Habitat Conservation Plan for Issuance of an Endangered Species Section 10(a)(1)(B) Permit for the Incidental Take of the Perdido Key Beach Mouse (*Peromyscus polionotus trissyllepsis*) associated with the Retreat and Searenity Condominium Developments on Perdido Key in Escambia County, Florida

PREPARED FOR:
U.S. FISH AND WILDLIFE SERVICE,
FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION,
RETREAT INVESTMENTS, INC.,
SERENITY DEVELOPMENT, INC.

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DECEMBER 9, 2004

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HABITAT CONSERVATION PLAN
1.0 Background

The applicants, Retreat Investments INC., and Searenity Development, INC., propose to develop luxury condominium complexes on the beachfront, Perdido Key in Escambia County, Florida consisting of:

Retreat: sixteen, 4 bedroom units on a 1.3-acre
Searenity: fifteen, 4 bedroom units on a 1.25-acre

The applicants acquired the subject properties in 2003 for the purpose of developing the proposed condominium complexes. Planning and design occurred over an eighteen month period culminating in preparation of site-plans for submittal to Escambia County for approval in the spring of 2004. Following coordination with the Service and the State, Escambia County now requires documentation from both agencies that protected species will not be affected by the development or a permit that provides incidental take for impacts to the species. The applicant's consultant, Edmisten & Associates, Inc. (Edmisten) has been leading the coordination with both agencies for the project.

A joint agency site inspection of both properties was conducted on June 28, 2004. During that inspection it was determined that the sites provided some suitable habitat for the PKBM. Accordingly, construction of the proposed development would involve impact to habitat resulting in the potential for take of the PKBM, requiring an incidental take permit (ITP) and a Florida Take Permit.

A pre-application meeting between Edmisten, as the applicant's representative, and Janet Mizzi the Service's Panama City Florida Field Office Deputy Supervisor was held on June 30, 2004. During that meeting, conceptual minimization options were reviewed. A second pre-application meeting was held on July 20, 2004, that included the applicant's design team, several Service biologists, and a representative of the FWC. Minimization options were discussed in more finite terms including habitat preservation objectives and the physical limitations of proposed development. As a result of consultation with both agencies, the Applicant finalized site plans to achieve the project's purpose and need while, to the greatest extent practicable, minimizing impact to the PKBM habitat.

The minimization effort has resulted in limiting the impacts of the projects on PKBM habitat to:

Retreat: 22 percent of the site with 78 percent of the site remaining as preserved or restored habitat after the project is constructed.
Searenity: 34 percent of the site with 66 percent of the site remaining as preserved or restored habitat after the project is constructed.

Additionally, a number of offsite mitigation measures have been offered by the land owner to benefit the recovery of the species.

1.1 Property Location

The subject properties are located in extreme southwestern Escambia County, Florida (Figures 1 and 2).

Retreat: Section 1 Township 4 South Range 33 West and is identified by the Escambia County Property Appraiser as parcel numbers 01-4S-33-1002-008-001 and 01-4S-33-1009-000-000 Approximate coordinates for the property are latitude 30° 16.92' north longitude 87° 30.80' west. The property is presently developed as a condominium duplex with the address 17255 Perdido Key Drive.

Searenity: Section 6 Township 4 South Range 32 West, and is identified by the Escambia County Property Appraiser as parcel number 06-4S-32-2001-010-001. Approximate coordinates for the property are latitude 30° 17.08' north longitude 87° 30.02' west. The property is presently developed as a single-family residence with the address 16557 Perdido Key Drive.

The Retreat parcel is bounded to the north by SR 292 and residences; to the east by a single family residence; to the west by Sea Quest condominium; and to the south by the Gulf of Mexico. The general vicinity of the property is dominated by redevelopment of beach cottages with high-rise condos. Presently, there are numerous such projects under construction. Photos of the site including views of the adjacent properties are included as **Appendix 5.2**.

The Searenity parcel is bounded to the north by SR292 (Perdido Key Drive) and residences; to the east and west by a single family residence; and to the south by the Gulf of Mexico. The general vicinity of the property is dominated by redevelopment of beach cottages with high-rise condos.

A copy of the USGS topographic map for the Perdido Quadrangle showing both sites approximate location is included as Figures 3 and 4.

Both properties occupy a lot 100 feet wide extending from the south right-of-way of State Road (SR) 292 (also known as Perdido Key Drive) to the Gulf of Mexico, approximately 500 feet to the south.

1.2 Project Description

Both projects are similarly designed except the Retreat will have 16 residential units and the Searenity project will have 15 units. Both will have a parking area; an indoor / outdoor pool and deck; and a dune walk-over. Additional amenities and life-safety infrastructure are included on the ground-floor within the footprint of the buildings. The sites include corridors along the east and west property boundaries designed to facilitate PKBM movement through the site from preserved on-site habitat to existing off-site habitat. Fencing is also incorporated into the site plan to restrict pedestrian traffic and provide protection to on-site habitat areas. A novel parking-lot design has been incorporated to minimize the project footprint and maximize the corridor and restored habitat areas. Typical landscaping elements including sod and ornamental exotics were

abandoned in favor of native beach-dune species to enhance the habitat value of the site. Drawings depicting the proposed developments are included in the **Appendices**.

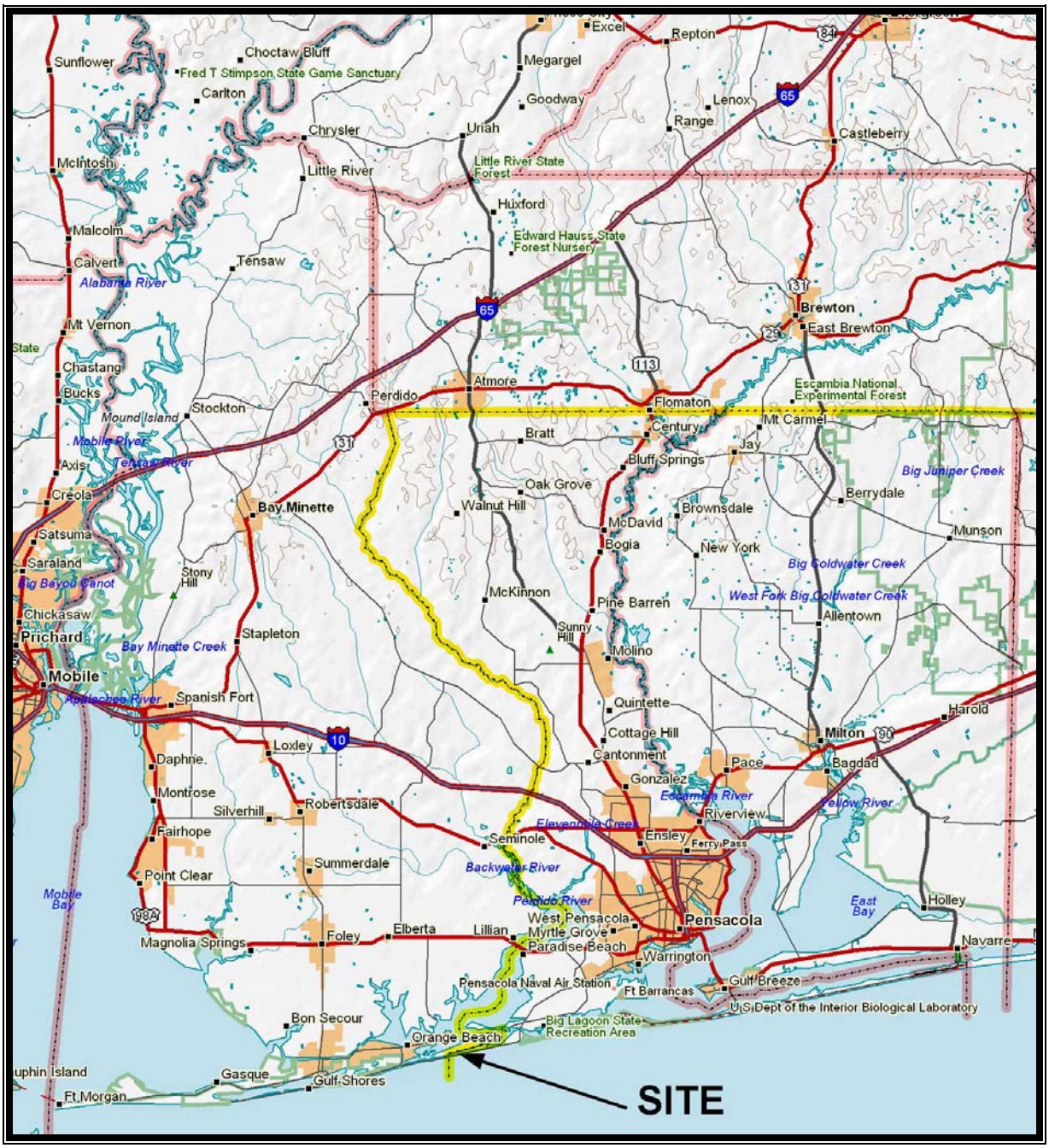

Figure 1: Vicinity map showing the Retreat property's general location on the west end of Perdido Key in extreme southwestern Escambia County, Florida. The approximate coordinates for the site are latitude N30° 16.92' longitude W87° 30.80'.

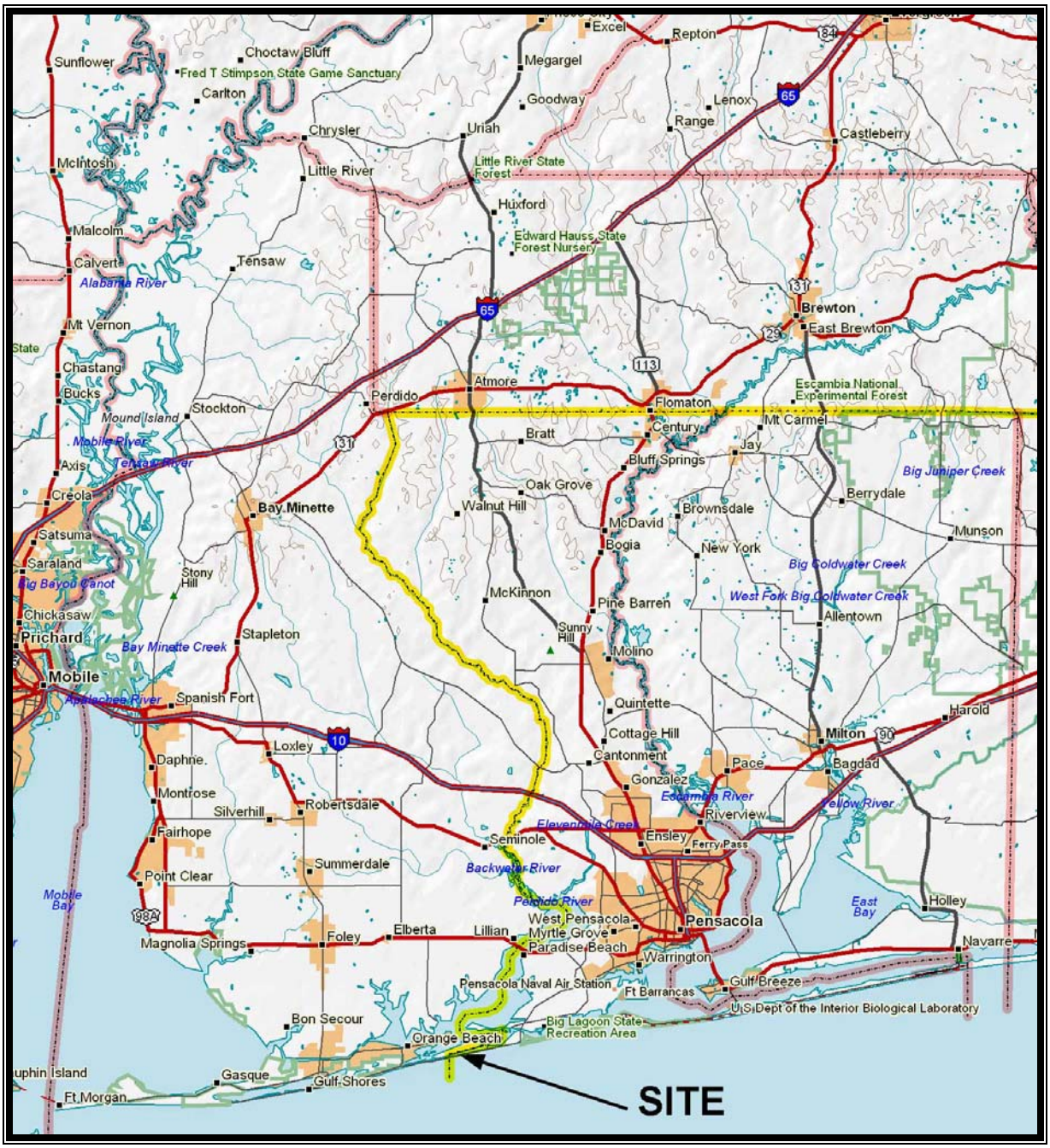

Figure 2: Vicinity map showing the Searenity property's general location on the west end of Perdido Key in extreme southwestern Escambia County, Florida. The approximate coordinates for the site are latitude N30° 17.07' longitude W87° 30.01'.

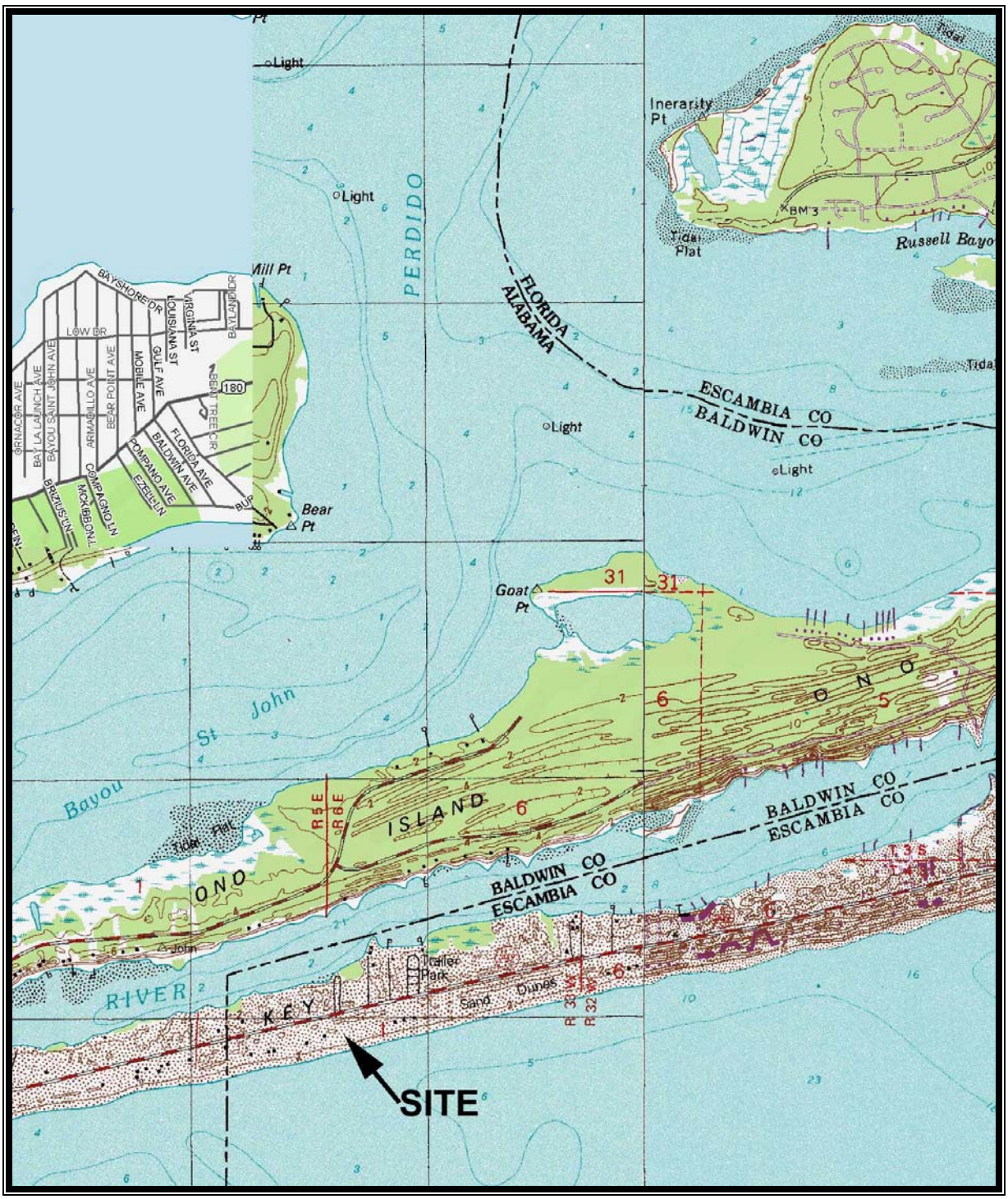

Figure 3: A portion of the USGS 7.5 minute topographic map Perdido Quadrangle showing approximate site location of the Retreat property.

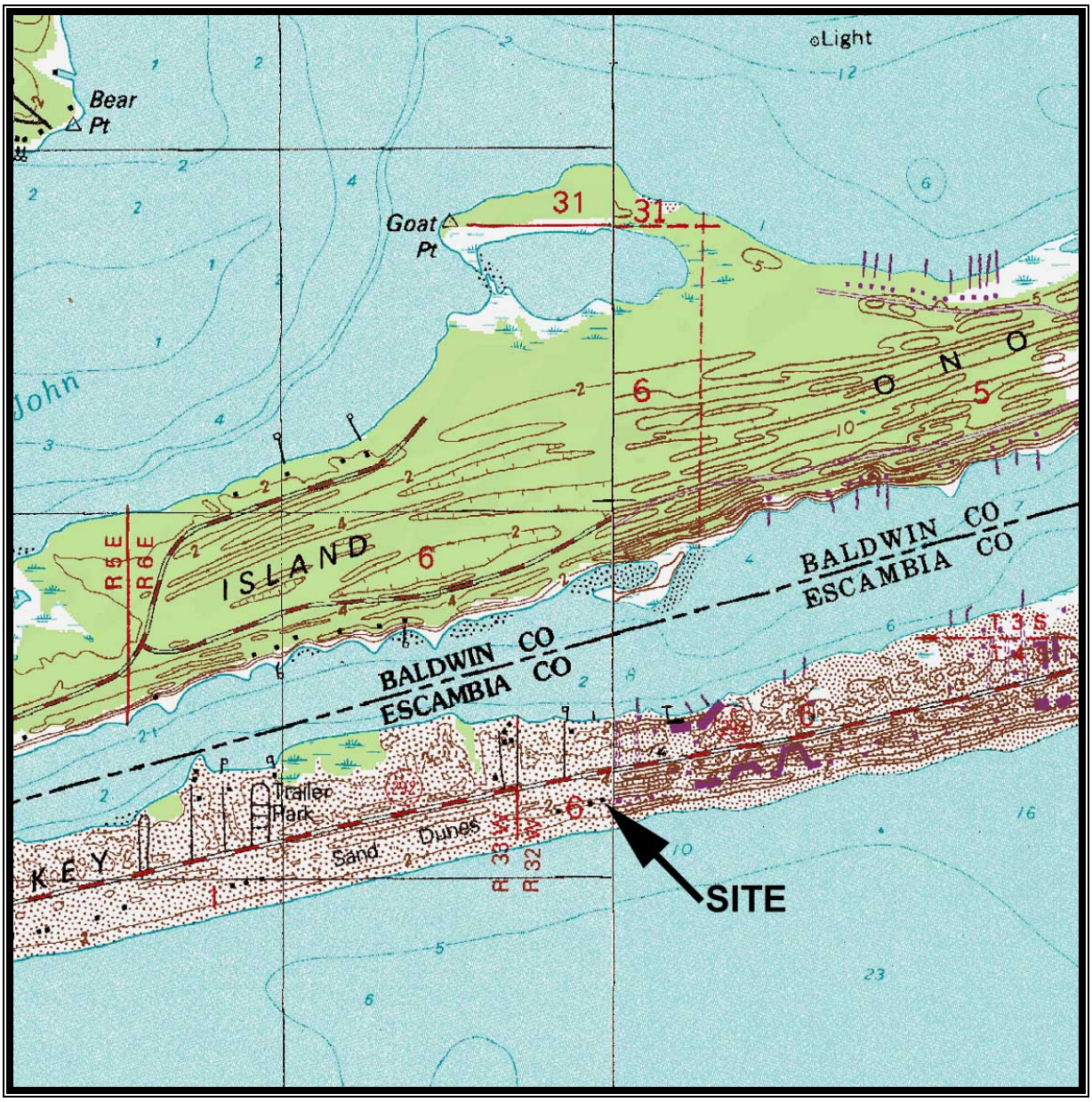

Figure 4: A portion of the USGS 7.5 minute topographic map Perdido Quadrangle showing approximate site location of the Searenity property.

2.0 PROJECT SITE Environments

The Retreat property is 1.3 acres of land and the Searenity property is 1.25 acres. Both properties are 100-feet wide extending from SR 292 to the shore of the Gulf of Mexico, a distance of approximately 500-feet. The sites occupy an ecological gradient ranging from the wet beach to woody secondary dune community. For ease of discussion these communities can be described in four zones: the wet beach, the fore-dune, the primary dune field, and the secondary dune field (Figures 5 and 6).

The wet beach is the open sand that occupies that portion adjacent to the Gulf. It is exposed to waves and tide and at its upper-reaches, storm surge. The wet beach is essentially unvegetated.

The fore dune is that portion of the beach that is beyond regular surge and is sufficiently stable to support a plant community. There is a slight topographic rise above the wet beach at the leading edge of the primary dune. The fore-dune community is the ecotone between the wet beach and the primary dune field and is occupied by colonizing species including: *Sesuvium, Hydrocotyle,* and *Ipomoea*.

The primary dune field is up gradient of the fore dune and is sufficiently remote from the physical stresses of the beach for a substantial herbaceous community to persist. Though there is a diversity of species in the primary dune community, it exhibits an aspect dominance of *Uniolia paniculata*. As noted in the PKBM species account, the leeward side of the dunes in the primary field is the preferred burrow location and the primary dune community is the principal habitat for the beach mouse.

On the retreat parcel about 36 percent of the subject property is comprised of primary dune community which is well-established and continues uninterrupted, east and west of the site. On the Searenity parcel about 38 percent of the subject property is comprised of primary dune community which is well-established and continues uninterrupted, east and west of the site.

Inland from the primary dune field is the secondary dune field. This community differs from the down-gradient primary dune community in the density of woody species. The physical dynamics of this zone allow the development and persistence of woody species including *Ceratiola* and *Quercus*. The difference between the primary and secondary dune communities includes a shift in species composition resulting in greater number of woody species in the secondary dune field also those species are more robust and provide greater percentage of cover in the secondary dune community. Although this zone of the barrier island ecosystem is occasionally utilized for regular habitation, it has significant value to the PKBM population for use as storm refugia, where the higher elevation and woody cover provide relative safety in storm events.

In addition to these four zones of native plant communities, both properties have been previously developed and have existing infrastructure and disturbed areas that are not suitable habitat for the PKBM (Figures 5 and 6).

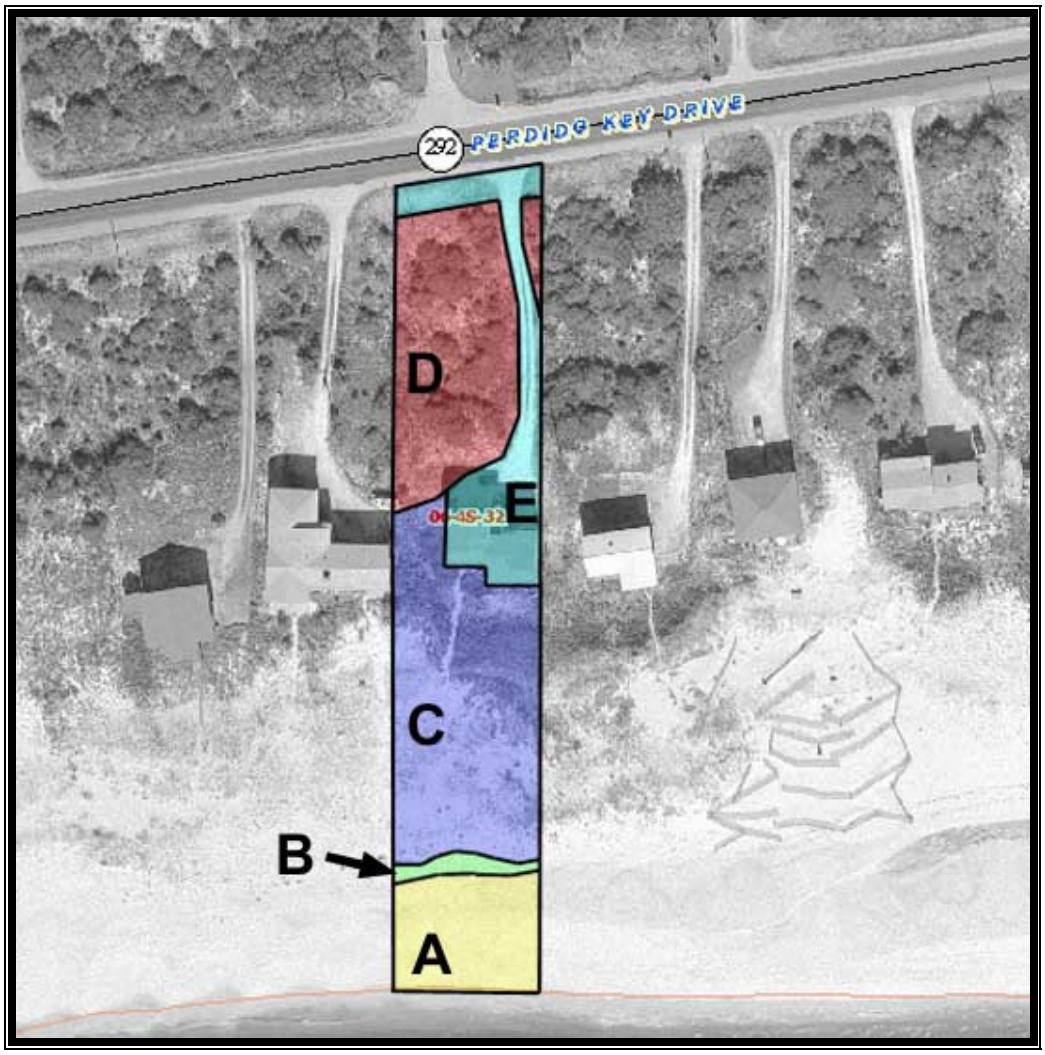

Figure 5: Depiction of the ecological communities occupying the Searenity property. These occur in four zones as a gradient from the open water landward and include (A) the wet beach; (B) the fore-dune; (C) the primary dune field; and (D) the secondary dune field. In addition to these four native communities there is a disturbed area (E) that constitutes the right of way of SR 292 and the driveway and house of the existing development.

Figure 6: Depiction of the ecological communities occupying the Retreat property. These occur in four zones as a gradient from the open water landward and include (A) the wet beach; (B) the fore-dune; (C) the primary dune field; and (D) the secondary dune field. In addition to these four native communities there is a disturbed area (E) that constitutes the right of way of SR 292 and the driveway, parking and building of the existing development.

No impacts to the wet beach or fore dune communities are proposed for the Retreat development. The proposed facility will be limited to the northern most portion of the property with structures located in the non-habitat and secondary dune field zones (except the dune walk-over). A small amount of primary dune community impacts will occur. More than three-quarters of the subject

property will remain un-impacted by the proposed development with permanent impacts limited to 22 percent of the site. Construction will result in temporary impacts to 11 percent of the site. However, this area will be restored once construction is completed. A total of 0.21-acres of habitat will be permanently impacted as a result of construction of the proposed project. This is offset by the creation of 0.28-acres of habitat on-site resulting in a net gain of 0.07-acres of habitat. The following table outlines the site impacts by ecological zone.

Table 1: Impacts (ft^2) to the Retreat property associated with construction of the proposed development.

	A*	B*	C*	D*	E*	Total	Acreage	HABITAT (less E)	
Total (sq ft)	2321	3394	20292	14758	15863	56628	1.3	**Total**	**Acreage**
Temp	0	0	447*	3339	3086	6425	0.15	3339	0.08
Permanent	0	0	455	8486	3453	12394	0.28	8941	0.21
Un-impacted	2321	3394	19390	2933	9234	37272	0.86	28038	0.64

*****Impacts are broken down into ecological zones A-E, which are depicted and described in Figure **5**. The zones are: A-Wet Beach, B-Fore dune, C-Primary Dune, D-Secondary Dune, E-Existing infrastructure. *Top-down construction of the dune walk-over will result in temporary impact only. Because this structure will be at-least 3-feet above grade, it is not counted as a permanent impact.

On the Searenity project, no impacts to the wet beach or fore dune communities are proposed for the subject development. The proposed facility will be limited to the northern most portion of the property with structures located in the non-habitat and secondary dune field zones (except the dune walk-over). A small amount of primary dune community impacts will occur. More than one-half of the subject property will remain un-impacted by the proposed development with permanent impacts limited to 34 percent of the site. Construction will result in temporary impacts to 11 percent of the site. However, this area will be restored once construction is completed. A total of 0.32-acres of habitat will be permanently impacted as a result of construction of the proposed project. This is offset by the creation of 0.14-acres of habitat on-site (section 4.4.2) resulting in a net loss of 0.2-acres of habitat (**Table 2**).

Table 2: Impacts to the Searenity property associated with construction of the proposed development

	A*	B*	C*	D*	E*	Total	Acreage	HABITAT (less E)	
Total (sq ft)	7270	1130	20846	15886	9231	54363	1.25	**Total**	**Acreage**
Temp	0	61*	1549*	2668	3115	5783	0.13	2668	0.06
Permanent	0	0	774	13218	4622	18614	0.43	13992	0.32
Un-impacted	7270	1069	18523	0	1494	28356	0.65	26862	0.62

***** Impacts (ft^2) to the subject property associated with construction of the proposed development. Impacts are broken down into ecological zones A-E, which are depicted and described in **Exhibit 6**. The zones are: A-Wet Beach, B-Fore dune, C-Primary Dune, D-Secondary Dune, E-Existing infrastructure. *Top-down construction of the dune walk-over will result in temporary impact only. Because this structure will be at-least 3-feet above grade, it is not counted as a permanent impact.

3.0 ALTERNATIVES INCLUDING THE PROPOSED ACTION

3.1 No Build Alternative

The entirety of the subject property beyond the footprint of the existing cottage and shell driveway has been deemed by the Service to be suitable habitat for the PKBM. Correspondingly, the only alternative that would result in complete avoidance of impact to the habitat is to not undertake the proposed development. The proposed project is an enterprise being undertaken on private property by the property owner and is compliant with local government and other regulations. In consideration of both projects' stated Purpose and Need, the no build alternative is not practicable. It was determined that the project's Purpose and Need cannot be realized without some impact to PKBM habitat.

3.23 Build out Alternative

Without cooperation with the Service and Commission, the property owner has the opportunity to maximize his development to include more parking, and more amenities. Further, the amenities could be more accommodating to the residents of the developments including more expansive decks, larger pools, etc. The build out alternative is deemed to include avoidable impacts to the environment and is, thus, not an acceptable alternative from the regulatory point of view.

3.3 Minimized Site Plan Alternative (Proposed & Preferred)

Through cooperation with the Service and Commission, the applicant has undertaken significant modification to the build out alternative. These modifications include minimization: through reductions in the project's footprint, construction techniques, and operation and management activities and mitigation: via on-site preservation and enhancement, monitoring of population dynamics to contribute data to the PKBM recovery effort, and financial contribution to population recovery efforts.

3.3.1 Minimization

The proposed development was designed within the constraints of the Escambia County Land Development Code and Florida's costal zone regulations. It was not until design was completed and development approval was sought from Escambia County that the property owner was made aware of the presence of the PKBM [note: at the time that this document was drafted, no permit had ever been requested or issued for impacts to the PKBM habitat. Further, much development had occurred and was ongoing for which no permits were acquired and no corrective action pursued]. In light of the presence of suitable PKBM habitat on the subject property and the determination that some impact was unavoidable, the design team convened to evaluate how the project's Purpose and Need could be accomplished while preserving, to the greatest extent practicable, the greatest amount of habitat on the subject property and preventing or minimizing the secondary impacts associated with the proposed use of the property. Several conceptual minimization opportunities were evaluated that were determined to not be practicable. These included elimination of parking spaces, modifying the footprint of the parking lot, and placing parking under the building. The number of parking spaces provided in a commercial development is dictated by the Escambia County

Land Development Code. The proposed project has been designed to include only the minimum required by code. Therefore, elimination of parking to minimize PKBM habitat impact is not possible. A synopsis of code restrictions that affect the size of the project's footprint and ability to further minimize is included as **Appendix 5.4**.

A key factor affecting the footprint of the parking area is the extremely limited dimensions of the site, which is only 100-feet wide. This limiting dimension greatly restricts the design of parking areas which are subject to geometry and orientation that affect the movement of vehicles through a parking area and how they can safely and effectively park. The proposed footprint of the parking area represents the absolute minimum area needed to accommodate the required parking. The limiting width also affects the addition of multi-level parking under the building. The number of spaces per floor is affected by the presence of ramps and the turning radius needed to navigate from the ramps into spaces. With only 80 feet of building width to work with, several levels of parking would be needed to accommodate the number of spaces needed. The cost-per-space is greatly increased as a result of the infrastructure needed to create multi-level parking. This cost was determined to be impracticable. More significantly, however, is the local government restriction on building height. The addition of multi-level parking under the residential building would cause the building to exceed the height allowable by the local government (see **Appendix 5.4**).

Upon thorough assessment of minimization opportunities and after consultation with the Service and Commission, the following minimization efforts were incorporated into the project's design. These include: modification of the site plan; management practices during construction; and policies for the operation of the facility.

3.3.1a Site Plan Amendments:

1. Buffers along the east and west sides of the proposed building will be maintained to provide corridors for the PKBM to access off-site habitat to the north. These corridors, originally designed as landscape buffers with sod and ornamental plants, will be a minimum of 10' wide and will be planted with native vegetation (see **Appendix 5.5** for a list of species that may be used).
2. A novel parking-lot design was devised to cantilever the parking spaces on the perimeter of the parking lot to maximize the width of the habitat corridors. A detail of this design feature is included in the site-plan drawings in **Appendix 5.3**.
3. An expansive deck and two pools were redesigned to diminish the development foot-print. This diminished footprint could only be accomplished by consolidating the pools into a single indoor/outdoor pool and eliminating significant area of deck. This design modification will affect the aesthetic of the project amenities changing it from luxurious to minimalist. This could affect marketability of the project, but the potential loss was deemed practicable. Drawings of the initial and minimized design are included in **Appendix 5.3**.
4. Two spiral stair-cases were eliminated from the exterior footprint leading from the habitable floors to the pool deck. This modification also significantly affects the aesthetic and marketability of the project.

5. The design was modified to include a hand-rail on the deck to provide a barrier to pedestrian traffic in the primary dune community.
6. Fencing was added along the east and west property boundaries and from the building to the property boundaries to prevent access to habitat areas. Sand-fencing was added south of the fore-dune to both enhance sand retention and prevent pedestrian access to the primary dune community.
7. A dune walkover will be constructed to provide access through the dune community to the beach. Coupled with the deck barrier, this walk-over will provide the only access to the beach, minimizing future habitat impact. The walk-way will be constructed using top-down techniques and will have a minimum elevation of 3-feet above grade.
8. Educational signs will be installed on the deck and walk-over providing anecdotal information about the PKBM and Sea Turtles and habitat conservation. These signs are intended to increase awareness resulting in beneficial behavior modification of residents and guests of the facility.
9. Trash collection and storage for the units is contained in interior spaces. Elimination of exterior trash receptacles will reduce predator and competition pressure from exotic species.
10. The initial design included exterior accesses to mechanical and life-safety equipment rooms. The project was redesigned to move these entrances to the interior thus eliminating entrance pavers (increasing habitat area) and occasional pedestrian traffic within the habitat area.

3.3.1b Project Construction

1. A summary Habitat Conservation document will be provided to the general contractor and included in all sub-contracts. The construction contract documents will include a stipulation that conservation objectives be communicated to all sub-contractors.
2. Limits of construction will be clearly marked on all construction plans and will be clearly indicated in the field with silt-fence or other barrier.
3. No barriers will be placed waterward of the proposed structure that will limit wildlife movement to and from adjacent properties.
4. Sea turtle lighting will be utilized on the structure and all common areas and sea turtle glass or tinting will be installed on all exterior windows and doors.
5. All areas temporarily impacted during construction will be restored to ambient or design grade and planted with suitable native vegetation.

3.3.1c Operation and Management

Where relevant, operation policies will be included in the condominium documents provided to each resident. Section 10.17 of the condo documents contains the referenced provisions and has been included as **Appendix 5.6**.

1. Cats will be absolutely prohibited on the premises. All other pets will be restricted to the inside of the condominium units.

2. Waste receptacles have been eliminated from all outdoor common areas in the project with the exception of one in the pool area. This receptacle will be animal-proof.
3. Pesticide and herbicide application will be prohibited outside the units.
4. All beach chairs and umbrellas or similar items will be removed from the beach each night from May 1 through October 31.
5. Access to the site will be granted to the Service, the Commission and their representatives to conduct monitoring and predator removal.
6. General restrictions provided in the covenants and restrictions for the condominium will provide reference to and compliance with the Endangered Species Act, prohibit littering on the beach or common areas, and prohibit access to the conservation easement and other natural areas on the site.

3.3.2 Mitigation

Construction of the Retreat Condominium will include an eight-story, sixteen unit condominium complex, 25-space parking lot, pool and pool deck, and dune walk-over. Though a number of minimization efforts were incorporated into the design, construction, and operation of this facility, 0.21-acre of PKBM habitat including 455- ft^2 of primary dune community and 8486- ft^2 of secondary dune community will be lost. This resource loss is offset by a number actions proposed by the land owner intended to benefit the PKBM, its habitat and recovery:

1. As a result of significant design modifications to minimize the project footprint, a 12410 ft^2 area that is presently occupied by the existing infrastructure will not be utilized. This area will be graded and planted with native vegetation resulting in creation of habitat on-site.
2. The developer will place in escrow with Clark, Pardington, Hart, *et. al.*, P.A. funds sufficient to finance the conduct of 12 monitoring events. These events will be conducted quarterly for three years. The data collected from this effort will be provided in an annual report to the Service. Any undesirable species captured during the trapping events will be destroyed, thus reducing competitive stress on the PKBM. Further, authorization and access to natural areas will be granted to the Service and Commission to conduct additional monitoring of their own.
3. To insure perpetual maintenance of the primary dune community on the subject property, the land owner offers to record a conservation easement (attached as **Appendix 5.7** also **s**ee Article 12.11 in **Appendix 5.6**) on the undeveloped portion of the site. With the exception of a 10' access easement associated with the walk-over, this measure insures that all land waterward of the proposed structure will remain in its natural state in perpetuity.
4. The land owner offers to establish a condition in the covenants and restrictions of the development that requires restoration of sand and vegetation in the dune community after a named storm event should such be lost or degraded. This mitigation measure provides legal assurance that restoration of future habitat losses will occur.
5. The land owner offers to contribute $20,000 to an approved state fund, for the purpose of restoration and enhancement activities on Perdido Key for the sole purpose of recovery of

the PKBM. This fund will be perpetually augmented by a $96 annual assessment to each unit owner.

3.4 Further Minimization Alternative

Evaluation of the project's site plan by representatives of the owner, the Service and Commission resulted in the identification of several suggested modifications that would result in a reduction in habitat impact. In all cases, un-incorporated minimization suggestions were eliminated from consideration for either conflict with the Land Development Code (LDC) (see **Appendix 5.4**) or being financially infeasible ($). Examples of rejected modifications include:

1. Elimination of parking spaces (LDC)
2. Putting parking under the building (LDC-Height restriction)
3. Elimination of condo units ($)
4. Reduction in unit size ($)
5. Elimination of pool and pool deck ($)

The alternative including additional site plan modifications was determined to be not practicable.

4.0 CONCLUSION

Retreat and Searenity are 16-unit and 15-unit condominiums, respectively, with associated amenities and infrastructure that will be constructed on a 1.3-acre and 1.25-acre, respectively, on 100-foot wide properties on Perdido Key. As a result of cooperation with the U.S. Fish and Wildlife Service, the Florida Fish and Wildlife Conservation Commission, the Florida Department of Environmental Protection, and Escambia County, the projects' stated purpose and needs will be accomplished with development occurring on less than 22 percent for the Retreat project and 34 percent for the Searenity project. In addition to the limited footprint of the developments, the applicants have agreed to incorporate, a number of design modifications, construction techniques, and management practices to minimize and mitigate the impact to the PKBM habitat. As a result of these efforts, a net gain of 0.07-acres of habitat on the Retreat property and a reduction of habitat loss to 0.2 acre for the Searenity project. The PKBM will benefit from implementation of a comprehensive mitigation plan including habitat conservation, restoration, monitoring, and monetary contributions to provide for off-site habitat conservation measures. As a result of minimization effort and mitigation offered by the applicants, the projects' Purpose and Needs will be accomplished with a net benefit to the PKBM.

5.0 APPENDICIES

ITP Application (not included in copies for public distribution)
Addressing Hurricane Ivan
Site Photos
Site Plan Drawings
Code Synopsis for Physical Limitations
Restoration Planting List
Covenants and Restrictions
Conservation Easement

ADDENDUM TO:

Environmental Assessment/Habitat Conservation Plan for Issuance of an Endangered Species Section 10(a)(1)(B) Permit for the Incidental Take of the Perdido Key Beach Mouse (*Peromyscus polionotus trissyllepsis*) associated with the Searenity and Retreat Condominium in Escambia County, Florida

ADDRESSING HURRICANE IVAN

PREPARED FOR:
U.S. FISH AND WILDLIFE SERVICE,
FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION,
RETREAT INVESTMENTS, INC.,
SERENITY DEVELOPMENT, INC.

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OCTOBER, 2004

Randy Davis (Applicant) is the principal for two nearly identical condominium projects to be located on two ca. one-acre sites on Perdido Key in Escambia County Florida. Authorization for these projects has been sought from the United States Fish and Wildlife Service (Service) and the Florida Fish and Wildlife Conservation Commission (Commission). Pre-application consultation has been ongoing between the Applicant and the Service and Commission since June, 2004 which culminated in preparation of an Environmental Assessment / Habitat Conservation Plan (EA/HCP) in September, 2004. On September 16, 2004 Hurricane Ivan made landfall in the vicinity of Perdido Key, Florida. The surge associated with this storm overwashed Perdido Key resulting in extreme damage to the key including significant physical alteration of the properties associated with the proposed development. This addendum is intended to augment the referenced EA/HCP providing updated information relating to habitat impacts and proposed mitigation.

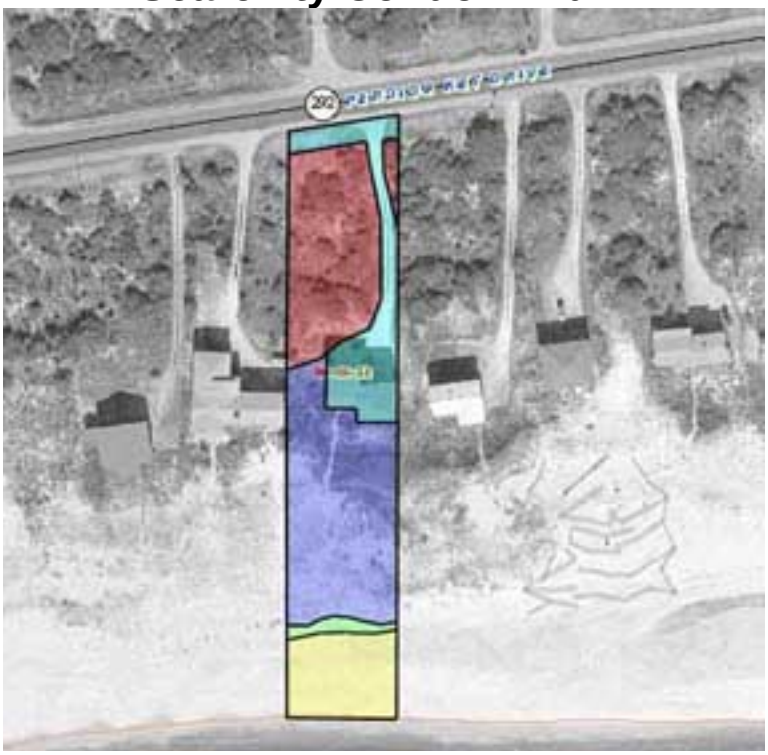
The affects of Hurricane Ivan as realized on the subject properties included destruction of the existing on-site and off-site infrastructure and associated deposition of debris throughout the property, eradication of most vegetation, and deposition of several feet of sand over most of the property. These physical alterations significantly diminish the habitat value and ecological character of the subject properties. The following are aerial photographs of the sites taken shortly after the storm compared to a “before” images excerpted from the EA/HCP. The before images include shading delineating various ecological communities on the site. These are as follows: (yellow) the wet beach; (green) the fore-dune; (blue) the primary dune field; and (red) the secondary dune field. In addition to these four native communities there is disturbed area (aqua) that constitutes the right of way of SR 292 and the driveway and structures of the existing development. For further analysis, high quality digital copies of the post-Ivan photos can be viewed and downloaded from http://alt.ngs.noaa.gov/ivan/IVAN00.HTM.

Retreat Condominium

Before Ivan

After Ivan

Searenity Condominium



Before Ivan

After Ivan

In an interest to ensure maximum benefit to the recovery of the Perdido Key Beach Mouse, the Applicant proposes to retain all components of the previously proposed mitigation associated with the Searenity and Retreat condominium projects. Additionally, the Applicant offers to restore the primary dune community waterward of the proposed developments. This restoration will include regrading the dune area with in situ material as allowed and governed by the Florida Department of Environmental Protection, installation of appropriate herbaceous species, and irrigation as needed to insure establishment of the transplants. This restoration effort will result in the replacement of 19,390 ft^2 of habitat on the Retreat property and 18,352 ft^2 of habitat on the Searenity property. As previously proposed in the EA/HCP, construction of the two projects would have resulted in subversion of only 0.13-acres of habitat. Inclusion of the additional restoration will result in a net gain of 0.74- acres of habitat on Perdido Key in addition to the substantial mitigation detailed in the HCP.