

2.19 Environmental Resource and Habitat Protection – Habitat Restoration

A. Introduction and Background.

Collier County has adopted various criteria to protect habitats from destruction by development. These criteria address both the retention of native vegetation and the preservation of wildlife habitat. The original 1989 Growth Management Plan provided for 25% retention of “viable naturally functioning native vegetation”

B. Identification of Specific Objectives from the Conservation and Coastal Management Element

In June 2002, the GMP was amended in response to the Governor and Cabinet’s Final Order addressing the Rural Agricultural Area Assessment. These amendments adopted more specific preservation and retention requirements for the Rural Fringe and Eastern Lands areas, and for other areas of the County as well. The current “countywide standards” provided for in Policy 6.1.1 of the CCME are summarized in Table 2.19-1:

Table 2.19-1

CCME, Objective 6.1, Policy 6.1.1				
	Coastal High Hazard Area		Non-Coastal High Hazard Area	
Residential and Mixed Use Development	Less than 2.5 acres	10%	Less than 5 acres.	10%
	Equal to or greater than 2.5 ac.	25%	Greater than 5 acres and less than 20 acres.	15%
			Equal to or greater than 20 ac.	25%
Golf Course		35%		35%
Commercial and Industrial Development	Less than 5 acres.	10%	Less than 5 acres.	10%
	Equal to or greater than 5 acres.	15%	Equal to or greater than 5 acres.	15%
Industrial Development (Rural-Industrial District only)	50%, not to exceed 25% of the project site.		50%, not to exceed 25% of the project site.	

Implementation Activities. The GMP is implemented during the County’s land petition and site development review process. Applicants must submit a vegetation inventory, including the amount of vegetation to be preserved on site. Staff reviews these applications for consistency with the requirements of the GMP and the Land Development Code to ensure the proper amount of vegetation is retained on site.

C. Data Assessment. For the 1996 EAR, staff analyzed the amount of vegetative communities retained by permitted developments. This analysis has been repeated for the current EAR, with the results summarized in Table 2.19-2. Figure 2.19-2 describes the methodology used to perform this analysis.

For the period of 1989 through 1994, Collier County required developments to retain 21.9% of the listed vegetation communities. Between 1995 and 2002, the retention rate was 31.4%. A comparison of the individual vegetative communities is graphically displayed in Figure 2.19-1.

D. Objective Achievement Analysis. The analysis indicates that application of the retention standards have set aside total vegetative communities at values that exceed the “nominal” value of 25% as adopted in the 1989 Growth Management Plan.

These results do not reflect the new amendments that were adopted in 2002 in response to the Governor and Cabinet’s Final Order addressing the Rural Agricultural Area Assessment. The Objectives that address the “county-wide “ standards are summarized in Table 2.19-3. It is expected that these new policies will provide for at least the same amount of overall retention. The new policies also provide for a priority list of habitats that must be retained as part of the vegetation retention requirement. For example, newly adopted Policy 6.1.1(4) states:

Selection of preservation areas shall reflect the following criteria in descending order of priority:

- a. Onsite wetlands shall be preserved pursuant to Policy 6.2.4 of this element;
- b. Areas known to be utilized by listed species or that serve as corridors for the movement of wildlife shall be preserved and protected in order to facilitate the movement of wildlife through the site. This criterion shall be consistent with the requirements of Policy 7.1.1 of this element. Parcels containing gopher tortoises shall protect the largest, most contiguous gopher tortoise habitat with the greatest number of active burrows, and provide a connection to off site adjacent gopher tortoise preserves.
- c. Upland habitat shall be part of the preservation requirement when wetlands alone do not constitute all of the requirement. Upland habitats have the following descending order of priority:
 1. Any upland habitat that serves as a buffer to a wetland area,
 2. Listed plant and animal species habitats,

3. Xeric Scrub,
4. Dune and Strand, Hardwood Hammocks
5. Dry Prairie, Pine Flatwoods, and
6. All other upland habitats.

d. Exceptions to these priorities are noted in (7) below.

(7) Exceptions, by means of mitigation in the form of increased landscape requirements shall be granted for parcels that cannot reasonably accommodate both the preservation area and the proposed activity. Criteria for allowing these exceptions include:

- (a) Where site elevations or conditions requires placement of fill thereby harming or reducing the survivability of the native vegetation in its existing locations;
- (b) Where the existing vegetation required by this policy is located where proposed site improvements are to be located and such improvements cannot be relocated as to protect the existing native vegetation;
- (c) Where native preservation requirements are not accommodated, the landscape plan shall re-create a native plant community in all three strata (ground covers, shrubs and trees), utilizing larger plant materials so as to more quickly re-create the lost mature vegetation.

Table 2.19-2 Amount of Vegetative Communities Retained by Permitted Development

Vegetative Community	1989-1994				1995-2002			
	Total Acres	Permitted Removal	Retained Acres	Percent Retention	Total Acres	Permitted Removal	Retained Acres	Percent Retention
Uplands								
Coastal Strand	-	-	-	n.a.	-	-	-	n.a.
Dry Prairie	38	30	8	21.1%	50	42	8	16.5%
Pinelands	3,943	3,220	723	18.3%	4,008	3,288	719	17.9%
Xeric Oak Scrub	54	35	19	35.2%	10	6	3	33.7%
Mixed Hardwood Pine Forests	98	60	38	38.8%	2	2	-	0.0%
Hardwood Hammocks and Forests	56	27	29	51.8%	92	48	45	48.2%
Tropical Hardwood Hammock	-	-	-	n.a.	1	1	-	0.0%
Sub-Total Uplands	4,189	3,372	817	19.5%	4,164	3,388	775	18.6%
Wetlands								
Coastal Salt Marsh	40	1	39	97.5%	10	-	10	100.0%
Freshwater Marsh and Wet Prairies	308	129	179	58.1%	477	83	394	82.6%
Cypress Swamp	983	283	700	71.2%	4,258	1,820	2,438	57.3%
Hardwood Swamp	291	63	228	78.4%	364	86	278	76.5%
Shrub Swamp	29	8	21	72.4%	32	6	26	81.1%
Mangrove Swamp	141	3	138	97.9%	335	0	335	99.9%
Sub-Total Wetlands	1,792	487	1,305	72.8%	5,476	1,995	3,481	63.6%
Open Water	259	134	125	48.3%	464	173	291	62.8%
Other Classifications								
Grassland	3,275	3,234	41	1.3%	3,798	3,676	122	3.2%
Shrub and Brushland	664	593	71	10.7%	227	189	38	16.7%
Exotic Plant Communities	481	396	85	17.7%	800	633	167	20.9%
Barren	598	575	23	3.8%	787	730	57	7.2%
Sub-Total Other Classifications	5,018	4,798	220	4.4%	5,611	5,227	384	6.8%
TOTAL	11,258	8,791	2,467	21.9%	15,714	10,783	4,931	31.4%

Figure 2.19-1

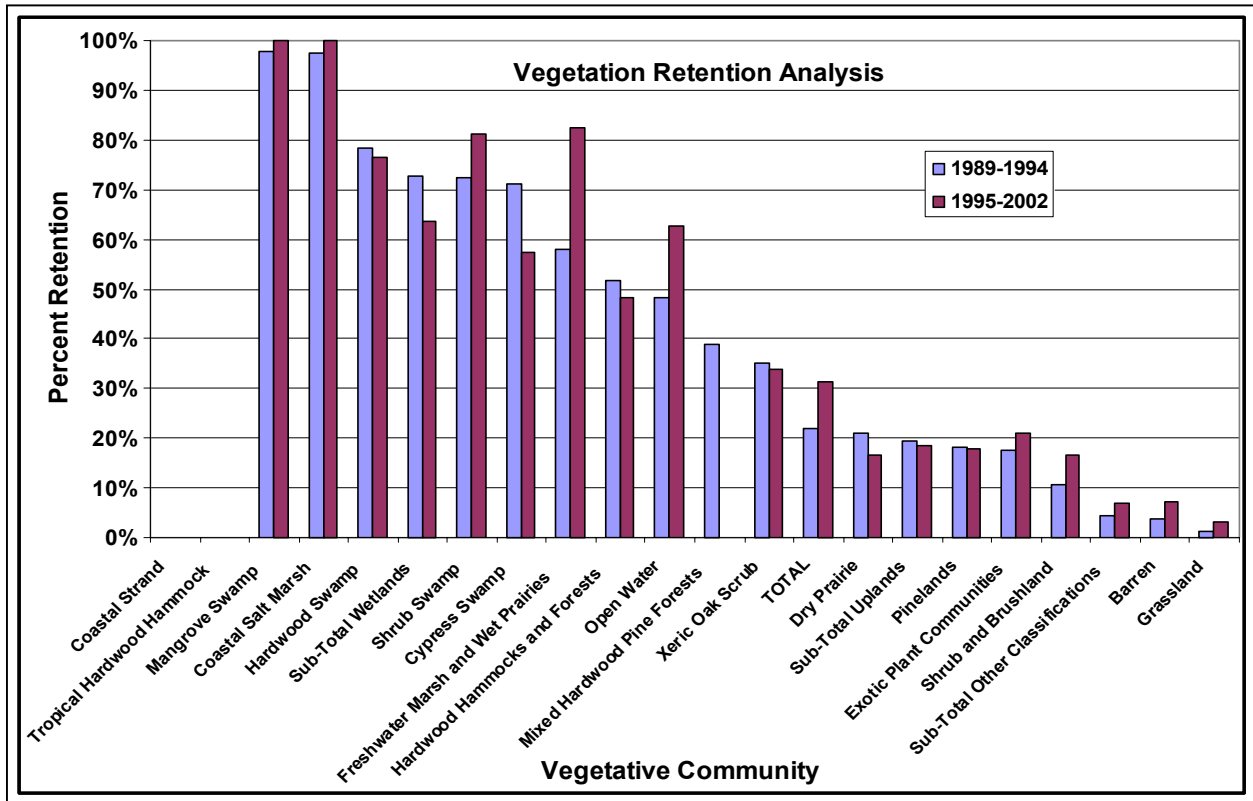


Table 2.19-3. Analysis of Specific Objectives from the Conservation and Coastal Management Element (CCME) relating to the Habitat Restoration Issue

CCME Objectives Linked to the Issue	Extent to which Objectives have been achieved	Unanticipated Changes Resulting in Problems or Opportunities	Recommendations
<p>OBJECTIVE 6.1 <i>The County shall protect native vegetative communities through the application of minimum preservation requirements. The following policies provide criteria to make this objective measurable. These policies shall apply to all of Collier County except for the Eastern Lands Study Area, for which policies are required to be adopted by November 1, 2002.</i></p>	<p>This is a new Objective adopted in June 2002.</p> <p>Not enough time has passed to evaluate the current objective. However, the analysis provided above indicates that the Objective can be attained.</p>	<p>None</p>	<p>Maintain current Objective and attendant policies.</p> <p>Reevaluate at the next EAR.</p>
<p>OBJECTIVE 6.2: <i>The County shall protect and conserve wetlands and the natural functions of wetlands. The following policies provide criteria to make this objective measurable. These policies shall apply to all of Collier County except for the Eastern Lands Study Area, for which policies are required to be adopted by November 1, 2002.</i></p>	<p>This is a new Objective adopted in June 2002.</p> <p>Not enough time has passed to evaluate the current objective. However, the analysis provided above indicates that the Objective can be attained.</p>	<p>None</p>	<p>Maintain current Objective and attendant policies.</p> <p>Reevaluate at the next EAR.</p>

CCME Objectives Linked to the Issue	Extent to which Objectives have been achieved	Unanticipated Changes Resulting in Problems or Opportunities	Recommendations
<p><i>OBJECTIVE 6.3</i> The County shall protect and conserve submerged marine habitats.</p>	<p>This is a new Objective adopted in June 2002.</p> <p>Not enough time has passed to evaluate the current objective. However, the analysis provided above indicates that the Objective can be attained.</p>	<p>None</p>	<p>Maintain current Objective and attendant policies.</p> <p>Reevaluate at the next EAR.</p>
<p><i>OBJECTIVE 6.4</i> The County will protect, conserve and appropriately use ecological communities shared with or tangential to State and Federal lands and other local governments.</p>	<p>This is a new Objective adopted in June 2002.</p> <p>Not enough time has passed to evaluate the current objective. However, the analysis provided above indicates that the Objective can be attained.</p>	<p>None</p>	<p>Maintain current Objective and attendant policies.</p> <p>Reevaluate at the next EAR.</p>
<p><i>OBJECTIVE 7.1</i> The County shall direct incompatible land uses away from listed animal species and their habitats. These policies shall apply to all of Collier County except for the Eastern Lands Study Area, for which policies are required to be adopted by November 1, 2002.</p>	<p>This is a new Objective adopted in June 2002.</p> <p>Not enough time has passed to evaluate the current objective. However, the analysis provided above indicates that the Objective can be attained.</p>	<p>None</p>	<p>Maintain current Objective and attendant policies.</p> <p>Reevaluate at the next EAR.</p>

E. Conclusion

Overall, the majority of the enabling policies continue to be relevant to the all of the objectives listed in Table 2.19-3, and will therefore be retained in the updated comprehensive plan.

It will require some time to evaluate the impact of the recently adopted vegetation retention policies. Therefore, no changes are recommended in this EAR for the set of objectives listed above in Table 2.19-3.

Figure 2.19-2

**METHODOLOGY FOR ASSESSING VEGETATION RETENTION
FOR PERMITTED DEVELOPMENTS**

Planned Unit Developments (PUDs) approved between the years of 1995 and 2002 were ranked in order of size. PUD records were then reviewed for information regarding habitat. PUDs with the largest acreages were reviewed first. The following PUD records were included in the analysis:

Arrowhead, ASGM Business, Bailey Lane, Baldrige, Cedar Hammock, Club Estates, Club Estates II, Cocohatchee, Collier Boulevard Mixed Use, Cypress Woods, The Dunes, First Assembly Ministry, First Baptist Church of Naples, Hammock Park Commerce Center, Ibis Cove, Indigo Lakes, Island Walk, Lands End Preserve, Lely Lakes Golf Resort, Malibu Lake, Mediterra (amendments only), Mirasol, Mission Church, Naples Heritage, Naples Reserve Golf Club, Nicaea Academy, Oak Grove, Olde Cypress, Outdoor Resorts of Naples, Pelican Marsh, Pelican Strand, Rigas, San Marino, Tarpon Cove, Terafina, Vanderbilt Country Club, Whippoorwill Lakes, Whippoorwill Woods, and Winding Cypress.

Habitat types and their associated acreages to be destroyed and/or retained were gathered from vegetation surveys, environmental impact studies, and development order stipulations.

In most PUDs, habitats were defined by the Florida Land Use, Cover and Forms Classification System (FLUCCS) numbers.

However, occasionally brief written assessments of the plant communities were the only documents describing habitat types.

In order to be consistent, FLUCCS numbers and the written assessments of plant communities were matched according to their definitions

HABITAT TYPE = FLUCCS NUMBERS

Barren 741,	=	100, 110, 111, 112, 113, 189, 191, 740, 743, 744, 746, 800, 810, 814, 832
Grassland	=	200, 210, 211, 213, 214, 216, 221, 231, 240, 241, 251, 260, 261
Dry Prairie	=	310
Shrub and Brushland	=	320, 321, 322, 329
Pinelands	=	410, 411, 4119, 415, 4159, 419
Xeric Scrub Oak	=	421
Mixed Hardwood and Pine Forests	=	414
Hardwood Hammocks And Forests	=	420, 427, 428, 432, 434
Tropical Hardwood Hammock	=	426
Exotic Plant Communities	=	422, 424, 437
Shrub Swamp	=	429
Freshwater Marsh And Wet Prairie	=	640, 641, 6419, 643, 6439, 646
Open Water	=	500, 510, 511, 512, 513, 514, 520, 524, 533, 534, 540, 560, 616, 742
Hardwood Swamp	=	611, 617, 6179, 618, 630
Mangrove Swamp	=	612
Cypress Swamp	=	620, 621, 6219, 624, 6249, 625
Coastal Salt marsh	=	642
Drained Cypress Swamp	=	6215, 6245