

**BOARD OF COUNTY COMMISSIONERS
AGENDA ITEM SUMMARY**

Meeting Date: July 18, 2013

Division: Growth Management

Bulk Item: Yes No X

Staff Contact Person/Phone #: Christine Hurley 289-2517
Michael Roberts 289-2502

AGENDA ITEM WORDING: Discussion and direction on the status of the implementation of the Incidental Take Permit and associated Habitat Conservation Plan for the Florida Key Deer and other protected species on Big Pine Key and No Name Key.

ITEM BACKGROUND: Monroe County adopted the Livable CommuniKeys Master Plan for Big Pine Key and No Name Key as an amendment to the 2010 Comprehensive Plan, on August 14, 2004 (Ordinance 029-2004). Monroe County, the Florida Department of Transportation, and the Florida Department of Community Affairs (now the Department of Economic Opportunity) also developed a Habitat Conservation Plan to address the incidental take of key deer, eastern indigo snake, and lower keys marsh rabbit that may result from development activities in Big Pine Key and No Name Key over the 20 year period of 2003-2023.

In 2006, the U.S. Fish and Wildlife Service issued an Incidental Take Permit (ITP) to Monroe County, the Florida Department of Transportation, and the Florida Department of Community Affairs (now the Department of Economic Opportunity) which became effective on June 9, 2006 and expires on June 30, 2023.

The ITP requires specific land use limitations and protections for Big Pine Key and No Name Key, including, but not limited to:

The total impact of commercial, institutional, and residential development over the 20 year life of the HCP shall not exceed H=1.1.

For each H value unit of development, three H units of conservation lands shall be acquired, restored, and protected in perpetuity. Over the term of this permit, lands with a cumulative H value of 3.3 shall be acquired.

New residential development will be limited to a maximum of 200 dwelling units over the 20 year life of the HCP.

New residential development in Tier 1 areas will be limited to no more than 5% of all residential units permitted over the 20 year life of the HCP (no more than 10 units or H=0.022) whichever results in a lower H.

No new development other than single-family residential and accessory uses will be permitted in Tier I areas.

Current Status:

As of December 2012, the County has issued building permits totaling 33% (0.3641 H) of the total H allowed over the 20 year period, while having acquired 77% (2.554 H) of the total mitigation required by the HCP and ITP. The County has a remaining balance of H value available for development impacts of 0.7359 H.

The ITP allows development of 10 dwelling units in Tier I on Big Pine Key and No Name Key, ROGO allocations for 9 dwelling units have been issued to date, with 4 of these allocations resulting in building permits thus far.

PREVIOUS RELEVANT BOCC ACTION: The BOCC adopted Resolution 562-2003 approving the Livable Communikeys Master Plan for Big Pine Key and No Name Key. This plan incorporates the development conditions of the HCP.

The BOCC adopted Resolution 119-2003 authorizing submittal of the HCP to the U.S. Fish & Wildlife Service.

CONTRACT/AGREEMENT CHANGES: n/a

STAFF RECOMMENDATIONS: Direct staff to coordinate with USFWS on the four potential options described in the attached memo: 1. Maintain status quo; 2. Amend the HCP/ITP; 3. Rely on the USFWS updated Biological Opinion and associated Species Assessment Guides (SAG's) for species protection on BPK/NNK; or 4. Eliminate the HCP/ITP.

TOTAL COST: _____ **INDIRECT COST:** _____ **BUDGETED:** Yes ___ No ___

DIFFERENTIAL OF LOCAL PREFERENCE: _____

COST TO COUNTY: _____ **SOURCE OF FUNDS:** _____

REVENUE PRODUCING: Yes ___ No ___ **AMOUNT PER MONTH** _____ **Year** _____

APPROVED BY: County Atty _____ OMB/Purchasing _____ Risk Management _____

DOCUMENTATION: Included X Not Required _____

DISPOSITION: _____ **AGENDA ITEM #** _____

County of Monroe

Growth Management Division

Planning & Environmental Resources Department

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To: Christine Hurley, AICP, Director of Growth Management

From: Michael Roberts, Senior Administrator, Environmental Resources

Date: July 2, 2013

Subject: Status of the implementation of the Incidental Take Permit and associated Habitat Conservation Plan for the Florida Key Deer and other protected species on BPK/NNK

Monroe County adopted the Livable CommuniKeys Master Plan (LCP) for Big Pine Key and No Name Key (BPK/NNK) as an amendment to the 2010 Comprehensive Plan, on August 14, 2004 (Ordinance 029-2004). Monroe County, the Florida Department of Transportation, and the Florida Department of Community Affairs (now the Department of Economic Opportunity) also developed a Habitat Conservation Plan to address the incidental take of key deer, eastern indigo snake, and lower keys marsh rabbit that may result from development activities in BPK/NNK over the 20 year period of 2003-2023.

In 2006, the U.S. Fish and Wildlife Service (FWS) issued an Incidental Take Permit (ITP) to Monroe County, the Florida Department of Transportation, and the Florida Department of Community Affairs (now the Department of Economic Opportunity) which became effective on June 9, 2006 and expires on June 30, 2023. All of these intricate regulatory documents hold as a key tenet the survival of the Florida Key Deer, as an umbrella species, through the maintenance of the herd above quasi-extinction population levels. This is accomplished through the strict monitoring of impact through the assigned master variable 'H'. 'H' represents both direct habitat loss and indirect human-related effects on Key deer. Each parcel of land on BPK/NNK is assigned an 'H' value that represents the total impact on Key deer that would be realized if that parcel or property were developed.

The ITP represents the County mitigating for private development and for potential public projects that were anticipated as a need in the LCP. It allows specific development limitations on BPK/NNK, including, but not limited to:

- The total impact of commercial, institutional (including public projects such as wastewater and roads), and residential development over the 20 year life of the HCP shall not exceed H=1.1.
- For each H value unit of development, 3 H units of conservation lands shall be acquired, restored, and protected in perpetuity. Over the term of this permit, lands with a cumulative H value of 3.3 shall be acquired.

- New residential development will be limited to a maximum of 200 dwelling units over the 20 year life of the HCP.
- New residential development in Tier 1 areas will be limited to no more than 5% of all residential units permitted over the 20 year life of the HCP (no more than 10 units) or H=0.022 whichever results in a lower H.
- No new development other than single-family residential and accessory uses will be permitted in Tier I areas.
- No development will be allowed in Lower Keys marsh rabbit habitat. No residential or commercial development will be allowed with 500 meters of marsh rabbit habitat, with the exception of isolated areas (i.e. green hatched areas on HCP Figure 2.2).

Current Status of Permits Issued:

As of December 2012 (9 years into the 20 year permit), the County has issued 91 of the 200 building permits allowed to be issued totaling 33% (0.3641 H) of the total 1.1 ‘H’ allowed, while having acquired 77% (2.554 ‘H’) of the total 3.3 ‘H’ mitigation required by the HCP and ITP. Since 1995, the Monroe County Land Authority has spent approximately \$8,000,000 on conservation land acquisition on Big Pine Key and No Name Key. The County has a remaining balance of 0.7359 ‘H’ available for development impacts. The following table depicts these ‘H’ impacts as of December 31, 2012.

SUMMARY OF ‘H’ IMPACTS FOR ISSUED DEVELOPMENT PERMITS ON BPK/NNK JUNE 2003 THROUGH DECEMBER 31, 2012									
	BASE (2003 – '06)	1 (2006)	2 (2007)	3 (2008)	4 (2009)	5 (2010)	6 (2011)	7 (2012)	TOTAL
SFR	0.0513	0.0341	0.0178	0.0058	0.0049	0.0025	0.0067	0.0016	0.1247
# New SFR	7	30	23	11	5	3	9	3	91
Fence	0.0201	0.0166	0.0001	0.0016	0	0.00164	0.00072	0.0013	0.04206
commercial	0.059	0.0211	0.089	0.0255	0	0.00136	0	0	0.19596
Public *	0	0	0	0.0012	0	0	0	0	0.0012
accessory	0.0002	0	0	0	0	0	0	0	0.0002
TOTAL ‘H’ impact	0.1306	0.0718	0.1069	0.0341	0.0049	0.0055	0.00742	0.0029	0.36412

*NOTE: Use of ‘H’ for these public projects has been extremely limited. Further, the sewer project is not expected to have a significant impact on ‘H’ as the majority of the proposed work is in the right of way, which does not have ‘H’ values assigned.

The ITP allows development of 10 dwelling units (or 0.022 H impact, whichever results in a lower H) in Tier I on BPK/NNK, ROGO allocations for 9 dwelling units totaling 0.0201 H have been issued to date, with 4 of these allocations resulting in building permits. The remaining 5 parcels have allocations that are on hold and are valid until July 2015. For purposes of the annual monitoring reports submitted to the USFWS, ‘H’ impacts are not debited until the building permit is issued. So while the issued building permits for Tier I are well under the permit limits, **the total allocations for Tier I development are within one allocation of the permit limits.** There are 36 applications (with a total ‘H’ of 0.049) currently competing in ROGO. Of these, 11 are Tier I applicants with a cumulative ‘H’ value of 0.025. The ‘H’ value of the highest ranked Tier I parcel currently competing in ROGO is .0026 H, the allocation of which would put the County over the 0.022 ‘H’ limit. As of the most recent ROGO ranking (May 2013), there were 3 applicants ahead of the highest ranked Tier I parcel. Two of these applicants

were awarded an allocation in May, 2013, therefore the highest ranked Tier I application may be the 2nd highest ranked parcel competing in ROGO at the close of the current quarter (July 2013).

SUMMARY OF TIER I DEVELOPMENT 12/2004 THROUGH 12/2013						
RE #	PERMIT #	Permit Issue Date	H	Certificate of Occupancy (CO) Date	Tier	Current Status
00285550-000000	95101813	6/1/2005	0.0028	9/4/2012	1	CO
00289510-000000	96101622	05/01/06	0.0022	3/6/2008	1	CO
00289710-000000	03102303	4/29/2008	0.0013	08/04/10	1	CO
00296820-000000	97101361	12/16/2009	0.0011	3/29/2012	1	CO
00319494-001300	96101472	EXPIRED			1	EXPIRED
00319494-000900	96101469		0.0032		1	Allocation Award valid to 7/2/2015 (Resolution 362-2012)
00319494-001000	96101470		0.0029		1	Allocation Award valid to 7/2/2015 (Resolution 362-2012)
00319494-000500	96101464		0.0024		1	Allocation Award valid to 7/2/2015 (Resolution 362-2012)
00319494-000400	96101463		0.0019		1	Allocation Award valid to 7/2/2015 (Resolution 362-2012)
00319494-001400	96101473		0.0023		1	Allocation Award valid to 7/2/2015 (Resolution 362-2012)
			0.0201			
NOTE: While the County has issued 10 allocations in Tier I, permit # 96101472 is expired. This allocation will now go to Administrative Relief and the 10 th allocation for Tier I development may be awarded from the annual ROGO allocations.						
PARCELS CURRENTLY COMPETING IN ROGO – MAY 2013						
RE #	PERMIT #		'H'	ROGO PTS	TIER	STATUS
00249610-000000	12105028		0.0008	20	3	Allocated
00248310-000000	12105054		0.0004	20	3	Allocated
00250400-000000	13100883		0.0008	20	3	Competing
00319494-000300	96101462		0.0026	18	1	Competing
00319494-000200	96101461		0.0022	18	1	Competing
00319494-000100	96101460		0.0043	18	1	Competing
00319494-000600	96101465		0.0026	18	1	Competing
00319494-000700	96101467		0.0034	18	1	Competing
00319494-000800	96101468		0.0025	18	1	Competing
00319494-001100	96101471		0.0027	18	1	Competing
00312470-000000	06101006		0.0007	18	2	Competing
00312571-002000	06101002		0.0006	18	2	Competing

00269070-000000	06104544		0.0011	18	2	Competing
00312572-002100	06101005		0.0010	18	2	Competing
00109350-000500	06106156		0.0021	18	2	Competing
00269910-000000	03105296		0.0008	18	2	Competing
00312572-000300	06101001		0.0010	16	2	Competing
00310280-000000	07100485		0.0013	16	2	Competing
00310260-000000	07100483		0.0007	16	2	Competing
00310240-000000	07100479		0.0011	16	2	Competing
00310220-000000	07100486		0.0010	16	2	Competing
00269190-000000	07102535		0.0010	16	2	Competing
00266360-000000	07102237		0.0007	16	2	Competing
00271270-000000	07102238		0.0007	16	2	Competing
00310490-000000	07103911		0.0007	16	2	Competing
00312571-000500	06100507		0.0011	14	2	Competing
00312890-000000	08101995		0.0013	14	2	Competing
00311610-000000	08102801		0.0010	14	2	Competing
00312572-000600	05100259		0.0012	13	2	Competing
00271260-000000	09102047		0.0007	13	2	Competing
00111880-000205	10103101		0.0007	12	3	Competing
00312571-001500	12100011		0.0012	11	2	Competing
00285660-000000	05105438		0.0024	10	1	Competing
00295360-000000	05104831		0.0011	10	1	Competing
00296960-000000	05103835		0.0011	9	1	Competing
00290190-000000	09102784		0.0004	3	1	Competing
TOTAL APPLICATIONS	36		0.049			

Strategy 2.2 of the LCP includes an “H unit budget” as a guideline for the allocation of H to various development activities based on the scenario modeling conducted during the development of the Master Plan. However, recognizing the uncertainty associated with mapping community needs over a twenty year period, Action Item 2.2.3 of the LCP includes a provision to allow for modifications to the ‘H’ budget as needed to meet community needs within the limits established by the HCP/ITP and with the approval of the BOCC. Therefore, if needed, the Board of County Commissioners may elect to modify the H budget to address changing community needs and/or development patterns. However, any modifications to the Tier I development limits would require amendments to the HCP and the ITP. There are currently 1,175 vacant, privately owned Tier I parcels on BPK/NNK.

EMERGING SPECIES ISSUES

Key Deer Mortality

In addition to the limits on development, the HCP/ITP includes a limit on the number of Key deer that may be subject to incidental take each year, expressed as a ratio of the number of deer seen during regular population counts and the number of deer killed as a result of human activity. The limiting ratio is 1.53. Key deer mortality on BPK/NNK has exceeded the 1.53 ratio since 2009, and has in fact increased each year since then. As of 2012, the Key deer mortality ratio was 2.73, well above the

allowed take in the HCP/ITP. The causes for increased mortality are not readily identifiable, as traffic counts and development both were relatively flat between 2006 and 2011. FWS is aware of the increased mortality and is working with Planning & Environmental Resources staff to determine the causes for the increasing mortality and to identify potential measures to reduce human related mortality.

FEMA & USFWS Permit Referral Process

As part of the Settlement Agreement for the administration of the National Flood Insurance Program (NFIP) in Monroe County, the Federal Emergency Management Agency (FEMA) mandated that Monroe County implement a Permit Referral Process in order to maintain eligibility in the NFIP so that flood insurance could be issued in Monroe County. On June 20, 2012 the Board of County Commissioners adopted Ordinance 015-2012 requiring the County to review permits for federally listed species to comply with the Federal Endangered Species Act. Subsequent to the adoption of Ordinance 015-2012, the Court lifted the injunction against the issuance of flood insurance in Florida Key Deer v. Fugate, 90-CV-10037 (the “FEMA Injunction”) on September 13, 2012. The County must now review development proposed within suitable habitats of certain federally listed species to comply with the Federal Endangered Species Act. The FWS prepared Species Focus Area Maps (SFAM’s) depicting areas of potentially suitable habitat for the listed species covered by the 2009 Biological Opinion on FEMA’s administration of the NFIP in Monroe County. The covered species are:

- Lower Keys marsh rabbit
- Key deer
- Key Largo cotton mouse
- Silver rice rat
- Schauss’ swallowtail butterfly
- Stock Island tree snail
- Eastern indigo snake
- Key Largo wood rat
- Keys tree cactus

In addition, the FWS prepared Species Assessment Guides (SAG’s) that categorized development activities within these potentially suitable habitats based on the likelihood the activity may affect the covered species.

Under the new process, floodplain development permit applications for parcels located within a Species Focus Area must be reviewed pursuant to the SAGs. For the covered species located on BPK/NNK, the affect determination is made in accordance with the HCP. However, the HCP does not cover potential impacts to the Silver rice rat, for which potentially suitable habitat has been designated on BPK/NNK. In light of this discrepancy, County staff reviews potential impacts to the Silver rice rat in accordance with the SAG direction for the species outside of BPK/NNK. Additionally, staff recently referred an application to FWS for proposed development within Lower Keys marsh rabbit habitat on Big Pine Key that was prohibited by the HCP. FWS however determined that the proposed development would not likely adversely affect the Lower Keys marsh rabbit due to the fact that Monroe County required a free-roaming cat deed restriction on these parcels.

Additional Species proposed for Listing by USFWS

The FWS emergency-listed the Miami blue butterfly to the Endangered Species list in 2011, and finalized the listing in April 2012. The Miami blue currently occurs in unincorporated Monroe County, but outside of BPK/NNK. In October 2012, the Service published a proposed rule to list the Florida semaphore cactus and Cape Sable thoroughwort as endangered and to designate critical habitat for the thoroughwort. Additionally, FWS is currently evaluating the Bartram’ s scrub hairstreak and the Florida leafwing butterflies for listing and critical habitat designation. The Florida leafwing, Bartram’s scrub hairstreak, and both proposed plants occur within unincorporated Monroe County, and may occur on BPK/NNK. The habitat needs of the two butterflies under consideration make it likely that portions of BPK/NNK will be included in the Critical Habitat designations for these species.

In addition to the above, the FWS plans to evaluate four additional plants that occur in the Florida Keys (Big Pine partridge pea, Blodgett's silverbush, sand flax, and wedge spurge) for listing and critical habitat in the coming year.

If these species are listed, the USFWS will be required to re-initiate consultation on the impacts of development on endangered species in the Keys and will have to amend the Biological Opinion to include Reasonable and Prudent Alternatives (RPA's) to address potential impacts to these species. It is anticipated that this will result in the designation of additional Species Focus Areas and the development of Species Assessment Guides for these butterflies.

Because these new species may occur on BPK/NNK and the HCP/ITP do not include impacts to these species, property owners on BPK/NNK will be required to consult with FWS and individual HCP's unless the FWS re-initiates consultation with Monroe County, DEO and FDOT to amend the HCP/ITP to include the new species. As an alternative, FWS has discussed with County staff that the revisions to the FEMA Biological Opinion that FWS must make to address the new species may include impacts and mitigation covered under the HCP/ITP so the County could evaluate impacts to species Countywide under the Permit Referral Process.

CONCLUSION

As detailed above, future development on BPK/NNK is currently controlled by the HCP/ITP. These documents establish criteria to reduce the incidental take of the Key deer, the Lower Keys marsh rabbit and the Eastern indigo snake. The Silver rice rat, while suspected to occur on BPK/NNK, is not covered by the HCP/ITP. The limits contained in the ITP include a restriction on Tier I development, and the County is at that limit with the issuance of one more ROGO allocation. Additionally, development within 1,500 feet of potentially suitable Lower Keys marsh rabbit habitat is significantly restricted and may result in increased potential takings issues. To that end, the Planning & Environmental Resources Department is requesting discussion and direction on future strategies for BPK/NNK as follows:

Maintain Status Quo

The County can continue to allocate permits in accordance with the HCP, deny future applications for development within Tier I or Lower Keys marsh rabbit habitat and continue to purchase properties on BPK/NNK to maintain a 3:1 mitigation to development ratio. Tier I property owners would need to consult directly with FWS for future impacts. Comprehensive Plan and Land Development Code amendments would be required for the County to issue final permits if the Tier I property owner was successful in obtaining authorization from the FWS. To date the County has issued 91 of the allowed 200 SFR permits for a total H impact for new dwelling units of 0.1247 (average H impact of 0.001). The 36 applicants competing in ROGO have a cumulative H value of 0.049 (average H of 0.0013). Using this value (0.0013) as the average, issuance of an additional 109 permits would result in additional H impacts of 0.1417 for a total H impact for SFR development of 0.2664. Taking the average of annual 'H' impact for all covered activities and extrapolating those values over the remaining life of the permit results in a total 'H' impact of 0.842.

Type of Development	Annual Average	Current H impact	ITP years remaining	Projected Total Impacts through 2023
sfr	0.0013**	0.1247	109 permits	0.2664** [200 units]
Fence	0.005258	0.04206	11	0.0999
commercial	0.024835	0.19596		0.4691
public	0.00075	0.0012		0.0095
accessory	0.0002	0.0002		0.0024
				0.8473

** SFR average (0.0013) based on parcels currently competing in ROGO; Total based on average (0.0013) times the number of SFR permits remaining under the HCP/ITP

Amend the HCP/ITP

FWS may re-initiate consultation with Monroe County, DEO and FDOT as provided in the ITP to amend/revise the HCP and ITP to allow increased development in Tier I and Lower Keys marsh rabbit habitat, if necessary to avoid constitutional takings or claims under the Bert J. Harris Act. With the new species potentially being listed, the County will have to do this to cover the additional species and to continue being the mitigating agency for private development impacts.

Alternatively, the County could require applicants within these areas to consult directly with the USFWS to draft an independent HCP specific to that owner's development request. This process could require 1½ to 2 years for approval.

Permit Referral Process

The County may initiate consultation with the USFWS and the co-permittees (DEO and FDOT) to close the ITP and rely on the FWS amended Biological Opinion if they agree to consolidate the review of potential impacts under one process and evaluate these impacts in accordance with the Permit Referral Process.

NOTE: FWS only consults with FEMA for properties eligible for flood insurance under the NFIP. Properties located within the Coastal Barrier Resource System (CBRS) are not eligible for flood insurance under the NFIP and therefore under this option these owners would be required to consult directly with FWS to develop an individual HCP and provide the appropriate mitigation. (See attached map for privately owned parcels in the CBRS on BPK/NNK).

Eliminate the HCP/ITP

The County (with DEO and FDOT) may request to close the HCP/ITP. To date, use of the ITP for public projects has been limited and private entities requiring permits are free to consult directly with FWS through Section 7 or 10 of the Endangered Species Act to obtain development approval.



United States Department of the Interior



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

July 5, 2013

Christine Hurley
Director of Growth Management
Monroe County
2798 Overseas Highway, Suite 400
Marathon, FL 33050

Dear Ms. Hurley:

In 2011, the U.S. Fish and Wildlife Service (Service) submitted a multi-year listing work plan to the U.S. District Court for the District of Columbia as part of a court settlement with conservation groups. Over a 6-year period, the Service nationwide will determine whether 251 candidate species from the 2010 Candidate Notice of Review require protection under the Endangered Species Act of 1973 (Act), as amended (87 Stat. 884; 16 United States Code 1531 *et seq.*). Of these species, 61 are found in the Southeast Region, and 9 are known to occur in the Florida Keys (see table below). Additional information on the settlement and the listing work plan can be found at: http://www.fws.gov/endangered/improving_esa/listing_workplan.html.

Common Name	Scientific name	Taxa	Status
Miami blue butterfly	<i>Cyclargus thomasi floridalis</i>	Butterfly	Endangered (2012)
Florida semaphore cactus	<i>Consolea corallicola</i>)	Plant	Proposed endangered , evaluating for critical habitat
Cape Sable thoroughwort	<i>Chromolaena frustrata</i>	Plant	Proposed endangered, proposed critical habitat
Bartram's scrub hairstreak	<i>Strymon acis bartrami</i>	Butterfly	Evaluating for listing and critical habitat
Florida leafwing	<i>Anaea troglodyta floridalis</i>	Butterfly	Evaluating for listing and critical habitat
Big Pine partridge pea	<i>Chamaecrista lineata var. keyensis</i>	Plant	Evaluating for listing and critical habitat
Blodgett's silverbush	<i>Argythamnia blodgettii</i>	Plant	Evaluating for listing and critical habitat
Sand flax	<i>Linum arenicola</i>	Plant	Evaluating for listing and critical habitat
Wedge spurge	<i>Chamaesyce deltoidea subsp. serpyllum</i>	Plant	Evaluating for listing and critical habitat

Our office is currently in various stages of evaluating these nine species, along with others in south Florida, to determine if they should be listed as endangered or threatened. Once a species is proposed for listing in the *Federal Register*, there is a 60-day comment period. The comment period is then followed by Service review of comments, peer review and new information, which normally takes several months. A final rule is usually published within 1 year of the initial



notice of the proposed listing, if the best available biological data support it and there are no extenuating circumstances. The final listing rule becomes effective 30 days later.

Additionally, when a species is proposed for listing as endangered or threatened under the Act, we must consider whether there are areas of habitat we believe are essential to the species' conservation. These areas may be proposed for designation as "critical habitat." Therefore, we are also currently evaluating proposed critical habitat designation for many of these species. The timing of proposed and final critical habitat rules approximates the schedule described above for listing rules, though exceptions may apply.

The Service emergency-listed the Miami blue butterfly in 2011, and finalized the listing in April 2012. The Miami blue currently occurs in unincorporated Monroe County, but outside of Big Pine and No Name Keys. In October 2012, the Service published a proposed rule in the *Federal Register* (77 FR 61836) to list the Florida semaphore cactus and Cape Sable thoroughwort as endangered and to designate critical habitat for the thoroughwort. Additionally, we are currently evaluating the Bartram's scrub hairstreak and the Florida leafwing butterflies for listing and critical habitat designation. If supported, proposed listing rules for these butterflies will be published in the *Federal Register*, as described above. The Florida leafwing, Bartram's scrub hairstreak, and both proposed plants occur within unincorporated Monroe County, and may occur within the footprint of the *Habitat Conservation Plan (HCP) for Florida Key Deer (Odocoileus virginianus clavium) and other Protected Species on Big Pine Key and No Name Key, Monroe County, Florida* (HCP). Lastly, we plan to evaluate four additional plants that occur in the Florida Keys (Big Pine partridge pea, Blodgett's silverbush, sand flax, and wedge spurge) for listing and critical habitat in the coming year.

The Service anticipates requesting that the Federal Emergency Management Agency (FEMA) reinitiate consultation on the December 12, 2010, Biological Opinion (BO) in accordance with the Reinitiation Notice in the BO and 50 Code of Federal Regulations (CFR) §402.16. The FEMA BO evaluates the effects of the National Flood Insurance Policy program on federally listed threatened and endangered species in Monroe County, Florida, also known as the Florida Keys, in accordance with section 7 of the Act. Reinitiation of formal consultation is required when a new species is listed or critical habitat is designated that may be affected by the action. The Service will also recommend that FEMA complete a conference report or opinion, as outlined in section 7(a)(4) of the Act, on the proposed and candidate species. This will both provide improved conservation for these species and proactively address effects to these species under the Act, should they become listed. Should a species become listed that is covered under a conference opinion, the conference opinion may be adopted as the final BO through a streamlined confirmation process.

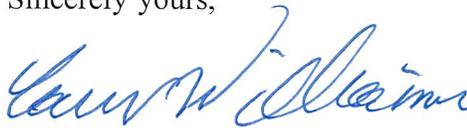
Similarly, the Service anticipates reinitiating consultation on its June 5, 2006, *Biological Opinion for Issuance of a Section 10(a)(1)(B) Incidental Take Permit to Monroe County, Florida, Florida Department of Transportation, and Florida Department of Community Affairs for Incidental Take of the Key deer, Lower Keys marsh rabbit, and Eastern Indigo Snake* (ITP BO), in accordance with the Reinitiation Notice in the ITP BO, 50 CFR §402.16, and the Act, should additional species be listed in the action area. This ITP BO is based on information provided in the above applicants' HCP. As discussed in the previous paragraph, a conference report and/or

opinion for the proposed and candidate species is also recommended as part of the reinitiation of the ITP BO.

The Reinitiation Notice in both Biological Opinions states in part "...As provided in 50 CFR §402.16, reinitiation of formal consultation is required where discretionary Federal involvement or control over the action has been retained (or is authorized by law) and if: ... (4) a new species is listed or critical habitat designated that may be affected by the action..." As outlined above, species indigenous to unincorporated Monroe County have been recently listed or may be listed in the immediate future. Therefore, the Service will request that FEMA initiate consultation for these species as soon as possible to avoid any lapse in incidental take coverage. Concurrently, the Service will need to reinitiate consultation on the ITP BO. In conjunction with reinitiation of consultation on both BOs, proposed and candidate species should be considered in a conference report or conference opinion, as appropriate. We look forward to coordinating with Monroe County to conserving these listed species, while avoiding any lapse in incidental take coverage.

Thank you for your cooperation in the effort to conserve federally listed species. If you have any questions regarding this letter, please contact Winston Hobgood at 772-469-4306.

Sincerely yours,



Larry Williams
Field Supervisor
South Florida Ecological Services Office

cc: electronic only

FEMA, Washington, D.C. (Lois Forster)

FEMA, Atlanta, Georgia (Prasad Inmula)

Service, Atlanta, Georgia (Cindy Dohner, David Dell, Ken Graham)

Service, Vero Beach, Florida (Paula Halupa, Brian Powell, Dave Bender, Mark Salvato)



FEDERAL FISH AND WILDLIFE PERMIT

2. AUTHORITY-STATUTES

16 USC 1539(a)(1)(B)

REGULATIONS (Attached)

50 CFR §§ 13 & 17

3. NUMBER

TE083411-0

4. RENEWABLE

YES

NO

5. MAY COPY

YES

NO

6. EFFECTIVE

6/9/2006

7. EXPIRES

6/30/2023

1. PERMITTEES

MONROE COUNTY, GROWTH MANAGEMENT DIVISION
2798 OVERSEAS HIGHWAY, SUITE 410
MARATHON, FLORIDA 33050
TELEPHONE: 305/289-2517
FACSIMILE: 305/289-2536

FLORIDA DEPARTMENT OF TRANSPORTATION
1000 NW 111th AVENUE, ROOM 6103
MIAMI, FLORIDA 33172

FLORIDA DEPARTMENT OF COMMUNITY AFFAIRS
2555 SHUMARD OAK BOULEVARD
TALLAHASSEE, FLORIDA 32399-2100

8. NAME AND TITLE OF PRINCIPAL OFFICER (If #1 is a business)

9. TYPE OF PERMIT

THREATENED AND ENDANGERED SPECIES
- INCIDENTAL TAKE

10. LOCATION WHERE AUTHORIZED ACTIVITY MAY BE CONDUCTED

BIG PINE KEY, NO NAME KEY, AND ADJACENT ISLETS AS SHOWN IN FIGURE 1.1 OF THE PERMITTEES' HABITAT CONSERVATION PLAN, PART OF THE FLORIDA KEYS, MONROE COUNTY, FLORIDA.

11. CONDITIONS AND AUTHORIZATIONS:

- A. GENERAL CONDITIONS SET OUT IN SUBPART D OF 50 CFR 13, AND SPECIFIC CONDITIONS CONTAINED IN FEDERAL REGULATIONS CITED IN BLOCK #2 ABOVE, ARE HEREBY MADE A PART OF THIS PERMIT. ALL ACTIVITIES AUTHORIZED HEREIN MUST BE CARRIED OUT IN ACCORD WITH AND FOR THE PURPOSES DESCRIBED IN THE APPLICATION SUBMITTED. CONTINUED VALIDITY, OR RENEWAL, OF THIS PERMIT IS SUBJECT TO COMPLETE AND TIMELY COMPLIANCE WITH ALL APPLICABLE CONDITIONS, INCLUDING THE FILING OF ALL REQUIRED INFORMATION AND REPORTS.
- B. THE VALIDITY OF THIS PERMIT IS ALSO CONDITIONED UPON STRICT OBSERVANCE OF ALL APPLICABLE FOREIGN, STATE, LOCAL OR OTHER FEDERAL LAW.
- C. VALID FOR USE BY PERMITTEE NAMED ABOVE, AND AUTHORIZED AGENTS.
- D. ACCEPTANCE OF THIS PERMIT SERVES AS EVIDENCE THAT THE PERMITTEES AND ITS AUTHORIZED AGENTS UNDERSTAND AND AGREE TO ABIDE BY THE TERMS OF THIS PERMIT AND ALL SECTIONS OF TITLE 50 CODE OF FEDERAL REGULATIONS, PARTS 13 AND 17, PERTINENT TO ISSUED PERMITS. SECTION 11 OF THE ENDANGERED SPECIES ACT OF 1973, AS AMENDED, PROVIDES FOR CIVIL AND CRIMINAL PENALTIES FOR FAILURE TO COMPLY WITH PERMIT CONDITIONS.

XX BLOCK 11 OF THIS PERMIT CONTAINS CONDITIONS A THROUGH N (10 PAGES TOTAL).

12. REPORTING REQUIREMENTS

REPORTS WILL BE PROVIDED TO THE U.S. FISH AND WILDLIFE SERVICE OFFICES APPEARING IN CONDITIONS 11.M AND 11.N OF THIS PERMIT.

ISSUED BY

Cynthia K. Jones

TITLE

DEPUTY REGIONAL DIRECTOR, FWS,
SOUTHEAST REGION

DATE

6/9/06

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2798 Overseas Highway, Suite 410
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- E. The Permittees have defined the geographic area (Plan Area) covered by their April 2006 Habitat Conservation Plan (HCP) to include Big Pine Key and No Name Key and surrounding small unnamed keys in Monroe County (County), Florida.

Status surveys and annual monitoring indicate that the Plan Area provides breeding, feeding, and sheltering habitat for the Florida Key deer, *Odocoileus virginianus clavium*, and Lower Keys marsh rabbit, *Sylvilagus palustris hefneri*; and potential habitat for the eastern indigo snake *Drymarchon corais couperi*: the "covered species."

- F. Subject to the continuing validity of this Permit, the Permittees, and their designated agents, successors, and assigns, are authorized to take, in the form of harassment, harm, or mortality, the covered species incidental to all commercial, institutional, and residential development set forth in the Permittees' HCP and as authorized by this Permit when conducted in conformance with the terms and conditions of this Permit. This permit does not authorize take of any covered species resulting from unlawful activities.

This Permit is based upon the Permittees' expected compliance with the provisions and commitments established in the HCP and the Permit's stated terms and conditions identified herein. Where a conflict occurs between the HCP and this Permit, the Permit shall control.

- G. The Permittees shall employ the following measures to ensure that take of the covered species is minimized and mitigated. The Permittees are responsible for meeting the terms and conditions of the ITP and implementing the HCP.
1. The total impact of commercial, institutional, and residential development over the 20 year life of the HCP shall not exceed "H" = 1.1.
 2. For each "H" value unit of development, three "H" units of conservation lands shall be acquired, restored, and protected in perpetuity. Over the term of this Permit, lands with a cumulative "H" value of 3.3 shall be acquired. The acquisition of mitigation lands may lag behind that required by the cumulative "H" value of development by no more than 5 percent at any time.
 3. New residential development will be limited to a maximum of 200 dwelling units over the 20 year life of the HCP.

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TE083411-0

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G. (Continued).

4. Clearing of native habitat will be limited to parcels to be developed for residential use or for local road widening. The total amount of clearing over the 20 year life of the HCP will be limited to no more than 7 acres. No clearing of native habitat, other than that necessary and authorized for new residential development, local road widening, or fire breaks to protect residential areas will be allowed. All other development will occur on disturbed lands.
5. New residential development in Tier 1 (Tiers defined in HCP, Table 2.7) areas will be limited to no more than five percent of all residential units permitted over the 20-year life of the HCP (i.e., a maximum of 10 units) or a total $H = 0.022$ (two percent of the total H), whichever results in a lower H.
6. No new development other than single-family residential and accessory uses will be permitted in Tier 1 areas. The total H of all development in Tier 1 will not exceed $H = 0.022$.
7. No development will be permitted which may result in habitat loss on the Sands corridor, as shown in HCP Figure 5.2.
8. New residential and commercial development will occur progressively over the 20 year life of the HCP, thus minimizing the extent of construction impacts that occur at any given time.
9. New commercial development will be limited to infill in existing commercial areas on Tier 2 and Tier 3 lands, mainly along the US-1 corridor on Big Pine Key. This includes all current commercially zoned areas south of Lytton's Way. All new commercial development would be limited to disturbed lands, as defined in the County Code (9.5-4 [D-14][S-2]). Clearing of pinelands and/or hammock will not be permitted for commercial development activities.
10. Expansion of private non-residential facilities will be restricted primarily to within the US-1 corridor, as described in 11.G.9 above.
11. The modified Rate of Growth Ordinance will continue to give new development priority to Tier 3 lands over Tier 2 and Tier 1 lands.
12. New recreational and community facilities development would be restricted to existing developed areas that are either already publicly owned or acquired for that purpose.

Continued...

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Block 11:

G. (Continued).

13. Minor recreational and community facilities will be restricted to areas within existing improved subdivisions.
14. Community organizations' development will be restricted to expansions, on existing organization-owned land, up to the buildable area limits per the County Code. No clearing of native habitat will be permitted for these expansions.
15. Speed limits, traffic calming devices, and other measures will be applied to lower the probability of vehicle collisions with Key deer and Lower Keys marsh rabbit on County roads.
16. Public infrastructure development will be restricted to disturbed lands as defined in the County Code (9.5-4 [D-14][S-2]).
17. No new fences will be allowed in Tier 1 lands, unless they are authorized by the U.S. Fish and Wildlife Service (Service). The Service will review applications for fences in Tier 1 for impacts on covered species.
18. No additional fences will be allowed in the US-1 commercial corridor.
19. Fences will be subject to restrictions and guidelines established in agreement with the Service. All fencing will follow the guidelines in HCP Appendix C.
20. No development will be allowed in Lower Keys marsh rabbit habitat. No residential or commercial development will be allowed within 500 meters of marsh rabbit habitat, with the exception of isolated areas (i.e., the green hatched areas on HCP Figure 2.2). Road widening activities along US-1 will occur within existing cleared and filled portions of the FDOT right-of-way.
21. Florida Department of Transportation will avoid impacts to wetlands during US-1 widening.
22. Accessory uses will be permitted on lots adjacent to existing developed lots only in Tier 2 and Tier 3 lands. Residential accessory uses will be limited to those listed in the County Code (Chapter 9.5-4 [A-2]).
23. The County will implement an animal control education program to educate the public regarding the potential negative effect of domestic predators on the Key deer and Lower Keys marsh rabbit. The education program will also request that the public report any Lower Keys marsh rabbit road mortality to the County or the Service.

Continued...

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G. (Continued).

24. The County and Service will annually review and evaluate the need and feasibility of additional regulatory measures to control the spread of domestic predators. A substantial decline in the Lower Keys marsh rabbit population will be considered a changed circumstance. If deemed necessary and feasible, measures will be enacted at a date to be determined through mutual agreement.
25. The County will ensure that standard protection measures for the eastern indigo snake will be implemented during all construction activities to minimize impacts to eastern indigo snakes.

H. Unforeseen and/or changed circumstances may become apparent either to the Permittees, authorized agents, or to personnel of the U.S. Fish and Wildlife Service. For purposes of implementation of this condition, unforeseen circumstances are defined as changes in circumstances affecting a species or geographic area covered by the HCP that could not reasonably have been anticipated by the HCP developers and the U.S. Fish and Wildlife Service at the time of the HCP's negotiation and development, and that result in a substantial and adverse change in the status of the covered species. Changed circumstances are defined as changes in circumstances affecting a species or geographic area covered by the HCP that can reasonably be anticipated by HCP developers and the U.S. Fish and Wildlife Service, and that can be planned for.

The Permittees and the U.S. Fish and Wildlife Service acknowledge that even with the above detailed provisions for mitigating and/or minimizing impacts, circumstances could arise which were not fully anticipated by this Permit and which are considered unforeseen. Such circumstances may become apparent either to the Permittees or to personnel of the U.S. Fish and Wildlife Service. For purposes of implementation of this condition, unforeseen circumstances are defined as any significant, unanticipated adverse change in the status of species; any significant, unanticipated adverse change in impacts of the Activity or in other factors upon which the HCP and Permit are based; or any other significant new information relevant to the Permit and Activity that was unforeseen by the Permittees and the U.S. Fish and Wildlife Service that could give rise to the need to review the Permittees' conservation program.

If, during the implementation of the HCP and adherence to this Permit, a significant unanticipated situation occurs that would have a serious effect on species covered by this Permit or the ability of the Permittees to continue the

Continued...

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Block 11:

H. (Continued).

effective implementation of the HCP and/or adherence to this Permit, the Permittees shall undertake actions described in Section 5.7 (Unforeseen Circumstances) of the HCP.

I. The Permittees and the U.S. Fish and Wildlife Service agree that modification and amendments to the Permittees' HCP and this Permit may occur through its effective term. The following procedures shall govern the modification and amendment process:

1. Any of the Permittees or the U.S. Fish and Wildlife Service may propose modifications and/or amendments to the HCP or this Permit by providing written notice. Such notice shall include a statement of the reason for the proposed modification and an analysis of its environmental effects, including its effects on operations under the HCP and on the covered species. The U.S. Fish and Wildlife Service or the Permittees will use best efforts to respond to a proposed modification or amendment within sixty (60) days of receipt of such notice. Absent any objection from the U.S. Fish and Wildlife Service or any Permittee, and provided such proposed modification or amendment does not fall within the limits of Condition 11.I.2, the proposed modification and/or amendment will be determined as minor and shall become effective upon written concurrence by the U.S. Fish and Wildlife Service or all of the Permittees. If the Service determines that a proposed modification or amendment would exceed the limits of Condition 11.I.2, such proposed modification or amendment must be processed in accordance with Condition 11.I.3.
2. The U.S. Fish and Wildlife Service will not propose or approve minor modifications or amendments to the HCP or this Permit if the U.S. Fish and Wildlife Service determines that such modifications or amendments would result in operations under the HCP and Permit that are significantly different from those analyzed in connection with the HCP, in adverse effects on the environment that are new or significantly different from those analyzed in connection with the HCP, or in additional take of the covered species not analyzed in connection with the HCP.
3. Any amendment or modification shall conform with all applicable legal requirements, including but not limited to the Endangered Species Act, the National Environmental Policy Act, and the U.S. Fish and Wildlife Service's permit regulations at 50 C.F.R. §13 and §17.

Continued...

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- J. The Permit and HCP will be reviewed formally by the Permittees and the Service annually. A meeting between the Permittees and Service will be scheduled within 60 days of annual report submittal to review the progress of Permit and HCP implementation and discuss any problems. Intermediate reviews may be conducted informally any time when either the Service or the Permittees find it necessary.
- K. By March 31 of each year this Permit is in effect, the Permittees shall submit an annual report to the U.S. Fish and Wildlife Service and other offices listed in Conditions 11.M and N. The annual report shall describe implementation of the terms of this Permit and HCP. The Permittees shall identify non-compliance and measures employed to resolve such non-compliance. The annual report shall also include the following certification from a responsible official who supervised or directed the preparation of the report:

Under penalty of law, I certify that, to the best of my knowledge, after appropriate inquiries of all relevant persons involved in the preparation of this report, the information submitted is true, accurate, and complete.

The annual report also shall address the following:

1. Results of the Key deer census, including the calculation of the average number of deer seen.
2. A summary of Key deer mortality information, including the calculation of the number of human-related deaths. Human-related deaths include those due to road kills, entanglement, attacks from domestic predators, and poaching.
3. A discussion and interpretation of mortality data.
4. A summary discussing habitat management activities for County mitigation lands.
5. An assessment of whether the ratio of the number of human-related deaths to average deer seen remains below 1.53.
6. A compilation (in acres) of annual impacts to the 500-meter wetland buffer areas identified as important for Lower Keys marsh rabbit.
7. The cumulative impacts of all development projects affecting buffers since

Continued...

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K. 7. (Continued).

- permit issuance for Lower Keys marsh rabbit.
8. A summary of reported Lower Keys marsh rabbit road mortality.
 9. A compilation and report of entire project area impacts (in acres) to document possible effects on eastern indigo snakes.
 10. A list and map of development activities approved and completed.
 11. The "H" value associated with each activity and the total "H" value of all activities for the year.
 12. The cumulative "H" value of all development since permit issuance.
 13. A discussion of any observations of covered species made during construction monitoring of county facilities and road expansion activities.
 14. A list and map of parcels acquired as mitigation in the reporting year.
 15. The "H" value for each parcel and the total "H" value of parcels acquired as mitigation during the reporting period.
 16. The cumulative "H" value of all land parcels acquired as mitigation since permit issuance.
 17. A discussion of management activities conducted on mitigation parcels during the reporting year.
 18. An assessment of the status of all mitigation parcels, addressing the extent of invasion by exotic species, trash disposal, and other potential human-related impacts.
 19. A monitoring report documenting compliance with the exotic/nuisance plant control program on County mitigation lands demonstrating no more than 20 percent aerial coverage of nuisance and 10 percent aerial coverage of invasive species identified by Florida Exotic Pest Plant Council.
 20. A statement confirming that mitigation has occurred so as to maintain a three to one ratio with respect to development activities and demonstrating

Continued...

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K. 20. (Continued).

that the cumulative "H" value of lands acquired as mitigation does not lag any more than 5 percent behind what is necessary to fully mitigate the cumulative "H" value of impacts authorized through the reporting period.

21. Any other pertinent information relative to the implementation of the HCP.

L. Upon locating a dead, injured, or sick specimen of any covered species or any other threatened or endangered species whose death, injury, or illness is causally related to the activities authorized by this Permit, initial notification must be made immediately to the U.S. Fish and Wildlife Service Law Enforcement Office, 10426 NW 31st Terrace, Miami, Florida 33172 (305/526-2610). Notification should also be made, by the next work day, to the contact office of the U.S. Fish and Wildlife Service noted in Condition 11.M. Care should be taken in handling sick, injured, or dead specimens to ensure effective treatment or to preserve biological materials for later analysis. In conjunction with the care of sick or injured threatened or endangered species or preservation of biological materials from a dead animal, the finder should take responsible steps to ensure that the site is not unnecessarily disturbed.

M. For purposes of monitoring compliance of the terms and conditions of this Permit, including review of annual reports, and coordination on unforeseen circumstances, the contact, address, and telephone number of the local U.S. Fish and Wildlife Service office is:

U.S. Fish and Wildlife Service
Attn: HCP Program
1339 20th Street
Vero Beach, Florida 32960-3559
Telephone: 772/562-3909
Facsimile: 772/562-4288.

Continued...

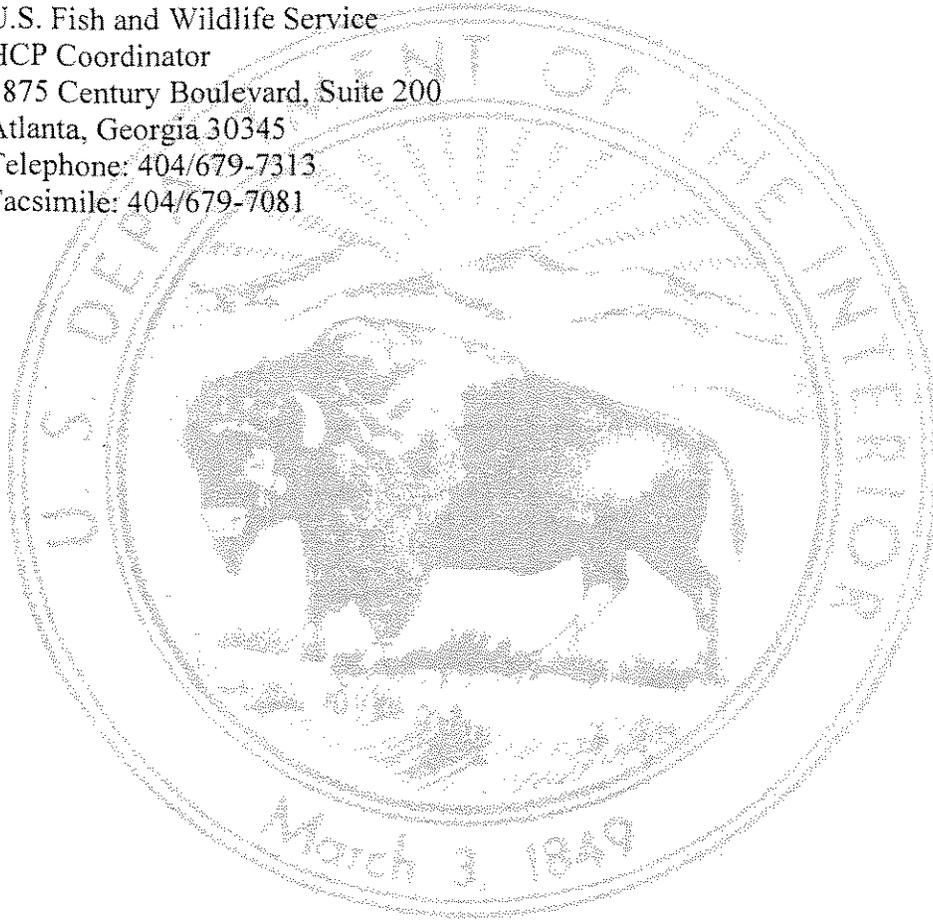
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N. Copies of annual reports and any other documentation submitted in response to the operation and management of this Permit shall also be provided to:

U.S. Fish and Wildlife Service
HCP Coordinator
1875 Century Boulevard, Suite 200
Atlanta, Georgia 30345
Telephone: 404/679-7313
Facsimile: 404/679-7081

END



**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**

Prepared for:

U.S. Fish and Wildlife Service
1339 20th Street
Vero Beach, Florida 32960-3559

Prepared by:

Monroe County
2798 Overseas Highway, Suite 410
Marathon, Florida 33050

Florida Department of Transportation, District VI
1000 NW 111th Avenue, Room #6101
Miami, Florida 33172

Florida Department of Community Affairs
2796 Overseas Highway, Suite 212
Marathon, Florida 33050

With assistance from consultants:

URS Corporation
700 S. Royal Poinciana Blvd., Suite 1000
Miami Springs, Florida 33166

**April 2003
April 2006 Revision**

Table of Contents

<u>Section</u>	<u>Page</u>
EXECUTIVE SUMMARY	1
1. INTRODUCTION AND BACKGROUND.....	9
1.1 Background and Purpose of the Plan.....	9
1.1.1 Historical Background and Memorandum of Agreement.....	11
1.1.2 Coordinating Committee.....	12
1.1.3 Objectives of the Plan	12
1.2 Plan Development Process and Methodology	13
1.2.1 Technical Studies	13
1.2.2 Public Information and Involvement	13
1.3 HCP Covered Area	15
1.4 Regulatory Basis of the HCP	15
1.4.1 Endangered Species Act	15
1.4.2 Clean Water Act.....	16
1.4.3 Section 10 of the Rivers and Harbors Act	16
1.4.4 Other Federal Actions	17
1.5 Key Elements of the HCP	17
1.5.1 Background and Studies	17
1.5.2 Covered Activities: Avoidance and Minimization of Impacts	18
1.5.3 Mitigation and Implementation.....	18
2. BIOLOGICAL CONDITIONS	20
2.1 Covered Species.....	20
2.1.1 Florida Key Deer (<i>Odocoileus virginianus clavium</i>).....	20
2.1.2 Lower Keys Marsh Rabbit (<i>Sylvilagus palustris hefneri</i>).....	22
2.1.3 Eastern Indigo Snake (<i>Drymarchon corais couperi</i>)	25
2.2 Species Not Covered.....	26
2.2.1 Federally Listed Species Not Covered.....	26
2.2.2 State Listed or Protected Species Not Covered	27
2.3 Vegetation and Habitat	28
2.3.1 Pinelands	28
2.3.2 Hammocks	30
2.3.3 Freshwater Wetlands.....	31
2.3.4 Saltwater Marsh/Buttonwood Marsh	32
2.3.5 Mangroves.....	32
2.4 Scientific Basis of the HCP: The Key Deer PVA Model and Its Application.....	33
2.4.1 Field Studies of Key Deer Population Dynamics	33
2.4.2 Development of the Key Deer PVA Model.....	34
2.4.3 PVA Model Analysis and Results.....	38
2.4.4 Application of the PVA Model to the HCP	39
2.4.5 The Tier System: A Planning Tool to Manage Development and Conservation.....	43

Table of Contents

<u>Section</u>	<u>Page</u>
3. LAND USE CONDITIONS.....	45
3.1 Introduction.....	45
3.2 Land Ownership.....	45
3.3 Habitat Management Activities	47
3.4 Covered Activities	48
4. ALTERNATIVE PLANNING STRATEGIES	50
4.1 Introduction.....	50
4.2 Planning Strategies Analyzed	51
4.2.1 Alternative #1: No Action Alternative/No Take.....	51
4.2.2 Alternative #2: Reduced Take	51
4.2.3 Alternative #3: Preferred Alternative.....	51
4.3 Comparison of Alternatives	52
5. CONSERVATION STRATEGY AND PROCEDURES.....	53
5.1 Biological Goals.....	53
5.1.1 Habitat Protection	53
5.1.2 Minimize the Increase of Human-Related Mortality of Key Deer	53
5.2 Summary of Take and Its Effects on the Covered Species.....	54
5.2.1 Florida Key Deer.....	54
5.2.2 Lower Keys Marsh Rabbit	55
5.2.3 Eastern Indigo Snake	56
5.3 Conservation Strategy - Mitigation Measures and Procedures.....	56
5.3.1 Conservative Assumptions and Level of Take	56
5.3.2 Avoidance and Minimization.....	57
5.3.3 Habitat Mitigation and Habitat Banking.....	60
5.3.4 Habitat Management.....	61
5.3.5 Regulatory Actions	62
5.3.6 Other Considerations	62
5.4 Monitoring and Reporting.....	63
5.4.1 Annual Reporting.....	64
5.5 Adaptive Management	65
5.6 Changed Circumstances.....	66
5.7 Unforeseen Circumstances.....	66
5.8 No Surprises.....	66
6. IMPLEMENTATION AND FINANCING.....	67
6.1 Regulatory Actions	67
6.1.1 Roles and Responsibilities	67
6.1.2 Implementation Schedule.....	67
6.2 Funding	68
6.3 Permit Amendment Procedures	69
6.4 Permit Renewal or Extension.....	70
7. REFERENCES.....	71

Table of Contents

<u>Section</u>	<u>Page</u>
7.1 Agencies and Persons Contacted	71
7.2 Bibliography	72
8. LIST OF PREPARERS	77
8.1 URS Corporation	77
8.2 Sub-Consultants	78
9. APPENDICES	79
A Definitions for Terms in the Big Pine Key Habitat Conservation Plan	79
B US-1 Corridor Area.....	80
C Summary of Fencing Requirements.....	81

List of Figures

Figure 1.1	Project area
Figure 2.1	Key deer locations from telemetry data
Figure 2.2	Lower Keys marsh rabbit habitat
Figure 2.3	Vegetative cover of Big Pine Key and No Name Key
Figure 2.4	Six grid layers used to generate weighting factor grid
Figure 2.5	Key deer PVA model grid layers
Figure 2.6	Tier classification system in the project area
Figure 3.1	Land ownership in the project area
Figure 5.1	Relationship between human-related Key deer mortality and deer density
Figure 5.2	Key deer corridor across Sands Subdivision

List of Tables

Table 1.1	HCP public meetings
Table 2.1	Covered species
Table 2.2	Habitat type distribution within the project area
Table 2.3	Gender and age-classes of radio collared Key deer in Big Pine Key and No Name Key, 1998-1999
Table 2.4	Effect of development on Key deer
Table 2.5	H multiplier for land use development categories
Table 2.6	Calculation of H for different development activities
Table 2.7	Tier classification system (vacant privately-owned lands)
Table 3.1	Land ownership in the project area as of mid-2002
Table 5.1	Status of vacant residential lots within 500 meters of Lower Keys marsh rabbit habitat in Big Pine Key
Table 5.2	Impacts and mitigation in Big Pine Key and No Name Key, 1995 - present
Table 5.3	Cumulative increase in H and mitigation needs in the first five years of the permit
Table 5.4	Projected budget for monitoring Key deer population for 20-year period
Table 6.1	Estimated cost of the HCP

ACRONYMS AND ABBREVIATIONS

Act	Endangered Species Act
ADID	Advanced Identification of Wetlands
CARL	Conservation and Recreation Lands
CCP	Comprehensive Conservation Plan
CFR	Code of Federal Regulations
Corps	U.S. Army Corps of Engineers
County	Monroe County
CWA	Clean Water Act
DA	Department of Army
DCA	Florida Department of Community Affairs
EPA	Environmental Protection Agency
ESA	Endangered Species Act
FDEP	Florida Department of Environmental Protection
FDOT	Florida Department of Transportation
FEMA	Federal Emergency Management Agency
F.S.	Florida Statutes
FWC	Florida Fish and Wildlife Conservation Commission
GIS	Geographic Information System
H	Harvest
HCP	Habitat Conservation Plan
ITP	Incidental Take Permit
K	Carrying Capacity
LCP	Livable CommuniKeys Program
LDR	Land Development Regulations
LOS	Level of Service
MCLA	Monroe County Land Authority
MM	Mile Marker on US-1
MOA	Memorandum of Agreement
NEPA	National Environmental Policy Act
NFIP	National Flood Insurance Program
NGVD	National Geodetic Vertical Datum
NMFS	National Marine Fisheries Service
NRCS	National Resource Conservation Service
PD&E	Project Development and Environment
Plan	Habitat Conservation Plan
Preserve	Coupon Bight Aquatic Preserve and Preserve Buffer
PVA	Population Viability Analysis
Refuge	National Key Deer Refuge
ROGO	Rate of Growth Ordinance
Service	United States Fish and Wildlife Service
US-1	U.S. Highway 1

EXECUTIVE SUMMARY

The Florida Department of Transportation (FDOT), Monroe County, and the Florida Department of Community Affairs (DCA)(the Applicants) submit this Habitat Conservation Plan (HCP or Plan), which addresses impacts to covered species resulting from potential development activities over a 20-year year period in Big Pine Key and No Name Key, Monroe County, Florida. Efforts to address Key deer and other protected species in Big Pine Key and No Name Key through an HCP started in the mid-1980s. In 1998, the Applicants signed a Memorandum of Agreement in which they committed to develop this HCP.

The species covered under this HCP are the Florida Key deer (*Odocoileus virginianus clavium*), the Lower Keys marsh rabbit (*Sylvilagus palustris hefneri*) and the eastern indigo snake (*Drymarchon corais couperi*). Activities covered under this HCP include residential and commercial development, as well as transportation improvements to meet the community needs of Big Pine Key and No Name Key.

The Applicants' objectives in developing this HCP were to allow for limited additional development activities on Big Pine Key and No Name Key, which will satisfy safety, functional, and recreational needs of a rural community, while maintaining the long-term viability of covered species and their habitat. The primary, measurable goals of this HCP are: a) to ensure future development does not have a negative impact on covered species habitat, and b) to limit the increase in human-related mortality of Key deer and Lower Keys marsh rabbit to a level that would make quasi-extinction (defined as the probability that the population fall to 50 or fewer females at least once in 50 years) unlikely. Additionally, the Plan aims at keeping secondary impacts to Lower Keys marsh rabbit to current levels or below.

Concurrently with the HCP, Monroe County carried out a planning effort based on community participation, the Livable CommuniKeys Program (LCP). Like the HCP, the overall goal of the LCP was to determine the appropriate amount, type and location of development in the project area that would provide for community needs, while maximizing conservation of the Key deer and other covered species through appropriate avoidance, minimization and mitigation.

HCP Covered Area

The HCP project area encompasses 7,031 acres: 5,840 acres on Big Pine Key and 1,191 acres in No Name Key. These two islands support more than two-thirds of the Key deer population. Sixty-six percent of the project area is in conservation, including Federal lands within the National Key Deer Refuge (Refuge), state-owned lands and lands owned by the Monroe County Land Authority (MCLA). Although these lands currently receive protection, they are included within the Plan's covered area because the effects of development on Key deer are evaluated throughout Big Pine Key and No Name Key. The main landowner is the Federal government with 55 percent, all of which is within the Refuge. Federal, state, and county agencies purchase and manage lands within the project area for the purpose of environmental protection and conservation. The Service owns 52 percent of Big Pine Key and 71 percent of No Name Key. The State of Florida purchases land under the Conservation and Recreation Lands (CARL) program, which is administered by the Florida Department of Environmental Protection (FDEP).

State-owned lands within the project area include the Coupon Bight Aquatic Preserve and Preserve Buffer Lands and lands within the Coupon Bight/Key Deer CARL project area, which combined are less than ten percent of the project area. The Monroe County Land Authority (MCLA) purchases a wide variety of vacant lands as directed in the Monroe County Comprehensive Plan and owns two percent of the land within the project area.

Public Involvement

The development of the HCP included extensive public involvement activities. The public information and participation plan included identification of stakeholders, periodic project-update mailings, several public meetings, and an open-door policy for public input. Three public meetings were held in Big Pine Key between February 2000 and March 2001. The objectives of the meetings were to inform the public about the scientific basis of the HCP, describe how land development alternatives were evaluated, and obtain input to ensure that all points of view were considered.

Scientific Basis of the HCP

Biological studies performed for this HCP focused on the Key deer, and emphasized a habitat-based approach for covered species. The Key deer and the eastern indigo snake are wide ranging and utilize virtually all available habitat in the project area, including developed areas. In contrast, the Lower Keys marsh rabbit is restricted to wetland and surrounding habitats. Therefore, the Plan focused on the Key deer as an “umbrella species” and operated under the assumption that avoiding and minimizing impacts to Key deer habitat, would also provide direct protection to both populations and habitats of other terrestrial species. The HCP also applies the most recent data on the distribution and habitat utilization of the Lower Keys marsh rabbit, provided by the Service.

Lopez (2001) studied the ecology and population dynamics of the Key deer for three years. He followed the movement, habitat utilization and fate of over 200 deer using radio-telemetry and census procedures. The study produced a Population Viability Analysis (PVA) model to evaluate the impacts of development scenarios on the Key deer population. The PVA model incorporated Key deer movements, habitat utilization, ecology and demographic data and included two main components: a) a matrix model of population dynamics and b) a spatial habitat model of carrying capacity and secondary impacts.

The PVA model is a tool to evaluate the likelihood that the species will persist for a given time into the future under different scenarios. Land development alternatives produced by the community were evaluated using the PVA model to quantify the associated impacts to Key deer in the project area. The model has the following characteristics:

- It includes a spatial component, which addresses the spatial differences in habitat quality and human-related effects on the Key deer, and a matrix model of population dynamics.
- The effects of development activities can be described as changes in the spatial model. In turn, changes in the spatial model affect the parameters of the matrix model.

- The unit of impact in the spatial model, termed “H”, can be applied to any type of development activity. For any development activity, the spatial model estimates an H value.
- H measures both direct habitat loss and indirect human-related effects on Key deer.
- For any H value, the matrix model estimates the effects on the Key deer population in terms of a) the probability of quasi-extinction and b) the number of additional human-related Key deer deaths per year.

The spatial component of the PVA model provides a reliable predictor of development impacts on the Key deer: Harvest (H), which is highly correlated with estimates of impacts. Therefore, we use H to measure impacts and mitigation in this HCP. The Key deer PVA yielded equations that relate H to estimates of risk and additional human-related mortality; therefore, if we can assign an H value to a development activity, then we can evaluate the effect of that development activity on the Key deer. The Applicants developed a method to assign H to any development activity based on the following three main premises:

1. *If development occurs on an undeveloped parcel, the impact equals the H of the parcel:* The Applicants assumed that an undeveloped parcel is fully available to the Key deer and that new development affects the habitat value of the entire undeveloped parcel. Therefore, the impact of such development equals the H of the entire parcel.
2. *If development occurs on a developed parcel (e.g., expansion or redevelopment), the impact of development equals the H of the footprint of the additional development:* The Applicants assume that the impact of existing development has been already realized; therefore, the H of development that occurs in parcels that are already developed is associated with the footprint of the additional activity instead of the entire parcel area.
3. *The effect of the development activity depends on the type of development or land use:* Because roadway mortality is the largest cause of human-related mortality of Key deer, 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 Tier System: A Planning Tool to Manage Development and Conservation

Based on the Key deer studies done under this HCP and the resulting spatial model, Monroe County developed a conservation priority classification for private undeveloped lands in the study area. The private undeveloped lands in the study area are classified into three “Tiers.” Tier 1 lands are higher quality Key deer habitat. Tier 3 lands are the lowest quality Key deer habitat. Most of the parcels in Tiers 2 and 3 are interspersed among developed parcels and among canals, and provide little habitat value to the covered species. The tier classification helped in determining the location of potential new development and prioritizing mitigation areas.

Covered Activities

This HCP addresses the incidental take of protected species that may result from development activities in Big Pine Key and No Name Key in the next 20 years. The types of activities covered under this HCP include residential development, commercial development and expansion, community and institutional facilities, and transportation improvements.

The Applicants anticipate the following development activities will occur in the covered area in the permit period and within a total $H = 1.1$:

- *New Residential Development:* A maximum of 200 residential units.
- *Non-Residential Private Development:* The county will authorize limited non-residential development as well as expansion or redevelopment of commercial facilities and community organizations such as religious institutions and civic clubs. The Applicants anticipate that no more than 60,000 square feet of floor area will be added over 20 years.
- *Recreational and Community Facilities:* The county anticipates the development of recreational and community center facilities, including passive public parks, and neighborhood “pocket” parks, as well as the expansion of the existing public library.
- *Public Facilities:* Several public facilities are anticipated over the next 20 years, such as a sewage treatment plant, public office space, and the expansion of the existing emergency response facility. The Applicants anticipate that no more than 24,000 square feet of floor area will be allocated to recreational and community facilities and other public facilities.
- *Local Road Paving or Widening:* Over the next 20 years, some local dirt roads may be paved and some paved roads may be widened to accommodate a bike path.
- *Three-Laning US-1:* The DOT will complete the addition of a third lane, a scramble lane, on the developed segment of US-1 on Big Pine Key. This involves the extension of the newly constructed turn lane east and west of the intersection improvement project.

In addition to limiting the total amount of development over 20 years to a maximum, cumulative $H = 1.1$, covered activities will comply with the avoidance and minimization guidelines established in this HCP. New development will be concentrated on already disturbed lands in order to minimize the loss of prime habitat for the covered species. New commercial development will be limited to infill areas mainly along the existing commercial corridor on US-1. The Applicants estimate that no more than 7 acres of native vegetation will be cleared over the permit period. Wetland impacts, estimated at no more than 3 acres over 20 years, will be limited to roadside swales and ditches. A limited number of fences and other accessory uses will be permitted. No new fences in Tier 1 habitat unless authorized by the Service.

The Master Plan for Future Development of Big Pine Key and No Name Key, developed in accordance with this HCP, regulates the amount and extent of each type of covered activity over the next 20 years in the project area. Other activities not described in this HCP are not authorized under this HCP.

Summary of Take and Its Effects on the Covered Species

All development activities combined over the 20-year period will have a maximum total impact of $H = 1.1$. For $H = 1.1$, the resulting probability that the population fall below 50 females at least once in 50 years and the average additional total annual human-related mortality are, respectively:

$$\text{Percent Risk}_{(50)} = 2.2e^{0.58*1.1} = 4.2\%$$

$$\text{Additional Annual Human-Related Mortality} = -0.65*1.1^2 + 4.85*1.1 - 0.34 = 4.2 \text{ deer/year}$$

Thus, the PVA model predicts that the combined effect of 20 years of development for a total $H = 1.1$ would raise the probability that the population will fall under 50 females at least once in 50 years by 2.0 percent over the risk under current conditions (from 2.2 to 4.2 percent) and increase human-related Key deer mortality by 4.2 deer a year. Additionally, the probability of extinction in 100 years is less than 0.1 percent, nearly indistinguishable from current conditions.

The Applicants anticipate no direct loss of Lower Keys marsh habitat as a result of covered activities. No development impacts to identified marsh rabbit habitat will be permitted. Indirect effects to marsh rabbit may result if development occurs near marsh rabbit habitat patches. The potential effect of this level of development is ameliorated because the majority of available lots within 500 meters of marsh rabbit habitat are adjacent to canals, in subdivisions already heavily developed.

Take of eastern indigo snake habitat is expected in the covered area of the HCP. The Applicants estimate that development activities over 20 years may occur on parcels totaling 168 acres (2.4 percent of the covered area).

Mitigation and Implementation

The Applicants propose to mitigate for the incidental take of covered species mainly by acquiring and managing native habitat areas within the HCP project area. The harvest grid used in the PVA provides a measure of habitat quality and potential indirect effects (i.e., increased human-related mortality) on the Key deer. It also provides a simple currency to compare impacts versus mitigation.

This HCP proposes a level of incidental take that results in a total $H = 1.1$. The Applicants will mitigate incidental take impacts by acquiring and managing habitat areas at a 3:1 ratio, using H as the unit of measurement. Therefore, over 20 years, lands for a maximum $H = 3.3$ will be acquired and managed. Land acquisition will occur in advance of or simultaneously with development activities. Should the cumulative H_{acquired} lag the cumulative H_{impact} by 5 percent at any time during the permit period, Monroe County will halt development permit issuance until H_{acquired} is within 5 percent of H_{impact} .

Monroe County will manage all natural lands acquired under this HCP, either directly or indirectly through agreements with other managing entities. Lands in the project area acquired for the HCP will comprise lands purchased by the Monroe County Land Authority (MCLA) for

the Florida Forever Program and lands purchased by the MCLA in accordance with the Monroe County Comprehensive Plan.

Monroe County will enact land development regulations, which will follow the guidelines for a rate of growth and development standards described in this HCP. Since 1992, Monroe County has successfully administered a Rate of Growth Ordinance that directs growth into disturbed lands and protects environmentally sensitive lands. The county has awarded 2,014 Rate of Growth Ordinance (ROGO) allocations since July 1992, of which only about six percent of the total were awarded to parcels with environmentally sensitive characteristics. Nearly half of this six percent was awarded to affordable housing projects.

With this HCP, the Applicants consolidate their efforts to provide for the protection of the Key deer and other covered species in the project area. For example, ongoing land acquisition has increased the amount of habitat protected in perpetuity. Beginning in 1993, FDOT invested approximately \$12 million to study, plan, and execute projects to reduce highway mortality of Key deer and improve safety on US-1 in Big Pine Key.

The Applicants will carry out biological and compliance monitoring to ensure that the biological goals and the commitments made in this HCP are met. Biological monitoring of the Key deer will focus on assessing the relative occurrence of human-related mortality. The main objective of the biological monitoring is to determine if human-related mortality is increasing beyond the levels observed in recent years. Specifically, the biological monitoring will test the null hypothesis that, as development activities proceed in the project area, there will be no significant increase in the relative incidence of human-related mortality. Compliance monitoring will include an annual compilation of the amount of development completed and acres converted, number of acres acquired, and a summary of habitat management activities by Monroe County. The total H for development and acquisition will be determined using the spatial model and the appropriate land use H conversion factors.

Monroe County will prepare and submit an annual HCP Report to the Service at the end of the reporting year. The reporting period will cover January 1 through December 31 and will be submitted by March 31 following the end of the reporting period. The report will address both the biological monitoring and the compliance monitoring.

Adaptive management provisions in the HCP's aim at reducing risk to the species due to significant data, information gaps, or to circumstances which arise requiring a change in species management or acquisition strategies. The Key deer has been extensively studied (Lopez 2001) and ongoing research programs at Texas A&M University are addressing the Key deer, the silver rice rat and the Lower Keys marsh rabbit. The Key deer PVA model is the state-of-the-art and will likely be fully applicable unless conditions change dramatically. No further studies are proposed as part of this HCP.

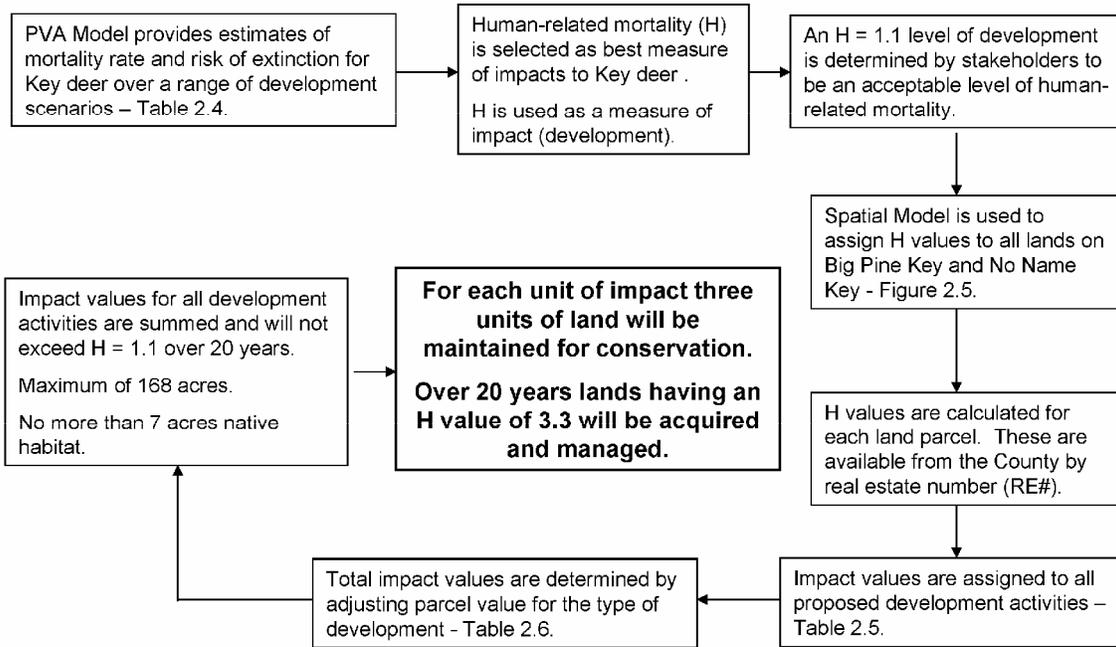
Reasonably foreseeable circumstance, which may occur in the project area or to the covered species include hurricanes, flooding, fire, or sudden population decline due to disease or habitat degradation.

Upon approval of the HCP and issuance of the ITP, the county will amend its Comprehensive Development Plan (Comp Plan) and Land Development Regulations (LDR) to codify the development guidelines described in this HCP. The Master Plan for Future Development of Big Pine Key and No Name Key determines the rate of growth and development standards in the project area, in accordance with the guidelines described in this HCP.

Monroe County will act on behalf of the Applicants in conducting the Plan's mitigation program and for all reporting activities under this HCP. In addition, Monroe County will be responsible for the following activities: approving development consistent with the covered activities in the HCP; maintaining a Geographic Information System (GIS) database on the number, habitat type and location of development activities and mitigation actions including acquisition and management activities; funding or providing staff for biological monitoring and annual reporting activities; establishing and maintaining an annual budget and budget amendments for HCP adoption and implementation; and all other duties and responsibilities relating to the execution of the HCP. Moreover, the county will be responsible for ensuring that all mitigation activities are implemented concomitant with development activities. Finally, Monroe County will coordinate with FDOT and DCA to ensure that the provisions of this HCP are met.

Monroe County will fund land acquisition and management under this HCP through existing funding mechanisms. Since 1986, the MCLA has been tasked with acquiring lands for the county in accordance with the Monroe County Comprehensive Plan Land Authority Ordinance (Ord. No. 31-1986, 1), and by s. 380.0661-380.0685, F.S., s. 125.0108, F.S. The MCLA was established to conduct land acquisition activities necessary to deal with property rights of small landowners, environmental protection, park and recreational space, affordable housing and public infrastructure should there be an environmental component. The MCLA provides a mechanism to "deal with the challenges of implementing comprehensive land use plans pursuant to the area of critical state concern program, which challenges are often complicated by the environmental sensitivity of such areas (and to provide) a stable funding source and the flexibility to address plan implementation innovatively and by acting as an intermediary between landowners and the governmental entities regulating land use" (Section 1-3, Rule 02-1991, MCLA).

Big Pine Key HCP Flowchart



November 10, 2004

1. INTRODUCTION AND BACKGROUND

1.1 Background and Purpose of the Plan

The Florida Department of Transportation (FDOT), Monroe County, and the Florida Department of Community Affairs (DCA)(the Applicants) submit this Habitat Conservation Plan (HCP or Plan), which addresses impacts to covered species resulting from potential development activities over a 20-year year period in Big Pine Key and No Name Key, Monroe County, Florida (Figure 1.1). Activities covered under this HCP include residential and commercial development, as well as transportation improvements to meet the community needs of Big Pine Key and No Name Key. The HCP establishes the guidelines under which covered activities may occur and describes a conservation and mitigation strategy to minimize and mitigate for the incidental take of threatened and endangered species during the execution of covered development activities. The Plan has been developed in accordance with the Federal Endangered Species Act of 1973 (ESA), as amended (87 Stat. 884; 16 U.S.C. 1531 *et seq.*).

Several species listed at the Federal and/or state level(s), including the endangered Florida Key deer (*Odocoileus virginianus clavium*), have been documented to occur, or have the potential to occur, within the project area. The Applicants have determined that the incidental take of Key deer may occur as a result of development activities during the next 20 years. Incidental take coverage is also requested for the Lower Keys marsh rabbit (*Sylvilagus palustris hefneri*) and the eastern indigo snake (*Drymarchon corais couperi*), which may be indirectly affected mainly through habitat loss by urban development activities throughout the 20-year period.

This HCP and accompanying Incidental Take Permit (ITP) application support the Applicants' request for the incidental take of Key deer, Lower Keys marsh rabbit, and eastern indigo snake from the U.S. Fish and Wildlife Service (Service). In compliance with the ITP issuance criteria listed in Section 10(a)(1)(B) of the ESA, the HCP provides for the minimization and mitigation of the incidental take. The Applicants believe that the amount of incidental take requested is not likely to jeopardize the survival and recovery of the covered species in the wild.

The Applicants understand that the ITP itself does not authorize development activities. Instead, the ITP authorizes the incidental take of covered species that may occur as a result of covered activities during the permit period.

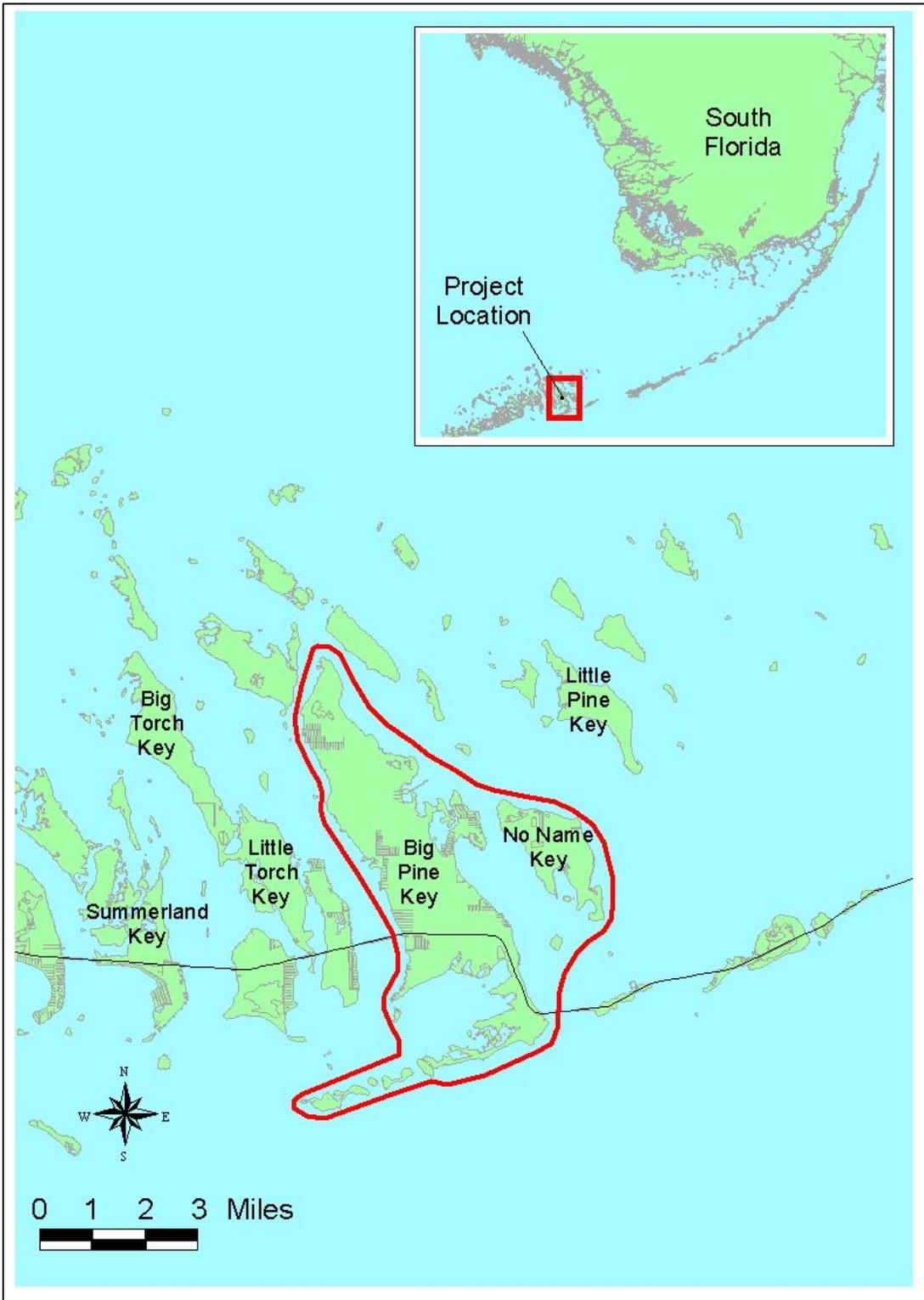


Figure 1.1. Project area

1.1.1 Historical Background and Memorandum of Agreement

Several listed species, including the Key deer, occur on Big Pine Key and No Name Key. The Key deer are wide-ranging and use a variety of habitats, including developed areas; consequently, they share much of their range with the human population. The Key deer was listed as endangered at the Federal level in March 1967 [32 Code of Federal Regulations (CFR) 4001]. Following the establishment of the National Key Deer Refuge (Refuge) in 1957, population levels began to recover. In 1951, there were an estimated 25 to 80 individuals; by 1973 the population had recovered to approximately 300 to 400, including 151 to 191 deer on Big Pine Key alone (FDOT 1999). However, mortality from road kills and habitat loss continued to threaten the population and, by 1982, population numbers were down to between 250 and 300 individuals (Klimstra 1985, Service 1985).

In the late 1980s, the FDOT began consultation to find a solution to the high road mortality of Key deer along portions of US-1 on Big Pine Key. In September 1993, FDOT convened a stakeholders meeting, after which an Ad Hoc Committee pursued solutions to the highway mortality of the Key deer. FDOT funded a Concept Study to examine viable alternatives for reducing Key deer mortality caused by vehicle collisions. The study focused on consensus building via public involvement and agency coordination, coupled with scientific analyses, and identified a series of structural and non-structural alternatives (FDOT 1996). The Concept Study recommended that wildlife underpasses be installed to allow the Key deer to move safely across the undeveloped segment of US-1 (approximately MM 33.0 to MM 31.0) and that a series of non-structural options, including signage, be implemented in the developed portion of US-1 in Big Pine Key (approximately MM 31.0 to MM 29.5).

Following the recommendations of the Concept Study, FDOT funded a Project Development & Environment (PD&E) Study to further evaluate the alternatives identified in the Concept Study (FDOT 1998). During the course of the PD&E Study, a Technical Task Force developed possible solutions for alleviating traffic congestion on US-1 on Big Pine Key. The Task Force recommended an intersection improvement project in the vicinity of the signalized intersection at US-1 and Key Deer Boulevard. Intersection improvements included adding a northbound through lane on US-1, both east and west of the traffic signal; extending the intersection's existing southbound left-turn lane on US-1; and improving the traffic signalization timing.

The PD&E Study included extensive public involvement and formal consultation with the Service. In January 1999 and April 2001, the Service issued Biological Opinions for the Key deer (Service 1999, 2001a). The wildlife underpasses and intersection improvement project were constructed after consultation for the Key deer was completed.

Since 1995, Big Pine Key has been under a building moratorium due to a lack of concurrence with State of Florida transportation requirements, as the level of service (LOS) of US-1 was insufficient. (The moratorium was lifted temporarily in 1996.) Improvements to US-1 would improve the LOS, thereby alleviating the building moratorium. The Service agreed to allow the intersection improvement project to proceed on the condition that an HCP be prepared. In 1998, the Applicants, the Service and the Florida Fish and Wildlife Conservation Commission (FWC) signed a Memorandum of Agreement (MOA) to develop an HCP for the Key deer and other

protected species in the project area. The purpose of the MOA was to direct an interagency approach to the conservation of Federally protected species on Big Pine Key and No Name Key. Specific objectives of the MOA were to define the relationships and cooperative agreements between signatory parties, determine appropriate growth and build out levels for the project area and establish a multi-agency HCP Coordinating Committee.

1.1.2 Coordinating Committee

In accordance with the MOA, the Applicants established a multi-agency HCP Coordinating Committee at the outset of the HCP process. The Coordinating Committee included representatives from the Applicants, the Service and the FWC, and two citizen representatives from Big Pine Key and No Name Key. The objectives of the Coordinating Committee were:

- To acquire and manage consultants tasked with developing the HCP;
- To establish funding obligations among the HCP Applicant Agencies;
- To define the desired outcome of the HCP; and
- To define Applicant roles.

The HCP Coordinating Committee met approximately every other month, beginning in late 1999 and continuing through December 2002.

1.1.3 Objectives of the Plan

The Applicants' objectives in developing this HCP are to allow for limited additional development activities on Big Pine Key and No Name Key, which will satisfy safety, functional, and recreational needs of a rural community, while maintaining the long-term viability of protected species and their habitat. Concurrently with the HCP, Monroe County carried out a planning effort based on community participation, the Livable CommuniKeys Program (LCP) (Monroe County 2004). Like the HCP, the overall goal of the LCP was to determine the appropriate amount, type and location of development in the project area that would provide for community needs, while maximizing conservation of the Key deer and other covered species through appropriate avoidance, minimization and mitigation.

At the outset of the study, the Applicants worked in consultation with the Service to establish clear and measurable biological goals for the HCP. Initially, a 5 percent probability of extinction in 100 years for the Key deer was established as the biological threshold to measure the effect of development activities. During the development of the HCP, this threshold was modified to a 5 percent probability of quasi-extinction (defined as the probability that the population fall to 50 or fewer females at least once in 50 years), instead of the 5 percent probability of extinction in 100 years previously proposed (see Section 5).

Biological studies performed for this HCP focused on the Key deer, and emphasized a habitat-based approach for covered species. The Key deer and the eastern indigo snake are wide ranging and utilize virtually all available habitat in the project area, including developed areas (Lopez

2001). In contrast, the Lower Keys marsh rabbit is restricted to wetland and surrounding habitats. Therefore, the Plan focused on the Key deer as an “umbrella species” and operated under the assumption that avoiding and minimizing impacts to Key deer habitat, would also provide direct protection to both populations and habitats of other terrestrial species.

The Plan aims at providing for the protection of covered species in the project area, while allowing development activities that satisfy community needs in Big Pine Key and No Name Key.

1.2 Plan Development Process and Methodology

The development of the HCP included scientific studies, developing and evaluating alternatives, and implementing a public information and participation program. Concurrently with the HCP, Monroe County carried out a planning effort, the LCP, based on community participation, in order to determine community needs. Monroe County initiated the LCP in April 2000 and adopted the Master Plan for Future Development of Big Pine Key and No Name Key in December 2004 (Monroe County 2004). The LCP addressed the needs of the local citizens and examined all development alternatives in the context of the Key deer’s biology. The LCP helped determine the community’s preferred type, location, and amount of development in the project area. A Development Alternatives Report, produced in March 2001 (Monroe County 2001), provides a detailed description of the final LCP alternatives, the methods used to develop these alternatives and the planning criteria by which alternatives were evaluated. The LCP for Big Pine Key and No Name Key, as well as this HCP, provide the basis of a Master Growth Management Plan, which will constitute the main tool to implement growth controls in order to meet the requirements of the HCP and the ITP for future development within the project area.

1.2.1 Technical Studies

Lopez (2001) studied the ecology and population dynamics of the Key deer for three years. He followed the movement, habitat utilization and fate of over 200 deer using radio-telemetry and census procedures. The study produced a Population Viability Analysis (PVA) model to evaluate the impacts of development scenarios on the Key deer population.

The PVA model is a tool to evaluate the likelihood that the species will persist for a given time into the future under different scenarios. Land development alternatives produced by the community were evaluated using the PVA model to quantify the associated impacts to Key deer in the project area. Dr. Resit Akcakaya (Applied Biomathematics, Inc.), an expert in population models and PVA reviewed and critiqued the PVA model in June 2000 and August 2001. Additionally, two technical workshops were held in Miami, Florida among the Applicants, the Service and the FWC to review the Key deer PVA model. For a description of PVA model development, see Section 2.4.

1.2.2 Public Information and Involvement

The development of the HCP included extensive public involvement activities. The public information and participation plan included identification of stakeholders, periodic project-update mailings, several public meetings, and an open-door policy for public input. Stakeholders are those individuals and organizations with an economic, cultural, social or environmental interest in the HCP. They include property owners, elected officials and other community leaders, Federal, state and local governments, permitting and reviewing agencies, environmental organizations, members of the media, and interested private citizens. Using the 1999 Monroe County Property Appraiser database as a foundation, a stakeholder database containing the names and addresses of more than 4,400 landowners was developed.

Public feedback helped identify over 100 additional stakeholders, who were included in the database. These additional stakeholders represent individuals or groups that did not own land within the project area but were interested in the process and outcome of the HCP, including non-profit and environmental organizations. The list of stakeholders was used to distribute public meeting invitations and project status reports. The stakeholder database was continually updated and maintained, per input received at public meetings from private landowners, citizen letters to the FDOT, and forwarding addresses provided by the U.S. Postal Service.

Three public meetings were held in Big Pine Key between February 2000 and March 2001 (Table 1.1). The objectives of the meetings were to inform the public about the scientific basis of the HCP, describe how land development alternatives were evaluated, and obtain input to ensure that all points of view were considered. Meetings were announced through direct mailings to property owners and other stakeholders, radio announcements, and newspapers. Generally, the public meetings included a presentation and a question and answer session. Public comments were recorded in every meeting. Meetings were held in accordance with applicable state and Federal laws, including provisions for the disabled as required by the Americans with Disabilities Act.

1.3 HCP Covered Area

The Florida Keys, including the project area, comprise a 113-mile long chain of islands extending southwest from the southern tip of the Florida mainland peninsula to the Dry Tortugas. Key Largo (25.1 square miles) and Big Pine Key (10.4 square miles) are the largest islands in this chain and possess the greatest diversity and acreage of habitats. Big Pine Key and No Name Key are situated in the southern third of the Florida Keys, also known as the Lower Keys. Long narrow channels separate the islands and connect the Gulf of Mexico with the Straits of Florida (Figure 1.1).

Table 1.1. HCP public meetings

	First Public Meeting	Second Public Meeting	Third Public Meeting
Date	February 1, 2000	April 17, 2000	March 27, 2001
Time	7:00 pm	7:30 pm	Two sessions: 4:30 pm and 7:30 pm
Venue	Big Pine Key United Methodist Church	Big Pine Key United Methodist Church	Big Pine Key Neighborhood School
Number of Attendees	Approximately 400	Approximately 100	Approximately 35 at each session (70 total)
Meeting Objectives	<ul style="list-style-type: none"> • Introductory meeting • Present background material and the HCP process • Present the project schedule and upcoming activities • Provide opportunity to identify public concerns 	<ul style="list-style-type: none"> • Present the model, its opportunities and constraints • Present current status of the Key deer • Discuss land acquisition programs, land use regulations and traffic analyses 	<ul style="list-style-type: none"> • Present preliminary model results for biological analysis of the Key deer and Lower Keys marsh rabbit • Discuss how the Livable Communi-Keys Program’s scenarios will interrelate with the knowledge of the species biology

The HCP project area encompasses 7,031 total acres, including 5,840 acres on Big Pine Key and 1,191 acres No Name Key. No Name Key is only connected by a two-lane bridge to Big Pine Key. These two islands support more than two-thirds of the Key deer population. Sixty-six percent of the project area is in conservation, including Federal lands within the National Key Deer Refuge (Refuge), state-owned lands and lands owned by the Monroe County Land Authority (MCLA). Although these lands currently receive protection, they are included within the Plan’s covered area since the effects of development are evaluated on Key deer throughout Big Pine Key and No Name Key.

1.4 Regulatory Basis of the HCP

1.4.1 Endangered Species Act

The U.S. Congress enacted the Endangered Species Act in 1973 (ESA), as amended (87 Stat. 884; 16 U.S.C. 1531 et seq.), to protect plant and animal species that are in danger of extinction throughout all or a significant portion of their range. Under Section 7 (a)(1) of the ESA, Federal agencies are required to use their authority to further the conservation of listed species. The Service is responsible for administering the ESA for those species under its jurisdiction. Section 9 of the ESA prohibits unauthorized take of Federally listed species. The ESA defines the term “take” as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in any such activity. “Harm” is defined to include significant habitat modification or degradation that results in the death or injury of listed species by significantly impairing essential behavioral patterns, which include, but are not limited to breeding, feeding or sheltering (50 CFR

Part 222). “Harass” is defined as actions that create the likelihood of injury to listed species to an extent as to significantly disrupt normal behavior patterns (50 CFR Part 17.3). The Section 9 prohibitions against “take” apply to states, counties, municipalities, and individuals.

The ESA provides two regulatory methods for development activities on lands containing Federally listed species. The first method is for Federal activities, which include, but are not limited to, development or work that requires the issuance of Federal permits, authorization, or funding. The authorization for take is accomplished through interagency consultation required under Section 7 of the ESA. The second method, Section 10 of the ESA, provides exceptions to Section 9 prohibitions, addressing non-Federal activities such as private development concerns.

The Applicants’ proposed activities fall within the regulatory mechanism authorized under Section 10(a)(1)(B) of the ESA, which allows the incidental take of a listed species that results from, but is not the purpose of, carrying out an otherwise lawful activity. The proposed project must meet 1) the statutory and regulatory permit issuance criteria under ESA Section 10(a)(2)(B) and 2) the Service’s regulatory issuance criteria pursuant to 50 CFR 17.22 (b)(2)(i)(A-F). These criteria provide that the taking will not appreciably reduce the likelihood of survival and recovery of the species in the wild. Under Section 10 of the ESA, the ITP applicant is required to submit an HCP. The HCP must identify and ensure that the effects of the authorized incidental take will be adequately minimized and mitigated to the maximum extent practicable (the Service and National Marine Fisheries Services [NMFS], 1996). The HCP will specify the impact to the species or habitat that is likely to result from the proposed action and the measures that would be taken to minimize and mitigate such impacts. The Congressional intent of the HCP Program was to institute a process that would integrate non-Federal development and land use activities with conservation goals, resolve conflicts between endangered species protection and economic activities on non-Federal lands and create a climate of partnership and cooperation. The Big Pine Key HCP, as presented herein, is designed to comply with the Congressional intent of the HCP program.

1.4.2 Clean Water Act

Wetlands are present in the project area; however, no authorization is requested for wetland impacts under this HCP. Section 404 of the Clean Water Act (CWA) requires a permit for the discharge of dredged or fill material into Waters of the United States (33 U.S.C. Section 1344). The U.S. Environmental Protection Agency (EPA) and the Department of the Army, Corps of Engineers, are responsible for administering the Section 404 program. Department of the Army (DA) permitting policies and procedures for regulating such activities can be found in 33 CFR parts 320 through 330.

1.4.3 Section 10 of the Rivers and Harbors Act

The proposed development activities on Big Pine and No Name Keys may involve the placement or construction of structures or activities including dredging activities in waters of the United States. These activities may require authorization under Section 10 of the Rivers and Harbors Act of 1899, (33 U.S.C. 403), which prohibits the unauthorized obstruction or alteration of any navigable water of the United States. The placement or construction of any structure or activities including dredging in or over any Waters of the United States requires recommendation by a

representative of the Chief of Engineers and authorization by the Secretary of the Army in the form of a permit.

Work in most wetlands (including isolated wetlands) may require separate approval by regulating agencies. The covered project area for this HCP contains areas which would be considered jurisdictional wetlands or Waters of the United States by the Department of the Army; however, the Applicants are not requesting coverage for impacts to listed species for any activities requiring authorization pursuant to Section 404 of the CWA or Section 10 of the Rivers and Harbors Act. The Applicants will not exempt individual landowners from coordinating with the agencies on impacts to listed species or from obtaining any state, local, other Federal, or special district authorization prior to the start of any activities in wetlands, State Waters, or Waters of the United States.

1.4.4 Other Federal Actions

The Federal Emergency Management Agency (FEMA) administers the National Flood Insurance Program (NFIP) throughout Monroe County, Florida. During consultation on the effects of FEMA's Federal action required under 7(a)(2) of the ESA, the Service issued a biological opinion on June 16, 1997. The Service recommended a "reasonable and prudent alternative" whereby Monroe County, with the assistance of the Service and FEMA, would identify habitat and assist with regulation of development. The Service and FEMA generated a list administered by the county of specific lots on Big Pine Key and No Name Key, which were considered to contain important Key deer habitat. The county coordinates with the Service on behalf of FEMA on permit application activities on the designated lots.

1.5 Key Elements of the HCP

The HCP is organized into sections that describe the background, technical studies, baseline conditions, proposed activities, potential impacts, avoidance and minimization measures, mitigation measures, and implementation measures. Key elements of the HCP include the following:

1.5.1 Background and Studies

Efforts to address Key deer and other protected species in Big Pine Key and No Name Key through an HCP started in the mid-1980s. The Applicants signed a Memorandum of Agreement in 1998 in which they committed to develop this HCP. The development of the HCP, which focused on the conservation of the covered species, was concurrent with the development of the Livable CommuniKeys Program (LCP), a Monroe County planning and community involvement process to address community needs in the HCP area.

The Applicants partially funded a three-year study of the population dynamics of the Key deer. Roel Lopez, working at times as a Ph.D. student and later, professor, at Texas A&M University and as a consultant to the Applicants developed a state-of-the-art PVA model for the Key deer. The model has the following characteristics:

- It includes a spatial component, which addresses the spatial differences in habitat quality and human-related effects on the Key deer, and a matrix model of population dynamics.
- The effects of development activities can be described as changes in the spatial model. In turn, changes in the spatial model affect the parameters of the matrix model.
- The unit of impact in the spatial model, termed “H,” can be applied to any type of development activity. For any development activity, the spatial model estimates an H value.
- H value measures both direct habitat loss and indirect human-related effects on Key deer.
- For any H value, the matrix model estimates the effects on the Key deer population in terms of a) the probability of quasi-extinction and b) the number of additional human-related Key deer deaths per year.

The HCP also applies the most recent data on the distribution and habitat utilization of the Lower Keys marsh rabbit, provided by the Service.

1.5.2 Covered Activities: Avoidance and Minimization of Impacts

The HCP addresses the incidental take of protected species that may result from development activities in Big Pine Key and No Name Key in the next 20 years. The types of activities covered under this HCP include limited residential development, commercial development and expansion, community and institutional facilities, and transportation improvements. These activities will occur under stringent guidelines in order avoid and minimize impacts to the covered species. For example:

- The total H_{impact} over 20 years will be limited to a maximum of $H = 1.1$. For this level of H, the PVA model estimates a probability of quasi-extinction of 4.2 percent (two percent higher than current conditions) and 4.2 additional human-related deer deaths per year.
- Development will be concentrated on low quality habitat, such as infill lots located in already-developed subdivisions, lots located among canals, and areas near US-1. No more than 7 acres of native habitat will be affected over 20 years.
- No direct impacts to Lower Keys marsh rabbit will be permitted.
- No direct take of eastern indigo snake will be permitted.
- In total, the Applicants estimate that no more that 168 acres will be affected by development in the HCP area (about 2.4 percent of the HCP area).

1.5.3 Mitigation and Implementation

The main mitigation measure will be the acquisition and management of lands for conservation. Land acquisition will occur concurrently with development. The mitigation goal is to acquire lands on 3:1 ratio based on H. Therefore, over 20 years, Monroe County will acquire lands with a total $H = 3.3$.

Monroe County will establish land development regulations to manage growth within the requirements of the HCP. The Master Plan for Future Development of Big Pine Key and No Name Key has been approved by the county.

2. BIOLOGICAL CONDITIONS

2.1 Covered Species

The HCP provides for a conservation strategy for three Federally listed species that may be affected by proposed development (Table 2.1). Based on the best available scientific information on each of the covered species, future development on Big Pine Key has the greatest probability of impacting the Key deer. The Florida Key deer has been used as umbrella species in the analysis conducted for this Plan. A brief description of the covered species follows.

Table 2.1. Covered species

Common Name	Scientific Name	Federal Status
Key deer	<i>Odocoileus virginianus clavium</i>	E
Lower Keys marsh rabbit	<i>Sylvilagus palustris hefneri</i>	E
Eastern indigo snake	<i>Drymarchon corais couperi</i>	T

E=Endangered, T=Threatened

2.1.1 Florida Key Deer (*Odocoileus virginianus clavium*)

Description

The Florida Key deer is the smallest race of North American white-tailed deer. Key deer are morphologically distinct from other races of white-tailed deer: their body is stockier, their legs are shorter, and their skull is wider. Mature adults measure between 25 to 30 inches at the shoulder, with average weights of 55 to 75 pounds for males, and 45 to 65 pounds for females. Lopez (2001) estimated that the current Key deer population on Big Pine Key and No Name Key is 453 to 517 animals. In contrast, Silvy (1975) estimated a population size of 151 to 191 animals in the 1970s and Dickson (1955) estimated a population size of 25 to 80 animals in 1955.

Key deer are more solitary than northern white-tailed deer (Harding 1974). Home ranges average about 299 acres (greater during the breeding season) for male deer and 138 acres for females. The breeding season begins in September, peaks in October, and declines through December and January, while the peak of fawning coincides with the onset of the rainy season in April and May (Harding 1974, Silvy 1975). Factors resulting in the low reproductive performance of Key deer include low fecundity and reproductive activity as well as high fetal sex ratios and mean age of initial reproduction (Folk and Klimstra 1991).

Distribution

The Key deer are wide ranging and utilize virtually all available habitat in the project area, including developed areas (Figure 2.1, Lopez 2001). The location and availability of fresh water greatly influences the distribution and movement of Key deer. Deer swim easily between keys and use all islands during the wet season, when drinking water is available. Conversely, they aggregate on large islands during the dry season (Folk and Klimstra 1991, Silvy 1975).

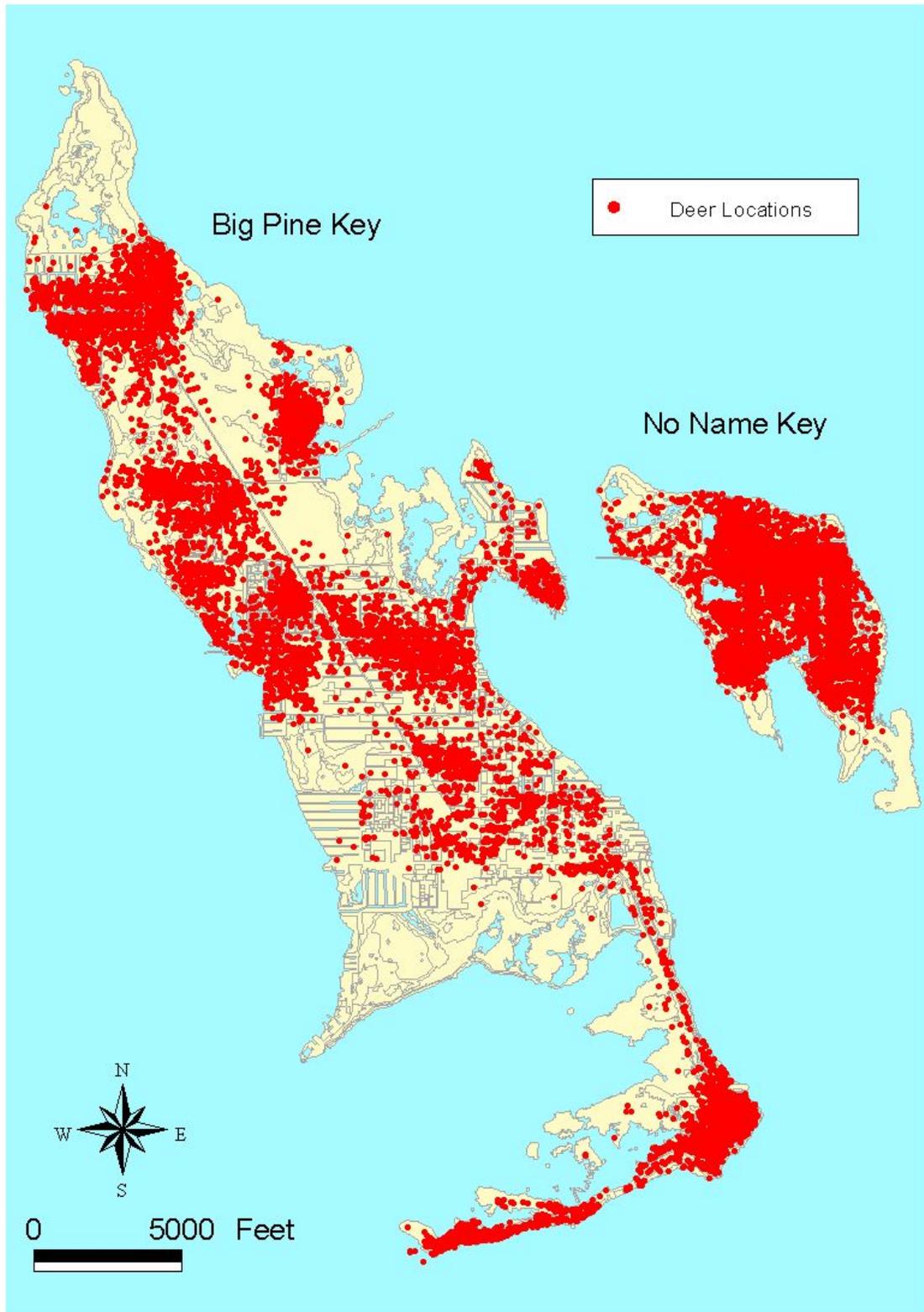


Figure 2.1. Key deer locations from telemetry data (Lopez 2001)

Permanent deer populations are found on islands with extensive pine and hardwood habitats and year-round supply of fresh water (Klimstra 1985). Hammocks provide important cover for fawning and bedding, whereas open developed areas provide feeding and resting opportunities.

Key deer are permanent residents throughout Big Pine, Big Torch, Cudjoe, Howe, Little Pine, Little Torch, Middle Torch, No Name, Sugarloaf, and Summerland Keys. Big Pine Key (5,840 acres) and No Name Key (1,191 acres) support more than two-thirds of the entire population; both islands have permanent fresh water and extensive pineland habitat. Key deer use keys with no permanent supply of fresh water as transients.

Habitat

Key deer utilize all habitat types including pine rocklands, hardwood hammocks, buttonwood salt marshes, mangrove wetlands, freshwater wetlands, and disturbed and developed lands (Lopez 2001). Pine rocklands are especially important to Key deer conservation because they hold freshwater year-round. Key deer use disturbed and developed lands extensively for foraging, travel, loafing, and socializing. The Key deer feed primarily on red and black mangrove, but also feed on approximately 160 other plants to meet nutritional requirements (Klimstra and Dooley 1990).

Threats to the Species

The greatest long-term threat to the Key deer population is the loss of habitat due to human development. Loss of habitat relates to loss of carrying capacity and can only be offset by providing suitable habitat. Development has fragmented Key deer habitat, creating habitat patches where not all deer requirements are met. Therefore, Key deer range across larger areas, increasing their exposure to human related threats (Silvy 1975).

Human-related mortality, primarily road kills, is the greatest known source of deer mortality and accounts for about 50 percent of identified deaths, or an average of 44 animals per year (Lopez 2001). Although road mortality is high, the loss can be offset through reproduction. Other types of human-related mortality include drowning in man-made ditches, predation by free roaming domestic predators, and entanglement in fences.

2.1.2 Lower Keys Marsh Rabbit (*Sylvilagus palustris hefneri*)

The Lower Keys marsh rabbit is listed as endangered by both the Service and the FWC.

Description

The Lower Keys marsh rabbit is a subspecies of the marsh rabbit (*Sylvilagus palustris*) and differs from the adjacent Upper Keys subspecies (*Sylvilagus palustris paludicola*) by its skull proportions and sculpturing (Lazell 1984). The Lower Keys marsh rabbit has a shorter molariform tooth row, higher and more convex frontonasal profile, broader cranium, and elongated dentary symphysis. The body is 12 to 15 inches long, with short dark brown dorsal fur and gray-white ventral fur. The tail is dark brown and inconspicuous.

The Lower Keys rabbit is most active at night, in early morning or late afternoon, or during overcast weather. It feeds on the leaves, shoots, buds, and flowers of grasses, herbaceous, and woody plants. In late summer, adult rabbits may chase young from the nest area.

Distribution

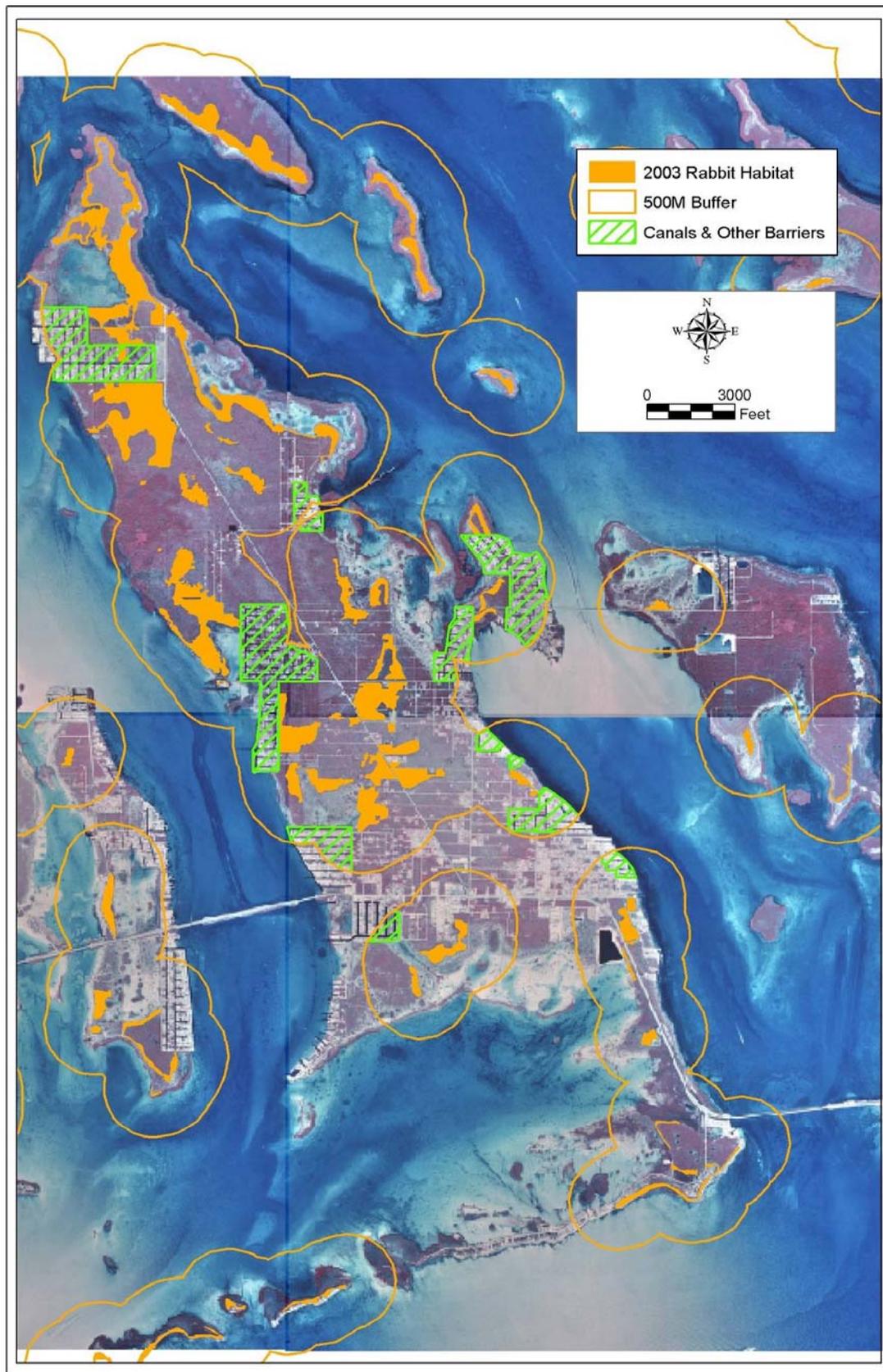
The Lower Keys marsh rabbit occurs in many of the larger Lower Keys, including Sugarloaf, Saddlebunch, Boca Chica, and Big Pine Keys, as well as in the small islands near these keys (Forys et al. 1996). Historically, the species was present on Middle Torch Key, Big Torch Key (Lazell 1984), Cudjoe Key (Howe 1988), and may have occurred on Ramrod Key, and Key West, but it has been extirpated from these areas. The Lower Keys marsh rabbit probably occurred on all of the Lower Keys that supported suitable habitat but did not occur east of the Seven-Mile Bridge, where it is replaced by *S. p. paludicola*. Known localities for the rabbit are on privately owned land, state-owned land, and Federal land within the National Key Deer Refuge and Key West Naval Air Station. A comprehensive survey for Lower Keys marsh rabbits was conducted in 1995 (Forys et al. 1996). Suitable habitat for this species is highly fragmented across all of the Lower Keys.

Habitat

Lower Keys marsh rabbits inhabit saltmarsh and buttonwood transition areas, freshwater wetlands, and coastal beach berms. Recent unpublished data suggest that the species may range into the edges of pinelands and other surrounding habitats (C. Faulhaber, pers. comm.). Freshwater wetlands are located in the northern and central portions of Big Pine Key, and are present in one parcel on No Name Key. Freshwater wetlands occupy 689.4 and 3.4 acres, respectively. A 2002 survey of Lower Keys marsh rabbit habitat on Big Pine Key and No Name Key (Faulhaber 2003) provided the most recent data on its distribution within the covered area (Figure 2.2). The Lower Keys marsh rabbit builds mazes of runs, dens, and nests in coastal (saline to brackish) or freshwater, inland marsh habitats. Two plant species, fringerush (*Fimbristylis* sp.) and buttonwood (*Conocarpus erectus*), are often present in the rabbit's habitat. In freshwater marshes, cattails (*Typha latifolia*), sawgrass (*Cladium jamaicense*), and sedges (*Cyperus* sp.) are common associates. Sometimes, spikerush (*Eleocharis* sp.) is also found. In coastal marshes, common associates include cordgrass (*Spartina* sp.), saltwort (*Batis maritima*), glasswort (*Salicornia virginica*), sawgrass, and sea ox-eye daisy (*Borrchia frutescens*). The rabbit's runs, dens and nests are made in cordgrass or sedges.

Threats to the Recovery of the Species

In the last few decades, development for residential, commercial, or military-related purposes has reduced the total area of marsh rabbit habitat in the Florida Keys. Habitat loss is the main cause of the marsh rabbit's endangered status. Currently, the Lower Keys marsh rabbit occurs in small, relatively disjunct populations and has a low population density because of predation by domestic cats. Although predation by domestic cats is the principal cause of mortality, some road mortality occurs as rabbits attempt to move among increasingly isolated Lower Keys marshes (Forys 1995). In the past, hunting of Lower Keys rabbit occurred; however, hunting is not known to be a current threat.



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Figure 2.2. Lower Keys marsh rabbit habitat (Source: United States Fish and Wildlife Service).

A PVA Study (Forys 1995, Forys and Humphrey 1999) stated that habitat on Big Pine Key consists of eight relatively large patches; Big Pine Key has the largest freshwater wetlands and more transitional habitat of the Lower Keys. The study showed that improving survival rates is very important to recovery of the species; however, during the study period survival rates among adult rabbits were low. For the Boca Chica Key study area, mortality due to domestic cats was 53 percent of total mortality and mortality due to motor vehicles was approximately 33 percent of total mortality. The model predicted a high probability of extinction if mortality from either vehicles or cats was not controlled. The model predicted a greater persistence of the population on Big Pine Key because of larger habitat patch size. A 1996 report prepared for the Service and Florida Game and Fresh Water Fish Commission identified recovery actions for the Lower Keys marsh rabbit. The report recommended that a plan to decrease domestic cat predation be established and implemented, or the marsh rabbit will face extinction in the next 20-30 years. Connectivity among suitable habitat patches is necessary for marsh rabbit dispersal among patches, and isolation from domestic predators is perhaps the main factor to help this species survive (Forys and Humphrey 1994).

2.1.3 Eastern Indigo Snake (*Drymarchon corais couperi*)

On January 31, 1978, the eastern indigo snake was designated as Federally threatened throughout its entire range.

Description

The eastern indigo snake is a large, non-poisonous snake that grows to a maximum length of eight feet. The color in both young and adults is shiny bluish-black, including the belly, with some red or cream coloring about the chin and sides of the head. The indigo snake subdues its prey with its powerful jaws and swallows the prey, usually while it is still alive. Food items include snakes, frogs, salamanders, toads, small mammals, birds, and young turtles. Indigo snakes probably reach sexual maturity at three or four years of age. Based on observations of captive animals, mating begins in November, peaks in December, and continues into March. Clutches averaging eight to nine eggs laid in late spring hatch approximately three months later.

The recovery plan objective is to delist the species by ensuring that numerous indigo snake populations exist and are reproducing and protected where suitable habitat still exists in the historical range of the species. Recovery tasks currently being implemented include habitat management through controlled burning, testing experimental miniature radio transmitters for tracking of juvenile indigo snakes, maintenance of a captive breeding colony, recapture of formerly released snakes to confirm survival in the wild, presentation of education lectures and field trips, and efforts to obtain landowner cooperation in indigo snake conservation efforts.

Distribution

Historically, the species ranged throughout Florida, except in the Marquesas and Dry Tortugas. Museum records document specimens from the Upper Keys and the Lower Keys, but not from the in the Middle Keys (Moler 1992). The species has declined throughout its range and has been extirpated from some areas due to habitat fragmentation, decline in the gopher tortoise populations, and other factors. Indigo snakes have not been documented in Big Pine Key for several years, despite the presence of suitable habitat throughout Big Pine and No Name Keys.

Habitat

The indigo snake seems to be strongly associated with high, dry, well-drained sandy soils, closely paralleling the sandhill habitat preferred by the gopher tortoise. The indigo snake can occur in most types of hammock in Florida and southeastern Georgia, often near wetlands, and often in association with gopher tortoise burrows. It is also known to occur in mangrove swamps, seepage swamp, flowing water swamp, pond swamp, wet prairie, xeric pinelands and scrub, flatwoods, dry glades, tropical hardwood hammocks, beach dune/coastal strand, pine rockland, and muckland fields in southern Florida (Cox and Kautz 2000). Gopher tortoise burrows, tree stumps, piles of debris, land crab burrows, and other subterranean cavities are commonly used as dens and for egg laying.

Threats to the Species

The species has declined throughout its range and has been extirpated from some areas due to habitat fragmentation, decline in the gopher tortoise populations, over-collecting, direct human-related mortality, and road mortality.

2.2 Species Not Covered

2.2.1 Federally Listed Species Not Covered

Several Federally listed species will not be covered under the HCP. These species include the silver rice rat (*Oryzomys argentatus*), Schaus swallowtail butterfly (*Heraclides aristodemus ponceanus*), Stock Island tree snail, (*Orthalicus reses*), Garber's spurge (*Chamaesyce garberi*), and Key tree-cactus (*Pilosocereus robinii*).

Silver Rice Rat (*Oryzomys argentatus*)

The silver rice rat is classified as Federally endangered and is known to occur on 11 islands in the Lower Keys: Little Pine, Howe, Water, Middle Torch, Big Torch, Summerland, Raccoon, Johnston, Cudjoe, Upper Sugarloaf, and Saddlebunch Keys (Vessey, et al. 1976, Wolfe 1986, Goodyear 1984, 1995). Suitable habitat is available on many islands including Big Pine Key and No Name Key, but no occurrence has been documented. Extensive trapping efforts on Big Pine Key have failed to detect silver rice rat. Therefore, the Applicants believe that the lack of documented occurrence on Big Pine Key and No Name Key has made coverage under the HCP unnecessary. It is unlikely any take of silver rice rats or their designated critical habitat will occur.

Schaus Swallowtail Butterfly (*Heraclides aristodemus ponceanus*)

The Schaus swallowtail butterfly was listed as threatened on April 28, 1976, due to population declines caused by habitat destruction, mosquito control practices, and over-harvesting by collectors. It was reclassified to endangered on August 31, 1984, because its numbers and range had declined dramatically since its listing. Critical habitat has not been designated. The Schaus swallowtail is a large blackish-brown butterfly with contrasting markings that are mostly dull yellow. There have been two unverified sightings of Schaus swallowtails in the Lower Keys. One Schaus swallowtail was seen on Big Pine Key in 1966. The present distribution of the Schaus is limited to undisturbed tropical hardwood hammocks in insular portions of Miami-Dade

and Monroe counties from Elliott Key in Biscayne National Park to northern Key Largo. There are no recent documented occurrences on Big Pine Key and No Name Key and the Applicants believe coverage under the HCP is unnecessary as it is unlikely any take of Schaus butterfly will occur.

Stock Island Tree Snail (*Orthalicus reses reses*)

The Stock Island tree snail is a subspecies classified as threatened by the Service. Historically, the Stock Island tree snail was found in several locations throughout Stock Island and Key West. Hardwood hammocks were probably the primary habitat before colonization by humans. A 1996 report by the Florida Game and Freshwater Fish Commission, which researched extant populations of Stock Island tree snails, found no evidence or documentation of Stock Island tree snails on Big Pine or No Name Key. The Applicants are not requesting coverage under the HCP based on a lack of documented occurrence on Big Pine Key and No Name Key.

Garber's Spurge (*Chamaesyce garberi*)

Garber's spurge is known only to exist on government protected lands within the covered area of the ITP and HCP. The National Key Deer Refuge on Big Pine key contains most of the remaining pine rocklands in the Keys. In pine rocklands, Garber's spurge is found growing in crevices in oolitic limestone. Pine rocklands in private ownership receive protection under the Monroe County Comprehensive Plan, and almost all remaining pinelands are targeted for acquisition. Therefore, the Applicants are not requesting coverage under the HCP, as take is unlikely.

Key Tree-Cactus (*Pilosocereus robinii*)

The Key tree-cactus was listed as endangered on July 19, 1984 due to severe population declines caused by destruction of upland tropical hardwood hammocks areas in the Keys for commercial and residential development. Critical habitat has not been designated. The Key tree-cactus is a large, tree-like cactus with erect columnar stems, reaching 10 meters (33 feet) in height. The Key tree-cactus grows in the hammocks of the Florida Keys and in the coastal thickets of the Matanzas and Habana provinces of Cuba. The historical distribution of this species in the Florida Keys, which included populations that are now extinct on Key West, Boca Chica, and Windley Keys, has been substantially diminished by the destruction of hardwood hammocks in the Lower Keys, particularly Key West. One known Key tree-cactus population exists on public lands on Big Pine Key. Therefore, the Applicants are not requesting coverage under the HCP based on a lack of documented occurrence of the species on private lands on Big Pine Key and No Name Key.

2.2.2 State Listed or Protected Species Not Covered

Coverage is not requested under the HCP for species such as the white-crowned pigeon (*Columba leucocephala*), mangrove terrapin (*Malaclemys terrapin rhizophorarum*), and striped mud turtle (*Kinosternon baurii baurii*). The habitats supporting these species are not expected to be impacted by the proposed development activities covered under the HCP. Therefore, the Applicants are not requesting coverage under the HCP for these species.

2.3 Vegetation and Habitat

Combined, mangroves and buttonwood saltwater wetlands are the most abundant habitat types in the project area (Table 2.2), and account for 40 percent and 48 percent of Big Pine Key and No Name Key, respectively (Figure 2.3). Uplands, including pinelands and hammocks, are the second most abundant habitat type and cover 29 percent of Big Pine Key and 48 percent of No Name Key. Developed areas are the least abundant habitat type and cover 19 percent of Big Pine Key and five percent of No Name Key. Freshwater wetlands are found in the central and northern portions of Big Pine Key and cover 12 percent of the island.

Table 2.2. Habitat type distribution within the project area

Habitat Type	ADID Categories ¹	Percent Area	
		Big Pine Key	No Name Key
Pinelands	Pinelands	22	12
Hammocks	Hammocks, ridge/hammock	7	36
Freshwater Wetland	Freshwater marsh, freshwater hardwoods, freshwater pine	12	-
Buttonwoods	Buttonwoods, grasslands, saltmarsh	15	12
Mangrove	Mangrove, scrub mangrove	25	36
Developed	Developed, exotics	19	4
	Total	100	100

¹ ADID: Advance Identification of Wetlands (McNeese and Taylor 1998).

The Florida Keys Advance Identification of Wetlands (ADID) Project (McNeese and Taylor 1998) was the source map used to develop a vegetation map of the project area. All land within the project area was field-verified and ADID habitat types were merged into six categories: pineland, hammock, freshwater wetland, buttonwood, mangrove and developed (Silvy 1975, Lopez 2001; Table 2.2). Water and Dune habitat categories were deleted from the vegetation map because the Key deer rarely uses these types of habitat.

2.3.1 Pinelands

Pinelands are upland forest communities with an open canopy dominated by the native slash pine (*Pinus elliottii* var. *densa*). Keys pinelands are fire-adapted and dependent on periodic fires for their long-term persistence. Surrounded by wet prairie habitats and/or mangroves, pinelands typically occur on locally elevated areas of bedrock, which may flood seasonally or during extreme storm events. Xeric conditions in this habitat are partly caused by locally low rainfall and the exposed rock ground cover.

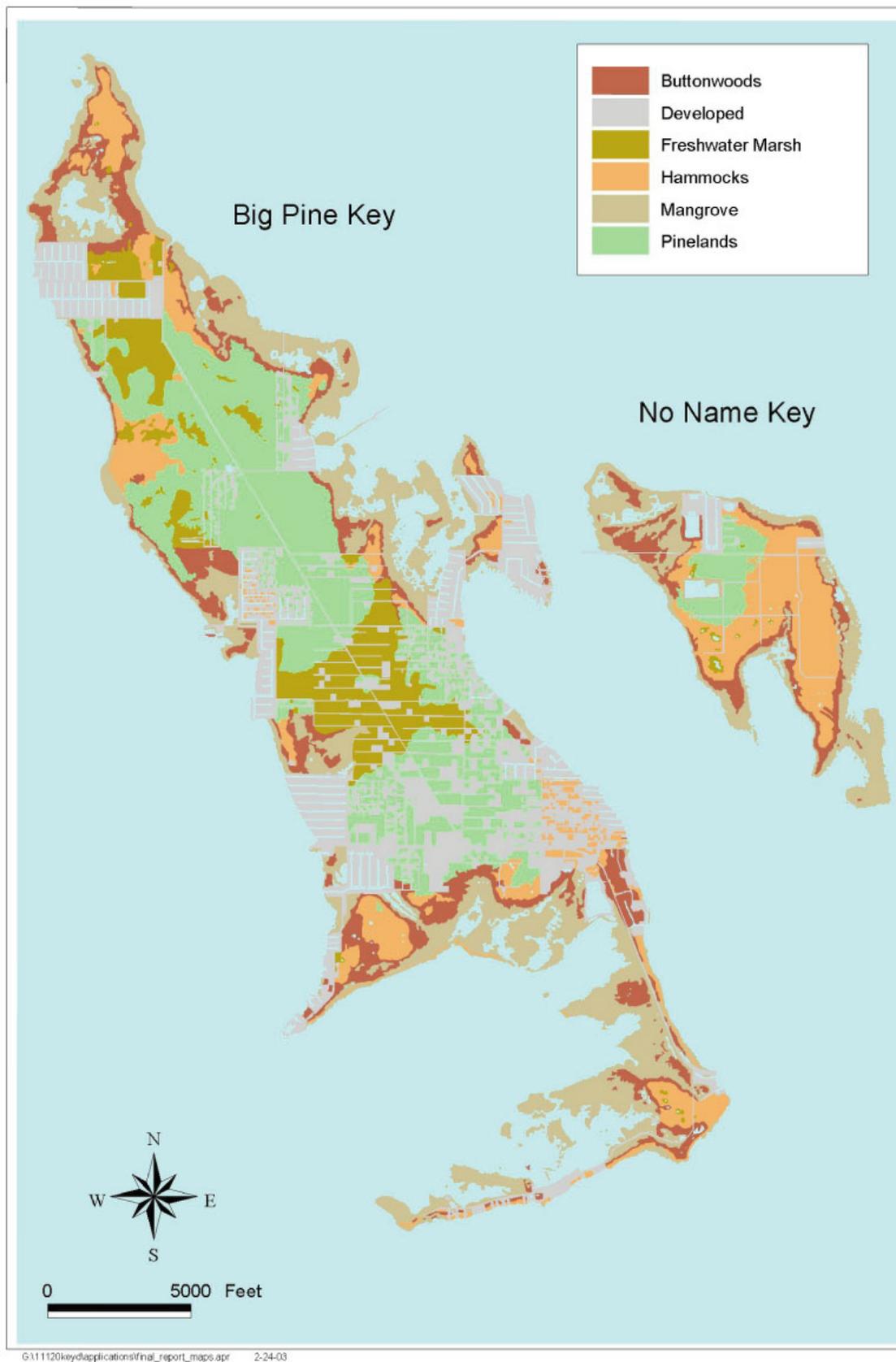


Figure 2.3. Vegetative cover of Big Pine Key and No Name Key (after McNeese and Taylor 1998).

The extent of subcanopy development in a pineland is dependent upon the frequency of surface fires. Pinelands on Big Pine Key typically have a well-developed subcanopy consisting of palms (silver thatch palm, *Coccothrinax argentata*; Key thatch palm, *Thrinax morissii*; thatch palm, *T. radiata*; saw palmetto, *Serenoa repens*) (Bergh and Wisby 1996). Other species found in the pineland understory include strongbark (*Bourreria cassinifolia*), locust berry (*Byrsonima lucida*), silver thatch palm, pineland croton (*Croton linearis*), rough velvetseed (*Guettarda scabra*), wild sage (*Lantana involucreta*), and long-stalked stopper (*Psidium longipes*). Shrub vegetation in Lower Keys pinelands varies in composition and density. For example, Big Pine Key pinelands have a low and sparse ground covering of grasses and bare limestone, whereas on Cudjoe, Little Pine, and No Name Keys a continuous hardwood understory of 6 meters height or more is present due to prolonged absence of fire.

More tropical plant species also occur in the Lower Keys pineland shrub stratum including *Caesalpinia* (*Caesalpinia pauciflora*), dune lily-thorn (*Catesbaea parviflora*), pisonia (*Pisonia rotundata*), and pride-of-Big-Pine (*Strumpfia maritima*). Plant species from adjacent habitats may invade at the pineland margins. For example, gumbo limbo (*Bursera simaruba*), inkwood (*Exothea paniculata*), and wild tamarind (*Lysiloma latisiliquum*) occur in pinelands sited adjacent to a hammock. Only four plant species endemic to South Florida pinelands (partridge pea, *Chamaescista lineata*; small-leaved melanthera, *Melanthera parvifolia*; rockland spurge, *Chamaesyce deltoidea* var. *serpyllum*; and sand flax, *Linum arenicola*) occur on Big Pine Key (Ross and Ruiz 1996), likely as a result of water table depth, salinity, and other physical variables.

Pinelands in the Lower Keys have declined markedly in recent history, primarily as a result of development. Coverage in Big Pine Key has decreased by 50 percent since 1940 (Ross 1989). At present, somewhat extensive pinelands occur on Big Pine, Little Pine, No Name, Cudjoe, and Sugarloaf Keys. Distribution of pineland vegetation in the Keys appears to coincide with the presence of freshwater lenses (McNeese and Taylor 1998). Other limiting factors on the establishment, growth, and persistence of pinelands appear to be lack of fire (Alexander and Dickson 1970, Snyder et al. 1990, Carlson et al. 1993) and salt-water intrusion into freshwater lenses (Ross et al. 1994). Without prescribed burning, the 2,268 acres of pinelands remaining in the Lower Keys could succeed into hardwood hammock in the next 50 years.

Pinelands occur throughout the project area. Key deer preferentially utilize this habitat for the permanent freshwater sources that are critical to survival of the species. Key deer also feed on herbaceous species and the fruits of woody species found in pinelands (Monroe County 1987). The fire regime of pinelands creates an environment of easily accessible food resources for the Key deer (Monroe County 1987).

2.3.2 Hammocks

Along with pinelands, tropical hardwood hammocks represent the climax upland community type in the Florida Keys and are second to pinelands in terms of biodiversity (Ross et al. 1992). Tropical hardwood hammocks in the Florida Keys are closed, broad-leaved forests that occupy elevated, well-drained and relatively fire-free areas. Hammocks in the Lower Keys are more widespread than pinelands, except for Big Pine Key where the area of pineland is greater than

that of hammock. Approximately 560 acres of hammock occur on Big Pine Key and 385 acres on No Name Key (Figure 2.3). The greatest limiting factor on hardwood hammocks in the Florida Keys has been human influence, in particular from development.

Canopy trees of the Lower Keys hammocks tend to be smaller than those in hammocks occurring in other parts of Florida, and are often referred to as “low hammock” or “Keys hammock thicket.” Trees commonly found in low hammock generally have a smaller trunk diameter and grow closer together. Species include poisonwood (*Metopium toxiferum*), buttonwood (*Conocarpus erectus*), blolly (*Guapira discolor*), Key thatch palm, Spanish stopper (*Eugenia foetida*), wild dilly (*Manilkara bahamensis*), Jamaica dogwood (*Piscidia piscipula*), and white stopper (*Eugenia axillaris*). Other species present on the windward side of low hammocks, referred to as transitional hammock or thorn scrub, include black torch (*Erithalis fruticosa*), saffron plum (*Bumelia celastrina*), sea grape (*Coccoloba uvifera*), blackbead (*Pithecellobium guadalupense*), indigo berry (*Randia aculeata*), tallowwood (*Ximenia americana*), darling plum (*Reynosia septentrionalis*), joewood (*Jacquinia keyensis*), barbed-wire cactus (*Cereus pentagonus*), and prickly pear cactus (*Opuntia stricta*).

Herbaceous plants are largely absent from Keys hammocks. Grasses include low panicum (*Panicum* spp.) and sour paspalum (*Paspalum conjugatum*) (NRCS 1989). In addition, hammocks support a diverse flora of orchids, ferns, bromeliads, and other epiphytes (Snyder et al. 1990, USEPA Undated 12), and are home to the Federally endangered Key tree-cactus (*Pilosocereus robinii*).

Tropical hammocks provide shelter for many animals during periods of high water and also nesting, feeding and roosting sites for many local and migratory birds (NRCS 1989). Key deer primarily utilize this habitat for cover, cool shelter, fawning and bedding (Silvy 1975). Other endangered and threatened species found in these areas in the Florida Keys include the Lower Keys marsh rabbit and eastern indigo snake (NRCS 1989). Additionally, tropical hardwood hammocks in south Florida provide essential habitat for the white-crowned pigeon (*Columba leucocephala*), Schaus’ swallowtail butterfly (*Papilio aristodemus ponceanus*), and tree snails (*Liguus* spp.).

2.3.3 Freshwater Wetlands

Throughout the Keys, freshwater wetlands are restricted to areas landward of the seasonal high tide line and in the Lower Keys are found in areas underlain by freshwater lenses (McNeese and Taylor 1998). The persistence of freshwater ecosystems is limited primarily by freshwater availability, tidal influence, and human activities, including direct and indirect effects of development such as draw-down and contamination (McNeese and Taylor 1998, Folk 1991). During the dry season, freshwater lenses of Big Pine Key can diminish by as much as 50 percent (Stewart et al. 1989). Freshwater wetlands are located in the northern and central portions of Big Pine Key but are present in one parcel on No Name Key and represent 689.4 and 3.4 acres, respectively.

This habitat type is dominated by sawgrass (*Cladium jamaicense*) and spikerush (*Eleocharis* spp.). Forested freshwater systems in the Keys are generally pinelands with a sawgrass

understory (McNeese and Taylor 1998). Freshwater wetlands are typically found in isolated, seasonally flooded depressions with elevations of +3.0 feet National Geodetic Vertical Datum (NGVD) or less and may be found in conjunction with pinelands. Freshwater wetlands provide critical habitat for several listed species, in particular the Key deer and Lower Keys marsh rabbit (*Sylvilagus palustris hefneri*). These habitats and surface waters represent the only dry season source of freshwater for wildlife (McNeese and Taylor 1998, NRCS 1989) and play an important role in attenuating nutrients and other contaminants in surface water runoff.

2.3.4 Saltwater Marsh/Buttonwood Marsh

Throughout the Florida Keys, salt marshes and buttonwood associations occur in coastal locations similar to mangrove wetlands (Montague and Wiegert 1990). Salt marshes are non-woody, salt-tolerant communities occupying supratidal zones that are occasionally inundated with salt water. Two types of salt marsh are found in the Florida Keys, low marsh and high marsh. Low marsh species include salt-tolerant herbs such as glasswort (*Salicornia* spp.) and Keygrass (*Monanthochloe littoralis*), while high marsh is dominated by Gulf cordgrass (*Spartina spartinae*), fringe rushes (*Fimbristylis* spp.), and sea-oxeye daisy (*Borrchia frutescens*) (McNeese and Taylor 1998).

Buttonwood associations border high marsh communities and have similar ecological characteristics (McNeese and Taylor 1998). Plant species that inhabit this community prefer low-energy waves with little tidal disturbance. Buttonwood forests are dominated by the silver buttonwood (*Conocarpus erectus*). Other species include salt-tolerant herbaceous perennials and woody shrubs such as fringe-rushes, Keygrass, Gulf cordgrass, and seashore dropseed (*Sporobolus virginianus*). There are approximately 685 acres of buttonwood marsh on Big Pine Key and 170 acres on No Name Key (Figure 2.3).

Salt marsh/buttonwood marsh communities provide important habitat for terrestrial species including the Federally endangered Lower Keys marsh rabbit, silver rice rat (*Oryzomys argentatus*), and diamondback terrapin (*Malaclemys terrapin*). Buttonwood areas provide herbaceous foods and loafing areas for Key deer. Common residents include polychaetes, gastropod mollusks, bivalve mollusks and crustaceans. Birds tend to use the marsh for feeding rather than for nesting. A few species of birds, fish, reptiles, or mammals can be considered residents of salt marshes; larger longer-lived organisms are not tolerant of the environmental fluctuations (Montague and Wiegert 1990).

2.3.5 Mangroves

Mangrove communities consist of facultative halophytes, which are tolerant of anaerobic saline soils and tidal inundation. Three species are found in Florida: the red mangrove (*Rhizophora mangle*), black mangrove (*Avicennia germinans*), and white mangrove (*Laguncularia racemosa*).

In general, the zonation of mangrove communities is regulated by elevation. Red mangroves occur in the middle and lower intertidal zone and upper subtidal zone. Black mangroves dominate the upper intertidal zone and are generally found between the red and white species. White mangroves occur on the landward edge of mangrove forests, throughout the intertidal and

in the upper portions of the swamp. Ground cover within a mangrove forest consists of leaf litter and decomposing forest debris.

Throughout the Florida Keys, mangrove forests form the predominant coastal vegetation community. Mangroves are found along the edges of shorelines, bays and lagoons and on overwash areas throughout the Keys. Major limiting factors on mangrove establishment, growth and persistence in the Florida Keys appear to be water quality, substrate, and development (Lewis 1980, Snedaker and Lugo 1973, Strong and Bancroft 1994, Odum et al. 1982). Mangrove habitat occurs on approximately 1,495 acres of Big Pine Key and 374 acres of No Name Key (Figure 2.3).

Mangrove communities in the Florida Keys provide essential habitat for numerous ecologically and economically important species (FWC Undated 7). The leaves and fruits of red and black mangroves are a primary food source for the Key deer, which spend considerable time foraging in tidal wetlands (Monroe County 1987, Silvy 1975). In South Florida, mangroves are important habitat for at least 220 fish species, 24 reptile and amphibian species, 18 mammal species, and 181 bird species (Odum et al. 1982), and provide nesting habitat for a number of threatened and endangered species. Dissolved organic matter from mangroves serves as an alternate food source, the basis for heterotrophic microorganism food webs, and a source of chemical cues for estuarine species (Snedaker 1989).

2.4 Scientific Basis of the HCP: The Key Deer PVA Model and Its Application

2.4.1 Field Studies of Key Deer Population Dynamics

Silvy (1975) had conducted the most recent, comprehensive population study of Key deer population dynamics in the early 1970s. Between 1998 and 2001, Lopez (2001) studied the Key deer population on Big Pine Key and No Name Key. To determine the fate of individual Key deer through time, Lopez placed radio transmitters on over 200 deer (Table 2.3) and monitored the status of individual deer for up to three years. Information on individual deer provided an assessment of the year-to-year probability of mortality and fecundity (average number of fawns produced by females). Radio telemetry data also provided a clear picture of habitat utilization, deer movement, and deer distribution in the study area.

Table 2.3. Gender and age-classes¹ of radio collared Key deer in Big Pine Key and No Name Key, 1998-1999 (after Lopez 2001)

	Adults	Yearlings	Fawns	Total
Male	52	35	9	96
Female	82	32	12	126
Total	134	67	21	222

¹ Fawns: <1 year old; Yearlings: 1-2 years old; Adults: >2 years old.

From March 1998 to December 1999, Lopez (2001) also performed weekly censuses along 10 miles of roads and bi-monthly censuses along 44 miles of roads in Big Pine Key and No Name Key. The censuses provided information on deer number and density.

2.4.2 Development of the Key Deer PVA Model

Numerous models have been developed for estimating the risk of extinction for small populations (Akcakaya 2000). A PVA model is a collection of methods for evaluating the threats faced by populations or species, their risk of extinction or decline, and their chance for recovery (Akcakaya and Sjogren-Gulve 2000). Species viability is often expressed as the risk or probability of extinction, population decline, expected time to extinction, or expected chance of recovery (Akcakaya and Sjogren-Gulve 2000). PVA models use demographic and habitat data and typically involve the use of computer simulations to assess extinction threats. PVA modeling is becoming one of the primary tools for managing threatened and endangered species. Akcakaya and Sjogren-Gulve (2000) recommended that critical population levels (quasi-extinction), instead of risk of extinction, should be used to express long-term population viability of species because of limitations inherent in modeling small populations. Following Akcakaya and Sjogren-Gulve, the Applicants of this HCP chose to express the probability of long-term viability of the species in terms of critical population level (quasi-extinction). Specifically, the probability that the population fall below 50 individuals at least once in 50 years was used as the criterion to determine an unacceptable level of development.

Lopez (2001) developed a PVA model to evaluate development impacts on the Florida Key deer population. The model incorporated Key deer movements, habitat utilization, ecology and demographic data and included two main components: a) a matrix model of population dynamics and b) a spatial habitat model of carrying capacity and secondary impacts.

Matrix Model

Quantitative information on mortality and fecundity for deer of different stages (e.g., fawn, yearling, adult) was used to create a matrix model that allows for simulating the fate of the population under different scenarios (Lopez 2001). In a matrix model, changes in mortality or fecundity result in changes in population size through time. A stage-based population matrix model represents the dynamics of the population as a function of annual estimates of fecundity (average number of fawns produced by females) and survival (probability of surviving from one year to the next). The Key deer model is applied only to females and takes the form:

$$\begin{bmatrix} F_y & F_a \\ S_f & \\ S_y & S_a \end{bmatrix},$$

Where S_f , S_y , and S_a are fawn, yearling, and adult survival, respectively, and F_y and F_a are yearling and adult fecundity estimates, respectively.

The stage-based matrix model allows for the analysis of stochasticity (i.e., the haphazard, year-to-year variation in fecundity and survival associated with changes in the environment). Stochastic events are particularly significant for small populations and, therefore, the model includes estimates of the variability of the population parameters. For example, annual female survival and variance estimates for each stage class were determined using a known-fate model framework in the computer program MARK (White and Burnham 1999, Lopez 2001). The

model also allows for evaluating the effects of stochastic events, such as hurricanes. A detailed discussion of the methodology to estimate model parameters is found in Lopez (2001, 2004) and Lopez et al. (2003).

Spatial Model

While the matrix model represents the overall dynamics of the Key deer population in the study area, the spatial model represents the location-specific contribution to the matrix model parameters. For example, localized changes in habitat quality and distribution, or in the number and location of paved roads may affect both fecundity and survival.

The spatial model also sought to address the anticipated impacts of development. For example, urban development causes two main types of impacts on the Key deer:

1. A change in carrying capacity. Urban development displaces and modifies Key deer habitat, therefore affecting the capacity of the remaining habitat to sustain Key deer.
2. An increase in human-related Key deer mortality. A change in the amount of development and resulting changes in the human population may, in turn, result in changes in the mortality of Key deer caused by motor-vehicle collisions, entanglement in fences, and other human-related effects.

Therefore, in order to address impacts to carrying capacity and mortality, the spatial model includes a carrying capacity and a “harvest” (i.e., human-related mortality) grid in a Geographic Information System (GIS). The grids represent the entire study area as an array of 10x10 meter cells; each cell’s value represents its contribution to the total carrying capacity or harvest of the study area.

A weighting factor grid supported the development of the carrying capacity and harvest grids. The objective of the weighting grid was to address location-specific conditions that affect carrying capacity and harvest. For example, two grid cells of the same vegetation type may contribute differently to the carrying capacity of the Key deer depending on their proximity to canals: a pineland cell located in the middle of a large pineland area would provide better habitat to the Key deer than an isolated pineland cell surrounded by canals. Similarly, development of a pineland cell near US-1 would create a lesser vehicle collision impact (due to shorter travel distance to US-1) than development of a pineland cell located far from US-1 (due to the longer travel distance to US-1).

Six parameters entered into the weighting factor grid (Figure 2.4):

- House density. Development in areas with higher house density would be less harmful to the Key deer than development in areas with lower house density.
- Deer corridors. Development outside Key deer corridors would be less harmful to the Key deer than development in areas within Key deer corridors.
- Patch quality: Development in smaller, fragmented habitat areas would be less harmful to the Key deer than development in larger, uninterrupted habitat areas.

- Deer density: Development in areas of low Key deer density would be less harmful to the Key deer than development in areas of high density.
- Distance from US-1. Development near US-1 would be less harmful to the Key deer than development farther from US-1.
- Water barriers. Development in areas with canals would be less harmful to the Key deer than development in areas without canals.

Because more than one factor may affect the value of a given cell, the final cell value in the weighting factor grid was the average of the six parameters, where 0 represented the lowest value to the Key deer and 2 represented the highest value to the Key deer.

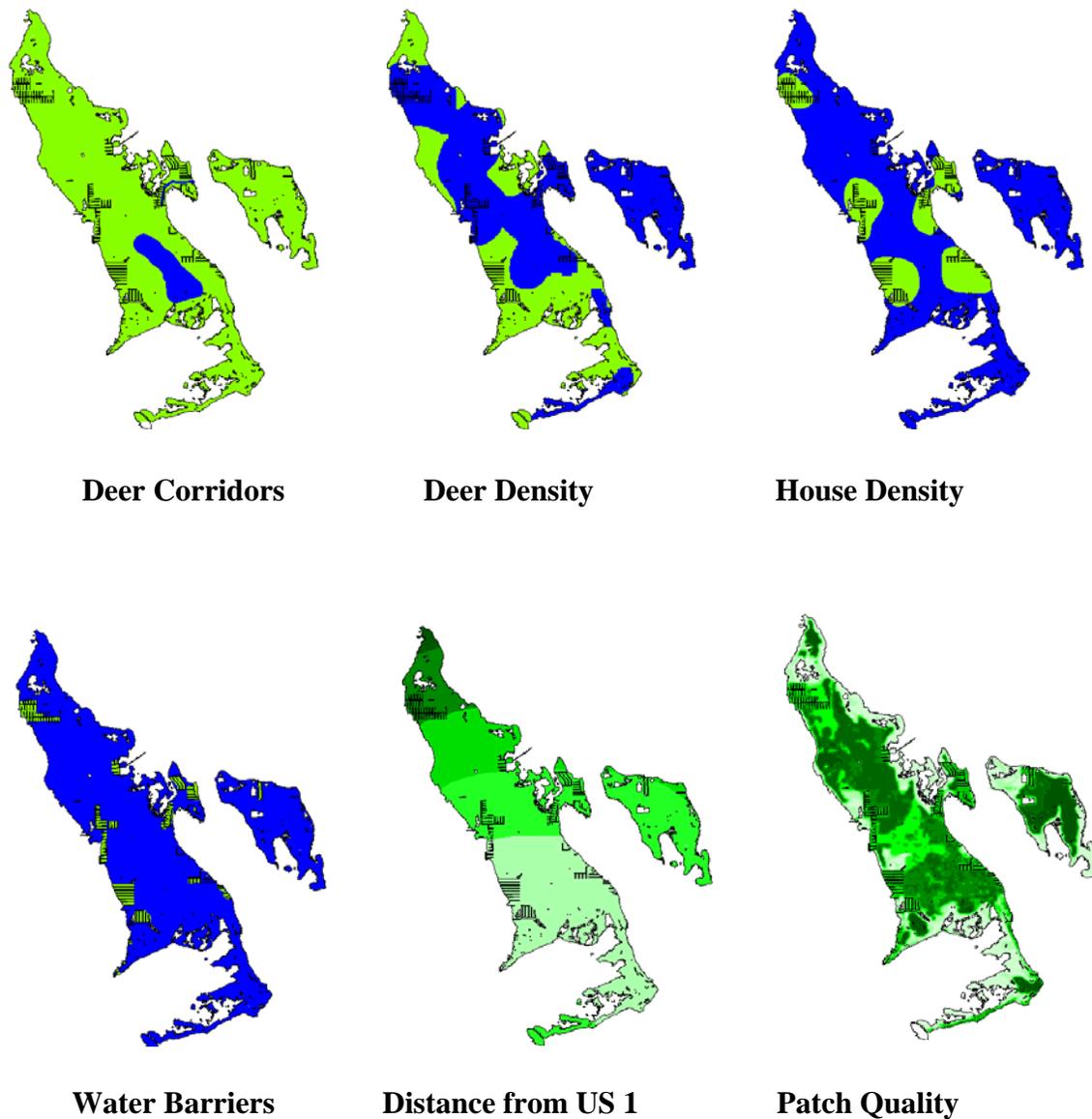


Figure 2.4. Six grid layers used to generate weighting factor grid (darker shades = higher value for the deer)

The final carrying capacity grid (Figure 2.5) represents the contribution of each 10x10 meter cell to the total carrying capacity of the study area after applying the weighting factor. Lopez (2001) estimated the number of Key deer that could be supported by available habitat in Big Pine Key and No Name Key. Initially, this total number was divided among the 10x10 meter cells, so that each cell would have the same number. Then, the weighting factor was applied to each cell; the result was a differential contribution of the cells to the total carrying capacity. To ensure that the method was consistent, the sum of the value for all the cells was confirmed the same before and after the application of the weighting factor.

Similarly, the final harvest grid represents the proportional contribution of each 10x10 meter cell to the total harvest in the study area. Lopez (2001) determined that approximately 8.4 percent of the deer population dies from human-related causes (total mortality is about 17 percent). He allocated this percentage equally among all the 10x10 meter cells for the study area. Then, he applied the weighting factor to each cell; the result was a differential contribution of the cells to the total human related mortality, or harvest, H. The sum of the values of all cells was the same in the initial grid and the final grid. For any given scenario, the location and intensity of development affect both the carrying capacity and the mortality of the Key deer.

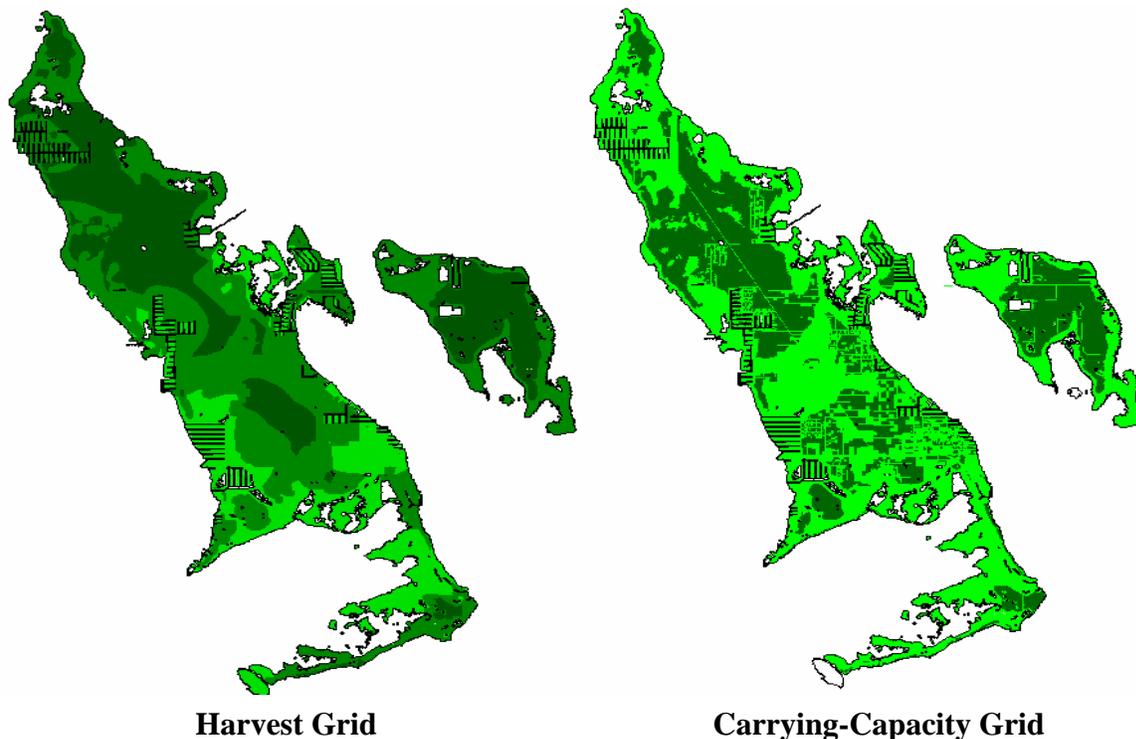


Figure 2.5. Key deer PVA model grid layers
(darker shades = higher value for the deer)

2.4.3 PVA Model Analysis and Results

The final PVA model includes the matrix model of population dynamics and the spatial model, which allows for addressing development impacts. The program RAMAS Metapop (Applied Biomathematics, Inc.) was used to run the model. The model provides estimates of population size, probability of extinction, and other risk estimates.

In a model “run,” the model multiplies the initial population number per stage class by the matrix; the result represents the number of Key deer in each stage class one year later. The model then multiplies this new number by the matrix again to generate the population number for year two. The model run simulates 100 years. This process is repeated 10,000 times. To account for stochastic events, the computer randomly varies matrix parameters and hurricane probabilities, within documented ranges (Lopez 2001). The final model run result represents the average of the 10,000, 100-year iterations.

To estimate the effects of increasing levels of development on the Key deer population, 10 scenarios were evaluated with the Key deer PVA model, beginning with a no action scenario, which represents initial conditions (prior to the construction of the US-1 projects). For any given scenario, the model chose the least valuable vacant parcels and assumed the parcels were developed. As parcels are selected, the spatial model calculated the change in carrying capacity (K) and harvest (H), under the assumption that the total K or H of the parcel was affected. The total K or H for a parcel is the sum of the value for each 10x10-m grid cell inside the parcel. A cell is counted within a parcel if more than 50 percent of its area is inside the parcel.

The change in K and H values, which represent the direct effects of development, are then input into the matrix model. The change in K represents the reduction in the carrying capacity of the area due to habitat loss; the change in H represents the additional percent of human-related mortality, or “harvest,” due to the combined effect of habitat loss and increased human activity. Therefore, the model run simulates the effect of development on the Key deer population through time.

The model runs provide an estimate of the risk of extinction in 100 years and the risk of quasi-extinction, here defined as the risk that the population falls below 50 individuals (females) at least once in 50 years (Table 2.2). Both are expressed as probabilities. The model also estimates the average additional human-related mortality (number of female deer).

Results suggest that the probability of extinction of the Key deer in 100 years is less than one percent, even in the presence of levels of development above initial conditions unlikely to occur in the project area (Table 2.4). Model results also indicate the probability that the Key deer population will fall below 50 females at least once in 50 years is 2.2 percent, even with no further development and without the US-1 projects already completed. As expected, the model suggests that annual human-related mortality is likely to increase with the intensity of development.

Table 2.4. Effect of development on Key deer

Scenario	Number of Residential Parcels Developed ¹	Habitat Loss ² (decrease in K)	Total Harvest ³ (increase in H)	Risk of Extinction in 100 years (percent)	Risk of Falling Below 50 Females at Least Once in 50 Years (percent)	Additional Average Annual Mortality ⁴
No Action	0	0	0.00	0.03	2.2	0
S1	200	0	0.42	0.04	2.8	1.6
S2	300	4	0.73	0.04	3.4	2.9
S3	400	6	1.07	0.05	4.1	4.1
S4	500	8	1.47	0.06	5.2	5.4
S5	600	10	1.99	0.07	7.0	6.7
S6	700	12	2.59	0.10	9.9	7.9
S7	800	14	2.90	0.11	11.8	8.3
S8	900	24	3.27	0.13	14.7	8.6
S9	1,000	27	3.70	0.16	18.0	8.7

¹ The model selected parcels with lowest total habitat value to the Key deer.

² From the carrying capacity grid in the spatial model. It is an input to the matrix model.

³ From the harvest grid in the spatial model. It is an input to the matrix model.

⁴ Males and females.

The matrix model is more sensitive to changes in H than to changes in K. In turn, changes in H are highly correlated with predicted impacts measured as either the risk of falling under 50 female individuals in 50 years or additional annual human-related mortality. The equations that relate H with these impact assessment variables are:

$$\text{Percent Risk}_{(50)} = 2.2e^{0.58H}$$

and

$$\text{Additional Annual Human-Related Mortality (males plus females)} = -0.65H^2 + 4.85H - 0.34$$

In both cases, the equations explain 99 percent of the variance; therefore, H is an excellent predictor of development impacts to the Key deer.

Through discussion with stakeholders an H level of 1.1 was determined to be an acceptable increase in human-related mortality that will not jeopardize the Key deer.

2.4.4 Application of the PVA Model to the HCP

The spatial component of the PVA model provides a reliable predictor of development impacts on the Key deer: Harvest (H), which is highly correlated with estimates of impacts. Therefore, H is used to measure impacts and mitigation in this HCP.

The Key deer PVA yielded equations that relate H to estimates of risk and additional human-related mortality; therefore, if an H value is assigned to a development activity, then the PVA model can evaluate the effect of that development activity on the Key deer.

Assigning an H Value to Development Activities

First, the method to assign H to a development activity must address the diversity of development types. The model runs assume development on vacant parcels and further assumed that the impact of development was equal to the entire H of the parcel. However, development activities will also occur on already developed parcels and may involve expansion of existing facilities or redevelopment of the parcels to the same or a different land use. Also, road paving or widening must be addressed.

Second, the method to assign H to a development activity must recognize that different land uses cause different levels of human activity (and, therefore, different potential effects on Key deer). For example, other things being equal, a single family residence and a 3,000 square foot store would have different effects on the level of traffic generated and, therefore, on the risk of Key deer road mortality.

In order to assign H to any development activity, the Applicants developed a method that meets the two conditions described above. The main premises of the method are:

1. *If development occurs on an undeveloped parcel, the impact equals the H of the parcel:* The Applicants assume that an undeveloped parcel is fully available to the Key deer and that new development affects the habitat value of the entire undeveloped parcel. Therefore, the impact of such development equals the H of the entire parcel (see Appendix A for definition of new structures).
2. *If development occurs on a developed parcel, the impact of development equals the H of the footprint of the additional development:* The Applicants assume that the impact of existing development has been already realized; therefore, the H of development that occurs in parcels that are already developed is associated with the footprint of the additional activity instead of the entire parcel area (see Appendix A for definition of replacement structures).
3. *The effect of the development activity depends on the type of development or land use:* Because roadway mortality is the largest cause of human-related mortality of Key deer, 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 (Table 2.5).

When unique development conditions are encountered that are not covered by the H-calculation formulas the county will propose a formula and explanation for the calculation to the Service for review and concurrence.

Table 2.5. H multiplier for land use development categories¹

Land Use	Average Daily Trip Generation²	H Multiplier	Variable Name
Single family residential	9.5	1	M _{SRF}
Fences only	--	0.2 ³	
Accessory uses	--	0.2 ³	M _{ACC}
Retail	70	7.4 (per 1,000 sq. ft.)	M _{LU1}
Hotel/Motel	7.9	0.8 (per room)	M _{LU2}
Office	5.9	0.6 (per 1,000 sq. ft.)	M _{LU3}
Institutional	13	1.4 (per 1,000 sq. ft.)	M _{LU4}
Industrial	5	0.5 (per 1,000 sq. ft.)	M _{LU5}
Recreational	67	7	M _{REC}

¹ The multiplier is based on traffic generation because vehicle collisions with Key deer are the most important human-related cause of mortality for the Key deer.

² Average daily trip generation was estimated from the Institute of Traffic Engineers Manual; daily trip generation by land use has not been verified for the Florida Keys.

³ Fences and accessory uses, as defined in the Monroe County Land Development Regulations, are assumed to cause no additional traffic impacts; they were assumed to cause habitat loss (change in K), which has a lesser effect on the matrix model than changes in H.

Based on these three premises, an H value can be assigned to any anticipated development activity (Table 2.6). Multiplier variables (M) described in Table 2.5.

Table 2.6. Calculation of H for different development activities

Type of Parcel	Type of Development	H Calculation	Description
Undeveloped	Residential construction (single family)	$H_{\text{impact}} = H_{\text{parcel}} * M_{\text{SFR}}$	Construction on vacant parcels incurs a new impact, both as loss of habitat and as causing secondary effects.
	Non-residential construction	$H_{\text{impact}} = H_{\text{parcel}} * M_{\text{LUx}}$	For non-residential land uses, the total impact is a function of both the amount and type of development.
	Accessory Use	$H_{\text{impact}} = H_{\text{parcel}} * M_{\text{ACC}}$	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)	$H_{\text{impact}} = (H_{\text{parcel}} * 0.2) * M_{\text{REC}}$	Parcels will be revegetated with native vegetation, thus improving habitat value. Recreation use will increase secondary impacts.
Developed	Expansion	$H_{\text{impact}} = H_{\text{parcel}} * (\text{sq.ft.}_{\text{expansion}} / \text{sq.ft.}_{\text{parcel}}) * M_{\text{LUx}}$	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)	$H_{\text{impact}} = H_{\text{parcel}} * \{ [M_{\text{LUx}} * (\text{sq.ft.}_{\text{dev}} / \text{sq.ft.}_{\text{parcel}})]_{\text{new}} - [M_{\text{LUx}} * (\text{sq.ft.}_{\text{dev}} / \text{sq.ft.}_{\text{parcel}})]_{\text{old}} \}$	The impact is the difference between the effect of the new footprint/land use and the old footprint/land use.
	Accessory Use	$H_{\text{impact}} = H_{\text{parcel}} * M_{\text{ACC}}$	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)	$H_{\text{impact}} = 0.03720 * \text{length of paving (in miles)}$	Calculation is based on the estimated H of 1 mile of paved road (H = 0.0372)
	Widening (paved roads; including US-1)	$H_{\text{impact}} = 0.03720 * (\text{additional width/existing width}) * \text{length (in miles)}$	

2.4.5 The Tier System: A Planning Tool to Manage Development and Conservation

Based on the Key deer studies done under this HCP and the resulting spatial model, Monroe County developed a conservation priority classification for private undeveloped lands in the study area. The private undeveloped lands in the study area are classified into three “Tiers” (Table 2.7 and Figure 2.6). Tier 1 lands are higher quality Key deer habitat. Tier 3 lands are the lowest quality Key deer habitat. Most of the parcels in Tiers 2 and 3 are interspersed among developed parcels and among canals. These areas provide little habitat value to the covered species. The tier classification helped in determining the location of potential new development and prioritizing mitigation areas.

Table 2.7. Tier classification system (vacant privately-owned lands)

Tier	Description	Area (acres)	
		Big Pine Key	No Name Key
1	Lands where all or a significant portion of the land area is characterized as environmentally sensitive and important for the continued viability of HCP covered species (mean H per 10x10 meter cell = 0.259×10^{-3}). These lands are high quality Key deer habitat, generally representing large contiguous patches of native vegetation that provide habitat for other protected species as well.	973.4	217.0
2	Scattered lots and fragments of environmentally sensitive lands that may be found in platted subdivisions (mean H per 10 x10 meter cell = 0.183×10^{-3}). A large number of these lots are located on canals and are of minimal value to the Key deer and other protected species because the canal presents a barrier to dispersal.	101.6	0
3	Scattered lots within already heavily developed areas that provide little habitat value to the Key deer and other protected species (mean H per 10x10 meter cell = 0.168×10^{-3}). Some of the undeveloped lots in this Tier are located between existing developed commercial lots within the US-1 corridor or are located on canals.	58.5	0
Total		1,133.5	217.0

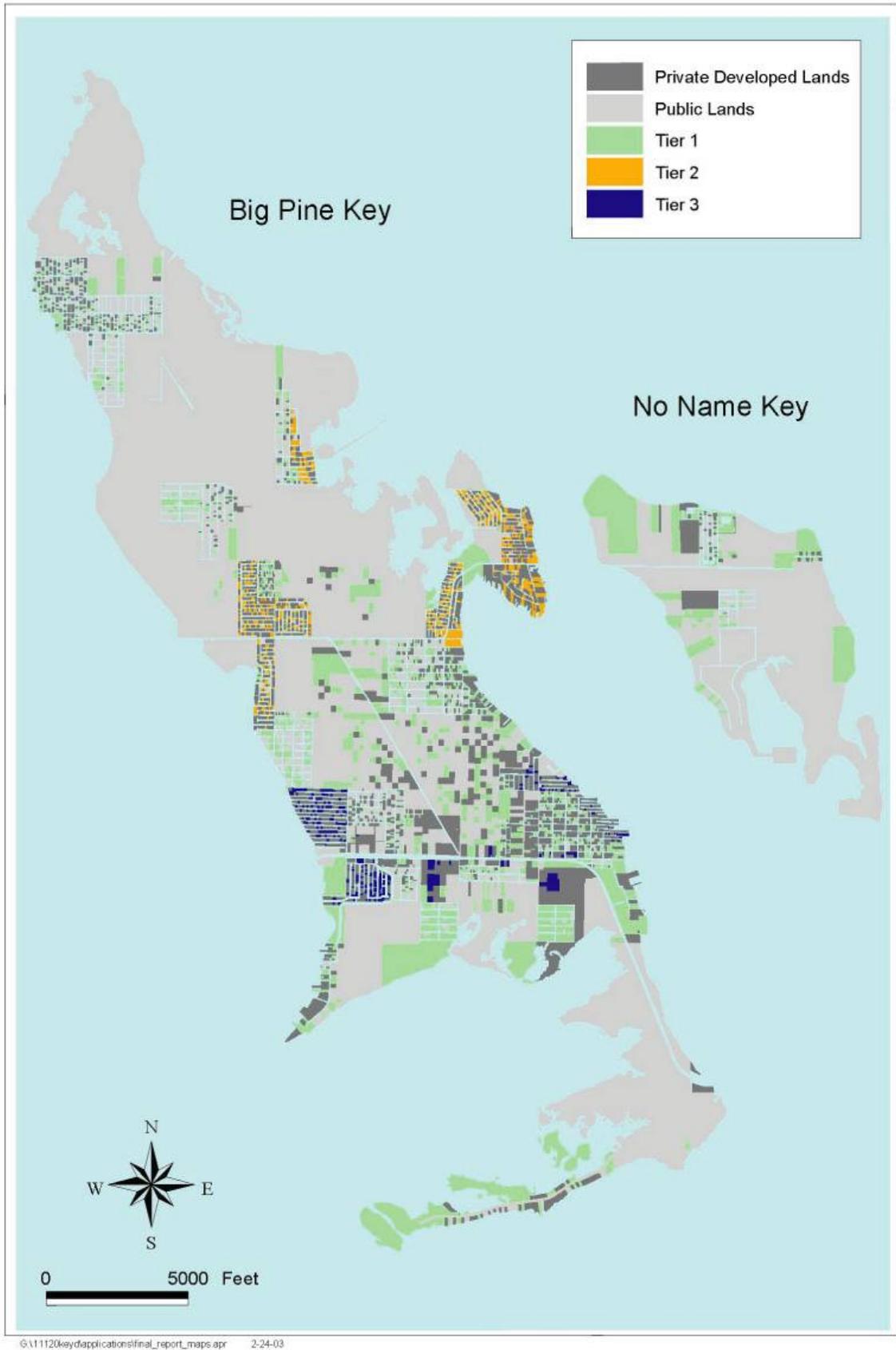


Figure 2.6. Tier classification system in the project area

3. LAND USE CONDITIONS

3.1 Introduction

The Florida Keys encompass a group of islands and, therefore, terrestrial habitats are naturally fragmented. Development has greatly increased the degree of habitat fragmentation mainly by reducing patch size, increasing distances among patches, and in some cases, creating barriers to dispersal (Strong and Bancroft 1994). Development in the Florida Keys has occurred primarily in upland areas, resulting in the loss of almost half of the upland habitats, from 20,038 acres in pre-development times to 10,353 acres in 1995 (URS 2001).

Lower Keys islands developed at a slower pace than the Middle and Upper Keys, but many subdivision plats were filed throughout the 1950s and 1960s. As human alteration of the habitat on Big Pine Key and No Name Key progressed, land was set aside for preservation, establishing the National Key Deer Refuge (Refuge) in 1957. Habitat removal and alteration on remaining private lands continued through the 1970s and the population on Big Pine Key and No Name Key increased steadily. A “housing boom” during the late 1970s and early 1980s brought about significant changes in the configuration of native habitat on the islands and the composition of the human community. In the project area commercial development is primarily found along US-1. The remaining private lands are residential with a few industrial sites, such as rock quarries. No Name Key is less developed and no public electrical service is available on the island. Presently 15 percent and 4.5 percent of the total landmass of Big Pine Key and No Name Key, respectively, are developed.

This chapter provides an overview of the land use and planning conditions in Big Pine and No Name Key, and focuses on future land use changes that are expected to occur over the next 17 years. The information contained herein provides the basis for the assessment of impacts to protected species and habitat in the project area that are likely to occur as the result of planned urban development in the future. Development occurring within the project area is used to model the amount of “take” that will be permitted under this HCP.

3.2 Land Ownership

Approximately 69 percent of the land within the project area is in public ownership (Figure 3.1; Table 3.1). Of which 66 percent are managed for conservation. The main landowner is the Federal government with 55 percent, all of which is within the Refuge. Federal, state, and county agencies purchase and manage lands within the project area for the purpose of environmental protection and conservation. The Service owns 52 percent of Big Pine Key and 71 percent of No Name Key. The State of Florida purchases land under the Conservation and Recreation Lands (CARL) program, which is administered by the Florida Department of Environmental Protection (FDEP). State-owned lands within the project area include the Coupon Bight Aquatic Preserve and Preserve Buffer Lands and lands within the Coupon Bight/Key Deer CARL project area, which combined are less than ten percent of the project area. The Monroe County Land Authority (MCLA) purchases a wide variety of vacant lands as directed in the Monroe County Comprehensive Plan and owns two percent of the land within the project area.

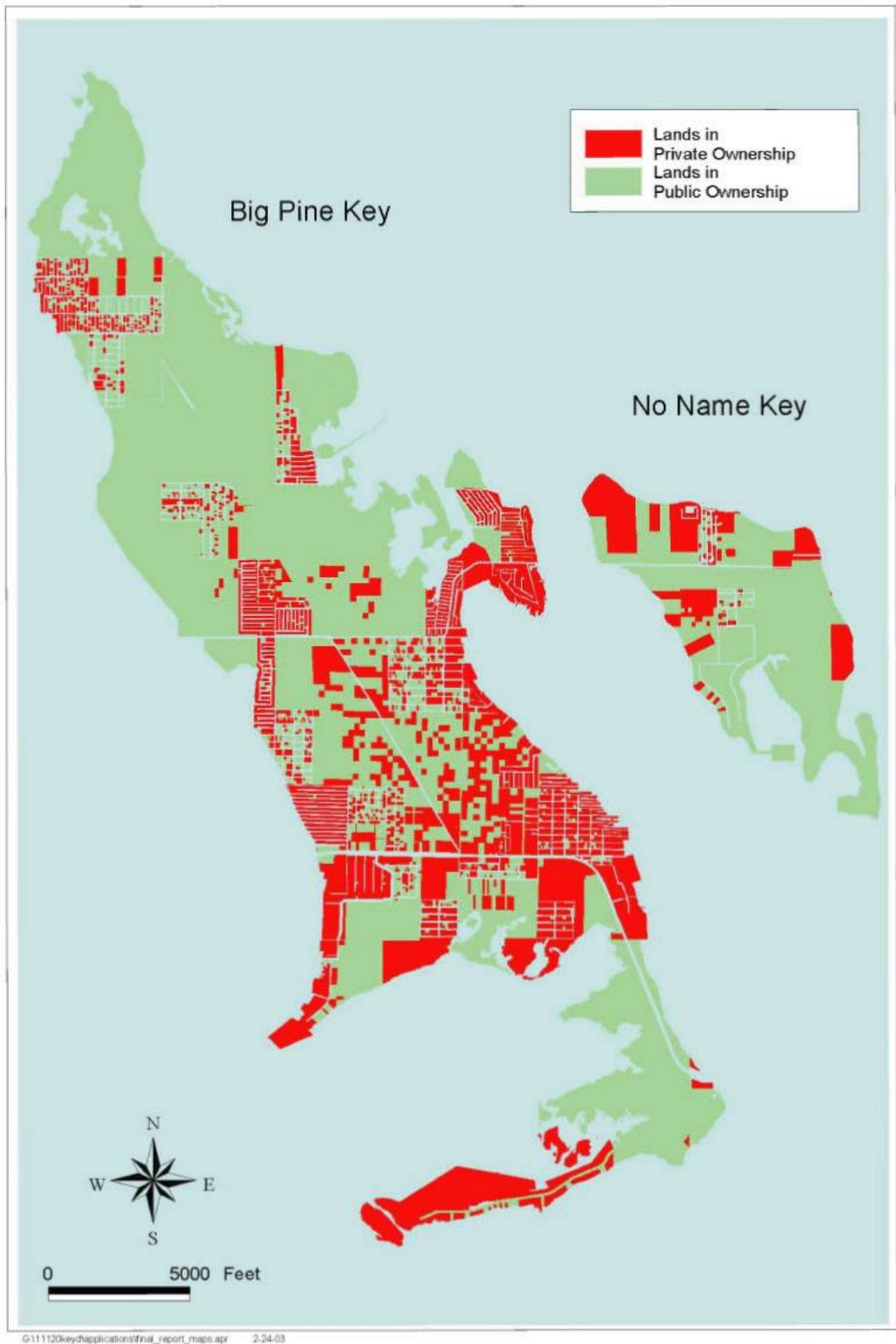


Figure 3.1. Land ownership in the project area

Table 3.1. Land ownership in the project area as of mid-2002¹.

	Big Pine Key		No Name Key		Total	
	Acres	%	Acres	%	Acres	%
Federal	3,184	51.8	801	70.8	3,985	54.8
State	856	13.9	50	4.4	906	12.5
County	135	2.2	12	1.0	147	2.0
Private Developed	836	13.6	52	4.6	888	12.2
Private Undeveloped	1,134	18.5	217	19.2	1,351	18.5
Total	6,145	100.0	1,132	100.0	7,277	100.0

¹Includes submerged lands.

3.3 Habitat Management Activities

Federal, state, and county agencies conduct habitat management activities within the project area. The Federal government, through the National Key Deer Refuge, is the main landowner in the study area. The Refuge also manages most of the land within the project area. Management activities include prescribed burning, mowing and clearing of fire breaks, filling of ditches to prevent deer drowning and limit salinity intrusion, habitat restoration, and development and protection of habitat corridors. The Refuge is developing a Comprehensive Conservation Plan (CCP), scheduled for completion in 2006. The CCP will outline a vision for the Refuge, guide management decisions, and outline goals, objectives, and strategies to achieve the visions and purposes of the Refuge. Development of the CPP is a requirement of the National Wildlife Refuge System Improvement Act of 1997.

The FDEP Office of Coastal and Aquatic Managed Areas manages state-owned lands within the Coupon Bight Aquatic Preserve and Preserve Buffer (Preserve), whereas the Service manages state-owned lands within the Coupon Bight/Key Deer CARL project area under an existing lease agreement. A management plan developed for the Coupon Bight Aquatic Preserve (Nielsen 1990) states that research and habitat restoration are primary needs for the Preserve. Current management activities include the installation of mooring and warning buoys, seagrass restoration, treatment of coral band disease, and sea turtle nesting beach surveys. Research activities within the Preserve include juvenile fish studies, larval recruitment of the spiny lobster, and studies on the effectiveness of fishing exclusion zones.

The Monroe County Land Steward is responsible for the management of county-owned public lands within the project area and throughout the Florida Keys. Currently no formal management plan exists for these lands; however, several small habitat restoration and management plans have been developed for individual parcels and subdivisions within the project area. Ongoing management efforts are conducted as needed or when funding becomes available. Primary responsibilities include trash removal, invasive exotic plant control, prescribed burning and other issues related to natural resource management. The Land Steward works in conjunction with the Monroe County Public Works Division, the MCLA, and volunteer groups to implement management activities.

Habitat management of county lands started Keys-wide during FY 2002-2003. Larger tracts of land received priority for management. These lands are primarily conservation lands acquired through grants from the Florida Communities Trust, for which contract requirements necessitate immediate management. Management of remaining county lands throughout the Keys was prioritized depending upon several factors including logistics, habitat quality, presence of rare species, and the character of the adjoining lands.

Federal, state, and county agencies also work together to jointly manage larger tracts of undeveloped land in which all are landowners. Within the project area this land is primarily pinelands. Management of pineland habitat will be addressed in a Fire Management Plan for Big Pine Key and No Name Key, which is currently being developed by the Lower Keys Wildland Fire Hazard Reduction Initiative. Prescribed burning will be conducted by all three agencies in the project area where there is contiguous pineland habitat. Individual undeveloped lots that cannot be burned because they are between developed properties will be maintained free of solid waste and non-native invasive plants and allowed to grow to hammock vegetation.

3.4 Covered Activities

This HCP addresses the incidental take of protected species that may result from **all non-Federal** development activities in Big Pine Key and No Name Key in the next 17 years. The types of activities covered under this HCP include residential development, commercial development and expansion, community and institutional facilities, and transportation improvements.

The Applicants anticipate the following development activities will occur in the covered area in the permit period and within a total $H = 1.1$:

- *New Residential Development:* A maximum of 200 residential units.
- *Non-Residential Private Development:* The county will authorize limited non-residential development as well as expansion or redevelopment of commercial facilities and community organizations such as religious institutions and civic clubs. The Applicants anticipate that no more than 60,000 square feet of floor area will be added over 20 years.
- *Recreational and Community Facilities:* The county anticipates the development of recreational and community center facilities, including passive public parks, and neighborhood “pocket” parks, as well as the expansion of the existing public library.
- *Public Facilities:* Several public facilities are anticipated over the next 20 years, such as a sewage treatment plant, public office space, and the expansion of the existing emergency response facility. The Applicants anticipate that no more than 24,000 square feet of floor area will be allocated to recreational and community facilities and other public facilities.
- *Local Road Paving or Widening:* During the permit period, some local dirt roads may be paved and some paved roads may be widened to accommodate a bike path.
- *Three-Laning US-1:* The DOT will complete the addition of a third lane, a scramble lane, on the developed segment of US-1 on Big Pine Key. This involves the extension of the newly constructed turn lane east and west of the intersection improvement project.

In addition to limiting the total amount of development over 20 years to a maximum, cumulative $H = 1.1$, covered activities will comply with the avoidance and minimization guidelines established in this HCP (see Section 5.3). New development will be concentrated on already disturbed lands in order to minimize the loss of prime habitat for the covered species. New commercial development will be limited to infill areas mainly along the existing commercial corridor on US-1 (Appendix B). Redevelopment and expansion activities may be authorized within the guidelines listed in Section 5.3 and within the total allowed $H = 1.1$ over 20 years. The Applicants estimate that no more than 7 acres of native vegetation will be cleared over the permit period. Wetland impacts, estimated at no more than 3 acres over 20 years, will be limited to roadside swales and ditches. A limited number of fences and other accessory uses will be permitted. Fencing will follow the guidelines in the Appendix C. Fences in Tier 1 may be permitted upon approval from the Service.

The Master Plan for Future Development of Big Pine Key and No Name Key, was developed in conjunction with this HCP, adopted in December 2004 (Monroe County 2004). The Master Plan provides guidance on the amount and extent of each type of covered activity over a 20 year period in the project area. Other activities not described in this HCP are not authorized under this HCP.

4. ALTERNATIVE PLANNING STRATEGIES

4.1 Introduction

Monroe County initiated the LCP in April 2000. The LCP was developed concurrently with the HCP and, while it focused on addressing the needs of the local citizens, all development alternatives were discussed in the context of the Key deer's biology. Like the HCP, the overall goal of the LCP was to determine the appropriate amount, type and location of development in the project area and the associated mitigation that would provide for community needs while maximizing conservation of the Key deer and other covered species.

Monroe County held public workshops and open houses to ascertain public views on planning and conservation issues; it used local media outlets and mailings to alert the public and to distribute surveys. Public workshops were held on April 6, May 25, and September 21, 2000 (Monroe County 2001). The public's understanding of the habitat needs of the Key deer was facilitated during presentations and open discussion at three HCP meetings held in tandem with LCP meetings (see Section 1.2.2). Results of the community workshops and meetings were used to identify key community issues, develop planning objectives and generate conceptual land use alternatives and conservation strategies for the project area.

In the LCP workshops, the following key community issues were identified:

1. Ascertain the distribution of future residential development within the project area;
2. Maintain the rural character of the project area while still allowing some future development;
3. Implement solutions to the traffic congestion on US-1 and minimize the need for local trips on US-1;
4. Develop a community gathering facility and/or more active recreation facilities on Big Pine Key; and
5. Discourage new development on No Name Key.

During the LCP process, Monroe County developed planning objectives to evaluate potential development scenarios. These objectives were based on the combined key issues expressed by the community, existing planning constraints and the existing habitat needs of the Key deer and other covered species. The ten objectives are:

1. Minimize the need for local vehicular trips on and across US-1, from north to south;
2. Improve the level of traffic service on US-1 to a standard that, in accordance with local regulations, would allow some development and to maintain that level of service over the planning horizon;
3. Discourage new development on No Name Key;

4. Encourage additional commercial development to be oriented to the local community rather than to the regional or tourist communities;
5. Continue to allow some development but generally keep the level low to achieve the maintenance of a “rural community” envisioned by the citizens;
6. Provide for a community gathering center and some active recreation;
7. Provide for a conservation plan with a reasonable level of implementation costs and logistics;
8. Provide for a conservation plan which complies with current regulatory constraints (for example, wetlands protection);
9. Provide greater certainty to the property owners and Key deer herd managers as to the location of future development; and
10. Minimize the alteration of undisturbed natural habitat.

The Master Plan for Future Development of Big Pine Key and No Name Key was adopted in December 2004 (Monroe County 2004).

4.2 Planning Strategies Analyzed

4.2.1 Alternative #1: No Action Alternative/No Take

Under this alternative, no HCP would be prepared. With no improvement in the LOS for US-1, the building moratorium would likely continue indefinitely. No new residential, commercial, or recreational development would occur within the project area. The community would retain its rural character, but no additional community facilities would be provided. Private landowners would have little or no recourse to obtain development approvals. With no regional HCP, it is likely that many smaller HCPs would be proposed by individual landowners or groups of landowners.

4.2.2 Alternative #2: Reduced Take

Alternative 2 included a reduced amount of development that, in turn, would result in a smaller level of impact, H. Under this alternative, important community needs would remain unsatisfied, such as community and government facilities expansions.

4.2.3 Alternative #3: Preferred Alternative

The preferred alternative provides for development activities that alleviate the building moratorium, improve the level of service on US-1, restore a low rate of growth in the study area, and offer community and public facilities improvements that satisfy community needs (see Section 1.2.1). The avoidance, minimization, and mitigation measures described in this HCP should ensure that populations of the covered species remain viable.

4.3 Comparison of Alternatives

Both the no action and reduced take alternatives were rejected mainly because they would impose undue restrictions on the community's ability to meet community needs, such as traffic improvements, while not providing significant added value to the conservation of the covered species. Both development alternatives (reduced take and preferred) limit development to disturbed, low quality habitat areas. The proposed alternative provides for a development program that satisfies the community's needs for growth and infrastructure, while ensuring habitat protection in perpetuity for the conservation of covered species.

5. CONSERVATION STRATEGY AND PROCEDURES

5.1 Biological Goals

The primary, measurable goals of this HCP are: a) to ensure future development does not have a negative impact on covered species habitat, and b) to limit the increase in human-related mortality of Key deer and Lower Keys marsh rabbit to a level that would make quasi-extinction over a 50-year period unlikely. Additionally, the Plan aims at keeping secondary impacts to Lower Keys marsh rabbit to current levels or below.

5.1.1 Habitat Protection

The following measures will ensure habitat protection:

- The HCP restricts the loss of native habitat: Native habitat loss caused by development activities over the permit period will be limited to no more than 7 acres in current privately-owned native habitat areas.
- Land development regulations will direct development activities to areas of low habitat quality. No more than two percent of the total H impact over 20 years will be allowed in vacant (privately owned) Tier 1 areas (H = 0.022).
- Monroe County will continue to acquire land to protect habitat areas in perpetuity.
- Monroe County will ensure the management of acquired lands by transferring ownership to state and Federal entities, as appropriate. Lands that remain in county ownership will be managed by the county. Management will include a domestic predator education program.

5.1.2 Minimize the Increase of Human-Related Mortality of Key Deer

The number of human-related deaths for Key deer varies year to year and is significantly correlated with a measure of deer density (Figure 5.1). A goal of this HCP is to ensure that development activities do not result in a significant increase in the relative occurrence of human-related mortality of Key deer.

The PVA model predicts an average of 4.2 additional human-related Key deer deaths per year. The number of human-related Key deer deaths varies from year to year, but is strongly correlated with a measure of deer density (Figure 5.1). Therefore, the ratio “deaths/deer seen” provides an indicator of the potential effects of development on the relative occurrence of human-related deaths. If development impacts are small, and other factors remain the same, future development should not significantly increase the ratio. For the last 13 years (1988-2000), the mean ratio of human-related Key deer deaths to average deer seen in censuses is:

$$\begin{aligned} \text{deaths/average deer seen} &= 1.38 \\ \text{Standard deviation} &= 0.28 \\ \text{95\% confidence interval} &= (1.23 - 1.53) \end{aligned}$$

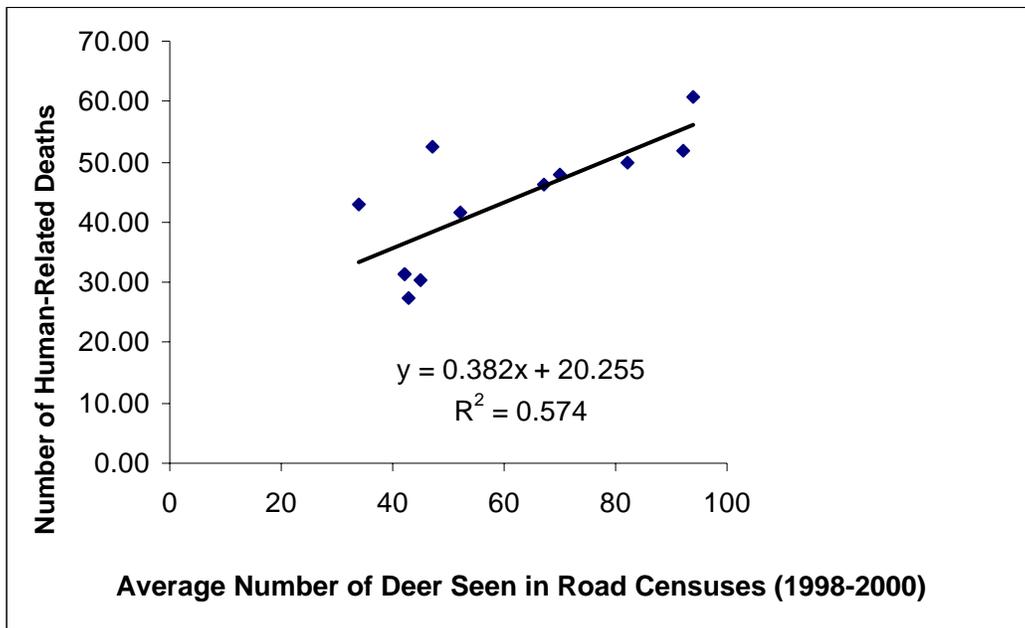


Figure 5.1. Relationship between human-related Key deer mortality and deer density. Data from the Service, and Roel Lopez (pers. comm.)

The predicted average increase in human-related mortality (4.2 deer) would fall within the 95 percent confidence interval, suggesting that no significant increase in the ratio should occur as a consequence of the proposed level of take. For example, an increase of four deer deaths in each of the last 11 years would have produced a mean ratio of 1.48, which is well within the 95 percent confidence interval. The overall effect of the proposed level of development over 20 years is expected to fall within the existing yearly variability.

5.2 Summary of Take and Its Effects on the Covered Species

5.2.1 Florida Key Deer

Under this HCP, the Applicants will carry out covered activities progressively over the permit period. All development activities combined over the permit period will have a maximum total impact of $H = 1.1$. For $H = 1.1$, the resulting probability that the population fall below 50 females at least once in 50 years and the average additional total annual human-related mortality are, respectively:

$$\text{Percent Risk}_{(50)} = 2.2e^{0.58*1.1} = 4.2\%$$

$$\text{Additional Annual Human-Related Mortality} = -0.65*1.1^2 + 4.85*1.1 - 0.34 = 4.2 \text{ deer/year}$$

Thus, the PVA model predicts that the combined effect of 20 years of development for a total $H = 1.1$ would raise the probability that the population will fall under 50 females at least once in 50 years by 2.0 percent over the risk under current conditions (from 2.2 to 4.2 percent) and increase human-related Key deer mortality by 4.2 deer a year. Additionally, the probability of extinction in 100 years is less than 0.1 percent, nearly indistinguishable from current conditions.

The effect of three-laning US-1 was estimated using H and, therefore, based on the spatial model. The Service (1999, 2001) estimated take of Key deer for the underpasses and intersection improvement projects on US-1 and both projects have been constructed. Using the same methodology, the Applicants estimate that the three-laning project may result in the additional death of 1 to 3 deer per year (this estimate is included in the model results).

The Applicants estimate that development activities over 20 years may occur on parcels totaling 168 acres (2.4 percent of the covered area). The total area affected will likely be lower, because development activities in developed parcels will affect only a portion of the parcel. The Applicants estimate that no more than 7 acres of native vegetation will be cleared over 20 years. This represents a loss of about 0.05 percent of native habitat in the HCP covered area and a minor direct effect or take on the covered species.

Construction activities will cause temporary and localized indirect impacts in the vicinity of the construction areas. After construction, other indirect effects may remain, such as edge effects. Given that the majority of the activities contemplated in the 20-year development plan will occur in areas of low habitat quality or on already disturbed lands, indirect and secondary effects are expected to be minimal.

5.2.2 Lower Keys Marsh Rabbit

The Applicants anticipate no direct loss of Lower Keys marsh rabbit habitat as a result of covered activities. No impacts to identified marsh rabbit habitat will be permitted. Indirect effects to marsh rabbit habitat may result if development occurs near marsh rabbit habitat patches. For example, new development near marsh rabbit habitat may bring about stray domestic cats, which are a known cause of mortality for the marsh rabbit. The potential effect of free-roaming domestic cats is reduced with distance to the habitat patch (a 500-meter buffer is generally recommended based on recent research) or if there are barriers to the cats' movements, such as canals. For analysis purposes, the Applicants estimated a "worst-case scenario" for the potential increase of domestic predators in the vicinity of marsh rabbit habitat. For example, assume that the 200 residential units to be permitted over 20 years were located within 500 meters of marsh rabbit habitat. Under this scenario, the number of residential units within 500 meters of marsh rabbit habitat would increase, over 20 years, by 11.6 percent, from 1,723 to 1,923 (Table 5.1). The potential effect of this level of development is ameliorated because the majority of available lots within 500 meters of marsh rabbit habitat are adjacent to canals, in subdivisions already heavily developed (see Figure 2.2). Another indirect effect of additional development in the vicinity of marsh rabbit habitat patches is the potential for road kills. The Applicants anticipate incidental take will be difficult to detect for the following reasons: (1) marsh rabbits are small, therefore, finding a dead or impaired specimen is unlikely, (2) losses may be masked by seasonal fluctuations in numbers or other causes, and (3) the species occurs in

wetland habitat, which makes access and detection of carcasses difficult. Therefore, the Applicants will estimate the level of take of this species by evaluating the acreage of overlap of development in or adjacent to the 500-meter wetland habitat buffers.

Table 5.1. Status of vacant residential lots within 500 meters of Lower Keys marsh rabbit habitat in Big Pine Key

Status	Tier	Total Parcels	Total Acres
Developed	N/A	1,723	416.7
Undeveloped	Combined	2,214	674.1
	1	1,535	542.9
	2	510	86.5
	3	167	32.6

5.2.3 Eastern Indigo Snake

Take of eastern indigo snake habitat is expected in the covered area of the HCP. Take of indigo snakes may occur when lots are cleared for development. The county will ensure that standard protection measures for the eastern indigo snake will be implemented during all construction activities to minimize take of indigo snakes.

A total of 1,351 acres of undeveloped land is in private ownership on Big Pine and No Name Key. A small portion of that may be developed over the next 20 years. The Applicants are requesting coverage for take of eastern indigo snakes resulting from an estimated 168 acres of development in possible indigo snake habitat (see Section 3.4). Monroe County will provide an annual report documenting yearly and cumulative acreages of impacts in all habitat types on Big Pine Key and No Name Key.

5.3 **Conservation Strategy - Mitigation Measures and Procedures**

The conservation program is focused primarily on strict avoidance and minimization measures, habitat mitigation based on replacing lost habitat value, and the protection and management in perpetuity of acquired habitat. The main goal of the Plan is to mitigate for the anticipated incidental take of covered species in accordance with the requirements for issuance of a Section 10(a)(1)(B) ITP.

5.3.1 Conservative Assumptions and Level of Take

The requested level of take, $H = 1.1$, is used in this HCP to measure the maximum amount of impacts over 20 years and to establish the level of impact to be mitigated. The model assumes that the entire net impact of $H = 1.1$ is incurred at the outset of the model run. In practice, $H = 1.1$ will be accrued over 20 years. The progressive increase in impact levels will allow the Key deer to adapt to changing circumstances, whereas the assumption that all impacts occur at once increases the impact estimates in the model runs.

The model assumed total habitat loss for newly developed parcels. The Key deer uses all available open areas, including developed areas. However, the PVA model assumes that any development on vacant parcels results in the loss of the entire parcel. For example, 200 developed residential lots in Pine Channel Estates contribute 1.8 Key deer to the carrying capacity of the study area (i.e., $K = 1.8$). However, the model assumes that 200 new houses will contribute nothing to the carrying capacity. Therefore, the model overestimates the impact of development and provides a conservative support to planning for development activities.

The Applicants chose to evaluate a more stringent population viability measure. Recent PVA and conservation literature recommends that conservation planners evaluate shorter-term risks to make management decisions (Akcakaya 2000, Akcakaya and Sjogren-Gulve 2000). The Key deer PVA model can estimate a variety of risk timeframes. For example, extinction risk may be expressed as the probability of extinction of the Key deer in 100 years. Historically, the Key deer population dwindled to less than 50 individuals, but rebounded with the implementation of protection measures (see Section 1.2.1). The Applicants chose to use the risk that the population falls below 50 females at least once in 50 years as a more conservative and realistic measure of risk in evaluating potential development activities. This more stringent indicator guided subsequent viability and incidental take analyses.

Finally, the estimated level of take omits the potential effects of the recently constructed US-1 projects. According to the Service's Biological Opinion (Service 2001), the combined effect of the underpasses and intersection improvement projects could be nine fewer human-related deer deaths per year. The model suggests that such reduction in mortality would ameliorate a significant portion of the impact of the proposed 20-year development program.

5.3.2 Avoidance and Minimization

Avoidance and minimization measures were applied at every step in the preparation of the HCP. First, the Applicants made key decisions, discussed above, in the development and use of the Key deer PVA model, which resulted in a conservative approach to modeling.

Second, development activities in the project area will occur in accordance with the following guidelines, which ensure avoidance and minimization of impacts to the Key deer and other covered species:

1. The total impact of commercial, institutional, and residential development over 20 years will not exceed $H = 1.1$.
2. New residential development will be limited to a maximum of 200 dwelling units over 20 years.
3. Clearing of native habitat will be limited to parcels to be developed for residential use or for local road widening. The total amount of clearing over 20 years will be limited to no more than 7 acres. No clearing of native habitat, other than that necessary and authorized for new residential development, local road widening, or fire breaks to protect residential areas will be allowed. All other development will occur on disturbed lands.

4. New residential development in Tier 1 areas will be limited to no more than five percent of all residential units permitted over the 20-year period (i.e., a maximum of 10 units) or a total $H = 0.022$ (two percent of the total H), whichever results in a lower H .
5. No new development other than single-family residential and accessory uses will be permitted in Tier 1. The total H of all development in Tier 1 will not exceed $H = 0.022$.
6. No development will be permitted which may result in habitat loss on the Sands corridor, as shown in Figure 5.2. With the completion of the Key deer underpasses and the proposed widening of US-1 along the business segment on Big Pine Key, native habitat in the Sands Subdivision area constitutes the main corridor connecting Key deer habitat south and north of US-1 (Figure 5.2).

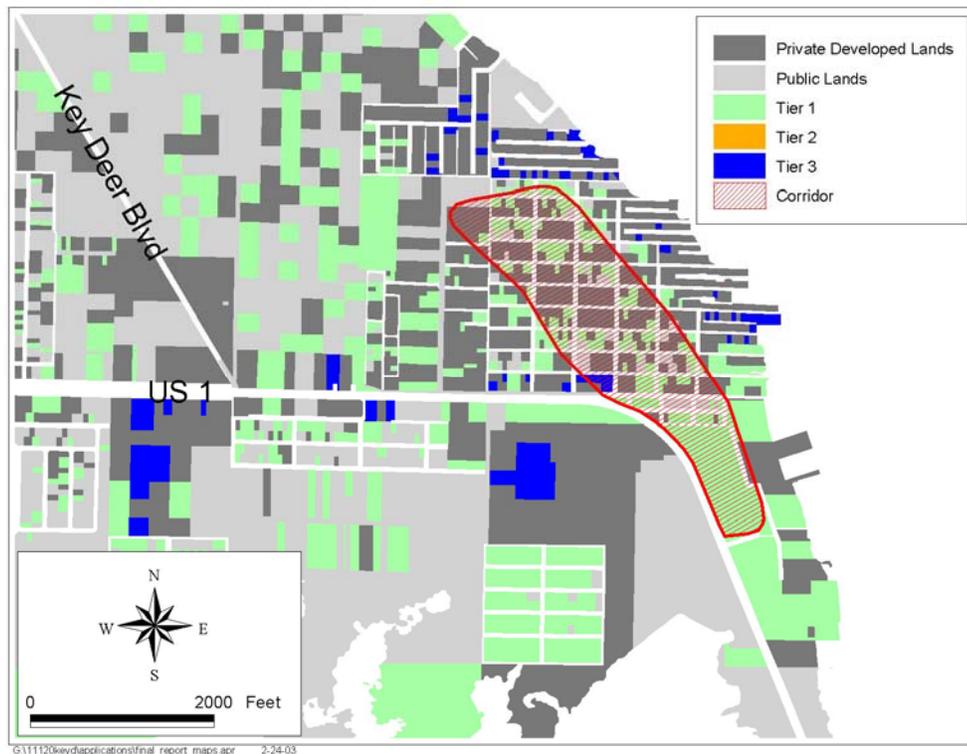


Figure 5.2 Key deer corridor across Sands Subdivision

7. New residential and commercial development will occur progressively over 20 years, thus minimizing the extent of construction impacts that occur at any given time.
8. New commercial development will be limited to infill in existing commercial areas on Tier 2 and Tier 3 lands, mainly along the US-1 corridor on Big Pine Key (Appendix B). This includes all current commercially zoned areas south of Lytton's Way. All new commercial development would be limited to disturbed lands, as defined in the Monroe County Code (9.5-4 [D-14][S-2]). Clearing of pinelands and/or hammock will not be permitted for commercial development activities.

9. Expansion of private non-residential facilities will be restricted primarily to within the US-1 corridor, as described above.
10. The modified ROGO will continue to give new development priority to Tier 3 over Tier 2 and Tier 1 lands.
11. New recreational and community facilities development would be restricted to existing developed areas that are either already publicly owned or acquired for that purpose.
12. Minor recreational and community facilities will be restricted to areas within existing improved subdivisions.
13. Community organizations' development will be restricted to expansions, on existing organization-owned land, up to the buildable area limits per Monroe County Code. No clearing of native habitat will be permitted for these expansions.
14. Speed limits, traffic calming devices, and other measures will be applied to lower the probability of vehicle collisions with Key deer and Lower Keys marsh rabbit on county roads.
15. Public infrastructure development will be restricted to disturbed lands as defined in the Monroe County Code (9.5-4 [D-14][S-2]).
16. No new fences will be allowed in Tier 1 lands, unless they are authorized by the Service. The Service will review applications for fences in Tier 1 for impacts on protected species.
17. No additional fences will be allowed in the US-1 commercial corridor.
18. Fences will be subject to restrictions and guidelines established in agreement with the Service. All fencing will follow the guidelines in Appendix C.
19. No development will be allowed in Lower Keys marsh rabbit habitat. No residential or commercial development will be allowed within 500 meters of marsh rabbit habitat, with the exception of isolated areas (i.e., the green hatched areas on Figure 2.2). Road widening activities along US-1 would occur within existing cleared and filled portions of the FDOT right-of-way.
20. FDOT will avoid impacts to wetlands during US-1 three-laning.
21. Accessory uses will be permitted on lots adjacent to existing developed lots only in Tier 2 and Tier 3 lands. Residential accessory uses would be limited to those listed in the Monroe County Code (Chapter 9.5-4[A-2]).
22. The county will implement an animal control education program to educate the public regarding the potential negative effect of domestic predators on the Lower Keys marsh rabbit. The education program will also request that the public report any Lower Keys marsh rabbit road mortality to the county or to the FWS.
23. The county and Service will annually review and evaluate the need and feasibility of additional regulatory measures to control the spread of domestic predators. If deemed necessary and feasible, measures will be enacted within at a date to be determined through mutual agreement.

24. The county will ensure that standard protection measures for the eastern indigo snake will be implemented during all construction activities to minimize impacts on eastern indigo snakes.

5.3.3 Habitat Mitigation and Habitat Banking

The Applicants propose to mitigate for the incidental take of covered species by acquiring and managing native habitat areas within the HCP project area. The harvest grid used in the PVA (see Section 3) provides a measure of habitat quality and potential indirect effects (i.e., increased human-related mortality) on the Key deer. It also provides a simple currency to compare impacts versus mitigation.

This HCP proposes a level of incidental take not to exceed a total impact area of H equals 1.1. The Applicants will mitigate incidental take impacts by acquiring and managing habitat areas at a 3:1 ratio, using H as the unit of measurement. Therefore, over 20 years, lands with a value totaling an H of 3.3 will be acquired and managed. Land acquisition will occur in advance of or simultaneously with development activities. Should the cumulative $H_{acquired}$ lag the cumulative H_{impact} by 5 percent at any time during the permit period, Monroe County will halt development permit issuance until $H_{acquired}$ is within 5 percent of H_{impact} .

During the building moratorium, Monroe County has continued to acquire lands for conservation. Monroe County issued 29 development permits - during a temporary lifting of the moratorium in 1996 - as well as 266 fencing permits. The Applicants propose to use the H value of acquired parcels, after taking into account permits issued for residential units and fences at a 3:1 ratio, as part of the overall mitigation required under this HCP. The proposed mitigation H, accrued through land acquisition, is $H = 0.3390$ (Table 5.2).

Table 5.2. Impacts and mitigation in Big Pine Key and No Name Key, 1995 - present

Mitigation (acquisition, credits)	
Properties acquired from 3/15/95 to 11/13/98	H = 0.5211
Properties acquired from 1999 through 2002	H = 0.2646
Total:	H = 0.7857
Impacts (permits, debits)	
Fences (266 permits)	H = 0.1118
Building permits (29 permits)	H = 0.0371
Total:	H = 0.1489
Habitat Banking Credit Calculation	
H required to mitigate impacts at 3:1	$H = (0.1489 * 3) = 0.4467$
Credit Available ($H_{acquired} - H_{required}$)	$H = (0.7857 - 0.4467) = 0.3390$

An updated total H value for all development approvals on Big Pine Key and No Name Key from March 13, 1995, to the date of the ITP issuance will be compiled and provided to the Service within one month after permit issuance. This shall be included in the Habitat Mitigation and Habitat Banking calculations at a 3:1 ratio and deducted from the total net H value of the ITP.

Table 5.3 illustrates the annual anticipated mitigation needed based on the implementation schedule presented in Section 6.1.2, for the first five years following issuance of the ITP and associated HCP.

5.3.4 Habitat Management

Monroe County will manage all natural lands acquired under this HCP, either directly or indirectly through agreements with other managing entities. Lands in the project area acquired for the HCP will comprise lands purchased by the Monroe County Land Authority (MCLA) for the Florida Forever Program and lands purchased by the MCLA in accordance with the Monroe County Comprehensive Plan.

Table 5.3. Cumulative increase in H and mitigation needs in the first five years of the permit. By the second year, land acquisition will be necessary to meet mitigation goals.

Project Year	Cumulative Impact (H)	Cumulative Mitigation Debits 3:1	Balance of Credits (initial credit: H = 0.3390)
1*	0.08404	0.25212	0.0878
2	0.16481	0.49443	-0.15543
3	0.18546	0.55638	-0.21738
4	0.20146	0.60438	-0.26538
5	0.21746	0.65238	-0.31338

* Year 1: 10 houses, 15 accessory uses, fire station expansion, 10,000 sq ft institutional expansion, one half of recreational and community facilities and public offices. Year 2: Year 1 plus 10 houses, 15 accessory uses, one half community facilities, and public offices. Year 3: Year 2 plus 10 houses, 15 accessory uses, three-laning US-1; Years 4 and 5: additional 10 houses and 15 accessory uses per year.

Lands acquired through the Florida Forever Program, as part of the Coupon Bight/Key deer CARL project, are owned by the State, but managed by the Service in accordance with existing Refuge practices and State leasing agreement. These lands encompass 3,452 acres of undeveloped land between the Coupon Bight Aquatic Preserve and the Refuge on Big Pine Key.

Other lands acquired by the MCLA either during HCP development or throughout the 20-year life of the ITP that are contiguous with Service lands will be managed by the Refuge through written agreement to be developed with the county. These lands will be managed in conjunction with State agencies and the Lower Keys Wildland Fire Hazard Reduction Initiative. Prescribed burning activities on these lands will be conducted in accordance with the Fire Management Plan for Big Pine Key and No Name Key, which is in preparation.

The Monroe County Land Steward is responsible for managing all other lands acquired by the MCLA in the project area, primarily individual undeveloped lots that cannot be burned due to the proximity of development. Habitat management activities for these lands will vary depending on the habitat quality, presence of rare species, and the character of the adjoining lands. These lands will be maintained free of solid waste and non-native invasive plants and allowed to grow to hammock vegetation. The Land Steward will conduct additional management efforts as needed, including trash removal, invasive exotic plant control and other issues related to natural

resource management. Management of mitigation lands will commence no later than 120 days following acquisition of land in fee title.

5.3.5 Regulatory Actions

Monroe County will enact land development regulations, which will follow the guidelines for a rate of growth and development standards described in this HCP. Since 1992, Monroe County has successfully administered a Rate of Growth Ordinance that directs growth into disturbed lands and protects environmentally sensitive lands. The county has awarded 2,014 Rate of Growth Ordinance (ROGO) allocations since July 1992, of which only about six percent of the total were awarded to parcels with environmentally sensitive characteristics. Nearly half of this six percent was awarded to affordable housing projects.

This HCP limits the proportion of permits in environmentally sensitive areas to five percent of all residential units permitted over 20 years or a total $H = 0.022$ (two percent of the total H over 20 years), whichever results in a lower total H .

The Master Plan for Future Development of Big Pine Key and No Name Key directs the rate of growth and development standards in the project area. The master plan will follow the avoidance and minimization guidelines described in this HCP.

5.3.6 Other Considerations

With this HCP, the Applicants consolidate their efforts to provide for the protection of the Key deer and other covered species in the project area. For example, ongoing land acquisition has increased the amount of habitat protected in perpetuity. Beginning in 1993, FDOT invested approximately \$12 million to study, plan, and execute projects to reduce highway mortality of Key deer and improve safety on US-1 in Big Pine Key.

In addition to co-funding the development of this HCP, the FDOT has also funded the following studies, which are consistent with recovery plans for covered species in the project area:

- Development of a Methodology for Determining Optimum Locations for Wildlife Crossings on State Highways Using a Geographic Information System (GIS) Approach, with Application to Key Deer on Big Pine Key: \$18,994.
- Evaluation of Deer Guards for Key Deer, Big Pine Key: \$45,000.
- Evaluating Reintroduction as a Conservation Strategy for Lower Keys Marsh Rabbit: \$18,000.
- Effectiveness of Fencing, Underpasses, and Deer Guards in Reducing Key Deer Mortality on the US-1 Corridor, Big Pine Key: \$170,506.

5.4 Monitoring and Reporting

The Applicants will carry out biological and compliance monitoring to ensure that the biological goals and the commitments made in this HCP are met.

Biological monitoring of the Key deer will focus on assessing the relative occurrence of human-related mortality. The main objective of the biological monitoring is to determine if human-related mortality is increasing beyond the levels observed in recent years. Specifically, the biological monitoring will test the null hypothesis that, as development activities proceed in the project area, there will be no significant increase in the relative incidence of human-related mortality. Based on the statistical relationship between human-related deaths and the mean number of deer seen in standard field censuses (see Sections 5.1 and 5.2), the ratio of human-related deaths to mean number of deer seen should remain below 1.53 during the permit period.

The Service conducts weekly population counts and monthly deer census. The Applicants will conduct a yearly (in April) census to supplement and verify data from the Service (Table 5.4). Census data will provide the “average number of deer seen.” Also, the Applicants will request Key deer mortality data the Service collects. Mortality data will provide the “number of human-related deaths.” The ratio will then be calculated for the reporting period and compared against the reference value, 1.53.

Table 5.4. Projected budget for monitoring Key deer population for 20-year period

Item/Service	Annual Costs	Costs for 20-Year Plan
Marking supplies	500	10,000
Trapping/surveys	1,000	20,000
Travel costs (2 trips)	3,000	60,000
Data analysis/reporting	500	10,000
Total Costs	\$5,000	\$100,000

The Applicants will also review the Service mortality data every year to determine if new spatial patterns emerge, or if any other change in the mortality patterns occur which may be explained by the additional development.

During construction activities of county facilities and road expansion activities, the county biologist will conduct bi-weekly monitoring to ensure that development is occurring in accordance with the conditions of the Plan.

Population surveys of the other covered species will not be conducted because the effects on these species are anticipated to be minimal. Habitat loss data will be compiled for the other covered species. The county will compile habitat impact data for the 500-meter wetland buffer areas identified as important for Lower Keys marsh rabbit. The county will also compile project area impact data (in acres) to document possible impacts to indigo snakes.

Compliance monitoring will include an annual compilation of the amount of development completed and acres converted, number of acres acquired, and a summary of habitat management activities by Monroe County. The total H for development and acquisition will be determined using the spatial model and the appropriate land use H conversion factors.

Documentation of habitat management activities will be conducted by the Monroe County Land Steward for lands acquired under the HCP that are not part of the Coupon Bight/Key deer CARL project. Habitat management activities should parallel land acquisition efforts, that is, the amount of land acquired by the MCLA annually, outside of the Coupon Bight/Key deer CARL project, should be equivalent to that which is managed. The Monroe County Land Steward will submit an annual summary of the number of the county's habitat management activities.

Monroe County is responsible for ensuring that these monitoring activities are funded and implemented. Monitoring activities will be detailed and summarized in an annual report for the life of the ITP.

5.4.1 Annual Reporting

Monroe County will prepare and submit an annual HCP Report to the Service at the end of the reporting year. The reporting period will cover January 1 through December 31 and will be submitted by March 31 following the end of the reporting period. The report will address both the biological monitoring and the compliance monitoring. The report will include the following information:

- Biological Information:
 - Results of the Key deer census, including the calculation of the average number of deer seen.
 - A summary of Key deer mortality information, including the calculation of the number of human-related deaths. Human-related deaths include those due to road kills, entanglement, attacks from domestic predators, and poaching.
 - A discussion and interpretation of mortality data.
 - A summary discussing habitat management activities for county lands.
 - An assessment of whether the ratio of the number of human-related deaths to average deer seen remains below 1.53.
 - For the Lower Keys marsh rabbit and eastern indigo snake:
 - A compilation (in acres) of annual impacts to the 500-meter wetland buffer areas identified as important for Lower Keys marsh rabbit.
 - The cumulative impacts of all development projects affecting buffers since permit issuance.
 - A compilation and report of entire project area impacts (in acres) to document possible effects on indigo snakes.
 - A summary of reported Lower Keys marsh rabbit road mortality (see Section 5.3.2).

- Annual Compliance Information:
 - A list and map of development activities approved and completed.
 - The H value associated with each activity and the total H value of all activities for the year.
 - The cumulative H value of all development since permit issuance.
 - A discussion of observations made during construction monitoring of county facilities and road expansion activities.
 - A list and map of parcels acquired in the reporting year.
 - The H value for each parcel and the total H value of parcels acquired during the reporting period.
 - The cumulative H value of all acquisition since permit issuance including the mitigation credit of $H = 0.3999$ discussed above.
 - A discussion of management activities conducted during the reporting year.
 - An assessment of the status of all mitigation parcels, addressing the extent of invasion by exotic species, trash disposal, and other potential human-related impacts.
 - A monitoring report documenting compliance with the exotic/nuisance plant control program on county conservation lands demonstrating no more than 20 percent aerial coverage nuisance and 10 percent aerial coverage invasive species identified by Florida Exotic Pest Plant Council.
 - A statement confirming that mitigation has occurred as to maintain a 3H:1H ratio with respect to development activities and demonstrating that acquisition credits represented in H are not greater than 5 percent behind H values for impacts
 - Any other pertinent information relative to the implementation of the HCP.
 - Monroe County will prepare and maintain an updated master list of all development permitted on Big Pine Key and No Name Key with the start date of March 13, 1995, which records the H value for each permit approval and a running total, which is cumulatively subtracted from the total H value. This master list shall be readily available to the public, the Service, and the DCA.

A meeting between the county and Service will be scheduled within 60 days of annual report submittal to review the HCP progress and discuss any problems.

5.5 Adaptive Management

Adaptive management provisions in the HCP aim at reducing risk to the species due to significant data, information gaps, or to circumstances which arise requiring a change in species management or acquisition strategies. The Key deer has been extensively studied (Lopez 2001) and ongoing research programs at Texas A&M University are addressing the Key deer, the silver rice rat and the Lower Keys marsh rabbit. The Key deer PVA model is the state-of-the-art and will likely be fully applicable unless conditions change dramatically. No further studies are proposed as part of this HCP.

The success of the proposed mitigation strategy relies heavily on the willingness of landowners to enter into sales agreements with the Applicants. Should unwilling sellers prevent the county from accomplishing the mitigation goals, Monroe County will halt the issuance of development

permits until willing sellers become available, or practice adaptive management by modifying the acquisition process to one with demonstrated success. Under no circumstance will the county issue permits if mitigation is not assured and, to the extent practicable, land acquisition will occur in advance of incurring impacts.

5.6 Changed Circumstances

Reasonably foreseeable circumstance, which may occur in the project area or to the covered species include hurricanes, flooding, fire, or sudden population decline due to disease or habitat degradation. A steep decline in the populations of the Key deer due to disease, food base change, or catastrophic event will trigger the Service to demonstrate a change in viability of the species. Finally, monitoring the success of this HCP depends on annual data from the Service. Should the Service stop obtaining deer density and mortality data, other options to gather these data should be agreed upon between the Applicants and the Service.

5.7 Unforeseen Circumstances

A catastrophic or other unforeseen event will trigger the Service to demonstrate a change in viability of covered species. The Service will reinitiate consultation on the listed species and resolution of issues should be agreed upon between the Applicants and the Service.

5.8 No Surprises

The “No Surprises” policy establishes a clear commitment from the Federal government to honor its agreements under an approved HCP for which the permittee is in good faith implementing the HCP’s terms and conditions (Service 1996). The HCP handbook (Service 1996) states that the Service will not require the commitment of additional land or financial compensation beyond the level of mitigation provided in the HCP.

6. IMPLEMENTATION AND FINANCING

6.1 Regulatory Actions

Upon approval of the HCP and issuance of the ITP, the county will amend its Comprehensive Development Plan (Comp Plan) and Land Development Regulations (LDR) to codify the development guidelines described in this HCP. The Master Plan for Future Development of Big Pine Key and No Name Key determines the rate of growth and development standards in the project area, in accordance with the guidelines described in this HCP. Pursuant to the 1998 MOU between the Applicants and technical agencies, the DCA and the county may enter into an agreement under Section 380.032, F.S., whereby the county may proceed with development activities in the HCP before amendments to the Comp Plan are completed.

6.1.1 Roles and Responsibilities

Monroe County will act on behalf of the Applicants in conducting the Plan's mitigation program and for all reporting activities under this HCP. In addition, Monroe County will be responsible for the following activities: approving development consistent with the covered activities in the HCP; maintaining a GIS database on the number, habitat type and location of development activities and mitigation actions including acquisition and management activities; funding or providing staff for biological monitoring and annual reporting activities; establishing and maintaining an annual budget and budget amendments for HCP adoption and implementation; and all other duties and responsibilities relating to the execution of the HCP. Moreover, the county will be responsible for ensuring that all mitigation activities are implemented concomitant with development activities. Finally, Monroe County will coordinate with FDOT and DCA to ensure that the provisions of this HCP are met.

6.1.2 Implementation Schedule

Over the life of the ITP, Monroe County will authorize residential development at a steady rate as outlined in the Master Plan. Commercial development and local road improvements would also occur progressively through the plan period at an approximate rate of 2,390 square feet per year and 10,890 square feet per year, respectively. Expansion of the existing fire station and institutions, and approximately half of the community facilities and county offices will be constructed during year one. The remaining community facilities and expansion of county offices will likely be completed in year two of the Plan.

The interim wastewater treatment plants will be constructed in years five, six, and seven of the Plan. FDOT would construct the US-1 three-laning project following completion of the design phase, which is scheduled for 2005. Construction may be completed within the first seven years of the plan period. Issuance of permits for accessory uses and fences will occur at the time of request, for the purposes of the schedule permit issuance was averaged over 20 years. Management of mitigation lands will be commensurate with land acquisition.

6.2 Funding

Monroe County will fund land acquisition and management under this HCP through existing funding mechanisms. Since 1986, the MCLA has been tasked with acquiring lands for the county in accordance with the Monroe County Comprehensive Plan Land Authority Ordinance (Ord. No. 31-1986, 1), and by s. 380.0661-380.0685, F.S., s. 125.0108, F.S. The MCLA was established to conduct land acquisition activities necessary to deal with property rights of small landowners, environmental protection, park and recreational space, affordable housing and public infrastructure should there be an environmental component. The MCLA provides a mechanism to “deal with the challenges of implementing comprehensive land use plans pursuant to the area of critical state concern program, which challenges are often complicated by the environmental sensitivity of such areas (and to provide) a stable funding source and the flexibility to address plan implementation innovatively and by acting as an intermediary between landowners and the governmental entities regulating land use” (Section 1-3, Rule 02-1991, MCLA).

Funding for the MCLA was initially supplied by recurring revenue from a Florida Department of Natural Resources park surcharge and one half cent of tourist impact tax revenue. The State Park surcharge (s. 380.0685, F.S.) is collected at a rate of 50 cents per person per day, or \$5 per annual family auto entrance permit, or \$2.50 per night per campsite, cabin, or other overnight recreational occupancy unit. Ninety-eight percent of this surcharge is provided to the MCLA for the purpose of land acquisition, ten percent of which may be used for administrative purposes. The tourist impact tax (s. 125.0108, F.S.) is collected as a 0.5-cent bed tax per \$1 lodging money on rentals with 6-month term or less, segregated by Area of Critical State Concern. Fifty percent of this tax is provided to the MCLA for the purpose of land acquisition, five percent of which may be used for administrative purposes.

Additional sources of revenue for the MCLA include grants from programs such as Preservation 2000. From 1998 to 2001, contributions to MCLA revenue from the state have been to the amount of \$3,000,000 per year, with a total of \$14,793,174 provided since 1985 (FDEP 2001). These funds are being used by the MCLA to purchase lands for the Coupon Bight/Key Deer CARL project. Whereas funds generated by grants fluctuate, revenue produced by the state park surcharge is relatively constant. Funds from the tourist impact tax continue to increase with increasing numbers of tourists visiting the Keys. All revenue provided to the MCLA is deposited into an interest-bearing account for the purpose of land acquisition and program administration costs.

Table 6.1 provides a preliminary estimate of the costs for Plan implementation. This cost estimate assumes that management costs for mitigation lands purchased by the MCLA for the Coupon Bight/Key Deer CARL project are not sustained by the county. Mitigation lands to be managed under the HCP include lands acquired in Tier 2 and Tier 3 areas. Administrative costs for land acquisition activities and reporting efforts will primarily constitute staff time and therefore are not shown in the estimate below.

Table 6.1. Estimated cost of the HCP

Item	Unit
Development impact (H)	1.1
Mitigation (H)	3.3
Estimated land value (based on average cost for lands totaling H=3.3)	\$6,185,000
Estimated number of acres (based on Tier 1 lands)	270
Annual management costs ¹	\$67,950
20-year management	\$1,359,000
20-year monitoring (\$5,000/year)	\$100,000
Total estimated HCP cost (Raw Cost over 20 Years)	\$11,685,000

¹ Management cost is estimated at \$1,000/acre for the first three years and \$100/acre thereafter. The number reported is the 20-year average.

6.3 Permit Amendment Procedures

Modifications to the ITP would need to be made in the event of:

1. Modifications to the boundaries of the project area or the location of development activities;
2. Increases in the acreage of development activities;
3. The listing of a species protected under the Act which is not covered under the HCP and which would likely be taken as a result of covered development activities;
4. A change in the development action or land acquisition mitigation activities that would result in an increased take of one or more of the covered species; and
5. Changes that would result in significant adverse effects to the covered species or new effects to covered species that were not addressed in the HCP.

Amendments to the ITP will require a revised HCP, a permit application and application fee, a National Environmental Policy Act (NEPA) document and a 30-day public comment period. The Service must be consulted and concur on all proposed amendments. There are two types of proposed amendments:

- **Minor Amendments.** Minor amendments involve routine administrative revisions or changes to the operation and management program, which do not deplete the level or means of mitigation. Such minor amendments do not alter the terms of the Permit. Upon written request of the Applicants, the Service is authorized to approve minor amendments to the HCP, if the amendment does not conflict with the purpose of the HCP as stated in Section 1.2.
- **All Other Amendments.** All other amendments will be considered an amendment to the ITP, and will be subject to any other procedural requirements of laws or regulations that may be applicable.

6.4 Permit Renewal or Extension

The ITP may be renewed or extended prior to expiration if the biological conditions described in the HCP are not significantly different and no additional take of covered species is requested. In the event that renewal of the ITP is sought, the Applicants will submit a written request to the Service certifying that the provisions within the HCP and all subsequent amendments are valid. The request for renewal will also include a description of the portions of the project to be completed or development activities that would be covered under the ITP renewal period. The request for renewal must be submitted 30 days prior to the ITP's date of expiration.

The Service may renew the ITP if its findings are consistent with those detailed in the Applicant's request. Renewal procedures will be conducted in accordance with 50 CFR 13.22. Renewal of the ITP does not authorize an increase in take levels beyond those stated in the original HCP. All annual reports and reporting requirements must be completed prior to submittal of the request for renewal.

7. REFERENCES

7.1 Agencies and Persons Contacted

Florida Department of Community Affairs

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Florida Department of Transportation

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Appendix A

Definitions for Terms in the Big Pine Key Habitat Conservation Plan.

For the purpose of this HCP the following definitions are used.

Accessory Uses or Accessory Structures - means a use or structure that is subordinate to and serves a principal use or structure; is subordinate in area, extent and purpose to the principal use or structure served; contributes to the comfort, convenience or necessity of occupants of the principal use or structure served; and is located on the same lot or on contiguous lots under the same ownership and in the same land use district as the principal use or structure. Accessory uses include the utilization of yards for home gardens provided that the produce of the garden is for noncommercial purpose; however, in no event shall an accessory use or structure be construed to authorize a use or structure not otherwise permitted in the district in which the principal use is located, and in no event shall an accessory use or structure be established prior to the principal use to which it is accessory. Accessory uses shall not include guest units or any other potentially habitable structure. Habitable structures are considered to be dwelling units as defined below in this section. [Monroe County Land Development Regulations Sec. 9.5-4, A-2].

Disturbed land - land that manifests signs of environmental disturbance which has had an observable effect on the structure and function of the natural community which existed on the site prior to the disturbance [Monroe County Land Development Regulations Sec. 9.5-4, D-14]. For the purpose of the HCP there is no difference in disturbed and scarified lands.

New Residential Development – any development on a residential property.

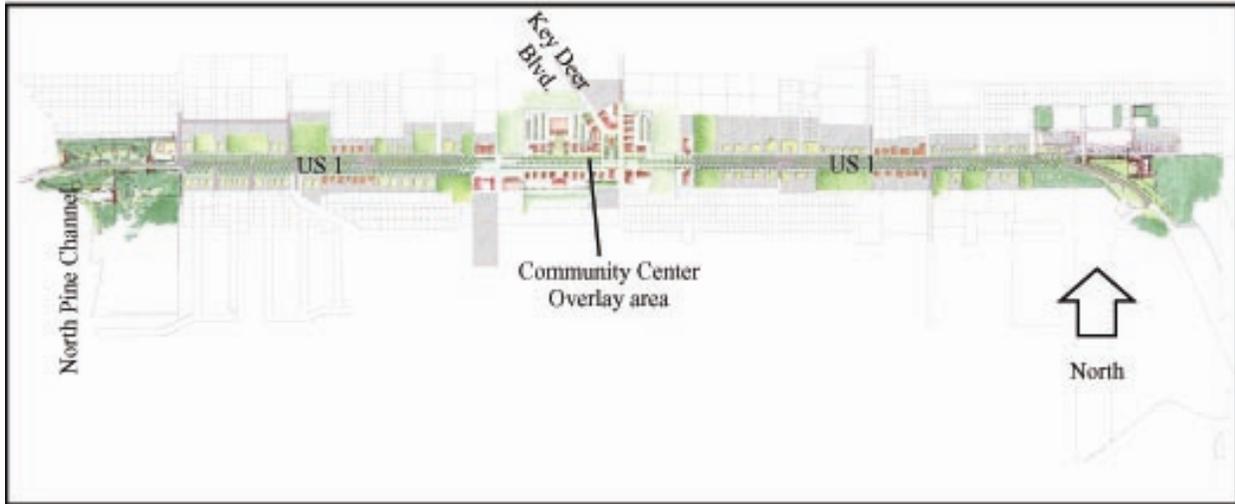
New Commercial Development – any development on a vacant commercial property or any existing commercial use property, or any expansion of the floor area on an existing commercial use property.

Replacement Residential Structures – those structures existing, legally established residential units as of the date this plan are not considered new development nor shall on-site replacement be considered to have any H impact (Monroe County 2004: 39).

Replacement Commercial Structures - those structures that replace legally established structures on the same site that do not increase the footprint size or impact native vegetation.

US-1 corridor – the area along US-1 determined for development in the Big Pine Key and No Name Key Master Plan (Monroe County 2004) (see appendix B for figure).

Appendix B
US-1 Corridor Area



The US-1 corridor area for the purpose of this HCP is the area designated in Figure 4.1 of the Big Pine Key and No Name Key Master Plan (Monroe County 2004) as depicted here.

Appendix C

Summary of Fencing Requirements in the Big Pine Key and No Name Key Habitat Conservation Plan

No new fences will be allowed in Tier 1 lands, unless they are authorized by the Service. The Service will review applications for fences in Tier 1 for impacts on protected species.

No additional fences will be allowed in the US-1 commercial corridor.

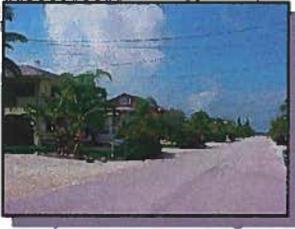
Fencing regulations on Big Pine and No Name Key as set forth in Monroe County Land Development Regulations 9.5-309 (c) as follows are applicable to this HCP.

Big Pine and No Name Key: The purpose of this section is to recognize and provide for the particular habitat needs of the Florida Key Deer (*Odocoileus virginianus clavium*) on Big Pine Key and No Name Key so that deer movement throughout Big Pine Key and No Name Key is not hindered while allowing for reasonable use of minimal fencing for the purposes of safety and protection of property. In addition to all other standards set forth in this section, all fences located on Big Pine Key and No Name Key shall meet the standards of this subsection as listed below:

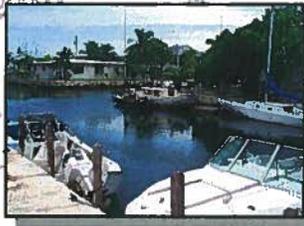
- (1) In the Improved Subdivision (IS) land use district, fences shall be set back as follows:
 - a. On canal lots, fences shall be set back at least fifteen (15) feet from the edge of abutting street rights-of-way; and built to the edge of all other property lines or as approved through a U.S. Fish and Wildlife Service coordination letter;
 - b. On all other lots, fences shall be set back at least fifteen (15) feet from the edge of abutting streets rights-of-way, at least five (5) feet from side property lines and at least ten (10) feet from the rear property line, or as approved through a U.S. Fish and Wildlife Service coordination letter;
- (2) In all other land use districts, fences may enclose up to a maximum of and not to exceed the net buildable area of the parcel only;
- (3) Enclosure of the freshwater wetlands by fences is prohibited;
- (4) All fences shall be designed and located such that Key deer access to native habitat, including pinelands, hammocks, beach berms, saltmarshes, buttonwoods and mangroves is maintained wherever possible;
- (5) All fences shall be designed and located such that Key deer corridors, as identified by the U.S. Fish and Wildlife Service, shall be maintained;
- (6) Fences shall not be permitted without a principal use except where the enclosed area consists of disturbed lands or disturbed land with exotics.



Livable Communities Program



Master Plan for Future Development of Big Pine Key and No Name Key



Monroe County
Planning and Environmental
Resources Department

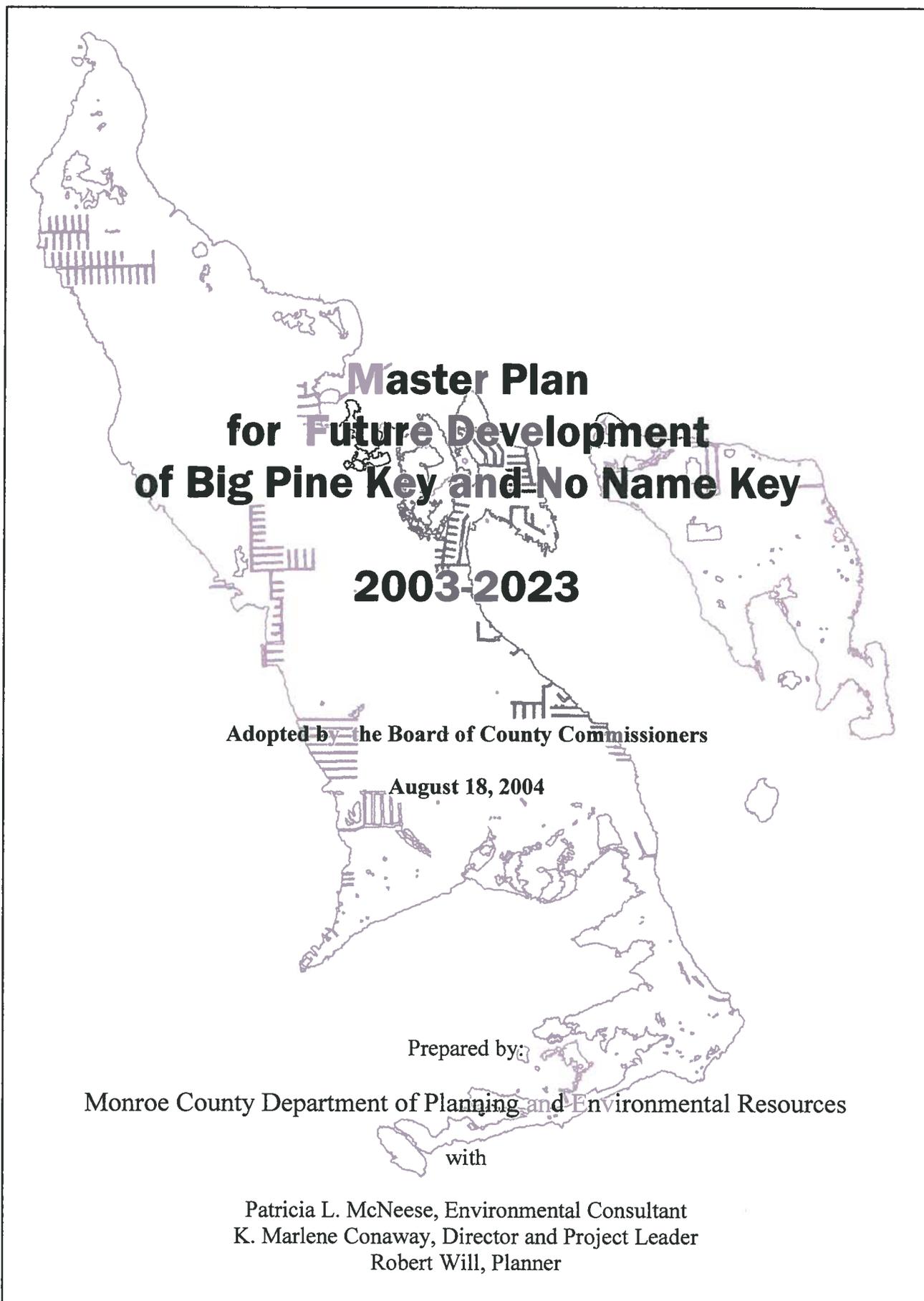
August 2004



**AMENDED
EFFECTIVE
08-17-09
BY ORD.
020-2009**

SEE ATTACHED

Amended by ORD.
022-2012



Community Vision

“We envision Big Pine and No Name Key as:

- A rural community with a small town atmosphere and way-of-life where people feel a connection with their friends and neighbors.
- A community rich in natural and scenic resources including endangered habitat found nowhere else in the world.
- A unique community in the Florida Keys where people can live in harmony with the natural world.
- Where residents and visitors can take advantage of the local goods and services without fighting traffic.
- Where kids of all ages have plenty of recreational opportunities.
- Where the dreams of home ownership and planting roots in the community can be realized.
- Where government regulations make sense and work for the betterment of all.
- Above all, we envision a community that responds to the needs of all its inhabitants.”

Executive Summary

During the spring and fall of 2000, the residents and property owners of Big Pine and No Name Keys worked with Monroe County planning staff on the Livable CommuniKeys Program (LCP) to identify the needs and desires of the community for future development on Big Pine Key and No Name Key .

Alternative potential development patterns and types were drafted during the process for evaluation to determine any possible impacts to the endangered species which make these islands their home. In order for any new development to occur, including road improvements, a permit from U. S. Fish and Wildlife Service (USFWS) was required. Therefore, the county and state have funded the preparation of a Habitat Conservation Plan (HCP) for the islands.

The HCP is a proposal to mitigate and compensate for the potential negative effects of development activities on the endangered species. The HCP is being reviewed by the USFWS to determine if it meets the species protection criteria.

The HCP is a permit application to allow a limited amount of development to occur as long as the impact on the endangered species is minimized and mitigated and the long term viability of the species is considered. The USFWS interest is in the protection of the endangered species, while the LCP plan provides the framework for development activities.

The LCP Master Plan minimizes impacts from development on the endangered species by directing development to areas of low habitat value and reducing trip length; limiting the amount of proposed development to maintain the rural character and to maximize the amount of habitat protected; and mitigating development by purchasing land for permanent protection.

The proposed LCP Master Plan will classify all land on Big Pine and No Name Keys into three 'tiers' based on conservation and infill priorities. Most of the islands are classified as Tier 1 because of their environmental sensitivity and importance for the continued viability of the endangered species. Tier 2 lands are canal lots located a distance from U.S. 1 with a potential for secondary impacts on the endangered species from traffic. Tier 3 lands are canal lots in close proximity to U.S. 1, which provide little habitat value to the endangered species and because of location, a decreased potential for deer kills from vehicles. Some undeveloped lots in Tier 3 are also located between existing developed commercial lots in the U.S. 1 corridor.

The development activities proposed in the Plan are expected to occur over a 20-year horizon. Proposed activities include:

- Residential units at a rate of roughly 10 per year for a total of 200 units.
- New commercial development, limited to 2,400 square feet a year, around existing commercial areas, mainly along the U.S. 1 corridor.
- New recreational facilities constructed on existing developed or disturbed/scarified lots.
- Limited expansion of community uses, churches, public offices, wastewater facilities, and the existing fire station.
- The widening of local, paved roads to accommodate bicycle paths, and storm water and sanitary sewer infrastructure and a third lane on U.S. 1.

Table of Contents

Chapter One:	
Introduction	8
Summary of LCP and HCP Processes	15
Format of Master Plan Elements	19
Chapter Two: Land Use and Redevelopment Element	
Goal 1: Directing Growth	23
Goal 2: Managing Growth	29
Goal 3: Housing	36
Goal 4: Non-Residential Uses	42
Goal 5: Community Organizations	48
Goal 6: Recreational Uses	51
Goal 7: Public Facilities	54
Goal 8: Accessory Uses	58
Goal 9: Land Acquisition	60
Chapter Three: Environmental Protection Element	
Goal 10: Natural Resource Management	65
Goal 11: Freshwater Resource Management	70
Chapter Four: Community Character Element	
Goal 12: Community Character	73
Goal 13: Historic Resources	77
Chapter Five: Economic Development Element	
Goal 14: Economic Development	80
Chapter Six: Traffic and Transportation Element	
Goal 15: Transportation	84
Chapter Seven: Community Participation Element	
Goal 16: Community Participation	89
Capital Costs Summary	92

List of Figures

Figure 1.1	Map of private, upland, vacant residential parcels.	12
Figure 1.2	Flow chart illustrating master plan process.	21
Figure 2.1	Tier designations on Big Pine and No Name Key.	28
Figure 2.2	FLUM and land use district changes.	35
Figure 2.3	Existing uses and commercial types in the U.S. 1 Corridor.	43
Figure 2.4	Big Pine Key Village Center	46
Figure 2.5	Location of existing institutional uses on Big Pine.	50
Figure 2.6	Location of existing recreational facilities and library.	53
Figure 2.7	Existing government facilities on Big Pine.	55
Figure 2.8	Private, undeveloped land within Tier I and Tier II.	63
Figure 4.1	Conceptual U.S. 1 corridor area map.	74
Figure 6.1	Existing platted residential and major roadways.	87

List of Tables

Table 1.1	Updated demographics for Big Pine/No Name from the 2000 Census.	10
Table 2.1	H multiplier for land use development categories.	25
Table 2.2	Calculation of H impact for different development activities.	26
Table 2.3	H-value budget for future development on Big Pine and No Name.	34
Table 2.4	Housing outside single family subdivisions.	36
Table 2.5	Housing figures of Big Pine and No Name from the 2000 Census.	37
Table 2.6	Big Pine Key commercial data.	42
Table 2.7	Institutional uses on Big Pine Key.	48
Table 7.1	Estimated cost of capital improvements	92
Table 7.2	Estimated cost of 3 to 1 mitigation	93

Acronyms

BOCC	Monroe County Board of County Commissioners
CARL	State of Florida Conservation and Recreational Lands Program
ESA	Endangered Species Act
FDCA	Florida Department of Community Affairs
FDEP	Florida Department of Environmental Protection
FDOT	Florida Department of Transportation
FKAA	Florida Keys Aqueduct Authority
FKCCS	Florida Keys Carrying Capacity Study
FKERTF	Florida Keys Environmental Restoration Trust Fund
FLUM	Future Land Use Map
FWS	United States Fish and Wildlife Service
HCP	Habitat Conservation Plan
ITP	Incidental Take Permit
LCP	Livable CommuniKeys Program
NGO	non-governmental organization
NROGO	Non-residential Rate of Growth Ordinance
PUV	private upland vacant parcel
PVA	population viability analysis
ROGO	Residential Rate of Growth Ordinance
SFWMD	South Florida Water Management District
SMMP	Monroe County Stormwater Management Master Plan
SOR	State of Florida Save Our Rivers Program
SWMP	Monroe County Sanitary Wastewater Master Plan
TDR	transferable development rights
TNC	The Nature Conservancy
TRE	transferable ROGO exemptions

Introduction

The Livable CommuniKeys Program (LCP) is a community-driven planning effort to address the very specific needs of unique island communities within the Florida Keys. The overall goal is to determine the appropriate amount, type and location of additional development within the LCP planning area. The LCP process includes community participation through a variety of methods. This process generates a community vision and alternative development scenarios. The scenarios are evaluated for feasibility within the current regulatory and physical framework and for how well they fit the community vision. A preferred alternative is identified and a master plan for future development is written around the preferred alternative. A Master Plan contains the specific development layout for the LCP planning area as well as action items that must be implemented to achieve the development and community vision. The Master Plan is a working document that is continually scrutinized and updated by the community.

Relationship to Comprehensive Plan

The Monroe County Year 2010 Comprehensive Plan was adopted in 1993 and became effective in its entirety in 1997. It contains the guiding goals, objectives and policies for implementation of growth management actions over the 20-year period covering 1990 through 2010. Some of the actions apply equally throughout Monroe County such as the need for adequate solid waste disposal facilities or the allocation of building permits limited by hurricane evacuation clearance times. Other actions, such as the need for preservation of historic resources or the planning of recreational facilities, while applying county-wide, vary in their importance by locale. There are also local needs that are not addressed in the Comprehensive Plan at all such as community goals towards beautification.

The Master Plan does not replace the Comprehensive Plan but focuses on the very specific needs of the local community. It is also a proactive planning tool rather than a strict regulatory document in that it identifies actions needed to meet the community's needs and goals. The Master Plan is attached as an addendum to the Comprehensive Plan. Some existing Comprehensive Plan policies will not be affected at all by the Master Plan. Other existing policies may be modified for consistency or entirely replaced by the Master Plan. The Livable CommuniKeys Program and Master Plan development are outlined in the comprehensive plan in Policy 101.20.1 that states:

“Monroe County shall develop a series of Community Master Plans. Master Plans will be developed in accordance with the following principles:

1. Each Community Master Plan will contain a framework for future development and redevelopment including the designation of growth boundaries and future acquisition areas for public spaces and environmental conservation;
2. Each Community Master Plan will include an Implementation Strategy composed of action items, an implementation schedule, and a monitoring mechanism to provide accountability to communities;
3. Each Community Master Plan will be consistent with existing Federal and State require-

- ments and overall goals of the 2010 Comprehensive Plan to ensure legal requirements are met. While consistency with the goals of the 2010 Comprehensive Plan is paramount, the 2010 Plan will be updated and amended where appropriate;
4. Each Community Master Plan will be closely coordinated with other community plans and other jurisdictions to ensure development or redevelopment activities will not adversely impact those areas;
 5. Each Community Master Plan will include appropriate mechanisms allowing citizens continued oversight and involvement in the implementation of their plans. Through the Community Master Plans, programs for ongoing public involvement, outreach, and education will be developed;
 6. Each Community Master Plan will include a Capital Improvements program to provide certainty that the provision of public facilities will be concurrent with future development;
 7. Each Community Master Plan will contain an environmental protection element to maintain existing high levels of environmental protection as required in the 2010 Comprehensive Plan;
 8. Each Community Master Plan will include a community character element that will address the protection and enhancement of existing residential areas and the preservation of community character through site and building guidelines. Design guidelines for public spaces, landscaping, streetscapes, buildings, parking lots, and other areas will be developed through collaborative efforts of citizens, the Planning Department, and design professionals reinforcing the character of the local community context;
 9. Each Community Master will include an economic development element addressing current and potential diversified economic development strategies including tourism management. The preservation and retention of valued local businesses, existing economies, and the development of economic alternatives will be encouraged through the process;
 10. Each Community Master Plan will contain a Transportation Element addressing transportation needs and possibilities including circulation, safe and convenient access to goods and services, and transportation alternatives that will be consistent with the overall integrity of the transportation system not resulting in negative consequences for other communities; and
 11. Each Community Master Plan will be based on knowledge of existing conditions in each community. The Planning Department will compile existing reports, databases, maps, field data, and information from other sources supplemented by community input to document current conditions; and
 12. Each Community Master Plan will simplify the planning process providing clarity and certainty for citizens, developers, and local officials by providing a transparent framework for a continuing open dialogue with different participants involved in planning issues.”

Relationship to State Legislation

The Comprehensive Plan was required to be adopted by Monroe County under Florida Statute 163 and must be compliant with the required format and minimum content listed in the Florida Administrative Code (FAC 9J-5). The Master Plan will be adopted as a modification of the existing Comprehensive Plan and the Florida Department of Community Affairs will review the modification for compliance with the applicable statutes and codes. This review will likely be most focused in areas where Master Plan policies replace existing Comprehensive Plan policies and serve as the Evaluation and Appraisal Report (EAR) for elements which address this planning area. Of course a comprehensive plan may include elements that are either optional or not listed at all in FAC 9J-5 and that is where the Master Plan is particularly valuable.

Master Plan for Big Pine and No Name Keys

This Master Plan covers Big Pine Key, No Name Key and the Newfound Harbor Keys, collectively referred to as the “planning area” throughout this document. For purposes of information presentation (such as demographics), the Newfound Harbor Keys are included with Big Pine Key. A companion document to this Master Plan, the “Big Pine Key & No Name Key Development Alternatives Report,” (hereafter referred to as the Development Alternatives Report) summarizes the background information for these islands.

Demographics

Some of the demographic information in the Development Alternatives Report was extrapolated from the 1990 census. Table 1.1 below presents some updated data from the 2000 census. The data show that most of the population live north of U.S. 1. Nearly 25% of the permanent household population are in rented units. During the winter season the population increases by nearly 38% to an estimated 6,944. The average persons per household on Big Pine is 2.21 and on No Name it is 2.48.

Table 1.1 Updated demographics for Big Pine/No Name from the 2000 census.

	Big Pine	No Name	Combined
Total Permanent Population	5,032	40	5,072
North of U.S. 1	4,458	40	4,498
South of U.S. 1	574	0	574
In Families	1,419	13	1,432
In Owned Housing Unit	3,749	36	3,785
In Rented Housing Unit	1,222	4	1,226
Seasonal Population (i.e., additional)	1,912	23	1,935
Source: U.S. Census 2000			

Existing Land Conditions

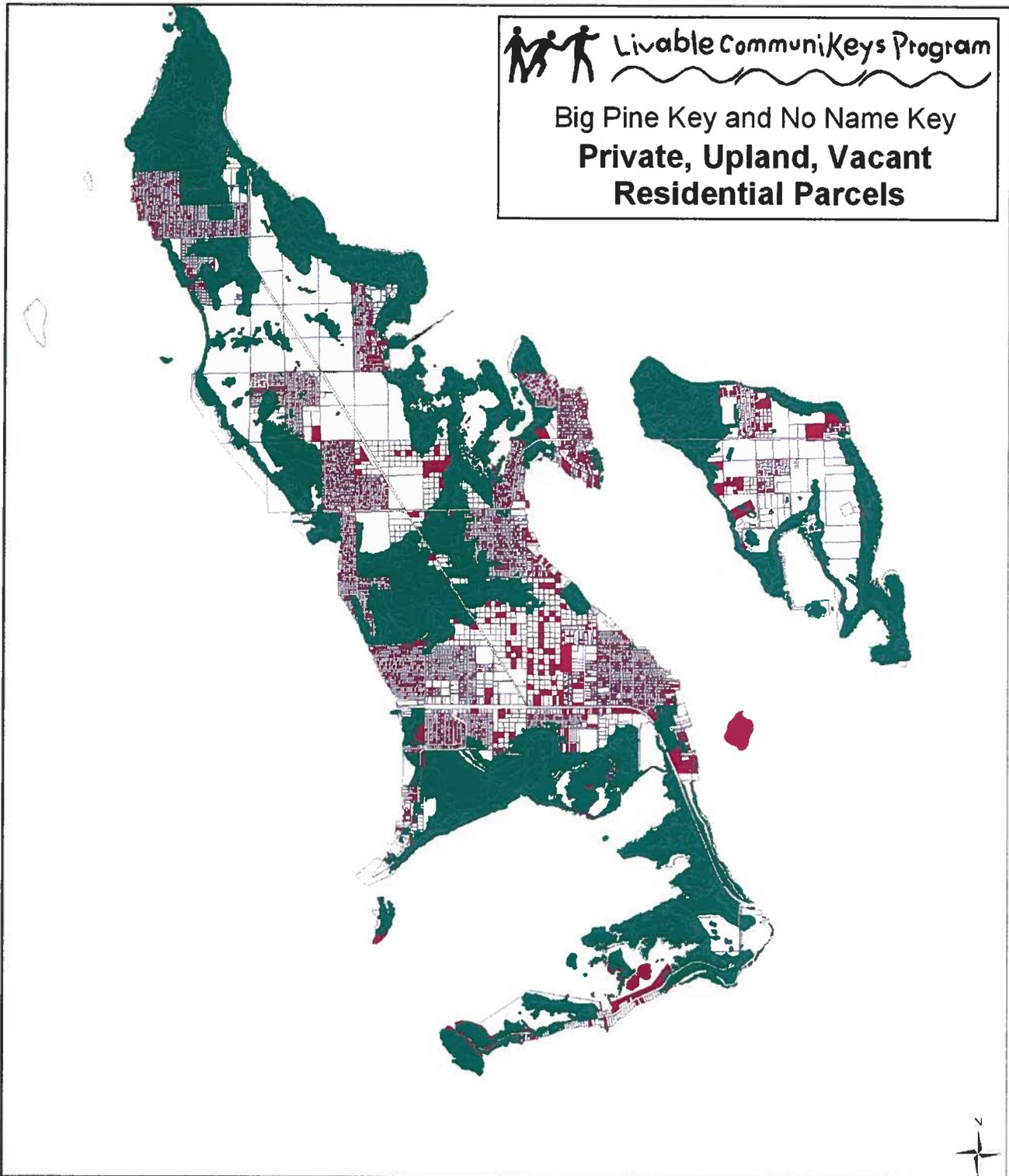
As natural habitat is acquired by resource agencies for preservation, most of the vacant buildable upland parcels remaining under private ownership are located within improved subdivisions or in commercial acreage near U.S. 1. There are approximately 2,920 vacant building residential lots remaining and approximately thirty-one parcels of vacant private upland commercial land remains covering about 18 acres. The remainder of the planning area is developed (about 12% of the land area), under public ownership (about 72% of the land area) or is located in unbuildable wetlands (under both public and private ownership). Public land owners primarily include the U.S. Fish and Wildlife Service Refuge System, the State of Florida and Monroe County.

Figure 1.1 on the following page shows vacant, upland residential lots under private ownership.

Development Context and Constraints

Listed below for reference purposes are the primary existing constraints on Big Pine Key and No Name Key development. All of these constraints apply county-wide but their particular application to Big Pine Key and No Name Key is discussed here.

- **Concurrency Standards:** Since March of 1995 the segment of U.S. 1 on Big Pine Key had been operating below the adopted level of service in the Comprehensive Plan. This has been the primary development constraint because it triggered a development moratorium on all new traffic-generating development. In 2002 FDOT completed an intersection improvement project and deer underpasses which improved the level of service to an acceptable level, however further improvements such as adding a third lane to the segment are necessary to permanently raise the operating level of service. This has been a primary motivating factor behind completion of the HCP; the issuance of the incidental take permit will allow necessary road improvements to go forward, thereby lifting this constraint on development.
- **ROGO:** As of the date of this report, the residential rate of growth ordinance (ROGO) allocates 49 total units (market rate plus affordable) annually to the Lower Keys. This is the latest number in a step down reduction that has occurred since the ROGO started. The reductions have mostly been related to required performance standards set forth in the Comprehensive Plan. It is considered unlikely at this time that the total allocation number will increase at least in the next 3-5 years. Therefore, permits for Big Pine and No Name Key will continue to be limited along with the rest of the Lower Keys under ROGO. The point system used to rank permits for allocations under ROGO is currently structured to give a competitive advantage to units proposed outside Big Pine and No Name Keys. This was done to bolster protection of natural resources on these two islands. With the issuance of the Incidental Take Permit and adoption of the LCP by the county, the ROGO will be restructured.
- **NROGO:** “NROGO” is the acronym for “Non-residential Rate of Growth Ordinance” under which the construction of new or expanded commercial uses is regulated. The amount of new and expanded commercial space allowed on Big Pine and No Name Keys



Legend

-  Other Parcels
-  Vacant Residential
-  Wetland Boundary



Monroe County
Planning and Environmental
Resources Department

This map is for Monroe County Growth Management Division purposes only. The data contained herein is illustrative only and may not accurately depict boundaries, parcels, roads, right of ways, or identification information.

Figure 1.1 Map of Private, Upland Vacant Residential Parcels.
(Ordinance 020-2009, § 1)

is tied to the level of residential development permitted as is the case for the entire county. As of the date of this report, the dwelling unit allocation ordinance allocates 49 total units annually to the Lower Keys. At 239 square feet of commercial space per residential unit allocated under NROGO, this sets the approximate Lower Keys commercial rate at 11,711 square feet per year (NROGO does not allocate commercial space by Keys sub-area but does so Keys-wide on an annual basis). As previously noted, the residential allocation is subject to change (usually decreases), so the commercial allocation could also change. The point system used to rank permits for allocations under NROGO is currently structured to give a competitive advantage to development proposed outside Big Pine and No Name Keys. This was done to bolster protection of natural resources on these two islands. With the issuance of the Incidental Take Permit and adoption of the HCP by the county, the point system may be restructured.

- Nutrient Credit System: The Comprehensive Plan requires no net increase in the level of nutrients in wastewater effluent. The number of building permits is tied to the number of cess pits or substandard wastewater treatment replaced by a compliant treatment system. The Monroe County Sanitary Wastewater Master Plan (SWMP) originally projected that this infrastructure would be in place by 2010 to meet Florida law and Comprehensive Plan requirements. Implementation of the SWMP is behind schedule but still well within the 20 year planning horizon of this Master Plan. Once the upgraded sewer service is installed, or all illegal cess pits are eliminated, nutrient level of service standards will be met for all existing and future development.
- Tier System: Monroe County's new Smart Growth Initiatives (Comprehensive Plan Goal 105), "Tier Map," is designed to refocus land acquisition efforts, conserve natural resources and direct future development to infill areas in coordination with the Livable CommuniKeys Program. The Tier System will consist of a set of maps and regulations directing growth to infill of existing subdivisions and commercial areas. The Tier System plays a major role in the implementation of this Master Plan and the HCP.

Additional future constraints on numbers and locations of permits are:

- Habitat Conservation Plan (HCP): The HCP applies to the Big Pine Key/No Name Key area only, not county-wide. The Incidental Take Permit, when issued, will limit development on Big Pine and No Name Keys to the level that will result in a maximum projected "take" of Key deer over the twenty-year planning horizon. The development levels contained in this Master Plan have been designed to meet the requirements of the anticipated Incidental Take Permit while meeting community needs.
- Florida Keys Carrying Capacity Study (FKCCS): The FKCCS analyzed the extent to which current and future projected development exceeds maximum impact thresholds of natural resources and infrastructure. The results of the FKCCS will be used to modify the ROGO and NROGO at some time in the near future and this may affect the number and location of residential permits that can be issued county-wide.

Acquisition Framework

For many years, the concurrent need for natural resource protection and relief to regulated land owners has been present throughout the Keys and particularly heightened for Big Pine and No Name Keys. The United States Fish and Wildlife Service (FWS) has been purchasing property under the refuge system since the National Key Deer Refuge was established in 1959. They can conduct acquisition activities essentially anywhere within the refuge administrative boundaries, which encompass the entire planning area. Their focus in the past has been on natural lands, usually on acreage parcels, that have higher wildlife habitat value. In the early 1990s they produced a priority acquisition plan that focused on remaining habitat and preservation of wildlife movement corridors.

These two islands were included in three ongoing state acquisition efforts in the 1990s: the Conservation and Recreational Lands (CARL) Program, the Florida Forever Program (formerly Preservation 2000) and the Save Our Rivers (SOR) Program. The latter program concentrated on protection of the existing freshwater sloughs and wetlands on Big Pine Key and has been completed. There are lands remaining to be purchased within the CARL boundaries. Also, the CARL boundaries are periodically reviewed at which time new lands may be added. Monroe County has actively prioritized Big Pine and No Name Keys for purchases by the Monroe County Land Authority. Many purchases by private citizens have also been made to garner additional "points" towards an allocation under the county's dwelling unit allocation ordinance (ROGO) and these properties have been deeded over to the county. The HCP and LCP processes will somewhat change and concentrate the focus of future acquisition efforts. Future acquisition and management of vacant lands will be a major component of this Master Plan.

Summary of LCP and HCP Processes

Livable CommuniKeys

The Livable CommuniKeys Program (LCP) is a community-driven planning effort aimed at determining the amount, type and location of additional development appropriate for the planning area. The Big Pine Key/No Name Key community is the first one in the county to embark upon the LCP planning process. The process was initiated in April 2000. The Development Alternatives Report was generated in March 2001. These interim products of the LCP process were then coordinated with the development of the HCP over the next year and a half. This Master Plan is the result of that coordination.

Community Input Summary

Three major public workshops and meetings facilitated the LCP effort and were followed up by newsletters mailed to all residents, property owners and interested parties. Stakeholder discussions and citizen surveys were also conducted. The newsletters summarized needs and desires expressed by the community in the workshops. A fourth newsletter was issued in January of 2003 and summarized the development proposals set forth in this plan. From this outreach effort key community issues were identified and a community vision was formulated. The community vision and stated planning objectives were used to evaluate possible development alternatives. This evaluation is contained in the Big Pine Key & No Name Key Development Alternatives Report.

Key Community Issues

In the LCP workshops the following key community issues were identified:

1. Ascertain the distribution of future residential development within the project area.
2. Maintain the rural character of the project area while still allowing some future development.
3. Implement solutions to the congestion on U.S. 1 and minimize the need for local trips on U.S. 1.
4. Develop a community gathering place and/or more active recreation facilities.
5. Discourage new development on No Name Key.

Planning Objectives

1. Minimize the need for local vehicular trips on and across U.S. 1 from north to south.
2. Improve the level of service on U.S. 1 to a standard that, in accordance with local regulations, would allow some development and to maintain that level of service over the planning horizon.
3. Discourage new development on No Name Key.
4. Encourage additional commercial development to be oriented to the local community rather than to the regional or tourist community.
5. Continue to allow some new development but generally keep the level low to achieve the maintenance of a "rural community" envisioned by the community.
6. Provide for a community gathering center and some active recreation.
7. Provide for a conservation plan with reasonable level of implementation costs and logistics.
8. Provide for a conservation plan that complies with current regulatory constraints.

9. Provide greater certainty to the property owners and Key deer herd managers as to the location of future development.
10. Minimize the alteration of undisturbed natural habitat.

Community Vision

“We envision Big Pine and No Name Key as:

- A rural community with a small town atmosphere and way-of-life where people feel a connection with their friends and neighbors.
- A community rich in natural and scenic resources including endangered habitat found nowhere else in the world.
- A unique community in the Florida Keys where people can live in harmony with the natural world.
- Where residents and visitors can take advantage of the local goods and services without fighting traffic.
- Where kids of all ages have plenty of recreational opportunities.
- Where the dreams of home ownership and planting roots in the community can be realized.
- Where government regulations make sense and work for the betterment of all.
- Above all, we envision a community that responds to the needs of all its inhabitants.”

Alternatives Analysis

Several alternative planning strategies for Big Pine Key and No Name Key were formulated. These strategies were aimed at satisfying basic community needs within the existing regulatory framework. The alternatives were then subjected to a planning analysis to see which ones were consistent with the community vision, addressed the ten planning objectives, could meet community needs and desires, and were within reasonable cost and feasibility. Alternatives for residential, commercial, recreational and transportation development were all evaluated. The analysis is contained in the Big Pine Key & No Name Key Development Alternatives Report, which is a companion document to this Master Plan. Alternatives considered to be the most feasible for fulfillment of community needs and desires included a clustered residential plan and a commercial redevelopment plan. Options for meeting community recreational and transportation needs were also presented. These alternatives were then analyzed for consistency with environmental goals, particularly protection of endangered species. This was done through development of a Habitat Conservation Plan (HCP) for these islands.

Habitat Conservation Plan

The development of a Habitat Conservation Plan (HCP) for Big Pine and No Name Keys was considered a reasonable way to resolve ongoing conflicts over the impacts of development on natural resources. The Big Pine Key & No Name Key Development Alternatives Report recounts the history of these conflicts and previous failed planning efforts for the islands. Section 10 of the Endangered Species Act (ESA) allows a developer, the “applicant,” to apply for a permit for “incidental take” of federally-designated endangered species. The process basically involves determining the level of reduction or “take” of the species caused by the proposed development. The applicant proposes the development along with a plan for mitigating the “take” caused by the development. The mitigation plan is written in the form of a Habitat Conservation Plan.

The HCP process for Big Pine Key and No Name Key was initiated in February 2000. The applicants are Monroe County, the Florida Department of Community Affairs (FDCA) and the Florida Department of Transportation (FDOT). The FDOT is a builder of proposed development within the state road right-of-way (U.S. 1) whereas the remaining two entities have authority over permitting of proposed development in the remainder of the planning area. The Habitat Conservation Plan document was produced with the assistance of an HCP committee made up of concerned agencies and citizen representatives. The document was completed in March 2003 and an application for the Incidental Take Permit was made to the FWS in May 2003. The process to develop the HCP consisted of three major components: 1) study of the endangered species populations and conditions necessary for their continued viability, 2) crafting of a proposed development action within this context and determination of the level of “take” caused by the action, and 3) development of a plan for mitigating the determined level of “take.”

Key Deer PVA Analysis

The HCP was designed to cover all federally-protected species known to occur on the two islands. Of the nine species covered, two were prioritized for analysis based on their sensitivity to development: the Florida Key deer (*Odocoileus virginianus clavium*) and the Lower Keys marsh rabbit (*Sylvilagus palustris hefneri*). If the habitat needs of these two species could be met, the needs of the remaining seven would be met automatically. Of the two species, the Lower Keys marsh rabbit is the more endangered, largely due to fragmentation of habitat already having occurred throughout much of its range in the Lower Keys. Protection of existing preferred habitat, mostly wetlands, is less an issue than secondary impacts (e.g., predation by domestic cats) and limitations on dispersal caused by existing development barriers. Additional “take” of this species had to be prevented due to its precarious situation. This was done by proposing a prohibition on development within the core habitat (mostly wetlands) and within buffer zones that surround the core habitat.

The Florida Key deer is a wide-ranging species with a core population located on Big Pine Key and No Name Key. For this species a population viability assessment (PVA) was completed and a model was developed to theoretically predict the response of the population to scenarios involving habitat loss, secondary mortality impacts (e.g. road kills) and major catastrophic events (i.e. hurricanes). One product of this model analysis was an actual map of the islands showing areas necessary for continued viability of the deer population and areas most suited for human development (i.e. least affecting deer viability). This map was used to re-analyze the LCP alternatives and generate a proposed development action. A detailed explanation of the PVA and modeling process is contained in the HCP document.

Summary of Proposed Action

The proposed development action in the HCP is expressed in terms of the total level of impact that will result in an acceptable level of “take” of the Key deer and no “take” of the Lower Keys Marsh Rabbit. The level of “take” of the Key deer is determined by the removal of habitat value measured in discrete units. The habitat value units are assigned to individual parcels within the planning area and consist of two main components: direct impact (habitat loss) and indirect impact (roadway mortality). Location and traffic generation are the two primary development components causing these impacts. The HCP will equate the total loss of habitat value units to a specific level of acceptable impact. Monroe County will need to track the impact of issued permits to ensure that the total acceptable level of habitat value units is not exceeded. The HCP

will not specify exactly where permits will be issued or for what type of development, but it will provide clear direction to the county on which locations and types will have greater impact. Furthermore, the preferred development alternative, generated by the LCP process and refined through the HCP process, has been analyzed using the PVA model. This process has allowed the county to plan for distribution of potential permits over the maximum available range of types and locations to meet community needs.

Summary of Habitat Conservation Plan

The Habitat Conservation Plan proposes to mitigate the “take” of Key deer mainly by putting habitat under public protection. Habitat protection is considered the highest priority action for protection of Key deer and other listed animal and plant species. Thus the habitat value units expended by allowing development can be mitigated to some extent by acquiring a certain level of habitat value elsewhere. In addition avoidance and minimization measures were applied at every step in the preparation of the HCP and the LCP to reduce potential impacts from the proposed future development plan. Mitigation will also involve management of the acquired habitat, and other activities. The HCP also proposes actions to minimize development impacts. Examples include implementation of traffic calming designs and restrictions on fencing. The Master Plan provides the details on how these minimization and mitigation actions will be implemented.

Effect of Issuance of Incidental Take Permit

The application for an Incidental Take Permit under Section 10 of the ESA was submitted in May 2003. Issuance of a permit is expected within two years. It is very important to note that because the HCP process included all concerned agencies and stakeholders, including the FWS in a technical support role, the HCP document as currently proposed is expected to be acceptable to the federal government with a minimal amount of changes. Of course the document must go through the public process and the final content may change. Based on the substantial coordination that has taken place thus far and in consideration of the substantial permit processing time involved, Monroe County is moving forward now with this Master Plan. There are components of the Master Plan that could be changed later, however, to match the final HCP document that accompanies the issued Incidental Take Permit. Both documents have a planning horizon of twenty years that starts upon issuance of the Incidental Take Permit.

Format of Master Plan Elements

There are six elements in this Master Plan. Each one focuses on an issue of heightened importance to Big Pine Key and No Name Key. The format for these elements is different from the comprehensive plan because this Master Plan is a culmination of the LCP process, not a starting point. Therefore, the community and planning staff have already reviewed and analyzed much of the available data about the island and they have been through a planning process whereby “problems” (questions, issues, uncertainties) have been identified and needs have been verbalized. Many of the opportunities and constraints for meeting these needs have also been analyzed through the development alternatives analysis. This information is contained in the Big Pine Key & No Name Key Development Alternatives Report.

The Master Plan seeks to further condense and refine the products of the development alternatives analysis process. The Master Plan provides the tools for problem solving by fulfilling three basic tasks:

- Statement of the goals of the LCP/HCP process as it applies to the planning area,
- Refined analysis of specific community and planning needs to fulfill the goals,
- Identification of strategies to meet the needs.

Goals: Each element states a specific planning goal designed around the major topics to be addressed through the LCP process such as growth and redevelopment, economic viability, environmental protection, and community character. This particular Master Plan also includes goal language designed to address the requirements of the HCP process.

Current Conditions Summary: A certain amount of information specific to the planning area is available and can be presented or cited in the Master Plan now. Some of this information was provided during the LCP process in newsletters and workshops. Demographics, inventories of community facilities, and land ownership patterns are examples of information presented in this section.

Analysis of Community Needs: The problem, issue or shortfall in the community or environment is stated here. These have been identified either by the community or by the planning staff. The community includes the affected public, stakeholders, and elected officials and they have identified needs to the planning staff in a variety of ways: workshop participation, mail surveys, meetings, phone calls, and letters. The planning staff identified additional needs either through planning analysis of existing information, professional judgment based on observations of data or conditions, or coordination with facility or service providers.

Final Strategies and Action Items: As part of the Master Planning process the planning staff has identified and evaluated possible strategies for meeting each need. The possible strategies were also evaluated relative to one another to identify conflicts and to identify opportunities for one strategy to fulfill multiple needs. In this way a final set of strategies was completed. Action items were then developed towards implementation of each strategy.

The plan is therefore written in the form of goals, strategies and action items rather than goals, objectives and policies as in the Comprehensive Plan. Where strategies and action items replace current comprehensive plan policies, this is noted and action items for deleting or modifying

those policies are included in the applicable element. It is very important to note that this plan will be an addendum to the Monroe County Year 2010 Comprehensive Plan. ***The Comprehensive Plan remains in effect in the Big Pine Key/No Name Key planning area.***

The plan format is illustrated in the flow chart in Figure 2.1. The flow chart starts with an individual need identified in the plan. A comprehensive strategy for meeting the need is formulated based on the information in hand. If the information in hand is sufficient to implement the strategy the action items for implementation can be written directly into the Master Plan. If not, an action item can be written to procure new information or further analyze existing information. Note that new information not only feeds back into implementation but may reveal new strategies, may redefine the need or may even reveal new needs. To be a meaningful and current implementation tool over the entire twenty-year planning horizon the Master Plan must include this iterative process of problem solving that monitors success and identifies changing conditions and new issues. It must also allow for timely response and tracking of progress towards problem solving.

Using this format the Master Plan moves the LCP/HCP process into its final phase by taking the following steps:

1. Adopt as the plan framework, the preferred land use scenario developed during the LCP/HCP process providing the basis for the anticipated incidental take permit.
2. Develop and refine the implementation details of the preferred land use scenario.
3. Include mechanisms for ensuring that the Master Plan complies with the anticipated incidental take permit through the twenty-year planning horizon.
4. Include mechanisms and revisions for ensuring that the Master Plan complies with the Monroe County Year 2010 Comprehensive Plan.
5. Address new issues relevant to the planning area that were not addressed in either of the aforementioned processes (Comprehensive Plan and HCP) and that have no impact or a positive impact on the ability to comply with those two processes.

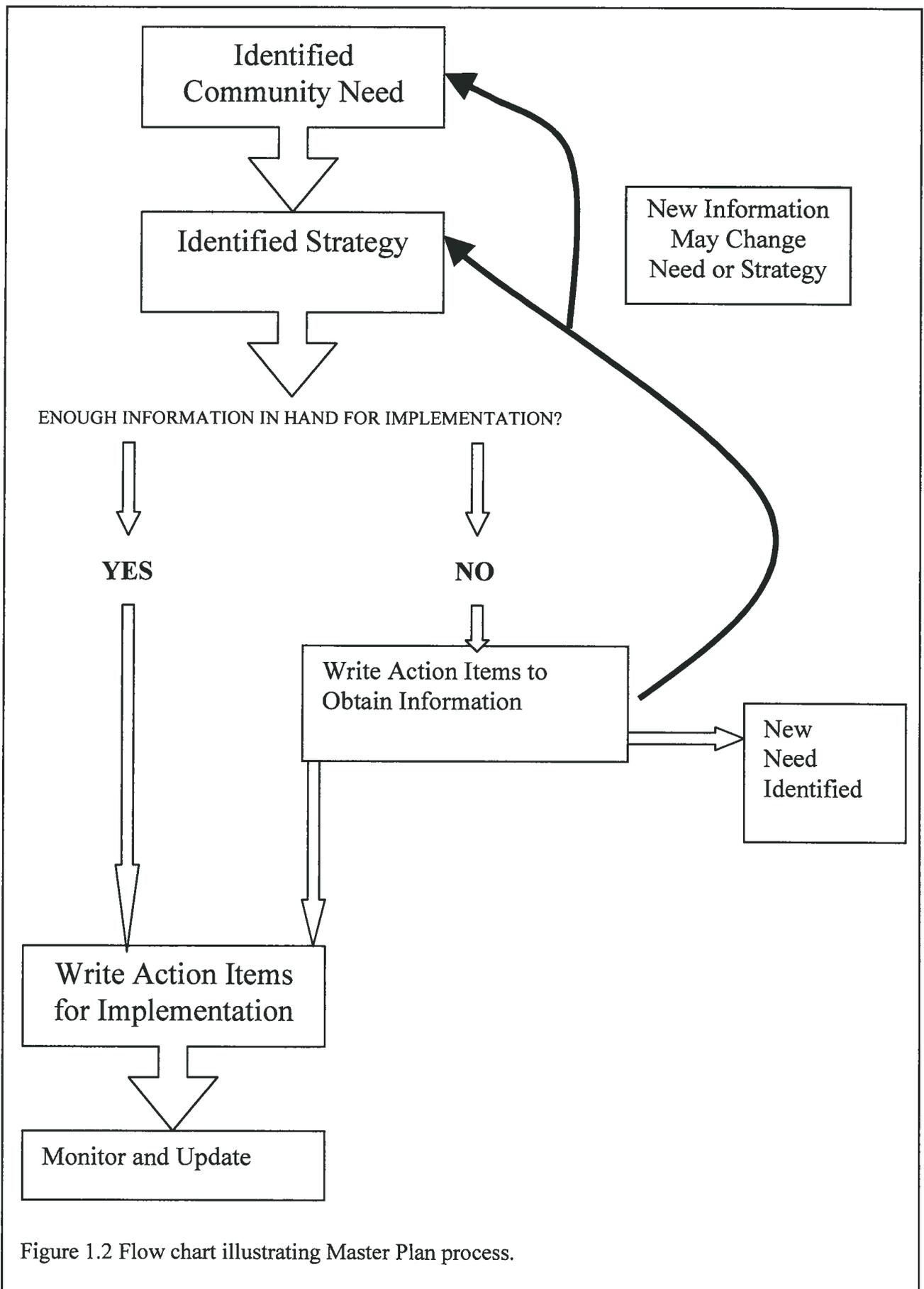
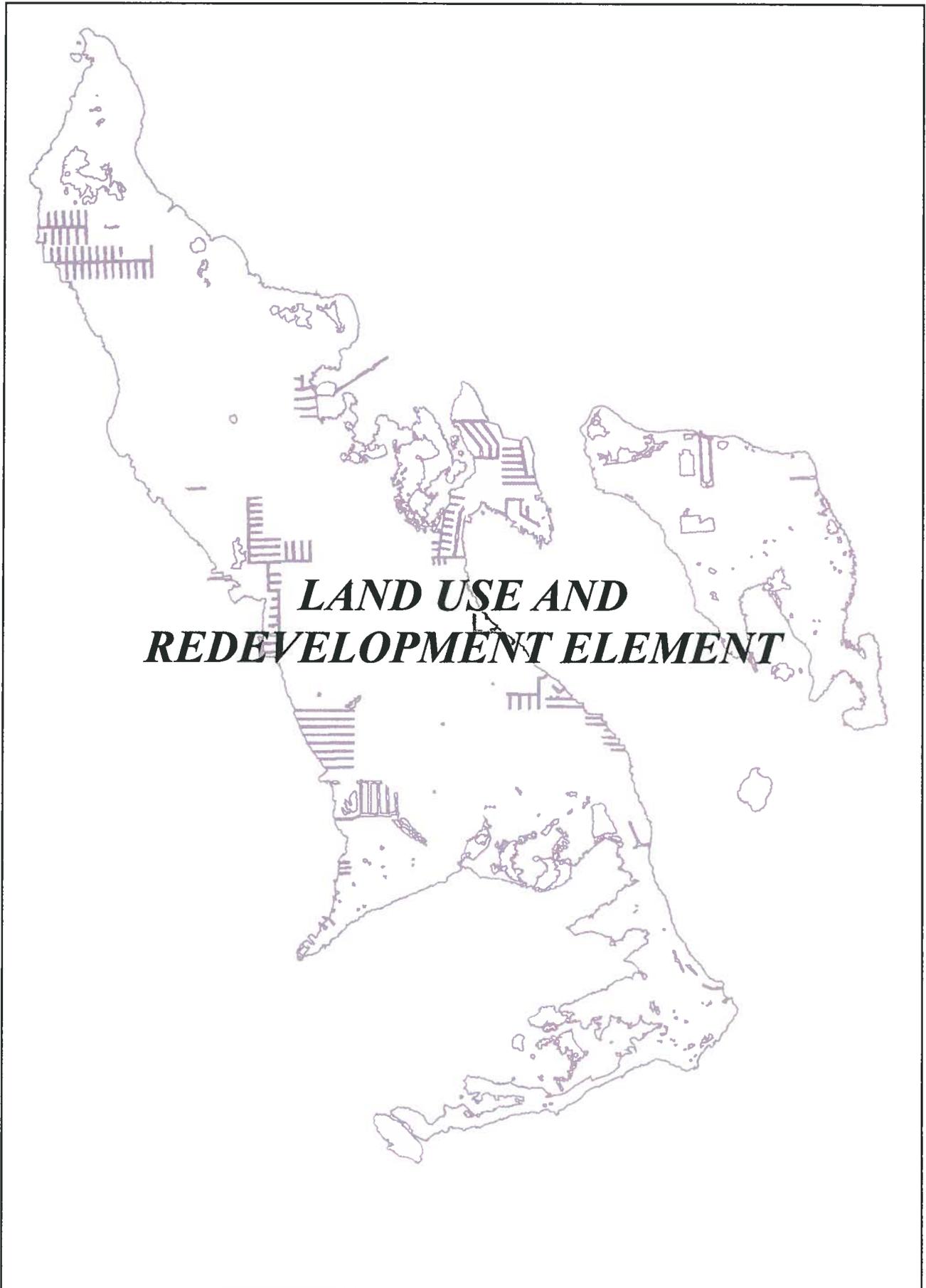


Figure 1.2 Flow chart illustrating Master Plan process.



***LAND USE AND
REDEVELOPMENT ELEMENT***

GOAL 1

Direct future growth to lands that are intrinsically most suitable for development and encourage conservation and protection of environmentally sensitive lands by using the relative wildlife habitat value of land as a basis for development decisions on Big Pine Key and No Name Key.

Current Conditions Summary

The Habitat Conservation Plan as implemented under the anticipated Incidental Take Permit (ITP) will create a direct link between wildlife habitat conservation and land development for the next twenty years. The direct link mechanism is the Harvest (measured in H-units) of individual parcels within the planning area. The HCP document explains how the H-unit was developed based upon the Population Viability Analysis (PVA) of the Key deer. The PVA revealed that both “harvest” (mortality) and the deer carrying capacity of the habitat (known as “K”) affect the population viability of the deer. The model further revealed that when a parcel is developed, the corresponding increase in harvest potential (additional traffic mortality) is a much better indicator than the corresponding removal of habitat as to the projected viability of the deer population over the 100-year PVA horizon. In fact, harvest turned out to be a very good indicator of development impacts when multiple development scenarios were processed through the PVA model. Therefore, the weighted Harvest Grid Map generated from the PVA will be used to predict the projected levels of take of endangered species for various development scenarios. Monroe County applied this map towards the planning of future development for the next twenty years through the LCP process.

A mechanism for translating the Harvest Grid Map into a land use regulatory tool exists under the county’s Smart Growth Initiative, otherwise known as the Tier System. Policy 105.2.1 defines the Tier System categories in detail. The three Tier categories are based on environmental protection and future land use planning priorities. Tier I lands are termed “Natural Area,” Tier II lands are called “Transition and Sprawl Reduction Area” and Tier III lands are the “Infill Area.” For Big Pine Key and No Name Key the habitat sensitivity information presented in the HCP can be used directly to define the environmental protection priorities incorporated into their Tier Map coverages. Planning priorities set during the LCP/HCP process can be used to refine the map where needed.

The same spatial model of the PVA that generates the Harvest Grid Map allows calculation of H-unit by individual parcel using a summing method applied to the grids contained within the parcel. Therefore, Monroe County will use this calculation to project the level of impact of each individual development proposal on endangered species and, ultimately, on ITP/HCP-compliance. The anticipated Incidental Take Permit will authorize a total take of approximately

78 female Key deer (PVA-model based number) and no take of the Lower Keys Marsh Rabbit in the twenty-year period covered by the permit. This is expressed in terms of development within the HCP as a total allowable H of 1.1 units. Furthermore, the anticipated ITP will require mitigation through the acquisition and protection of at least 3.3 total H units (mitigation ratio of 3 to 1). The projected amount of development that could be accommodated by 1.1 units of H was estimated as the equivalent of approximately 600 residential units. This was done by running the PVA model through several scenarios in which the least valuable habitat was always developed first. The scenarios used equivalent units that were characterized as single family residential units within subdivisions. A method was needed for the direct translation of equivalent units into all types of land uses anticipated by the LCP process such as commercial, public facilities, and roadways. The HCP does this by supplying a multiplier for those uses generating additional traffic (translating to harvest impact) beyond that generated by a single family residential unit.

Analysis of Community Needs

Tier Map

The Tier Map for Big Pine Key and No Name Key has been developed based on relative wildlife habitat quality as defined in the HCP. Monroe County is in the process of developing the Tier Maps pursuant to county-wide Smart Growth Initiatives adopted in Goal 105 of the Comprehensive Plan. For the Big Pine Key and No Name Key planning area the Tier Maps are based upon habitat sensitivity identified in the HCP, primarily as represented on the weighted Harvest Grid Map.

H unit Tracking System

Pursuant to the anticipated ITP and the HCP, the H-Value of all parcels developed and parcels acquired for the purpose of mitigating endangered species take will need to be continuously compiled and monitored. A system for tracking the H for each parcel developed, and how much H is in the mitigation bank must be created and monitored. An annual report will be presented detailing this information.

Recommended Strategies and Actions

Strategy 1.1

Create a Tier Map for the planning area depicting the locations of Tier I, Tier II and Tier III lands as described in Comprehensive Plan Policy 105.2.1. Base the Tier Map on the habitat needs of federally endangered resident species in the planning area as set forth in the anticipated ITP and HCP in terms of relative H of parcels within the planning area.

Strategy 1.2

Assign relative H units to all parcels within the planning area as per the method described in the HCP in order to ensure compliance with the permitted level of take of federally endangered species contained in the anticipated ITP.

Action Item 1.2.1: Use the parcel-specific H unit spreadsheet included with the HCP to assign H to individual parcels within the planning area.

Action Item 1.2.2: For development proposal applications involving multiple parcels, sum the H units for the individual parcels to generate the total H impact of the development.

Action Item 1.2.3: Devise a trip generation equivalency system to account for the difference in harvest impact between non-residential and residential uses in accordance with HCP requirements. Use the revised version of HCP Table shown below in Table 2.1. This revision provides more detail regarding the uses that are anticipated in this Master Plan.

Table 2.1 H multiplier for land use development (both new and expansion) categories.

Land Use	Average Daily Trip Generation ²	H Multiplier ¹
Residential (any type)	9.5	1
Accessory Uses ³ (on vacant parcels) (includes neighborhood pocket parks)	--	0.2
Retail and Service	70.0	7.4 (per 1,000 sq. ft.)
Office – government or private	5.9	0.6 (per 1,000 sq. ft.)
Institutional (includes community and religious organizations)	13.0	1.4 (per 1,000 sq. ft.)
Industrial (includes public utilities)	5.0	0.5 (per 1,000 sq. ft.)
Recreational (major parks) and Library	67	7.0
Hotel/Motel	7.9	0.8 per room

Source: Habitat Conservation Plan for Florida Key Deer

¹ The multiplier is based on traffic generation because vehicle collisions with Key deer is the most important human-related cause of mortality for the Key deer.

² Average daily trips generation was estimated from the Institute of Traffic Engineers Manual; daily trip generation by land use has not been verified for the Florida Keys.

³ Fences and auxiliary uses, as defined in the Monroe County Land Development Regulations, are assumed to cause no additional traffic impacts; they were assumed to cause habitat loss (change in K), which has a lesser effect on the matrix model than changes in H.

Action Item 1.2.4: Use the formulas in Table 2.2 of this Plan, (Table 2.6 of the HCP) to determine the H impact of development permitted after March 15, 1995.

Strategy 1.3

Prepare a public acquisition strategy to acquire parcels with the highest H first because of their relative habitat value, to maximize mitigation potential and ensure compliance with the anticipated ITP/HCP.

Action Item 1.3.1: Prioritize the purchase of Tier I lands over Tier II and Tier III lands in order to achieve the highest possible level of H protection and to ensure compliance with the anticipated ITP mitigation requirements. Within Tier I, Florida Key deer movement corridors, as depicted in the HCP document shall be further prioritized for acquisition.

Action Item 1.3.2: Consider the following acquisition mechanisms applied within the planning area as eligible to be counted for the purpose of providing H unit equivalent mitigation:

Table 2.2 Calculation of H impact for different development activities.

Type of Parcel	Type of Development	H Calculation	Description
Undeveloped	Residential Construction (single family)	$H_{\text{impact}} = H_{\text{parcel}}$	Construction on vacant parcels incurs a new impact, both as loss of habitat and as causing secondary effects.
	Non-residential construction	$H_{\text{impact}} = H_{\text{parcel}} * \# \text{ development units} * M_{\text{land use}}$	For non-residential land uses, the total impact is a function of both the amount and type of development. The number of development units refers to the square footage of new development divided by 1,000.
	Accessory use	$H_{\text{impact}} = H_{\text{parcel}} * 0.2$	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)	$H_{\text{impact}} = (H_{\text{parcel}} * 0.2) * M_{\text{recreation}}$	Parcels will be revegetated with native vegetation, thus improving habitat value. Recreation use will increase secondary impacts.
	Expansion	$H_{\text{impact}} = H_{\text{parcel}} * (\text{sq.ft. expansion} / H_{\text{parcel}}) * M_{\text{land use}}$	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.
Developed	Redevelopment (different use)	$H_{\text{impact}} = H_{\text{parcel}} * \{ [M * (\text{sq.ft. dev./sq.ft. parcel})]_{\text{new}} - [M * (\text{sq.ft. dev./sq.ft. parcel})]_{\text{old}} \}$	The impact is the difference between the effect of the new footprint/land use and the old footprint/land use.
	Accessory use	$H_{\text{impact}} = H_{\text{parcel}} * 0.2$	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)	$H_{\text{impact}} = 0.03720 * \text{length of paving (in miles)}$	Calculation is based on the estimated H of one mile of paved road ($H = 0.0372$)
	Widening (paved roads; including U.S 1)	$H_{\text{impact}} = 0.03720 * (\text{additional width/existing width}) * \text{length (in miles)}$	

Source: Habitat Conservation Plan for Florida Key Deer

1. Outright purchases by Monroe County for conservation purpose using county funds, state funds, grants or other outside funding sources, whether or not the property is later donated to the federal government for conservation purpose or transferred/sold to the State of Florida for conservation purpose.
2. Properties purchased for the purpose of conservation by the State of Florida which do not specifically prohibit use of the funds for mitigation purposes.
3. Lots dedicated to Monroe County to achieve points for the ROGO eligibility.

Strategy 1.4

Compile the H units of parcels permitted for development as permits are issued in order to allow continuous determination of the individual and cumulative H units of developed parcels. At the same time, continuously compile the H units of conservation parcels acquired for the purpose of mitigating H units developed.

Strategy 1.5

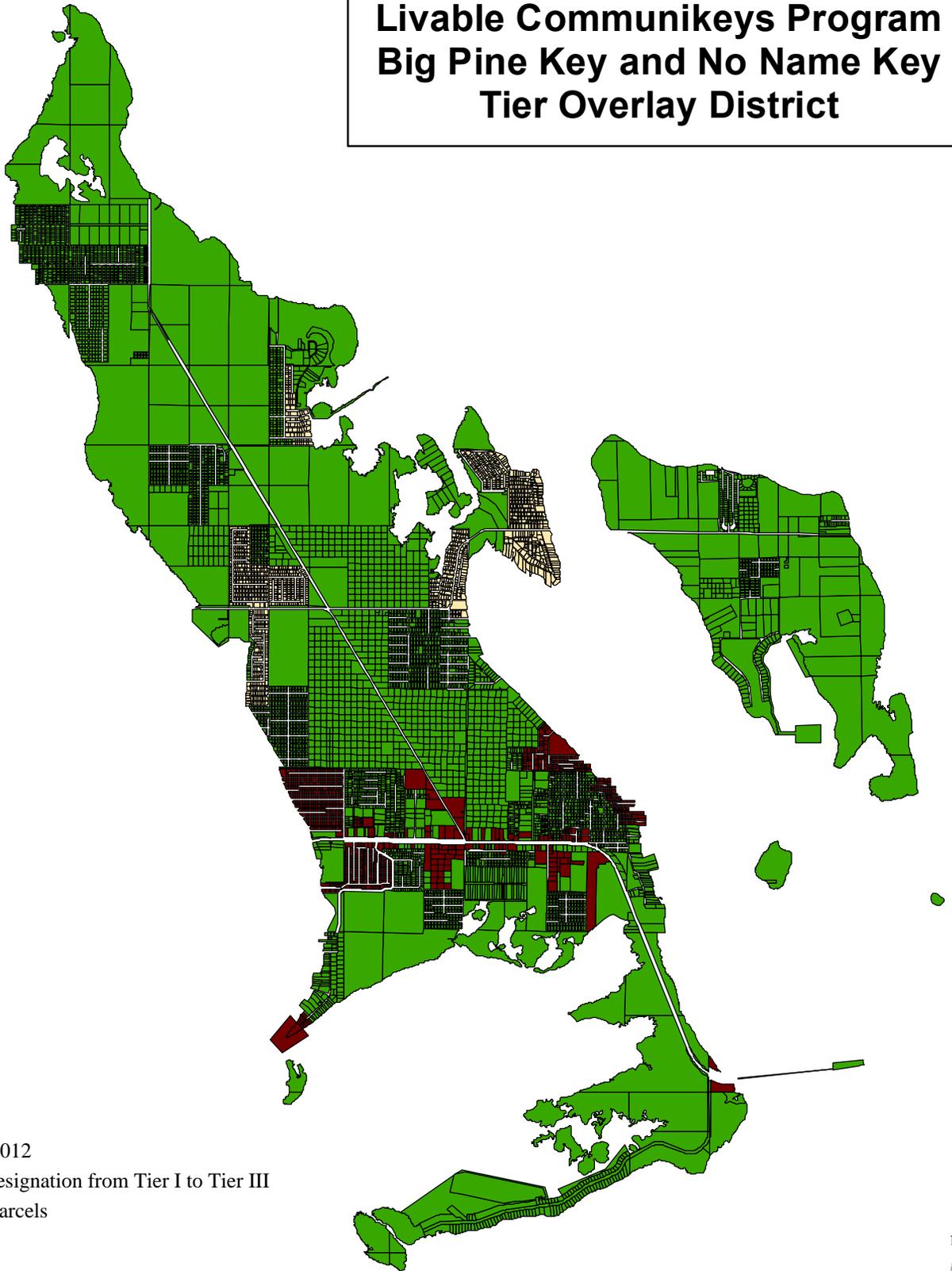
Evaluate and demonstrate compliance with the total allowable H under the ITP/HCP through annual reporting of H units developed and H units acquired.

Action Item 1.5.1: Based on the annual report, evaluate whether there continues to be a steady and available rate of H units for meeting community needs throughout the twenty-year planning horizon.

Action Item 1.5.2: Based on the annual report, evaluate whether the acquisition strategy ensures a steady and available rate of H units for mitigation (through identification of future acquisition areas) throughout the twenty-year planning horizon.

Action Item 1.5.3: Based on the annual report, evaluate whether the program ensures that H units protected through acquisition substantially mitigates H units lost through development.

Livable Communikeys Program Big Pine Key and No Name Key Tier Overlay District



Ordinance 022-2012
Amended Tier designation from Tier I to Tier III
for eleven (11) parcels

Monroe County - Tier Overlay District

Tier

- Tier I - Native Area
- Tier II - Transition and Sprawl Area
- Tier III - Infill Area



**Monroe County
Planning and Environmental
Resources Department**

This map is for Monroe County Growth Management Division purposes only. The data contained herein is illustrative and may not accurately depict boundaries, parks, roads, right of ways, or other features. These maps are to serve as a general reference and information contained herein should always be checked and confirmed by Growth Management Division staff before commencing any decisions based on this information.
Data Source: Monroe County - Growth Management - GIS

Figure 2.1 Tier designations on Big Pine Key and No Name Key. (Ordinance 020-2009, § 1)

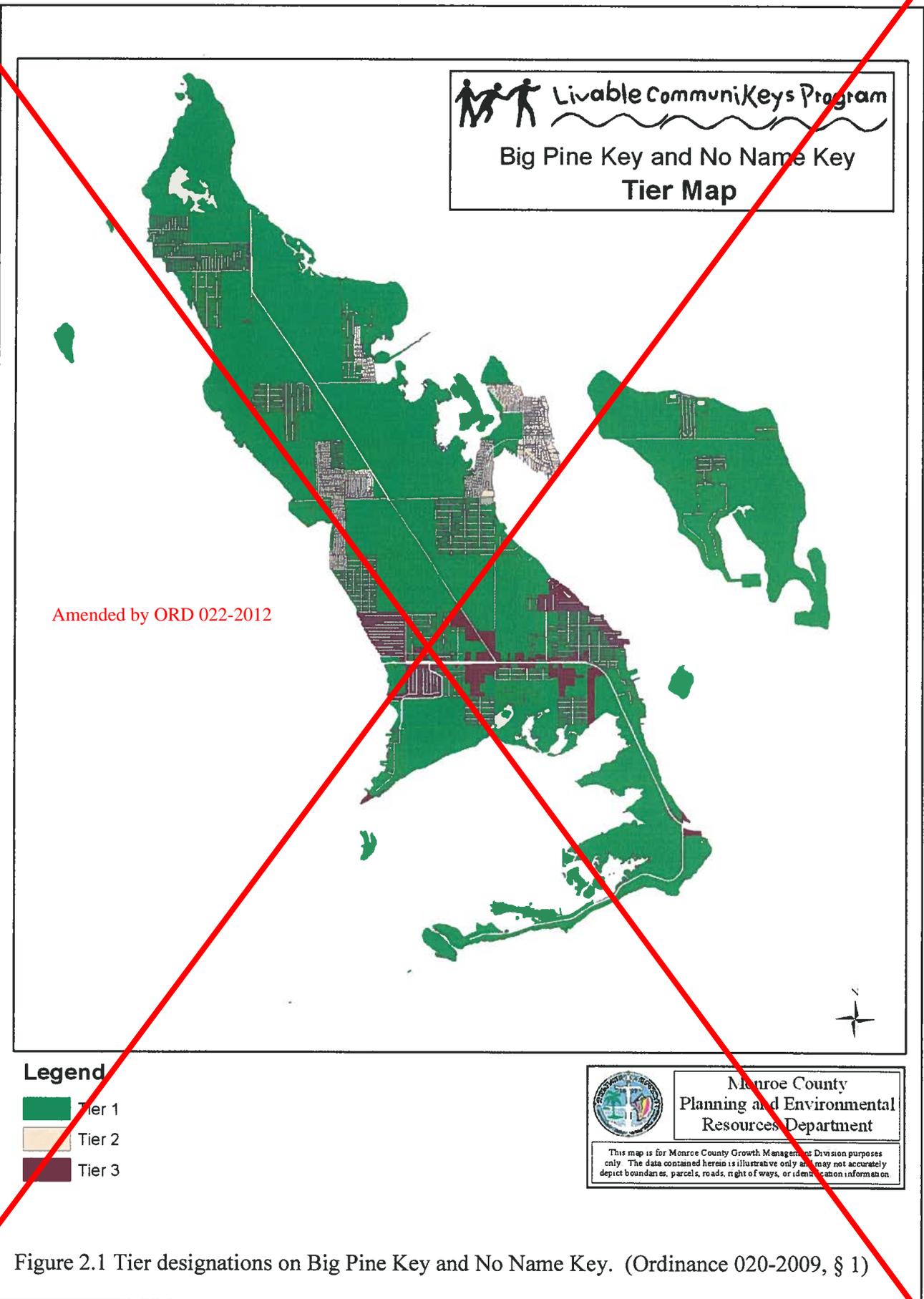


Figure 2.1 Tier designations on Big Pine Key and No Name Key. (Ordinance 020-2009, § 1)

GOAL 2

Manage future growth for the next twenty years on Big Pine Key and No Name Key consistent with the community vision, while minimizing impacts on the endangered species and maintaining the existing biodiversity .

Current Conditions Summary

The primary mechanisms for implementation of the Tier System are the permit allocation system and land acquisition. These two programs are already in place and need merely to be revised to implement the HCP and this Master Plan. Tiers I and II minimize development impact on natural resources and sparsely settled areas. Tier III encourages development in disturbed areas already heavily settled. It is envisioned that future development patterns will be accomplished through the application of minimum eligibility requirements for competing in the permit allocation system. Tier III applicants will be immediately eligible to compete whereas Tier I and Tier II applicants will be required to amass points via land preservation prior to being eligible for entry into the system. In this way, the competition aspect of the allocation system is preserved while the subjective evaluation of point awards (a growing problem since the system was first implemented) is eliminated. The land acquisition program, the second implementation mechanism of the Tier System, will be reviewed and revised to prioritize parcel acquisition according to Tier category.

As described in Goal 1, the distribution of future development within the planning area will be based directly on the H units of the land to achieve minimization and avoidance of impacts. The Tier category coverages were developed following this same format of habitat sensitivity information presented in the HCP, primarily as depicted on the Harvest Grid Map. Much of this information was available and was brought into the LCP process during development of the preferred land use alternative.

Land use alternatives developed in the LCP were organized by land use category according to the primary focus area identified by the community: residential, commercial, recreational/community facilities, and transportation. The alternatives analysis is presented in the Big Pine Key & No Name Key Development Alternatives Report. The alternatives considered most feasible (preferred) for the first three land use categories are identified in that report as:

- Residential Clustered,
- Commercial Redevelopment, and,
- New Community Facilities and Scattered Community Facilities (two alternatives were combined).

The transportation alternatives were further analyzed and preferred alternatives were later identified to be:

- Three-laning of U.S. 1 on Big Pine Key, and,
- Cross-island road for local traffic.

The basic desired rate of development was also set during the LCP process for the twenty-year planning horizon:

- 200 residential units, and,
- 47,800 square feet of additional commercial floor area (to correspond with residential).

The conceptual maps of the above alternatives (and all other alternatives considered) are contained in Appendix 5 of the Big Pine Key & No Name Key Development Alternatives Report.

The preferred alternatives were combined and refined into a single preferred land use alternative to which were added plans for expansion of institutional uses and planned public facilities. During development of the HCP this preferred alternative was further refined to form a specific land use plan for Big Pine and No Name Keys. This is the plan for which the proposed levels of take of federally-protected endangered species was determined through PVA modeling. Therefore, implementation of this specific plan will comply with the anticipated Incidental Take Permit. The plan components are as follows:

- Residential – Up to 200 new units over the next twenty years.
- Commercial – Up to 47,800 square feet of commercial floor area over the next twenty years in the U.S. 1 Corridor Area (south of Lytton’s Way) to be used for infill and expansion of existing businesses. Development is limited to Tier III disturbed and scarified uplands. Total trip generation over the twenty-year horizon is limited to the equivalent of 200 residential units.
- Major Recreational/Community Facilities – One major recreational and community center facility to be located at the county-owned “Mariner’s Resort” site in southeastern Big Pine Key; Three additional public parks to be located on disturbed uplands; Expansion of the existing public library by up to 5,000 square feet.
- Minor (Neighborhood) Recreational – Up to seven neighborhood “pocket parks” on disturbed or scarified sites in any of the following subdivisions:

Pine Channel Estates	Palm Villa	Port Pine Heights
Cahill Pines and Palms	Sands	
Doctor’s Arm	Eden Pines Colony	
- Community Organizations – Allow for expansion of existing community organizations such as religious institutions and civic clubs on scarified land already owned by them on the date of the issuance of the Incidental Take Permit.
- Public Facilities – To include the following public facilities needs anticipated over the next twenty years, all of which are to be restricted to disturbed and/or scarified areas:
 1. Sewage treatment needs outlined in the Monroe County Sanitary Wastewater Master Plan (SWMP), including facilities for collection and treatment,
 2. Stormwater treatment needs outlined in the Monroe County Stormwater Management Master Plan (SMMP) including facilities for collection and treatment,
 3. Public office space to be located in the U.S. 1 Corridor Area, and
 4. Expansion of county emergency response facilities at the current location.

- Accessory Lots and Fences – Approximately 250-300 vacant lots allowed to either be fenced or developed with accessory uses primarily on Tier II and Tier III lands.
- Roads – To include three-laning of U.S. Highway 1 only. The cross-island road was included in the PVA modeling effort as part of the total development impact. However, the road was subsequently withdrawn from consideration by the Board of County Commissioners (BOCC) based on planning issues identified through further study and public input. One-way access from the western area of Big Pine Key to the central business area (surrounding Key Deer Blvd.) may still be considered as well as improvements to other roadways as permitted in the HCP.

Analysis of Community Needs

Reconciliation of the Tier Map, Future Land Use Map (FLUM) and Land Use District Map
Land use within the planning area is already regulated pursuant to the Future Land Use Map (FLUM) of the Comprehensive Plan and the Land Use District Maps (a.k.a., zoning maps). The Master Plan horizon (most likely 2025) will now extend beyond the comprehensive plan horizon (2010) because it must correspond with the federal Incidental Take Permit (ITP). Therefore, any FLUM or Land Use District revisions required to implement the LCP or HCP should be included in this Master Plan. Revisions must still be consistent with the intent of the Comprehensive Plan. In addition to map revisions, the regulatory status and relationships of the FLUM, Land Use District Map and Tier System Map must be codified.

H-unit Budget

A total of 1.1 units of H may be developed over the twenty-year planning horizon, as long as the mitigation ratio of 3:1 mandated by the HCP is maintained. The community and planning staff have formulated a general development scenario that meets community needs and complies with the HCP. In order to ensure that the desired scenario can be followed, the plan must partition H to the various planned uses, at least in the early stages. This will ensure that reserve H units are available for each planned use when it is ready to develop, promoting an orderly development process over the twenty-year horizon. The H unit budget for each land use type will ensure the fair and reasonable partitioning of development potential towards that land use type in compliance with the spatial and temporal commitments made in the HCP and pursuant to the LCP. The H unit budget will be used as a guide and is more important near the beginning of the process. The county may consider changing the H unit budget according to changing conditions within the planning area. Changes would merely redistribute H units among uses but could not result in a change that would exceed the total number of H units allowable under the anticipated ITP and HCP.

Comprehensive Plan Consistency

Once the HCP and Master Plan for Big Pine Key are formulated and completed, inconsistencies with existing Comprehensive Plan policies must be addressed. For every policy in the Comprehensive Plan that specifically addresses Big Pine and No Name Keys the Master Plan will in some way address that policy issue. The Comprehensive Plan policies will be individually evaluated to determine whether or not they are affected by the Master Plan, and if they will be replaced or modified.

Recommended Strategies and Actions

Strategy 2.1

Continue to utilize the Land Use District Maps and supporting FLUM to regulate land use type, density and intensity on an individual parcel basis within the planning area. The distribution of future development shall be guided by a Tier System Overlay Map pursuant to the Comprehensive Plan Smart Growth Initiatives (Goal 105).

Action Item 2.1.1: Continue to recognize the FLUM categories and land use districts as the regulatory tool used for evaluating individual development proposals for compliance with land development standards such as type of use, intensity of use, and open space. This will promote orderly and safe development that is consistent with the Comprehensive Plan and will protect the integrity and conformance status of existing development.

Action Item 2.1.2: Adopt the Tier System Map separate from but as an overlay of the Land Use District Maps. The Tier System Overlay Map shall be used primarily to guide the distribution of development through the application of the residential rate of growth ordinance (ROGO) and the non-residential rate of growth ordinance (NROGO) pursuant to the strategies set forth in this Master Plan.

Action Item 2.1.3: Adopt the following parcel-specific revisions to the FLUM and Land Use District Map. These revisions are either required actions pursuant to the Comprehensive Plan or needed to facilitate the implementation of this Master Plan (see Figure 2.2):

1. Revise the Land Use District Map to remove the Area of Critical County Concern (ACCC) land use district designation from all parcels within the planning area and replace the designation with the applicable underlying FLUM category and land use district for each parcel in the planning area. Delete Policy 103.1.2 requiring this change from the Comprehensive Plan.

2. Change the designation of acreage identified as real estate parcel numbers:

00110460.000000; 00110540.000000; 00110640.000000;
00110720.000000; 00110720.000100; 00110730.000000;
00110740.000000; 00110750.000000; 00111020.000000;
00111020.000010; 00111020.000020; 00111020.000030; and

00111020.000040 on Big Pine Key from Mixed Use/Commercial (MC) to Residential Low (RL) on the FLUM and from Destination Resort (DR) to Suburban Residential (SR) on the land use district map. This proposed change will reduce the intensity of the existing land use district and bring it into conformity with the current use and surrounding community. Additionally it will protect existing sensitive habitat.

3. Change the designation of Lots 21 and 22, Tropic Island Ranchettes from Residential Conservation (RC) to Mixed Use/Commercial (MC) on the FLUM and from Native Area (NA) to Suburban Commercial (SC) on the land use district map. This change was a request by the property owner in order to recognize a commercial use existing before 1986 and to allow for minor expansion of the use.

4. Change the designation of acreage identified as real estate parcel numbers 00111470.000000 and 00111470.000100 from Suburban Residential (SR) to Suburban Commercial (SC) on the land use district map. Leave the existing FLUM designation of Institutional (INS) unchanged. This change was a request by the property owner in order to allow for expansion of existing community and institutional facilities.

Action Item 2.1.4: Create a new land use district category, Light Industrial (LI), for the purpose of providing a more appropriate definition and accommodation of existing light industrial uses on Big Pine Key. The LI category may be considered for parcels within the Mixed Use/Commercial (MC) FLUM category that do not border on U.S. Highway 1 and are currently occupied by light industrial uses such as, but not limited to construction material and lumber yards, outdoor and/or enclosed storage, warehouses and distribution centers, auto and marine services.

Action Item 2.1.5: Once Master Plan FLUM changes are adopted pursuant to Goal 2, Strategy 2.1, Action Item 2.1.3, consider any future changes to the FLUM to be inconsistent with the intent of the adopted Master Plan and the intent of the HCP, except that changes to the Conservation designation may be considered consistent with both plans.

Strategy 2.2

Limit the total impact over 20 years to not exceed H units of 1.1.

Action Item 2.2.1: Create an H unit budget for the general land use types and amounts established through the LCP preferred alternative process and refined through development of the HCP.

Action Item 2.2.2: Use the following “H unit budget” table (Table 2.3), based on the final preferred development scenario modeled in the HCP, as a guideline for the approximate amount of H that should be anticipated for planned development over the twenty-year horizon.

Action Item 2.2.3: Include discussion of the H unit budget in the annual review of HCP compliance and change the budget as needed to meet community needs within HCP limits upon approval by the Board of County Commissioners.

Table 2.3. H unit budget for future development on Big Pine Key and No Name Key.			
Land Use Scenario Modeled in the HCP For Endangered Species Impacts	Unit	Proposed Units	Percentage H Estimated
Residential	Single Family House	200	23%
Residential Accessory Lots (no additional traffic impact)	Developed SFR Lot	250	5%
Commercial (new and expansion)	1,000 Square Feet	47.8	39%
Community Organizations (new and expansion)	1,000 Square Feet	10	2%
Community Park Facility	Parcel	1	6%
Library Expansion	1,000 Square Feet	5	1%
Public Offices (new and expansion)	1,000 Square Feet	10	1%
Emergency Facility Expansion	1,000 Square Feet	7	1%
US 1 Three-Laning	Mile	.25	1%
Existing Roadway Paving	Mile	5	16%
Remaining public uses (minor parks, stormwater etc.)	N/A	N/A	5%
Total			100%
Note: The percentage of H estimated is a generalized H unit value based on parcel averages and is for estimation purposes only			
Source: Habitat Conservation Plan for Florida Key Deer			

Strategy 2.3

Revise the Future Land Use Element policies of the Comprehensive Plan regulating the Big Pine Key and No Name Key Area of Critical County Concern.

Action Item 2.3.1: Revise Objective 103.1 of the Comprehensive Plan to add the Master Plan and the Habitat Conservation Plan as guiding documents with which future land development regulation on Big Pine Key and No Name Key must be consistent.

Action Item 2.3.2: Delete the following policies under Objective 103.1 of the Comprehensive Plan: 103.1.1 and 103.1.2; 103.1.7 through 103.1.12; 103.1.14 and 103.1.15. These policies are specifically addressed in this Master Plan.

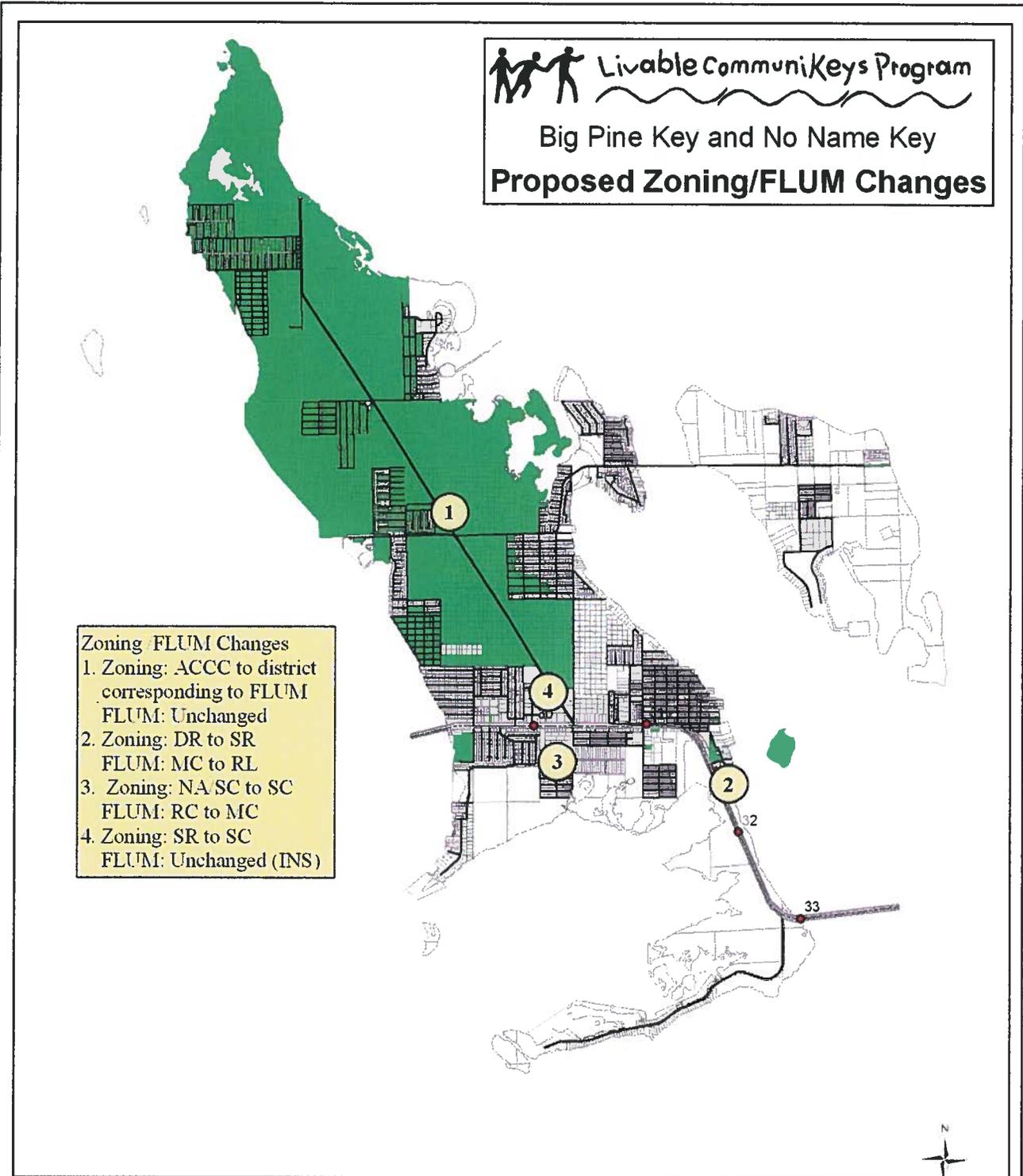


Figure 2.2 FLUM and Land Use District changes listed in Strategy 2.1, Action Item 2.1.3. (Ordinance 020-2009, § 1)

GOAL 3

Maintain housing opportunities for all segments of the population while limiting the total number of new housing units to preserve the rural character of the planning area and minimize impacts on the critical habitat areas.

Current Conditions Summary

As described earlier, the LCP process envisions issuance of 200 residential dwelling units over the twenty-year planning horizon. The first 30 of those 200 permits will be issued to applicants who had already received an allocation but could not be issued a permit due to the traffic concurrency moratorium. These applicants were awarded regulatory relief through beneficial use or administrative relief after waiting for at least five years. All but two of the permits will be issued for single family lots within Tier III. The two remaining lots are in Tier I.

The 170 additional permits to be issued over the next twenty years will be located primarily on privately owned vacant upland lots zoned for residential use. There are a total of 1,539 private vacant upland residential lots located in improved subdivisions. Of these, 756 (49%) are in Tiers II and III. This illustrates the fact that there is sufficient area and in fact a large surplus of lots available to accommodate planned development.

Most residential development within the planning area takes place in single family residential subdivisions at the rate of one house per lot. Table 2.4 shows the characteristics of existing housing outside of single family subdivisions.

Type	Number	Status
Mobile homes/RVs (not including RV spaces)	518	Permanent or seasonal
Multi-family/duplex	121	Permanent
Attached employee unit	93	Permanent
Institutional (shelters, etc.)	61	Transient

Source: U.S. Census 2000

Table 2.5 below summarizes the status of current housing on Big Pine Key and No Name Key. The average size for households on Big Pine Key is 2.21 persons and for No Name Key is 2.48 persons.

Table 2.5 Housing figures for Big Pine and No Name Keys from the 2000 census.

	Vacant for rent	Vacant for sale	Vacant Seasonal	Vacant Other	Owner Occupied	Renter Occupied	Totals
Big Pine Units	36	45	727	98	1,723	524	3,153
Household Pop					3,749	1,222	4,971*
No Name Units	0	3	18	1	20	1	43
Household Pop					36	4	40

* The total population is 5,032 which includes 61 persons in correctional or other institutional living quarters.
Source: U.S. Census 2000

These data show that at least 23% of existing housing units are reserved for seasonal or recreational use. Another 17% are renter occupied while 55% are owner occupied. About 3% of total units were available for sale or rent at the time of the census.

The 2000 Census reports that the per capita income on Big Pine was \$23,169. The per capita income of Monroe County was \$26,102. Within the County a reported 7,977 individuals had an income that placed them below the poverty level, roughly 10.2%. On Big Pine the ratio remains similar: 472 individuals below the poverty level (roughly 9.5%).

ROGO on Big Pine Key and No Name Key

Being competitive in the current ROGO system on Big Pine and No Name is extremely difficult. Even if an applicant proposes to building in an improved subdivision on a scarified lot (gaining 10 points for infill and 1 point for a disturbed habitat) they are assessed -10 for being on Big Pine or No Name. An additional 10 points are subtracted if the lot is within the proposed CARL boundaries which consist of approximately 80% of Big Pine and 100% of No Name. Ten more points are subtracted if the lot is located with a Priority I or II acquisition area of the National Key Deer Refuge, which overlaps with much of the CARL boundaries on and covers 100% of No Name. In order to protect threatened or endangered species, 10 points for each species are subtracted if the applicant proposes to build in the known habitat.

The known habitat of the Key deer covers both of the islands so a minimum of -10 points will affect the applicant. Another ten points will be subtracted from any application to No Name Key because it is a unit of the Coastal Barrier Resources System (CBRS). Therefore, just for being located on Big Pine and No Name an applicant would typically be subject to as little as -20 and as much as -80 points in ROGO.

The proposed ROGO system described in this Master Plan simplifies the process. Competition will only be between Big Pine and No Name applicants and the points system will be based predominantly on the Tier designations set forth in the HCP. Additional negative points will discourage development in designated Key deer corridors, close to marsh rabbit habitat, and on No Name Key. To enter the proposed system, a threshold of '0' must be reached and the most negative points which would be imposed would be -40 (for No Name Key within range of marsh rabbit habitat).

Housing Affordability

Retention of existing affordable housing is one of the most difficult issues to address in an area such as the Florida Keys where market pressure can be heavily slanted towards market rate housing as development slows. This is a particularly heightened issue within the planning area because Big Pine Key has traditionally been perceived as a “bedroom-community” for workers employed in the cities of Key West and Marathon. As existing dwelling units become more valuable due to growth restrictions, redevelopment of units which may now be affordable into market-rate units becomes more attractive to many owners. This pressure is too great to overcome with the use of incentive-based programs so the normal means of retaining affordable housing is to require new affordable units to remain affordable for a specified period of time. County regulations now require a period of fifty years for new affordable units to remain affordable.

Certain land use districts have been traditionally more accommodating to affordable types of housing including commercial districts (as employee housing), mobile home, and duplex or multi-family districts.

Analysis of Community Needs

Define Residential Development

There is a need to clearly define the types and locations of residential development to be permitted. Most residential development will take place in subdivisions but further clarification is needed to address housing in other Tier II and III areas (e.g., commercial and mixed use) and to firmly establish future zoning guidelines for these areas.

Revise ROGO

The dwelling unit allocation system (ROGO) will need to be revised to implement the Tier System Overlay Map and to be consistent with the Master Plan and HCP. The Tier system incorporates most of the factors used in the existing ROGO to assign negative and positive points. By using habitat value, species protection and location as the basis of Tier designation a simplified allocation system can be developed. The revised system should be based on encouraging development to occur in infill areas, Tier III, and discouraging development, using weighting categories, in Tiers I and II. The system should also include additional major negatives for any development proposed in the Key deer corridor or on No Name Key and within the 500 meter buffers of Lower Keys Marsh Rabbit habitat (occupied or unoccupied).

Existing Affordable Housing Stock Inventory

The existing information on affordable housing within the planning area needs to be compiled including the types, locations, conditions, and projected longevity.

Affordable Housing Retention and Expansion

As the pool of housing becomes more limited, the incentive to redevelop existing affordable units into market-rate units may increase. There is a need to determine current and future trends and to take steps to ensure that affordable housing is retained or replaced and, if possible, expanded.

Recommended Strategies and Actions

Strategy 3.1

Control the overall level of residential development for the next twenty years consistent with the community vision and the growth plan developed through the Livable CommuniKeys planning process. Future development shall also be consistent with the incidental take permit and the accompanying Habitat Conservation Plan for the Florida Key Deer and Other Protected Species.

Action Item 3.1.1: Limit the total allocations for new residential units over the next 20 years to 200 units.

Action Item 3.1.2: Do not consider the replacement of existing, legally established residential units as of the date this plan as new development nor shall on-site replacement be considered to have any H impact.

Action Item 3.1.3: Permit residential units at a steady rate over the twenty-year planning horizon and encourage the distribution of units to designated infill areas. The Rate of Growth Ordinance (ROGO) and Tier Map Overlays shall be the mechanisms used to implement distribution patterns to minimize impact on the resource and rate of growth allocations.

Action Item 3.1.4: Allow residential units of any type listed in the applicable FLUM categories and land use districts with the exception that new transient residential units shall be prohibited.

Action Item 3.1.5: Prohibit transfer of development rights (TDRs) from islands outside of the planning area to within the planning area pursuant to Policy 101.13.4. Additionally, TDRs and transferable ROGO exemptions (TREs) within the planning area shall not be transferred from a higher (infill) tier category to a lower (conservation-open space) tier category, except as provided for in Action Item 3.1.5. Transfers to and from the same tier category are permitted except in Tier I.

Strategy 3.2

Revise the Comprehensive Plan policies regulating the rate and allocation of residential growth to adjust for allocation according to the Tier System for Big Pine Key and No Name Key.

Action Item 3.2.1: Amend the current ROGO to base eligibility to compete in the allocation system upon the location of the proposed development with respect to the Tier System Overlay Map. Remove any direct references to the planning area from Sec. 9.5.122.3

Action Item 3.2.2: The ROGO for Big Pine Key and No Name Key shall be implemented through the Monroe County Comprehensive Plan and the Monroe County Code, reflecting the requirements of the Habitat Conservation Plan (HCP) and Incidental Take Permit (ITP). (Ordinance 020-2009 § 1)

Action Item 3.2.3: Count as part of the 200-unit cap, the 4 residential units that have been awarded allocations for administrative relief. The 200 dwelling units are tracked from June

9, 2003, the beginning of the 20-year period in the Incidental Take Permit. (Ordinance 020-2009 § 1)

Action Item 3.2.4: Allocate residential units within the planning area at the rate of no greater than 10 in any given year. More than 10 residential awards may be allocated if the excess consists of affordable units, that may be accumulated and issued in any allocation period or “borrowed forward” from future allocations. The allocation rate in this policy replaces that in Policy 103.1.1 of the Comprehensive Plan, which shall be deleted from the plan.

Action Item 3.2.5: Reserve the 10 unit per year allocation rate provided in Strategy 3.2, Action Item 3.2.4 (above) separately out of the Lower Keys annual allocation for the exclusive use of the Big Pine Key and No Name Key planning area for at least the first five years of the twenty-year planning horizon. This will provide for housing opportunities within the planning area that were not available during the temporary deferral of awards preceding adoption of this plan. At the end of five years, the need for and effect of a reserve allocation shall be reevaluated and the reserve either abolished or continued. However the planning area shall continue to bear its fair share of the minimum 20% affordable housing set-aside (i.e. 2 units per year) as part of the annual 10-unit allocation pursuant to ROGO requirements.

Action Item 3.2.6: Limit allocation awards in Tier I to no more than five percent of all residential units permitted over the twenty year planning period (i.e. a maximum of 10 units) or a total of $H = 0.022$ (two percent of the total H), whichever results in the lower H. Development in Tier 1 is tracked from December 27, 2004, the effective date of the Livable CommuniKeys Plan, which established the Tier System for Big Pine Key and No Name Key. (Ordinance 020-2009 § 1)

Action Item 3.2.7: Land acquisition for mitigation and the total impact of commercial, institutional and residential development (H impact = 1.1) is tracked from March 13 1995. U.S. Fish and Wildlife Service has allowed the County to record the H value for all development and land acquisition (mitigation) from March 13, 1995. (Ordinance 020-2009 § 1)

Strategy 3.3

Retain and expand availability of affordable housing within the planning area to the greatest extent possible.

Action Item 3.3.1: Identify the locations and characteristics of the existing pool of affordable housing in the planning area. These areas shall be targeted for the formulation and implementation of retention and expansion mechanisms.

Action Item 3.3.2: Consider an incentive program for existing mobile home parks and other existing or potential affordable housing in the planning area to provide for retention of affordable status.

Action Item 3.3.3: Set aside a minimum of 20% (i.e., 2 per year) of dedicated ROGO units for affordable housing development within the planning area. This number may be adjusted during the annual BOCC review of the HCP status report.

Action Item 3.3.4: Consider provision of incentives for businesses to build affordable housing, including employee housing, in conjunction with their businesses on U.S. 1.

GOAL 4

Provide opportunities for redevelopment and expansion of existing businesses and limited new non-residential uses within the U.S. 1 Corridor on sacrificed lands.

Current Conditions Summary

The LCP process envisioned a redevelopment focus for the commercial uses within the planning area, primarily those near U.S. Highway 1 on Big Pine Key. The allocation of 47,800 s.f. of new commercial floor area represents the maximum, that may be needed to serve the additional 200 residential units (at the rate of 239 square feet per unit per year established by the Non-residential Rate of Growth Ordinance). Therefore, much of the new floor area is to be used for redevelopment and expansion of existing businesses.

The only commercial business (outside possible home-based businesses) located on No Name Key is an operating borrow pit. That site is used for materials extraction only and is not open to the public. Therefore the focus of discussion for non-residential development issues is Big Pine Key. Table 2.6 lists some characteristics of existing businesses on Big Pine Key.

Table 2.6 Big Pine Key commercial data.		
Commercial Type	Number	Floor Area
Retail	27	214,820
Restaurant	6	19,952
Financial	3	6,431
Office	10	40,392
Industrial	15	75,313
Indoor or Outdoor Storage	8	30,280
Auto or Marine Service	6	13,916
Service	21	89,200
Total	96	490,304

Source: Monroe County Planning and Environmental Resources Department

Most businesses are located near U.S. Highway 1 in the central business area of Big Pine Key. This area was identified as the U.S. 1 Corridor Area for purposes of analysis during the LCP process. All of the businesses in Tier III are located in the U.S. 1 Corridor Area. It also appears at this time that the 47,800 square foot limit on commercial envisioned in the LCP process may be more than adequate to accommodate future expansions. Further analysis of existing commercial uses will help to identify where future commercial expansion is likely to take place and whether the 47,800 square foot limit is likely to be needed within the twenty-year planning horizon.

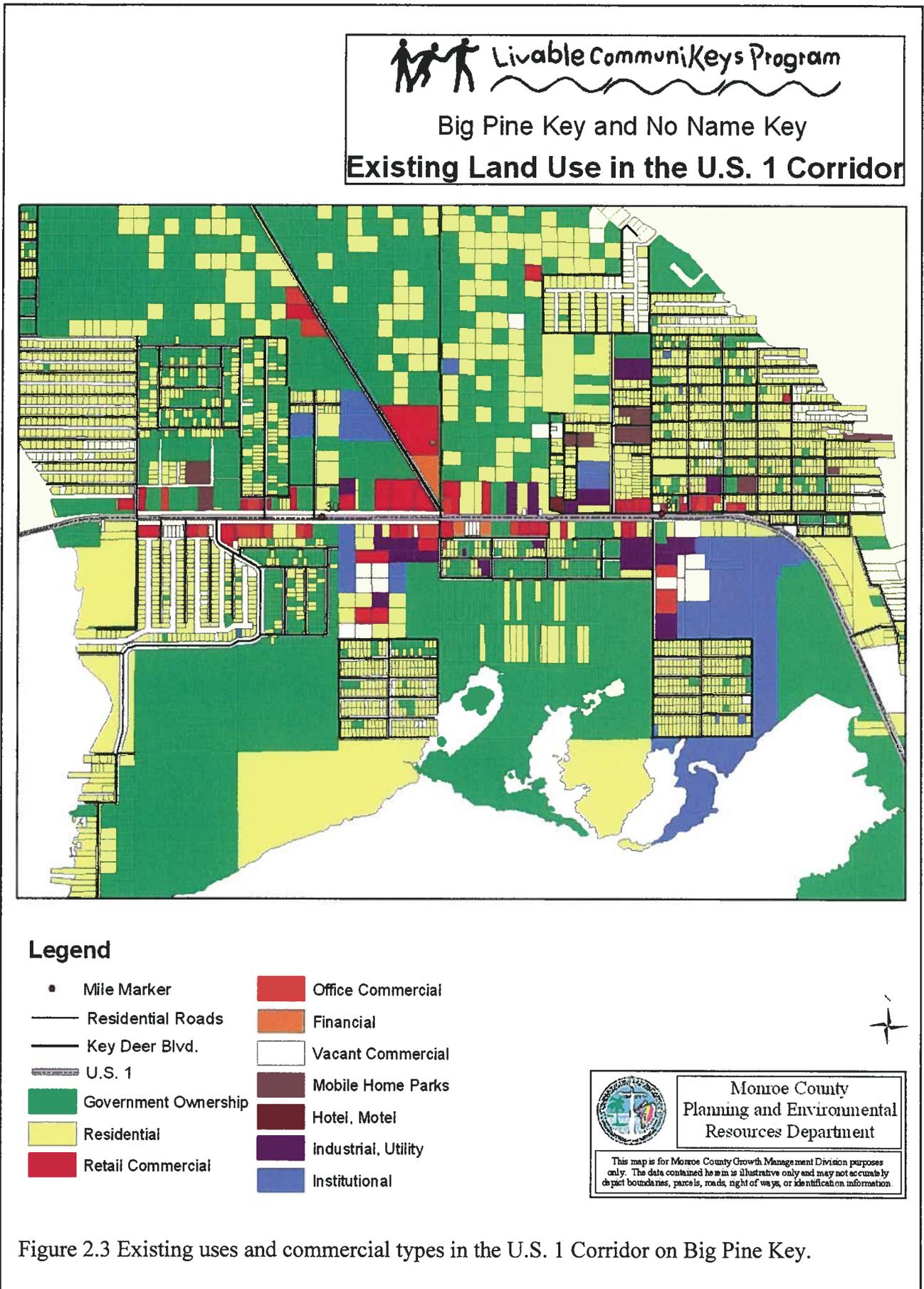


Figure 2.3 Existing uses and commercial types in the U.S. 1 Corridor on Big Pine Key.

Industrial uses are scattered throughout the U.S. 1 corridor area, however most do not directly front U.S. 1 but are located off of side streets. Many industrial uses operate 'in the open', that is to say they are not located entirely within a building structure. Concrete plants, marine repair shops, and auto yards typically only have a small building but much of the site is utilized for work and storage. Industrial uses are not currently subject to NROGO, therefore additional floor area for manufacturing, assembly, wholesaling, or distribution no allocation is necessary.

In January 2003 Monroe County proceeded with a design charrette planning process for the commercial corridor area of Big Pine Key. The charrette was a facilitated community discussion during which design concepts were developed and graphically assembled at the meeting for immediate reaction. The focus of the discussion was the U.S. 1 Corridor Area and the idea of a community center was presented as a layered concept based primarily on walking distance to the existing commercial center of Big Pine Key.

Analysis of Community Needs

Define Commercial Development

There is a need to clearly define the types and locations of commercial development permitted. The proposed development plan includes redevelopment and infill of existing commercial uses in the U.S. 1 Corridor Area. The Tier Map shows Tier I and Tier III lands within the U.S. 1 Corridor Area. The HCP requirements place some limitations, especially on the intensities of uses that can be permitted if the maximum floor area (47,800 square feet) is to be accommodated. Further guidance on commercial redevelopment is found in the Smart Growth Initiatives (Policy 105.2.15) that call for the creation of Community Center Overlay districts where commercial redevelopment and infill may be encouraged.

During the LCP process the Community Center idea was expressed as the "Main Street" development alternative. While this alternative was not ultimately selected as the preferred development alternative it did convey an existing centralized business focus surrounding the Key Deer Boulevard/U.S. 1 intersection having potential for enhancement. The U.S. 1 Corridor Area Design Charrette held in January 2003 with the community also identified this intersection as a focus for future commercial development.

Revise NROGO

Some portions of NROGO are to be automatically updated as Master Plans for individual communities are completed. NROGO for Big Pine Key will need to be revised accordingly and will also need to be revised for compliance with the development limits set forth by the Master Plan and ITP. In addition, NROGO needs to be updated to implement the Tier System.

Although certain types of industrial floor area are not subject to NROGO, the HCP requires all increases in floor area to be considered development and must be accounted for in the total 1.1 H allowed over the 20-year horizon. Therefore, the H impact for new industrial floor area shall be calculated and subtracted from the total H allowed for commercial development.

Recommended Strategies and Actions

Strategy 4.1

Plan the overall level of non-residential development for the next twenty years to be consistent with the community vision and development plan selected through the Livable CommuniKeys planning process. It shall also be consistent with the incidental take permit and the accompanying Habitat Conservation Plan for the Florida Key Deer and Other Protected Species.

Action Item 4.1.1: Limit the total amount of new commercial floor area that may be permitted to 47,800 square feet over the twenty-year planning horizon. This amount may be revised at a later time based on data indicating a change is warranted.

Action Item 4.1.2: Designate the U.S. 1 Corridor Area as the area defined in the Big Pine/US 1 Corridor enhancement plan, incorporated herein by reference.

Action Item 4.1.3: Direct non-residential development and redevelopment to infill in existing non-residential areas on Tier II and Tier III lands, mainly in the U.S. 1 Corridor Area. New commercial development will be limited to disturbed or scarified land – no clearing of pine-lands and/or hammock will be permitted.

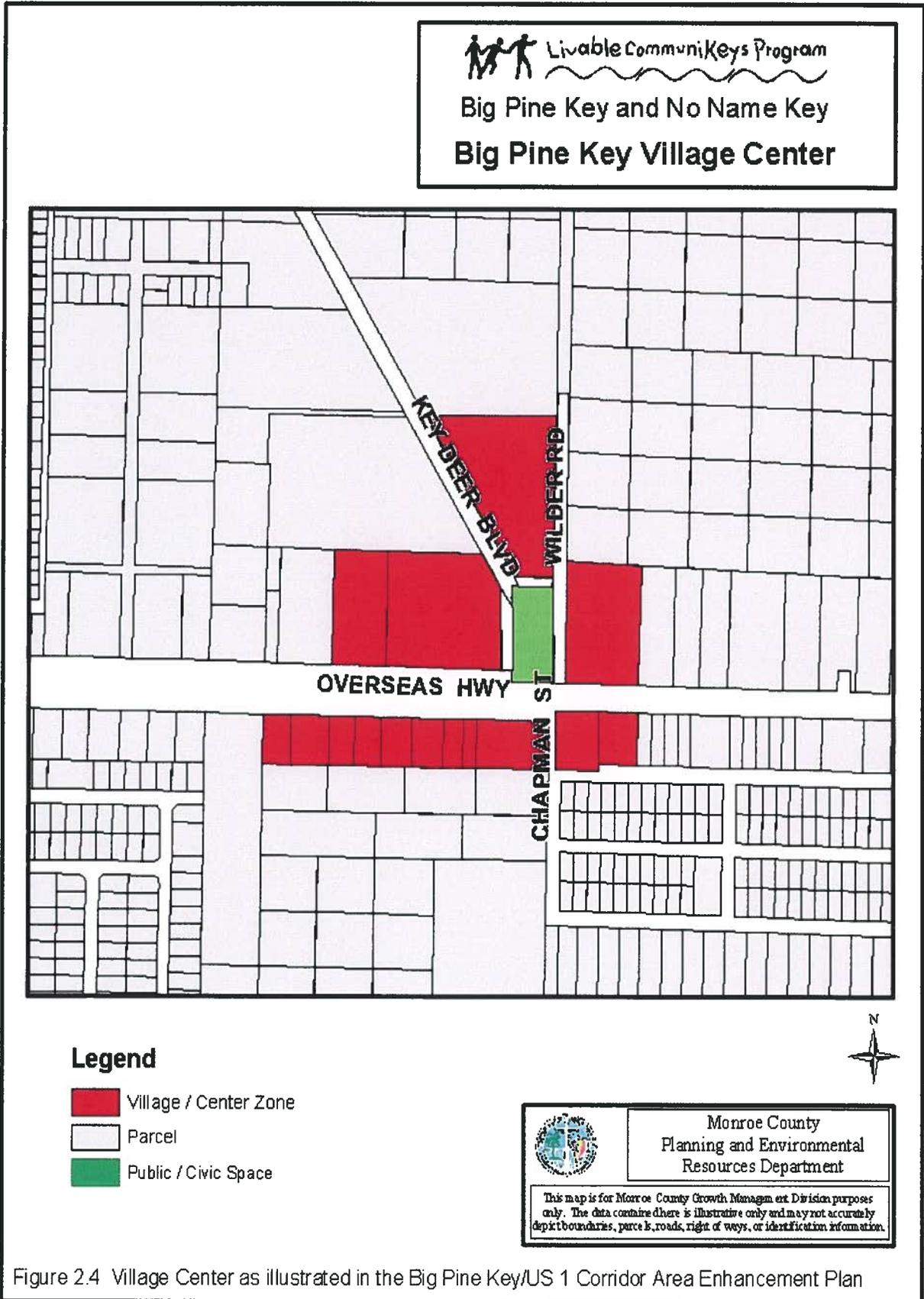
Action Item 4.1.4: Prohibit new non-residential development in Tier I. Redevelopment and expansion of existing institutional uses in Tier I is allowed, but is restricted to disturbed or scarified land.

Action Item 4.1.5: Create a Community Center Overlay on Big Pine Key pursuant to Policy 105.2.15 of the Comprehensive Plan where Tier III infill and incentives for redevelopment will be encouraged. The Community Center Overlay shall be located at the intersection of U.S. 1 and Key Deer Boulevard, Wilder Road and Chapman Street; and be limited to the geographical area designated in figure 2.4. Land Development Regulations for design of the Community Center Overlay shall be as follows:

- a. Small individual buildings, of 2,500 square feet or less, fronting both U.S. 1 and Key Deer Boulevard will be encouraged, with commercial uses on the lower floor and employee housing on the upper floor.
- b. The FAR in the Overlay District may be increased to .40 to foster a coherent more dense streetscape.
- c. Parking lots in front of the commercial uses are discouraged, although on street parking may occur where appropriate
- d. Building front setbacks are reduced with the majority of the building façade on the required building line.
- e. Arcades, colonnades, open porches, canopies, awnings, balconies may be permitted to encroach on the frontage.

Action Item 4.1.6: Prohibit the following new uses or change in use:

- a. Commercial retail high intensity uses that generate more than one hundred and fifty (150) trips per one thousand square feet of floor area.
- b. Outdoor storage as a principal use.
- c. Outdoor retail sales as a principal use.



Action Item 4.1.7: Limit new commercial uses to medium and low intensity uses with corresponding limitations on trip generation. This restriction replaces those in Policy 103.1.1 of the Comprehensive Plan. Policy 103.1.1 shall be deleted from the plan.

Action Item 4.1.8: Create a new land use district category called Light Industrial (LI) for the purpose of more appropriate definition and accommodation of existing light industrial uses on Big Pine Key. The LI category may be considered for parcels within the Mixed Use/Commercial (MC) FLUM category that do not border on U.S. Highway 1 and are currently occupied by light industrial uses such as, but not limited to construction material and lumber yards, outdoor and/or enclosed storage, warehouses and distribution centers, auto and marine services.

Action Item 4.1.9: Prohibit new light industrial uses in the Suburban Commercial land use district fronting on U.S. 1.

Action Item 4.1.10: Count H impact for new industrial square footage, even if exempt from NROGO, as part of the total 1.1 H available for development activities over the 20-year planning horizon. The H used for industrial development shall be counted as a part of the H to be used for commercial development.

Strategy 4.2

Revise the comprehensive plan policies regulating the rate and allocation of non-residential growth to adjust for allocation according to the Tier System.

Action Item 4.2.1: Revise the non-residential rate of growth ordinance (NROGO) to base eligibility to compete in the system upon the location of the proposed development with respect to the Tier System Overlay Map and make the following changes to the NROGO point system:

- a. Revise Criterion 6 to delete Big Pine Key and No Name Key from the critical habitat list.
- b. Revise Criterion 1 to encourage, by awarding positive points, both infill development and the redevelopment of existing commercial properties in Tier III to bring them into closer conformance with the current comprehensive plan and land development regulations. This point criterion shall not apply to the redevelopment of historic resources.
- c. Add an evaluation criterion, that encourages, by awarding positive points, the location of new commercial floor area within the U.S. 1 Corridor Area and within the Community Center Overlay area.

Action Item 4.2.2: Allow new commercial square footage allocation awards to exceed 2,500 square feet per site within the designated Community Center Overlay provided they follow adopted design guidelines (see Community Character Element).

Action Item 4.2.3: Prohibit the transfer of commercial floor area from outside the planning area pursuant to NROGO. Transfer of commercial floor area from one site to another entirely within the planning area may be allowed provided the receiver site is located within the designated Community Center.

GOAL 5

Maintain the viability of existing community organizations by providing opportunities for limited redevelopment and expansion.

Current Conditions Summary

The LCP/HCP process sought to ensure that existing community organizations could remain viable and expand according to their needs within existing zoning limitations. Table 2.7 lists these organizations.

Table 2.7 Institutional uses located on Big Pine Key.

Civic	Parcel	Zoning	Tier
Lion's Club	108770	NA	1
Lower Keys Property Owners	309070	IS	2
Moose Club	111070	SR	1
Religious			
St. Francis	110040	NA	1
Lord of the Seas	111074.068	NA	1
Big Pine Baptist	111470	SR	3
Big Pine Methodist	111450	SR	3
Vineyard Christian	111170	SR	1
St. Peter's	110400	SC	3
Other			
Memorial Gardens Cemetery	110830.0001	I	3
Big Pine Neighborhood Charter School	111420.0023	SC	3
Seacamp	247000 ±	MU	1-3

Source: Monroe County Planning and Environmental Resources Department

*00112030-000000, 00246950-000000, 00246960-000000, 00246970-000000, 00246980-000000, 00246990-000000, 00247000-000000, 00247140-000000, 00247150-000000, 00247160-000000, 00247170-000000, and 00247180-000000

All of these institutional uses have been existing for at least 20 years and no new uses are anticipated at present. A number of these institutions have expressed an interest in redevelopment of existing square footage or a limited expansion to better serve the needs of the present population.

Analysis of Community Needs

Plan for Future Community Organization Needs

The existing community organizations in the planning area have been identified. Some have built their current land ownership to capacity while others have expressed a desire to expand. The permitted action under the HCP will allow for a limited amount of expansion needs. For the remaining facilities there is a need to define the future potential for expansion and maintain flexibility so that future requests can be handled.

GOAL 5

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St. Peter's	110400	SC	3
Other			
Memorial Gardens Cemetery	110830.0001	I	3
Big Pine Neighborhood Charter School	111420.0023	SC	3
Seacamp	247000	MU	1

Source: Monroe County Planning and Environmental Resources Department

All of these institutional uses have been existing for at least 20 years and no new uses are anticipated at present. A number of these institutions have expressed an interest in redevelopment of existing square footage or a limited expansion to better serve the needs of the present population.

Analysis of Community Needs

Plan for Future Community Organization Needs

The existing community organizations in the planning area have been identified. Some have built their current land ownership to capacity while others have expressed a desire to expand. The permitted action under the HCP will allow for a limited amount of expansion needs. For the remaining facilities there is a need to define the future potential for expansion and maintain flexibility so that future requests can be handled.

Recommended Strategies and Actions

Strategy 5.1

Allow the limited expansion of existing community religious, civic and institutional organizations over the next twenty years consistent with the community vision and development plan and with the incidental take permit and the accompanying Habitat Conservation Plan for the Florida Key Deer and Other Protected Species.

Action Item 5.1.1: Expansion of non-public institutional floor area and uses is allowed in all Tier designations within the planning area, but only on lands currently owned by the organizations on the date of the issuance of the Incidental Take Permit, to ensure avoidance and minimization of impacts to the Key deer and other covered species.

Action Item 5.1.2: Limit floor area allocations to 2,500 square feet per organization, per year.

Action Item 5.1.3: Monitor the total amount of new floor area allocated towards expansion of existing non-public institutional uses as specific proposals are received. At the point where new floor area is expected to exceed the H units budgeted, consider allocation of H from commercial or public facilities categories to fulfill community organization needs for both existing expansions and new uses. Include this as a discussion item during presentation of the annual report and obtain Board of County Commissioners' approval prior to revising the H budget.

Action Item 5.1.4: Allow allocation and permit issuance for non-public institutional floor area at any time during the twenty-year planning horizon.

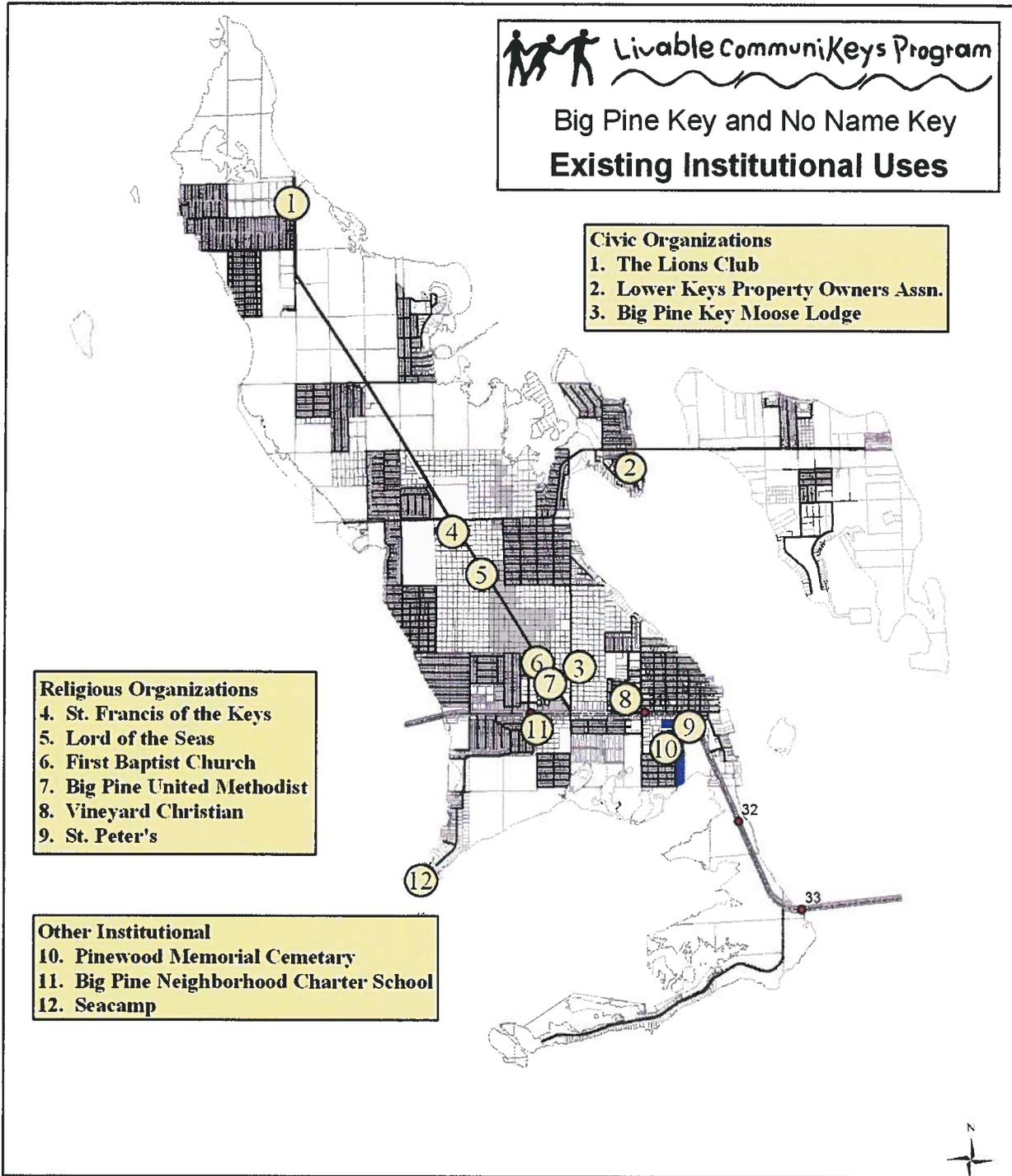


Figure 2.5 Location of existing institutional uses on Big Pine Key. (Ordinance 020-2009, § 1)

GOAL 6

Provide facilities for the active and passive recreational needs of all age groups in the community while avoiding unnecessary impacts to the protected species

Current Conditions Summary

The LCP process identified a strong need for recreational facilities. The final vision included addition of a major park and recreational facility somewhere within the planning area and the possible addition of some smaller parks. The county is moving forward immediately with planning for the major park. The old Mariner's Resort property on the eastern shoreline of Big Pine Key has been purchased and the county is proceeding with plans for major recreational facilities at that site. Scarified land both north and south of US-1 at the western end of Big Pine Key is also publicly owned and was identified as an area that may be appropriate for a passive sunset park.

Other major county-owned recreational sites within the planning area include Watson's Field and the Blue Heron facility. Scattered "pocket parks" maintained by the county or by individual neighborhoods also exist throughout the planning area. The county has a branch library located in the Winn Dixie Shopping Center and arrangements have been made to expand the library into existing vacant floor area at that site. This expansion may be able to accommodate some meeting facilities for the community although the extent of this is not yet known. For public hearings and meetings the community uses facilities located at the Big Pine School or at one of the community organization buildings on Big Pine Key.

Analysis of Community Needs

Develop Major Recreational Facilities

Monroe County has recently purchased the old Mariner's Resort property for development of major recreational facilities on Big Pine Key. The planning process for this site has begun. This will fulfill the need for one large recreational site anticipated during the LCP/HCP process. Two more sites of approximately 3 acres each were also anticipated. These will most likely be located near U.S. 1. During the LCP process, a desire by the Catholic Church to possibly build an athletic field on their property was also identified.

Expand County Branch Library

The Big Pine branch of the Monroe County Library is in need of expansion. The Big Pine community is also in need of reliable meeting facilities that may or may not be connected to the library. Therefore, an allowance for a 7,500 square foot facility (5,000 s.f. expansion over existing) was included in the HCP modeling effort. Although the library is planning to expand at its current leased site, the accommodation of a new building should remain in the Master Plan to allow planning flexibility over the entire twenty-year horizon.

Plan Neighborhood Recreation.

The extent of existing neighborhood recreational facilities such as playgrounds and boat ramps needs to be identified and the sites evaluated. These areas should be evaluated for utilization of existing facilities and the need for new facilities. The HCP modeled up to seven new “pocket park” sites in designated subdivisions.

Recommended Strategies and Actions

Strategy 6.1

Plan for recreational and community facilities over the next twenty years to be consistent with the community vision and development plan selected through the Livable CommuniKeys planning process to meet the needs of Big Pine Key and No Name Key residents. Planned facilities shall also be consistent with the incidental take permit and the accompanying Habitat Conservation Plan for the Florida Key Deer and Other Protected Species.

Action Item 6.1.1: Designate and develop the property currently known as “Mariner’s Resort” for the purpose of meeting the active recreation needs of the community over the twenty-year planning horizon.

Action Item 6.1.2: Allow up to three new public parks on disturbed and/or scarified uplands to be located within the U.S. 1 Corridor Area. The intent of this Action Item is to provide for the needs of the Florida Keys Overseas Heritage Trail and the U.S. 1 Corridor Area design guidelines (see Community Character Element). Therefore, these two purposes shall be given priority for park designation.

Action Item 6.1.3: Allow up to seven new neighborhood “pocket parks” on disturbed and/or scarified lands in any of the following subdivisions:

- Pine Channel Estates
- Cahill Pines and Palms
- Doctor’s Arm
- Palm Villa
- Sands
- Eden Pines Colony
- Port Pine Heights

Neighborhood parks are intended to provide minor local recreational opportunities within walking and/or biking distance of most residents served. Pocket parks may include passive and or active recreational uses such as green space, boat ramps, tennis courts, volleyball courts, playgrounds and similar uses.

Action Item 6.1.4: Allow expansion of the existing county library to be located on scarified/disturbed uplands within the U.S. 1 Corridor Area.

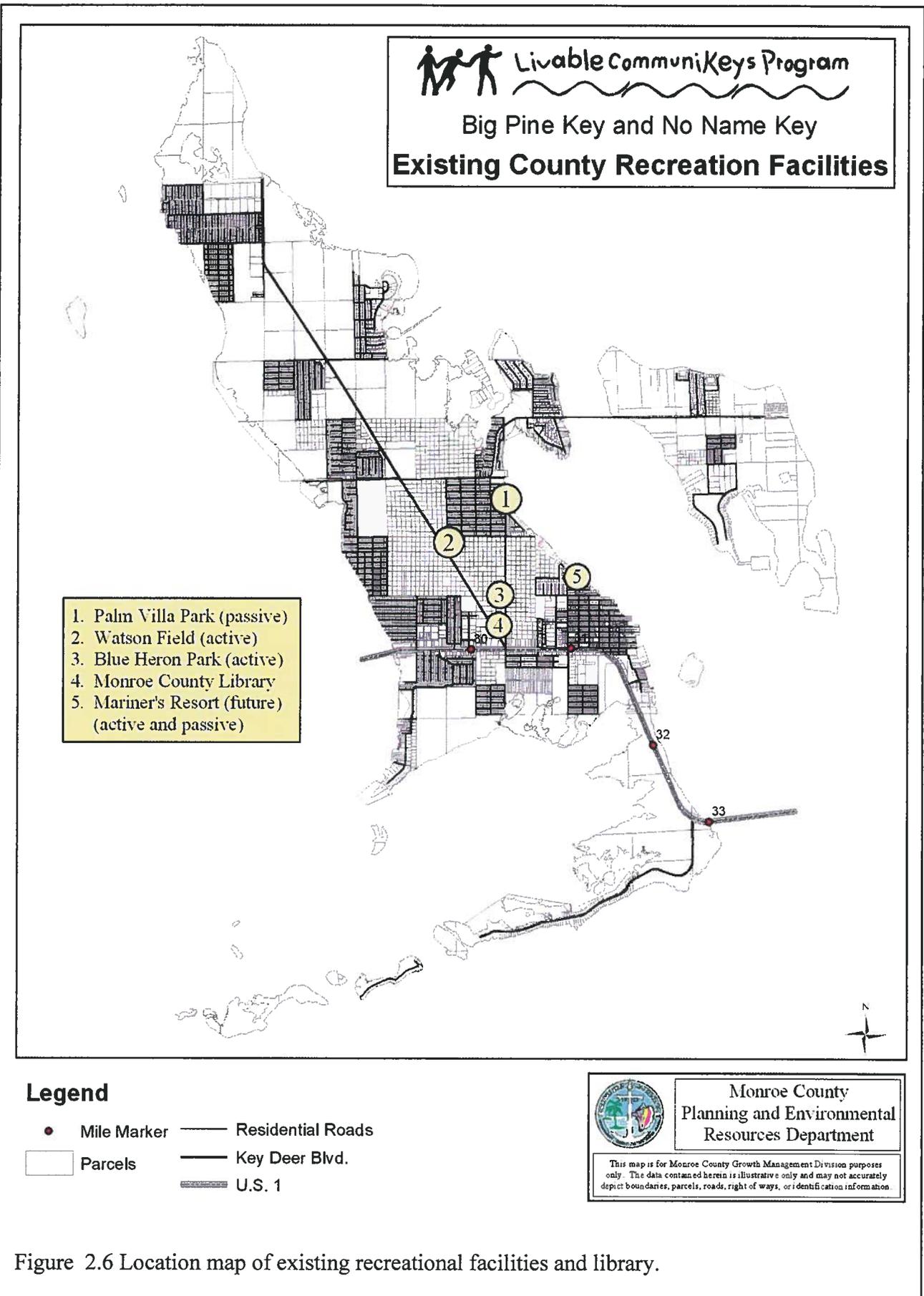


Figure 2.6 Location map of existing recreational facilities and library.

GOAL 7

Provide adequate public facilities to serve the existing and future needs of Big Pine Key and No Name Key

Current Conditions Summary

Certain public facilities are already planned including sewer and stormwater facilities within the twenty-year horizon. The Monroe County Sanitary Wastewater Master Plan sets out priorities for provision of advanced wastewater treatment to county "hot spots" where collection and centralized treatment systems are recommended. Facilities are required to be available by the Year 2010 in order to fulfill comprehensive plan mandates. Even if this schedule falls behind, it is safe to assume that these facilities will be built within the twenty-year planning horizon of this Master Plan. Major subdivision areas slated for package treatment and collection facilities include Sands Subdivision and surrounding subdivisions, the Doctor's Arm/Tropical Bay area, Eden Pines Colony subdivision, the Tropical Key Colony/Pine Channel Estates area, and Port Pine Heights subdivision.

The Stormwater Management Master Plan contains mainly regulatory and nonstructural improvement recommendations for handling stormwater. The plan does have a list of retrofit projects but none of them are located within the planning area. Therefore, at present it is assumed that there will be no major public stormwater collection systems installed.

Several buildings house government services in planning area now. The following is a list of the existing non-recreational government facilities:

Monroe County:	Big Pine Animal Shelter
	Emergency Response Facilities
	Library
	Police Substation
State of Florida:	Road Prison
	Department of Children and Families
U.S. Government:	National Key Deer Refuge offices and facilities
	U.S. Forest Service

Monroe County anticipates the need to expand emergency response facilities and is currently proceeding with expansion plans. Other types of government services are not normally planned into a timeframe beyond five to seven years. Therefore, without knowing what additional government services may be needed in the planning area over the twenty-year horizon, floor area was reserved for government service uses in the preferred land use scenario during the LCP/HCP process.

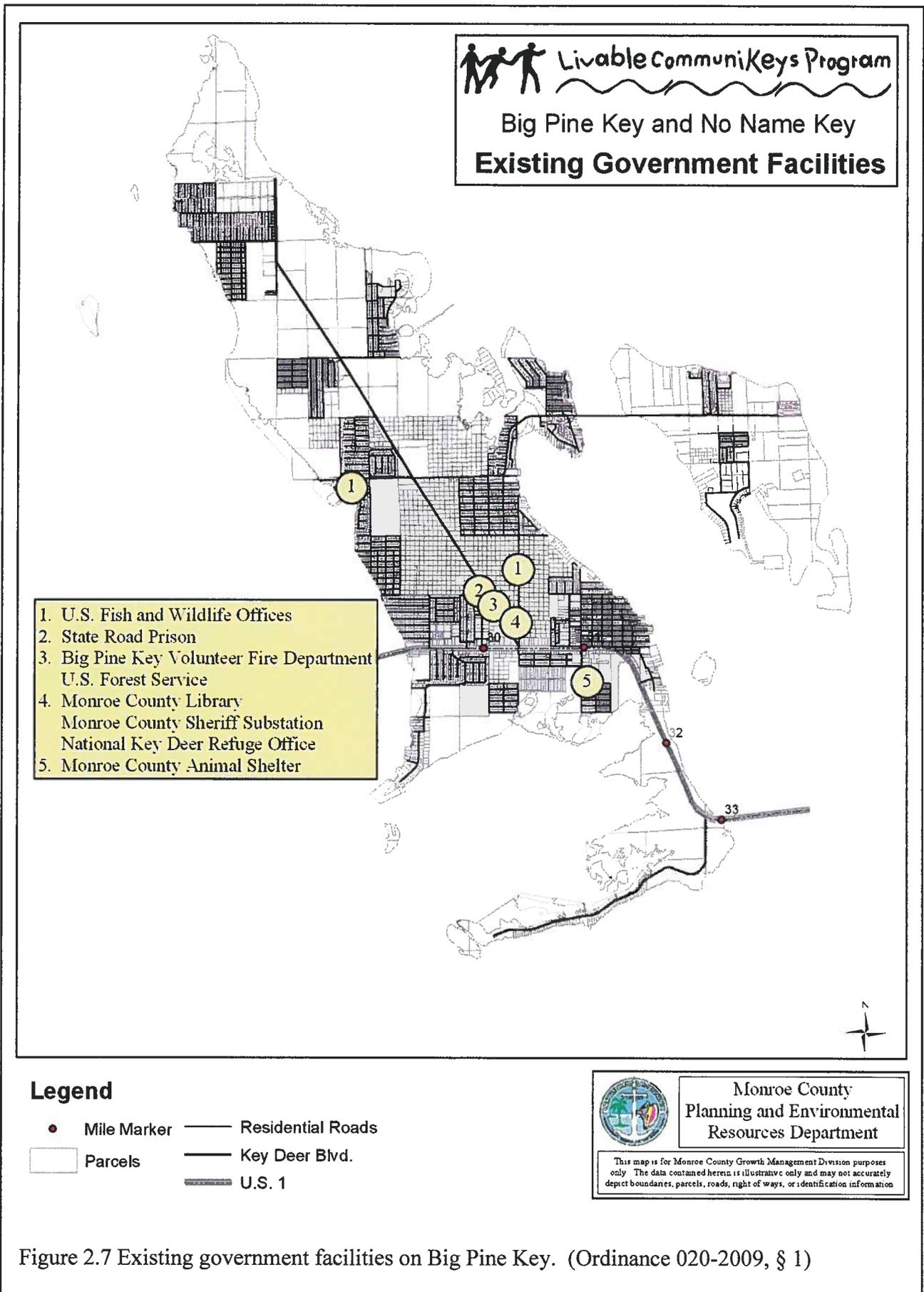


Figure 2.7 Existing government facilities on Big Pine Key. (Ordinance 020-2009, § 1)

Analysis of Community Needs

Public Buildings. There is a need to project and address the maintenance of existing public facilities on Big Pine Key, including expansions necessary to maintain an appropriate level of service into the twenty-year horizon. Of the existing facilities analyzed during the LCP/HCP process, the only identified expansion need was an addition to the emergency services facilities to be built in 2003. Due to the usually short planning horizon for capital facilities at the county level (5 years or less), additional floor area for future government office space was modeled in the HCP. In the case of Big Pine Key, however, there is a need for further analysis of public facilities into the twenty-year planning horizon. This will help anticipate future needs and identify mechanisms to meet changing conditions.

Wastewater and Stormwater Facilities. According to the county's Sanitary Wastewater Master Plan and Stormwater Management Master Plan, these types of facilities are scheduled to be installed in the planning area within the twenty-year horizon. Potential sites for sewage treatment facilities have been identified and were included in the LCP/HCP planning process. Potential sites for stormwater treatment have not been identified. Collection systems will be installed along existing roads. Although the timing of these facilities is laid out in their respective plans, implementation of both plans has fallen behind schedule. Therefore, there will be a need to monitor this situation. There is probably also a need to re-evaluate projected sewer and stormwater layouts in light of new development assumptions for Big Pine Key introduced through the LCP/HCP process.

Recommended Strategies and Actions

Strategy 7.1

Limit development of new and expanded public facilities to the level necessary to adequately serve existing and future development over the twenty-year planning horizon. Public facilities development shall also be consistent with the incidental take permit and the accompanying Habitat Conservation Plan for the Florida Key Deer and Other Protected Species and the Year 2010 Comprehensive Plan.

Action Item 7.1.1: Install a sanitary sewage treatment system in accordance with the Monroe County Sanitary Wastewater Master Plan. Components may include centralized or cluster facilities for collection and treatment, all of which shall be developed on disturbed and/or scarified uplands or in existing rights-of-way. The projected sewage treatment requirements for the planning area should be revisited and confirmed to be consistent with the final development plan adopted pursuant to the Master Plan and the HCP.

Action Item 7.1.2: Allow installation of stormwater treatment systems in accordance with the Monroe County Stormwater Management Master Plan. Any facilities installed for centralized collection and treatment should be developed on disturbed and/or scarified uplands or in existing rights-of-way.

Action Item 7.1.3: Allow development of new and/or expanded public offices to be located on disturbed and/or scarified uplands within the U.S. 1 Corridor Area.

Action Item 7.1.4: Allow expansion of emergency response facilities on scarified uplands at their current location on Big Pine Key.

Action Item 7.1.5: Public facilities may be built at any time during the twenty-year planning horizon.

Action Item 7.1.6: Monitor the total amount of new floor area allocated towards public facilities as specific proposals are received. At the point where new floor area is expected to exceed the H budgeted, consider allocation of H units from the non-residential category as needed. Likewise, at any point where the Board of County Commissioners identifies the H budget towards government uses to exceed actual needs, consider re-allocation of H from public uses back to private uses. Include this as a discussion item during presentation of the annual report and obtain Board of County Commissioners' approval prior to revising the H budget.

GOAL 8

Recognize the community's desire for certain accessory uses and security fencing by allocating a limited amount of H-value for these uses.

Current Conditions Summary

In analyzing the impact of habitat development on the population viability of the Key deer, the PVA model considered loss of all habitat within each individual parcel developed. Fencing of a parcel was likewise modeled as a complete loss of habitat from that parcel because fencing makes the habitat inaccessible to deer. Because the model was based on the current status of access by deer to all parts of the planning area, the fencing of new vacant habitat was generally considered unacceptable. Fencing of developed parcels in Tier II and III was acceptable because the model assumed most of the habitat value is already lost from the developed parcel for the incidental take permit.

Accessory uses are those that serve or support a principal use development. Residential accessory uses may include such items as storage sheds, gardens, play equipment, swimming pools or boat docks. Commercial accessory uses may include such items as storage, trash enclosures, sewage treatment plants, signage, parking lots, and other uses or equipment specific to the business being served.

Monroe County has considered one means of retiring development rights through the purchase of subdivision lots and resale to adjacent developed lot owners at a reduced price. The possibility of building accessory uses on these lots may make this mechanism more attractive to adjacent owners. Therefore the county expressed a desire for approximately 250 vacant "accessory lots" in Tiers II and III to be modeled in the PVA and included as a development impact in the HCP.

Analysis of Community Needs

Clarify Regulatory Status of Fences and Accessory Uses

The Master Plan needs to specify the appropriate locations for fences and accessory uses based on the HCP model. Appropriate design standards for fences within the planning area are already contained in the land development regulations and should be retained through the planning horizon.

Recommended Strategies and Actions

Strategy 8.1

Regulate the overall level of new habitat to be occupied by accessory uses and/or enclosed by fences over the next twenty years consistent with the level of habitat alteration contained in the incidental take permit and the accompanying Habitat Conservation Plan for the Florida Key Deer and Other Protected Species.

Action Item 8.1.1: Regulate new fences as follows:

- a. Prohibit new fences on Tier I lands except as authorized by the U.S. Fish and Wildlife Service and fencing required for safety purposes at any location to enclose the immediate impervious area of pools and tennis courts. (Ordinance 020-2009 § 1)
- b. Prohibit new fences in non-residential areas along U.S. 1.
- c. Permit new fences on developed lots and vacant lots that are contiguous to and serve a principal use within Tier II and Tier III. All fences shall be designed to meet adopted fence design guidelines for the planning area already contained in the land development regulations. (Ordinance 020-2009 § 1)
- d. Allow replacement of fences existing on the date this plan is adopted in their existing configuration.
- e. Do not consider fencing of developed property in Tier II or III (whether developed with principal or accessory uses) to have H impact additional to the development as modeled in the HCP as a reduction in K.

Action Item 8.1.2: Regulate new accessory uses as follows:

- a. No new development other than residential single-family and accessory uses will be permitted in Tier I areas. (Ordinance 020-2009 § 1)
- b. Permit new accessory uses to be located on the same parcel as the principal use within Tier I, Tier II and Tier III lands. Do not consider accessory uses located on the same parcel as the principal use to have any H unit impact additional to the principal use. (Ordinance 020-2009 § 1)
- c. Permit new accessory uses on vacant lots contiguous to and serving a principal use within Tier II and Tier III lands and as authorized by the U.S. Fish and Wildlife Service within Port Pine Heights and Kyle-Dyer Subdivisions. Consider new accessory uses located on vacant lots to impact H-Value. (Ordinance 020-2009 § 1)
- d. Allow for the replacement of existing accessory uses and/or for their relocation elsewhere on the same parcel for safety and security purposes.
- e. Continue to apply all other Comprehensive Plan and land development regulations regarding types, placement and other features of accessory uses.

Action Item 8.1.3: Monitor fence and accessory use allocations as specific proposals are received. At the point where these uses are expected to exceed the H budgeted, consider allocation of H from other categories as needed or consider modifying the regulations concerning these uses. Include this as a discussion item during presentation of the annual report and obtain Board of County Commissioners' approval prior to revising the H budget.

GOAL 9

Implement a land consolidation and acquisition system that provides fair, equitable and efficient compensation to land owners who are willing sellers on Big Pine Key and No Name Key.

Current Conditions Summary

The most challenging aspect of the Master Plan will be implementation of a coordinated and efficient system of compensation to land owners who wish to sell their parcels to the county. There are three basic levels of government land acquisition currently operating. At the federal level, the U.S. Fish and Wildlife may purchase lands authorized by their land protection program within the administrative boundaries of the refuge system. The entire planning area is included in the National Key Deer Refuge boundaries for purposes of acquisition. However, the federal government usually purchases property with wildlife habitat value that is either undisturbed or can be restored. This usually excludes platted subdivision lots in certain areas that do not lend themselves to management for conservation purposes.

The State of Florida participates in acquisition primarily through two programs: the Conservation and Recreational Lands (CARL) Program and the Florida Forever Program. CARL purchases are made within the authorized CARL boundaries while grant funding from the Florida Forever Program has been used by Monroe County in non-CARL areas county-wide to mainly purchase platted lots with relatively undisturbed habitat.

The Monroe County Land Authority conducts acquisition at the local level. The Land Authority may purchase properties outright and hold them but usually tries to resell or transfer them to some other entity that will accept the property for management purposes. For properties within the CARL boundaries, for example, the Land Authority may expedite purchases for willing seller owners who want to avoid the arduous state purchasing process. Then the county can resell the property to the state. For purposes of implementing the HCP and this Master Plan, the primary means of funding acquisition are anticipated to be existing state programs and the Monroe County Land Authority.

The HCP estimates the projected cost of land acquisition for mitigation at approximately \$6.8 million over the twenty-year life of the Incidental Take Permit. However, this estimate only covers the purchase of lands needed to mitigate H impacts at the ratio of 3 to 1 (acres preserved to acres impacted). The implementation of Smart Growth Initiatives and the Tier System through this Master Plan broadens the scope of acquisition to cover all vacant, private Tier I lands and probably most vacant, private Tier II lands within the planning area. Because we have established that there is a surplus of property in Tier III to accommodate development over the twenty-year horizon, there may eventually be a need to add some Tier III acquisition to the above cost.

To put this purchase cost in perspective, it is useful to know that the levels of development contemplated in this HCP and Master Plan are only slightly higher than the current comprehensive plan allows. Therefore the above cost is not purely a result of these processes because much of it already existed under the current plan. What changes under this plan is the focus of acquisition and the increased urgency to acquire especially sensitive Tier I lands.

Analysis of Community Needs

Provide Relief for Willing Sellers

There is a need to prioritize vacant Tier I properties based on habitat value for acquisition and to acquire these and other properties at a fair and reasonable price. Regardless of how zoning and permitting issues are handled, the level of development contemplated in the LCP/HCP process is only slightly higher than the current comprehensive plan allows. Therefore, there is a need to continue current acquisition efforts and to reprioritize and focus those efforts to conform with the new Master Plan.

Anticipate and Address Funding Needs

The above preliminary analysis gives some indication as to the level of funding needed to fully implement the HCP and this Master Plan. Further analysis is needed to anticipate acquisition costs and identify where county acquisition will be most effective. In addition, acquisition must be coordinated with existing state programs to encourage updating of those programs for increased support of the HCP and Master Plan.

Recommended Strategies and Actions

Strategy 9.1

Implement the Acquisition Strategy developed in Goal 1 making offers in 2003 to purchase those lands identified to have the highest priorities.

Strategy 9.2

Identify and pursue existing and new acquisition resources.

Action Item 9.2.1: Update Comprehensive Plan Policy 101.6.4 to encourage the FDCA to work at the state level for a dedicated acquisition fund for Tier I lands within the planning area based on results of the Carrying Capacity Study and the requirements of the anticipated ITP and HCP.

Action Item 9.2.2: Revise Policy 101.6.5 to add to item 3 the consideration of whether or not development on the subject property may adversely impact successful implementation of a Habitat Conservation Plan.

Action Item 9.2.3: Encourage the State of Florida to revise the CARL boundaries within the planning area to correspond with coverage of Tier I and Tier II lands as depicted on the Tier System Overlay Map for the purpose of prioritizing purchases.

Action Item 9.2.4: Create an environmental mitigation fee for new residences, non-residential floor area and institutional uses in order to ensure that development bears its fair share of the required mitigation under the anticipated ITP. The mitigation fee will be set to

cover at least 50% of the actual cost of acquiring mitigation land at the required 3 to 1 H in the HCP. The Board of County Commissioners will review and revise the amount of the mitigation fee on a yearly basis. The mitigation fee may also be used for management activities of acquired lands including fire management, invasive species control, restoration and monitoring. Affordable housing allocations will not be subject to the mitigation fee.

Action Item 9.2.5: Encourage the U.S. Fish and Wildlife Service to support the goals of the HCP by providing relief to property owners within the acquisition boundaries of the National Key Deer Refuge and continuing to acquire land with high H-value, even though federal purchases cannot be applied to the required mitigation.

Strategy 9.3

Identify and pursue existing and new means of retiring development rights.

Action Item 9.3.1: Amend the administrative relief and beneficial use provisions of the Comprehensive Plan and land development regulations to require purchase of land for Tier I applicants and to allow purchase or issuance of permits for Tier II and Tier III applicants, as appropriate.

Action Item 9.3.2: Encourage density reduction through lot consolidation especially on Tier II lands. Mechanisms may include conservation easements, tax relief, and accessory lot purchase mechanisms for privately owned, vacant land in Tier II and Tier III.

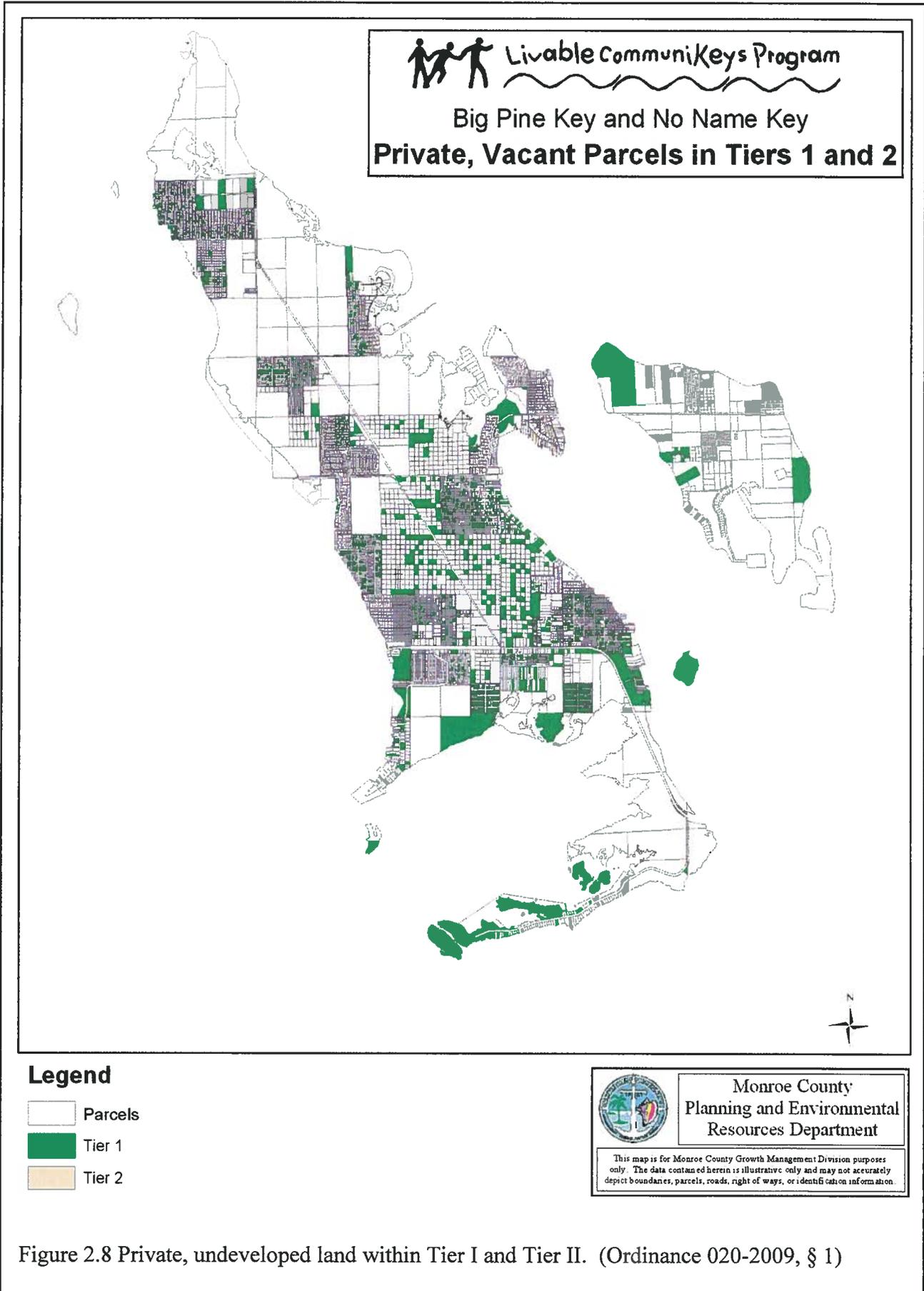
Action Item 9.3.3: As an alternative to direct purchase, evaluate and encourage the use of conservation easements, life estates and purchase/retirement of development rights from under-density developed parcels for the purpose of retiring development rights and providing tax relief.

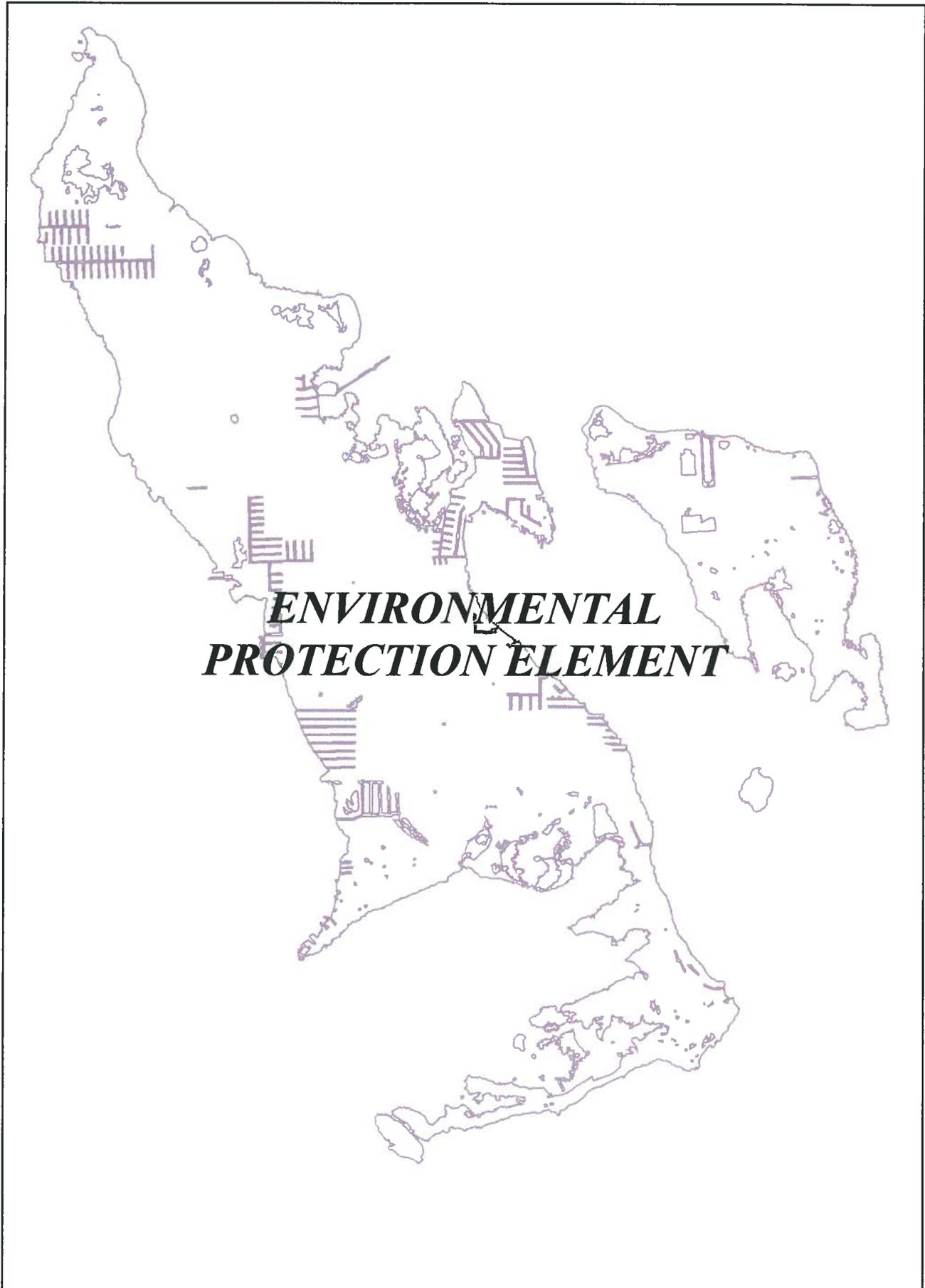
Action Item 9.3.4: Track conservation easements placed on property as a part of the H tracking system. Enforcement of conservation easements shall be done by the Monroe County Growth Management Division.

Fiscal Implications and Anticipated Capital Improvements Projects

The primary fiscal impact of the Land Use and Redevelopment Element will be in the form of required acquisition funds to implement the HCP and this Master Plan. A minimum of \$6.2 million may be needed to implement the HCP and an additional \$44.5 million may be needed to implement the Master Plan.

Known capital facilities improvements within the planning area over the next twenty years include the expansion of the existing emergency response facilities, the installation of sewage treatment facilities, expansion of the existing library, and the development of major recreational facilities at the Mariner's Resort park site. The first three items were previously planned or mandated facilities and were not new community needs identified in the LCP process. The need for a major recreational facility was identified through the LCP and previous planning processes. It is projected to be completed by 2004 and it is estimated that the facility will cost approximately \$ 2.4 million to build (operating costs are not available at this time).





GOAL 10

Protect and manage natural resources within the planning area in order to ensure continued viability and biodiversity of plant and animal life and to maintain compliance with the anticipated Incidental Take Permit (ITP).

Current Conditions Summary

Environmental protection within the planning area has primarily been implemented to date using the following mechanisms: existing environmental design criteria in the land development regulations, discouragement of development of environmentally sensitive areas through the ROGO point system and acquisition of habitat. The HCP and Master Plan strategies will primarily change the second mechanism with the addition of the Tier Map Overlay. With this new system comes an accelerated acquisition program. Monroe County has anticipated this trend county-wide and must contemplate being in the position of holding more and more land, either temporarily until it can be resold, or permanently. With this increased land ownership comes the need for constant attention to land management issues. In 2001 Monroe County hired a full-time land steward to address management issues on county lands. Prior to that, there was no dedicated land management framework within county government.

Due to its environmental sensitivity and biodiversity the planning area has received the attention of numerous conservation land management entities. Those operating within the planning area at present include the U.S. Fish and Wildlife Service (FWS, Florida Keys Refuges), Monroe County and two private non-profit organizations, The Nature Conservancy (TNC) and the Florida Keys Environmental Restoration Trust Fund (FKERTF, National Audubon of Florida, Trustee). Of the latter two, TNC is a land owner in the area. The FKERTF performs habitat restoration and management activities on publicly owned lands in the area. The State of Florida is a major land owner in the area but through a cooperative agreement, turns management of lands they acquire over to the FWS.

All of these entities, with the exception of Monroe County have been engaging in natural resource land management activities within the planning area for many years and all have focused on management of undisturbed habitat or habitat that can be restored. Traditional habitat management within the planning area usually includes the following activities: land protection (i.e., from dumping, roaming domestic animals, poaching, etc.), eradication of invasive exotic vegetation, habitat restoration through removal of disturbed areas, and controlled burning of pinelands. These activities are best suited to unpopulated or sparsely populated areas. Until recently most agencies have generally avoided the acquisition of platted, improved subdivision lots, whether they contained natural habitat or not.

The application of management activities to subdivision lots brings a suite of additional tasks, the most important of which is coordination with neighboring land owners. The amount of work needed to manage small fragmented subdivision parcels has made the cost-benefit ratio seem less attractive in the scheme of a management program that covers thousands of acres. After all, the primary purpose for acquisition of many of these lots has been to prevent additional development impacts on wildlife and biodiversity within the planning area. Once a lot is acquired however, the land-owner is responsible for its management compatible with resource conservation goals and with the surrounding neighborhood. Over the last few years, the FWS has begun to shoulder responsibility for management of many of these lots within priority areas. The FWS through a cooperative agreement with Monroe County manages many county-owned subdivision lots.

The population viability analysis of the Key deer demonstrates that the remaining hammocks and pinelands within the planning area have very high habitat value for the deer. Development of these habitats is currently discouraged mainly through the Rate of Growth Ordinance (ROGO) point system. Because the Tier System Overlay Map is based upon the H of parcels, hammocks and pinelands have already been mapped as Tier I "Natural Lands."

The submitted HCP greatly limits the clearing of native habitat. Limited clearing is only permitted on parcels to be developed for residential purposes or for local road widening. The total cumulative amount of clearing permitted over the 20-year period of the HCP is no more than .2 percent of the current extent of native habitat (a total of 7.1 acres) and no more than 20% of any individual lot with native habitat for wildfire prevention purposes only.

Analysis of Community Needs

Habitat Management Implementation

There is a need to plan for organized habitat management of lands acquired for conservation purposes that will meet the requirements of the HCP. The county has not traditionally engaged in natural lands management in the past and has only recently dedicated one employee position to this activity. Therefore, efficient habitat management will likely be accomplished through heavy coordination with existing management entities operating within the planning area. There is a need to anticipate future management needs based upon habitat acquisition goals and to determine how the county will handle expanding management responsibilities. There is a further need to organize completed annual management activities into report form to fulfill HCP mandates.

HCP Compliance Reporting

There is a need to coordinate all of the activities contained in the HCP and produce an annual report of their status. These activities include the compilation of H units permitted and purchased as described in the Land Use and Redevelopment Element, and the minimization and mitigation measures described throughout the HCP. Many of these measures involve habitat management activities.

Protection of Hammocks and Pinelands

All remaining hammocks and pinelands are included in Tier I on the Tier System Overlay Map. Further protection is needed for parcels that may be developed. The HCP limits further clearing of hammocks and pinelands to no more than 20% and the preferred land use scenario modeled in the PVA included very little new clearing of pinelands and hammocks. Therefore, all of these habitats within the planning area should be classified as automatic high quality due to their high wildlife habitat value.

Comprehensive Plan Consistency

Policies in the comprehensive plan specifically aimed at protection of unique habitat and wildlife communities on Big Pine need to be updated.

Recommended Strategies and Actions

Strategy 10.1

Revise policies in the comprehensive plan specifically aimed at protection of unique habitat and wildlife communities in the planning area.

Action Item 10.1.1: Delete policies 207.7.5, 207.7.7, 207.7.9, 207.7.10, 207.7.11, and 207.7.17 from the Conservation and Coastal Element of the Comprehensive Plan. These policies cover habitat and wildlife protection issues that either have been fulfilled since the policies were written, or are addressed as part of the HCP as implemented in this Master Plan.

Action Item 10.1.2: Amend existing habitat analysis policies and regulations to add all hammocks and pinelands located within the planning area (on Big Pine Key and No Name Key) to the "Automatic High Quality" category with corresponding open space ratios applied.

Action Item 10.1.3: Limit any clearing of native habitat on parcels to be developed for residential purposes or for local road widening. The total amount of clearing permitted over the 20-year period is no more than .2 percent of the current extent of native habitat (7.1 acres) and no more than 20% of any individual lot with native habitat (for wildfire prevention purposes only).

Strategy 10.2

Formulate and carry out a plan for habitat management of lands acquired for conservation purposes to meet the goals of this Master Plan and the HCP.

Action Item 10.2.1: Offer any lands acquired for conservation purposes to the FWS for management under the refuge system. Terms of offer, ownership and management arrangements are to be worked out on an individual parcel basis and will not be limited by this plan.

Action Item 10.2.2: Work with land managers of the FWS, state and non-governmental organizations to formulate a coordinated land management system for the planning area.

Action Item 10.2.3: Identify and prioritize conservation lands under county ownership and management for implementation of management activities. Anticipate future management needs based upon the projected acquisition of properties required to implement the HCP and this Master Plan.

Action Item 10.2.4: Based on interagency goals formulated pursuant to Goal 4, Strategy 4.2, Action Item 4.2.2, formulate management objectives for specific habitats and locations within the planning area on conservation land under county ownership and management.

Action Item 10.2.5: Identify and prioritize management activities such as fence removal, trash removal, invasive exotic vegetation control, invasive exotic animal control, control of free-roaming domestic pets, controlled burning and habitat restoration.

Action Item 10.2.6: Monroe County shall restore, where practicable, disrupted wetland and native upland vegetation systems on County-owned public lands on Big Pine Key and No Name Key in order to improve Key deer habitat.

Action Item 10.2.7: Use a GIS database for continual tracking and update of management activities and for HCP reporting of management activities. Coordinate this as appropriate with the existing GIS management database used by FWS.

Action Item 10.2.8: The status of management activities shall be organized into report form annually to fulfill HCP mandates.

Strategy 10.3

Coordinate all of the required activities contained in the HCP and produce an annual report of their status. Present the report annually to the Board of County Commissioners, ITP applicants and the public prior to submission to the FWS.

Action Item 10.3.1: Combine tracking of H permitted and H acquired as outlined in the Land Use and Redevelopment Element using a GIS-based system. Compile tracking results for presentation in the annual report.

Action Item 10.3.2: Track and compile annually all management activities and other minimization and mitigation activities carried out in fulfillment of the HCP and present this information in the annual report.

Action Item 10.3.3: Conduct annual formal coordination with the other ITP applicants and other management entities working within the planning area to coordinate management activities and exchange information. In the annual report, provide a summary of relevant management efforts being conducted by others such as monitoring of the Key deer population by the FWS refuge office.

Fiscal Implications and Anticipated Capital Improvement Projects

The HCP anticipates acquisition of approximately 300 acres of Tier I lands over the twenty-year planning horizon to satisfy mitigation requirements. The HCP further estimates the management costs of Tier I lands acquired for mitigation to average approximately \$1,000 per acre per year for the first two or three years of management, after which time costs should decrease to approximately \$100/acre/year. Management of mitigation lands is therefore projected to cost approximately \$1.27 million over the twenty-year horizon. Further analysis of the cost is needed to confirm the per unit cost of management for land in all Tiers and to add the projected acquisition that will be needed to implement the Master Plan requirements over and above the HCP requirements.

GOAL 11

Protect the quality and quantity of water in the freshwater lens systems on Big Pine Key and No Name Key so as to preserve ecosystems dependant upon fresh water.

Current Conditions Summary

The entire habitat, wildlife assemblage and the unique character of the historic and current human community in the planning area are all based on the presence of the freshwater lenses on Big Pine Key and No Name Key. The lenses exist as two major underground basins of fresh water with ground surface expression in the form of freshwater sloughs through the center of the island and numerous freshwater solution holes and ponds scattered throughout the area. Much of the freshwater slough habitat was acquired during the 1990s as part of the South Florida Water Management District's (SFWMD) Save Our Rivers (SOR) project in which the special hydrology of the area was recognized. Ownership of all lands acquired during the SOR project have since been transferred from the SFWMD to the Florida Department of Environmental Protection (FDEP) to be added to the CARL project.

The county conducted a working group planning study of the lens pursuant to Comprehensive Plan requirements. Mainly as a result of that study several consumptive wells were phased out on Big Pine Key with the provision of potable water by the Florida Keys Aqueduct Authority (FKAA). Also, a monitoring system was set in place as a cooperative effort of the SFWMD and the FWS.

Analysis of Community Needs

Continue to Monitor the Lens.

The SFWMD has installed monitoring wells throughout Big Pine Key for use by the FWS in monitoring the water quality and the surface and depth extent of the freshwater lens. A GIS map of the lens would be very useful for land use planning and design purposes.

Consumptive Well Prohibition and Phase-Out.

The phase-out of consumptive wells on Big Pine Key is to be a continuing management activity to be credited towards minimization of impacts on wildlife, especially the Key deer, under the HCP. Policies in the comprehensive plan specifically aimed at protection of the freshwater lens on Big Pine Key need to be reemphasized in this Master Plan.

Extractive Mining Regulations.

The Year 2010 Comprehensive plan restricts extractive mining operations to the conditions set forth on individual permits. No new operations or expansion of existing operations is permitted. All extractive operations are required to submit the following documentation to ensure the protection of ground water resources: a storm water management plan, soil erosion and sedimenta-

tion control plan, a reclamation plan, and survey information documenting excavation depth. Existing resource extraction operations are not permitted to go below sixty (60) feet in depth, effectively limiting the scope of existing operations.

Recommended Strategies and Actions

Strategy 11.1

Continue to regulate development activities that may impact freshwater lens systems.

Action Item 11.1.1: Prohibit new consumptive wells within the planning area.

Action Item 11.1.2: Identify and phase out existing consumptive-use wells and replace them with potable water supplies and cisterns.

Action Item 11.1.3: Consider adoption of design standards such as minimization of impervious surfaces that promote the protection and recharge of the freshwater lens system. This is especially applicable to the major southern lens underlying the U.S. 1 Corridor Area and the Community Center Overlay.

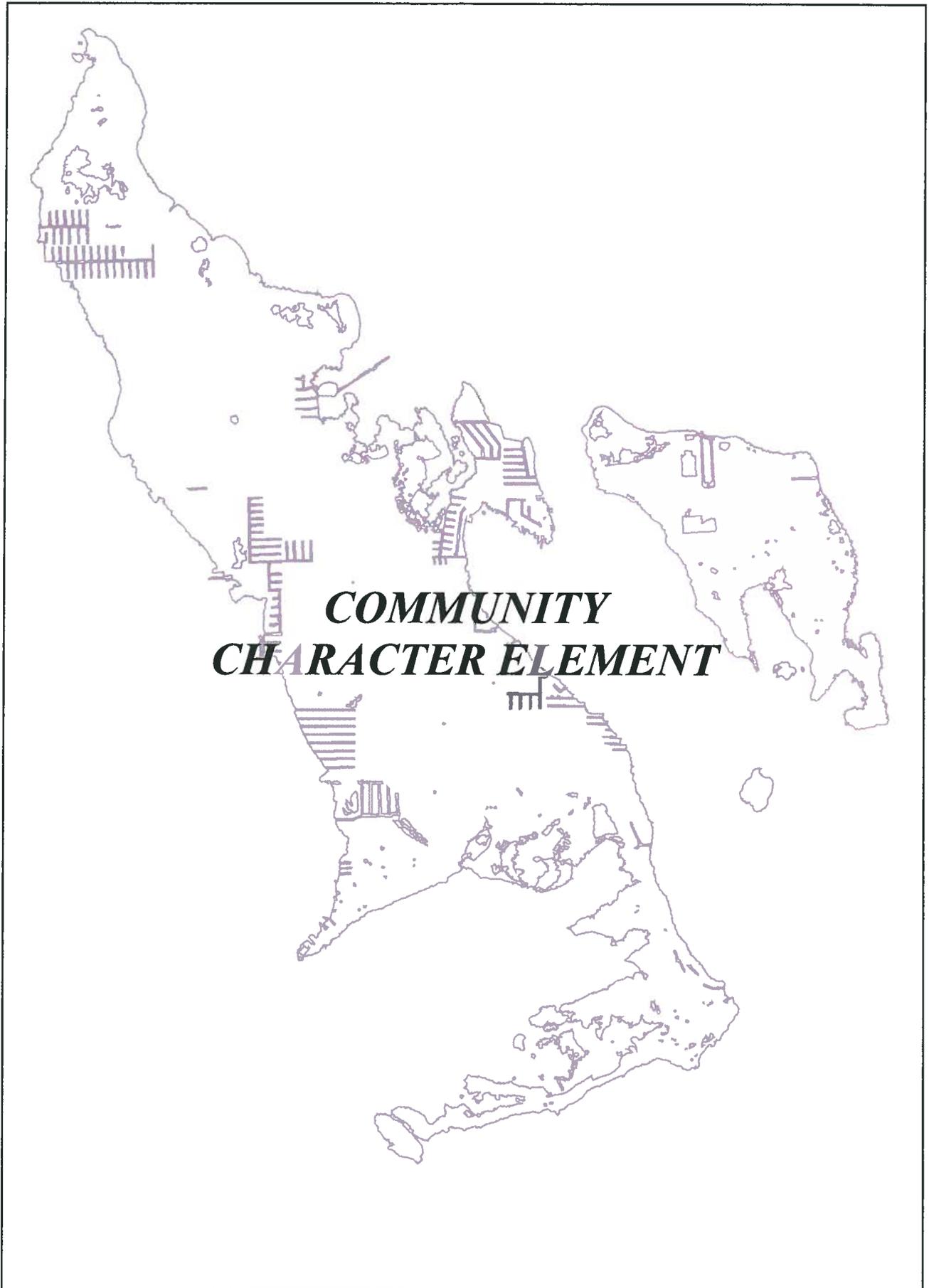
Action Item 11.1.4: Prohibit new resource extraction activities and expansions of existing operations within the planning area. Continue to monitor existing operations upon review of their required annual operating permits.

Strategy 11.2

Implement management activities that enhance and restore the lens.

Action Item 11.2.1: Encourage the U.S. Fish and Wildlife Service to map the extent of the freshwater lens on the GIS database. Utilize this mapped overlay to coordinate land management and restoration activities conducted within the planning area.

Action Item 11.2.2: Incorporate protection of the existing freshwater lens and lens-based freshwater wetlands into land management plans. Coordinate with state, federal and non-governmental land managers within the planning area to encourage them to enhance and restore the freshwater lens and freshwater wetlands through lens monitoring, restoration of freshwater slough hydrology, reduction of salt water intrusion, and improvement of freshwater habitat.



GOAL 12

Define, maintain and enhance the community character of Big Pine Key and No Name Key.

Current Conditions Summary

Community character was a major point of discussion and planning focus during the LCP process. Defining the community character meant many things to LCP workshop participants including recognition of the unique natural character of the planning area, maintaining the area's rural feel and moderate pace, and enhancement of community gathering areas for conducting business, socializing and recreation. In January 2003 Monroe County proceeded with a design charrette planning process for the commercial corridor area of Big Pine Key. The charrette was a facilitated community discussion during which design concepts were developed and graphically assembled at the meeting for immediate reaction. The focus of the discussion was the U.S. 1 Corridor Area and the idea of a village center was presented as a layered concept based primarily on walking distance to the existing commercial center of Big Pine Key. The Corridor Enhancement Plan final draft was transmitted to the Planning Department and certain elements will be adopted as a part of this Master Plan.

Two major planning efforts will be conducted for corridor improvements over the next three to five years. The first is the three-laning of U.S. 1, which is expected to proceed once the incidental take permit is issued. The Florida Department of Transportation (FDOT) will plan and fund that project. The second major effort is the design and development of the Florida Keys Heritage Trail project being conducted by the Florida Department of Environmental Protection (FDEP). This project currently has major funding in place.

Analysis of Community Needs

U.S. 1 and Major Street Beautification

The idea of the Main Street element introduced and evaluated during the LCP process drew some support in the community with ideas for beautification of U.S. 1 and the commercial center of the island. Circulation and ease of accessibility for the human population was integrated into the beautification element during the corridor enhancement charrette process. This should be explored further and coordinated with other agencies working in the corridor, especially in light of pending major U.S. 1 modifications such as three-laning and the addition of the heritage trail.

Commercial Building Design Guidelines

There may be a need for design guidelines for new and replacement buildings. Recommendations for design guidelines are included in the Corridor Enhancement Plan. Care should also be taken to ensure that design requirements do not stifle a positive redevelopment momentum.

The Corridor Enhancement Plan and Community Center Overlay

The county has completed a Corridor Enhancement Plan for the U.S. 1 Corridor Area. Designation of a Community Center Overlay District pursuant to Policy 105.2.15 should also be considered. These efforts should address some of the aspects of the Main Street Alternative considered during the LCP process and further refined during the corridor enhancement charrette process. These include focus on the main business center of Big Pine, improved pedestrian and bicycle circulation, improved vehicular traffic circulation, beautification, strategic integration of existing green space, and introduction of employee housing. The U.S. 1 Corridor Area and the Community Center Overlay will also designate boundaries for the purpose of encouraging concentration of new commercial floor area over the twenty-year horizon.

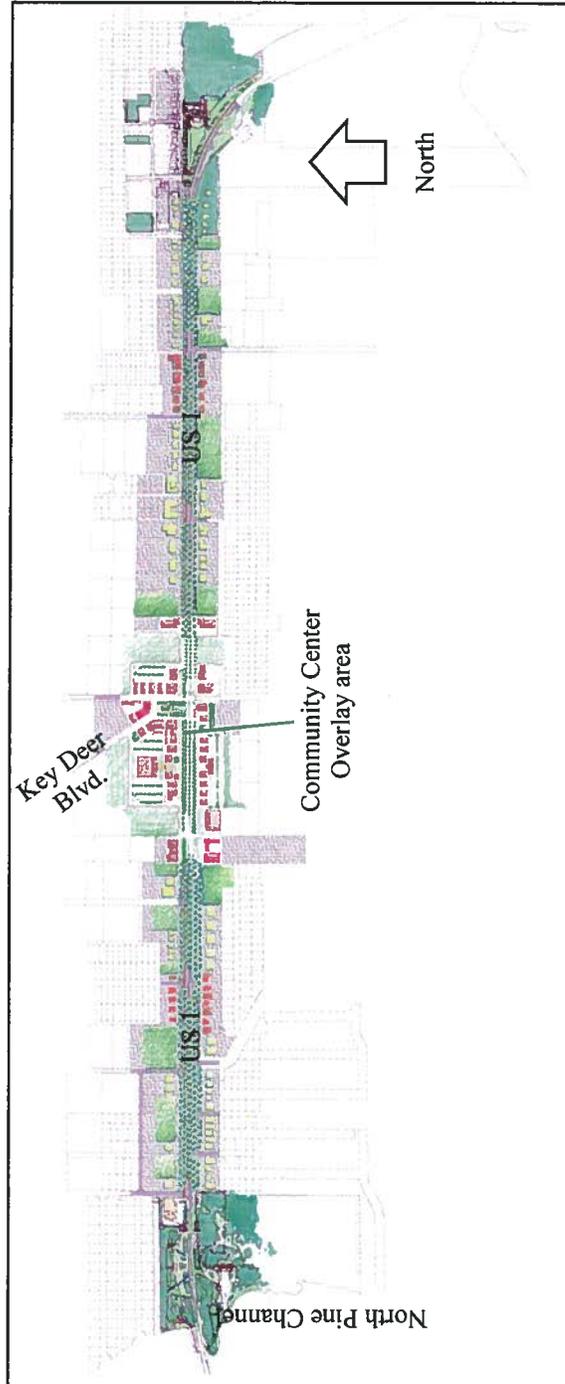


Figure 4.1 Conceptual U.S. 1 Corridor Area Map and Community Center. The map is a sample concept for a designation of areas based on walking distance.

Recommended Strategies and Actions

Strategy 12.1

Define the boundaries and planning priorities for the U.S. 1 Corridor Area and the Community Center Overlay.

Action Item 12.1.1: Designate the U.S. 1 Corridor Area as the area defined in the Big Pine/U.S. 1 Corridor enhancement plan, incorporated herein by reference. It is a focus of community activity due to the dominant land use pattern of commercial and other non-residential uses. A program of planning focus on this area shall be continued and accelerated.

Action Item 12.1.2: Designate a Community Center Overlay on Big Pine Key pursuant to Policy 105.2.15 where Tier III lots receive incentives for redevelopment. The Community Center Overlay will cover the area described as the Village Center as defined in the Big Pine Key/U.S. 1 Corridor Enhancement Plan.

Action Item 12.1.3: Prohibit the designation of new commercial land use districts beyond that contained in this Master Plan in order to protect the existing viability of the U.S. 1 Corridor Area and Community Center Overlay and to prevent the perpetuation of sprawl or strip commercial zoning.

Action Item 12.1.4: Provide for a community meeting facility either in conjunction with library facilities or as a stand-alone facility. The Community Center Overlay is the preferred location for a community meeting facility.

Action Item 12.1.5: Continue to discourage tour busses within the planning area.

Strategy 12.2

Develop a Corridor Enhancement Plan for the U.S. 1 Corridor Area.

Action Item 12.2.1: Generate a Corridor Enhancement Plan, based upon the corridor enhancement charrette process, that includes ideas for improvement of traffic and pedestrian/bicycle movement, beautification, and incorporation of parks/open space.

Action Item 12.2.2: Develop design guidelines to be adopted as a part of the Land Development Regulations which shall be applied to all new development or substantial redevelopment within the U.S. 1 Corridor Area and the Community Center Overlay based on recommendations of the Corridor Enhancement Plan.

Action Item 12.2.3: Explore the possibility of a limited access one-way local traffic enhancement from Ship's Way to Key Deer Boulevard as part of the Corridor Enhancement Plan.

Action Item 12.2.4: Prohibit new formula retail businesses and restaurants in the planning area through the development of Land Development Regulations.

Action Item 12.2.5: Coordinate with land owners, including the U.S. Fish and Wildlife Service, to explore opportunities for restoration and incorporation of remaining native habitat into the corridor design including purchases, removal of fences, removal of exotics, open space design, historical features and educational materials.

Action Item 12.2.6: Prohibit new industrial uses on U.S. 1 within the planning area in order to enhance the community character of the U.S. 1 Corridor Area.

GOAL 13

*Identify, protect and enhance historic resources on
Big Pine and No Name Keys.*

Current Conditions Summary

The Comprehensive Plan contains standards for designation of historic structures and districts within the county (Objective 104). The planning area contains several archeological sites and older structures that may be of local historic importance. Only one structure has been designated pursuant to the county process to date. That structure is on the eastern shoreline of Big Pine Key at the site of a former shark fishery and processing plant. There may be other structures and sites suitable for designation. The county is currently conducting an inventory of historical sites county-wide.

Analysis of Community Needs

Historic Resources Identification and Protection.

The comprehensive plan contains policies regarding designation and protection of historic resources. There is a need to specifically address resources within the planning area. Many are archeological resources while a few buildings of historic value also remain. Standards are needed to protect and encourage the preservation and enhancement of these resources.

Recommended Strategies and Actions

Strategy 13.1

Provide for retention of remaining historic resources within the planning area through the Comprehensive Plan process for historical designations (Objective 104).

Action Item 13.1.1: Receive and review the results of the Historic Architectural Survey of Unincorporated Areas of Monroe County completed in 2003 in order to identify historic and archeological resources within the planning area.

Action Item 13.1.2: Continue to encourage the protection of the existing historic designated resources.

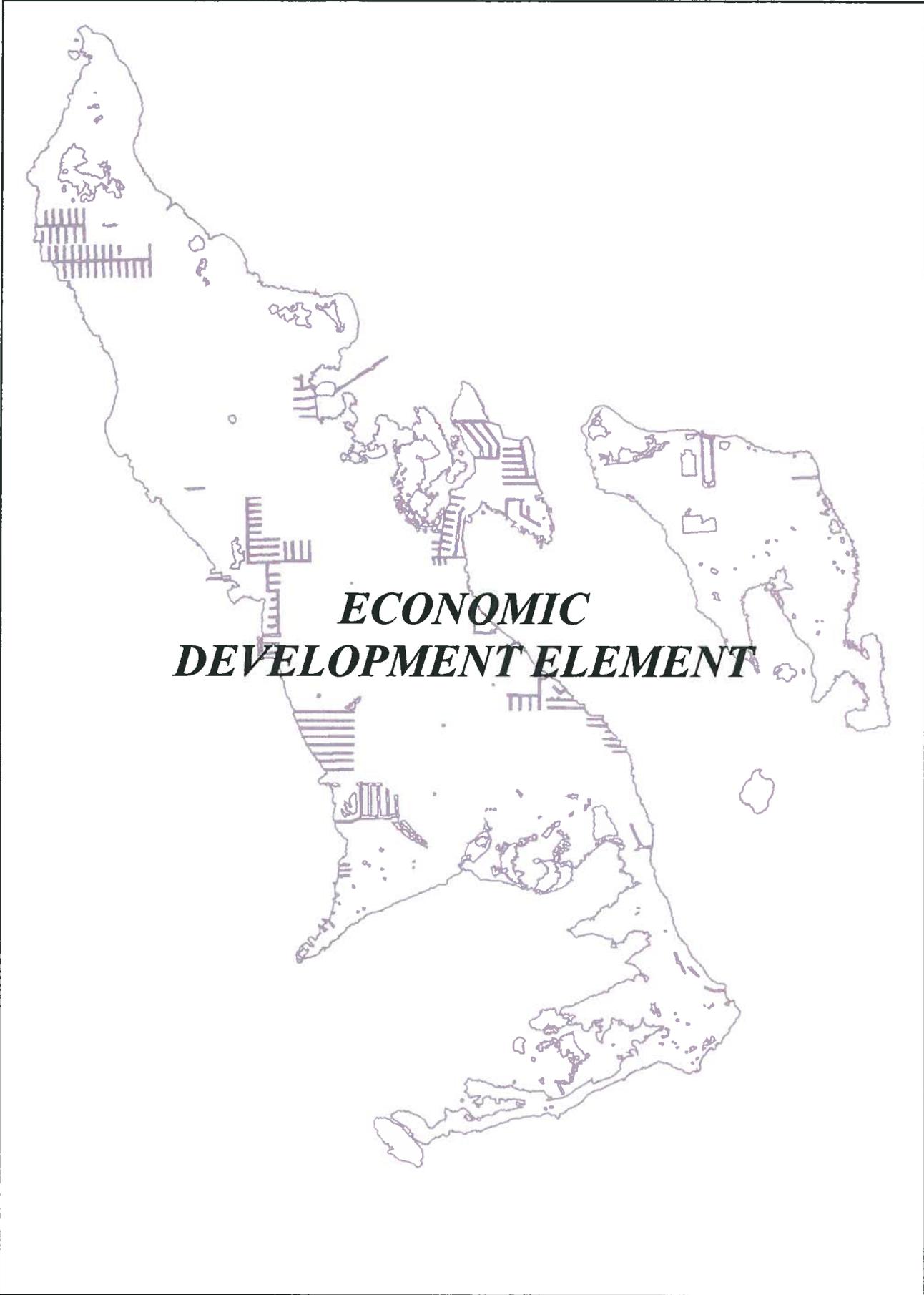
Action Item 13.1.3: Consider new designation categories based on the results of the Historic Architectural Survey of Unincorporated Areas of Monroe County completed in 2003.

Strategy 13.2

Provide for protection of existing and newly discovered historic resources in accordance with Comprehensive Plan Objective 104 and related policies.

Fiscal Implications and Anticipated Capital Improvement Projects

The fiscal implications of the Community Character Element depend mainly on the final design and implementation strategies of the Corridor Enhancement Plan. The extent of new capital improvements projects, if any, associated with that effort are unknown. However, two new capital projects being conducted by others in the corridor include the three-laning of U.S. 1 by FDOT and the Florida Keys Heritage Trail project led by FDEP. Coordination with these agencies may provide an opportunity for the county to have a good portion of the Corridor Enhancement Plan funded through these two projects.



GOAL 14

Identify and enhance economic development opportunities for Big Pine Key and No Name Key that respond to the economic needs of the community and are compatible with the community character and the environment.

Current Conditions Summary

Since 1995 there has been a moratorium on all traffic generating development on Big Pine Key and No Name Key because the segment of U.S. 1 that passes through Big Pine has been found to have an inadequate level of service (concurrency has not been met). This has not only prevented residential development, but has greatly impacted commercial development on the island (as well as areas west of Big Pine). With the implementation of the HCP road improvements are scheduled to begin which are anticipated to improve the level of service beyond the planning horizon.

During the LCP process the community indicated that additional commercial development should be oriented to the local community rather than the regional or tourist economy. New development should be kept at a small scale to maintain the rural and suburban character of the islands envisioned by the community. Currently, Big Pine has a mix of locally owned businesses, franchises and national chain stores. Many of the businesses, such as the grocery store, the drug store, banks, and restaurants serve not only the residents of Big Pine, but also other areas of the Lower Keys.

With the lifting of the moratorium on traffic-generating development, there is now an opportunity for existing businesses to expand and redevelop and for new buildings to be constructed, promoting an economic benefit to the community. However, there are many needs that have to be addressed in order to promote positive economic redevelopment on Big Pine. Most businesses have frontage on U.S. 1, but some are set back so that access is difficult and signage is not always visible. Many areas of the roadway need maintenance, parking enforcement, and stormwater management techniques installed. The corridor enhancement plan has identified guidelines for improving the look of the corridor including addressing building design features and recommendations for improved signage as well as alternative access ways to make it easier to move between business sites.

Currently there are many opportunities within the corridor for individual businesses to expand and redeveloped if they so desire. There are numerous scarified sites that are either vacant or the buildings are under utilized. Employee housing is currently very limited and could be located on commercial properties which would then gain a density bonus for expansion of the commercial use.

Analysis of Community Needs

Retain Economic Viability

Because business development and redevelopment will be closely controlled by the limits within the HCP and Master Plan there is a need to ensure the economic viability of current businesses, community organizations, commercial structures and projected future businesses relative to potential regulatory impacts.

Encourage Positive Redevelopment

A major component of ensuring economic viability is the need to encourage positive redevelopment of existing businesses and community organizations. Current impediments to redevelopment on Big Pine Key should be examined and strategies formulated to streamline the process and provide appropriate incentives.

Recommended Strategies and Actions

Strategy 14.1

Maintain and enhance economic activity and opportunity within the U.S. 1 Corridor Area.

Action Item 14.1.1: Inventory and analyze the characteristics of existing commercial uses within the corridor. Examine commercial uses for expansion potential in order to project the likely rates and amounts of commercial to be added over the planning horizon. This will help evaluate whether the H budgeted for commercial development is likely to be needed or used. Include traffic generation projections in the analysis.

Action Item 14.1.2: Use the results of the county-wide economic study to assist in determining future commercial use trends and needs into the twenty-year planning horizon. This information may be used to identify ways to retain the marketability of existing business uses and commercial structures within the U.S. 1 Corridor Area.

Action Item 14.1.3: Create a new land use district category called Light Industrial (LI) for the purpose of more appropriate definition and accommodation of existing light industrial uses on Big Pine Key. The Light Industrial category may be considered for parcels within the FLUM category, Mixed Use/Commercial (MC) that do not border U.S. 1 and are currently occupied by light industrial uses such as, but not limited to construction material and lumber yards, outdoor and/or enclosed storage, warehouses and distribution centers, auto and marine services.

Strategy 14.2

Encourage positive redevelopment of non-residential development within the planning area.

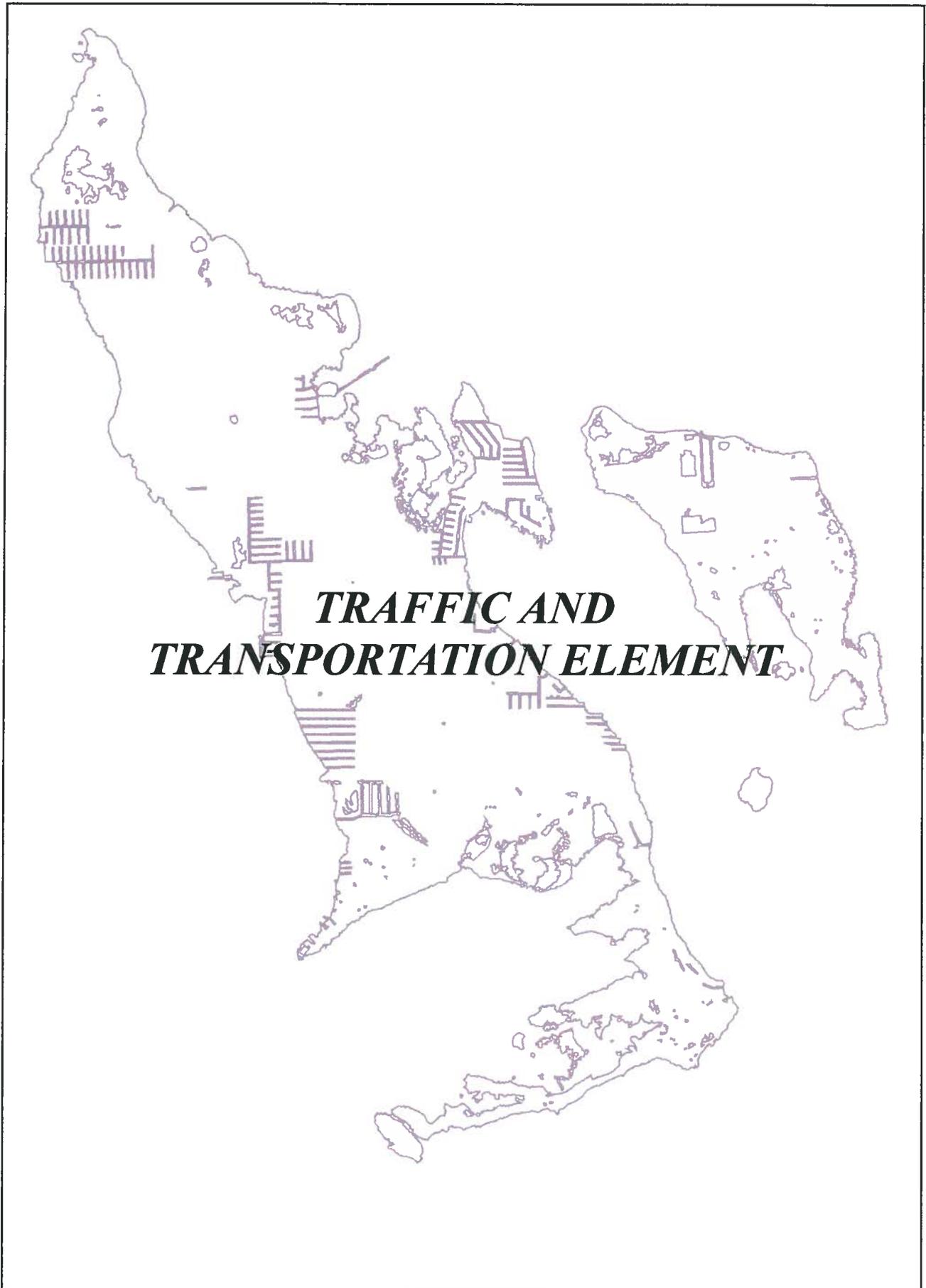
Action Item 14.2.1: Examine and revise the existing regulations regarding nonconforming uses and structures in consideration of projected commercial patterns over the twenty-year horizon, the recommendations of the Corridor Enhancement Plan features, and consistency with the community vision and the HCP.

Action Item 14.2.2: Allow increased allocation of floor area within the designated Community Center Overlay pursuant to the limits outlined in NROGO and encourage transfer of commercial floor area from within the planning area to the Community Center Overlay.

Action Item 14.2.3: Only require new design guidelines for new development, the replacement of an existing building or if 2,500 square feet is added. Ensure that new commercial design guidelines do not create a burden on existing businesses with potential for redevelopment.

Action Item 14.2.4: Provide incentives to business to provide minor beautification elements to existing properties. Minor elements are those which are not classified as replacement of additions of 2,500 square feet or greater, and could include but are not limited to additional landscaping, building façade improvements, and pedestrian-friendly additions.

Action Item 14.2.5: Explore ways of easing some financial burden of redevelopment such as county or state funding of landscaping within the Corridor Area as an alternative to business owners bearing the entire cost.



GOAL 15

Provide a safe, convenient, efficient and environmentally compatible motorized and non-motorized transportation system for the movement of people and goods on Big Pine Key and No Name Key.

Current Conditions Summary

Included in the final preferred alternative that was modeled in the HCP process was a plan for widening U.S. 1 to three lanes within the business segment of Big Pine Key and also a plan for future local road development including:

- Consideration of one-way access from the west side of the island to Key Deer Boulevard (north of U.S. 1). This was originally modeled in the HCP as the cross-island road improvement but after further consideration the county decided not to proceed with this project.
- Widening of the following existing roads by a total of 15 feet to accommodate the installation or upgrading of bicycle paths: Watson Boulevard, Newfound Harbor Road, Key Deer Boulevard, and Wilder Road.
- Widening of all other existing local roads by 5 feet, when necessary, to accommodate the installation of bicycle paths, stormwater infrastructure and/or sanitary sewer infrastructure.

Some habitat alteration was modeled for road widening but no alteration may take place within habitat areas of the Lower Keys marsh rabbit such as areas adjacent to portions of Watson Boulevard. It should be noted that, like capital facilities planning, the county's planning horizon for local roads is fairly short, at seven years, when compared to the Master Plan horizon. Although Monroe County does not currently anticipate widening all local roads, or even a large proportion of them, the ability to do so was built in primarily to maintain flexibility in meeting future public facilities needs, including sewer and stormwater collection systems and water distribution systems. The HCP commits to design coordination on future maintenance of roads in order to incorporate standards that will help reduce vehicular-deer collisions. The county has already incorporated the design standards into recent repaving projects.

Analysis of Community Needs

Three-Laning of U.S. 1

There is a need for the county to closely and continually coordinate with and assist FDOT on design and implementation of future U.S. 1 three-laning.

Local Roads

There is a need to develop and implement a local road and bike path improvement/maintenance program with appropriate design controls and traffic/roadside management in coordination with FWS. The county's current seven-year road plan serves as the basis for this program.

Analysis of Local Traffic Movement

A two-way, cross-island roadway has been rejected as a means of addressing local traffic movement within the U.S. 1 Corridor Area north of U.S. 1 and west of Key Deer Boulevard. Further consideration of local traffic circulation improvements should be part of the Corridor Enhancement Plan process.

Recommended Strategies and Actions

Strategy 15.1

Maintain close coordination with FDOT on the three-lane plan for U.S. 1 in order to provide appropriate county support where needed, to ensure consistency with the Corridor Enhancement Plan and to ensure compliance with the anticipated ITP/HCP requirements.

Strategy 15.2

Ensure that the seven-year local road/bike path maintenance and improvement program is consistent with the anticipated ITP/HCP and this Master Plan on an annual basis.

Action Item 15.2.1: Map all local roads on the GIS database and characterize by ownership, pavement status, and other features.

Action Item 15.2.2: Coordinate with the U.S. Fish and Wildlife Service to identify design and roadside management techniques, including the appropriate location for their use, aimed at increasing human safety and decreasing wildlife impacts. The feature designs shall be integrated into the seven-year road plan where appropriate.

Action Item 15.2.3: Evaluate the need for traffic calming elements, both on U.S. 1 and county roads where increased development may warrant such elements for safety purposes.

Action Item 15.2.4: Limit new paving to roads or portions of roads that serve Tier III properties or public facilities.

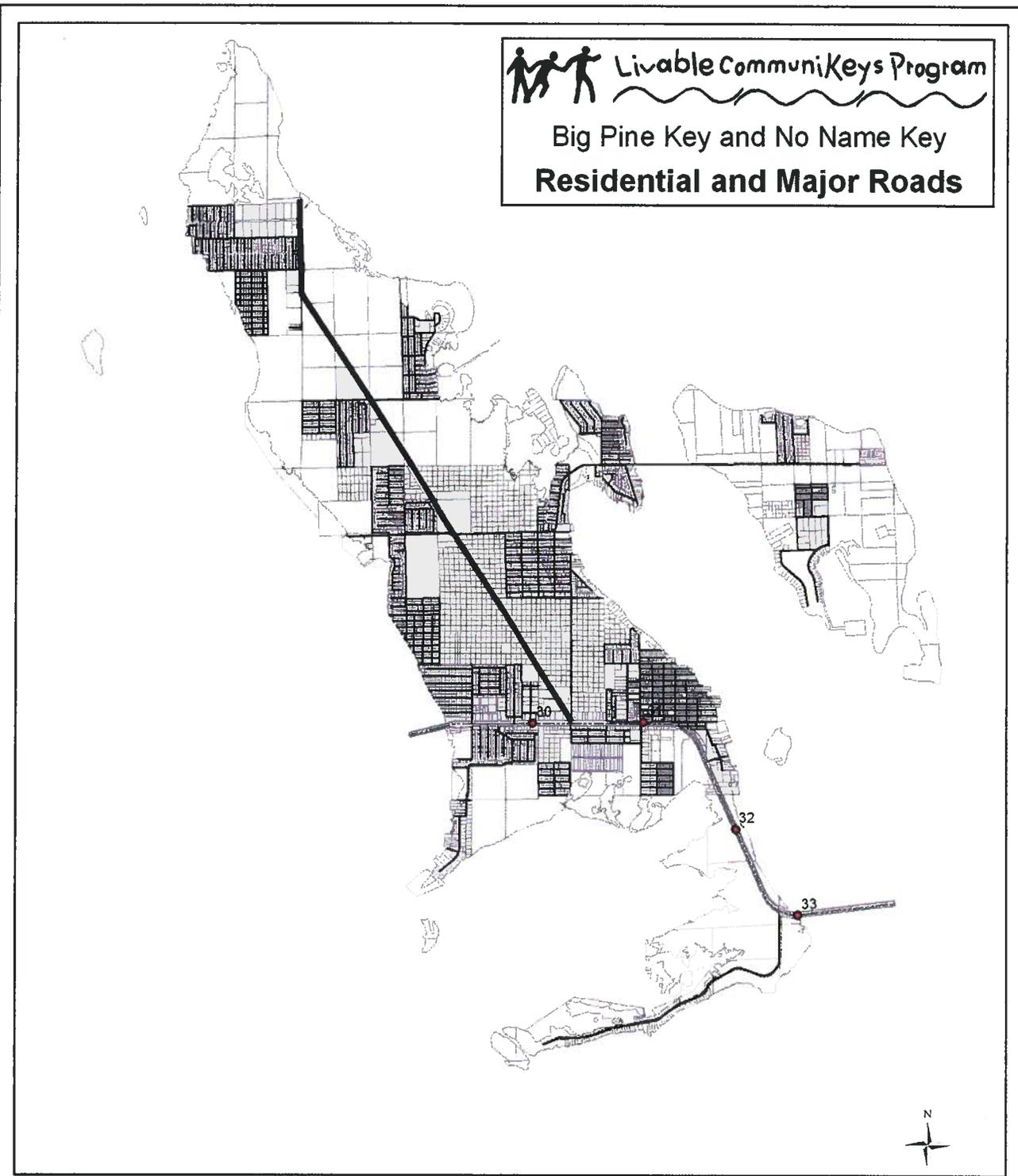
Action Item 15.2.5: Permit maintenance of private easements in their existing footprint and elevation.

Action Item 15.2.6: Permit the minimum necessary road widening within existing rights-of-way to accommodate the following:

- a. bike paths and/or sidewalks.
- b. public facilities including sewage collection systems, stormwater collection and treatment systems, water distribution systems and other utilities.

Fiscal Implications and Anticipated Capital Improvement Projects

The county's seven-year road plan existed prior to and separate from this Master Plan. The county's planned roadway improvements were modeled in the HCP and included in this Master Plan. The only additional fiscal impacts introduced by that process are associated with the addition of wildlife management design and construction aspects to already existing road maintenance and widening plans. It is estimated that these management items (e.g., speed bumps, signs, etc.) add a small amount to the cost of road maintenance on average. The projected capital cost of the current seven-year road plan is \$1.5 million. Therefore, we can assume that the HCP/Master Plan requirements will add only a small amount to that cost for at least the next seven years. There are no other new fiscal impacts or capital costs to Monroe County introduced by the Traffic and Transportation Element.



Legend

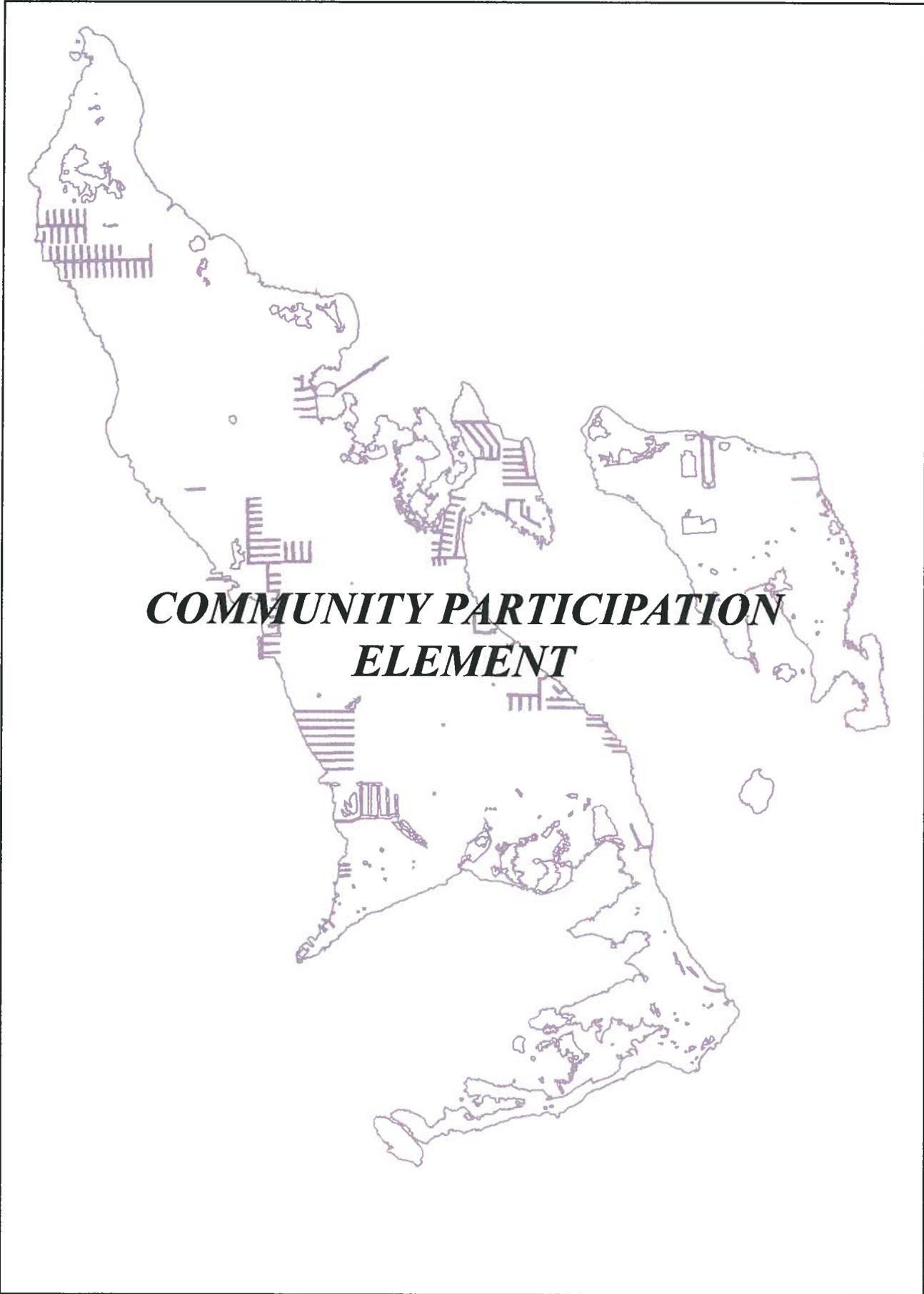
- Mile Marker
- ▭ Parcels
- Residential Roads
- Key Deer Blvd.
- U.S. 1



**Monroe County
Planning and Environmental
Resources Department**

This map is for Monroe County Growth Management Division purposes only. The data contained herein is illustrative only and may not accurately depict boundaries, parcels, roads, right of ways, or identification information.

Figure 6.1 Platted residential and major roadways on Big Pine Key and No Name Key.
(Ordinance 020-2009, § 1)



GOAL 16

Encourage community involvement in implementing and monitoring the Livable CommuniKeys Program (LCP) Master Plan

Current Conditions Summary

The community has demonstrated their interest in planning for the future of Big Pine Key and No Name Key by attending workshops, community meetings and sending letters to the planning department concerning what they hoped to achieve in this planning process. Continuous community feedback has allowed staff to gain an understanding of the needs and desires of the community. The community interest has kept the project on track moving forward toward the Vision.

Four Livable CommuniKeys newsletters were written and distributed to all residents of the community and to property owners who may live in a different location. The newsletters were an outreach effort to the community, as a whole, to assure that everyone had an opportunity to become informed about the issues being addressed in both the LCP Master Plan and the Habitat Conservation Plan (HCP). Each of the three LCP workshops was well attended by sometimes more than 100 residents.

Policy 101.20.1 of the 2010 Comprehensive Plan directs that the LCP Master Plans be developed following certain principles. Principle number Two states that the community master plans will include “a monitoring mechanism to provide accountability to the communities.” Principle number Five directs that “each Community Master Plan will include mechanisms allowing citizens continued oversight and involvement in the implementation of their plans. Through the Community Master Plans, programs for ongoing public involvement, outreach, and education will be developed.”

Analysis of Community Needs

Continuing Community Involvement

Mechanisms need to be developed to assure that the citizens of this planning area are kept informed and have an opportunity for meaningful comment on plan implementation, at a minimum including the H budget, community facilities, U.S. 1 expansion and progress on the corridor enhancement plan.

Recommended Strategies and Actions

Strategy 16.1

Provide updates to the community on all aspects of plan implementation and the status of public projects on Big Pine Key and No Name Key.

Action Item 16.1.1: Work closely with the County communications office to distribute information through press releases and the Monroe County web site.

Action Item 16.1.2: Continue to provide speakers to civic and service organizations to discuss LCP Master Plan issues.

Action Item 16.1.3: Publish and distribute a public newsletter on a periodic basis to provide community awareness and update on the progress.

Strategy 16.2

Provide opportunities for public review of the annual development and acquisition report required in the HCP and Strategy 1.5.

Action item 16.2.1 Present the report annually in a public meeting before the Planning Commission including the evaluation and demonstration of compliance with the total allowable H and the H of conservation parcels acquired for the purpose of mitigating H developed.

Action Item 16.2.2: Place the annual Report on the County web page and in the Public Library on Big Pine Key.

Strategy 16.3

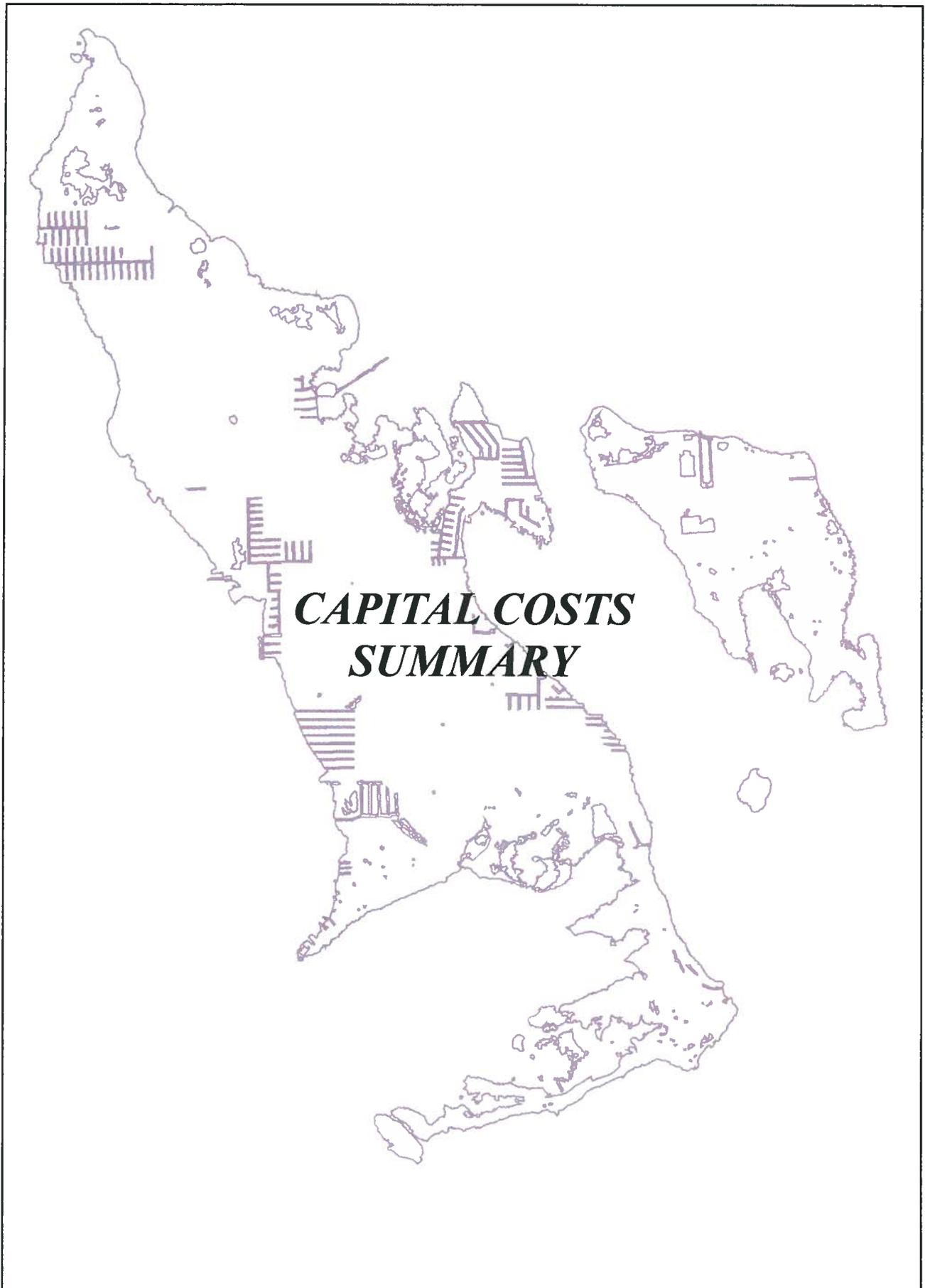
Establish a Big Pine Key Corridor Area Enhancement Committee to advise the Planning Commission on project proposals within the identified corridor.

Action Item 16.3.1: Appoint five to seven Committee members to include representatives from the business community, the general citizenry, and design professionals to serve as volunteers reviewing and commenting on plans for projects and improvements along the corridor.

Action Item 16.3.2: Specify procedures for Committee review of development and redevelopment proposals concerning conformance to the Architectural Guidelines in the Big Pine Key/US 1 Corridor Enhancement Plan.

Action Item 16.3.3: Hold all meetings of the Committee in a public format and advertise the date and agenda following the Florida "Sunshine" Law requirements.

Action Item 16.3.4: Support the Committee by having the planning department provide technical and secretarial staffing, mailings, advertising, and preparation of Committee reports.



Capital Costs Summary

Table 7.1 below lists the estimated costs of the major capital improvements that are called for in the plan. Not every suggested project is included in this list (e.g. public offices or neighborhood parks) because many are undefined at this time and it is not possible to determine what costs may be involved. The seven year roadway improvements plan only extends to the year 2006. After this date the new cost estimates will have to be included to achieve a more accurate total cost over the planning horizon. Estimates were gathered from various sources including:

- The Monroe County Sanitary Wastewater Master Plan
- The Monroe County Seven Year Roadway/Bicycle Path Plan
- The Florida Keys Overseas Heritage Trail Master Plan
- The Monroe County Capital Projects Plan
- The Monroe County Annual Budget

Table 7.1 Estimated cost of capital improvements		
Project	Cost	Source of Funds
Fire Station Redevelopment	\$ 2,400,000	Infrastructure tax
Community Park Development	\$ 3,500,000	Infrastructure tax
Roadway/Bike Path (including stormwater management)	\$ 1,557,170	Impact Fees
Overseas Heritage Trail (including landscaping)	\$ 1,485,000	FDOT/DEP/National Park Service
Wastewater Treatment Facilities	\$ 35,550,000	Sources outlined in SWMP
Total Cost of Capital Improvements	\$ 44,492,170	

Table 7.1 also identifies the sources of the funding for each of the projects. Both the fire station and the community park development have been allocated funding in the year 2003 and are projects which have already begun. The roadway improvements only pertain to county maintained roads and bike paths and are funded through impact fees. The proposed widening of U.S. 1 will be done by FDOT, which has already allocated funding for the design of the project. Funding sources have not been identified for the improvements to this section of the Overseas Heritage Trail, however the DEP is actively seeking sources at this time. The Monroe County Sanitary Wastewater Master Plan outlines a number of sources for use in funding wastewater facilities including user fees and charges, bonds and loans, grants, financial assistance for low income individuals, and assessment fees. Some areas of Big Pine have been determined to be 'hot spots' and are ranked as 4th, 5th, 8th, and 9th in terms of priority in the Lower Keys. These 'hot spots' will be addressed after the current wastewater projects are underway and funding sources will be pursued at that time.

The table below estimates of the cost of reaching the 3 to 1 mitigation factor required by the HCP.

Table 7.2 Estimated cost of 3 to 1 mitigation	
Estimated land value (based on average cost)	\$ 6,185,000
Annual management costs: \$1,000 per acre for the first three years	\$ 810,000
Annual management costs: \$100 per acre after the first three years	\$ 459,000
20 year monitoring (\$5,000 per year)	\$ 100,000
Total cost over 20 years	\$ 7,554,000
Source: Habitat Conservation Plan for Florida Key Deer	

Mitigation costs will be shared by the county, the state, and the federal government. Much of Big Pine and No Name are included in the state's CARL program. When lands within the CARL boundary are acquired, the county can apply to the state for reimbursement for monies spent on acquisition. Additionally, all of Big Pine and No Name are within the National Key Deer Refuge and lands acquired which have significant value to the endangered species may be turned over to the US Fish and Wildlife Service for management purposes, reducing the overall management cost to the county.

Both the capital costs and the mitigation would cost an estimated \$52,046,170 over the twenty year period.

If purchase of all private, vacant Tier I lands were necessary, a preliminary estimate in 2002 indicates the assessed value of these lands would be approximately \$16 million. Purchase price is typically higher than the assessed value, therefore a higher number could be expected.

County of Monroe

Growth Management Division

Planning & Environmental Resources
Department

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Board of County Commissioners

Mayor George Neugent, Dist. 2
Mayor Pro Tem Heather Carruthers, Dist. 3
David Rice, Dist. 4
Danny Kolhage, Dist. 1
Sylvia J. Murphy, Dist. 5

We strive to be caring, professional and fair

July 5, 2013

Brian Powell
Habitat Conservation Planning Coordinator
U.S. Fish and Wildlife Service
1339 20th Street
Vero Beach, FL 32960-3559

RE: HCP/ITP Annual Report

Dear Mr. Powell,

The Federal Fish and Wildlife Incidental Take Permit #TE083411-0 requires the County to provide an annual report for each of the 20 years of the permit. Enclosed please find Monroe County's 7th Annual Report for the year of January 1, 2012 to December 31, 2012.

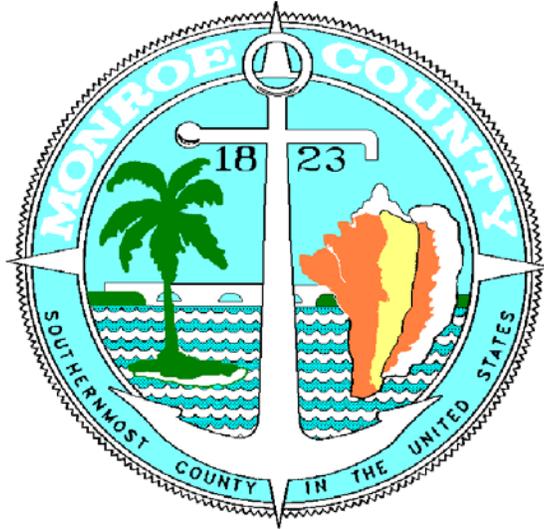
Should you have any questions or comments, do not hesitate to contact me. Thank you for your patience.

Sincerely,

Michael Roberts, CEP; PWS
Sr. Administrator – Environmental Resources
Monroe County Department of Planning and Environmental Resources

Cc: Rebecca Jetton, Florida Department of Economic Opportunity
Aileen Boucle, Florida Department of Transportation

County of Monroe
Growth Management Division



We strive to be caring, professional and fair

INCIDENTAL TAKE PERMIT NUMBER TE083411-0

7th ANNUAL BIG PINE / NO NAME KEY MITIGATION REPORT

REPORTING YEAR 7: JANUARY 1, 2012 TO DECEMBER 31, 2012

Table of Contents

INTRODUCTION	2
I. 2012 KEY DEER CENSUS.....	3
II. KEY DEER MORTALITY SUMMARY	3
III. KEY DEER MORTALITY DATA	5
IV. Summary of Habitat Management Activities	6
V. KEY DEER MORTALITY RATIO	6
VI. ANNUAL IMPACTS TO 500-METER LOWER KEYS MARSH RABBIT BUFFERS	7
VII. CUMULATIVE IMPACTS TO MARSH RABBIT BUFFERS	7
VIII. LOWER KEYS MARSH RABBIT ROAD MORTALITY	7
IX. CUMULATIVE IMPACTS TO PROJECT AREA SINCE PERMIT ISSUANCE (6/9/2006).....	8
X. DEVELOPMENT ACTIVITIES	9
XI. H VALUE ASSOCIATED WITH DEVELOPMENT JANUARY 1, 2012 THROUGH DECEMBER 31, 2012	11
XII. CUMULATIVE H Value for all Development	11
XIII. CONSTRUCTION OBSERVATIONS	11
XIV. ACQUISITIONS THROUGH DECEMBER 31, 2011	12
XV. ACQUISITIONS FOR 2012.....	12
XVI. CUMULATIVE “H” ACQUIRED	12
XVII. management activities conducted during January 1, 2011 – December 31, 2011	12
XVIII. ASSESSMENT of all mitigation parcels	12
IXX. EXOTIC / NUISANCE PLANT CONTROL PROGRAM MONITORING REPORT	13
XX. MITIGATION CONFIRMATION STATEMENT	14
XXI. OTHER PERTINENT INFORMATION	15
XXII. UPDATED MASTER LIST OF ALL DEVELOPMENT PERMITTED ON BIG PINE KEY AND NO NAME KEY	16

Exhibits

Exhibit 1	Map of Development Activities – Cumulative
Exhibit 2	Map of Development Activities – 2012
Exhibit 3	Map of Acquired Mitigation Parcels – Cumulative
Exhibit 4	Map of Acquired Mitigation Parcels – 2012
Exhibit 5	Map of Cumulative Impacts to Lower Keys Marsh Rabbit buffers

Appendices

Appendix I	Monroe County Land Steward Report
Appendix II	Master List

INTRODUCTION

Efforts to address the development impacts on the habitat of the Key Deer, Lower Keys Marsh Rabbit and the Eastern Indigo Snake on Big Pine Key and No Name Key started in the mid-1980s. In 1998, Monroe County, the Florida Department of Transportation (FDOT) and the Florida Department of Community Affairs (DCA), (permittees) signed a Memorandum of Agreement in which they committed to develop a Habitat Conservation Plan (HCP) for these two Keys. Concurrently with the HCP, Monroe County carried out a planning effort, the Liveable Communikey Plan (LCP), based on community participation, in order to determine community needs. Monroe County initiated the LCP in April 2000 and adopted the Master Plan for Future Development of Big Pine Key and No Name Key in December 2004 (Monroe County 2004).

The HCP, in conjunction with the LCP for Big Pine Key and No Name Key, HCP, provides the basis of a Master Growth Management Plan for development on Big Pine Key and No Name Key. It satisfies the functional and recreational needs of a rural community, while maintaining the long-term viability of covered species and their habitat. The HCP provides for minimization and mitigation of incidental take by regulating development and acquisition activities. The goals of the HCP ensure that future development activity does not have a negative impact on the Key Deer, Lower Keys Marsh Rabbit and the Eastern Indigo Snake. The Federal Incidental Take Permit, TE083411-0 (ITP) is the accompanying document to the HCP. The ITP has a twenty (20) year lifespan running from June 9, 2003 through June 30, 2023. To account for development activities authorized prior to the adoption of the LCP, impacts and land acquisition activities are included for the period from March 13, 1995 to June 8, 2006. The initial monitoring year (1st Annual Monitoring Report) is the period from the start of the Incidental Take Permit, June 9, 2006 to December 31, 2006. Items counted over the 20-year period include county acquired parcels, number of fence permits, single family residential developments and commercial developments.

This is the 7th Annual Big Pine Key / No Name Key Mitigation Report. Each year Monroe County develops an annual report and presents it to the U.S. Fish and Wildlife Service. This report fulfills the requirements of the ITP, gives a full accounting of development and acquisition activities from March 13, 1995 through December 31, 2012 and it reports on the bank balance of the “H” value debited by development activities and credited by acquisition and conservation activities.

I. 2012 KEY DEER CENSUS

(Key deer National Wildlife Refuge data)

For January 1, 2012 to December 31, 2012

Average count for full year = 59.0

The Key deer road-count index value is the average count from multiple road count surveys throughout the year on Big Pine Key and No Name Key. The road counts are conducted on the USFWS Survey Route, approximately monthly. The 2012 road-count index value was derived from 10 standardized count surveys. For the period January through December, 2012, the census value was 59.0. The record high count index value for any year since 1975 (when the counts were started) occurred in 2006 (71.5).

II. KEY DEER MORTALITY SUMMARY

(Key deer National Wildlife Refuge data)

The other index of Key deer abundance is the mortality index (human-caused deer deaths documented on Big Pine and No Name Keys). The human-caused mortality index was 161 (this value was 153 in 2011). The 2012 count (161 human-caused) is the highest on record since the mortality counts were started in 1966. The second highest was the 2011 value and the third highest was in 2009 (126 human-caused). Prior to 2009 to 2011, the highest mortality index occurred in 2005 (105 human-caused). The values first surpassed 100 in 2003 (102 human-caused). In 2012, the total mortality count (all known mortalities from all causes) on Big Pine Key and No Name Key was 197 (this value was 184 in 2011).

Over the long-term, the Big Pine Key-No Name Key mortality index (count of human-caused deaths documented over the year) and the road count index illustrated a direct correlation, with an overall positive trend in each. However, the peak road count occurred in 2006, and has declined for six years to the present. The decline is not precipitous. Two earlier declines appear to have been somewhat sharper, although each lasted only four years prior to changing upward. The annual mortality counts have been at their highest for the last four years. The high mortality indices are due to an increase in the absolute number of road-kills (DVCs). An increase in the absolute number of disease-related deaths also contributes slightly.

Mortalities in the core of the range (HCP area; Big Pine and No Name Keys), 2007 to 2012.

	Combat	Disease	Dog	Drown	Entn glmnt	Poach	Deer- vehicle collision (DVC)	Misc. (human causes)	Unkn own	Total	DVC as % Total
2007	1	6	0	4	1	1	83	1	15	112	74%
2008	0	2	0	4	1	1	86	2	24	120	72%
2009	0	4	0	4	2	2	117	1	25	155	75%
2010	2	7	0	7	1	0	104	1	20	142	73%
2011	2	13	4	3	3	0	138	3	16	184	75%

2012	4	17	4	3	5	0	150	1	15	197	76%
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The proportion of all known Big Pine and No Name Key deaths that were due to DVCs in 2012 (76 percent) was similar to values for 2004 to 2012 (range, 72 to 76 percent). In 2012, 83% of the total known Big Pine and No Name Key mortalities were attributed to all human causes combined (ranging from 78 to 85 percent, 2004-2012). The long-term average proportion (encompassing 1966-2012) is approximately 83 percent (DVCs alone account for 76 percent of all known deaths). From 1983 to 2001, the 13-year average attributed to human causes had gradually declined from 91% to 73%. The 13-year average attributed to human causes (79% in 2011, 80% in 2012) has risen gradually subsequent to the 2001 low (73%, 1989—2001). Some of the deaths for which the cause was “undetermined”, and likely even some disease deaths, undoubtedly include a number of cases that may actually be attributable to human causes, particularly DVCs. However, an unknown number of both natural and human-caused deaths go entirely undetected.

Of the road mortalities in which sex was determined since 1966, approximately 39% were females (61% males). The 13-year average has ranged from approximately 37-41 percent females since 1978 (the first year a 13-year average was available). The 13-year average as of 2012 was approximately 41 and 59 percent females and males, respectively.

DVCs on U.S.1 comprised approximately 67 percent of all DVCs on Big Pine Key during 2012. The 2012 proportion (67%) was the highest value since 1996 (70%). Similarly, DVCs on U.S.1 comprised approximately 67 percent of all DVC mortalities on Big Pine Key and No Name Key combined (only one DVC was attributed to No Name Key). Of the road mortalities documented on Big Pine Key since 1966, approximately 54 percent were on U.S.1 (13-year averages ending 2012, 1994, and 1978 were approximately 50, 58, and 53%, respectively). Of the total DVC mortalities documented on both Big Pine and No Name keys since 1966, approximately 50 percent were on U.S.1. Thus, U.S.1 accounts for half of all DVCs in the core over the long term, and two-thirds of DVCs in 2012.

Of the total mortalities documented throughout the core since 1966, of the mortalities where the cause was determined, approximately 88 percent were from DVCs. Of all mortalities rangewide, the proportion that occurred on Big Pine Key was approximately 94 percent (mean, 88% since 1966). Mortalities in the core (Big Pine and No Name keys combined), comprised approximately 95 percent of all mortalities rangewide. Of all DVCs rangewide, the proportion that occurred on Big Pine Key was also approximately 94 percent (grand mean, 90%). The proportion of DVCs that were attributed to No Name Key was approximately 1 percent (grand mean, 6%).

The long-term proportion of all Big Pine and No Name Key deaths attributed to disease (1966—2006) was approximately 2 percent. The annual proportion is greater in recent periods (5%, 1991-2012) compared to earlier decades (less than 1%, 1966-1990). The 13-year average increased from approximately 0.1 percent in 1966 to 5 percent as of 2005; the 13-year average remains above 5 percent. The proportion of all Big Pine and No Name Key deaths attributed to disease in 2012 was approximately 9 percent.

III. KEY DEER MORTALITY DATA

(Key deer National Wildlife Refuge data)

Total mortalities in the core jumped to 184 and 197 in 2011 and 2012, respectively, from a previous record high of 155 in 2009. Total DVC mortalities in the core jumped to 138 and 150 in 2011 and 2012, respectively, from a previous record high of 117 in 2009. DVC mortalities on U.S.1 jumped to 85 and 100 in 2011 and 2012, respectively, from a previous record high of 56 in 2009. However, the proportion of all deaths attributed to DVCs was approximately 76 percent, similar to the long-term average (72 percent; as discussed above).

Overall in 2012, the proportion of mortalities from DVCs is not particularly great (although the trend appears increasing), the proportion attributed to U.S.1 is somewhat high, the absolute number of DVCs attributed to U.S.1 was very high (also high in 2011), the road-count has continued to decline somewhat (for the sixth year), and the ratio has continued to increase. ***These results may suggest that movement has increased, resulting in more deer intersecting U.S.1 and thus, colliding with vehicles.*** Alternatively, U.S.1 has become more lethal to deer that intersect it.

Absolute road mortalities increased, with much of the increase attributed to U.S.1. The increase would result from increased abundance and or a higher mortality rate. Higher population levels could result in commensurately more DVCs. Alternatively, mortalities may be occurring at a higher per capita rate than in previous years, such as if U.S.1 has become more lethal to deer. This may be the case if the mortality and count indices, respectively, accurately depicted the increase in mortality and the lack of population increase indicated over recent years). If so, one factor that could evidently explain it is that the proportion of mortalities attributed to U.S.1 was high in 2011 and 2012. However, actual abundance may or may not be well indicated by the count index on a given year.

With regard to recent years in the context of the long term record of the count index, we may be witnessing a possible decrease in the long-term population growth trajectory. Key deer may have attained or exceeded carrying capacity within the HCP area, which is the core of the Key deer's range. Accordingly, in the absence of new and substantial threats or major changes in habitat that result in major changes in food availability and or survival, the Key deer population within the core may fluctuate around carrying capacity (the actual value of which cannot be directly calculated). Numerical fluctuations will result from source-driven and random variation in factors including environmental influences, annual productivity of the landscape, mortality rates, and annual variation in female productivity. We are unable to determine whether the current mortality rate is compensatory or additive.

DVCs remain the prominent source of Key deer mortality. Roadside feeding may exacerbate the threat of DVCs to a subset of Key deer. Though roadside feeding may directly or indirectly influence DVCs to some degree, the more profound impacts of feeding in any context are changes in Key deer social behavior, movement, dispersion, nutrition, and possibly genetic patterns.

IV. Summary of Habitat Management Activities

The Monroe County Land Steward is responsible for managing all of the County's conservation lands, including the County's mitigation properties on Big Pine and No Name Keys. Over the past year, the Land Steward and the Monroe County Invasive Exotic Plant Technicians have conducted numerous invasive exotic plant removal projects, site cleanups and native planting projects on County mitigation properties. Larger scale work sites included parcels within Sands, Eden Pines, Kyle Dyer, Palm Villa and Cahill Subdivisions. Some of these projects required the use of independent contractors and/or assistance from Monroe County Public Works.

V. KEY DEER MORTALITY RATIO

(Key deer National Wildlife Refuge data)

For January 2012 through December 2012

$$\text{Ratio} = \frac{\text{human-related deaths}}{\text{average deer seen}} = \frac{161}{59.0} = 2.73$$

For January 2011 through December 2011

$$\text{Ratio} = \frac{\text{human-related deaths}}{\text{average deer seen}} = \frac{153}{61.3} = 2.50$$

For January 2010 through December 2010

$$\text{Ratio} = \frac{\text{human-related deaths}}{\text{average deer seen}} = \frac{113}{57.1} = 1.98$$

For January 2009 through December 2009

$$\text{Ratio} = \frac{\text{human-related deaths}}{\text{average deer seen}} = \frac{126}{63.9} = 1.97$$

The ratio of human-related deaths (mortality index) to average number of deer seen (count index), 2.73, was well above the upper boundary of the 95% confidence interval (1.53) defined in the HCP. The 2012 mortality index (2.73) was at the highest level since 1986. During each year, 2009 through 2012, the mortality index was at its highest level since 1987. The 2012 mortality index was also substantially above the previously high values (2009, 1.97; 2010, 1.98; and 2011, 2.50) following the late 1980s. The 13-year average as of 1987 (first year available) was 2.29. That declined to 1.42 in 2000, 2001, and 2002, and subsequently rose to 1.79 (13-year average, 2000—2012; 95% CI=0.23 for those 13 years gives limits of 1.56—2.02). The long-term average (38 years, 1975 to 2012) was 1.83 (95% CI=0.24 for those 38 years gives limits of 1.59—2.07).

VI. ANNUAL IMPACTS TO 500-METER LOWER KEYS MARSH RABBIT BUFFERS

January 1, 2012 – December 31, 2012

For Reporting Year 7, two (2) development permits were issued resulting in 17,500 square feet of land impacting the Marsh Rabbits' 500-meter wetland buffer. No development permits were issued outside the Lower Keys Marsh Rabbit green zone.

2012 ANNUAL DEVELOPMENT IMPACT TO THE 500-METER WETLAND MARSH RABBIT BUFFER AREAS

REAL ESTATE	PERMIT NUMBER	ISSUE DATE	PERMIT TYPE	IMPACTS (BY ACREAGE)
00250330-000000	12100893	8/24/2012	SFR	0.172
00312571-003100	06100601	4/25/2012	SFR	0.23
TOTAL PARCELS IMPACTED (BY ACREAGE)				0.402

VII. CUMULATIVE IMPACTS TO MARSH RABBIT BUFFERS

Since 2003, the cumulative impact of all development projects affecting buffers for the Lower Keys marsh rabbit is 44.302 acres. Cumulative impacts to the Lower Keys Marsh Rabbit buffer **since permit issuance** (June 9, 2006) are 19.04 acres (Exhibit 5).

VIII. LOWER KEYS MARSH RABBIT ROAD MORTALITY

In both 2006 and 2007, the occurrence of at least one road kill on Big Pine Key was verbally reported by local naturalists, but not otherwise substantiated. In 2008, at least two mortalities were detected and the carcasses retrieved. One was killed by a vehicle on Wilder Road, along a stretch where a rabbit had previously been seen by USFWS personnel fleeing from a cat. In 2009, one was taken from Big Pine Key to a veterinarian, where it died. It reportedly involved a vehicle strike, but no other details were conveyed. A necropsy conducted on that mortality suggested that a predation attempt was likely, but that subsequently, a vehicle strike may have occurred as well. These observations indicate, as per the literature on Lower Keys marsh rabbits, that cats continue to suppress rabbit populations and that vehicle strikes are an additional threat. In 2010, no road mortalities were detected on Big Pine, No Name, or other areas outside of Naval Air Station Key West. In late February, 2011, one LKMR road mortality occurred and was retrieved on Key Deer Blvd., Big Pine Key. No Lower Keys marsh rabbit mortalities were reported for 2012.

IX CUMULATIVE IMPACTS TO PROJECT AREA SINCE PERMIT ISSUANCE (6/9/2006)

REAL ESTATE NUMBER	PERMIT NUMBER	ISSUE DATE / DATE LAND ACQUIRED	PERMIT TYPE	ACRES
00249720-000000	98100115	10/26/2006	SFR	0.34
00316150-000000	97101902	10/26/2006	SFR	0.41
00313100-000000	98100811	11/22/2006	SFR	0.26
00245720-000000	03103814	1/2/2007	SFR	0.15
00249130-000000	04104077	1/10/2007	SFR	0.17
00248460-000000	04102831	1/17/2007	SFR	0.17
00248980-000000	04101652	1/18/2007	SFR	0.17
00245880-000000	07100308	1/19/2007	SFR	0.15
00249660-000000	06106296	1/19/2007	SFR	0.17
00249900-000000	07100309	1/19/2007	SFR	0.17
00249150-000000	03104466	1/24/2007	SFR	0.17
00248390-000000	05101386	1/25/2007	SFR	0.18
00285290-000000	03102339	1/25/2007	SFR	0.19
00285300-000000	04100750	1/25/2007	SFR	0.12
00247780-000000	04104936	2/23/2007	SFR	0.17
00312571-000200	97101893	3/12/2007	SFR	0.37
00248700-000000	05101709	3/26/2007	SFR	0.17
00249380-000000	05102876	3/26/2007	SFR	0.17
00248310-000000	05103866	3/30/2007	SFR	0.17
00312572-003300	02100058	4/23/2007	SFR	0.14
00309761-000101	97101413	5/3/2007	SFR	0.58
00286360-000000 - MARINER'S	07101477	7/31/2007	Commercial	10.17
00248960-000000	02105130	8/16/2007	SFR	0.17
00247930-000000	05104608	8/24/2007	SFR	0.18
00245900-000000	05106221	8/30/2007	SFR	0.15
00245600-000000	06100466	9/20/2007	SFR	0.14
00109340-000300	99103072	12/21/2007	SFR	0.14
00111420-000100	05105317	2/1/2008	Commercial	1.02
00111420-000500	05105321	2/1/2008	Commercial	1.02
00111420-000100	07102786	2/1/2008	SFR	1.02
00111420-000100	07103037	2/1/2008	SFR	
00111420-000500	07102787	2/1/2008	SFR	1.02
00111420-000500	07103036	2/1/2008	SFR	
00111460-000000	02100313	4/23/2008	Public	1.64
00289710-000000	03102303	4/29/2008	SFR	0.12
00249660-000000	06106296	5/13/2008	SFR	0.17
00245880-000000	07100308	6/5/2008	SFR	0.15
00249900-000000	07100309	6/5/2008	SFR	0.17
00246170-000000	07105045	8/13/2008	SFR	0.14
00249040-000000	07104806	9/16/2008	SFR	0.17
00111090-000000 &	07105046	11/21/2008	Commercial	1.26

00275620-000000				
00312572-003400	04100574	12/8/2008	SFR	0.14
00266770-000000	06104582	2/9/2009	SFR	0.35
00266780-000000	06104582	2/19/2009	SFR	0.00
00248690-000000	08102594	3/12/2009	SFR	0.17
00111690-000900	08103853	4/24/2009	Commercial	3.02
00247820-000000	08103005	8/25/2009	SFR	0.17
00250410-000000	09101886	10/30/2009	SFR	0.17
00296820-000000	97101361	12/16/2009	SFR	0.17
00111690-000400	09105095	1/4/2010	Commercial	1.99
00250510-000000	09102323	3/8/2010	SFR	0.17
00248640-000000	09102011	5/20/2010	SFR	0.17
00313510-000000	05103051	12/1/2010	SFR	0.20
00247640-000000	10105246	1/19/2011	SFR	0.18
00310700-000000	5101712	2/11/2011	SFR	0.15
00110830-000103	8103871	7/12/2011	SFR	1.12
00313820-000000	5102824	8/16/2011	SFR	0.17
00313620-000000	5102823	8/25/2011	SFR	0.17
00250150-000000	11100039	8/26/2011	SFR	0.17
00250390-000000	11102869	10/21/2011	SFR	0.17
00250520-000000	11101010	11/28/2011	SFR	0.17
00285310-000000	10107566	12/22/2011	SFR	0.12
				32.58

X DEVELOPMENT ACTIVITIES

a. March 13, 1995 – December 31 2011

The total “H” value of all development activities between March 13, 1995 and December 31, 2011 is 0. 0.3612 "H_{impact}". See Master List (Appendix II).

b. January 1, 2012 – December 31, 2012

The total “H_{impact}” value for Reporting Year 6 is 0.0029 “H”.

2012 SINGLE FAMILY RESIDENTIAL BUILDING PERMITS						
RE	Permit	Permit Issue Date	Parcel H	H Impact	Tier	Permit type
00250330-000000	12100893	8/24/2012	0.0011	0.0011	3	SFR
00312571-003100	06100601	4/25/2012	0.0005	0.0005	2	SFR
00303460-000000	12100972	4/24/2012	NO DATA	0	1	SFR
TOTAL 'H' IMPACT SFR				0.0016		

2012 FENCE PERMITS						
RE	Permit	Permit Issue Date	Parcel H	H Impact	Tier	Permit type
00309170-000000	12102646	6/28/2012	0.0039	0.00078	2	Fence
00312571-002600	12102346	6/26/2012	0.0007	0.00014	2	Fence
00314180-000000	12105046	12/18/2012	0.0019	0.00038	2	Fence
00246710-000000	12100340	3/16/2012	0.0032	0	1	Fence (replace)
00286070-000000	11105878	1/12/2012	0.0021	0	3	Fence/ret wall relocation
00272471-003300	12101130	4/24/2012	0.0006	0	2	gate
0027471-003500	12101131	4/24/2012	0.0008	0	2	gate
00112340-001300	12104783	11/28/2012	0.0069	0	1	gate replacement
00307100-000000	12104966	12/20/2012	0.0007	0	1	Fence/ - replace existing
00260920-000000	12100134	3/26/2012	0.0022	0	1	Fence/ret wall (front only)
00247550-000000	12101725	5/1/2012	0.0011	0	3	Fence/ (repair)
00112341-000600	12100788	3/15/2012	0.0028	0	1	retaining wall
TOTAL 'H' IMPACT FENCES				0.0013		

2012 LAND CLEARING PERMITS						
RE	Permit	Permit Issue Date	Parcel H	H Impact	Tier	Permit type
00304660-000000	11105708	12/6/2011	0.0005	NA		Land Clear (trim)
00108120-000500	11101235	3/16/2011	0.0013	NA		Land Clear (exotics)
00111540-000000	11103901	8/18/2011	0.0154	NA		Land Clear (exotics)
00312571-001500	11105405	11/9/2011	0.0012	NA		Land Clear (exotics)
00319491-001900	11105893	12/1/2011	0.0008	NA		Land Clear (exotics)
00319491-002000	11105891	12/1/2011	0.0008	NA		Land Clear (exotics)
00111150-000100	11103902	8/18/2011	0.0058	NA		Land Clear (pruning)
00246221-005300	11102179	5/4/2011	0.0015	NA		Land Clear (replacement)
00251150-000000	11102362	5/23/2011	0.0017	NA		Land Clear (trimming)
00108050-000103	11102032	4/27/2011	0.0049	NA		Land Clear(hazard tree)
00279050-000000	11102547	5/24/2011	0.0016	NA		Land Clear(hazard tree)
00293170-000000	11100794	2/18/2011	0.001	NA		Land Clear(hazard tree)
00304200-000000	11100588	2/22/2011	0.0005	NA		Land Clear(hazard tree)
00301900-000000	11102847	6/13/2011	0.001	NA		Land Clear(hzrd tree)
TOTAL 'H' IMPACT LAND CLEAR				0		

2012 COMMERCIAL BUILDING PERMITS						
RE	Permit	Permit Issue Date	Parcel H		Tier	Permit type
NO NEW COMMERCIAL DEVELOPMENT IN 2012						
TOTAL 'H' IMPACT COMMERCIAL						
TOTAL 'H' IMPACTS (all permits) .0029						

XI H VALUE ASSOCIATED WITH DEVELOPMENT JANUARY 1, 2012 THROUGH DECEMBER 31, 2012

	Period	Himpact	Hmitigation	No. of Residential	No. Tier 1	Tier I H	Native Habitat (acres)	Rabbit Buffer (acres)
Reporting Year 7	1/1/2012 - 12/31/2012	.0029	.0087	2	0	0	0.00	0.402

XII CUMULATIVE H Value for all Development

Total “H” impact for all time periods is 0.3641 “H”. See Appendix II for master list of all activity.

Summary of “H” Impact for Big Pine Key and No Name Key

	Baseline	Year 1 2006	Year 2 2007	Year 3 2008	Year 2009	Year 5 2010	Year 6 2011	Year 7 2012	TOTAL
SFR	0.0513	0.0341	0.0178	0.0058	0.0049	0.0025	0.0067	.0016	0.1231
Fence	0.0201	0.0166	0.0001	0.0016		0.00164	0.00072	.0013	0.04076
Commercial	.0590	0.0211	0.089	.0255	0	0.00136	0		0.19596
Public				0.0012					0.0012
Accessory	0.0002								0.0002
TOTAL	.1306	.0718	0.1069	.0341	.0049	.0055	0.00742	.0029	0.3641

XIII CONSTRUCTION OBSERVATIONS

The permittees made no observation of direct or incidental take of Key deer during construction monitoring of County facilities and road expansion activities.

XIV ACQUISITIONS THROUGH DECEMBER 31, 2011

There are a total of 1088 parcels that comprise the mitigation lands under the Monroe County's Habitat Conservation Plan (HCP). These lands are managed by the Monroe County Land Steward and, in some instances, the US Fish and Wildlife Service Key Deer Refuge staff. A total of 113 parcels are located on No Name Key and the remaining 975 parcels are on Big Pine Key. Acquired parcels are summarized below:

March 13, 1995 – December 31, 2011

For the reporting period of March 13, 1995 through December 31, 2010, Monroe County acquired parcels with a total "H" value of 2.0366 "H".

XV ACQUISITIONS FOR 2012

January 1, 2012 – December 31, 2012

During Reporting Year 7, Monroe County acquired 97 parcels (52.41 acres) with a total "H" of .449 "H".

XVI CUMULATIVE "H" ACQUIRED

Total cumulative "H" acquired is 2.5544 "H".

XVII MANAGEMENT ACTIVITIES CONDUCTED DURING JANUARY 1, 2011 – DECEMBER 31, 2011

The Monroe County Land Steward is responsible for managing all of the County's conservation lands, including the County's mitigation properties on Big Pine Key. Over the past year, the Land Steward has conducted numerous invasive exotic plant removal projects, site cleanups and native planting projects on County mitigation properties. Work sites included lots within Sands, Darios and Eden Pines Subdivisions and unplatted parcels outside of subdivisions. Site work was done by independent contractors and/or Monroe County Public Works. Additionally, the Monroe County Invasive Exotic Plant Technicians continue to monitor these and other mitigation properties to ensure that the sites remain free of invasive exotic plant species.

XVIII ASSESSMENT OF ALL MITIGATION PARCELS

There are 1,088 mitigation parcels on Big Pine and No Name Keys. Many of these parcels are individual lots within developed subdivisions. This situation creates a large amount of edge between developed parcels and the subject mitigation lands. The edge effects include the constant threat of invasive exotic plant invasion and the potential for

dumping and encroachment by neighboring residents. The Monroe County Land Steward is working to address these management issues by conducting invasive exotic removal projects, notifying residents of encroachment issues and working with Monroe County Public Works to clean up dumping. Additionally, the Land Steward has created an informational brochure for homeowners that provides information regarding invasive exotic plant species, native plants and the proper disposal of landscape debris.

IXX EXOTIC / NUISANCE PLANT CONTROL PROGRAM MONITORING REPORT

Site visits were conducted and aerial photo interpretation was used to determine the level of infestation of invasive exotic vegetation. For the purposes of this report, an “invasive exotic plant” is one that is listed on the Exotic Pest Plant Council’s list as either a Category I or a Category II species (list attached). A total of 66 parcels were found to have invasive exotic infestation level greater than 10 percent. These parcels comprise approximately 6.1 percent of the total number of parcels (1,088).

The greatest concentration of invasive exotics occurring on Monroe County Mitigation Lands is found in Sands Subdivision. However, Monroe County continues to make progress on the eradication of exotics in Sands. Within the past year, the County hired contractors to conduct invasive exotic removals on nineteen lots within this subdivision. The invasive exotic removals were followed by site cleanup and native vegetation planting as needed. Additional invasive exotic removal projects are planned for the coming years, subject to available funding.

The Monroe County Land Steward and Invasive Exotic Plant Technicians continue to monitor and treat invasive exotic plant species on Monroe County Mitigation Lands.

Please see Appendix I for the Invasive Exotic Vegetation Status Report.

XX MITIGATION CONFIRMATION STATEMENT

3H:1H mitigation to impact ratio

The cumulative H value of lands acquired as mitigation since March 13, 1995 through the end of the reporting period, December 31, 2012 is 2.55 H.

The cumulative H value of parcels impacted by development activities since March 13, 1995 through the end of the reporting period, December 31, 2011 is 0.3641 H.

The ratio of mitigation H (acquired lands) to H impact (from development activities) is:
 $2.55 H / 0.3641 H = 7.0:1H$.

5% lag in meeting mitigation requirements

H _{impact} :	= 0.3641
Mitigation required (H _{impact} X 3):	= 1.09
Mitigation Provided:	= 2.554
% of required mitigation provided:	= 234%

The permittees are not lagging behind in the 3H:1H mitigation requirement by more than 5%.

Statement of confirmation

The permittees confirm that mitigation has occurred as to maintain a 3H:1H ratio with respect to development activities and demonstrates by the calculations above that the cumulative H value of lands acquired as mitigation does not lag by more than 5 percent allowed to fully mitigate the cumulative H value of impacts authorized through the reporting period.

Townsley Schwab, Sr. Director of Planning & Environmental Resources

XXI OTHER PERTINENT INFORMATION

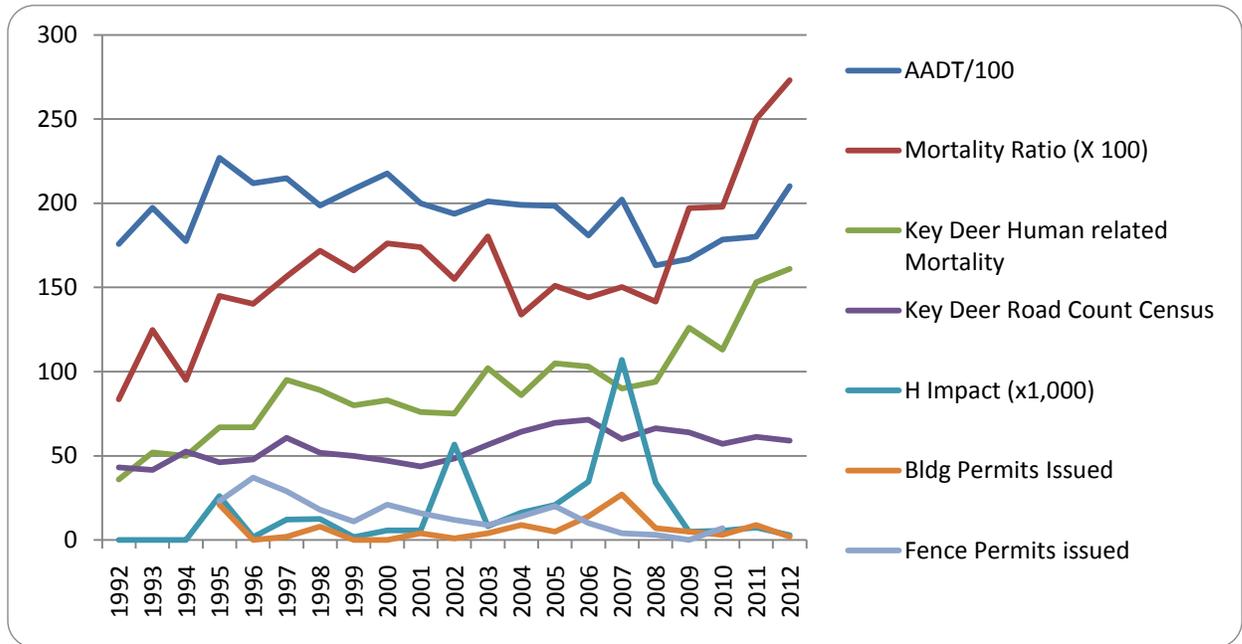
The Key Deer mortality data continues to be a concern. As reported, a total of 197 Key Deer mortalities were reported in 2012, with 151 of these being credited as human related mortality. This, in conjunction with the census count, yields a mortality index of 2.73.

The HCP states a presumption that the mortality index reflects herd dynamics and increases in the index can be attributed to development, particularly due to increased traffic. However, the actual traffic counts on U.S. 1 on Big Pine Key showed a significant drop in annual average daily traffic (AADT) counts between 2007 and 2011, returning to over 21,000 AADT for the first time since 2000 in 2012. For the reporting period 1995 through present, Monroe County has issued 121 permits for new single family residences. Since 2006, there have been 65 building permits issued, however 39 of these permits are on hold either due to the FEMA injunction or through legislative extensions. In addition, the actual census population of the Big Pine Key CDP dropped by over 15% between 2000 and 2010. The presumed correlation of development resulting in increased deer mortality does not appear to be reflected in this data.

	<i>AADT</i>	<i>BLDG PERMITS</i>	<i>H IMPACT</i>	<i>KEY DEER CENSUS</i>	<i>KEY DEER MORTALITY</i>	<i>MORTALITY RATIO</i>
1992	17,568			43.1	36	0.84
1993	19,738			41.7	52	1.25
1994	17,743			52.6	50	0.95
1995	22,688	21	0.02614	46.2	67	1.45
1996	21,186	0	0.00172	47.8	67	1.40
1997	21,496	2	0.01208	60.7	95	1.57
1998	19,866	8	0.0126	51.8	89	1.72
1999	20,843	0	0.00176	50	80	1.60
2000	21,774	0	0.00562	47.1	83	1.76
2001	19,991	4	0.0058	43.7	76	1.74
2002	19,364	1	0.05678	48.4	75	1.55
2003	20,115	4	0.00808	56.6	102	1.80
2004	19,894	9	0.016224	64.3	86	1.34
2005	19,844	5	0.02092	69.5	105	1.51
2006	18,095	14	0.03468	71.5	103	1.44
2007	20,215	27	0.10692	59.9	90	1.50
2008	16,308	7	0.03408	66.4	94	1.42
2009	16,680	5	0.0049	63.9	126	1.97
2010	17,842	3	0.0055	57.1	113	1.98
2011	18,011	9	0.00742	61.3	153	2.50
2012	21,009	2	.0029	59	161	2.73
		121				

As illustrated in Figure 1 below, when development related stressors (traffic, building permits and H impact) are graphed with the Key Deer mortality, the sharp increase in mortality is not reflected in similarly significant increases in stressors. Though traffic volume was heavier in 2012 (21,009 AADT), it has remained relatively stable over the 20 year period with an average AADT of 19,537 trips (standard deviation = 1728), while the mortality ratio has risen sharply over the same period from 0.84 in 1992 (17,500 AADT) to 2.73 in 2012 (21,009 AADT).

Figure 1. Comparison of Development Stressors with Mortality



XXII UPDATED MASTER LIST OF ALL DEVELOPMENT PERMITTED ON BIG PINE KEY AND NO NAME KEY

The master list of all development has been added as Appendix II. Florida has a very broad public records laws. Most written communications to or from the County regarding County business are public record, available to the public and media upon request. All reports and corresponding data will be published to the Monroe County web site: <http://monroecofl.virtualtownhall.net>.

The H balance reflected in this 7th Annual Report covers all occurrences of impacts dated from March 13, 1995 to December 31, 2012. The H value remaining for impacts:

Total H value allowed for impacts	1.100 H
Running total of cumulative H value	

<u>for each permit approval since March 13, 1995</u>	- (0.3641H)
<u>through December 31, 2012</u>	
Remaining H value available for development impacts	0.7359 H

Monroe County is allowed 1.1 “H” for development and required to provide 3.3 “H” in mitigation through land acquisition. The mitigation required for the current level of development is 1.09 “H” ($0.3641 \times 3 = 1.09$ “H”). Currently, there is 0.7359 “H” remaining for development and 0.745 “H” remaining for acquisition.

Monroe County has demonstrated the cumulative "H" value of lands acquired as mitigation does not lag any more than five percent (5%) behind what is necessary to fully mitigate the cumulative "H" value of impacts authorized by the ITP through the reporting period.

Exhibits

Exhibit 1
Map of Development Activities – Cumulative

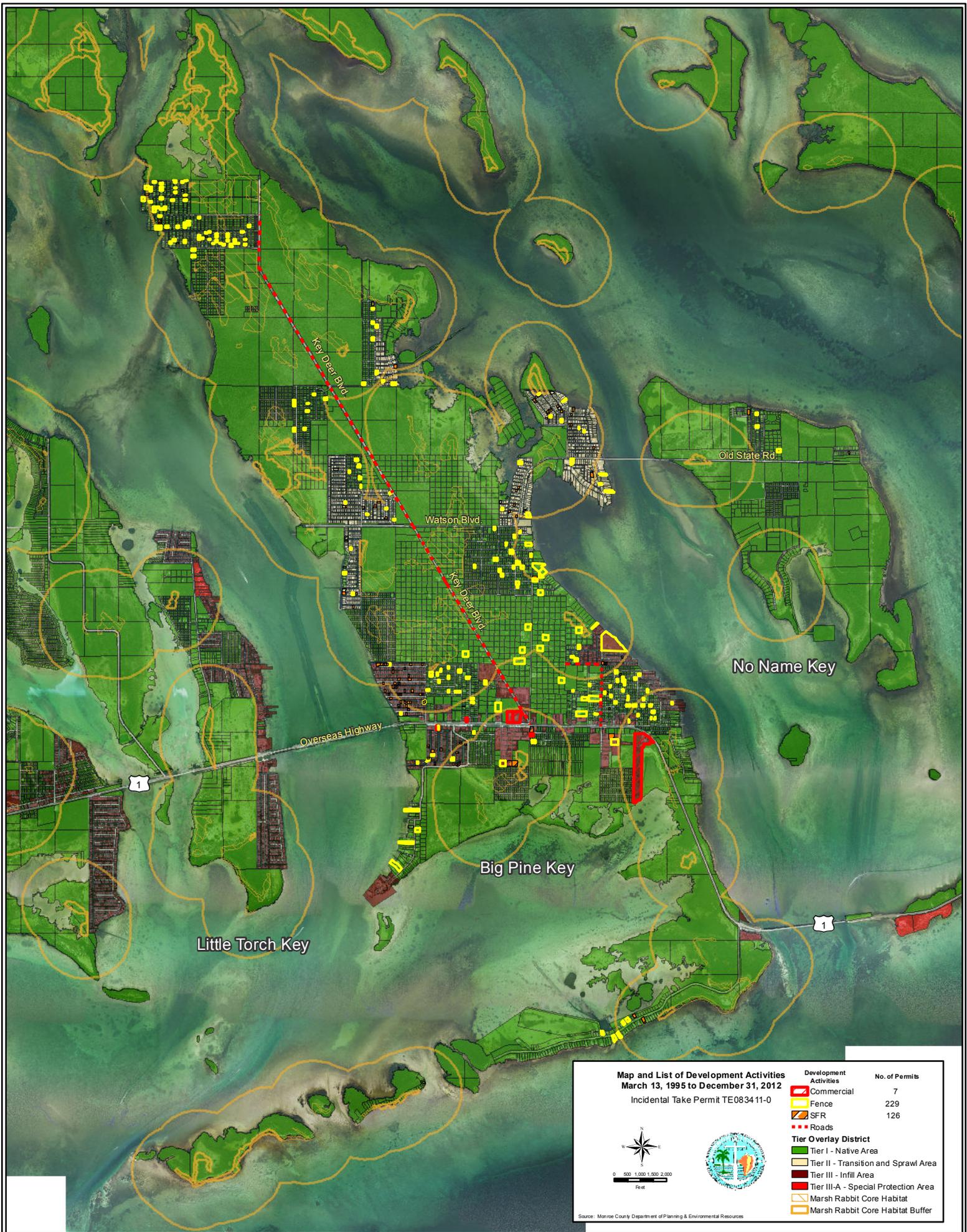


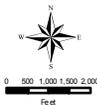
Exhibit 2
Map of Development Activities – 2012



Map and List of Development Activities
January 1, 2012 to December 31, 2012
 Incidental Take Permit TE0834 11-0

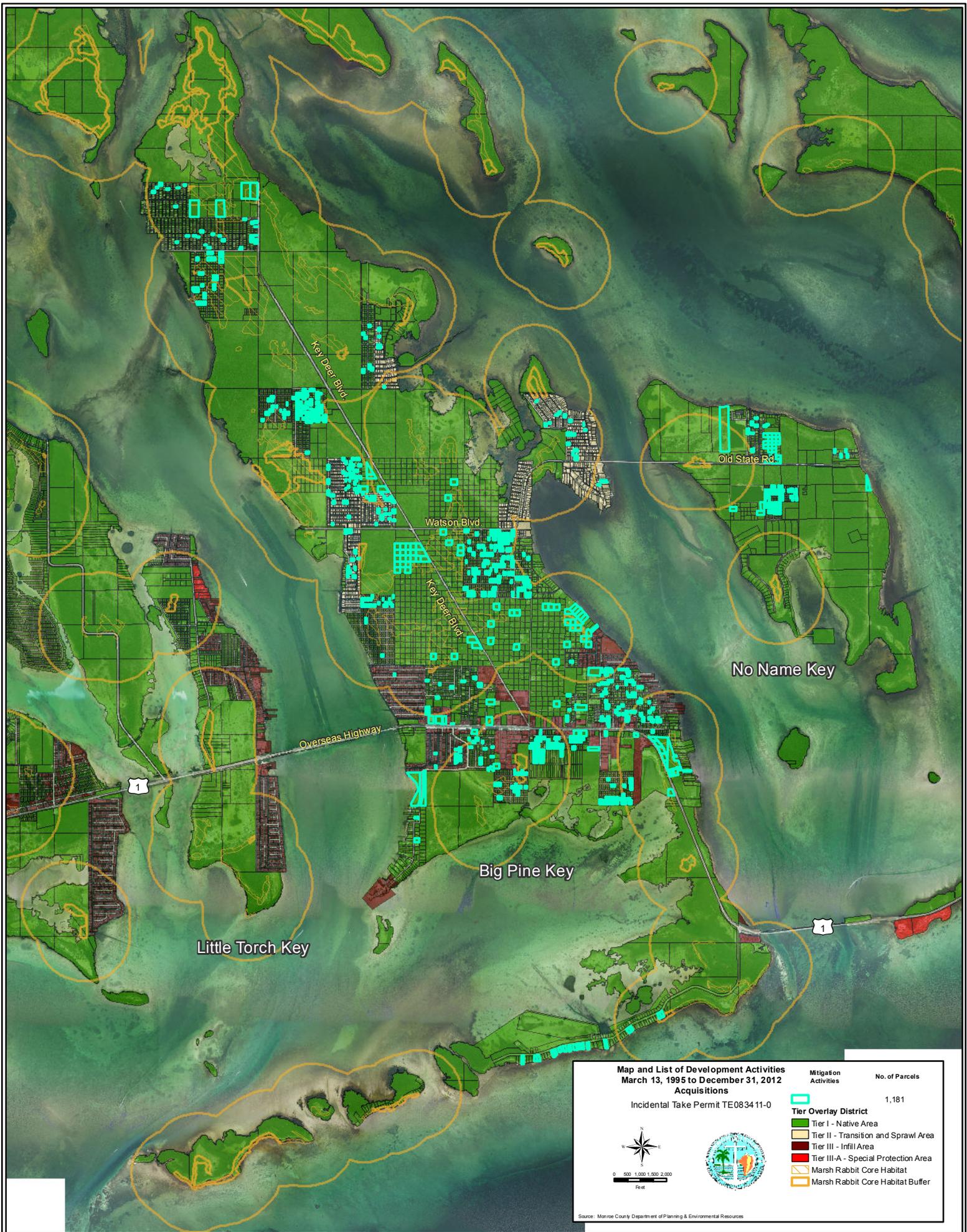
Development Activities	No. of Permits
Fence	3
SFR	3

- Tier Overlay District**
- Tier I - Native Area
 - Tier II - Transition and Sprawl Area
 - Tier III - Infill Area
 - Tier III-A - Special Protection Area
 - Marsh Rabbit Core Habitat
 - Marsh Rabbit Core Habitat Buffer



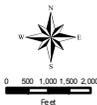
Source: Monroe County Department of Planning & Environmental Resources

Exhibit 3
Map of Acquired Mitigation Parcels – Cumulative



Map and List of Development Activities
 March 13, 1995 to December 31, 2012
 Acquisitions

Incidental Take Permit TE0834 11-0



Mitigation Activities	No. of Parcels
Tier Overlay District	1,181
Tier I - Native Area	
Tier II - Transition and Sprawl Area	
Tier III - Infill Area	
Tier III-A - Special Protection Area	
Marsh Rabbit Core Habitat	
Marsh Rabbit Core Habitat Buffer	

Source: Monroe County Department of Planning & Environmental Resources

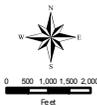
Exhibit 4
Map of Acquired Mitigation Parcels - 2012



**Map and List of Development Activities
January 1, 2012 to December 31, 2012
Acquisitions**

Incidental Take Permit TE0834 11-0

Mitigation Activities
No. of Parcels
97



- Tier Overlay District**
- Tier I - Native Area
- Tier II - Transition and Sprawl Area
- Tier III - Infill Area
- Tier III-A - Special Protection Area
- Marsh Rabbit Core Habitat
- Marsh Rabbit Core Habitat Buffer

Source: Monroe County Department of Planning & Environmental Resources

Exhibit 5
Map of Cumulative Impacts to Lower Keys Marsh
Rabbit buffers



Map and List of Development Activities
 January 1, 2012 to December 31, 2012 "H" Impacts
 Incidental Take Permit TE0834 11-0

Development Activities	No. of Permits
Fence	2
SFR	2
Tier Overlay District	
Tier I - Native Area	
Tier II - Transition and Sprawl Area	
Tier III - Infill Area	
Tier III-A - Special Protection Area	
Marsh Rabbit Core Habitat	
Marsh Rabbit Core Habitat Buffer	

Source: Monroe County Department of Planning & Environmental Resources

Appendices

Appendix I

Monroe County Land Steward Report

**Monroe County
Mitigation Lands
Invasive Exotic Vegetation Status Report**

May 2013

As required by
Incidental Take Permit # TE083411-0

Prepared by
Beth Bergh
Monroe County Land Steward

This report has been prepared in accordance with Requirement # 19, Block 11: K of Incidental Take Permit (ITP) # TE083411-0 which requires Monroe County to submit “A monitoring report documenting compliance with the exotic / nuisance plant control program on county conservation lands, demonstrating no more than 20 percent aerial coverage of nuisance and 10 percent aerial coverage of invasive species identified by Florida Exotic Pest Plant Council.”

There are a total of 1,185 parcels that comprise the mitigation lands under the Monroe County’s Habitat Conservation Plan (HCP). These lands are managed by the Monroe County Land Steward and, in some instances, the US Fish and Wildlife Service Key Deer Refuge staff. A total of 122 parcels are located on No Name Key and the remaining 1,063 parcels are on Big Pine Key. The following table shows the breakdown of the mitigation parcels by subdivision:

Key	Subdivision	Number of Parcels
No Name	Bahia Shores	8
No Name	No Name	30
No Name	Ocean Heights	27
No Name	Tuxedo Park	54
No Name	Other	3
Big Pine	Cahill Pines & Palms	15
Big Pine	Doctor’s Arm	27
Big Pine	Eden Pines	108
Big Pine	Kinercha	74
Big Pine	Koehns	9
Big Pine	Long Beach Estates	18
Big Pine	Palm Villa	183
Big Pine	Pine Crest	31
Big Pine	Pine Grove	25
Big Pine	Pine Heights	126
Big Pine	Port Pine Heights	37
Big Pine	Sands	135
Big Pine	Sea View Estates	29
Big Pine	Silas Knowles	49
Big Pine	Tropical Park	34
Big Pine	Wickfield Acres	18
Big Pine	Other	145
	TOTAL	1,185

As illustrated in the table above, a large majority of the mitigation parcels are located in residential developments with the greatest number of properties situated in Palm Villa, Sands, and Pine Heights Subdivisions, respectively. The typical subdivision lot measures approximately 50 ft x 100ft. The size and the location of these lots create unique land management challenges, including increased edge effect and potential for encroachment.

Site visits were conducted and aerial photo interpretation was used to determine the level of infestation of invasive exotic vegetation. For the purposes of this report, an “invasive exotic plant” is one that is listed on the Exotic Pest Plant Council’s list as either a Category I or a Category II species (list attached). The percent cover of invasive exotics was classified as follows:

Level of Infestation	% Cover of Invasive Exotics
0	Not present
1	Less than 10 %
2	10-20%
3	20-50%
4	50-75%
5	75-100%

The complete parcel-by-parcel results of the survey may be found in the attached spreadsheet titled “Monroe County Mitigation Lands”. The results may be summarized as follows:

Level of Infestation	Number of Parcels
0	962
1	166
2	13
3	13
4	13
5	18

A total of 57 parcels were found to have invasive exotic infestation level greater than 10 percent. These parcels comprise approximately 4.8 percent of the total number of parcels (1,185).

The greatest concentration of invasive exotics occurring on Monroe County Mitigation Lands was found in Sands Subdivision. However, Monroe County continues to make progress on the eradication of exotics in Sands. Within the past year, the County hired contractors to conduct invasive exotic removals on several lots within this subdivision. The invasive exotic removals were followed by site cleanup and native vegetation planting as needed. Additional invasive exotic removal projects are planned for the coming years, subject to available funding.

The Monroe County Land Steward and the Invasive Exotic Technicians continue to monitor and treat invasive exotic plant species on Monroe County Mitigation Lands.

Appendix II Master List

REAL ESTATE NUMBER	PERMIT NUMBER	ISSUE DATE / DATE LAND ACQUIRED	H VALUE OF PROPERTY	H IMPACT	CREDITS TO H BANK	TIER	NOTES	DEVELOPMENT / ACQUISITION
00285491-002300	94101480	4/20/1995	0.0014	0.0014		3		SFR
00275930-000000	95100655	5/16/1995	0.0006	0.0001		1	vacant	FENCE
00292110-000000	92105467	5/22/1995	0.0007	0.0007		1		SFR
00305320-000000	95100344	5/25/1995	0.0005	0.0005		1		SFR
00284510-000000		6/1/1995	0.0015		0.0015	1	COUNTY ACQUISITION	ACQUISITION
00312573-002800	95100369	6/9/1995	0.0002	0.0002		2		SFR
00296810-000000	95100138	6/15/1995	0.0011	0.0011		1		SFR
00291680-000000		6/21/1995	0.0010		0.0010	1	COUNTY ACQUISITION	ACQUISITION
00291890-000000		6/21/1995	0.0027		0.0027	1	DEDICATED ROGO LOT	ACQUISITION
00281150-000000		6/27/1995	0.0015		0.0015	1	UNIDENTIFIED FUNDING - ADD-ON	ACQUISITION
00296490-000000	95100384	6/29/1995	0.0011	0.0011		1		SFR
00246221-005000		7/1/1995	0.0005		0.0005	1	COUNTY ACQUISITION	ACQUISITION
00256730-000000	95100272	7/17/1995	0.0015	0.0015		1		SFR
00296690-000000	95100241	7/19/1995	0.0011	0.0011		1		SFR
00307320-000000	94101617	7/20/1995	0.0010	0.0010		1		SFR
00261040-000000		7/25/1995	0.0013		0.0013	1	DEDICATED ROGO LOT	ACQUISITION
00261730-000000		7/25/1995	0.0013		0.0013	1	COUNTY ACQUISITION	ACQUISITION
00259780-000000		8/7/1995	0.0018		0.0018	1	DEDICATED ROGO LOT	ACQUISITION
00259790-000000		8/7/1995	0.0014		0.0014	1	DEDICATED ROGO LOT	ACQUISITION
00259980-000000		8/7/1995	0.0022		0.0022	1	DEDICATED ROGO LOT	ACQUISITION
00259990-000000		8/7/1995	0.0006		0.0006	1	DEDICATED ROGO LOT	ACQUISITION
00260940-000000		8/7/1995	0.0023		0.0023	1	DEDICATED ROGO LOT	ACQUISITION
00261780-000000		8/7/1995	0.0014		0.0014	1	DEDICATED ROGO LOT	ACQUISITION
00261790-000000		8/7/1995	0.0014		0.0014	1	COUNTY ACQUISITION	ACQUISITION
00260710-000000		8/11/1995	0.0018		0.0018	1	COUNTY ACQUISITION	ACQUISITION
00261000-000000		8/11/1995	0.0007		0.0007	1	COUNTY ACQUISITION	ACQUISITION
00261480-000000		8/17/1995	0.0020		0.0020	1	DEDICATED ROGO LOT	ACQUISITION
00261490-000000		8/17/1995	0.0021		0.0021	1	DEDICATED ROGO LOT	ACQUISITION
00275910-000000	95101075	8/22/1995	0.0006	0.0001		1	vacant	FENCE
00261070-000000		8/28/1995	0.0048		0.0048	1	DEDICATED ROGO LOT	ACQUISITION
00259890-000000		9/1/1995	0.0046		0.0046	1	DEDICATED ROGO LOT	ACQUISITION
00259900-000000		9/1/1995	0.0014		0.0014	1	DEDICATED ROGO LOT	ACQUISITION
00260500-000000		9/1/1995	0.0014		0.0014	1	DEDICATED ROGO LOT	ACQUISITION
00291840-000000		9/1/1995	0.0021		0.0021	1	DEDICATED ROGO LOT	ACQUISITION
00259910-000000		9/12/1995	0.0007		0.0007	1	DEDICATED ROGO LOT	ACQUISITION
00259920-000000		9/12/1995	0.0013		0.0013	1	DEDICATED ROGO LOT	ACQUISITION
00260960-000000		9/12/1995	0.0007		0.0007	1	COUNTY ACQUISITION	ACQUISITION
00260970-000000		9/12/1995	0.0007		0.0007	1	COUNTY ACQUISITION	ACQUISITION
00261540-000000		9/12/1995	0.0007		0.0007	1	DEDICATED ROGO LOT	ACQUISITION
00261550-000000		9/12/1995	0.0007		0.0007	1	DEDICATED ROGO LOT	ACQUISITION
00260900-000000		9/21/1995	0.0013		0.0013	1	DEDICATED ROGO LOT	ACQUISITION
00260910-000000		9/21/1995	0.0014		0.0014	1	DEDICATED ROGO LOT	ACQUISITION
00111690-000600	95101213	10/10/1995	0.0120	0.0024		1	vacant	FENCE
00261580-000000		10/10/1995	0.0021		0.0021	1	DEDICATED ROGO LOT	ACQUISITION
00261590-000000		10/10/1995	0.0045		0.0045	1	DEDICATED ROGO LOT	ACQUISITION
00305330-000000	95100760	10/20/1995	0.0011	0.0011		1		SFR
00260780-000000		11/9/1995	0.0007		0.0007	1	DEDICATED ROGO LOT	ACQUISITION
00260790-000000		11/9/1995	0.0058		0.0058	1	DEDICATED ROGO LOT	ACQUISITION
00249140-000000	95101312	11/14/1995	0.0009	0.0009		3		SFR
00295920-000000	95100377	11/15/1995	0.0013	0.0013		1		SFR
00248200-000000	95101322	11/16/1995	0.0008	0.0008		3		SFR
00312572-004500	95101369	11/20/1995	0.0006	0.0006		2		SFR
00269810-000000	95101309	11/29/1995	0.0016	0.0016		2		SFR
00295450-000000	95101100	11/30/1995	0.0012	0.0012		1		SFR
00108130-002700	95101343	12/11/1995	0.0016	0.0016		1	SFR-AFFORDABLE	SFR
00271710-000000	95101270	12/11/1995	0.0010	0.0010		2		SFR
00279180-000000	95100415	12/11/1995	0.0012	0.0012		1	SFR-AFFORDABLE	SFR
00294830-000000	95101033	12/11/1995	0.0015	0.0015		1		SFR
00296830-000000	95101102	12/11/1995	0.0011	0.0011		1		SFR
00244930-000000	95101331	12/12/1995	0.0010	0.0010		3		SFR
00260240-000000		12/19/1995	0.0018		0.0018	1	DEDICATED ROGO LOT	ACQUISITION
00260250-000000		12/19/1995	0.0009		0.0009	1	DEDICATED ROGO LOT	ACQUISITION
00261760-000000		1/29/1996	0.0007		0.0007	1	DEDICATED ROGO LOT	ACQUISITION
00261770-000000		1/29/1996	0.0014		0.0014	1	DEDICATED ROGO LOT	ACQUISITION
00275010-000000		1/29/1996	0.0005		0.0005	1	MCLA-ADD-ON	ACQUISITION
00275020-000000		1/29/1996	0.0010		0.0010	1	MCLA-ADD-ON	ACQUISITION
00108710-000000		1/30/1996	0.0016		0.0016	1	DEDICATED ROGO LOT	ACQUISITION
00109710-001400		1/30/1996	0.0017		0.0017	1	DEDICATED ROGO LOT	ACQUISITION
00260000-000000		1/30/1996	0.0010		0.0010	1	COUNTY ACQUISITION	ACQUISITION
00260010-000000		1/30/1996	0.0014		0.0014	1	DEDICATED ROGO LOT	ACQUISITION
00260020-000000		1/30/1996	0.0014		0.0014	1	DEDICATED ROGO LOT	ACQUISITION
00260030-000000		1/30/1996	0.0045		0.0045	1	DEDICATED ROGO LOT	ACQUISITION
00260040-000000		1/30/1996	0.0057		0.0057	1	DEDICATED ROGO LOT	ACQUISITION
00260170-000000		1/30/1996	0.0007		0.0007	1	DEDICATED ROGO LOT	ACQUISITION
00260180-000000		1/30/1996	0.0007		0.0007	1	DEDICATED ROGO LOT	ACQUISITION
00260260-000000		1/30/1996	0.0018		0.0018	1	DEDICATED ROGO LOT	ACQUISITION
00260270-000000		1/30/1996	0.0022		0.0022	1	DEDICATED ROGO LOT	ACQUISITION
00260310-000000		1/30/1996	0.0013		0.0013	1	DEDICATED ROGO LOT	ACQUISITION
00260400-000000		1/30/1996	0.0052		0.0052	1	COUNTY ACQUISITION	ACQUISITION
00260410-000000		1/30/1996	0.0007		0.0007	1	DEDICATED ROGO LOT	ACQUISITION
00260480-000000		1/30/1996	0.0013		0.0013	1	COUNTY ACQUISITION	ACQUISITION
00260490-000000		1/30/1996	0.0014		0.0014	1	DEDICATED ROGO LOT	ACQUISITION
00260560-000000		1/30/1996	0.0011		0.0011	1	DEDICATED ROGO LOT	ACQUISITION
00260660-000000		1/30/1996	0.0014		0.0014	1	DEDICATED ROGO LOT	ACQUISITION
00260870-000000		1/30/1996	0.0018		0.0018	1	DEDICATED ROGO LOT	ACQUISITION
00261030-000000		1/30/1996	0.0473		0.0473	1	COUNTY ACQUISITION	ACQUISITION
00261050-000000		1/30/1996	0.0013		0.0013	1	DEDICATED ROGO LOT	ACQUISITION
00261060-000000		1/30/1996	0.0020		0.0020	1	DEDICATED ROGO LOT	ACQUISITION
00261140-000000		1/30/1996	0.0009		0.0009	1	COUNTY ACQUISITION	ACQUISITION
00261150-000000		1/30/1996	0.0007		0.0007	1	DEDICATED ROGO LOT	ACQUISITION
00261170-000000		1/30/1996	0.0028		0.0028	1	DEDICATED ROGO LOT	ACQUISITION
00261180-000000		1/30/1996	0.0007		0.0007	1	DEDICATED ROGO LOT	ACQUISITION
00261220-000000		1/30/1996	0.0007		0.0007	1	DEDICATED ROGO LOT	ACQUISITION
00261230-000000		1/30/1996	0.0007		0.0007	1	COUNTY ACQUISITION	ACQUISITION
00261380-000000		1/30/1996	0.0007		0.0007	1	DEDICATED ROGO LOT	ACQUISITION
00261390-000000		1/30/1996	0.0013		0.0013	1	COUNTY ACQUISITION	ACQUISITION
00261460-000000		1/30/1996	0.0014		0.0014	1	DEDICATED ROGO LOT	ACQUISITION
00261470-000000		1/30/1996	0.0013		0.0013	1	COUNTY ACQUISITION	ACQUISITION
00261500-000000		1/30/1996	0.0013		0.0013	1	DEDICATED ROGO LOT	ACQUISITION
00261510-000000		1/30/1996	0.0007		0.0007	1	DEDICATED ROGO LOT	ACQUISITION
00292730-000000	94100234	2/13/1996	0.0020	0.0004		1	1991	FENCE
00259880-000000		2/23/1996	0.0007		0.0007	1	DEDICATED ROGO LOT	ACQUISITION
00259960-000000		2/23/1996	0.0014		0.0014	1	DEDICATED ROGO LOT	ACQUISITION
00259970-000000		2/23/1996	0.0009		0.0009	1	DEDICATED ROGO LOT	ACQUISITION
00260050-000000		2/23/1996	0.0021		0.0021	1	DEDICATED ROGO LOT	ACQUISITION

00260060-000000		2/23/1996	0.0014		0.0014	1	DEDICATED ROGO LOT	ACQUISITION
00260070-000000		2/23/1996	0.0014		0.0014	1	DEDICATED ROGO LOT	ACQUISITION
00260080-000000		2/23/1996	0.0020		0.0020	1	DEDICATED ROGO LOT	ACQUISITION
00260590-000000		2/23/1996	0.0016		0.0016	1	DEDICATED ROGO LOT	ACQUISITION
00260600-000000		2/23/1996	0.0040		0.0040	1	DEDICATED ROGO LOT	ACQUISITION
00260680-000000		2/23/1996	0.0014		0.0014	1	DEDICATED ROGO LOT	ACQUISITION
00260690-000000		2/23/1996	0.0014		0.0014	1	COUNTY ACQUISITION	ACQUISITION
00260840-000000		2/23/1996	0.0017		0.0017	1	DEDICATED ROGO LOT	ACQUISITION
00260850-000000		2/23/1996	0.0014		0.0014	1	DEDICATED ROGO LOT	ACQUISITION
00261200-000000		2/23/1996	0.0007		0.0007	1	COUNTY ACQUISITION	ACQUISITION
00261210-000000		2/23/1996	0.0018		0.0018	1	DEDICATED ROGO LOT	ACQUISITION
00261420-000000		2/23/1996	0.0007		0.0007	1	DEDICATED ROGO LOT	ACQUISITION
00261430-000000		2/23/1996	0.0016		0.0016	1	COUNTY ACQUISITION	ACQUISITION
00261440-000000		2/23/1996	0.0009		0.0009	1	COUNTY ACQUISITION	ACQUISITION
00261600-000000		2/23/1996	0.0007		0.0007	1	DEDICATED ROGO LOT	ACQUISITION
00261610-000000		2/23/1996	0.0007		0.0007	1	DEDICATED ROGO LOT	ACQUISITION
00261680-000000		2/23/1996	0.0013		0.0013	1	DEDICATED ROGO LOT	ACQUISITION
00261690-000000		2/23/1996	0.0013		0.0013	1	COUNTY ACQUISITION	ACQUISITION
00261950-000000		2/23/1996	0.0020		0.0020	1	DEDICATED ROGO LOT	ACQUISITION
00293170-000000	96100260	2/23/1996	0.0010	0.0002		1	1987	FENCE
00292150-000000	96100371	3/13/1996	0.0006	0.0001		1	Existing SFR	FENCE
00267290-000000	96100372	3/15/1996	0.0014	0.0003		1	1990	FENCE
00261240-000000		3/19/1996	0.0007		0.0007	1	COUNTY ACQUISITION	ACQUISITION
00261250-000000		3/19/1996	0.0012		0.0012	1	DEDICATED ROGO LOT	ACQUISITION
00260640-000000		3/28/1996	0.0007		0.0007	1	COUNTY ACQUISITION	ACQUISITION
00260650-000000		3/28/1996	0.0007		0.0007	1	COUNTY ACQUISITION	ACQUISITION
00261930-000000		3/28/1996	0.0014		0.0014	1	COUNTY ACQUISITION	ACQUISITION
00261940-000000		3/28/1996	0.0007		0.0007	1	COUNTY ACQUISITION	ACQUISITION
00280140-000000		4/1/1996	0.0008		0.0008	1	COUNTY ACQUISITION	ACQUISITION
00292110-000000	96100571	4/18/1996	0.0007	0.0001		1	6/17/1995	FENCE
00293310-000000	96100663	4/26/1996	0.0012	0.0002		1	1990	FENCE
00288810-000000		5/10/1996	0.0086		0.0086	1	COUNTY ACQUISITION	ACQUISITION
00288820-000000		5/10/1996	0.0007		0.0007	1	COUNTY ACQUISITION	ACQUISITION
00255830-000000		5/29/1996	0.0006		0.0006	1	UNIDENTIFIED FUNDING - ADD-ON	ACQUISITION
00279220-000000		6/1/1996	0.0016		0.0016	1	COUNTY ACQUISITION	ACQUISITION
00282740-000000		6/1/1996	0.0008		0.0008	1	COUNTY ACQUISITION	ACQUISITION
00282750-000000		6/1/1996	0.0015		0.0015	1	COUNTY ACQUISITION	ACQUISITION
00284730-000000		6/1/1996	0.0024		0.0024	1	COUNTY ACQUISITION	ACQUISITION
00261400-000000		6/2/1996	0.0013		0.0013	1	COUNTY ACQUISITION	ACQUISITION
00261450-000000		6/2/1996	0.0014		0.0014	1	COUNTY ACQUISITION	ACQUISITION
00261740-000000		6/2/1996	0.0014		0.0014	1	COUNTY ACQUISITION	ACQUISITION
00261750-000000		6/2/1996	0.0007		0.0007	1	COUNTY ACQUISITION	ACQUISITION
00289200-000000		6/12/1996	0.0013		0.0013	1	COUNTY ACQUISITION	ACQUISITION
00287460-000000		6/13/1996	0.0073		0.0073	1	COUNTY ACQUISITION	ACQUISITION
00287470-000000		6/13/1996	0.0007		0.0007	1	COUNTY ACQUISITION	ACQUISITION
00287480-000000		6/13/1996	0.0007		0.0007	1	COUNTY ACQUISITION	ACQUISITION
00287490-000000		6/13/1996	0.0016		0.0016	1	COUNTY ACQUISITION	ACQUISITION
00289190-000000		6/18/1996	0.0011		0.0011	1	COUNTY ACQUISITION	ACQUISITION
00246221-003300		6/19/1996	0.0010		0.0010	1	COUNTY ACQUISITION	ACQUISITION
00276700-000000		6/19/1996	0.0012		0.0012	1	DEDICATED ROGO LOT	ACQUISITION
00278610-000000		6/19/1996	0.0014		0.0014	1	COUNTY ACQUISITION	ACQUISITION
00279210-000000		6/19/1996	0.0008		0.0008	1	COUNTY ACQUISITION	ACQUISITION
00279230-000000		6/19/1996	0.0008		0.0008	1	COUNTY ACQUISITION	ACQUISITION
00279370-000000		6/19/1996	0.0016		0.0016	1	COUNTY ACQUISITION	ACQUISITION
00282440-000000		6/19/1996	0.0011		0.0011	1	COUNTY ACQUISITION	ACQUISITION
00282450-000000		6/19/1996	0.0006		0.0006	1	COUNTY ACQUISITION	ACQUISITION
00282760-000000		6/19/1996	0.0008		0.0008	1	COUNTY ACQUISITION	ACQUISITION
00282770-000000		6/19/1996	0.0015		0.0015	1	DEDICATED ROGO LOT	ACQUISITION
00284520-000000		6/19/1996	0.0008		0.0008	1	COUNTY ACQUISITION	ACQUISITION
00287770-000000		6/27/1996	0.0014		0.0014	1	COUNTY ACQUISITION	ACQUISITION
00287780-000000		6/27/1996	0.0007		0.0007	1	COUNTY ACQUISITION	ACQUISITION
00288520-000000		6/27/1996	0.0014		0.0014	1	COUNTY ACQUISITION	ACQUISITION
00288880-000000		6/27/1996	0.0009		0.0009	1	COUNTY ACQUISITION	ACQUISITION
00288890-000000		6/27/1996	0.0011		0.0011	1	COUNTY ACQUISITION	ACQUISITION
00288900-000000		6/27/1996	0.0018		0.0018	1	COUNTY ACQUISITION	ACQUISITION
00288510-000000		6/28/1996	0.0014		0.0014	1	COUNTY ACQUISITION	ACQUISITION
00256060-000000		7/1/1996	0.0006		0.0006	1	COUNTY ACQUISITION	ACQUISITION
00279260-000000		7/1/1996	0.0006		0.0006	1	COUNTY ACQUISITION	ACQUISITION
00288140-000000		7/2/1996	0.0009		0.0009	1	COUNTY ACQUISITION	ACQUISITION
00287820-000000		7/10/1996	0.0009		0.0009	1	DEDICATED ROGO LOT	ACQUISITION
00287830-000000		7/10/1996	0.0014		0.0014	1	DEDICATED ROGO LOT	ACQUISITION
00287900-000000		7/10/1996	0.0018		0.0018	1	DEDICATED ROGO LOT	ACQUISITION
00287910-000000		7/10/1996	0.0014		0.0014	1	DEDICATED ROGO LOT	ACQUISITION
00288060-000000		7/10/1996	0.0075		0.0075	1	DEDICATED ROGO LOT	ACQUISITION
00262170-000000		8/23/1996	0.0057		0.0057	1	DEDICATED ROGO LOT	ACQUISITION
00289280-000000	96101210	8/26/1996	0.0017	0.0003		1	vacant	FENCE
00246221-003200		8/28/1996	0.0010		0.0010	1	UNIDENTIFIED FUNDING - ADD-ON	ACQUISITION
00246221-015000		8/28/1996	0.0015		0.0015	1	UNIDENTIFIED FUNDING - ADD-ON	ACQUISITION
00276560-000000		9/1/1996	0.0008		0.0008	1	DEDICATED ROGO LOT	ACQUISITION
00279270-000000		9/1/1996	0.0014		0.0014	1	DEDICATED ROGO LOT	ACQUISITION
00262860-000000		9/5/1996	0.0007		0.0007	1	COUNTY ACQUISITION	ACQUISITION
00262990-000000		9/6/1996	0.0021		0.0021	1	COUNTY ACQUISITION	ACQUISITION
00263000-000000		9/6/1996	0.0021		0.0021	1	COUNTY ACQUISITION	ACQUISITION
00263010-000000		9/6/1996	0.0030		0.0030	1	COUNTY ACQUISITION	ACQUISITION
00246221-014400		9/9/1996	0.0015		0.0015	1	UNIDENTIFIED FUNDING - ADD-ON	ACQUISITION
00288320-000000		9/26/1996	0.0016		0.0016	1	COUNTY ACQUISITION	ACQUISITION
00288330-000000		9/26/1996	0.0079		0.0079	1	COUNTY ACQUISITION	ACQUISITION
00288340-000000		9/26/1996	0.0014		0.0014	1	COUNTY ACQUISITION	ACQUISITION
00288350-000000		9/26/1996	0.0007		0.0007	1	COUNTY ACQUISITION	ACQUISITION
00262550-000000		9/27/1996	0.0013		0.0013	1	DEDICATED ROGO LOT	ACQUISITION
00262560-000000		9/27/1996	0.0045		0.0045	1	COUNTY ACQUISITION	ACQUISITION
00287970-000000		9/27/1996	0.0007		0.0007	1	DEDICATED ROGO LOT	ACQUISITION
00262890-000000		10/11/1996	0.0014		0.0014	1	DEDICATED ROGO LOT	ACQUISITION
00262970-000000		10/11/1996	0.0014		0.0014	1	DEDICATED ROGO LOT	ACQUISITION
00263710-000000		10/11/1996	0.0016		0.0016	1	DEDICATED ROGO LOT	ACQUISITION
00263640-000000		10/15/1996	0.0009		0.0009	1	COUNTY ACQUISITION	ACQUISITION
00263300-000000		10/18/1996	0.0007		0.0007	1	COUNTY ACQUISITION	ACQUISITION
00263440-000000		10/18/1996	0.0014		0.0014	1	COUNTY ACQUISITION	ACQUISITION
00263680-000000		10/18/1996	0.0014		0.0014	1	COUNTY ACQUISITION	ACQUISITION
00263690-000000		10/18/1996	0.0007		0.0007	1	COUNTY ACQUISITION	ACQUISITION
00108050-000213		10/29/1996	0.0014		0.0014	1	COUNTY ACQUISITION	ACQUISITION
00261620-000000		11/1/1996	0.0027		0.0027	1	COUNTY ACQUISITION	ACQUISITION
00261630-000000		11/1/1996	0.0156		0.0156	1	COUNTY ACQUISITION	ACQUISITION
00261640-000000		11/1/1996	0.0009		0.0009	1	COUNTY ACQUISITION	ACQUISITION
00261650-000000		11/1/1996	0.0007		0.0007	1	COUNTY ACQUISITION	ACQUISITION

00261880-000000		11/1/1996	0.0014		0.0014	1	COUNTY ACQUISITION	ACQUISITION
00108050-000111		11/7/1996	0.0067		0.0067	1	COUNTY ACQUISITION	ACQUISITION
00108050-000209		11/7/1996	0.0014		0.0014	1	DEDICATED ROGO LOT	ACQUISITION
00276490-000000		11/12/1996	0.0010		0.0010	1	DEDICATED ROGO LOT	ACQUISITION
00276500-000000		11/12/1996	0.0013		0.0013	1	DEDICATED ROGO LOT	ACQUISITION
00276520-000000		11/12/1996	0.0013		0.0013	1	DEDICATED ROGO LOT	ACQUISITION
00276530-000000		11/12/1996	0.0017		0.0017	1	DEDICATED ROGO LOT	ACQUISITION
00276710-000000		11/12/1996	0.0012		0.0012	1	COUNTY ACQUISITION	ACQUISITION
00276780-000000		11/12/1996	0.0010		0.0010	1	DEDICATED ROGO LOT	ACQUISITION
00276870-000000		11/12/1996	0.0009		0.0009	1	DEDICATED ROGO LOT	ACQUISITION
00280110-000000		11/12/1996	0.0016		0.0016	1	DEDICATED ROGO LOT	ACQUISITION
00280120-000000		11/12/1996	0.0008		0.0008	1	DEDICATED ROGO LOT	ACQUISITION
00282780-000000		11/12/1996	0.0008		0.0008	1	DEDICATED ROGO LOT	ACQUISITION
00284380-000000		11/12/1996	0.0015		0.0015	1	DEDICATED ROGO LOT	ACQUISITION
00291860-000000		11/12/1996	0.0019		0.0019	1	DEDICATED ROGO LOT	ACQUISITION
00108050-000108		11/14/1996	0.0010		0.0010	1	DEDICATED ROGO LOT	ACQUISITION
00108050-000109		11/25/1996	0.0013		0.0013	1	DEDICATED ROGO LOT	ACQUISITION
00108050-000112		11/25/1996	0.0058		0.0058	1	COUNTY ACQUISITION	ACQUISITION
00108050-000114		11/25/1996	0.0019		0.0019	1	COUNTY ACQUISITION	ACQUISITION
00108050-000211		11/25/1996	0.0014		0.0014	1	DEDICATED ROGO LOT	ACQUISITION
							UNIDENTIFIED FUNDING -	
00281160-000000		11/25/1996	0.0008		0.0008	1	ADD-ON	ACQUISITION
00108050-000216		11/29/1996	0.0011		0.0011	1	DEDICATED ROGO LOT	ACQUISITION
00260750-000000		11/30/1996	0.0016		0.0016	1	DEDICATED ROGO LOT	ACQUISITION
00276580-000000		12/1/1996	0.0016		0.0016	1	DEDICATED ROGO LOT	ACQUISITION
00276590-000000		12/1/1996	0.0008		0.0008	1	DEDICATED ROGO LOT	ACQUISITION
							UNIDENTIFIED FUNDING -	
00277820-000000		12/2/1996	0.0012		0.0012	1	ADD-ON	ACQUISITION
							UNIDENTIFIED FUNDING -	
00281170-000000		12/2/1996	0.0013		0.0013	1	ADD-ON	ACQUISITION
00108050-000116		12/9/1996	0.0016		0.0016	1	DEDICATED ROGO LOT	ACQUISITION
00108050-000215		12/11/1996	0.0088		0.0088	1	DEDICATED ROGO LOT	ACQUISITION
00108050-000203		12/30/1996	0.0008		0.0008	1	DEDICATED ROGO LOT	ACQUISITION
00108050-000212		12/30/1996	0.0007		0.0007	1	DEDICATED ROGO LOT	ACQUISITION
00108050-000214		12/30/1996	0.0015		0.0015	1	DEDICATED ROGO LOT	ACQUISITION
00260450-000000		12/30/1996	0.0009		0.0009	1	DEDICATED ROGO LOT	ACQUISITION
							UNIDENTIFIED FUNDING -	
00278340-000000		1/7/1997	0.0016		0.0016	1	ADD-ON	ACQUISITION
00108050-000104		1/10/1997	0.0009		0.0009	1	DEDICATED ROGO LOT	ACQUISITION
00108050-000110		1/10/1997	0.0085		0.0085	1	DEDICATED ROGO LOT	ACQUISITION
00272471-000100	96101524	1/13/1997	0.0013	0.0013		2		SFR
00296930-000000	97100053	1/13/1997	0.0013	0.0003		1	1987	FENCE
00108050-000115		1/14/1997	0.0007		0.0007	1	DEDICATED ROGO LOT	ACQUISITION
00108050-000201		1/14/1997	0.0016		0.0016	1	DEDICATED ROGO LOT	ACQUISITION
00108050-000202		1/14/1997	0.0086		0.0086	1	DEDICATED ROGO LOT	ACQUISITION
00108050-000204		1/14/1997	0.0007		0.0007	1	COUNTY ACQUISITION	ACQUISITION
00263430-000000		1/17/1997	0.0013		0.0013	1	COUNTY ACQUISITION	ACQUISITION
							UNIDENTIFIED FUNDING -	
00281100-000000		2/13/1997	0.0015		0.0015	1	ADD-ON	ACQUISITION
00276630-000000		3/19/1997	0.0008		0.0008	1	COUNTY ACQUISITION	ACQUISITION
00290830-000000	97100442	3/20/1997	0.0015	0.0003		1	1/9/1995	FENCE
							UNIDENTIFIED FUNDING -	
00282020-000000		3/31/1997	0.0015		0.0015	1	ADD-ON	ACQUISITION
							UNIDENTIFIED FUNDING -	
00277600-000000		4/1/1997	0.0008		0.0008	1	ADD-ON	ACQUISITION
							UNIDENTIFIED FUNDING -	
00276090-000000		4/4/1997	0.0013		0.0013	1	ADD-ON	ACQUISITION
00313440-000000	97100497	4/7/1997	0.0010	0.0002		2	vacant	FENCE
00275660-000000	96100463	4/16/1997	0.0025	0.0025		1	New 2,246 sf office	COMMERCIAL
00276400-000000		5/1/1997	0.0006		0.0006	1	COUNTY ACQUISITION	ACQUISITION
00276410-000000		5/1/1997	0.0010		0.0010	1	COUNTY ACQUISITION	ACQUISITION
00276420-000000		5/1/1997	0.0012		0.0012	1	COUNTY ACQUISITION	ACQUISITION
00276480-000000		5/1/1997	0.0008		0.0008	1	COUNTY ACQUISITION	ACQUISITION
00276540-000000		5/1/1997	0.0008		0.0008	1	COUNTY ACQUISITION	ACQUISITION
00276600-000000		5/1/1997	0.0016		0.0016	1	COUNTY ACQUISITION	ACQUISITION
00276650-000000		5/1/1997	0.0010		0.0010	1	COUNTY ACQUISITION	ACQUISITION
00276760-000000		5/1/1997	0.0007		0.0007	1	COUNTY ACQUISITION	ACQUISITION
00276790-000000		5/1/1997	0.0014		0.0014	1	COUNTY ACQUISITION	ACQUISITION
00276810-000000		5/1/1997	0.0015		0.0015	1	COUNTY ACQUISITION	ACQUISITION
00276840-000000		5/1/1997	0.0017		0.0017	1	COUNTY ACQUISITION	ACQUISITION
00281110-000000		5/1/1997	0.0008		0.0008	1	COUNTY ACQUISITION	ACQUISITION
00282580-000000	97100673	5/1/1997	0.0009	0.0002		1	Existing SFR	FENCE
00282790-000000		5/1/1997	0.0015		0.0015	1	COUNTY ACQUISITION	ACQUISITION
00284550-000000		5/1/1997	0.0011		0.0011	1	COUNTY ACQUISITION	ACQUISITION
00108050-000101		5/9/1997	0.0074		0.0074	1	COUNTY ACQUISITION	ACQUISITION
00108050-000102		5/9/1997	0.0007		0.0007	1	COUNTY ACQUISITION	ACQUISITION
							UNIDENTIFIED FUNDING -	
00279500-000000		5/27/1997	0.0008		0.0008	1	ADD-ON	ACQUISITION
00260610-000000		5/28/1997	0.0020		0.0020	1	DEDICATED ROGO LOT	ACQUISITION
00260620-000000		5/28/1997	0.0007		0.0007	1	COUNTY ACQUISITION	ACQUISITION
00260630-000000		5/28/1997	0.0052		0.0052	1	COUNTY ACQUISITION	ACQUISITION
00250591-005300	97100813	6/2/1997	0.0011	0.0002		1	Existing SFR	FENCE
00319330-000000		6/6/1997	0.0014		0.0014	1	COUNTY ACQUISITION	ACQUISITION
00319340-000000		6/6/1997	0.0014		0.0014	1	COUNTY ACQUISITION	ACQUISITION
00318550-000000		6/16/1997	0.0011		0.0011	1	COUNTY ACQUISITION	ACQUISITION
00318760-000000		6/16/1997	0.0013		0.0013	1	COUNTY ACQUISITION	ACQUISITION
00319460-000000		6/16/1997	0.0009		0.0009	1	COUNTY ACQUISITION	ACQUISITION
00317560-000000		7/7/1997	0.0007		0.0007	1	COUNTY ACQUISITION	ACQUISITION
00317570-000000		7/7/1997	0.0014		0.0014	1	COUNTY ACQUISITION	ACQUISITION
							UNIDENTIFIED FUNDING -	
00280180-000000		7/8/1997	0.0008		0.0008	1	ADD-ON	ACQUISITION
							UNIDENTIFIED FUNDING -	
00280190-000000		7/8/1997	0.0016		0.0016	1	ADD-ON	ACQUISITION
							UNIDENTIFIED FUNDING -	
00284640-000000		7/8/1997	0.0023		0.0023	1	ADD-ON	ACQUISITION
00318910-000000		7/11/1997	0.0005		0.0005	1	COUNTY ACQUISITION	ACQUISITION
00318920-000000		7/11/1997	0.0014		0.0014	1	COUNTY ACQUISITION	ACQUISITION
00318930-000000		7/11/1997	0.0007		0.0007	1	COUNTY ACQUISITION	ACQUISITION
00318940-000000		7/11/1997	0.0009		0.0009	1	COUNTY ACQUISITION	ACQUISITION
00318950-000000		7/11/1997	0.0014		0.0014	1	COUNTY ACQUISITION	ACQUISITION
00318960-000000		7/11/1997	0.0018		0.0018	1	COUNTY ACQUISITION	ACQUISITION
00318970-000000		7/11/1997	0.0016		0.0016	1	COUNTY ACQUISITION	ACQUISITION
00318980-000000		7/11/1997	0.0007		0.0007	1	DEDICATED ROGO LOT	ACQUISITION
00318990-000000		7/11/1997	0.0007		0.0007	1	DEDICATED ROGO LOT	ACQUISITION
00319000-000000		7/11/1997	0.0007		0.0007	1	COUNTY ACQUISITION	ACQUISITION
00317590-000000		7/15/1997	0.0014		0.0014	1	COUNTY ACQUISITION	ACQUISITION
00318370-000000		7/15/1997	0.0014		0.0014	1	COUNTY ACQUISITION	ACQUISITION
00317510-000000		7/18/1997	0.0007		0.0007	1	COUNTY ACQUISITION	ACQUISITION
00317520-000000		7/18/1997	0.0014		0.0014	1	COUNTY ACQUISITION	ACQUISITION

00317530-000000		7/18/1997	0.0007		0.0007	1	COUNTY ACQUISITION	ACQUISITION
00317540-000000		7/18/1997	0.0020		0.0020	1	COUNTY ACQUISITION	ACQUISITION
00317710-000000		7/18/1997	0.0018		0.0018	1	COUNTY ACQUISITION	ACQUISITION
00317720-000000		7/18/1997	0.0007		0.0007	1	COUNTY ACQUISITION	ACQUISITION
00317730-000000		7/18/1997	0.0011		0.0011	1	COUNTY ACQUISITION	ACQUISITION
00317740-000000		7/18/1997	0.0011		0.0011	1	COUNTY ACQUISITION	ACQUISITION
00318420-000000		7/18/1997	0.0018		0.0018	1	COUNTY ACQUISITION	ACQUISITION
00318540-000000		7/18/1997	0.0043		0.0043	1	COUNTY ACQUISITION	ACQUISITION
00318650-000000		7/18/1997	0.0007		0.0007	1	COUNTY ACQUISITION	ACQUISITION
00318660-000000		7/18/1997	0.0005		0.0005	1	COUNTY ACQUISITION	ACQUISITION
00318770-000000		7/18/1997	0.0014		0.0014	1	COUNTY ACQUISITION	ACQUISITION
00318780-000000		7/18/1997	0.0007		0.0007	1	COUNTY ACQUISITION	ACQUISITION
00318790-000000		7/18/1997	0.0013		0.0013	1	COUNTY ACQUISITION	ACQUISITION
00318800-000000		7/18/1997	0.0006		0.0006	1	COUNTY ACQUISITION	ACQUISITION
00318810-000000		7/18/1997	0.0013		0.0013	1	COUNTY ACQUISITION	ACQUISITION
00318820-000000		7/18/1997	0.0007		0.0007	1	COUNTY ACQUISITION	ACQUISITION
00318830-000000		7/18/1997	0.0007		0.0007	1	COUNTY ACQUISITION	ACQUISITION
00318840-000000		7/18/1997	0.0014		0.0014	1	COUNTY ACQUISITION	ACQUISITION
00318850-000000		7/18/1997	0.0009		0.0009	1	COUNTY ACQUISITION	ACQUISITION
00318860-000000		7/18/1997	0.0014		0.0014	1	COUNTY ACQUISITION	ACQUISITION
00318870-000000		7/18/1997	0.0007		0.0007	1	COUNTY ACQUISITION	ACQUISITION
00318880-000000		7/18/1997	0.0013		0.0013	1	COUNTY ACQUISITION	ACQUISITION
00318890-000000		7/18/1997	0.0013		0.0013	1	COUNTY ACQUISITION	ACQUISITION
00318900-000000		7/18/1997	0.0014		0.0014	1	COUNTY ACQUISITION	ACQUISITION
00319010-000000		7/18/1997	0.0009		0.0009	1	COUNTY ACQUISITION	ACQUISITION
00319020-000000		7/18/1997	0.0054		0.0054	1	COUNTY ACQUISITION	ACQUISITION
00319130-000000		7/18/1997	0.0047		0.0047	1	COUNTY ACQUISITION	ACQUISITION
00319140-000000		7/18/1997	0.0018		0.0018	1	COUNTY ACQUISITION	ACQUISITION
00319250-000000		7/18/1997	0.0020		0.0020	1	COUNTY ACQUISITION	ACQUISITION
00319260-000000		7/18/1997	0.0014		0.0014	1	COUNTY ACQUISITION	ACQUISITION
00319370-000000		7/18/1997	0.0044		0.0044	1	COUNTY ACQUISITION	ACQUISITION
00319490-000000		7/18/1997	0.0031		0.0031	1	COUNTY ACQUISITION	ACQUISITION
00319380-000000		7/19/1997	0.0009		0.0009	1	COUNTY ACQUISITION	ACQUISITION
00296080-000000	97101177	7/25/1997	0.0011	0.0002		1	1989	FENCE
00317550-000000		7/31/1997	0.0013		0.0013	1	COUNTY ACQUISITION	ACQUISITION
00317700-000000		7/31/1997	0.0014		0.0014	1	COUNTY ACQUISITION	ACQUISITION
00111190-000000	97101174	8/4/1997	0.0118	0.0024		1	Existing commercial building, BPK Christian	FENCE
00318590-000000		8/4/1997	0.0036		0.0036	1	COUNTY ACQUISITION	ACQUISITION
00318600-000000		8/4/1997	0.0013		0.0013	1	COUNTY ACQUISITION	ACQUISITION
00276770-000000		8/17/1997	0.0009		0.0009	1	COUNTY ACQUISITION	ACQUISITION
00276830-000000		8/17/1997	0.0008		0.0008	1	COUNTY ACQUISITION	ACQUISITION
00277470-000000		8/17/1997	0.0008		0.0008	1	COUNTY ACQUISITION	ACQUISITION
00277480-000000		8/17/1997	0.0006		0.0006	1	COUNTY ACQUISITION	ACQUISITION
00277510-000000		8/17/1997	0.0016		0.0016	1	COUNTY ACQUISITION	ACQUISITION
00277610-000000		8/17/1997	0.0016		0.0016	1	COUNTY ACQUISITION	ACQUISITION
00277630-000000		8/17/1997	0.0008		0.0008	1	COUNTY ACQUISITION	ACQUISITION
00277830-000000		8/17/1997	0.0006		0.0006	1	COUNTY ACQUISITION	ACQUISITION
00281980-000000		8/17/1997	0.0015		0.0015	1	COUNTY ACQUISITION	ACQUISITION
00284610-000000		8/17/1997	0.0024		0.0024	1	COUNTY ACQUISITION	ACQUISITION
00291100-000000		8/17/1997	0.0009		0.0009	1	COUNTY ACQUISITION	ACQUISITION
00291660-000000		8/17/1997	0.0010		0.0010	1	COUNTY ACQUISITION	ACQUISITION
00293360-000000		8/17/1997	0.0006		0.0006	1	COUNTY ACQUISITION	ACQUISITION
00268440-000000	97101277	8/27/1997	0.0006	0.0001		1	2/14/1995	FENCE
00317660-000000		9/12/1997	0.0020		0.0020	1	COUNTY ACQUISITION	ACQUISITION
00317670-000000		9/12/1997	0.0018		0.0018	1	COUNTY ACQUISITION	ACQUISITION
00317680-000000		9/12/1997	0.0010		0.0010	1	COUNTY ACQUISITION	ACQUISITION
00317690-000000		9/12/1997	0.0018		0.0018	1	COUNTY ACQUISITION	ACQUISITION
00111060-000300		10/6/1997	0.0062		0.0062	1	UNIDENTIFIED FUNDING - ADD-ON	ACQUISITION
00305310-000000	97101647	11/6/1997	0.0011	0.0002		1	02/15/1995	FENCE
00276510-000000		11/12/1997	0.0006		0.0006	1	COUNTY ACQUISITION	ACQUISITION
00276550-000000		11/12/1997	0.0017		0.0017	1	COUNTY ACQUISITION	ACQUISITION
00277490-000000		11/12/1997	0.0016		0.0016	1	COUNTY ACQUISITION	ACQUISITION
00277520-000000		11/12/1997	0.0008		0.0008	1	COUNTY ACQUISITION	ACQUISITION
00277530-000000		11/12/1997	0.0016		0.0016	1	COUNTY ACQUISITION	ACQUISITION
00282800-000000		11/12/1997	0.0008		0.0008	1	COUNTY ACQUISITION	ACQUISITION
00282910-000000		11/12/1997	0.0015		0.0015	1	COUNTY ACQUISITION	ACQUISITION
00278390-000000		11/20/1997	0.0016		0.0016	1	UNIDENTIFIED FUNDING - ADD-ON	ACQUISITION
00284630-000000		11/20/1997	0.0014		0.0014	1	UNIDENTIFIED FUNDING - ADD-ON	ACQUISITION
00246221-002700		11/24/1997	0.0010		0.0010	1	UNIDENTIFIED FUNDING - ADD-ON	ACQUISITION
00318350-000000		11/28/1997	0.0009		0.0009	1	COUNTY ACQUISITION	ACQUISITION
00318360-000000		11/28/1997	0.0039		0.0039	1	COUNTY ACQUISITION	ACQUISITION
00277790-000000		12/10/1997	0.0016		0.0016	1	COUNTY ACQUISITION	ACQUISITION
00278760-000000		12/10/1997	0.0016		0.0016	1	COUNTY ACQUISITION	ACQUISITION
00256080-000000		12/16/1997	0.0006		0.0006	1	UNIDENTIFIED FUNDING - ADD-ON	ACQUISITION
00256090-000000		12/16/1997	0.0011		0.0011	1	UNIDENTIFIED FUNDING - ADD-ON	ACQUISITION
00316840-000000	96100316	12/22/1997	0.0040	0.0040		1		SFR
00301300-000000	97101830	12/30/1997	0.0010	0.0002		3	vacant	FENCE
00110230-004400		1/9/1998	0.0018		0.0018	1	COUNTY ACQUISITION	ACQUISITION
00110230-004800		1/10/1998	0.0050		0.0050	1	DEDICATED ROGO LOT	ACQUISITION
00248500-000000	95101282	1/14/1998	0.0008	0.0008		3		SFR
00284560-000000		1/14/1998	0.0006		0.0006	1	DEDICATED ROGO LOT	ACQUISITION
00291550-000000		1/14/1998	0.0005		0.0005	1	COUNTY ACQUISITION	ACQUISITION
00110230-004600		1/26/1998	0.0009		0.0009	1	COUNTY ACQUISITION	ACQUISITION
00110230-006700		1/26/1998	0.0024		0.0024	1	COUNTY ACQUISITION	ACQUISITION
00265370-000000	95101746	1/30/1998	0.0021	0.0021		2		SFR
00265370-000100	95101746	1/30/1998	0.0010	0.0010		2	SFR-AFFORDABLE	SFR
00294370-000000	95101818	2/2/1998	0.0012	0.0012		1		SFR
00110230-005200		2/10/1998	0.0018		0.0018	1	COUNTY ACQUISITION	ACQUISITION
00278750-000000		2/10/1998	0.0008		0.0008	1	UNIDENTIFIED FUNDING - ADD-ON	ACQUISITION
00270760-000000		2/11/1998	0.0012		0.0012	2	DEDICATED ROGO LOT	ACQUISITION
00276820-000000		2/11/1998	0.0015		0.0015	1	COUNTY ACQUISITION	ACQUISITION
00295660-000000	98100169	2/19/1998	0.0017	0.0003		1	Existing SFR	FENCE
00109340-001400	96100385	3/6/1998	0.0019	0.0019		2		SFR
00277540-000000		3/11/1998	0.0008		0.0008	1	DEDICATED ROGO LOT	ACQUISITION
00277550-000000		3/11/1998	0.0016		0.0016	1	DEDICATED ROGO LOT	ACQUISITION
00281390-000000		3/11/1998	0.0008		0.0008	1	COUNTY ACQUISITION	ACQUISITION
00284530-000000		3/11/1998	0.0013		0.0013	1	DEDICATED ROGO LOT	ACQUISITION
00290220-000000	98100232	3/11/1998	0.0012	0.0002		1	Existing SFR	FENCE
00110230-005800		3/13/1998	0.0045		0.0045	1	COUNTY ACQUISITION	ACQUISITION
00110230-005900		3/13/1998	0.0009		0.0009	1	COUNTY ACQUISITION	ACQUISITION
00110230-006300		3/13/1998	0.0014		0.0014	1	COUNTY ACQUISITION	ACQUISITION

00271850-000000	96100001	3/27/1998	0.0007	0.0007		2		SFR
00244550-000000	96100441	4/1/1998	0.0008	0.0008		3		SFR
00317330-000000		4/3/1998	0.0016		0.0016	1	COUNTY ACQUISITION	ACQUISITION
00317340-000000		4/3/1998	0.0007		0.0007	1	DEDICATED ROGO LOT	ACQUISITION
00317060-000000	96100029	4/6/1998	0.0022	0.0022		1		SFR
00267510-000000		4/8/1998	0.0006		0.0006	1	MCLA-ADD-ON	ACQUISITION
00276430-000000		4/8/1998	0.0006		0.0006	1	COUNTY ACQUISITION	ACQUISITION
00245460-000000		4/14/1998	0.0005		0.0005	3	MCLA-ADD-ON	ACQUISITION
00281140-000000		5/11/1998	0.0008		0.0008	1	COUNTY ACQUISITION	ACQUISITION
00289940-000000		5/11/1998	0.0013		0.0013	1	COUNTY ACQUISITION	ACQUISITION
00268310-000000		5/13/1998	0.0006		0.0006	1	COUNTY ACQUISITION	ACQUISITION
00268320-000000		5/13/1998	0.0012		0.0012	1	COUNTY ACQUISITION	ACQUISITION
00277580-000000		5/13/1998	0.0008		0.0008	1	COUNTY ACQUISITION	ACQUISITION
00278580-000000		5/13/1998	0.0008		0.0008	1	COUNTY ACQUISITION	ACQUISITION
00282720-000000		5/13/1998	0.0006		0.0006	1	DEDICATED ROGO LOT	ACQUISITION
00282730-000000		5/13/1998	0.0011		0.0011	1	DEDICATED ROGO LOT	ACQUISITION
00291730-000000		5/13/1998	0.0010		0.0010	1	DEDICATED ROGO LOT	ACQUISITION
00318610-000000		5/15/1998	0.0007		0.0007	1	DEDICATED ROGO LOT	ACQUISITION
00318620-000000		5/15/1998	0.0038		0.0038	1	DEDICATED ROGO LOT	ACQUISITION
00295450-000000	98100766	5/29/1998	0.0012	0.0002		1	11/30/1995	FENCE
00267450-000000	98100771	6/1/1998	0.0006	0.0001		1	Existing SFR	FENCE
00277370-000000		6/4/1998	0.0008		0.0008	1	UNIDENTIFIED FUNDING - ADD-ON	ACQUISITION
00288980-000000		6/8/1998	0.0007		0.0007	1	DEDICATED ROGO LOT	ACQUISITION
00291540-000000		6/10/1998	0.0007		0.0007	1	DEDICATED ROGO LOT	ACQUISITION
00306780-000000	98100880	6/17/1998	0.0013	0.0003		1	1994	FENCE
00283770-000000		6/23/1998	0.0048		0.0048	1	DEDICATED ROGO LOT	ACQUISITION
00283780-000000		6/23/1998	0.0014		0.0014	1	DEDICATED ROGO LOT	ACQUISITION
00283790-000000		6/23/1998	0.0005		0.0005	1	DEDICATED ROGO LOT	ACQUISITION
00283370-000000		6/26/1998	0.0016		0.0016	1	DEDICATED ROGO LOT	ACQUISITION
00283380-000000		6/26/1998	0.0009		0.0009	1	DEDICATED ROGO LOT	ACQUISITION
00283390-000000		6/26/1998	0.0045		0.0045	1	DEDICATED ROGO LOT	ACQUISITION
00283400-000000		6/26/1998	0.0041		0.0041	1	DEDICATED ROGO LOT	ACQUISITION
00281340-000000		7/8/1998	0.0008		0.0008	1	DEDICATED ROGO LOT	ACQUISITION
00279750-000000		7/24/1998	0.0045		0.0045	1	DEDICATED ROGO LOT	ACQUISITION
00279760-000000		7/24/1998	0.0007		0.0007	1	DEDICATED ROGO LOT	ACQUISITION
00296480-000000	98101037	8/7/1998	0.0002	0.0002		1	combined with 00296490-000100	ACCESSORY
00246221-015900		8/17/1998	0.0011		0.0011	1	UNIDENTIFIED FUNDING - ADD-ON	ACQUISITION
00296480-000000	98101011	8/31/1998	0.0011	0.0002		1	Existing SFR	FENCE
00276100-000000		9/2/1998	0.0006		0.0006	1	UNIDENTIFIED FUNDING - ADD-ON	ACQUISITION
00306670-000100		9/3/1998	0.0011		0.0011	1	UNIDENTIFIED FUNDING - ADD-ON	ACQUISITION
00110230-005100		10/1/1998	0.0018		0.0018	1	DEDICATED ROGO LOT	ACQUISITION
00261890-000000		11/13/1998	0.0021		0.0021	1	DEDICATED ROGO LOT	ACQUISITION
00316370-000000		11/16/1998	0.0023		0.0023	2	FCT GRANT-ADD-ON	ACQUISITION
00316380-000000		11/16/1998	0.0034		0.0034	2	FCT GRANT-ADD-ON	ACQUISITION
00315610-000000		11/17/1998	0.0021		0.0021	1	MCLA-ADD-ON	ACQUISITION
00246221-005600		12/8/1998	0.0010		0.0010	1	UNIDENTIFIED FUNDING - ADD-ON	ACQUISITION
00275940-000000		12/9/1998	0.0013		0.0013	1	DEDICATED ROGO LOT	ACQUISITION
00275950-000000		12/9/1998	0.0013		0.0013	1	DEDICATED ROGO LOT	ACQUISITION
00275960-000000		12/9/1998	0.0006		0.0006	1	DEDICATED ROGO LOT	ACQUISITION
00276120-000000		12/9/1998	0.0006		0.0006	1	DEDICATED ROGO LOT	ACQUISITION
00281180-000000		12/9/1998	0.0006		0.0006	1	DEDICATED ROGO LOT	ACQUISITION
00291520-000000		12/9/1998	0.0007		0.0007	1	DEDICATED ROGO LOT	ACQUISITION
00111880-000300		12/15/1998	0.0096		0.0096	1	FCT GRANT-ADD-ON	ACQUISITION
00295480-000000	98102764	12/15/1998	0.0013	0.0003		1	Existing SFR	FENCE
00279580-000000		1/13/1999	0.0012		0.0012	1	COUNTY ACQUISITION	ACQUISITION
00289670-000000		1/13/1999	0.0013		0.0013	1	DEDICATED ROGO LOT	ACQUISITION
00278590-000000		2/10/1999	0.0016		0.0016	1	COUNTY ACQUISITION	ACQUISITION
00281020-000000		2/10/1999	0.0015		0.0015	1	COUNTY ACQUISITION	ACQUISITION
00290210-000000	99100391	2/11/1999	0.0012	0.0002		1	vacant	FENCE
00296780-000000	99100390	2/11/1999	0.0019	0.0004		1	vacant	FENCE
00111260-000000		3/1/1999	0.0060		0.0060	1	COUNTY ACQUISITION	ACQUISITION
00111270-000000		3/1/1999	0.0030		0.0030	1	COUNTY ACQUISITION	ACQUISITION
00111880-000030		3/1/1999	0.0022		0.0022	1	COUNTY ACQUISITION	ACQUISITION
00111890-000000		3/1/1999	0.0108		0.0108	1	COUNTY ACQUISITION	ACQUISITION
00111940-000000		3/1/1999	0.0044		0.0044	1	COUNTY ACQUISITION	ACQUISITION
00271040-000000		3/4/1999	0.0012		0.0012	2	UNIDENTIFIED FUNDING - ADD-ON	ACQUISITION
00268300-000000		3/10/1999	0.0012		0.0012	1	COUNTY ACQUISITION	ACQUISITION
00276620-000000		3/10/1999	0.0016		0.0016	1	COUNTY ACQUISITION	ACQUISITION
00291650-000000		3/10/1999	0.0010		0.0010	1	COUNTY ACQUISITION	ACQUISITION
00258160-000000		4/1/1999	0.0015		0.0015	1	COUNTY ACQUISITION	ACQUISITION
00250720-000000		4/14/1999	0.0011		0.0011	1	COUNTY ACQUISITION	ACQUISITION
00250730-000000		4/14/1999	0.0005		0.0005	1	COUNTY ACQUISITION	ACQUISITION
00276860-000000		4/14/1999	0.0017		0.0017	1	COUNTY ACQUISITION	ACQUISITION
00280150-000000		4/14/1999	0.0016		0.0016	1	COUNTY ACQUISITION	ACQUISITION
00281350-000000		4/14/1999	0.0015		0.0015	1	COUNTY ACQUISITION	ACQUISITION
00294010-000000		4/14/1999	0.0006		0.0006	1	COUNTY ACQUISITION	ACQUISITION
00312572-001700		4/14/1999	0.0014		0.0014	2	MCLA/P2000-ADD-ON	ACQUISITION
00270940-000000		4/16/1999	0.0012		0.0012	2	ROGO-ADD-ON	ACQUISITION
00272180-000000		4/19/1999	0.0010		0.0010	2	ROGO-ADD-ON	ACQUISITION
00312571-003200		4/21/1999	0.0005		0.0005	2	COUNTY ACQUISITION	ACQUISITION
00246221-011300		4/26/1999	0.0005		0.0005	1	UNIDENTIFIED FUNDING - ADD-ON	ACQUISITION
00271810-000000		4/26/1999	0.0010		0.0010	2	MCLA/P2000-ADD-ON	ACQUISITION
00271890-000000		4/26/1999	0.0010		0.0010	2	MCLA/P2000-ADD-ON	ACQUISITION
00258150-000000		5/1/1999	0.0009		0.0009	1	COUNTY ACQUISITION	ACQUISITION
00319491-001300		5/4/1999	0.0008		0.0008	1	COUNTY ACQUISITION	ACQUISITION
00319491-004100		5/7/1999	0.0013		0.0013	1	COUNTY ACQUISITION	ACQUISITION
00319491-004200		5/7/1999	0.0011		0.0011	1	COUNTY ACQUISITION	ACQUISITION
00319492-001600		5/11/1999	0.0011		0.0011	1	DEDICATED ROGO LOT	ACQUISITION
00276110-000000		5/12/1999	0.0013		0.0013	1	DEDICATED ROGO LOT	ACQUISITION
00319491-002600		5/14/1999	0.0011		0.0011	1	DEDICATED ROGO LOT	ACQUISITION
00294110-000000		6/1/1999	0.0007		0.0007	1	DEDICATED ROGO LOT	ACQUISITION
00319491-003600		6/4/1999	0.0011		0.0011	1	DEDICATED ROGO LOT	ACQUISITION
00246221-009800		6/9/1999	0.0011		0.0011	1	UNIDENTIFIED FUNDING - ADD-ON	ACQUISITION
00246221-009900		6/9/1999	0.0011		0.0011	1	UNIDENTIFIED FUNDING - ADD-ON	ACQUISITION
00279320-000000		6/11/1999	0.0008		0.0008	1	UNIDENTIFIED FUNDING - ADD-ON	ACQUISITION
00280940-000000	99101639	6/17/1999	0.0007	0.0001		1	1994	FENCE
00269160-000000		6/21/1999	0.0014		0.0014	2	COUNTY ACQUISITION	ACQUISITION
00269610-000000		6/21/1999	0.0017		0.0017	2	COUNTY ACQUISITION	ACQUISITION

00271920-000000		6/22/1999	0.0010		0.0010	2	COUNTY ACQUISITION	ACQUISITION
00280470-000000		7/9/1999	0.0011		0.0011	1	UNIDENTIFIED FUNDING - ADD-ON	ACQUISITION
00277360-000000		7/13/1999	0.0016		0.0016	1	DEDICATED ROGO LOT	ACQUISITION
00319492-002000		7/13/1999	0.0011		0.0011	1	DEDICATED ROGO LOT	ACQUISITION
00267930-000000		7/14/1999	0.0012		0.0012	1	UNIDENTIFIED FUNDING - ADD-ON	ACQUISITION
00279330-000000		7/14/1999	0.0016		0.0016	1	UNIDENTIFIED FUNDING - ADD-ON	ACQUISITION
00270880-000000		7/19/1999	0.0012		0.0012	2	COUNTY ACQUISITION	ACQUISITION
00111060-000400		7/22/1999	0.0091		0.0091	1	DEDICATED ROGO LOT	ACQUISITION
00267800-000000		7/22/1999	0.0010		0.0010	1	DEDICATED ROGO LOT	ACQUISITION
00275930-000000		7/22/1999	0.0006		0.0006	1	DEDICATED ROGO LOT	ACQUISITION
00276070-000000		7/22/1999	0.0006		0.0006	1	DEDICATED ROGO LOT	ACQUISITION
00279300-000000		7/22/1999	0.0008		0.0008	1	DEDICATED ROGO LOT	ACQUISITION
00279310-000000		7/22/1999	0.0016		0.0016	1	DEDICATED ROGO LOT	ACQUISITION
00282870-000000		7/22/1999	0.0011		0.0011	1	DEDICATED ROGO LOT	ACQUISITION
00282880-000000		7/22/1999	0.0006		0.0006	1	DEDICATED ROGO LOT	ACQUISITION
00292220-000000		7/22/1999	0.0017		0.0017	1	DEDICATED ROGO LOT	ACQUISITION
00302490-000000		7/22/1999	0.0005		0.0005	1	DEDICATED ROGO LOT	ACQUISITION
00304200-000000		7/22/1999	0.0005		0.0005	1	DEDICATED ROGO LOT	ACQUISITION
00304210-000000		7/22/1999	0.0010		0.0010	1	DEDICATED ROGO LOT	ACQUISITION
00305670-000000		7/22/1999	0.0010		0.0010	1	DEDICATED ROGO LOT	ACQUISITION
00319491-002700		7/26/1999	0.0011		0.0011	1	DEDICATED ROGO LOT	ACQUISITION
00272070-000000		7/29/1999	0.0008		0.0008	2	COUNTY ACQUISITION	ACQUISITION
00291300-000000		8/14/1999	0.0011		0.0011	1	DEDICATED ROGO LOT	ACQUISITION
00112341-000800		9/8/1999	0.0035		0.0035	1	MCLA/P2000-ADD-ON	ACQUISITION
00275850-000000		9/9/1999	0.0013		0.0013	1	DEDICATED ROGO LOT	ACQUISITION
00276850-000000		9/9/1999	0.0009		0.0009	1	DEDICATED ROGO LOT	ACQUISITION
00277100-000000		9/9/1999	0.0011		0.0011	1	DEDICATED ROGO LOT	ACQUISITION
00277110-000000		9/9/1999	0.0009		0.0009	1	DEDICATED ROGO LOT	ACQUISITION
00277590-000000		9/9/1999	0.0016		0.0016	1	DEDICATED ROGO LOT	ACQUISITION
00284410-000000		9/9/1999	0.0008		0.0008	1	DEDICATED ROGO LOT	ACQUISITION
00284700-000000		9/9/1999	0.0024		0.0024	1	DEDICATED ROGO LOT	ACQUISITION
00293600-000000		9/9/1999	0.0011		0.0011	1	DEDICATED ROGO LOT	ACQUISITION
00303110-000000		9/9/1999	0.0010		0.0010	1	DEDICATED ROGO LOT	ACQUISITION
00303120-000000		9/9/1999	0.0010		0.0010	1	DEDICATED ROGO LOT	ACQUISITION
00311550-000000		9/9/1999	0.0007		0.0007	2	COUNTY ACQUISITION	ACQUISITION
00112341-000700		9/16/1999	0.0030		0.0030	1	DEDICATED ROGO LOT	ACQUISITION
00311560-000000		9/22/1999	0.0003		0.0003	2	COUNTY ACQUISITION	ACQUISITION
00256580-000000	99102235	10/5/1999	0.0010	0.0010		3	New 2,400 sf office	COMMERCIAL
00112340-002000		10/12/1999	0.0028		0.0028	1	DEDICATED ROGO LOT	ACQUISITION
00281790-000000		10/12/1999	0.0016		0.0016	1	DEDICATED ROGO LOT	ACQUISITION
00311530-000000		10/14/1999	0.0003		0.0003	2	COUNTY ACQUISITION	ACQUISITION
00311540-000000		10/14/1999	0.0003		0.0003	2	COUNTY ACQUISITION	ACQUISITION
00281890-000000		10/20/1999	0.0008		0.0008	1	DEDICATED ROGO LOT	ACQUISITION
00284930-000000		10/21/1999	0.0012		0.0012	1	DEDICATED ROGO LOT	ACQUISITION
00284940-000000		10/21/1999	0.0024		0.0024	1	DEDICATED ROGO LOT	ACQUISITION
00284950-000000		10/21/1999	0.0012		0.0012	1	DEDICATED ROGO LOT	ACQUISITION
00281970-000000		10/26/1999	0.0008		0.0008	1	DEDICATED ROGO LOT	ACQUISITION
00282130-000000		10/28/1999	0.0016		0.0016	1	DEDICATED ROGO LOT	ACQUISITION
00282140-000000		10/28/1999	0.0008		0.0008	1	DEDICATED ROGO LOT	ACQUISITION
00282150-000000		10/28/1999	0.0014		0.0014	1	DEDICATED ROGO LOT	ACQUISITION
00282160-000000		10/28/1999	0.0007		0.0007	1	DEDICATED ROGO LOT	ACQUISITION
00284100-000000		10/29/1999	0.0008		0.0008	1	DEDICATED ROGO LOT	ACQUISITION
00284110-000000		10/29/1999	0.0017		0.0017	1	DEDICATED ROGO LOT	ACQUISITION
00284120-000000		10/29/1999	0.0009		0.0009	1	DEDICATED ROGO LOT	ACQUISITION
00267790-000000		11/10/1999	0.0010		0.0010	1	DEDICATED ROGO LOT	ACQUISITION
00283360-000000		11/15/1999	0.0012		0.0012	1	MCLA/P2000-ADD-ON	ACQUISITION
00283600-000000		11/16/1999	0.0016		0.0016	1	DEDICATED ROGO LOT	ACQUISITION
00277950-000000		11/17/1999	0.0006		0.0006	1	DEDICATED ROGO LOT	ACQUISITION
00277940-000000		11/18/1999	0.0015		0.0015	1	DEDICATED ROGO LOT	ACQUISITION
00277960-000000		11/18/1999	0.0013		0.0013	1	DEDICATED ROGO LOT	ACQUISITION
00285000-000000		11/22/1999	0.0025		0.0025	1	DEDICATED ROGO LOT	ACQUISITION
00285010-000000		11/22/1999	0.0021		0.0021	1	DEDICATED ROGO LOT	ACQUISITION
00285020-000000		11/22/1999	0.0011		0.0011	1	DEDICATED ROGO LOT	ACQUISITION
00283610-000000		11/29/1999	0.0008		0.0008	1	DEDICATED ROGO LOT	ACQUISITION
00268900-000000		12/1/1999	0.0006		0.0006	2	COUNTY ACQUISITION	ACQUISITION
00317270-000000		12/3/1999	0.0024		0.0024	1	DEDICATED ROGO LOT	ACQUISITION
00317280-000000		12/3/1999	0.0011		0.0011	1	DEDICATED ROGO LOT	ACQUISITION
00317290-000000		12/3/1999	0.0023		0.0023	1	DEDICATED ROGO LOT	ACQUISITION
00317300-000000		12/3/1999	0.0011		0.0011	1	DEDICATED ROGO LOT	ACQUISITION
00317470-000000		12/3/1999	0.0009		0.0009	1	DEDICATED ROGO LOT *	ACQUISITION
00317480-000000		12/3/1999	0.0018		0.0018	1	DEDICATED ROGO LOT	ACQUISITION
00317490-000000		12/3/1999	0.0009		0.0009	1	DEDICATED ROGO LOT	ACQUISITION
00317500-000000		12/3/1999	0.0018		0.0018	1	DEDICATED ROGO LOT	ACQUISITION
00318410-000000		12/3/1999	0.0014		0.0014	1	DEDICATED ROGO LOT	ACQUISITION
00271060-000000		12/9/1999	0.0010		0.0010	1	UNIDENTIFIED FUNDING - ADD-ON	ACQUISITION
00276640-000000		12/12/1999	0.0016		0.0016	1	UNIDENTIFIED FUNDING - ADD-ON	ACQUISITION
00281600-000000		12/15/1999	0.0014		0.0014	1	DEDICATED ROGO LOT	ACQUISITION
00111240-000000		1/3/2000	0.0063		0.0063	1	DEDICATED ROGO LOT	ACQUISITION
00112340-000400		1/3/2000	0.0028		0.0028	1	DEDICATED ROGO LOT	ACQUISITION
00112340-001600		1/6/2000	0.0035		0.0035	1	DEDICATED ROGO LOT	ACQUISITION
00280920-000000	99102605	1/13/2000	0.0007	0.0001		1	vacant	FENCE
00276750-000000		1/20/2000	0.0010		0.0010	1	DEDICATED ROGO LOT	ACQUISITION
00307620-000000		1/20/2000	0.0008		0.0008	1	DEDICATED ROGO LOT	ACQUISITION
00281760-000000		2/3/2000	0.0010		0.0010	1	DEDICATED ROGO LOT	ACQUISITION
00281770-000000		2/3/2000	0.0014		0.0014	1	DEDICATED ROGO LOT	ACQUISITION
00283440-000000		2/3/2000	0.0012		0.0012	1	DEDICATED ROGO LOT	ACQUISITION
00112340-001800		2/11/2000	0.0041		0.0041	1	DEDICATED ROGO LOT	ACQUISITION
00112340-001900		2/11/2000	0.0039		0.0039	1	DEDICATED ROGO LOT	ACQUISITION
00112340-002100		2/11/2000	0.0044		0.0044	1	DEDICATED ROGO LOT	ACQUISITION
00316770-000000		2/11/2000	0.0032		0.0032	1	DEDICATED ROGO LOT	ACQUISITION
00112341-001301		2/16/2000	0.0067		0.0067	1	DEDICATED ROGO LOT	ACQUISITION
00268090-000000		2/17/2000	0.0006		0.0006	1	COUNTY ACQUISITION	ACQUISITION
00268370-000000		2/17/2000	0.0012		0.0012	1	DEDICATED ROGO LOT	ACQUISITION
00289570-000000		2/17/2000	0.0009		0.0009	1	DEDICATED ROGO LOT	ACQUISITION
00112340-001400		2/18/2000	0.0039		0.0039	1	MCLA/P2000-ADD-ON	ACQUISITION
00316760-000000		3/13/2000	0.0040		0.0040	1	COUNTY ACQUISITION	ACQUISITION
00112340-001000		3/16/2000	0.0030		0.0030	1	DEDICATED ROGO LOT	ACQUISITION
00268150-000000		3/16/2000	0.0012		0.0012	1	DEDICATED ROGO LOT	ACQUISITION
00302850-000000		3/16/2000	0.0010		0.0010	1	DEDICATED ROGO LOT	ACQUISITION
00302860-000000		3/16/2000	0.0005		0.0005	1	DEDICATED ROGO LOT	ACQUISITION
00280790-000000	00101099	3/24/2000	0.0016	0.0003		1	vacant	FENCE
00316890-000000		3/28/2000	0.0037		0.0037	1	DEDICATED ROGO LOT	ACQUISITION
00316900-000000		3/28/2000	0.0035		0.0035	1	COUNTY ACQUISITION	ACQUISITION
00303030-000000		4/10/2000	0.0010		0.0010	1	DEDICATED ROGO LOT	ACQUISITION

							SFR on Lot 16, owns lots 15 & 16	
00307430-000000	00101650	4/19/2000	0.0005	0.0001		1		FENCE
00111060-000600		4/20/2000	0.0090		0.0090	1	DEDICATED ROGO LOT	ACQUISITION
00111060-000700		4/20/2000	0.0060		0.0060	1	DEDICATED ROGO LOT	ACQUISITION
00111930-000200		4/20/2000	0.0010		0.0010	1	DEDICATED ROGO LOT	ACQUISITION
00111930-000300		4/20/2000	0.0013		0.0013	1	DEDICATED ROGO LOT	ACQUISITION
00111930-000400		4/20/2000	0.0050		0.0050	1	DEDICATED ROGO LOT	ACQUISITION
00111930-000600		4/20/2000	0.0010		0.0010	1	DEDICATED ROGO LOT	ACQUISITION
00272320-000000		4/20/2000	0.0020		0.0020	2	COUNTY ACQUISITION	ACQUISITION
00277800-000000		4/20/2000	0.0012		0.0012	1	DEDICATED ROGO LOT	ACQUISITION
00279360-000000		4/20/2000	0.0008		0.0008	1	DEDICATED ROGO LOT	ACQUISITION
00280510-000000		4/20/2000	0.0015		0.0015	1	DEDICATED ROGO LOT	ACQUISITION
00282890-000000		4/20/2000	0.0015		0.0015	1	DEDICATED ROGO LOT	ACQUISITION
00302470-000000		4/20/2000	0.0005		0.0005	1	DEDICATED ROGO LOT	ACQUISITION
00302480-000000		4/20/2000	0.0010		0.0010	1	DEDICATED ROGO LOT	ACQUISITION
00305290-000000		4/20/2000	0.0011		0.0011	1	DEDICATED ROGO LOT	ACQUISITION
00305300-000000		4/20/2000	0.0005		0.0005	1	DEDICATED ROGO LOT	ACQUISITION
00307880-000000		4/20/2000	0.0005		0.0005	1	DEDICATED ROGO LOT	ACQUISITION
00307890-000000		4/20/2000	0.0010		0.0010	1	DEDICATED ROGO LOT	ACQUISITION
00246221-015700		5/18/2000	0.0025		0.0025	1	DEDICATED ROGO LOT	ACQUISITION
00111071-028000	00102284	5/22/2000	0.0167	0.0033		1	Park-Wild Bird Sanctuary	FENCE
00312573-000600		5/23/2000	0.0014		0.0014	2	MCLA/P2000-ADD-ON	ACQUISITION
00271660-000000		6/14/2000	0.0010		0.0010	2	COUNTY ACQUISITION	ACQUISITION
00312573-002200		6/15/2000	0.0010		0.0010	2	COUNTY ACQUISITION	ACQUISITION
00112341-000100		6/22/2000	0.0026		0.0026	1	COUNTY ACQUISITION	ACQUISITION
00260330-000000		6/27/2000	0.0014		0.0014	1	COUNTY ACQUISITION	ACQUISITION
00260340-000000		6/27/2000	0.0007		0.0007	1	DEDICATED ROGO LOT	ACQUISITION
00302170-000000		6/27/2000	0.0010		0.0010	1	MCLA/P2000-ADD-ON	ACQUISITION
00302020-000000		7/5/2000	0.0010		0.0010	1	DEDICATED ROGO LOT	ACQUISITION
00302030-000000		7/5/2000	0.0005		0.0005	1	DEDICATED ROGO LOT	ACQUISITION
00302160-000000		7/5/2000	0.0005		0.0005	1	DEDICATED ROGO LOT	ACQUISITION
00303040-000000		7/5/2000	0.0005		0.0005	1	DEDICATED ROGO LOT	ACQUISITION
00298850-000000		7/18/2000	0.0010		0.0010	1	DEDICATED ROGO LOT	ACQUISITION
00298860-000000		7/18/2000	0.0003		0.0003	1	DEDICATED ROGO LOT	ACQUISITION
00298880-000000		7/18/2000	0.0005		0.0005	1	DEDICATED ROGO LOT	ACQUISITION
00112270-000400	00103052	7/21/2000	0.0056	0.0011		1	Existing SFR	FENCE
00276200-000000		7/27/2000	0.0012		0.0012	1	DEDICATED ROGO LOT	ACQUISITION
00276210-000000		7/27/2000	0.0006		0.0006	1	COUNTY ACQUISITION	ACQUISITION
00276220-000000		7/27/2000	0.0012		0.0012	1	DEDICATED ROGO LOT	ACQUISITION
00276230-000000		7/27/2000	0.0006		0.0006	1	COUNTY ACQUISITION	ACQUISITION
00276320-000000		7/27/2000	0.0006		0.0006	1	COUNTY ACQUISITION	ACQUISITION
00276440-000000		7/27/2000	0.0012		0.0012	1	DEDICATED ROGO LOT	ACQUISITION
00276450-000000		7/27/2000	0.0012		0.0012	1	DEDICATED ROGO LOT	ACQUISITION
00276460-000000		7/27/2000	0.0006		0.0006	1	DEDICATED ROGO LOT	ACQUISITION
00276470-000000		7/27/2000	0.0012		0.0012	1	DEDICATED ROGO LOT	ACQUISITION
00280130-000000		7/27/2000	0.0016		0.0016	1	DEDICATED ROGO LOT	ACQUISITION
00284860-000000		7/27/2000	0.0026		0.0026	1	DEDICATED ROGO LOT	ACQUISITION
00298380-000000		7/27/2000	0.0010		0.0010	1	DEDICATED ROGO LOT	ACQUISITION
00298390-000000		7/27/2000	0.0010		0.0010	1	DEDICATED ROGO LOT	ACQUISITION
00298600-000000		7/27/2000	0.0010		0.0010	1	DEDICATED ROGO LOT	ACQUISITION
00298610-000000		7/27/2000	0.0010		0.0010	1	DEDICATED ROGO LOT	ACQUISITION
00298670-000000		7/27/2000	0.0010		0.0010	1	DEDICATED ROGO LOT	ACQUISITION
00298680-000000		7/27/2000	0.0010		0.0010	1	DEDICATED ROGO LOT	ACQUISITION
00301850-000000		7/27/2000	0.0010		0.0010	1	COUNTY ACQUISITION	ACQUISITION
00305650-000000		7/27/2000	0.0010		0.0010	1	COUNTY ACQUISITION	ACQUISITION
00285040-000000		8/9/2000	0.0011		0.0011	1	COUNTY ACQUISITION	ACQUISITION
00299510-000000		8/9/2000	0.0005		0.0005	1	DEDICATED ROGO LOT	ACQUISITION
00299520-000000		8/9/2000	0.0005		0.0005	1	COUNTY ACQUISITION	ACQUISITION
00279180-000000	00103319	8/10/2000	0.0012	0.0002		1	12/11/1995	FENCE
00298620-000000		9/15/2000	0.0010		0.0010	1	COUNTY ACQUISITION	ACQUISITION
00247420-000000		9/20/2000	0.0004		0.0004	1	COUNTY ACQUISITION	ACQUISITION
00261410-000000		9/20/2000	0.0018		0.0018	1	COUNTY ACQUISITION	ACQUISITION
00111930-000500		9/21/2000	0.0010		0.0010	1	DEDICATED ROGO LOT	ACQUISITION
00247360-000000		9/21/2000	0.0007		0.0007	1	DEDICATED ROGO LOT	ACQUISITION
00256050-000000		9/21/2000	0.0013		0.0013	1	DEDICATED ROGO LOT	ACQUISITION
00267570-000000		9/21/2000	0.0012		0.0012	1	DEDICATED ROGO LOT	ACQUISITION
00275760-000000		9/21/2000	0.0006		0.0006	1	DEDICATED ROGO LOT	ACQUISITION
00279600-000000		9/21/2000	0.0009		0.0009	1	DEDICATED ROGO LOT	ACQUISITION
00279610-000000		9/21/2000	0.0018		0.0018	1	DEDICATED ROGO LOT	ACQUISITION
00281400-000000		9/21/2000	0.0015		0.0015	1	DEDICATED ROGO LOT	ACQUISITION
00284880-000000		9/21/2000	0.0025		0.0025	1	DEDICATED ROGO LOT	ACQUISITION
00286690-000000		9/21/2000	0.0019		0.0019	1	DEDICATED ROGO LOT	ACQUISITION
00307250-000000		9/21/2000	0.0010		0.0010	1	DEDICATED ROGO LOT	ACQUISITION
00307260-000000		9/21/2000	0.0005		0.0005	1	DEDICATED ROGO LOT	ACQUISITION
00307350-000000		9/21/2000	0.0010		0.0010	1	DEDICATED ROGO LOT	ACQUISITION
00310460-000000		9/21/2000	0.0003		0.0003	2	COUNTY ACQUISITION	ACQUISITION
00267250-000000		10/19/2000	0.0006		0.0006	2	COUNTY ACQUISITION	ACQUISITION
00267260-000000		10/19/2000	0.0012		0.0012	2	COUNTY ACQUISITION	ACQUISITION
00276380-000000		10/19/2000	0.0006		0.0006	1	COUNTY ACQUISITION	ACQUISITION
00276390-000000		10/19/2000	0.0012		0.0012	1	DEDICATED ROGO LOT	ACQUISITION
00301700-000000		10/19/2000	0.0010		0.0010	1	DEDICATED ROGO LOT	ACQUISITION
00301720-000000		10/19/2000	0.0010		0.0010	1	DEDICATED ROGO LOT	ACQUISITION
00303260-000000		10/19/2000	0.0010		0.0010	1	DEDICATED ROGO LOT	ACQUISITION
00308770-000000		10/19/2000	0.0005		0.0005	1	COUNTY ACQUISITION	ACQUISITION
00307790-000000		10/19/2000	0.0011		0.0011	1	DEDICATED ROGO LOT	ACQUISITION
00268500-000000		11/22/2000	0.0014		0.0014	1	COUNTY ACQUISITION	ACQUISITION
00275830-000000		11/22/2000	0.0015		0.0015	1	COUNTY ACQUISITION	ACQUISITION
00276730-000000		11/22/2000	0.0012		0.0012	1	COUNTY ACQUISITION	ACQUISITION
00276740-000000		11/22/2000	0.0005		0.0005	1	COUNTY ACQUISITION	ACQUISITION
00302150-000000		11/22/2000	0.0010		0.0010	1	COUNTY ACQUISITION	ACQUISITION
00307340-000000		11/22/2000	0.0008		0.0008	1	COUNTY ACQUISITION	ACQUISITION
00315920-000000		11/22/2000	0.0009		0.0009	2	COUNTY ACQUISITION	ACQUISITION
00272471-000401	00104603	12/1/2000	0.0003	0.0001		2	combined with 00109990-000100 (shed)	FENCE
00302040-000000		12/5/2000	0.0010		0.0010	1	COUNTY ACQUISITION	ACQUISITION
00301840-000000		12/14/2000	0.0005		0.0005	1	COUNTY ACQUISITION	ACQUISITION
00319494-001200		1/8/2001	0.0038		0.0038	1	COUNTY ACQUISITION	ACQUISITION
00265830-000000		1/18/2001	0.0009		0.0009	2	COUNTY ACQUISITION	ACQUISITION
00302360-000000		1/18/2001	0.0005		0.0005	1	COUNTY ACQUISITION	ACQUISITION
00302370-000000		1/18/2001	0.0010		0.0010	1	COUNTY ACQUISITION	ACQUISITION
00267330-000000		1/30/2001	0.0012		0.0012	1	UNIDENTIFIED FUNDING - ADD-ON	ACQUISITION
00112270-000100		2/1/2001	0.0076		0.0076	1	COUNTY ACQUISITION	ACQUISITION
00294690-000000		2/11/2001	0.0017		0.0017	1	DEDICATED ROGO LOT	ACQUISITION
00275710-000000		2/22/2001	0.0008		0.0008	1	DEDICATED ROGO LOT	ACQUISITION
00275720-000000		2/22/2001	0.0013		0.0013	1	DEDICATED ROGO LOT	ACQUISITION
00275730-000000		2/22/2001	0.0013		0.0013	1	DEDICATED ROGO LOT	ACQUISITION
00281250-000000		2/22/2001	0.0009		0.0009	1	DEDICATED ROGO LOT	ACQUISITION
00301730-000000		2/22/2001	0.0005		0.0005	1	DEDICATED ROGO LOT	ACQUISITION

00301790-000000		2/22/2001	0.0010		0.0010	1	DEDICATED ROGO LOT	ACQUISITION
00301800-000000		2/22/2001	0.0005		0.0005	1	DEDICATED ROGO LOT	ACQUISITION
00311570-000000		2/22/2001	0.0007		0.0007	2	COUNTY ACQUISITION	ACQUISITION
00311580-000000		2/22/2001	0.0007		0.0007	2	COUNTY ACQUISITION	ACQUISITION
00311730-000000		2/22/2001	0.0003		0.0003	2	COUNTY ACQUISITION	ACQUISITION
00246760-000000	99102250	2/26/2001	0.0020	0.0020		1		SFR
00264980-000000		2/28/2001	0.0010		0.0010	2	DEDICATED ROGO LOT	ACQUISITION
00305210-000000	01100513	3/9/2001	0.0005	0.0001		1	1992	FENCE
00268180-000000		3/13/2001	0.0006		0.0006	1	DEDICATED ROGO LOT	ACQUISITION
00272310-000000		3/22/2001	0.0014		0.0014	2	COUNTY ACQUISITION	ACQUISITION
00301740-000000		3/22/2001	0.0010		0.0010	1	DEDICATED ROGO LOT	ACQUISITION
00307670-000000		3/22/2001	0.0004		0.0004	1	DEDICATED ROGO LOT	ACQUISITION
00261910-000000		4/19/2001	0.0018		0.0018	1	DEDICATED ROGO LOT	ACQUISITION
00261920-000000		4/19/2001	0.0009		0.0009	1	COUNTY ACQUISITION	ACQUISITION
00267300-000000		4/19/2001	0.0006		0.0006	1	COUNTY ACQUISITION	ACQUISITION
00280540-000000		4/19/2001	0.0008		0.0008	1	COUNTY ACQUISITION	ACQUISITION
00284370-000000		4/19/2001	0.0015		0.0015	1	DEDICATED ROGO LOT	ACQUISITION
00291670-000000		4/19/2001	0.0010		0.0010	1	DEDICATED ROGO LOT	ACQUISITION
00294330-000000		4/19/2001	0.0011		0.0011	1	DEDICATED ROGO LOT	ACQUISITION
00305680-000000		4/19/2001	0.0005		0.0005	1	COUNTY ACQUISITION	ACQUISITION
00319491-001200		4/27/2001	0.0008		0.0008	1	COUNTY ACQUISITION	ACQUISITION
00250700-000000		5/17/2001	0.0004		0.0004	1	COUNTY ACQUISITION	ACQUISITION
00284480-000000	01101981	6/1/2001	0.0015	0.0003		1	combined with 00284470 & 480 = 00284460-000000	FENCE
00267840-000000		6/21/2001	0.0012		0.0012	1	COUNTY ACQUISITION	ACQUISITION
00306970-000000		6/21/2001	0.0005		0.0005	1	COUNTY ACQUISITION	ACQUISITION
00306980-000000		6/21/2001	0.0010		0.0010	1	DEDICATED ROGO LOT	ACQUISITION
00307760-000000		6/21/2001	0.0006		0.0006	1	COUNTY ACQUISITION	ACQUISITION
00319491-000300	01101893	7/18/2001	0.0009	0.0009		1		SFR
00244420-000000		7/19/2001	0.0005		0.0005	3	COUNTY ACQUISITION	ACQUISITION
00261900-000000		7/19/2001	0.0009		0.0009	1	COUNTY ACQUISITION	ACQUISITION
00269930-000000		7/19/2001	0.0008		0.0008	2	COUNTY ACQUISITION	ACQUISITION
00270640-000000		7/19/2001	0.0006		0.0006	2	COUNTY ACQUISITION	ACQUISITION
00282420-000000		7/19/2001	0.0011		0.0011	1	COUNTY ACQUISITION	ACQUISITION
00282430-000000		7/19/2001	0.0006		0.0006	1	COUNTY ACQUISITION	ACQUISITION
00305690-000000		7/19/2001	0.0010		0.0010	1	COUNTY ACQUISITION	ACQUISITION
00271910-000000	1102596	7/23/2001	0.0010	0.0002		2	vacant	FENCE
00111110-000000		8/1/2001	0.0239		0.0239	1	COUNTY ACQUISITION	ACQUISITION
00315800-000000	01103007/A161	8/3/2001	0.0023	0.0023		1		SFR
00272520-000000		8/14/2001	0.0005		0.0005	1	COUNTY ACQUISITION	ACQUISITION
00272690-000000		8/14/2001	0.0005		0.0005	1	COUNTY ACQUISITION	ACQUISITION
00272700-000000		8/14/2001	0.0010		0.0010	1	COUNTY ACQUISITION	ACQUISITION
00272710-000000		8/14/2001	0.0005		0.0005	1	COUNTY ACQUISITION	ACQUISITION
00272720-000000		8/14/2001	0.0010		0.0010	1	COUNTY ACQUISITION	ACQUISITION
00264970-000000		8/16/2001	0.0005		0.0005	2	COUNTY ACQUISITION	ACQUISITION
00250160-000000		8/27/2001	0.0005		0.0005	3	COUNTY ACQUISITION	ACQUISITION
00110230-003800		9/11/2001	0.0086		0.0086	1	COUNTY ACQUISITION	ACQUISITION
00110230-003900		9/11/2001	0.0066		0.0066	1	COUNTY ACQUISITION	ACQUISITION
00110230-004000		9/11/2001	0.0086		0.0086	1	COUNTY ACQUISITION	ACQUISITION
00274470-000000		9/25/2001	0.0005		0.0005	1	COUNTY ACQUISITION	ACQUISITION
00274480-000000		9/25/2001	0.0010		0.0010	1	COUNTY ACQUISITION	ACQUISITION
00274490-000000		9/25/2001	0.0007		0.0007	1	COUNTY ACQUISITION	ACQUISITION
00246010-000000		10/2/2001	0.0006		0.0006	3	COUNTY ACQUISITION	ACQUISITION
00272630-000000		10/16/2001	0.0005		0.0005	1	COUNTY ACQUISITION	ACQUISITION
00272670-000000		10/16/2001	0.0005		0.0005	1	COUNTY ACQUISITION	ACQUISITION
00108070-000700		10/18/2001	0.0084		0.0084	1	UNIDENTIFIED FUNDING - ADD-ON	ACQUISITION
00250710-000000		10/18/2001	0.0008		0.0008	1	COUNTY ACQUISITION	ACQUISITION
00272580-000000		10/30/2001	0.0005		0.0005	1	COUNTY ACQUISITION	ACQUISITION
00272650-000000		10/30/2001	0.0005		0.0005	1	COUNTY ACQUISITION	ACQUISITION
00273520-000000		11/20/2001	0.0011		0.0011	1	COUNTY ACQUISITION	ACQUISITION
00273530-000000		11/20/2001	0.0011		0.0011	1	COUNTY ACQUISITION	ACQUISITION
00273540-000000		11/20/2001	0.0006		0.0006	1	COUNTY ACQUISITION	ACQUISITION
00273550-000000		11/20/2001	0.0011		0.0011	1	COUNTY ACQUISITION	ACQUISITION
00273560-000000		11/20/2001	0.0005		0.0005	1	DEDICATED ROGO LOT	ACQUISITION
00312573-002600		12/4/2001	0.0003		0.0003	2	COUNTY ACQUISITION	ACQUISITION
00274230-000000		12/10/2001	0.0007		0.0007	1	DEDICATED ROGO LOT	ACQUISITION
00274240-000000		12/10/2001	0.0008		0.0008	1	DEDICATED ROGO LOT	ACQUISITION
00274250-000000		12/10/2001	0.0007		0.0007	1	DEDICATED ROGO LOT	ACQUISITION
00274260-000000		12/10/2001	0.0008		0.0008	1	DEDICATED ROGO LOT	ACQUISITION
00274330-000000		12/10/2001	0.0010		0.0010	1	DEDICATED ROGO LOT	ACQUISITION
00274340-000000		12/10/2001	0.0005		0.0005	1	DEDICATED ROGO LOT	ACQUISITION
00267820-000000		12/20/2001	0.0012		0.0012	1	DEDICATED ROGO LOT	ACQUISITION
00268030-000000		12/20/2001	0.0006		0.0006	1	DEDICATED ROGO LOT	ACQUISITION
00306520-000000		12/20/2001	0.0006		0.0006	1	DEDICATED ROGO LOT	ACQUISITION
00307750-000000		12/20/2001	0.0011		0.0011	1	DEDICATED ROGO LOT	ACQUISITION
00273770-000000		1/8/2002	0.0005		0.0005	1	DEDICATED ROGO LOT	ACQUISITION
00268510-000000		1/17/2002	0.0008		0.0008	1	DEDICATED ROGO LOT	ACQUISITION
00290630-000000		1/17/2002	0.0015		0.0015	1	DEDICATED ROGO LOT	ACQUISITION
00302230-000000		1/17/2002	0.0005		0.0005	1	DEDICATED ROGO LOT	ACQUISITION
00302280-000000		1/17/2002	0.0005		0.0005	1	DEDICATED ROGO LOT	ACQUISITION
00310080-000000		1/17/2002	0.0010		0.0010	2	COUNTY ACQUISITION	ACQUISITION
00310090-000000		1/17/2002	0.0020		0.0020	2	COUNTY ACQUISITION	ACQUISITION
00247380-000000		2/14/2002	0.0007		0.0007	1	DEDICATED ROGO LOT	ACQUISITION
00269990-000000		2/14/2002	0.0007		0.0007	2	COUNTY ACQUISITION	ACQUISITION
00310560-000000		2/14/2002	0.0010		0.0010	2	COUNTY ACQUISITION	ACQUISITION
00317030-000000	02100525	3/14/2002	0.0016	0.0003		1	vacant	FENCE
00319492-002100	02100524	3/14/2002	0.0008	0.0002		1	1993	FENCE
00268920-000000		4/17/2002	0.0008		0.0008	2	COUNTY ACQUISITION	ACQUISITION
00269620-000000		4/17/2002	0.0017		0.0017	2	COUNTY ACQUISITION	ACQUISITION
00270140-000000		4/17/2002	0.0010		0.0010	2	COUNTY ACQUISITION	ACQUISITION
00278600-000000		4/17/2002	0.0008		0.0008	1	DEDICATED ROGO LOT	ACQUISITION
00278620-000000		4/17/2002	0.0006		0.0006	1	DEDICATED ROGO LOT	ACQUISITION
00302220-000000		4/17/2002	0.0010		0.0010	1	DEDICATED ROGO LOT	ACQUISITION
00244040-000000	95101836	4/22/2002	0.0555	0.0555		3	2,500 sf retail, Panizza	COMMERCIAL
00319491-001100		4/24/2002	0.0008		0.0008	1	DEDICATED ROGO LOT	ACQUISITION
00294830-000000	00101693	4/24/2000	0.0015	0.0003		1	12/15/1995	FENCE
00279250-000000		5/1/2002	0.0012		0.0012	1	DEDICATED ROGO LOT	ACQUISITION
00306150-000000		5/15/2002	0.0010		0.0010	1	DEDICATED ROGO LOT	ACQUISITION
00306160-000000		5/15/2002	0.0005		0.0005	1	DEDICATED ROGO LOT	ACQUISITION
00261350-000000	02101922	6/10/2002	0.0007	0.0001		1	vacant	FENCE
00270100-000000		6/19/2002	0.0008		0.0008	2	COUNTY ACQUISITION	ACQUISITION
00270150-000000		6/19/2002	0.0018		0.0018	2	COUNTY ACQUISITION	ACQUISITION
00310580-000000		6/19/2002	0.0010		0.0010	2	COUNTY ACQUISITION	ACQUISITION
00263660-000000		7/17/2002	0.0014		0.0014	1	DEDICATED ROGO LOT	ACQUISITION
00278350-000000		7/17/2002	0.0016		0.0016	1	DEDICATED ROGO LOT	ACQUISITION
00302400-000000		7/17/2002	0.0005		0.0005	1	COUNTY ACQUISITION	ACQUISITION
00302890-000000		7/17/2002	0.0010		0.0010	1	COUNTY ACQUISITION	ACQUISITION
00312480-000000		7/17/2002	0.0007		0.0007	2	COUNTY ACQUISITION	ACQUISITION

00307700-000000		8/20/2003	0.0008		0.0008	1	DEDICATED ROGO LOT	ACQUISITION
00312490-000000		8/20/2003	0.0003		0.0003	2	COUNTY ACQUISITION	ACQUISITION
00316580-000000		8/20/2003	0.0014		0.0014	2	COUNTY ACQUISITION	ACQUISITION
00270960-000000		8/22/2003	0.0016		0.0016	2	COUNTY ACQUISITION	ACQUISITION
00112340-000300		8/27/2003	0.0052		0.0052	1	DEDICATED ROGO LOT	ACQUISITION
00250591-016800		9/17/2003	0.0010		0.0010	1	DEDICATED ROGO LOT	ACQUISITION
00304750-000000		9/17/2003	0.0005		0.0005	1	DEDICATED ROGO LOT	ACQUISITION
00108050-000205		10/15/2003	0.0045		0.0045	1	ROGO-ADD-ON	ACQUISITION
00108050-000207		10/15/2003	0.0045		0.0045	1	ROGO-ADD-ON	ACQUISITION
00256510-000000		10/15/2003	0.0007		0.0007	1	DEDICATED ROGO LOT	ACQUISITION
00260570-000000		10/15/2003	0.0014		0.0014	1	DEDICATED ROGO LOT	ACQUISITION
00260580-000000		10/15/2003	0.0007		0.0007	1	DEDICATED ROGO LOT	ACQUISITION
00289660-000000		10/15/2003	0.0015		0.0015	1	DEDICATED ROGO LOT	ACQUISITION
00310570-000000		10/15/2003	0.0003		0.0003	2	COUNTY ACQUISITION	ACQUISITION
00315250-000000		10/15/2003	0.0014		0.0014	1	DEDICATED ROGO LOT	ACQUISITION
00111070-022000		10/30/2003	0.0085		0.0085	1	UNIDENTIFIED FUNDING - ADD-ON	ACQUISITION
00307570-000000		11/14/2003	0.0011		0.0011	1	DEDICATED ROGO LOT	ACQUISITION
00307580-000000		11/14/2003	0.0006		0.0006	1	DEDICATED ROGO LOT	ACQUISITION
00307650-000000		12/17/2003	0.0004		0.0004	1	DEDICATED ROGO LOT	ACQUISITION
00109990-000200	96100807	1/11/2004	0.0012	0.0012		2		SFR
00244030-000000	04100187	1/16/2004	0.0008	0.0002		3	vacant	FENCE
00304640-000000		1/21/2004	0.0005		0.0005	1	DEDICATED ROGO LOT	ACQUISITION
00109350-000500	04100057	1/26/2004	0.0021	0.0004		2	vacant	FENCE
00319492-001400	04100346	2/9/2004	0.0008	0.0002		1	1991	FENCE
00111072-015000		2/18/2004	0.0086		0.0086	1	UNIDENTIFIED FUNDING - ADD-ON	ACQUISITION
00264590-000000		2/18/2004	0.0006		0.0006	2	COUNTY ACQUISITION	ACQUISITION
00272300-000000		2/18/2004	0.0010		0.0010	2	COUNTY ACQUISITION	ACQUISITION
00303140-000000		2/18/2004	0.0010		0.0010	1	DEDICATED ROGO LOT	ACQUISITION
00305440-000000		2/18/2004	0.0011		0.0011	1	DEDICATED ROGO LOT	ACQUISITION
00303320-000000		3/17/2004	0.0005		0.0005	1	DEDICATED ROGO LOT	ACQUISITION
00110370-000000		4/13/2004	0.0084		0.0084	1	DEDICATED ROGO LOT	ACQUISITION
00256100000000		4/21/2004	0.0011		0.0011	1	COUNTY ACQUISITION	ACQUISITION
00303230000000		4/21/2004	0.0005		0.0005	1	DEDICATED ROGO LOT	ACQUISITION
00267830-000000		4/21/2004	0.0006		0.0006	1	DEDICATED ROGO LOT	ACQUISITION
00267890-000000		4/21/2004	0.0012		0.0012	1	COUNTY ACQUISITION	ACQUISITION
00276130-000000		4/21/2004	0.0024		0.0024	1	DEDICATED ROGO LOT	ACQUISITION
00284900-000000		4/21/2004	0.0025		0.0025	1	DEDICATED ROGO LOT	ACQUISITION
00312573-002500		4/21/2004	0.0003		0.0003	2	COUNTY ACQUISITION	ACQUISITION
00270490-000000	96100959	5/4/2004	0.0012	0.0012		1		SFR
00260190000000		5/19/2004	0.0007		0.0007	1	DEDICATED ROGO LOT	ACQUISITION
00260210-000000		5/19/2004	0.0009		0.0009	1	ROGO-ADD-ON	ACQUISITION
00272380-000000		5/19/2004	0.0012		0.0012	2	COUNTY ACQUISITION	ACQUISITION
00281950-000000		5/19/2004	0.0008		0.0008	1	DEDICATED ROGO LOT	ACQUISITION
00305710-000000		5/19/2004	0.0005		0.0005	1	ROGO-ADD-ON	ACQUISITION
00110400-000000	04100900	5/25/2004	0.1383	0.0053		3	Expansion 3,630 SQ Institutional Use -Church	COMMERCIAL
00111420-001100		5/27/2004	0.0080		0.0080	1	DEDICATED ROGO LOT	ACQUISITION
00279890-000000		6/1/2004	0.0011		0.0011	1	DEDICATED ROGO LOT	ACQUISITION
00304630000000		6/16/2004	0.0010		0.0010	1	DEDICATED ROGO LOT	ACQUISITION
00307680000000		6/16/2004	0.0008		0.0008	1	DEDICATED ROGO LOT	ACQUISITION
00108820-000000		6/16/2004	0.0417		0.0417	1	DEDICATED ROGO LOT	ACQUISITION
00275740-000000		6/16/2004	0.0006		0.0006	1	ROGO-ADD-ON	ACQUISITION
00275840-000000		6/16/2004	0.0008		0.0008	1	ROGO-ADD-ON	ACQUISITION
00281480000000		6/18/2004	0.0015		0.0015	1	DEDICATED ROGO LOT	ACQUISITION
00281490000000		6/18/2004	0.0008		0.0008	1	DEDICATED ROGO LOT	ACQUISITION
00312573-004100	95101747	6/25/2004	0.0009	0.0009		2	see lot -00312573-004200	SFR
00312573-004200	95101747	6/25/2004	0.0007	0.0007		2	see lot -00312573-004100	SFR
00270060-000000		7/14/2004	0.0014		0.0014	2	COUNTY ACQUISITION	ACQUISITION
00271520-000000	96101457	7/21/2004	0.0018	0.0018		2		SFR
00289710-000000	04103719	8/16/2004	0.0013	0.0003		1		FENCE
00111071-050000		8/18/2004	0.0084		0.0084	1	DEDICATED ROGO LOT	ACQUISITION
00245480-000000		8/18/2004	0.0005		0.0005	3	COUNTY ACQUISITION	ACQUISITION
00245580-000000		8/18/2004	0.0007		0.0007	3	COUNTY ACQUISITION	ACQUISITION
00255780-000000		8/18/2004	0.0013		0.0013	1	DEDICATED ROGO LOT	ACQUISITION
00267400-000000		8/18/2004	0.0006		0.0006	1	DEDICATED ROGO LOT	ACQUISITION
00268540-000000		8/18/2004	0.0012		0.0012	1	DEDICATED ROGO LOT	ACQUISITION
00268550-000000		8/18/2004	0.0006		0.0006	1	DEDICATED ROGO LOT	ACQUISITION
00277180-000000		8/18/2004	0.0070		0.0070	1	DEDICATED ROGO LOT	ACQUISITION
00312573-004000	96100430	8/31/2004	0.0006	0.0006		2		SFR
00108120-001500		9/1/2004	0.0018		0.0018	1	DEDICATED ROGO LOT	ACQUISITION
00255350-000000		9/1/2004	0.0013		0.0013	1	DEDICATED ROGO LOT	ACQUISITION
00304340000000		10/20/2004	0.0005		0.0005	1	COUNTY ACQUISITION	ACQUISITION
00315290000000		10/20/2004	0.0014		0.0014	1	DEDICATED ROGO LOT	ACQUISITION
00255740-000000		10/20/2004	0.0012		0.0012	1	COUNTY ACQUISITION	ACQUISITION
00265810-000000		11/17/2004	0.0009		0.0009	2	COUNTY ACQUISITION	ACQUISITION
00271170-000000	96101361	12/8/2004	0.0023	0.0023		2		SFR
00312571-003300	97100139	12/14/2004	0.0003	0.0003		2	see lot 00312571-003400	SFR
00312571-003400	97100139	12/14/2004	0.0009	0.0009		2	see lot 00312571-003300	SFR
00277240-001300	05100155	2/3/2005	0.0243	0.0049		2	vacant	FENCE
00268330-000000		2/16/2005	0.0006		0.0006	1	ROGO-ADD-ON	ACQUISITION
00270970-000000		2/16/2005	0.0012		0.0012	2	ROGO-ADD-ON	ACQUISITION
00301680-000000		2/16/2005	0.0010		0.0010	1	ROGO-ADD-ON	ACQUISITION
00301690-000000		2/16/2005	0.0005		0.0005	1	ROGO-ADD-ON	ACQUISITION
00303220-000000		2/16/2005	0.0010		0.0010	1	ROGO-ADD-ON	ACQUISITION
00246580-000000		3/1/2005	0.0055		0.0055	1	COUNTY ACQUISITION	ACQUISITION
00286360-000000	05100073	3/24/2005	0.0483	0.0097		3	Park	FENCE
00108120-000800		3/30/2005	0.0014		0.0014	1	COUNTY ACQUISITION	ACQUISITION
00267680-000000		4/20/2005	0.0012		0.0012	1	ROGO-ADD-ON	ACQUISITION
00307920-000000		4/20/2005	0.0005		0.0005	1	ROGO-ADD-ON	ACQUISITION
00311000-000000		4/20/2005	0.0010		0.0010	2	ROGO-ADD-ON	ACQUISITION
00108860-000000		5/11/2005	0.0439		0.0439	1	UNIDENTIFIED FUNDING - ADD-ON	ACQUISITION
00256490-000000		5/11/2005	0.0007		0.0007	1	ROGO-ADD-ON	ACQUISITION
00268410-000000		5/11/2005	0.0012		0.0012	1	ROGO-ADD-ON	ACQUISITION
00271050-000000		5/11/2005	0.0012		0.0012	2	ROGO-ADD-ON	ACQUISITION
00281240-000000		5/11/2005	0.0007		0.0007	1	ROGO-ADD-ON	ACQUISITION
00313060-000000	05102488	5/16/2005	0.0035	0.0007		2	vacant	FENCE
00249960-000000	96100949	5/20/2005	0.0010	0.0010		3		SFR
00311860-000000	96100971	5/20/2005	0.0015	0.0015		2		SFR
00285550-000000	95101813	6/1/2005	0.0028	0.0028		1		SFR
00291830-000000		6/8/2005	0.0014		0.0014	1	ROGO-ADD-ON	ACQUISITION
00245590-000000		6/10/2005	0.0005		0.0005	3	ROGO-ADD-ON	ACQUISITION
00246221-005100		6/10/2005	0.0010		0.0010	1	ROGO-ADD-ON	ACQUISITION
00246221-010000		6/20/2005	0.0011		0.0011	1	ROGO-ADD-ON	ACQUISITION
00268060-000000		6/20/2005	0.0012		0.0012	1	ROGO-ADD-ON	ACQUISITION
00307740-000000		6/20/2005	0.0006		0.0006	1	COUNTY ACQUISITION	ACQUISITION
00245510-000000		7/15/2005	0.0005		0.0005	3	ROGO-ADD-ON	ACQUISITION

00265730-000000		7/15/2005	0.0008		0.0008	1	ROGO-ADD-ON	ACQUISITION
00265740-000000		7/15/2005	0.0003		0.0003	1	ROGO-ADD-ON	ACQUISITION
00278240-000000		7/15/2005	0.0009		0.0009	1	ROGO-ADD-ON	ACQUISITION
00303730-000000		7/15/2005	0.0012		0.0012	1	ROGO-ADD-ON	ACQUISITION
00303740-000000		7/15/2005	0.0007		0.0007	1	ROGO-ADD-ON	ACQUISITION
00270370-000700	96100393	7/22/2005	0.0004	0.0004		2		SFR
00306690-000000		7/26/2005	0.0017		0.0017	1	ROGO-ADD-ON	ACQUISITION
00309240-000000		8/26/2005	0.0042		0.0042	2	COUNTY ACQUISITION	ACQUISITION
00280480-000000		11/17/2005	0.0006		0.0006	1	ROGO-ADD-ON	ACQUISITION
00255280-000000		12/6/2005	0.0012		0.0012	1	ROGO-ADD-ON	ACQUISITION
00271820-000000		12/21/2005	0.0012		0.0012	2	ROGO-ADD-ON	ACQUISITION
00315280-000000		12/21/2005	0.0016		0.0016	1	ROGO-ADD-ON	ACQUISITION
00255680-000000		1/31/2006	0.0013		0.0013	1	COUNTY ACQUISITION	ACQUISITION
00246020-000000	98100902	2/21/2006	0.0003	0.0003		3		SFR
00245540-000000		3/16/2006	0.0003		0.0003	3	COUNTY ACQUISITION	ACQUISITION
00248800-000000	02101935	3/23/2006	0.0005	0.0005		3		SFR
00248390-000000	05107044	3/28/2006	0.0010	0.0002		3	vacant	FENCE
00315960-000000	06101638	3/29/2006	0.0009	0.0002		2	vacant	FENCE
00312573-001700	96100434	3/30/2006	0.0009	0.0009		2		SFR
00245450-000000	97101498	3/31/2006	0.0005	0.0005		3		SFR
00269840-000000	96101675	4/10/2006	0.0011	0.0011		2		SFR
00312573-001800	97100008	4/10/2006	0.0008	0.0008		2		SFR
00313180-000000	96100970	4/10/2006	0.0017	0.0017		2		SFR
00248600-000000	95101694	4/12/2006	0.0008	0.0008		3		SFR
00313230-000000	96101742	4/12/2006	0.0015	0.0015		2		SFR
00244200-000000	97100591	4/24/2006	0.0008	0.0008		3		SFR
00244210-000000	97100592	4/24/2006	0.0008	0.0008		3		SFR
00244280-000000	97100593	4/24/2006	0.0008	0.0008		3		SFR
00289510-000000	96101622	5/1/2006	0.0022	0.0022		1		SFR
00248810-000000	97100002	5/5/2006	0.0009	0.0009		3		SFR
00275770-000000		5/5/2006	0.0013		0.0013	1	ROGO-ADD-ON	ACQUISITION
00275810-000000		5/5/2006	0.0008		0.0008	1	ROGO-ADD-ON	ACQUISITION
00111060-001601		5/11/2006	0.0038		0.0038	1	COUNTY ACQUISITION	ACQUISITION
00272440-000000		5/26/2006	0.0012		0.0012	2	MCLA-ADD-ON	ACQUISITION
00305660-000000		5/26/2006	0.0005		0.0005	1	MCLA-ADD-ON	ACQUISITION
00306670-000101		5/26/2006	0.0006		0.0006	1	MCLA-ADD-ON	ACQUISITION
00307960-000000		5/26/2006	0.0007		0.0007	1	MCLA-ADD-ON	ACQUISITION
00307970-000000		5/26/2006	0.0003		0.0003	1	MCLA-ADD-ON	ACQUISITION
00307980-000000		5/26/2006	0.0007		0.0007	1	MCLA-ADD-ON	ACQUISITION
00308060-000000		5/26/2006	0.0007		0.0007	1	MCLA-ADD-ON	ACQUISITION
00308070-000000		5/26/2006	0.0008		0.0008	1	MCLA-ADD-ON	ACQUISITION
Reporting Year 1-A (6/9/03-6/8/2006)				0.5462	0.0511	0.2957		
00245530-000000		6/16/2006	0.0005		0.0005	3	COUNTY ACQUISITION	ACQUISITION
00300330-000000		6/26/2006	0.0006		0.0006	1	ROGO-ADD-ON	ACQUISITION
00295400-000000		7/12/2006	0.0009		0.0009	1	ROGO-ADD-ON	ACQUISITION
00255360-000000		7/17/2006	0.0006		0.0006	1	ROGO-ADD-ON	ACQUISITION
00255690-000000		8/4/2006	0.0006		0.0006	1	COUNTY ACQUISITION	ACQUISITION
00267920-000000		8/4/2006	0.0006		0.0006	1	COUNTY ACQUISITION	ACQUISITION
00300540-000000		8/4/2006	0.0011		0.0011	1	ROGO-ADD-ON	ACQUISITION
00307720-000000		8/4/2006	0.0006		0.0006	1	DEDICATED ROGO LOT	ACQUISITION
00246410-000201		8/9/2006	0.0023		0.0023	1	ROGO-ADD-ON	ACQUISITION
00255380-000000		8/25/2006	0.0006		0.0006	1	ROGO-ADD-ON	ACQUISITION
00304660-000000		8/31/2006	0.0005		0.0005	1	DEDICATED ROGO LOT	ACQUISITION
00257740-000000		9/28/2006	0.0015		0.0015	1	ROGO-ADD-ON	ACQUISITION
00249720-000000	98100115	10/26/2006	0.0008	0.0008		3		SFR
00316150-000000	97101902	10/26/2006	0.0025	0.0025		2		SFR
00305700-000000		11/5/2006	0.0005		0.0005	1	ROGO-ADD-ON	ACQUISITION
00108070-002200		11/8/2006	0.0090		0.0090	1	ROGO-ADD-ON	ACQUISITION
00313100-000000	98100811	11/22/2006	0.0016	0.0016		2		SFR
County Rd. to Mariner's Park	ROAD	12/31/2006	0.0102	0.0102			COMMERCIAL	COMMERCIAL
Hibiscus Rd.	ROAD	12/31/2006	0.0019	0.0019			COMMERCIAL	COMMERCIAL
Sands Road Segment 1	ROAD	12/31/2006	0.0018	0.0018			COMMERCIAL	COMMERCIAL
Sands Road Segment 2	ROAD	12/31/2006	0.0019	0.0019			COMMERCIAL	COMMERCIAL
Reporting Year 1-B (6/9/2006 - 12/31/2006)				0.0406	0.0207	0.0199		
00245720-000000	03103814	1/2/2007	0.0008	0.0008		3		SFR
00249130-000000	04104077	1/10/2007	0.0005	0.0005		3		SFR
00248460-000000	04102831	1/17/2007	0.0008	0.0008		3		SFR
00248980-000000	04101652	1/18/2007	0.0012	0.0012		3		SFR
00249150-000000	03104466	1/24/2007	0.0008	0.0008		3		SFR
00248390-000000	05101386	1/25/2007	0.0010	0.0008		3	previously fenced	SFR
00285290-000000	03102339	1/25/2007	0.0011	0.0011		3		SFR
00285300-000000	04100750	1/25/2007	0.0007	0.0007		3		SFR
00306670-000000		2/13/2007	0.0012		0.0012	1	DEDICATED ROGO LOT	ACQUISITION
00306680-000000		2/13/2007	0.0012		0.0012	1	DEDICATED ROGO LOT	ACQUISITION
00306680-000100		2/13/2007	0.0006		0.0006	1	DEDICATED ROGO LOT	ACQUISITION
00247780-000000	04104936	2/23/2007	0.0008	0.0008		3		SFR
00248290-000000	05104382	2/23/2007	0.0003			3		SFR
00310990-000000		2/27/2007	0.0010		0.0010	2	DEDICATED ROGO LOT	ACQUISITION
00293370-000000		3/6/2007	0.0012		0.0012	1	DEDICATED ROGO LOT	ACQUISITION
00312571-000200	97101893	3/12/2007	0.0024	0.0024		2		SFR
00248700-000000	05101709	3/26/2007	0.0005	0.0005		3		SFR
00249380-000000	05102876	3/26/2007	0.0009	0.0009		3		SFR
00248310-000000	05103866	3/30/2007	0.0004	0.0004		3		SFR
00248320-000000	05103466	3/30/2007	0.0003			3	permit expired	SFR
00312572-003300	02100058	4/23/2007	0.0010	0.0010		2		SFR
00255290-000000		4/25/2007	0.0006		0.0006	1	DEDICATED ROGO LOT	ACQUISITION
00309761-000101	97101413	5/3/2007	0.0015	0.0015		2		SFR
00110410-000000		6/8/2007	0.0278	0.0278		1	COUNTY ACQUISITION	ACQUISITION
00110410-000100		6/8/2007	0.0055	0.0055		1	COUNTY ACQUISITION	ACQUISITION
00110410-000200		6/8/2007	0.0079	0.0079		1	COUNTY ACQUISITION	ACQUISITION
00110410-000300		6/8/2007	0.0093	0.0093		1	COUNTY ACQUISITION	ACQUISITION
00110410-000400		6/8/2007	0.0090	0.0090		1	COUNTY ACQUISITION	ACQUISITION
00110410-000500		6/8/2007	0.0044	0.0044		1	COUNTY ACQUISITION	ACQUISITION
00111660-000000		6/8/2007	0.0068	0.0068		1	COUNTY ACQUISITION	ACQUISITION
00111880-000000		6/8/2007	0.0007	0.0007		1	COUNTY ACQUISITION	ACQUISITION
00246210-000000		6/8/2007	0.0220	0.0220		1	COUNTY ACQUISITION	ACQUISITION
00246220-000000		6/8/2007	0.0439	0.0439		1	COUNTY ACQUISITION	ACQUISITION
00281940-000000		7/18/2007	0.0016		0.0016	1	DEDICATED ROGO LOT	ACQUISITION
00286360-000000	07101477	7/31/2007		0.0890		3	Permit approval to construct a community building.	PUBLIC
00279880-000000		8/10/2007	0.0013		0.0013	1	DEDICATED ROGO LOT	ACQUISITION
00248960-000000	02105130	8/16/2007	0.0008	0.0008		3		SFR
00247930-000000	05104608	8/24/2007	0.0008	0.0008		3		SFR
00245900-000000	05106221	8/30/2007	0.0009	0.0009		3		SFR
00299640-000000		8/30/2007	0.0010		0.0010	1	COUNTY ACQUISITION	ACQUISITION
00299690-000000		8/30/2007	0.0006		0.0006	1	COUNTY ACQUISITION	ACQUISITION
00299700-000000		8/30/2007	0.0002		0.0002	1	COUNTY ACQUISITION	ACQUISITION
00299710-000000		8/30/2007	0.0006		0.0006	1	COUNTY ACQUISITION	ACQUISITION
00299720-000000		8/30/2007	0.0014		0.0014	1	COUNTY ACQUISITION	ACQUISITION

00299750-000000		8/30/2007	0.0016		0.0016	1	COUNTY ACQUISITION	ACQUISITION
00299760-000000		8/30/2007	0.0008		0.0008	1	COUNTY ACQUISITION	ACQUISITION
00299770-000000		8/30/2007	0.0016		0.0016	1	COUNTY ACQUISITION	ACQUISITION
00299780-000000		8/30/2007	0.0008		0.0008	1	COUNTY ACQUISITION	ACQUISITION
00299810-000000		8/30/2007	0.0016		0.0016	1	COUNTY ACQUISITION	ACQUISITION
00299820-000000		8/30/2007	0.0016		0.0016	1	COUNTY ACQUISITION	ACQUISITION
00299830-000000		8/30/2007	0.0003		0.0003	1	COUNTY ACQUISITION	ACQUISITION
00299840-000000		8/30/2007	0.0006		0.0006	1	COUNTY ACQUISITION	ACQUISITION
00299850-000000		8/30/2007	0.0003		0.0003	1	COUNTY ACQUISITION	ACQUISITION
00299860-000000		8/30/2007	0.0009		0.0009	1	COUNTY ACQUISITION	ACQUISITION
00299870-000000		8/30/2007	0.0000		0.0000	1	COUNTY ACQUISITION	ACQUISITION
00299880-000000		8/30/2007	0.0000		0.0000	1	COUNTY ACQUISITION	ACQUISITION
00299890-000000		8/30/2007	0.0005		0.0005	1	COUNTY ACQUISITION	ACQUISITION
00299900-000000		8/30/2007	0.0008		0.0008	1	COUNTY ACQUISITION	ACQUISITION
00299970-000000		8/30/2007	0.0016		0.0016	1	COUNTY ACQUISITION	ACQUISITION
00299980-000000		8/30/2007	0.0008		0.0008	1	COUNTY ACQUISITION	ACQUISITION
00299990-000000		8/30/2007	0.0013		0.0013	1	COUNTY ACQUISITION	ACQUISITION
00300000-000000		8/30/2007	0.0003		0.0003	1	COUNTY ACQUISITION	ACQUISITION
00300010-000000		8/30/2007	0.0003		0.0003	1	COUNTY ACQUISITION	ACQUISITION
00300020-000000		8/30/2007	0.0002		0.0002	1	COUNTY ACQUISITION	ACQUISITION
00300030-000000		8/30/2007	0.0008		0.0008	1	COUNTY ACQUISITION	ACQUISITION
00300040-000000		8/30/2007	0.0003		0.0003	1	COUNTY ACQUISITION	ACQUISITION
00300050-000000		8/30/2007	0.0005		0.0005	1	COUNTY ACQUISITION	ACQUISITION
00300060-000000		8/30/2007	0.0008		0.0008	1	COUNTY ACQUISITION	ACQUISITION
00245600-000000	06100466	9/20/2007	0.0005	0.0005		3		SFR
00302290-000000		9/24/2007	0.0010		0.0010	1	DEDICATED ROGO LOT	ACQUISITION
00246221-010100		10/3/2007	0.0011		0.0011	1	ROGO-ADD-ON	ACQUISITION
00246221-010200		10/3/2007	0.0005		0.0005	1	ROGO-ADD-ON	ACQUISITION
00298190-000000		10/17/2007	0.0010		0.0010	1	COUNTY ACQUISITION	ACQUISITION
00250591-005400	07105037	12/18/2007	0.0006	0.0001		1	Existing SFR	FENCE
00245880-000000	07100308	1/19/2007	0.0009			3		SFR
00249660-000000	06106296	1/19/2007	0.0008			3	permits re-issued in 2008	SFR
00249900-000000	07100309	1/19/2007	0.0008			3	H counted in 08	SFR
00109340-000300	99103072	12/21/2007	0.0006	0.0006		2		SFR
Reporting Year 2 (2007)			0.1934	0.1069	0.1717			
00315970-000000	08100012	1/4/2008	0.0013	0.0003		2	vacant	FENCE
00111420-000100	05105317	2/1/2008	0.0060	0.0060		3	2,500 sq As of Right Permit (FLETCHER)	COMMERCIAL
00111420-000100	07102786	2/1/2008				3	SFR-AFFORDABLE	SFR
00111420-000100	07103037	2/1/2008				3	SFR-AFFORDABLE	SFR
00111420-000500	05105321	2/1/2008	0.0062	0.0062		3	2,500 sf As of Right Permit (FLETCHER)	COMMERCIAL
00111420-000500	07102787	2/1/2008				3	SFR-AFFORDABLE	SFR
00111420-000500	07103036	2/1/2008				3	SFR-AFFORDABLE	SFR
00108130-002200		2/14/2008	0.0012		0.0012	1	ROGO-ADD-ON	ACQUISITION
00316670-000000	08100610	2/19/2008	0.0028	0.0006		2	vacant	FENCE
00298180-000000		2/25/2008	0.0005		0.0005	1	COUNTY ACQUISITION	ACQUISITION
00315960-000000	07105122	3/4/2008	0.0009	0.0000		2	vacant	repalce fence
00111075-036000		3/25/2008	0.0189		0.0189	1	COUNTY ACQUISITION	ACQUISITION
00108130-002200		3/28/2008	0.0018		0.0018	1	ROGO-ADD-ON	ACQUISITION
00295640-000000	08100741	4/21/2008	0.0023	0.0005		1	Existing SFR	FENCE
00111460-000000	02100313	4/23/2008	0.0155	0.0012		3	Big Pine Key Firestation	
00289710-000000	03102303	4/29/2008	0.0013	0.0010		1	80% OF H. EXISTING FENCE	SFR
00249660-000000	06106296	5/13/2008	0.0008	0.0008		3		SFR
Key Deer Boulevard	FINAL	6/1/2008	0.0130	0.0130			ROAD	COMMERCIAL
00245880-000000	07100308	6/5/2008	0.0009	0.0009		3		SFR
00249900-000000	07100309	6/5/2008	0.0008	0.0008		3		SFR
00306180-000000	07104663	6/16/2008	0.0015	0.0003		1	mobile home	FENCE
00246170-000000	07105045	8/13/2008	0.0010	0.0010		3		SFR
00111070-030000		8/23/2008	0.0080		0.0080	1		ACQUISITION
00249040-000000	07104806	9/16/2008	0.0008	0.0008		3		SFR
00107970-000000		10/8/2008	0.0008		0.0008	1	COUNTY ACQUISITION	ACQUISITION
00277640-000000		10/8/2008	0.0016		0.0016	1	COUNTY ACQUISITION	ACQUISITION
00299600-000000		10/8/2008	0.0010		0.0010	1	COUNTY ACQUISITION	ACQUISITION
00299610-000000		10/8/2008	0.0005		0.0005	1	COUNTY ACQUISITION	ACQUISITION
00299650-000000		10/8/2008	0.0005		0.0005	1	COUNTY ACQUISITION	ACQUISITION
00299660-000000		10/8/2008	0.0010		0.0010	1	COUNTY ACQUISITION	ACQUISITION
00299670-000000		10/8/2008	0.0010		0.0010	1	COUNTY ACQUISITION	ACQUISITION
00299950-000000		10/8/2008	0.0016		0.0016	1	COUNTY ACQUISITION	ACQUISITION
00259930-000000		11/3/2008	0.0009		0.0009	1	COUNTY ACQUISITION	ACQUISITION
00259940-000000		11/3/2008	0.0018		0.0018	1	COUNTY ACQUISITION	ACQUISITION
00259950-000000		11/3/2008	0.0007		0.0007	1	COUNTY ACQUISITION	ACQUISITION
00289170-000000		11/3/2008	0.0024		0.0024	1		ACQUISITION
00289180-000000		11/3/2008	0.0012		0.0012	1		ACQUISITION
00307030-000000		11/3/2008	0.0010		0.0010	1	COUNTY ACQUISITION	ACQUISITION
00314760-000000		11/3/2008	0.0021		0.0021	1		ACQUISITION
090-000000 & 00275620-00	07105046	11/21/2008	0.0115	0.0003		3	1,309 ft expansion TIB BANK	COMMERCIAL
00255370-000000		12/6/2008	0.0013		0.0013	1	ROGO-ADD-ON	ACQUISITION
00312572-003400	04100574	12/8/2008	0.0005	0.0005		2		SFR
00108490-000100		12/18/2008	0.1007		0.1007	1		ACQUISITION
Reporting Year 3 (2008)			0.2176	0.0341	0.1505			
00266770-000000	06104582	2/9/2009	0.0010	0.0010		2		SFR
00248690-000000	08102594	3/12/2009	0.0008	0.0008		3		SFR
00272040-000000		6/18/2009	0.0008		0.0008	2		ACQUISITION
00275580-000000		8/12/2009	0.0021		0.0021	1		ACQUISITION
00275590-000000		8/12/2009	0.0011		0.0011	1		ACQUISITION
00275600-000000		8/12/2009	0.0021		0.0021	1		ACQUISITION
00275610-000000		8/12/2009	0.0011		0.0011	1		ACQUISITION
00247820-000000	08103005	8/25/2009	0.0008	0.0008		3	SFR-AFFORDABLE	SFR
00250591-011300		9/3/2009	0.0015		0.0015	1		ACQUISITION
00269750-000000		10/28/2009	0.0011		0.0011	2		ACQUISITION
00269760-000000		10/28/2009	0.0011		0.0011	2		ACQUISITION
00271830-000000		10/28/2009	0.0007		0.0007	2		ACQUISITION
00316620-000000		10/29/2009	0.0007		0.0007	2		ACQUISITION
00250410-000000	09101886	10/30/2009	0.0012	0.0012		3		SFR
00296820-000000	97101361	12/16/2009	0.0011	0.0011		1	00296820-000000	SFR
00277195-000000		12/17/2009	0.0068		0.0068	1		ACQUISITION
Reporting Year 4 (2009)			0.0240	0.0049	0.0191			
00111690-000400	09105095	1/4/2010	0.0159	0.00136		3	Commercial admn 1,000 SF storage	COMMERCIAL
00250500-000000	9104839	1/5/2010	0.0008	0.00016		3		FENCE
00275910-000000		1/11/2010	0.0006		0.0006	1	DEDICATED ROGO LOT	ACQUISITION
00244290-000000	10100735	2/12/2010	0.0009	0.00018		3		FENCE
00309020-000000		2/23/2010	0.0014		0.0014	2	ROGO-ADD-ON	ACQUISITION
00267440-000100		3/5/2010	0.0006		0.0006	1	DEDICATED ROGO LOT	ACQUISITION
00250510-000000	09102323	3/8/2010	0.0008	0.0008		3		SFR
00306730-000000		3/9/2010	0.0006		0.0006	1	COUNTY ACQUISITION	ACQUISITION
00268610-000000		4/5/2010	0.0016		0.0016	2	DEDICATED ROGO LOT	ACQUISITION
00315830-000000	10101164	4/5/2010	0.0016	0.00032		1		FENCE

00110610-000000		5/18/2010	0.0491		0.0491	1	DEDICATED ROGO LOT	ACQUISITION
00248640-000000	09102011	5/20/2010	0.0004	0.0004		3		SFR
00247670-000000	10103034	6/17/2010	0.0009	0.00018		3		FENCE
00309010-000000	10104311	8/4/2010	0.0019	0.00038		2		FENCE
00246600-000000	10103870	8/5/2010	0.0055	0		1		FENCE - REPLACE EXISTING
00311460-000000	10104540	8/20/2010	0.0007	0.00014		2		FENCE
00111690-000900	10104988	9/1/2010	0.0253	0		3	walgreens replace existing fence	FENCE - REPLACE EXISTING
00110841-000000		9/13/2010	0.003		0.003	1	DEDICATED ROGO LOT	ACQUISITION
00309260-000000	10106218	10/14/2010	0.005	0		2		FENCE - add gate to existing fence
00306130-000000		10/19/2010	0.0010		0.0010	1	ROGO-ADD-ON	ACQUISITION
00306140-000000		10/19/2010	0.0005		0.0005	1	ROGO-ADD-ON	ACQUISITION
00319030-000000		10/19/2010	0.0015		0.0015	1		ACQUISITION
00319040-000000		10/19/2010	0.0007		0.0007	1		ACQUISITION
00319050-000000		10/19/2010	0.0014		0.0014	1		ACQUISITION
00319170-000000		10/19/2010	0.0009		0.0009	1		ACQUISITION
00292300-000000		10/29/2010	0.0009		0.0009	1	COUNTY ACQUISITION	ACQUISITION
00292310-000000		10/29/2010	0.0005		0.0005	1	COUNTY ACQUISITION	ACQUISITION
00308850-000000	10106447	11/8/2010	0.0053	0		2		FENCE - REPLACE GATES
00111070-007000	10105978	11/19/2010	0.0076	0		1		FENCE - gate on existing fence
00250591-006600	10107012	11/22/2010	0.0011			1		FENCE - extension to existing fence
00313510-000000	05103051	12/1/2010	0.0013	0.0013		2		SFR
00303180-000000		12/2/2010	0.0010		0.0010	1	DEDICATED ROGO LOT	ACQUISITION
00111610-000000		12/6/2010	0.0103		0.0103	1	DEDICATED ROGO LOT	ACQUISITION
00316470-000000	10107247	12/21/2010	0.0014	0.00028		2		FENCE
Reporting Year 5 (2010)			0.152	0.0055	0.0756			
00108050-000103	11102032	4/27/2011	0.0049	0		1		Land Clear(hazard tree removal)
00108120-000500	11101235	3/16/2011	0.0013	0		1		Land Clear (exotics)
00110830-000103	8103871	7/12/2011	0.0069	0		3	workforce housing - comm apt added to existing commercial development. No expansion of footprint	SFR
00111150-000100	11103902	8/18/2011	0.0058	0		1		Land Clear (major pruning)
00111540-000000	11103901	8/18/2011	0.0154	0		1		Land Clear (exotics)
00112341-001300	11101308	3/21/2011	0.0063	0		1		gate only - no other fencing
00245800-000000	11100052	1/5/2011	0.0005	0.0001		3		Fence/Wall
00246221-005300	11102179	5/4/2011	0.0015	0		1		Land Clear (Tree replacement)
00247640-000000	10105246	1/19/2011	0.0008	0.0008		3		SFR
00250150-000000	11100039	8/26/2011	0.0008	0.0008		3		SFR
00250390-000000	11102869	10/21/2011	0.0008	0.0008		3		SFR
00250520-000000	11101010	11/28/2011	0.0012	0.0012		3		SFR
00251150-000000	11102362	5/23/2011	0.0017	0		1		Land Clear (trimming)
00279050-000000	11102547	5/24/2011	0.0016	0		1		Land Clear(hazard tree removal)
00285310-000000	10107566	12/22/2011	0.0007	0.0007		3		SFR
00293170-000000	11100794	2/18/2011	0.001	0		1		Land Clear(hazard tree removal)
00301860-000000	11102522	6/3/2011	0.0005	0.0001		1		Trim & fence
00301900-000000	11102847	6/13/2011	0.001	0		3		Land Clear(hzrd tree pruning)
00304200-000000	11100588	2/22/2011	0.0005	0		1		Land Clear(hazard tree removal)
00304660-000000	11105708	12/6/2011	0.0005	0		1		Land Clear
00310700-000000	5101712	2/1/2011	0.001	0.001		2		SFR
00312571-001500	11105405	11/9/2011	0.0012	0		2		Land Clear (exotics)
00312572-003000	11105461	11/17/2011	0.0008	0.00016		2		Fence/Wall
00312700-000000	11101273	3/17/2011	0.0008	0.00016		2		Fence/Wall
00312950-000000	11103228	8/15/2011	0.001	0.0002		2		Fence/Wall
00313620-000000	5102823	8/25/2011	0.0007	0.0007		2		SFR
00313820-000000	5102824	8/16/2011	0.0007	0.0007		2		SFR
00319491-001900	11105893	12/1/2011	0.0008	0		1		Land Clear (exotics)
00319491-002000	11105891	12/1/2011	0.0008	0		1		Land Clear (exotics)
00111072-080000	0	2/8/2011	0.0089	0.0089		1	COUNTY ACQUISITION	ACQUISITION
00111072-055000	0	2/8/2011	0.0087	0.0087		1	COUNTY ACQUISITION	ACQUISITION
00111072-056000	0	2/8/2011	0.0089	0.0089		1	COUNTY ACQUISITION	ACQUISITION
00111074-053000	0	2/8/2011	0.0054	0.0054		1	COUNTY ACQUISITION	ACQUISITION
00281920-000000	0	2/23/2011	0.0016	0.0016		1	COUNTY ACQUISITION	ACQUISITION
00281930-000000	0	2/23/2011	0.0008	0.0008		1	COUNTY ACQUISITION	ACQUISITION
00295950-000000	0	4/14/2011	0.0006	0.0006		1	COUNTY ACQUISITION	ACQUISITION
00255870-000000	0	4/21/2011	0.0006	0.0006		1	COUNTY ACQUISITION	ACQUISITION
00255560-000000	0	5/9/2011	0.0012	0.0012		1	COUNTY ACQUISITION	ACQUISITION
00251760-000000	0	6/1/2011	0.0010	0.0010		1	COUNTY ACQUISITION	ACQUISITION
00251770-000000	0	6/1/2011	0.0005	0.0005		1	COUNTY ACQUISITION	ACQUISITION
00273810-000000	0	6/1/2011	0.0010	0.0010		1	COUNTY ACQUISITION	ACQUISITION
00273820-000000	0	6/1/2011	0.0005	0.0005		1	COUNTY ACQUISITION	ACQUISITION
00273830-000000	0	6/1/2011	0.0010	0.0010		1	COUNTY ACQUISITION	ACQUISITION
00273840-000000	0	6/1/2011	0.0005	0.0005		1	COUNTY ACQUISITION	ACQUISITION
00273850-000000	0	6/1/2011	0.0010	0.0010		1	COUNTY ACQUISITION	ACQUISITION
00273860-000000	0	6/1/2011	0.0005	0.0005		1	COUNTY ACQUISITION	ACQUISITION
00273871-000000	0	6/1/2011	0.0010	0.0010		1	COUNTY ACQUISITION	ACQUISITION
00273880-000000	0	6/1/2011	0.0005	0.0005		1	COUNTY ACQUISITION	ACQUISITION
00273910-000000	0	6/1/2011	0.0010	0.0010		1	COUNTY ACQUISITION	ACQUISITION
00273920-000000	0	6/1/2011	0.0005	0.0005		1	COUNTY ACQUISITION	ACQUISITION
00110600-000000	0	6/3/2011	0.0083	0.0083		1	COUNTY ACQUISITION	ACQUISITION
00110620-000000	0	6/3/2011	0.0032	0.0032		1	COUNTY ACQUISITION	ACQUISITION
00110630-000000	0	6/3/2011	0.0029	0.0029		1	COUNTY ACQUISITION	ACQUISITION
00110680-000000	0	6/3/2011	0.0017	0.0017		1	COUNTY ACQUISITION	ACQUISITION
00265840-000000	0	7/25/2011	0.0007	0.0007		2	COUNTY ACQUISITION	ACQUISITION
00312571-001600	0	7/26/2011	0.0012	0.0012		2	COUNTY ACQUISITION	ACQUISITION
00312571-000170	0	7/26/2011	0.0012	0.0012		2	COUNTY ACQUISITION	ACQUISITION
00266730-000000	0	7/28/2011	0.0012	0.0012		2	COUNTY ACQUISITION	ACQUISITION
00262670-000000	0	9/7/2011	0.0007	0.0007		1	COUNTY ACQUISITION	ACQUISITION
00262680-000000	0	9/7/2011	0.0013	0.0013		1	COUNTY ACQUISITION	ACQUISITION
00262690-000000	0	9/7/2011	0.0007	0.0007		1	COUNTY ACQUISITION	ACQUISITION
Reporting Year 6 (2011)			0.1303	0.00742	0.0688			
00309170-000000	12102646	6/28/2012	0.0039	0.00078		2		Fence
00312571-002600	12102346	6/26/2012	0.0007	0.00014		2		Fence
00314180-000000	12105046	12/18/2012	0.0019	0.00038		2		Fence
00246710-000000	12100340	3/16/2012	0.0032	0		1		Fence (replace)
00286070-000000	11105878	1/12/2012	0.0021	0		3		Fence/ret wall relocation
00272471-003300	12101130	4/24/2012	0.0006	0		2		Fence/ret wall - gate opener & column
0027471-003500	12101131	4/24/2012	0.0008	0		2		Fence/ret wall - gate opener & column
00112340-001300	12104783	11/28/2012	0.0069	0		1		Fence/ret wall - gate replacement
00307100-000000	12104966	12/20/2012	0.0007	0		1		Fence/ret wall - replace existing
00260920-000000	12100134	3/26/2012	0.0022	0		1		Fence/ret wall (front only)
00247550-000000	12101725	5/1/2012	0.0011	0		3		Fence/ret wall (repair)
00112341-000600	12100788	3/15/2012	0.0028	0		1		Fence/ret wall retaining wall
00270270-000000	12105031	12/3/2012	0.0005	0		2		Exotics
00286550-000000	12100384	1/25/2012	0.0022	0		3		Exotics
0030600-000400	12100445	1/30/2012	0.0008	0		3		Exotics
00248310-000000	12105167	12/14/2012	0.0004	0		3		invasive exotics

268760.000000 0 12/14/2012 0.0007 0.0007 2 COUNTY ACQUISITION ACQUISITION
 269770.000000 0 12/21/2012 0.0005 0.0005 2 COUNTY ACQUISITION ACQUISITION

Reporting Year 7 (2012)		0.0029	0.449
Cumulative Totals Through 2011		0.3641	2.5544

PENDING/FUTURE ALLOCATIONS & RESERVATIONS

US 1 ROAD WIDENING	PLANNING STAGES	Bid Letting 1/2010	0.0072	0.0072			ROAD	COMMERCIAL
Library-BUDGETED		BUDGETED	0.0110	0.0110			Library Expansion	COMMERCIAL
Public Offices - BUDGETED		BUDGETED	0.0110	0.0110			New and Expansion	COMMERCIAL
Public Uses - BUDGETED		BUDGETED	0.0550	0.0550			7 pocket parks	COMMERCIAL
00109250-000000	05101327	PENDING	0.0041	0.0041		2		SFR-PENDING / NOT ISSUED
00111078-000000		PENDING	0.0087	0.0870		3	CAYA PLACE	SFR-RESERVED -16 AFFORDABLE
00111078-000300			0.0109	0.0109				Beal
00111420-000100	11105562	PENDING	0.0075	0.0075			FLETCHER	
00111420-000500	11105567	PENDING	0.0077	0.0077			FLETCHER	
00111420-000500	11105568	PENDING	0.0077				FLETCHER	
00111420-001300	07102788	PENDING	0.0054	0.0054		3	FLETCHER	SFR-PENDING / NOT ISSUED - AFFORDABLE
00111420-001300	07102788	PENDING	0.0054			3	FLETCHER	SFR-PENDING / NOT ISSUED - AFFORDABLE
00111420-001300	08100719	PENDING	0.0054				FLETCHER	SFR-PENDING / NOT ISSUED
00111420-001300	07102788	PENDING	0.0054				FLETCHER	SFR-PENDING / NOT ISSUED
0011420-000100	11105563	PENDING	0.0075	0.0075			FLETCHER	
00245860-000000	05106290	PENDING	0.0004	0.0004				SFR-PENDING / NOT ISSUED
00248160-000000	95100743	PENDING	0.0008	0.0008				SFR-PENDING / NOT ISSUED
00250340-000000	09103450	PENDING	0.0009	0.0009		3		SFR-PENDING / NOT ISSUED
00310720-000000	05101712	PENDING	0.0003	0.0003				SFR-PENDING / NOT ISSUED
00311610-000000	08102801	PENDING	0.0010	0.0010		2		SFR-PENDING / NOT ISSUED - AFFORDABLE
00312573-001100	05105880	PENDING	0.0007	0.0007				SFR-PENDING / NOT ISSUED
00312880-000000	04105552	PENDING	0.0015	0.0015		2		SFR-PENDING / NOT ISSUED
00312890-000000	08101995	PENDING	0.0013	0.0013		2		SFR-PENDING / NOT ISSUED - AFFORDABLE
00313050-000000	99100786	PENDING	0.0015	0.0015			ROGO allocation	SFR-PENDING / NOT ISSUED
00313370-000000	05101328	PENDING	0.0040	0.0040		2		SFR-PENDING / NOT ISSUED
00313620-000000	05102823	PENDING	0.0007	0.0007				SFR-PENDING / NOT ISSUED
00319494-000900	96101469	ALLOCATION	0.0032	0.0032		1	GALLEON BAY	ISSUED PENDING PICK UP 623/12
00319494-001000	96101470	ALLOCATION	0.0029	0.0029		1	GALLEON BAY	ISSUED PENDING PICK UP 623/12
00319494-001300	96101472	PENDING	0.0026	0.0026		1	GALLEON BAY	SFR-PENDING / NOT ISSUED
Pending, Planned & Reserved Projects/Permits			0.1817	0.2361				

PARCELS CURRENTLY COMPETING IN ROGO

00319494.000500	96101464	0.0024	1
00319494.000400	96101463	0.0019	1
00319494.001400	96101473	0.0023	1
00319494.000300	96101462	0.0026	1
00319494.000200	96101461	0.0022	1
00319494.000100	96101460	0.0043	1
00319494.000600	96101465	0.0026	1
00319494.000700	96101467	0.0034	1
00319494.000800	96101468	0.0025	1
00319494.001100	96101471	0.0027	1
00311840.000000	06101218	0.0005	2
00312470.000000	06101006	0.0007	2
00312571.002000	06101002	0.0006	2
00269070.000000	06104544	0.0011	2
00312572.002100	06101005	0.0010	2
00109350.000500	06106156	0.0021	2
00269910.000000	03105296	0.0008	2
00312572.000300	06101001	0.0010	2
00269190.000000	07102535	0.0010	2
00266360.000000	07102237	0.0007	2
00271270.000000	07102238	0.0007	2
00310490.000000	07103911	0.0007	2
00312890.000000	08101995	0.0013	2
00311610.000000	08102801	0.0010	2
00312571.000500	06100507	0.0011	2
00312572.000600	05100259	0.0012	2
00271260.000000	09102047	0.0007	2
00111880.000205	10103101	0.0007	3
00310280.000000	07100485	0.0013	2
00310260.000000	07100483	0.0007	2
00310240.000000	07100479	0.0011	2
00310220.000000	07100486	0.0010	2
00296960.000000	05103835	0.0011	1
00285660.000000	05105438	0.0024	1
00295360.000000	05104831	0.0011	1
00290190.000000	09102784	0.0004	1

0.0529

Cumulative H IMPACT	0.3641
Total H Mitigation Required @ 3:1	1.0924
Cumulative Commercial Devel	0.1960
Cumulative Mitigation H acqud	2.5544

Summary of H impacts and mitigation, June 8, 2012	
Cumulative H impact	0.3641
Pending H impact	0.2361
Competing ROGO H impact	0.0529
TOTAL POTENTIAL H impact	0.6531
Mitigation Required	1.95937293
Current Mitigation Acqud	2.5544
Mitigation Pending (TNC parcels)	0.1915
Current + Pending Mitigation	2.7459

The ratio of mitigation H (acquired lands) to H impact (from development activities) acquired lands / H impact lands
 = 7.0152

5% lag in meeting mitigation requirements		The H value remaining for impacts:	
1-(H value mitigated / H value impact at 3:1)		Total H value allowed for impacts	Permit Limit Conservation
=	NA	Total of cumulative H val	1.1 3.3
%	NA	Cumulative Impacts/Acqud	0.3641 2.5544
		H value remaining	0.7359 0.7456