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Report and Tier Maps prepared by:
K. Marlene Conaway, Director
Maureen Lackey, Sr. Planner
Maureen Meehan, Planner
Rob Will, Planner

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1.0 Purpose

The purpose of this report is as follows:

- To provide the Monroe County Planning Commission and the public with the proposed Tier Maps developed by staff to guide the County’s 20-year Land Acquisition Program (Objective 105.2).
- To explain how the Tier Maps implement Goal 105 “Smart Growth” of the Comprehensive Plan.
- To review the requirements of the Florida Administrative Commission Rule number 28-20.100 – 2010 Comprehensive Plan “Work Program”.
- To provide additional understanding of the results of the Carrying Capacity Study and how the Tier System is the framework for it’s implementation by the County.

2.0 Background

The Florida Keys consists of a 112-mile long chain of islands located at the southern tip of Florida. U.S. Highway 1, stretching from Key Largo to Key West, connects the more developed islands. The biological communities in the Florida Keys have evolved in response to unique island environmental conditions characterized by salt water, subtropical savanna-type climate- hot humid summers and cool dry winters, limestone substrate and hurricanes. These conditions combined with the isolation of the islands have supported colonization and evolution of highly specialized plants and animals, many endemic to the Florida Keys. The upland habitats, hammock and pine lands include over 30 of these endemic species. In addition, a significant portion of the waters adjacent to the islands has been designated as Outstanding Florida Waters, and includes the Florida Keys National Marine Sanctuary.

Approximately 15% of the land area in the Florida Keys is developed , and between 60% and 70% of the are undeveloped land area is in public ownership (Florida Keys Carrying Capacity Study, September 2002.) This leaves between 15% and 20% of the land area vacant and in private ownership. This report and the Tier Maps are primarily concerned with this remaining undeveloped privately owned lands and determining, based on the environmental quality and development characteristics, whether they should be designated for acquisition for habitat protection or sprawl reduction, or designated for infill and redevelopment.

2.1 Florida Administration Commission Rule 28-20.100 – Work Program

The 2010 Comprehensive Plan took seven years to be fully in effect, mired in three to four years of legal challenges after it was adopted in April 1993. The ongoing legal proceedings prompted a 1995 Final Order and Recommendations by a Hearing Officer,



which found that the proposed Plan was not in compliance and specified remedial action. The findings stated among other things that near shore waters, shoreline sea grasses and Key Deer habitat had reached or exceeded the carrying capacity. As a result of this order, the Florida Administration Commission in 1996 enacted Rule 28-20.100, which created the Work Program in the 2010 Comprehensive Plan. The Work Program required among other things, the preparation of a carrying capacity study for the Florida Keys. The goal of the Carrying Capacity Study, excerpted from Rule 28-20.100 reads as follows:

“The carrying capacity analysis shall be designed to determine the ability of the Florida Keys ecosystem and the various segments thereof, to withstand all impacts of additional land development activities.”

Year Six of the Work Program (July 13, 2002 – July 13, 2003) enacted in Rule 28-20.100, as amended, directs the county to implement the Carrying Capacity Study by adopting amendments to the rate of growth ordinance, the LDRs, the future land use maps and maximum permitted densities. The Rule amendment in 2002 added two additional tasks to the work program:

- 1) A master land acquisition plan is required containing a strategy for securing funding and the acquisition of properties that should be preserved due to their habitat and also land for affordable housing; and
- 2) Adoption of land development regulations, and/or comprehensive plan amendments that strengthens the protection of terrestrial habitat through the Permit Allocation System and permitting processes, and the preservation and maintenance of affordable housing stock.

2.2 Carrying Capacity Study

The DCA and the U.S. Army Corps of Engineers jointly sponsored the Carrying Capacity Study. A series of technical workshops were held during 1999 to refine the scope of the study and address uncertainties regarding available information and modeling capabilities. The contractor, URS, Inc., began working on the project in late 1999 and completed the study in September 2002. The draft of the model and study was critically peer reviewed in early 2002.

The National Science Foundation review document stated, that over-all the current peer reviewed scientific information proved insufficient to develop a comprehensive carrying capacity framework that would allow for undisputable determinations of whether future development scenarios fall within the carrying capacity of the Florida Keys. The final report was also peer reviewed and the scientists and technical reviewers agree that the



terrestrial portion of the study provides a valuable analysis and the Impact Assessment Model is a useful tool, but with substantial limitations. The marine ecosystems and species portion of the study was removed from the model because existing data is insufficient to establish quantitative, predictive relationships between land use or development and marine environment.

Chapter 5 of the Carrying Capacity Study (attached) summarizes of the results of the study. “The evaluation of the terrestrial ecosystem demonstrated that land development in the Florida Keys has surpassed the capacity of upland habitats to withstand further development.” The study states that fragmentation of the habitat is a primary concern; “Small patches of forest show lower biodiversity, increased vulnerability to invasion by exotic plant and animal species and decreased gene flow within and among populations. The secondary and indirect impacts of development further contribute to habitat loss and fragmentation.” The conclusion is drawn that “the Florida Keys has surpassed the capacity of the upland habitats to withstand further development. Any further development would exacerbate secondary and indirect impacts.”

The Carrying Capacity Study concludes with four guidelines for future development:

- 1) Prevent encroachment into native habitat.
- 2) Continue and intensify existing land acquisition programs and land restoration efforts throughout the Keys, wastewater and storm water master plan implementation, and on-going research and management activities.
- 3) Focus on redevelopment and infill development, small potentially acceptable, additional environmental impacts may occur in areas ripe for development and redevelopment.
- 4) Increase efforts to manage the resource to preserve and improve the remaining terrestrial ecosystems.

2.3 Goal 105 Smart Growth

Goal 105 was adopted by the Board of County Commissioners in 2001 to provide a framework within the 2010 Comprehensive Plan to implement the Carrying Capacity Study and a 20 year land acquisition Program. Goal 105 reads as follows:

Monroe County shall undertake a comprehensive land acquisition program and smart growth initiatives in conjunction with its Livable CommuniKeys Program in a manner that recognizes the finite capacity for new development in the Florida Keys by providing economic and housing opportunities for residents without compromising the biodiversity of the natural environment and the continued ability of the natural and made-made systems to sustain livable communities in the Florida Keys for future generations.



TIER MAPS

The initial phase of implementing Goal 105 is the drafting and adoption of the Tier maps to be used as guidance for the County's land acquisition program. Future work tasks include amending the zoning map with a tier overlay, revising the permit allocation system, developing a land acquisition strategy and a land maintenance program.

The County is directed to implement the 20 year land acquisition program by designating acquisition areas into three general categories: Natural Area (Tier I); Transition (Tier II); and Infill Area (Tier III). Tier III lands will only be acquired for affordable housing and parks. The acquisition program is to be funded with assistance of the state and federal governments and shall accomplish the following:

- secure for conservation and passive recreation purposes remaining privately-owned environmentally sensitive lands;
- retire development rights on privately owned vacant lands to limit further sprawl and to balance the rights of property owners with the sustainability of the Keys man-made and natural systems;
- secure and retain land for affordable housing. (Objective 105.2)

The goal includes a description of the lands to be included in each Tier. The descriptions are outlined below:

Tier I – Natural Area

Conservation, restoration and protection of environmentally sensitive land

- Adjacent to existing publicly owned lands and/or high quality habitat.
- Conservation land to qualify for ROGO dedication.
- Consisting of private vacant parcels to be acquired or development rights retired for resource conservation, restoration or passive recreation.
- New development severely restricted in the allocation system.

Tier II – Transition and Sprawl Area

Prevent encroachment on environmentally sensitive land and reduce sprawl.

- Consists of less than 50% built subdivisions or parts of subdivisions with incomplete infrastructure and less than 4 acre of isolated environmentally sensitive land.
- County purchase w/adjacent lot owners – retire development rights and development potential.
- New development discouraged in allocation system.

Tier III – Infill Area

Redevelopment and infill new development.

- Consists of >50% built subdivisions with full infrastructure present or in future plans with established commercial areas.



- Development encouraged in allocation system.
- Newly established community centers become eligible Transfer of Development Rights (TDR) receiver sites with a higher density incentive to TDR.

3.0 Tier Maps

The Tier Maps are based on the requirements and scientific findings from the previously described documents. The maps are being proposed, at this time, as a guide for future land acquisition from willing sellers and designation of Tier I to allow lots to be dedicated for ROGO points. Tier maps have been drafted and are under consideration for all lands in unincorporated Monroe County south of Ocean Reef. The tiers are large areas, with characteristics shared by the majority of the land areas. All tiers include some existing residential and commercial uses, being designated Tier I or Tier II should not have any effect on those existing uses. The tier maps were created using the county's Arc View GIS, which contains most of maps, aerials, data, and overlays used in performing the carrying capacity study.

3.1 Criteria

The criteria used to designate the tiers and draw the boundaries between different tiers were developed using the Carrying Capacity Study, Goal 105 and other goals and policies within the 2010 Comprehensive plan

Criteria followed to designate lands as Tier I:

- Include natural areas (CARL) of more than 4 acres and buffer areas of privately owned vacant lots and parcels.
- Include land to connect patches and reduce further fragmentation.
- Provide a buffer between natural areas and development to minimize secondary impacts up to a 500-foot radius. Canals or roadways may, depending on size, form a sufficient barrier from secondary impacts.
- Include most NA districts; other districts in buffer/restoration area.
- Consider potential for successful land management - restoration of disturbed habitat, removal of exotics, and connecting patches.
- Has minimal existing development.
- Is legally and scientifically defensible.

Criteria followed to designate lands as Tier II:

- Includes subdivision less than 50% developed, or a portion of a subdivision that is less than 50% developed because of environmental constraints.
- Contains fragmented, unconnected hammock patches of 4 acres or less and is isolated from larger natural areas by existing development.
- Includes large developed and undeveloped SR and SS lots w/habitat.



- Has platted lots in areas where adjoining property owner(s) may purchase the lots with county financial participation - a conservation easement and possibly limited accessory uses.

Criteria followed to designate lands as Tier II:

- Consists of substantially developed subdivisions near established commercial areas.
- Has small IS and URM lots.
- May contain small fragmented hammock areas.

3.2 Methodology

Goal 105 states that overlay maps of the proposed tiers are to be created per Policy 105.2.2 which shall be incorporated as an overlay on the zoning maps with supporting text amendments in the Land Development Regulations and the smart growth initiatives in conjunction with the Livable CommuniKeys Program.

For the first phase of this mapping project, staff was directed to create a specific database tied to the GIS to be used to expand the area available for land acquisition from willing sellers for the Land Acquisition Program. These maps will continue to be refined and adopted as zoning overlays to implement the smart growth initiatives and Livable CommuniKeys Program. The maps attribute table provides the following information:

Property owner
Property Record card number
Existing land use designation
Future land use designation
Value of property
Existing Property Appraiser's Code of Actual Use on Property
Environmental Designation (wetland, hammock...)
Size of property
Subdivision identification
Island name
Tier Designation

Using the database, GIS shapefiles were created. The shapefiles were used for the creations of Tier maps. While the attribute table provides the information in tabular format regarding the property, the map gives the spatial details; this visual affect allows for fine-tuning of the tier system. The creation of the base map allows for analysis using various computerized overlays, which may be used to aid the planning department or land authority in regard to acquisition, assessment or monitoring. The aide of the maps allowed field inspections and/or prior knowledge to correct any discrepancies in the databases.



TIER MAPS

The first priority for land acquisition is to identify areas as Tier I, or natural areas. In order to begin mapping, the database was used to determine the location of the existing natural areas. Locating where the existing sensitive lands lie within the acquisition boundaries of federal and state resource conservation areas and parks were the first step.

Next the existing ADID (Advanced Identification of Wetlands) dataset was used and sensitive lands were highlighted in the legend and an overlay was created from this information. Once the foundation layer showed where the sensitive areas were, the second layer on the map was CARL lands, or lands within the acquisition boundaries of federal and state resource conservation and park areas. A Tier column was added to the data set and all of these areas received a "Tier I Designation." In addition, small, isolated platted subdivisions with clusters of more than four acres of sensitive habitat located within 500 feet of privately-owned vacant lands, received the Tier I designation in the data set and a Tier I layer was formed. All non-developed state and federal public parcels and local parks above four acres received a Tier I designation.

A GIS layer depicting existing infill and subdivision build-out was the primary basis for Tier III designations. In an effort to determine property to be designated as Tier III, the first attempt was to sort all subdivisions and determine by count how many were 50 percent or more developed. Once determined, the sensitive lands layer was placed over the 50 percent developed subdivisions layer to see if there were any of these subdivisions might have pockets of sensitive lands. If clusters of hammock existed within the subdivision, either the subdivision was divided into Tier III and Tier II or, the subdivision was determined a Tier II designation because of the amount of hammock.

For acquisition purposes, if the subdivision is over 50% built out but cannot be further developed due to environmental constraints; these properties should be the target of acquisition. It should be noted that parcels that house condominiums were generally given a Tier I designation even though the units themselves were given a Tier III designation. Most condominium units require ample open space thus the existing vacant land cannot be built on and these open spaces generally showed clusters of environmentally sensitive lands. However, if the open space did not have any sensitive lands, the parcel itself would receive a Tier II designation. This scenario also describes that of mobile home parks where the parcel of land is owned by one entity. (This is a function of the data set and will be revised to Tier III if completely developed.)

The third phase of creating the Tier Maps was the Transition and Sprawl Reduction Area (Tier II). The first measure in the designation was the subdivision build out as well as infrastructure, proximity to established commercial areas and pockets of environmentally sensitive lands. These were determined by process of elimination. Once the 50 percent build out was given and mapped, the sensitive environment layer was placed over the Tier II designated areas to see if the subdivision had large pockets of environmentally



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sensitive lands. Then the determination was made as to whether the subdivision was near established commercial areas. If the subdivision was built out but had clusters or pockets of sensitive lands; the designation might be broken into two tiers. Acreage that was not platted generally received a Tier II designation as did large parcels of private vacant land. Most of the Suburban Residential (SR) land use district was given a Tier II designation as only one dwelling unit is permitted per two acres.

Once all parcels received a designation, a vacant parcels layer was created to verify the data set. The Monroe County Property Appraiser's office data was used to determine if the parcel is vacant. In addition, the ROGO allocations given since 2001 are being considered for mapping purposes.

After the draft Tier Maps were created, the county biologists reviewed the maps, parcel by parcel, to determine the accuracy of the maps and the identification of environmentally sensitive lands. Aerials were also used as well as field knowledge and site visits. In addition, corrections were made to verify water, road easements and to validate the map for acquisition purposes.

The first draft of the Tier Maps were also reviewed and revised in response to comments from U.S. Fish and Wildlife Service, Florida Department of Community Affairs (DCA), Monroe County Land Authority staff and the county Land Steward. Three public meetings were held in locations in the upper and lower Keys. Comments from the community were taken, concerning possible errors in the data used to draft the maps. These areas will be re-evaluated and changes made where appropriate.

3.3 Upper Keys

3.3.1 Description

The Upper Keys Tier Maps begin at Tavernier Creek Bridge (Mile Marker 91) and extend northward to Mile Marker 112 with the exception of Ocean Reef. From Tavernier Creek to Mile Marker 93, there is a mixture of commercial and residential uses extending from the US-1 toward the ocean and bay. Between Mile Marker 93 and 97, most of the land is in residential use with several large tracts of public-owned land. Many of the tracts of land along the highway on the bay side are listed as Tier II because many of them are in the Suburban Residential (SR) land use district which allows for one dwelling unit per two acre tract of land and a higher maximum density using TDRs. Because of the environmental sensitivity of these parcels, which extend from highway to bay, even though there are homes on the parcels, the Tier designation is a Tier II for environmental reasons.



TIER MAPS

From Mile Marker 97-100, there is a tremendous amount of infill areas and substantially developed subdivisions. Other than passive recreation areas and clusters of more than four acres of land, the majority of this area is a Tier III designation.

From Mile Marker 100-103, there is not a large number of subdivisions. Much of this area is designated Tier I. At Mile Marker 103, there has been more residential growth occurring and many of the subdivisions in this area are considered infill areas. Substantially developed subdivisions exist along the bay and ocean side of US-1 past Mile Marker 106, at which point there is some development, but very minimal.

3.3.2 Tier Matrix

Location (Mile Marker)	Tier	Vacant URM	Vacant IS	Vacant SR	Vacant Residential Parcels	Vacant Commercial Parcels	Total Private Vacant Parcels	Total Developed Parcels
Upper Keys	I	21	794	1242	1781	234	4047	866
(MM 91 to 112)	II	30	1040	26	1310	157	1539	1572
	III	234	861	25	1473	240	1845	7955
Total		285	2695	1293	4564	631	7431	10393

Source: Monroe County Tier Maps

3.3.2 Discussion

There are two large tracts of land for passive recreation purposes within the Upper Keys that are owned by Monroe County: Harry Harris Park and Port Largo Park. In addition, the John Pennekamp State Park is located at Mile Marker 103, which is owned by the State of Florida. There is also a large tract of state-owned land adjacent to Harry Harris Park. The area is comprised of 27,536 acres of land, with 23,988 of this acreage designated as Tier I. Within the Tier I designated areas, there are 17,178 acres of public land. Sixty-two percent of the land in the Upper Keys is government-owned or “public” land.

The Upper Keys portion of unincorporated Monroe County includes 126 subdivisions with a total of 17,205 platted lots. The majority of the subdivisions within this area of Monroe County are developed with complete infrastructure. In addition, there are several mobile home parks and condominium units that have are considered infill areas in the Upper Keys.

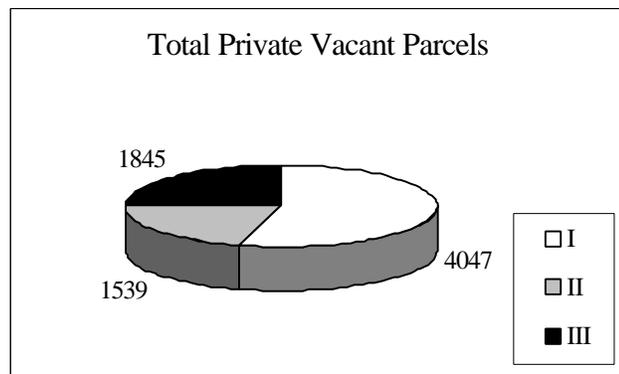


TIER MAPS

Within the Upper Keys, staff has designated 815 vacant-platted lots in IS and URM subdivisions as Tier I. These are privately owned vacant residential parcels that meet the criteria for a Tier I designation. These lots are either environmentally sensitive, are CARL lands or they exist in a subdivision that does not have complete infrastructure and are environmentally sensitive, or possibly all three criteria have been met.

The following chart shows the distribution of vacant, private parcels based on their proposed Tier designation. From Tavernier Creek Bridge (Mile Marker 91) to Mile Marker 112, there are 2,908 designated Tier II parcels. There are 3,274 Tier III parcels within this area of Monroe County.

The majority of the lots designated for acquisition in the Upper Keys are located within either the Urban Residential Mobile (URM and URM-L) and Improved Subdivision (IS) land use districts which allow for one dwelling unit per lot. These are relatively small lots in subdivisions with build-out potential.





3.4 Middle Keys – Mile Marker 60-71

3.4.1 Description

The Middle Keys tier region is comprised of all of the islands from Mile Marker 60 (Duck Key) through Mile Marker 71 (Long Key). There are several different types of uses found within this area. The land uses include residential neighborhoods, commercial fishing areas, a destination resort, a state park and preservation lands. The diverse setting creates a region with high-density development surrounded by more sensitive habitat. Long Key (MM 65-71) especially exhibits this type of development. In addition, many of the uses found within this region rely heavily on water resources to continue normal business and residential operations.

The diverse land uses lend to different land use map designations. Duck Key is divided between Destination Resort (DR) for Hawk’s Cay Resort and Improved Subdivision Masonry (IS-M). Conch Key is a Commercial Fishing District, specifically location #16 (CFSD 16). The density for IS-M is the same as IS subdivisions, one (1) unit per lot and the allocated density for CFSD 16 is three (3) units per acre.

3.4.2 Land Use Matrix

The following matrix was built by querying the attribute table. The residential and commercial areas were determined by using the Monroe County Property Appraiser’s database and the property classification codes (PC) associated with each parcel.

Goal 105 Tier System								
Vacant Parcels and Development Potential								
Location (Mile Marker)	Tier	Vacant URM	Vacant IS M	Vacant SR	Vacant Residential Parcels	Vacant Commercial Parcels	Total Private Vacant Parcels	Total Developed Parcels
Middle Keys	I	0	0	0	34	0	34	39
	II	0	245	0	245	0	245	116
	III	61	138	0	266	9	275	991
Total		61	383	0	545	9	554	1146

Source: Monroe County Tier Maps and Property Appraiser's Database

3.4.3 Discussion

There are a total of 1,326 acres and 1,745 individual parcels within the Middle Keys Tier area. The total number of private vacant parcels is 554. This number represents 32% of all parcels in the area. The total number of developed parcels is 1,146 or 66% of



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the parcels in the Middle Keys. This number does not represent the area of total land developed. The number of publicly owned parcels is 84 or 4% of parcels, with a land mass occupied by publicly owned entities of 828 acres or 62% of the total area of the Middle Keys. The amount of area that is vacant and privately owned is 253 acres or 19% of the total area of the Middle Keys.

The following graph outlines the number of vacant private parcels in each tier.

There are 34 vacant private parcels in the proposed Tier I areas, 245 vacant private parcels in the proposed Tier II areas and 275 vacant private parcels in the proposed Tier III areas.

The number of Tier III vacant parcels includes both residential and commercial uses. The number of vacant IS-M and URM parcels in Tier I is 444. The density for these 444 parcels is one unit per lot. Therefore, there is

the potential to develop 444 new single family dwelling units on the IS-M and URM lots. This is 80% of the total number of private vacant residential parcels. The remaining 20% of the total private vacant parcels is divided by the vacant commercial lots, which are 1% of the total and other residential zoning classifications including Suburban Residential (SR), Urban Residential (UR) and Commercial Fishing District (CFSD).

The total number of vacant commercial parcels is nine, with all of the parcels located in Tier III. The vacant commercial parcels are located on Duck Key and Conch Key. These two areas already contain densely developed commercial areas.

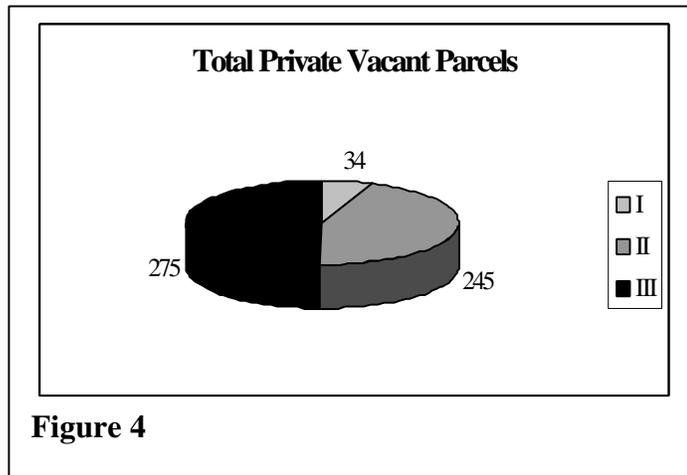


Figure 4



3.5 Lower Keys – Mile Marker 4 to 40

3.4.1 Description

The Lower Keys tier region is comprised of all of the islands from Mile Marker 4 (Stock Island) to Mile Marker 40 (Little Duck Key), excluding Big Pine Key and No Name Key. This region includes refuge areas, residential neighborhoods and high-density commercial areas. CARL land and the Great White Heron Wildlife Refuge are included in the refuge areas. The high-density commercial areas are on Stock Island and US 1 corridor, especially Big Coppitt Key and Summerland Key. Boca Chica Naval Air Station and land that is specifically for Military Facilities has been excluded from this draft of the Tier System. The Federal Government currently owns these lands and there is no indication that these lands will change ownership in the near future.

3.4.2 Tier Matrix

The following matrix was built by querying the attribute table. The residential and commercial areas were determined by using the Monroe County Property Appraiser’s database and the property classification codes (PC) associated with each parcel.

Goal 105 Tier System								
Vacant Parcels and Development Potential								
Location (Mile Marker)	Tier	Vacant URM Parcels	Vacant IS Parcels	Vacant SR Parcels	Vacant Residential Parcels	Vacant Commercial Parcels	Total Private Vacant Parcels	Total Developed Parcels
MM 4-40	I	10	1097	221	5283	71	5354	7816
Lower Keys	II	3	793	9	1259	37	1296	1382
	III	163	1549	50	2111	195	2306	7013
Total		176	3439	280	8653	303	8956	16211

Source: Monroe County Tier Maps and Property Appraiser's Database

Figure 3

3.4.3 Discussion

There are a total of 26,411 acres and 25,897 individual parcels within the Lower Keys Tier area. The total number of private vacant parcels is 8,956, 34% of all parcels in the area. The total number of developed parcels is 16,211 or 62% of the parcels in the Lower Keys. This number does not represent the area of total land developed. The number of publicly owned parcels is 6,910 or 26% of parcels, but the land mass that is occupied by



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publicly owned entities is 17,330 acres or 66% of the total area of the Lower Keys. The amount of area that is vacant and privately owned is 6,631 acres or 25% of the total area of the Lower Keys.

The following graph outlines the number of vacant private parcels in each tier.

There are 5,354 vacant private parcels in the proposed Tier I areas, 1,296 vacant private parcels in the proposed Tier II areas and 2,306 vacant private parcels in the proposed Tier III areas.

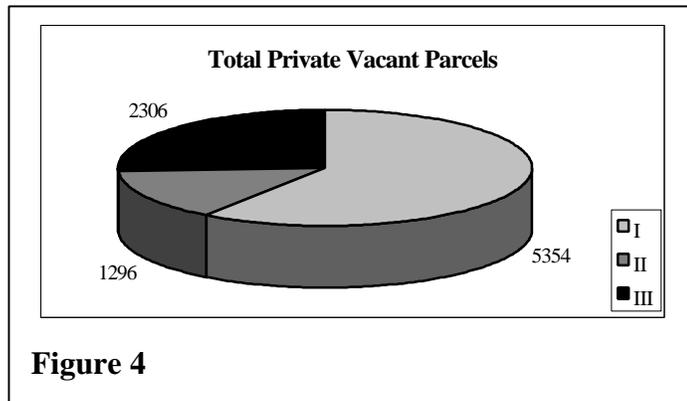


Figure 4

The number of Tier III vacant parcels includes both residential and commercial uses. The number of vacant IS and URM parcels in Tier I is 1,712. The density for these 1,712 parcels is one unit per lot. Therefore, there is the potential to develop 1,712 new single family dwelling units on the IS and URM lots. This is 74% of the total number of private vacant residential parcels. The remaining 26% of the total private vacant parcels is divided by the vacant commercial lots, which are only 8% of the total and other residential zoning classifications including Mixed Use (MU), Sparsely Settled (SS) and Suburban Residential (SR).

The total number of vacant commercial parcels is 303, with 195 or 64% of the parcels in Tier III. With the exception of Stock Island, the majority of the vacant commercial parcels are located on US 1 and are in close proximity to existing commercial uses.



3.5 Big Pine Key and No Name Key

3.5.1 Description

While Big Pine and No Name Keys are included in the Lower Keys, they require additional discussion and analysis. The Tier designations on Big Pine and No Name Key were not based on the criteria outlined in section 3.1 of this report, but rather other factors established by the Habitat Conservation Plan. The Habitat Conservation Plan (HCP) is required for a permit from U.S. Fish and Wildlife because any additional development on Big Pine will have an impact on the endangered species resulting in a prohibited ‘taking’ of the species. The HCP outlines what types of development will be permitted on Big Pine and No Name Keys and how the primary and secondary impacts of the new development on the endangered species (primarily the Florida Key Deer and the Lower Keys March Rabbit) will be mitigated.

The Tier designations on Big Pine and No Name Keys were based on a Key Deer Population Viability Analysis (PVA) model, in the HCP, which included different habitat characteristics relevant to the survival of the Key deer population. The factors used in the PVA (and also in determining Tier designations) were: deer corridors, deer density, house density, water barriers, distance from US 1, and habitat patch quality. These six factors were evaluated based on two forms of impact to the Key deer, secondary impacts such as increase in traffic and loss or change of habitat. Deer corridors, areas of high deer density, and areas with quality deer habitat were considered most valuable to the species, while areas with a high house density, water barriers such as canals, and areas close to US 1 were considered to be less valuable to the species.

The resulting Tier designations were somewhat different from other areas in the county. For example, subdivisions which are more than 50% built-out were not designated as Tier III because they are located in areas of high deer density, high habitat quality and located far from US 1 thus increasing the likelihood of traffic mortality.

3.5.2 Tier Matrix

Location (Mile Marker)	Tier	Vacant URM	Vacant IS	Vacant SR	Vacant Residential Parcels	Vacant Commercial Parcels	Total Private Vacant Parcels	Total Developed Parcels
Big Pine	I	3	852	98	2248	14	2362	1400
(MM 29.5 to 33)	II	0	489	0	559	7	566	782
	III	1	226	0	249	19	268	611
Total		4	1567	98	3056	40	3096	2793

Source: Monroe County Tier Maps and Property Appraiser’s Database



3.5.3 Discussion

The majority of land on Big Pine and No Name is already under public ownership (roughly 67% including federal, state, and county lands). Most of the large tracts have already been purchased for conservation purposes and are under management by the US Fish and Wildlife Service and are part of the Key Deer Refuge and Great White Heron Sanctuary. The HCP will require any new development that occurs on Big Pine to be mitigated, mainly through the purchase of lands for conservation purposes. Therefore, the lands currently in private ownership designated Tier I is very important to mitigate the limited amount of proposed new development on Big Pine.

The following graph shows the breakdown of private, vacant parcels by their proposed Tier designations. The majority of the vacant parcels located in Tier I are either acre parcels located in the center of Big Pine or small Improved Subdivision (IS) lots located in subdivisions which are located in deer corridors or on the north side of the island far from US 1. Tier III parcels are all located within close proximity to US 1 and the majority are IS lots located on canals, with a limited amount of vacant commercial lots within the US 1 Corridor. Tier II parcels are

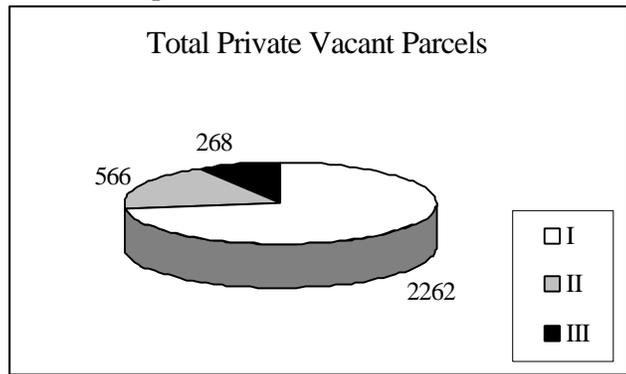


Figure 6

predominantly located in subdivisions in the central portion of Big Pine and are on canals or in areas of high housing density. All of No Name Key is designated Tier I.

The Habitat Conservation Plan will determine the permitted amount of development activities on Big Pine and No Name Key for the next 20 years. The proposed plan will only permit 200 residential units (ten per year) and a corresponding amount of new commercial development. There are a total of 226 vacant IS lots proposed to be designated as Tier III, however there are 852 IS lots proposed as Tier I. Tier II, the transition area, has 489 vacant IS lots.



4.0 Recommendations

- The Planning Commission to recommend the Tier Maps to the Board of County Commissions for adoption as guidance maps for acquisition of lands from willing sellers and to designate Tier I as “Conservation Land Protection Area” permitting donation of lots for ROGO points.
- Staff to continue to refine the maps, final Tier Maps to be adopted as an over-lay to the zoning maps as required in the 2010 Plan.
- Staff and the Planning Commission to work together to develop revised ROGO and development regulations to incorporate the Tiers and fulfill the requirements of the Work Program in the Comprehensive Plan.
- Contract to have a fiscal analysis performed on the impact of using the maps as a basis for acquisition and future rate of growth regulations.
- Analyze the Tiers and revisions to the LDRs in the “Carrying Capacity Impact Assessment Model” to determine the improvements in projected Carrying Capacity with the amendments.