key, Monroe County, Florida. Monroe County, Marathon, Florida.

Resolution P71-95. 1995. Monroe County Board of Commissioners. File # 990834, BK # 1444, PG # 1591. Monroe County, Florida

U.S. Fish and Wildlife Service. 2006. Big Pine Key Park Marina biological opinion. Vero Beach, Florida

APPENDIX 1

MONROE COUNTY CALCULATION OF MARINER'S RESORT REDEVELOPMENT

Old Use
Commercial Retail
Restaurant 4,861 sf
Lounge 1,000 sf
Bait Shop 1,000 sf
Total 6,861 sf
H Multiplier: 7.4/1000sf = (6861/1000) x 7.4 = MLU2 51
Hotel
26 Rooms
H Multiplier: 0.8 per rooms = .8 x 26 = MLU3 20
Residential 2 SFR
H Multiplier 1 per unit 1 x 2 = MSFR 2

New Use
Recreation
Park 1
H Multiplier = MREC 7

H impact Calculation
H parcel: 0.0483, but fenced, so reduce by 20%; 0.0483 x .8 = 0.0386H
Himpact: commercial retail, hotel, and SFR to recreational land use
Himpact = 0.0386H x {7 –{[(MLU1 51 x 6,861 sf / 435,600 sf) + MLU3 20 + MSFR 2]} =
0.0386H x {7 – [0.8 + 20 + 2]} =
0.0386H x {7 – 22.8} =
0.0386H x -15.8 =
Himpact = -0.6099H

APPENDIX 2

Table 2.6, page 42 of the HCP

Table 2.6. Calculation of H for different development activities

Type of Parcel	Type of Development	H Calculation	Description
Undeveloped	Residential construction (single family)	$H_{impact} = H_{parcel} * M_{SFR}$	Construction on vacant parcels incurs a new impact, both as loss of habitat and as causing secondary effects.
	Non-residential construction	$H_{impact} = H_{parcel} * M_{LUx}$	For non-residential land uses, the total impact is a function of both the amount and type of development.
	Accessory Use	$H_{impact} = H_{parcel} * M_{ACC}$	Accessory uses only cause loss of open habitat (reduction in K); the effect of K on the model is 0.2 times the effect of H.
	Open space (passive parks)	$H_{impact} = (H_{parcel} * 0.2) * M_{REC}$	Parcels will be revegetated with native vegetation, thus improving habitat value. Recreation use will increase secondary impacts.
Developed	Expansion	$H_{impact} = H_{parcel} * (sq.ft._{expansion}/sq.ft_{parcel}) * M_{LUx}$	In developed parcels, expansion causes an increase on the footprint of development; impact is a function of the additional footprint and the type of land use.
	Redevelopment (different use)	$\mathbf{H_{impact} = H_{parcel} * \{[M_{LUx} * (sq.ft._{dev}/sq.ft._{parcel})]_{new} - [M_{LUx} * (sq.ft._{dev}/sq.ft._{parcel})]_{old}\}}$	**The impact is the difference between the effect of the new footprint/land use and the old footprint/land use.**
	Accessory Use	$H_{impact} = H_{parcel} * M_{ACC}$	Accessory uses only cause loss of open habitat (reduction in K); the effect of K on the model is 0.2 times the effect of H.
	If parcel is already fenced	H_{parcel} is multiplied by 0.8; otherwise the equations above remain unaltered.	The H grid was built without field verification of fencing.
Roads	Paving (dirt roads)	H_{impact} = 0.03720 * length of paving (in miles)	Calculation is based on the estimated H of 1 mile of paved road (H = 0.0372)
	Widening (paved roads; including US-1)	H_{impact} = 0.03720 * (additional width/existing width) * length (in miles)	

APPENDIX 3

SERVICE RECALCULATION OF MARINER'S RESORT REDEVELOPMENT H-VALUE

Old Use

Residential 2 SFR
H Multiplier 1 per unit 1 x 2 = MSFR 2

New Use

Recreation Park
H Multiplier 4.3[a] = MREC 4.3

Residential 1 SFR[b]
MSFR H Multiplier 1 is included in MREC 4.3

H impact Calculation

Property = H parcel = 0.0483, but fenced, so reduce by 20%; (0.0483 x .8) = 0.0386H
0.483 is the original H-value used by the county and is tied to the parcel on the County's books.

Himpact = Hparcel x {Multiplier New Use – Multiplier Old Use))
Himpact = 0.0386H x {(Multiplier recreational land use) – (Multiplier 2 SFR)}
Himpact = 0.0386H x {(MREC 4.3 - MSFR 2]}
Himpact = 0.0386H x {4.3 - 2}
Himpact = 0.0386H x {2.3}
Himpact = 0.089

[a] HCP, page 41: "...the H value for a development activity is multiplied by a factor that accounts for the traffic generated by the specific land use or type of activity." The average number of daily trips for the redeveloped site as determined in the 2006 Biological Opinion was 43, which included the residence. Ten trips per day equates a multiplier of 1.

[b] 2006 Biological Opinion, page 4: "An existing single-family residence on the property will be retained and used for local law enforcement housing."