

SUMMARY OF RECOMMENDED CHANGES
2011 EVALUATION & APPRAISAL REPORT (EAR)

Conservation and Coastal Management Element

Goals, Objective and Policies: The entire Element should be revised to reflect the proper formatting of Goals, Objectives and Policies, as defined below.

Goal: General statement that defines what the Element will ultimately achieve.

Objective: A more specific statement than the stated Goal; describes actions that will help achieve the goal(s).

Policies: Specific statements that provide directives on how to achieve the objectives and ultimately the Element's goal(s).

Goals, Objective and Policies: The entire Element should be revised to reflect Department name changes, designee changes, renumbering due to objective and/or policy additions and/or deletions, and grammatical changes.

- Objective 1.1:** Revise to reflect Program has been implemented and activities are ongoing
- Policy 1.1.3:** Revise per EAC to address financial feasibility
- Policy 1.1.6:** Revise to include an effective date
- Objective 1.2:** Revise per the EAC to address database provisions
- Policy 1.2.3:** Modify to require that only watershed dependent data should be organized by watershed and sub-basin units; and revise per CCPC to include specific text
- Policy 1.2.5:** Delete per staff as Policy is no longer relevant
- Policy 1.3.1:** Revise per EAC to include correct acronyms
- Policy 1.3.4:** Delete, as Policy is no longer relevant
- Objective 2.1:** Modify to reflect completed work and reword first sentence in item (c); and revise per EAC to add requirement that compensation for all wetland impacts occur within the same drainage area

- Policy 2.1.3:** Revise per EAC to include within the Policy measurement tools for determining improvements to the watersheds over time
- Policy 2.1.6:** Revise per EAC to include within the Policy the use of watershed management plans for ongoing data collection guidance
- Policy 1.3.1:** Revise to reflect most current acronym references per EAC
- Policy 1.3.4:** Delete, as Policy is no longer relevant
- Objective 2.1:** Revise to require that compensation for all wetland impacts occur within the same drainage area per EAC
- Policy 2.1.3:** Revise to include requirement for measurement tools for determining improvements to the watersheds over time per EAC
- Policy 2.1.6:** Revise to require the use of watershed management plans for ongoing data collection guidance per EAC
- Objective 2.2:** Modify to add qualifier, such as “to attain the highest water quality practical” per staff; retain Objective text as written per CCPC; and retain Objective text as written per SFWMD
- Policy 2.2.1:** Revise to include provision to encourage wastewater re-use for irrigation per EAC
- Policy 2.2.2:** Revise to include establishment and implementation of a fertilizer ordinance to limit nitrogen and phosphorus use per EAC
- Policy 2.2.5:** Revise to include benchmarks for Policy achievement per EAC
- Objective 2.3:** Revise to include coordination and Plan development with the FDEP per staff; and retain Objective text as written per CCPC
- Objective 2.5:** Delete, as estuarine management program has been implemented per staff; and, revise to reflect initial implementation and ongoing maintenance per CCPC and EAC
- Policy 2.5.1:** Delete, as estuarine management program has been implemented per staff; and, revise to reflect initial implementation and ongoing maintenance per CCPC and EAC
- Policy 2.5.2:** Delete, as estuarine management program has been implemented per staff; and, revise to reflect initial implementation and ongoing maintenance per CCPC and EAC

- Policy 2.5.3:** Delete, as estuarine management program has been implemented per staff; and, revise to reflect initial implementation and ongoing maintenance per CCPC and EAC
- Objective 3.1:** Revise to reflect establishment of the monitoring network, addition of phrase, “to ensure highest water quality practical,” and reference that groundwater monitoring activities are ongoing per staff; and, retain Objective text as written per CCPC
- Policy 3.1.1:** Revise to address improvement of groundwater monitoring in order to assess saltwater intrusion per EAC
- Objective 3.3:** Revise to add provision for staff assessment within a specific Immokalee wellfield extending under the airport and adjoining industrial lands per EAC
- Policy 3.4.1:** Revise to add reference to salinity trending within Policy per EAC
- Policy 3.4.4:** Revise to add provision for coordination with the SFWMD and Big Cypress Basin per EAC
- Policy 4.1.2:** Revise to indicate that the County, in coordination with the SFWMD shall be responsible for devising a method to determine agricultural pumpage
- Policy 4.1.3:** Revise to indicate County Department responsible for compiling water use requirements of the native plant and animal community associations within the County
- Policy 6.1.1:** Modify to reference the June 2010 Land Development Code amendments that implement specific subsections of this Policy, address scrivener’s errors in subsections 6.1.1 (7 & 13) and revise applicable subsections, delete subsection 6.1.1 (7), and add an exemption from the native vegetation retention requirements for Federal and State parks, preserves and forests whose purpose is to manage land for conservation per staff; revise to clearly reflect intent per CCPC; and, revise to clearly reflect intent per EAC
- Policy 6.1.2:** Revise to include reference to the June 2010 Land Development Code amendments that implement specific subsections of the Policy, and include an exemption from the native vegetation retention requirements for Federal and State parks, preserves and forests whose purpose is to manage land for conservation purposes per staff; revise to clearly reflect intent per CCPC; and, revise to clearly reflect intent per EAC
- Policy 6.2.1:** Revise to correct the Florida Administrative Code reference; and insert reference to the current SFWMD land use and land cover inventory

- Objective 6.2:** Revise to require mitigation within the same drainage area as initial impact per EAC
- Policy 6.2.3:** Revise provision (6) to include that watershed management plans contain designated areas to be protected from development so as to preserve habitat, water flows, recharge areas and to prevent future flooding per EAC
- Policy 6.2.5:** Delete Section 6.2.5 (6)(5)(b)(3), as the specific criteria to identify mitigation priorities and implement the incentive program have been adopted into the Land development Code, and address native vegetation retention standards for the Lake Trafford/Camp Keais Strand System as part of the Immokalee Area Master Plan amendments per staff; and revise to clarify native vegetation requirements for the Lake Trafford/Camp Keais Strand System per CCPC; and revise to clarify native vegetation requirements for the Lake Trafford/Camp Keais Strand System and provide cross references to other Elements per EAC
- Policy 6.2.7:** Revise to require wetland mitigation within impacted watershed per EAC
- Policy 6.3.2:** Revise to reflect maintenance dredging permit requirement and include within the CCME additional policies to protect sea grasses from dredging activities per the EAC
- Policy 6.3.3:** Delete, as the new FWC Rule Change prohibits speed zones to be established based on benthic resources per staff; retain Policy as written per CCPC; and, retain Policy as written per EAC
- Policy 7.1.2:** Delete references to specific wildlife publications and plans listed in the Policy, revise to add a general reference to publications utilized by the FFWCC and USFWS as their technical assistance, and delete the reference to mitigation for black bear habitat, as no such mitigation is required by the FFWCC or USFWS per staff; and revise to add provision for retention of old growth slash pines for RCW nesting habitat per EAC
- Policy 7.1.6:** Delete, as the Land Development Code amendment to implement this Policy has been completed per staff; and, revise to reflect the continuance of Policy Objective per CCPC
- Objective 7.2:** Revise to reflect the most up-to-date, best available data on manatee deaths in Collier County waters
- Policy 7.2.2:** Delete specific reference to Policy 6.3.3, as reference is no longer relevant per staff; and revise Policy to retain reference to Policy 6.3.3 per EAC

- Objective 7.3:** Revise to reflect the most up-to-date, best available data on sea turtle disorientation
- Policy 7.3.1** Revise to reflect the correct Policy reference
- Policy 7.4.1** Modify Policy to refer to other funding opportunities
- Policy 9.1.6** Revise to reflect the establishment of a training program
- Policy 9.1.7** Revise to reflect current departmental reference
- Policy 9.2.3** Modify to reflect the establishment, and maintenance, of a cooperative agreement
- Policy 9.4.3** Modify to remove redundant sentence
- Policy 10.1.1:** Revise Policy or add policies to include strategies to preserve recreational and commercial working waterfronts
- Policy 10.1.5** Modify to consistently refer to “marine” wetlands per staff; revise to clarify “marine wetlands” per CCPC; and revise to define or clarify “marine wetlands” per EAC
- Policy 10.1.6** Modify to require that destruction of any marine wetlands requires a fiscal analysis
- Policy 10.2.1** Modify to require beach access sites shown on plans to be at the discretion of the County
- Objective 10.3:** Revise to include LDC map reference per EAC
- Objective 10.4:** Revise Objective to read, “...continue to be restored and then maintained per EAC
- Policy 10.4.13** Modify the Policy to change its focus to educating the public about sea level rise
- Policy 10.6.2** Delete, as existing regulations are adequate to address sea level rise per staff; retain Policy as written per the CCPC; and retain Policy as written per the EAC
- Objective 12.1** Modify to address legislative changes to hurricane evacuations requirements
- Policy 12.1.3** Modify to reflect shelter space figures that are consistent with the Southwest Florida Regional Planning Council’s Hurricane Evacuation Study Update

- Policy 12.1.5** Modify to reflect updated equipment listing requirements for onsite shelters
- Policy 12.1.7:** Revise to add requirement to coordinate with the municipalities per CCPC
- Policy 12.1.9** Revise to reflect correct terminology and coordination activities
- Policy 12.1.11** Revise to reflect latest date of document
- Policy 12.1.12** Revise to reflect latest date of document
- Policy 12.1.13** Modify to reference funding limitations
- Policy 12.1.14** Delete, as the inclusion of hurricane shelters within the 5-year schedule of Capital Improvements is not supported
- Policy 12.1.15** Modify to make Policy references consistent with State and Federal guidelines; and, revise to reflect latest date of document
- Policy 12.1.17** Revise sentence for clarity
- Policy 12.1.21** Revise to reflect the next due date for the Plan update
- Policy 12.2.5** Modify to provide new CHHA definition
- Policy 12.3.2** Revise for clarification and sentence structure
- Objective 12.4** Revise to reflect current terminology and departmental names

**Assessment of the Successes and Shortcomings
and Recommendations
for the Conservation and Coastal Management Element**

A. Background and Introduction

The Conservation and Coastal Management Element of the Growth Management Plan provides the County the guidance to: manage coastal systems and historic resources, and maintain shoreline lands and infrastructure so as to enhance environmental, recreational, and economic opportunities and protect human life; protect, conserve and manage natural systems, and vegetative and land resources; and, where appropriate, enhance air and water quality.

The Conservation and Coastal Management Element includes thirteen (13) Goals and associated objectives and policies. These Goals are summarized as follows:

1. Protection of natural resources;
2. Protection of surface and estuarine water resources;
3. Protection of groundwater resources;
4. Protection of freshwater resources;
5. Protection of mineral and soil resources;
6. Protection of native vegetation and wildlife habitat;
7. Protection of fisheries and wildlife;
8. Maintenance of existing air quality;
9. Management of hazardous materials and hazardous wastes;
10. Protection of coastal resources;
11. Protection of historic resources;
12. Hurricane evacuation and sheltering; and,
13. Avoiding duplication of regulations

During the reporting period for this Evaluation and Appraisal Report, the County has been successful in furthering the Element's overall purposes of: protecting and conserving natural resources; protecting human life and property along the coast; and, protecting and managing watersheds and estuarine areas. The County has implemented and maintained various programs and regulatory controls that have been instrumental in protecting and conserving wetlands, listed species habitat and other areas appropriate for protection; these include, but are not limited to: (1) The Stewardship Program in the Rural Lands Stewardship Area Overlay; (2) The Transfer of Development Rights Program in the Rural Fringe Mixed Use District; (3) The Conservation Collier land acquisition program; and (4) Regulatory controls within the Conservation and Coastal Management Element and the Land Development Code.

Additionally, the County continues to maintain timely hurricane evacuation and sheltering practices; constructed the new James V. Mudd Emergency Services Center with state of the art equipment; maintains water quality and monitoring programs; continues the development of watershed management plans; continues periodic beach renourishment and dredging projects; and, continues to monitor sea turtle nesting.

Preparation of this Section of the Evaluation & Appraisal Report (EAR) involved coordination between Comprehensive Planning staff and the following departments/sections: Land Development Services Department – Zoning Services Section, Stormwater and Environmental Planning Section, Engineering Services Section; Public Utilities Engineering and Water Departments; Pollution Control Department; Parks and Recreation Department; Coastal Zone Management Department; Facilities Department – Conservation Collier; and the Bureau of Emergency Services. Changes are proposed to the following Objectives and Policies.

B. Objective Analysis

OBJECTIVE 1.1:

Collier County will continue to develop and implement a comprehensive environmental management and conservation program, which will ensure that the natural resources, including State and Federally listed animal species, of Collier County are properly, appropriately, and effectively identified, managed, and protected.

Objective Achievement Analysis:

Collier County continues to operate the program described in this Objective.

This Objective remains relevant and should be retained. However, the Objective should be revised to reflect that the program is ongoing.

Policy Relevance:

Policy 1.1.3:

Collier County shall continue to support established environmental policies by maintaining an appropriately administered and professionally staffed governmental unit capable of developing, administering, and providing long-term direction for the protection and management of the County's environmental resources.

Policy Achievement Analysis:

The County continues to support established environmental policies by maintaining an appropriately administered and professionally staffed governmental unit capable of developing, administering, and providing long-term direction for the protection and management of the County's environmental resources.

This Policy remains relevant and should be retained.

[Environmental Advisory Council (EAC) Comment from the August 11, 2010 Workshop – Suggesting that the financial feasibility of achieving the Policy objectives with limited staff resources be evaluated.]

[Post EAC and CCPC Workshops and Adoption Hearings – Staff Comment – No change to this Policy is recommended. Staff believes that current staffing levels are adequate to fulfill the Policy objectives, and adjustments have been made over time in response to changes in workload.]

Policy 1.1.6:

In those areas of Collier County where oil extraction and related processing is an allowable use, such use is subject to applicable state and federal oil and gas permits and Collier County non-environmental site development plan review procedures. Directional-drilling and/or previously cleared or disturbed areas shall be utilized in order to minimize impacts to native

habitats, where determined to be practicable. This requirement shall be deemed satisfied upon issuance of a state permit in compliance with the criteria established in Chapter 62C-25 through 62C-30, F.A.C., as those rules exist on the effective date of this amendment to the Collier County Comprehensive Plan, regardless of whether the activity occurs within the Big Cypress Watershed, as defined in Rule 62C-30.001(2), F.A.C. All applicable Collier County environmental permitting requirements shall be considered satisfied by evidence of the issuance of all applicable federal and/or state oil and gas permits for proposed oil and gas activities in Collier County, so long as the state permits comply with the requirements of Chapter 62C-25 through 62C-30, F.A.C. For those areas of Collier County outside the boundary of the Big Cypress Watershed, the applicant shall be responsible for convening the Big Cypress Swamp Advisory Committee as set forth in Section 377.42, F.S., to assure compliance with Chapter 62C-25 through 62C-30, F.A.C. even if outside the defined Big Cypress Watershed. All access roads to oil and gas uses shall be constructed and protected from unauthorized uses according to the standards established in Rule 62C-30.005(2)(a)(1) through (12), F.A.C.

Policy Achievement Analysis:

Policy 1.1.6 outlines the environmental review criteria for oil extraction and related processing, where oil extraction and related processing is an allowable use in the County.

This Policy remains relevant and should be retained. However, the Policy should be revised to include the effective date of the amendment.

OBJECTIVE 1.2:

Maintain the framework for an integrated, computer-based environmental resources data storage, analysis, and graphics system and annually update the databases based on previous year's analytical data in order to monitor the status of the County's natural resources and propose potential protection measures when appropriate.

Objective Achievement Analysis:

The Collier County Environmental Planning Section maintains a robust, GIS-based system (ESRI's ArcGIS) that will be updated annually.

This Objective remains relevant and should be retained.

[Environmental Advisory Council (EAC) Comment from the August 11, 2010 Workshop – Suggesting that the Objective address/include provisions for quality of data, analysis of data, and availability of data; and, the Environmental Planning Section maintain copies of, and an index to, analyses performed on these GIS-based data.]

[Post EAC and CCPC Workshops and Adoption Hearings – Staff Comment – No change to this Policy is recommended. The computer-based environmental resources data is stored with the Division's GIS data. This makes the data most available to other county staff. Data quality details are stored as metadata files when they are provided by the data source. Published GIS data are required to include metadata files. Almost all county data are public records and available, there is no need for the environmental planning section to maintain copies. A log of environmental analysis will be started and stored with the environmental GIS data.]

Policy Relevance

Policy 1.2.3:

Collected and/or compiled data will be organized by established water-shed and sub-basin units.

Policy Achievement Analysis:

Most of this data is in GIS format, so there is no need or benefit to organize it by watershed.

The Policy remains relevant and should be retained. However, the Policy should be modified to require watershed dependent data only be organized by watershed and sub-basin units.

[Environmental Advisory Council (EAC) Comment from the August 11, 2010 Workshop – Suggesting that text be added to the Policy that ensures data quality.]

[Planning Commission Comment from the August 27, 2010 EAR Workshop – Suggesting that the Policy be revised to read, “Non GIS-based data collected will be organized by established watershed and sub-basin units.”]

[Post EAC and CCPC Workshops and Adoption Hearings – Staff Comment – Staff concurs with the CCPC recommendation that the Policy be revised for clarity. However, staff does not concur with the EAC’s recommendation, as “data quality” is addressed in preceding Policies.]

Policy 1.2.5

Collier County’s computerized environmental resources data storage, analysis and graphics system shall share information and resources with other Federal, State, Regional, local and private environmental management agencies and organizations and the general public. The County shall cooperate with these other entities when updating its system in order that the benefits of the updated system may be shared with all appropriate agencies and organizations.

Policy Achievement Analysis:

Provisions for working cooperatively with other agencies and sharing data with the public are in the preceding policies.

This Policy is no longer relevant and should be deleted.

OBJECTIVE 1.3:

Pursuant to Administration Commission Final Order AC-99-002 dated June 22, 1999, the County has completed the phased delineation, data gathering, management guidelines and implementation of the Natural Resources Protection Area (NRPA) program as part of the required Collier County Rural and Agricultural Assessment. Through this Assessment, the County has determined that the NRPA program is not the only mechanism to protect significant environmental systems. Accordingly, within the Rural Lands Stewardship Area Overlay in the Future Land Use Element, the County has delineated Stewardship Sending Areas that will function to protect large environmental systems. Pursuant to the following policies, the County shall protect identified environmental systems through the NRPA and Rural Lands Stewardship programs.

Objective Achievement Analysis:

This Objective remains relevant and should be retained. However, the Objective should be rewritten for clarity (i.e. formatting).

Policy Relevance:

Policy 1.3.1:

The purpose of the NRPA program is to direct incompatible land uses away from significant environmental systems that exist at a landscape scale, contain large systems of connected wetland and upland habitats, and support a wide variety of listed species. The program will include the following:

- a. Identification of the NRPAs in map form as an overlay to the Future Land Use Map; During the Assessment for the Rural Fringe area, the County has determined that CREW Trust lands, Belle Meade, a portion of the Northern Belle Meade shall be identified as NRPAs. The County also has determined that the South Golden Gate Estates is a NPRA. The specific boundaries have been identified as NRPAs on the Future Land Use Map.**
- b. A process for verifying the existence and boundaries of NRPAs during development permit applications;**
- c. Guidelines and standards for development of NRPAs including conservation guidelines to protect natural resource values, to maintain ecologically functioning systems, and to restore or mitigate NRPAs already degraded. Allowable land uses, vegetation preservation standards, development standards, and listed species protection criteria for the NRPAs are those contained in the NRPA Overlay within the Future Land Use Element.**
- d. A review process, integrated into the normal development application review, to ensure that the guidelines and standards are being met;**
- e. A program to defer development of NRPAs. First consideration should be fee simple purchase (based on public referenda approving and funding purchases). Other options should include, but not be limited to, tax incentives and transfer of development rights;**
- f. A program to pursue Delegation of Authority Agreements with State and Federal Permitting agencies for local regulation of activities that may alter the biological and physical characteristics of NRPAs;**
- g. The County shall seek assistance from and support State (e.g. CARL, SOR) or Federal land acquisition programs for County areas qualifying as NRPAs.**

Policy Achievement Analysis:

The County established Natural Resource Protection Areas (NRPAs) to direct incompatible land uses away from significant environmental systems that exist at a landscape scale, contain large systems of connected wetland and upland habitats, and support a wide variety of listed species. The Policy also provides information regarding the relationship of the NRPAs to the Rural and Agricultural Area Assessment. Finally, the Policy requires the County to seek assistance from, and support, state and/or federal land acquisition programs for areas qualifying as NRPAs; Conservation Collier identifies nominated properties within Federal and State acquisition areas and coordinates with the agencies to make them aware of willing sellers within their acquisition areas.

This Policy remains relevant and should be retained.

[Environmental Advisory Council (EAC) Comment from the August 11, 2010 Workshop – Suggesting to delete the acronym “CARL” and insert “Florida Forever”; and spell-out the acronym, “SOR” - Save Our Rivers.]

[Post EAC and CCPC Workshops and Adoption Hearings – Staff Comment – Staff generally agrees with the EAC’s recommendation, and suggests that the Policy be revised to read, “The County shall seek assistance from, and support, State and/or Federal land acquisition programs for County areas qualifying as NRPAs.”]

Policy 1.3.4:

Guided by the Technical Advisory Committee, designate and adopt management guidelines and performance standards for County natural resource protection areas. Implementation shall occur on an annual basis as NRPAs and their implementation criteria are developed.

Policy Achievement Analysis:

The Policy objectives have been achieved as part of the Growth Management Plan amendments to satisfy the Final Order.

This Policy is no longer relevant and should be deleted.

OBJECTIVE 2.1:

By January 2008, the County shall complete the prioritization and begin the process of preparing Watershed Management Plans, which contain appropriate mechanisms to protect the County’s estuarine and wetland systems. The process shall consist of (1) an evaluation of areas for which Watershed Management Plans are not necessary based on current or past watershed management planning efforts, (2) an assessment of available data and information that can be used in the development of Watershed Management Plans, and (3) budget authorization to begin preparation of the first Watershed Management Plan by January 2008.

A funding schedule shall be established to ensure that all Watershed Management Plans will be completed by 2010. In selecting the order of Plan completion, the County shall give priority to watersheds where the development growth potential is greatest and will impact the greatest amount of wetland and listed species habitats. The schedule and priorities shall also be coordinated with the Federal and State agency plans that address Total Maximum Daily Loads (TMDLs). Until the Watershed Management Plans are completed, the County shall apply the following as interim standards for development:

- a. **All new development and re-development projects shall meet 150% of the water quality volumetric requirements of Section 5.2.1(a) of the Basis of Review for Environmental Resource Permit Applications Within the South Florida Water Management District (February 2006) and the retention and detention requirements, and the allowable offsite discharge rates required by Drainage Sub-element Policy 6.2 and 6.3, respectively;**
- b. **Loss of storage or conveyance volume resulting from direct impacts to wetlands shall be compensated for by providing an equal amount of storage or conveyance capacity on site and within or adjacent to the impacted wetland.**
- c. **Floodplain storage compensation shall be evaluated for developments within the designated flood zones “A”, “AE”, and “VE” as depicted on the Flood Insurance Rate Maps published by the Federal Emergency Management Agency with an effective date of November 17, 2005. Floodplain storage compensation shall also be evaluated for areas known to be periodically inundated by intense rainfall or sheetflow conditions.**
- d. **All development located within areas identified on Figure 1 shall be evaluated to determine impacts to natural wetlands, flowways, or sloughs. For this particular evaluation, natural wetlands, flowways, or sloughs shall be tentatively identified as contiguous lands having a continual preponderance of wetland or wet facultative plant species and a ground elevation through the major portion of the natural wetland, flowway, or slough at least one (1) foot lower than the ground at the edge of the natural**

wetland, flowway, or slough. The edge of the natural wetlands, flowways, or sloughs shall be identified by field determination and based upon vegetation and elevation differences from the adjacent uplands or transitional wetlands. The County shall require the applicant to avoid direct impacts to these natural wetlands, flowways, or sloughs or, when not possible, to ensure any direct impact is minimized and compensated for by providing the same conveyance capacity lost by the direct impact. The County shall adhere to the limiting discharge rates of each basin as outlined in Ordinance 2001-27, adopted May 22, 2001 which amended the County Water Management Policy and provided basin delineations where special peak discharge rates have been established. The limiting discharge rates will be reviewed as a part of the Watershed Management Plans, and modified according to the analyses and findings of the Watershed Management Plans.

- e. All new development and re-development projects shall ensure surrounding properties will not be adversely impacted from the project's influence on stormwater sheet flow.
- f. Prior to the issuance of a final development order, the County shall require all development projects to obtain the necessary state and federal environmental permits.
- g. Within one year of the effective date of these amendments, the County shall adopt land development regulations to require Best Management Practices of future development or re-development projects. Best Management Practices means structural and non-structural facilities or practices intended to reduce pollution either through source control or treatment of stormwater.

Figure 1. Restoration Project Areas Where Interim Development Standard 2.1.d is Applicable [See Figure 1 following CCME text]

Objective Achievement Analysis:

Collier County is currently involved in the development of the Watershed Management Plans. The County completed the initial delineation and prioritization of the watersheds by the end of November 2007. Dedicated funding for development of the Watershed Management Plans was also obtained and set aside in 2007. The County coordinated with the Florida Department of Emergency Management coastal Light Detection and Ranging (LiDAR) aerial topographic mapping effort to obtain more detailed and expanded coverage of the County. The County also coordinated with the South Florida Water Management District to utilize their existing two-dimensional regional hydrologic and hydraulic model for southwest Florida as a starting tool in the development of the Watershed Management Plans. The County utilized the various policies under CCME Objective 2.1 to form the basis for the Scope of Services and then hired a consultant team to prepare the Watershed Management Plans. The work is in progress and is scheduled for completion by the end of 2010.

This Objective remains relevant and should be retained. However, the Objective should be modified to reflect completed work, and the first sentence in (c) reworded as follows, "Floodplain storage compensation shall be evaluated for developments within the designated Special Flood Hazard Area (flood zones starting with the letter "V" or "A") as depicted on the effective Flood Insurance Rate Map published by the Federal Emergency Management Agency."

[Public Comment (Community Meeting held on 3/15/10):

Public stated that the County has not developed a county-wide stormwater plan.]

[Public Comment (Community Meeting held on 3/15/10):

Public stated that all development in the urban zones and outside should be considered and evaluated after each watershed and its characteristics are developed.]

[Environmental Advisory Council (EAC) Comment from the August 11, 2010 Workshop – Suggesting to add in section b. of the Objective, a requirement that compensation for all wetland impacts occur within the same drainage area.]

[Post EAC and CCPC Workshops and Adoption Hearings – Staff Comment – No change is recommended to this Objective as part of the EAR-based amendments, as wetland impacts will be addressed as part of the Watershed Management Plans. Further, mitigation requirements for wetland impacts will be determined by the BCC with the adoption of the Watershed Management Plans.]

Policy Relevance

Policy 2.1.3:

The Plans will also evaluate structural and non-structural controls for restoring historical hydroperiods in impacted watersheds where possible and for reducing the impacts of canal and stormwater discharges to estuaries.

Policy Achievement Analysis:

The Scope of Services for development of the Watershed Management Plans includes this policy's features.

The Policy remains relevant and should be retained.

[Environmental Advisory Council (EAC) Comment from the August 11, 2010 Workshop – Suggesting that measurement tools be added to the Policy so as to determine improvements to the watersheds over time.]

[Environmental Advisory Council (EAC) Comment from the November 3, 2010 Adoption Hearing – Suggesting that the EAC comment from August 11, 2010 be revised to read, “measurement tools be added to the Policy for determining improvements to the watersheds over time.”]

[Post EAC and CCPC Workshops and Adoption Hearings – Staff Comment – No change to the Policy is recommended at this time. The Watershed Management Plans include performance measures, and the need for future evaluation of improvements will be addressed when Plans are adopted.]

Policy 2.1.6:

Until the completion and adoption of individual watershed management plans, promote water management permitting on a basin by basin approach.

Policy Achievement Analysis:

Water management permitting is regulated by the South Florida Water Management District.

The Policy is not relevant and should be deleted, as water management permitting is regulated by the SFWMD.

[Environmental Advisory Council (EAC) Comment from the August 11, 2010 Workshop – Suggesting that data shortfalls be addressed.]

[Environmental Advisory Council (EAC) Comment from the November 3, 2010 Adoption Hearing – Suggesting that EAC comment from August 11, 2010 be revised to read, “use watershed management plans for ongoing data collection guidance.”]

[Post EAC and CCPC Workshops and Adoption Hearings – Staff Comment – No change to the Policy is recommended at this time, as the Watershed Management Plans will identify data needs.]

Policy 2.1.7:

Collier County shall take the lead and promote intergovernmental coordination between the County and other governmental agencies involved with watershed planning, including, but not necessarily limited to, the municipalities of Marco Island, Naples and Everglades City, the Florida Department of Environmental Protection, the South Florida Water Management District, the Florida Fish and Wildlife Conservation Commission, the U.S. Fish and Wildlife Service, the U.S. Army Corps of Engineers and other governmental agencies. The County will take the lead and oversee the preparation of the necessary watershed management plans, and will rely upon the work performed or data collected by other agencies, to the extent that these agencies have data and/or experience, which may be useful within the watershed basin planning and management process.

Policy Achievement Analysis:

This Policy describes the Scope of Services for the development of the Watershed Management Plans.

The Policy remains relevant and should be retained. However, the Policy should be modified to reflect work completed and that the listed activities are on-going.

OBJECTIVE 2.2:

All canals, rivers, and flow ways discharging into estuaries shall meet all applicable Federal, State, or local water quality standards.

Objective Achievement Analysis:

This Objective has not been met, because there are several water bodies in Collier County that do not meet Federal or State water quality standards. The Florida Department of Environmental Protection (FDEP) and the United States Environmental Protection Agency have finalized the list of those water bodies that do not meet water quality standards, and in 2008 FDEP developed Total Maximum Daily Loads for these water bodies. The Watershed Management Plans being developed by Collier County will address these water bodies.

Water quality improvement initiatives have been taken within Collier County to address some water quality issues. A new water quality treatment system referred to as Freedom Park has been constructed to treat the water within the Gordon River. In addition the Lake Trafford dredging project, which is currently ongoing, has been removing the muck on the bottom of the lake in order to improve the lake's water quality and prevent future fish kills.

Collier County Pollution Control continues to implement numerous proactive programs designed to protect the County's surface water quality from man-made pollution sources. However, due to natural conditions impacting the water quality found in Collier County, some federal and state water quality conditions may not be achievable. Therefore, Collier County will continue to take all necessary actions to maintain the highest attainable level of surface water quality within its watersheds.

This Objective remains relevant and should be retained. However, the Objective should be reworded similar to Goal 3 to read, "to attain the highest water quality practical."

[Environmental Advisory Council (EAC) Comment from the August 11, 2010 Workshop – Suggesting staff examine the use of filter ponds to improve water quality of canals.]

[Planning Commission Comment from the August 27, 2010 EAR Workshop – Suggesting that the Objective be retained as written.]

[Recommendation from the October 14, 2010 South Florida Water Management District Comments to the Department of Community Affairs on the Proposed EAR – Suggesting that the Objective be retained as written.]

[Post EAC and CCPC Workshops and Adoption Hearings – Staff Comment – Staff concurs with the stated recommendations that the Objective should be retained as written.]

Policy Relevance:

Policy 2.2.1:

Wastewater treatment plants shall not be allowed to discharge directly to rivers, canals or jurisdictional wetlands unless they meet Florida Department of Environmental Protection (FDEP) regulations and are not in violation of other Goals, Objectives and Policies of this Element.

Policy Achievement Analysis:

Policy 2.2.1 bans wastewater treatment plants from discharging directly into rivers, canals or jurisdictional wetlands unless they meet Florida Department of Environmental Protection (FDEP) regulations and are not in violation of other Goals, Objectives, and Policies of this Element.

This Policy remains relevant and should be retained.

[Environmental Advisory Council (EAC) Comment from the August 11, 2010 Workshop – Suggesting to insert the phrase, “encourage wastewater re-use for irrigation” within the Policy.]

[Post EAC and CCPC Workshops and Adoption Hearings – Staff Comment – Staff recommends retaining the Policy as written, as the reference to “re-use” is not applicable to this Policy. Further, staff suggests an additional Policy be added within the CCME to address the EAC’s recommendation, if Board directed.]

Policy Achievement Analysis:

Policy 2.2.2:

In order to limit the specific and cumulative impacts of stormwater run-off, stormwater systems should be designed in such a way that discharged water does not degrade receiving waters and an attempt is made to enhance the timing, quantity and quality of fresh water to the estuarine system. Non-structural methods such as discharge and storage in wetlands are encouraged.

Policy Achievement Analysis:

Policy 2.2.2 limits the specific and cumulative impacts of stormwater run-off.

The Policy remains relevant and should be retained. However, the Policy should be revised to delete the word “in” and with the word “into” in the last sentence.

[Environmental Advisory Council (EAC) Comment from the August 11, 2010 Workshop – Suggesting staff limit nitrogen and phosphorous use through a fertilizer ordinance, so these nutrients become less

likely to reach waterways (seasonal uses, granular forms, no application near storm drains or water retention/flow areas). Also, limit application of pesticides in a similar fashion.]

[Post EAC and CCPC Workshops and Adoption Hearings – Staff Comment – The adoption of a fertilizer ordinance is required by Chapter 403.9337, Florida Statutes, and will be part of the Watershed Management Plans.]

Policy 2.2.3:

Chemical spraying for aquatic weed control should be conducted with extreme caution. The use of appropriate biological and mechanical (use of harvesting equipment to remove vegetation) controls in both the canal system and stormwater detention ponds is encouraged. Manufacturers and EPA guidelines for chemical use in aquatic habitat will be followed.

Policy Achievement Analysis:

Policy 2.2.3 requires that chemical spraying for aquatic weed control should be conducted with extreme caution and encourages the use of biological and mechanical controls.

The Policy remains relevant and should be retained.

[Environmental Advisory Council (EAC) Comment from the August 11, 2010 Workshop – Suggesting staff develop an ordinance or LDC guidelines for the application of weed control.]

[Post EAC and CCPC Workshops and Adoption Hearings – Staff Comment – Aquatic plant control is necessary to keep the canal systems flow capacity adequate to prevent flooding. Maintenance activities are regulated by State licensing and Federal label requirements. Operational policies will be discussed in the Watershed Management Plans.]

Policy 2.2.4:

Continue and expand when needed the existing water quality monitoring program for sampling canals and rivers and assess the data annually.

Policy Achievement Analysis:

Policy 2.2.4 requires the continuation and expansion of the County's water quality sampling program. Collier County Pollution Control Department (CCPCD) continues monitoring a fixed network of surface water stations throughout the county. The network is evaluated every 3 years to determine the relevancy of the sampling sites. If water quality problems are found that may impact public health, a very intensive study area (VISA) is initiated to determine the source of the water quality problems. The surface water quality data were assessed in 2007 by CCPCD; in 2008 by the Florida Department of Environmental Protection under the Impaired Waters Rule Assessment; and will be reassessed in 2010 by CCPCD.

The Policy remains relevant and should be retained.

[Environmental Advisory Council (EAC) Comment from the August 11, 2010 Workshop – Suggesting staff use analysis of existing data to drive new data collection.]

[Post EAC and CCPC Workshops and Adoption Hearings – Staff Comment – The Policy remains relevant and should be retained as written.]

Policy 2.2.5:

By December 31, 2008, and no less than every three years, stormwater management systems shall be inspected and certified by a licensed Florida professional engineer for compliance with their approved design, and any deficiencies shall be corrected.

Policy Achievement Analysis:

The deadline for Policy 2.2.5 has not been met, and the County has not identified stormwater management systems that are not currently meeting State water quality treatment standards. The County is developing a process for stormwater management systems, which is expected to be completed by December 2015.

This Policy remains relevant and should be retained. However, the Policy should be revised to reflect an extended deadline to December 2015; and include a requirement to coordinate activities with the South Florida Water Management District (SFWMD) and FDEP.

[Environmental Advisory Council (EAC) Comment from the August 11, 2010 Workshop – Suggesting to add benchmarks within the Policy for the achievement of the stated objectives by year 2015.]

[Post EAC and CCPC Workshops and Adoption Hearings – Staff Comment – No change to the Policy is recommended at this time. The Florida Department of Environmental Protection has been working on an update to the statewide stormwater Rule that includes system inspections. The County is following the development of this Rule and will wait to review the standards in the Rule prior to adopting a local ordinance.]

OBJECTIVE 2.3:

All estuaries shall meet all applicable federal, state and local water quality standards.

Objective Achievement Analysis:

This Objective has not been met. Not all estuaries meet Federal or State water quality standards. The Watershed Management Plans developed by the County will address measures to bring these water bodies into compliance with State and Federal water quality standards. Currently, the County monitors its water quality through the collection and evaluation of ground water and surface water samples.

This Objective remains relevant and should be retained. However, the Objective should be revised to include the development of a plan, in coordination with the FDEP, to meet applicable federal, state and local water quality standards.

[Environmental Advisory Council (EAC) Comment from August 11, 2010 Workshop – Suggesting that staff consider monitoring locations.]

[Planning Commission (CCPC) Comment from August 27, 2010 EAR Workshop – Suggesting that the Objective be retained as written.]

[Post EAC and CCPC Workshops and Adoption Hearings – Staff Comment – Staff recommends retaining the Objective as written.]

Policy Relevance:

Policy 2.3.4:

Continue to implement and refine a water quality and sediment monitoring program for the estuarine system.

Policy Achievement Analysis:

The Coastal Zone Management (CZM) Department implemented a water quality monitoring program in October of 2008. A water quality monitoring plan was written and approved. The Monitoring Plan follows FDEP's Standard Operating Procedures and the Pollution Control Department's Lab Procedures. Water quality sampling has been conducted in Cocohatchee Estuary for over a year; a draft report of the data has been written. Also, water quality sampling started in November of 2009 in Clam Bay. CZM is currently sampling the Cocohatchee and Clam Bay on a monthly basis. Master plans will be developed with stakeholders as data and regulations are developed.

This Policy remains relevant and should be retained.

[Environmental Advisory Council (EAC) Comment from August 11, 2010 Workshop – Suggesting that staff use the Watershed Management Plan effort to evaluate sampling points. Also, suggesting need for a fertilizer ordinance to reduce discharges of nutrients into waterways.]

[Post EAC and CCPC Workshops and Adoption Hearings – Staff Comment – Staff recommends retaining the Policy as written. A fertilizer ordinance is required by State statute and will be part of the Watershed Management Plans.]

Policy 2.3.6:

The County will only allow development activities which will not adversely impact coastal water resources. This is implemented through the following mechanisms:

- a. **Require all applicable Federal and State permits addressing water quality to be submitted to Collier County before Collier County issues a Final Development Order.**
- b. **Excluding single family homes, any project impacting 5 acres or more of wetlands must provide a pre and post development water quality analysis to demonstrate no increase in nutrient, biochemical oxygen demand, total suspended solids, lead, zinc and copper loading in the post development scenario.**
- c. **By January 2008, the County shall undertake an assessment of the current model used to evaluate pre and post development pollutant loadings referenced in (b) of this Policy. At a minimum, the purpose of this assessment will be to verify the accuracy of the model and to provide data evaluating stormwater management structure design. In reviewing the accuracy of the model, the County will include an evaluation of the reduction of lake depths with time and the corresponding loss of retention volume, the impact of lake stratification, and the need for aeration. The assessment will also include the sampling of runoff from undisturbed sites and from permitted stormwater outfalls for the parameters listed in Paragraph (b) of this Policy and pesticides. The results of the assessment and recommendations regarding the pollutant loading analysis, revisions to current model methodology, potential regulatory restrictions, and further monitoring shall be presented to the Board of County Commissioners for further direction.**

Policy Achievement Analysis:

Policy 2.3.6 requires the County to only allow development activities which will not adversely impact coastal water resources. This is to be implemented by 1) requiring applicable Federal and State permits addressing water quality to be submitted to Collier County before Collier County issues a Final Development Order, 2) require projects, excluding single family homes, impacting 5 acres or more of wetlands to provide a pre and post development water quality analysis to demonstrate no increase in nutrient, biochemical oxygen demand, total suspended solids, lead, zinc and copper loading in the post development scenario and 3) undertake an assessment of the current model used to evaluate these pre and post development pollutant loadings.

Regarding, a pre-development vs. post-development analysis for nutrients, BOD, TSS, Pb, Zn, and Cu, LDC section 10.02.02 A.3.a.ii indicates that the analysis shall be performed using “approved methodologies” and only requires the analysis on nutrients. The methodology that has been used by the US Army Corps of Engineers and is being developed by the Florida Department of Environmental Protection is limited to nutrients (nitrogen and phosphorus).

The original state stormwater regulations were based on a standard of 80 % removal of TSS. Current evaluations of Florida stormwater regulation indicate the design needs to address increasing concentrations of nutrients (nitrogen and phosphorus) in surface and ground water. Additionally other significant pollutants are more easily removed than nitrogen or phosphorus (Harper, 2007). The draft permitting handbook for the update of the state stormwater rule includes analysis only for nitrogen and phosphorus loadings (FDEP, 2009). In the new model the pre development conditions are now considered to be the conditions represented by the SWFFS Natural Systems Model. (This analysis model is very similar to that proposed in Evaluation of Alternative Stormwater Regulations for Southwest Florida, 2003).” The model proposed in the new stormwater rule is the preferred analysis, by staff.

The FDEP evaluation of the stormwater rules in preparation of development of the proposed state-wide stormwater rule addressed the issues identified in section c. Harper (2007) indicates that in wet detention systems, nutrient treatment is primarily through the production of algae. He recommends that only the top 12 feet of un-mixed systems be considered in the water quality treatment requirement. (Deeper depths are recognized as storage of solids and treatment for other constituents.) This is also the recommendation of the “Applicant’s Handbook” for the proposed rule. The choice of whether to aerate/mix wet detention systems or not is left to the applicant, but the treatment is only based on the aerated portion. Additionally, the monitoring of solids accumulation to identify when impacts to treatment volume is required annually. FDEP also studied runoff from native vegetative communities (Harper 2009) and reported runoff characteristics for nutrients and metals.

Due to the change in emphasis of state regulatory programs limiting the loading analysis to nutrients and the studies that have been produced by FDEP to support the proposed stormwater rule, Collier County recommends removing the requirement for TSS, BOD, Pb, Zn, and Cu from the Policy in section b, and delete section c.

Literature:

Evaluation of Alternative Stormwater Regulations for Southwest Florida. Harvey Harper PhD., P.E., David M. Baker P.E.. Environmental Research & Design, Inc. 2003
Evaluation of Current Stormwater Design Criteria within the State of Florida. Harvey Harper PhD., P.E., David M. Baker P.E.. FDEP 2007
Environmental Resource Permit Stormwater Quality. Applicant’s Handbook. Draft (July 2009). FDEP”

OBJECTIVE 2.5:

The County will continue with the implementation of its estuarine management program by requiring development to meet its current standards addressing stormwater management, and the protection of seagrass beds, dune and strand, and wetland habitats.

Objective Achievement Analysis:

The estuarine management program has been implemented. The development of watershed management plans for the County has been included elsewhere in the CCME. The estuarine management program has been implemented through the following:

1. CCME Policies under Goals 2, 6, 7 and 11
2. LDC Sections
 - 3.03.00 Coastal Zone Management
 - 3.04.00 Protection of Endangered, Threatened, or Listed Species
 - 3.05.01 Vegetation Removal, Protection, and Preservation
 - 5.03.06 Dock Facilities (Protection of seagrass beds)
 - 9.04.06 Variance to the Coastal Construction Setback Line
 - 10.02.02.A Environmental Data Submittal Requirements
 - 10.02.06.I Vehicle-on-the-Beach Regulations
3. Manatee Protection Plan
4. County water quality monitoring program
5. Artificial reef program
6. Waterways management program

The Objective and associated Policies are no longer relevant and should be deleted.

[Planning Commission Comment from the August 27, 2010 EAR Workshop – Suggesting that the Objective and Policies be retained, but revised to reflect the initial implementation, and ongoing maintenance of the estuarine management program.]

[Environmental Advisory Council (EAC) Comment from the November 3, 2010 Adoption Hearing – The EAC is in agreement with the CCPC comment from the August 27, 2010 EAR Workshop.]

[Post EAC and CCPC Workshops and Adoption Hearings – Staff Comment – Staff concurs with the EAC and CCPC recommendations that the Objective and Policies should be retained to ensure the continuance of the estuarine management program.]

Policy Relevance:

Policy 2.5.1:

Identify land use activities that have the potential to degrade the estuarine environmental quality.

Policy Achievement Analysis:

Policy is no longer relevant and should be removed (see Objective Achievement Analysis).

[Planning Commission Comment from the August 27, 2010 EAR Workshop – Suggesting that the Policy be retained, but revised to reflect the initial implementation, and ongoing maintenance, of the estuarine management program.]

[Post EAC and CCPC Workshops and Adoption Hearings – Staff Comment – Staff concurs with the CCPC recommendation.]

Policy 2.5.2:

This management program shall incorporate information obtained from the various watershed management plans described elsewhere in this Element.

Policy Achievement Analysis:

Policy is no longer relevant and should be removed (see Objective Achievement Analysis).

[Planning Commission Comment from the August 27, 2010 EAR Workshop – Suggesting that the Policy be retained, but revised to reflect the initial implementation, and ongoing maintenance of the estuarine management program.]

[Post EAC and CCPC Workshops and Adoption Hearings – Staff Comment – Staff concurs with the CCPC recommendation.]

Policy 2.5.3:

This program shall in part be based on the estuarine data analyses and management recommendations contained in the County's coastal management program's technical reports.

Policy Achievement Analysis:

Policy is no longer relevant and should be removed (see Objective Achievement Analysis).

[Planning Commission Comment from the August 27, 2010 EAR Workshop – Suggesting that the Policy be retained, but revised to reflect the initial implementation, and ongoing maintenance of the estuarine management program.]

[Post EAC and CCPC Workshops and Adoption Hearings – Staff Comment – Staff concurs with the CCPC recommendation.]

OBJECTIVE 3.1:

Ground water quality shall meet all applicable Federal and State water quality standards. Ground water quality shall be monitored in order to determine whether development activities are contributing to the degradation of Collier County's ground water quality. Ground water data and land use activities will be assessed annually to determine long-term trends and whether the County is meeting Federal and State regulatory standards for ground water quality. The County shall require ground water monitoring of land uses in accordance with Chapters 62-520, 62-550 and 62-777 of the Florida Administrative Code. Upon the detection of any ground water degradation determined through the monitoring process, the County will notify the appropriate regulatory agencies.

In a coordinated effort with the United States Geological Survey (USGS), or of its own accord, the County shall institute a groundwater monitoring network by 2008, including the comprehensive inventory of monitoring wells, an assessment of monitoring wells previously damaged, and policies to make appropriate well repairs and replacements.

Objective Achievement Analysis:

Collier County continues to implement numerous proactive programs designed to protect the County's ground water quality from man-made pollution sources. However, due to natural conditions impacting the water quality found in Collier County, some federal and state water quality conditions may not be achievable. Suggest Objective be worded similar to goal to "ensure highest water quality practical". A groundwater monitoring network was established by the County's Pollution Control Department in 2006. This monitoring network monitors seventy (70) ground water monitoring wells semiannually; dry and wet season. These wells provide limited monitoring of the following land uses; agriculture, commercial, golf course, park, rural residential, urban residential, utilities and wetland. Groundwater quality is assessed annually and provided to the appropriate regulatory agencies for further investigation of exceedances of State and Federal ground water quality standards. This network of monitoring wells encompasses wells owned by USGS, City of Naples, Collier County Wastewater Department and Collier County Water Department. Any monitoring well repairs or replacements would be done at the owner's discretion.

In addition, Section 3.06 of the County's Land Development Code (Ground Water Protection) was developed to protect existing and future wellfields, protect natural aquifer system recharge areas, protect Countywide groundwater resources, and to protect the public health and resources through regulation and establishment of standards for development involving the use, storage, generation, handling, and disposal of quantities of hazardous products and hazardous waste in excess of identified quantities, disposal of sewage and effluent, storm water management, earth mining, petroleum exploration, solid waste, and other related aspects of land use and development.

Since a groundwater monitoring network was established in 2006, suggest Objective 3.1 be revised to replace the second paragraph with "The County shall continue to institute a groundwater monitoring network."

This Objective remains relevant and should be retained. However, the Objective should be revised to reflect the establishment of the monitoring network in 2006; include in first sentence of Objective the phrase, "to ensure highest water quality practical"; and, include a reference that monitoring activities are ongoing.

[Environmental Advisory Council (EAC) Comment from the August 11, 2010 Workshop – Suggesting that staff follow trends in salinity of various aquifers to determine trending over time.]

[Planning Commission Comment from the August 27, 2010 EAR Workshop – Suggesting that the Objective be retained as written, except to include a reference that the monitoring network has been established.]

[Post EAC and CCPC Workshops and Adoption Hearings – Staff Comment – Staff concurs with the CCPC recommendation.]

Policy Relevance:

Policy 3.1.1:

Wellhead protection areas identified on the Future Land Use Map Series shall be protected as follows:

- 1. Wellhead protection areas shall consist of four (4) Wellfield Risk Management Zones defined as follows:**

- a) W-1 is the land area surrounding the identified potable water wellfield wellheads and extends to the five percent ground water capture zone boundary line (which approximates the one year ground water travel time to the wellfield).
 - b) W-2 is the land area between the W-1 boundary line and the ten percent ground water capture zone boundary line (which approximates the two year ground water travel time to the potable water wellfield).
 - c) W-3 is the land area between the W-2 boundary line and the twenty-five percent ground water capture zone boundary line (which approximates the five year ground water travel time to the potable water wellfield).
 - d) W-4 is the land area between the W-3 boundary line and the 100 percent ground water capture zone boundary line (which approximates the twenty year ground water travel time to the potable water wellfield).
2. Land uses are restricted within the wellfield risk management zones as follows:
- a) Future solid waste disposal facilities: prohibited in all wellfield risk management zones.
 - b) Future solid waste transfer stations: prohibited in W-1, W-2, W-3.
 - c) Future solid waste storage, collection, and recycling storing hazardous products and hazardous wastes: prohibited in W-1, W-2, W-3.
 - d) Future non-residential uses involving hazardous products in quantities exceeding 250 liquid gallons or 1,000 pounds of solids: provide for absorption or secondary containment in W-1, W-2, W-3.
 - e) Future domestic wastewater treatment plants: prohibited in W-1.
 - f) Future land disposal systems: must meet high level disinfection standards as found in 40 CFR part 135.
 - g) Land application of domestic residuals: limit metal concentrations, nitrogen based on uptake ability of vegetation), and require a conditional use.
 - h) Future petroleum exploration and production and expansions of existing: prohibited in W-1 and W-2, conditional use required in W-3 and W-4.
 - i) Future on-site disposal systems (septic tanks) requiring a soil absorption area greater than 1,000 square feet are allowed to discharge in zone W-1 subject to complying with construction standards and provision of an automatic dosing device and a low-pressure lateral distribution.
 - j) On-site sewage disposal systems (septic tanks) serving existing industrial uses and subject to the thresholds in d) and e) above within wellfield zones W-1, W-2, and W-3 shall meet all construction and operating standards contained in 64E-10, F.A.C. as the rule existed on August 31, 1999 and shall implement a ground water monitoring plan.
3. Conditional uses shall be granted only in extraordinary circumstances and where impacts of the development will be isolated from the Surficial and Intermediate Aquifer.

Policy Achievement Analysis:

There is one (1) policy within this Objective. Policy 3.1.1 contains criteria for the identification of wellhead protection areas within the County's Future Land Use Map Series.

This Policy remains relevant and should be retained, but paragraph 3 should be modified to: clarify the conditional use reference pertains to those conditional uses required by this policy, as opposed to all conditional uses allowed by the zoning district on a given property within a wellfield protection area; and, remove or clarify the term "extraordinary circumstances." Additionally, the Policy will be evaluated to determine if it would be more appropriately located in the Natural Groundwater Aquifer Recharge Sub-Element (NGARSE).

[Environmental Advisory Council (EAC) Comment from August 11, 2010 Workshop – Suggest addressing the improvement of ground water monitoring in order to assess saltwater intrusion.]

[Post Workshop and Adoption Hearings – Staff Comment – Implementation of the EAC's recommendation will require the monitoring activities to be programmed and funded.]

OBJECTIVE 3.3:

Continue to identify, refine extents of, and map zones of influence and contribution around potable wellfields in order to identify activities that must be regulated to protect ground water quality near wellfields. (Refer to Objective 1.1 in the Natural Ground Water Aquifer Recharge Sub-Element.)

Objective Achievement Analysis:

This Objective remains relevant and should be retained. However, the Policy will be evaluated to determine if it would be more appropriately located in the Natural Groundwater Aquifer Recharge Sub-Element (NGARSE).

[Environmental Advisory Council (EAC) Comment from the August 11, 2010 Workshop – Suggesting that staff assess the wellfield in Immokalee that has a 10 year cone of depression extending under the airport and adjoining industrial zoning.]

[Post EAC and CCPC Workshops and Adoption Hearings – Staff Comment – Implementation of the EAC's recommendation will require the existing Model be adjusted to accommodate the 10-year Risk Management Special Treatment Overlay zones, as the Model evaluates years 1, 2, 5 and 20 only. (The cost to adjust the Model is unknown at this time.)]

OBJECTIVE 3.4

Collect and evaluate data and information designed to monitor the quality of ground water in order to identify the need for additional protection measures. (Refer to Objective 1.3 in the Natural Ground Water Aquifer Recharge Sub-Element.)

Objective Achievement Analysis:

As noted within Objective 3.1 (above), the County's Pollution Control Department established a groundwater monitoring network that monitors seventy (70) ground water monitoring wells semiannually. These data are assessed annually and submitted to the South Florida Water Management District (SFWMD), where these data are maintained within their DBHYDRO database. The SFWMD DBHYDRO database is located at:

http://www.sfwmd.gov/portal/page/portal/pg_grp_sfwmd_era/pg_sfwmd_era_dbhydrobrowser).

Objective 3.4 references Objective 1.3 in the Natural Groundwater Aquifer Recharge Sub Element (NGARSE). This statement should reference Objective 3.

This Objective remains relevant and should be retained. However, the Objective should be revised to reflect the correct reference in the NGARSE - Objective 3.

Policy Relevance:

Policy 3.4.1:

Continue the existing water quality monitoring program to provide base-line data, evaluate long-term trends, identify water quality problems, and evaluate the effectiveness of the County's ground water protection program.

Policy Achievement Analysis:

Policy 3.4.1 requires the County to continue the existing water quality-monitoring program to provide base-line data, evaluate long-term trends, identify water quality problems, and evaluate the effectiveness of the County's ground water protection program.

This Policy remains relevant and should be retained.

[Environmental Advisory Council (EAC) Comment from the August 11, 2010 Workshop – Suggesting that staff add reference to salinity trending within the Policy.]

[Post EAC and CCPC Workshops and Adoption Hearings – Staff Comment – Staff concurs with the EAC's recommendation.]

Policy 3.4.4:

Gather and use appropriate data to refine and improve the database used in the County's 3-dimensional ground water model.

Policy Achievement Analysis:

Policy 3.4.4 recommends that the County gather and use appropriate data to refine and improve the database used in the County's 3-dimensional ground water model.

This Policy remains relevant and should be retained. However, the Policy will be evaluated to determine if it should be deleted from the CCME, as it already appears in the Natural Groundwater Aquifer Recharge Sub-Element (NGARSE).

[Environmental Advisory Council (EAC) Comment from the August 11, 2010 Workshop – Suggesting that staff add a provision for coordination with the SFWMD and Big Cypress Basin within the Policy.]

[Post EAC and CCPC Workshops and Adoption Hearings – Staff Comment – Staff concurs with the EAC's recommendation.]

OBJECTIVE 4.1:

Collect and evaluate data and information designed to more accurately determine water use in Collier County such as the County's database tracking all permitted wells and wells having consumptive use permits.

[This Objective is provided for contextual purposes only; no change is proposed]

Policy Relevance:

Policy 4.1.2:

Work with the agricultural community to devise a method for determining agricultural pumpage.

Policy Achievement Analysis:

This Policy remains relevant and should be retained. However, the Policy should be revised to indicate that the County, in coordination with the South Florida Water Management District, will devise a method for determining agricultural pumpage.

[Environmental Advisory Council (EAC) Comment from the August 11, 2010 Workshop – Suggesting that staff insert a date for Policy achievement, assign department and add a requirement to coordinate with SFWMD.]

[Post EAC and CCPC Workshops and Adoption Hearings – Staff Comment – Staff concurs with the EAC's recommendation.]

OBJECTIVE 5.3:

The Collier County Engineering Services Department shall periodically assess the types, quantities and location of minable mineral resources in Collier County.

Objective Achievement Analysis:

This Objective remains relevant and should be retained. However, the Objective should be revised to reflect the current departmental reference.

Policy Relevance:

Policy 5.3.1:

The Collier County Engineering Services Department shall work with the Florida Department of Environmental Protection, the Florida Geological Survey and local mining industry officials to inventory and assess the existing mineral reserves in Collier County. The inventory and assessment will incorporate use of a GIS-based database of all areas within the County that are permitted, either by right, or through a conditional use permit, to conduct mineral extraction operations as well as the volume of fill that is permitted to be removed for each such active mineral extraction operation.

Policy Achievement Analysis:

Policy 5.3.1 recommends that the County work with the Florida Department of Environmental Protection and the Florida Geological Survey and local mining industry officials to inventory and evaluate the existing mineral reserves in Collier County.

This Policy remains relevant and should be retained. However, the Policy should be revised to reflect the current departmental reference.

OBJECTIVE 6.1:

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 that portion of the County which is identified on the Countywide Future Land Use Map (FLUM) as the Rural Lands Stewardship Area Overlay.

[This Objective is provided for contextual purposes only; no change is proposed]

Policy Relevance:

Policy 6.1.1:

For the County's Urban Designated Area, Estates Designated Area, Conservation Designated Area, and Agricultural/Rural Mixed Use District, Rural-Industrial District and Rural-Settlement Area District as designated on the FLUM, native vegetation shall be preserved through the application of the following preservation and vegetation retention standards and criteria, unless the development occurs within the Area of Critical State Concern (ACSC) where the ACSC standards referenced in the Future Land Use Element shall apply. Notwithstanding the

ACSC requirements, this policy shall apply to all non-agricultural development except for single-family dwelling units situated on individual parcels that are not located within a watershed management conservation area identified in a Watershed Management Plan developed pursuant to policies supporting Objective 2.1 of this Element.

	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 acres 25%	Equal to or 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.

The following standards and criteria shall apply to the vegetation retention requirements referenced above.

- (1) For the purpose of this policy, “native vegetation” is defined as a vegetative community having 25% or more canopy coverage or highest existing vegetative strata of native plant species. The vegetation retention requirements specified in this policy are calculated based on the amount of “native vegetation” that conforms to this definition.
- (2) The preservation of native vegetation shall include canopy, under-story and ground cover emphasizing the largest contiguous area possible, which may include connection to offsite preserves. The purpose for identifying the largest contiguous area is to provide for a core area that has the greatest potential for wildlife habitat by reducing the interface between the preserve area and development which decreases the conflicts from other land uses. Criteria for determining the dimensional standards of the preserve are to be set out in the Land Development Code.
- (3) Areas that fulfill the native vegetation retention standards and criteria of this policy shall be set aside as preserve areas. On-site and off-site preserve areas shall be protected by a permanent conservation mechanism to prohibit further development, consistent with the requirements of this policy. The type of permanent conservation mechanism, including conservation easements, required for a specific development may vary based on preserve area size, type of development approval, and other factors, as set forth in the County’s land development regulations.

- (4) Selection of native vegetation to be retained as preserve areas shall reflect the following criteria in descending order of priority:**
 - a. Wetland or upland 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 continued use of the site by listed species or the movement through the site, consistent with the requirements of Policy 7.1.1 and 7.1.2 of this element.**
 - b. Xeric Scrub, Dune and Strand, Hardwood Hammocks.**
 - c. Onsite wetlands having functionality scores of at least 0.65 WRAP or 0.7 UMAM, unless permitted for impact pursuant to Policy 6.2.4 of this Element. WRAP means South Florida Water Management District's Wetland Rapid Assessment Procedures as described in Technical Publication Reg 001 (September 1997, as updated August 1999). UMAM means Uniform Wetland Mitigation Assessment Method as described in Chapter 62-345, F.A.C.**
 - d. Any upland habitat that serves as a buffer to a wetland area as identified in Paragraph (4)c. above,**
 - e. Dry Prairie, Pine Flatwoods, and**
 - f. All other native habitats.**
- (5) The uses allowable within preserve areas are limited to:**
 - a. Passive recreational uses that do not impact the minimum required vegetation or cause a loss of function to the preserve area. Loss of function to the preserve area includes a reduction or a change in vegetation within the preserve and harming any listed species present in the preserve. More specific standards that implement this policy shall be set forth in the land development regulations and will address various types of construction that are compatible with the function of the preserve. The land development regulations will also provide criteria to define appropriate passive recreational uses. The criteria will be established to allow for passive recreational uses such as trails or boardwalks that provide for access within the preserves, providing the uses do not reduce the minimum required vegetation or cause harm to listed species.**
 - b. Receipt of treated stormwater discharge where such use, including conveyance, treatment and discharge structures, does not result in adverse impacts the naturally occurring, native vegetation, to include the loss of the minimum required vegetation and the harm to any listed species according to the policies associated with Objective 7.1, as determined by criteria set forth in land development regulations. Discharge to preserves having wetlands requires treatment that will meet water quality standards as set forth in Chapter 62-302. F.A.C. and will conform to the water quality criteria requirements set forth by the South Florida Water Management District.**
- (6) A management plan shall be submitted for preserve areas identified by specific criteria in the land development regulations to identify actions that must be taken to ensure that the preserved areas will maintain natural diversity and will function as proposed. The plan shall include methods to address control and treatment of invasive exotic species, fire management, stormwater management (if applicable), and maintenance of permitted facilities. If applicable, a listed species monitoring program shall be submitted pursuant to Policy 7.1.2 (2) (i). State and federal management plans consistent with the requirements of the LDC will be accepted.**
- (7) Until the land development regulations addressed in Policy 6.1.1(11) are developed, 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 nature vegetation.

- (8) Parcels that were legally cleared of native vegetation prior to January 1989 shall be exempt from this requirement.
- (9) Should the amount of wetland vegetation exceed the minimum vegetation requirements as specified herein, retention of wetland vegetation having significant habitat or hydrologic value is encouraged. Increased preservation shall be fostered through incentives including, but not limited to: clustered development, reduced development standards such as open space, setbacks, and landscape buffers, to allow for increased areas of preserved wetland vegetation. Significant habitat or hydrologic value is determined by wetland function, not the size of the wetland.
- (10) Within one year of the effective date of these amendments, the County shall adopt land development regulations that allow for a process whereby a property owner may submit a petition requesting that all or a portion of the native vegetation preservation retention requirement to be satisfied by a monetary payment, land donation that contains native vegetative communities equal to or of a higher priority as described in Policy 6.1.1 (4) than the land being impacted, or other appropriate method of compensation to an acceptable land acquisition program, as required by the land development regulations. The monetary payment shall be used to purchase and manage native vegetative communities off-site. The land development regulations shall provide criteria to determine when this alternative will be considered. The criteria will be based upon the following provisions:
- a. The amount, type, rarity and quality of the native vegetation on site;
 - b. The presence of conservation lands adjoining the site;
 - c. The presence of listed species and consideration of Federal and State agency technical assistance;
 - d. The type of land use proposed, such as, but not limited to, affordable housing;
 - e. The size of the preserve required to remain on site is too small to ensure that the preserve can remain functional; and
 - f. Right of Way acquisitions for all purposes necessary for roadway construction, including ancillary drainage facilities, and including utilities within the right of way acquisition area.

The land development regulations shall include a methodology to establish the monetary value, land donation, or other appropriate method of compensation to ensure that native vegetative communities not preserved on-site will be preserved and appropriately managed off-site.

- (11) Right of Way acquisitions by any governmental entity for all purposes necessary for roadway construction, including ancillary drainage facilities, and including utilities within the right of way acquisition area, shall be exempt from mitigation requirements.
- (12) Although the primary intent of this Policy is to retain and protect existing native vegetation, there are situations where the application of the retention requirements of this Policy is not possible. In these cases, creation or restoration of vegetation to satisfy all or a portion of the native vegetation retention requirements may be allowed. Within one year of the effective date of these amendments, the County shall adopt land development regulations to determine the circumstances for when creation or restoration is allowed and to specify criteria for creation and restoration.
- (13) The County may grant a deviation to the native vegetation retention requirements of this Policy, except for the Native Vegetation Retention Requirements Table, and provisions in Paragraphs 1, 2, 3, 6, and 7. Within one year of the effective date of these

amendments, the County shall adopt land development regulations to set forth the process for obtaining a deviation. The regulations shall allow for the granting of a deviation by the appropriate review board after a public hearing, and for the granting of a deviation administratively. The County shall consider the amount and type of native vegetation and the presence of listed species in determining whether the granting of a deviation requires a public hearing, or may be granted administratively.

The County may grant a deviation if:

- a. County, Federal or State agencies require that site improvements be located in areas which result in an inability to meet the provisions of this Policy, or
- b. On or off-site environmental conditions are such that the application of one or more provisions of this Policy is not possible or will result in a preserve area of lesser quality, or
- c. The strict adherence to these provisions will not allow for the implementation of other Plan policies that encourage beneficial land uses.

Policy Achievement Analysis:

Policy 6.1.1 specifies that it is applicable to the County's Urban Designated Area, Estates Designated Area, Conservation Designated Area, and Agricultural/Rural Mixed Use District, Rural-Industrial District and Rural-Settlement Area District as designated on the FLUM, and that native vegetation shall be preserved through the application of a series of preservation and vegetation retention standards and criteria, unless the development occurs within the Area of Critical State Concern (ACSC) where the ACSC standards referenced in the Future Land Use Element shall apply.

This Policy remains relevant and should be retained. However, the Policy should be modified to: reevaluate the scrivener's errors in subsections 6.1.1 (7 & 13); delete subsection 6.1.1 (7), since it is already addressed by Policy 6.1.1 (12); and add an exemption from the native vegetation retention requirements for Federal and State parks, preserves and forests whose purpose is to manage land for conservation.

[Environmental Advisory Council (EAC) Comment from the August 11, 2010 Workshop – Suggesting that staff insert within (5) b. the word, “acreage” after the phrase “...loss of the minimum required vegetation ...”]

[Planning Commission (CCPC) Comment from the August 27, 2010 EAR Workshop – Suggesting that the Policy be revised to clearly express the intent that Federal and State parks, preserves and forests shall comply with native vegetative retention requirements, but are not required to have a separate preserve onsite and a preserve management plan.]

[Environmental Advisory Council (EAC) Comment from the November 3, 2010 Adoption Hearing – The EAC is in agreement with the CCPC comment from the August 27, 2010 EAR Workshop.]

[Post EAC and CCPC Workshops and Adoption Hearings – Staff Comment – Staff concurs with the EAC and CCPC recommendations.]

Policy 6.1.2:

For the County's Rural Fringe Mixed Use District, as designated on the FLUM, native vegetation shall be preserved on site through the application of the following preservation and vegetation retention standards and criteria:

Preservation and Native Vegetation Retention Standards:

- a. Receiving Lands:

A minimum of 40% of the native vegetation present, not to exceed 25% of the total site area shall be preserved.

b. Neutral Lands:

A minimum of 60% of the native vegetation present, not to exceed 45% of the total site area shall be preserved, except that, for Section 24, Township 49 South, Range 26 East, located in the North Belle Meade Overlay, a minimum of 70% of the native vegetation present, not to exceed 70% of the total site area, shall be preserved. Additionally, for residential development in Section 24, if the dwelling units are not clustered, a minimum of 90% of the slash pine trees present shall be retained. Further restrictions are identified in the North Belle Meade Overlay in the FLUE. [The preceding 2 sentences in italics were adopted 1/25/07 but will NOT be applied or implemented by Collier County. They relate to text in the Future Land Use Element's North Belle Meade Overlay that was found to be "not in compliance" by the Florida Department of Community Affairs in letter dated 5/1/07.]

c. Non-NRPA Sending Lands:

Calculated at the higher value of 80% of the native vegetation present, or as may otherwise be permitted under the Density Rating provisions of the FLUE;

d. NRPA Sending Lands:

Calculated at the higher value of 90% of the native vegetation present, or as may otherwise be permitted under the Density Blending provisions of the FLUE.

e. Provisions a. through d. above shall also be consistent with the wetland protection policies set forth under CCME Objective 6.2.

f. In order to ensure reasonable use and to protect the private property rights of owners of smaller parcels of land within lands designated Rural Fringe Mixed Use District on the Future Land Use Map, including nonconforming lots of record which existed on or before June 22, 1999, for lots, parcels or fractional units of land or water equal to or less than five (5) acres in size, native vegetation clearing shall be allowed, at 20% or 25,000 square feet of the lot or parcel or fractional unit, whichever is greater, exclusive of any clearing necessary to provide for a 15-foot wide access drive up to 660 feet in length. For lots and parcels greater than 5 acres but less than 10 acres, up to 20% of the parcel may be cleared. This allowance shall not be considered a maximum clearing allowance where other provisions of this Plan allow for greater clearing amounts. These clearing limitations shall not prohibit the clearing of brush or under-story vegetation within 200 feet of structures in order to minimize wildfire fuel sources.

g. Within Receiving and Neutral lands where schools and other public facilities are co-located on a site, the native vegetation retention requirement shall be 30% of the native vegetation present, not to exceed 25% of the site.

- (1) For the purpose of this policy, "native vegetation" is defined as a vegetative community having 25% or more canopy coverage or highest existing vegetative strata of native plant species. The vegetation retention requirements specified in this policy are calculated on the amount of "native vegetation" that conforms to this definition.**
- (2) The preservation of native vegetation shall include canopy, under-story and ground cover, emphasizing the largest contiguous area possible, which may include connection to offsite preserves. The purpose for identifying the largest contiguous area is to provide for a core area that has the greatest potential for wildlife habitat by reducing the interface between the preserve area and development which decreases the conflicts from other land uses. Criteria for determining the dimensional standards of the preserve are to be set out in the Land Development Code.**
- (3) Areas that fulfill the native vegetation retention standards and criteria of this policy shall be set aside as preserve areas. On-site and off-site preserve areas shall be protected by a permanent conservation mechanism to prohibit further development, consistent with the requirements of this policy. The type of conservation mechanism, including conservation easements, required for a specific development may vary based on preserve area size, type**

of development approval, and other factors, as set forth in the County's land development regulations.

- (4) Selection of native vegetation to be retained as preserve areas shall reflect the following criteria in descending order of priority:
 - a. Wetland or upland 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 continued use of the site by listed species or the movement of wildlife through the site. This criterion shall be consistent with the requirements of Policy 7.1.1 and 7.1.2 of this element.
 - b. Xeric Scrub, Dune and Strand, Hardwood Hammocks.
 - c. Onsite wetlands preserved pursuant to Policy 6.2.5 of this Element;
 - d. Any upland habitat that serves as a buffer to a wetland area, as identified in (4)c. above.
 - e. Dry Prairie, Pine Flatwoods, and
 - f. All other native habitats.
- (5) The uses allowable within preserve areas are limited to:
 - a. Passive recreational uses that do not impact the minimum required vegetation or cause a loss of function to the preserve area. Criteria identifying what constitutes a loss of function shall be set forth in the land development regulations and will address various types of construction that are compatible with the function of the preserve. The land development regulations will also provide criteria to define appropriate passive recreational uses. The criteria will be established to allow for passive recreational uses such as trails or boardwalks that provide for access within the preserves, providing the uses do not reduce the minimum required vegetation or cause harm to listed species.
 - b. Receipt of treated stormwater discharge where such use, including conveyance, treatment and discharge structures, does not result in adverse impacts on the naturally occurring, native vegetation, to include the loss of the minimum required vegetation and the harm to any listed species according to the policies associated with Objective 7.1, as determined by criteria set forth in the land development regulations. Discharge to preserves having wetlands requires treatment that will meet water quality standards as set forth in Chapter, 62-302 F.A.C. and will conform to the water quality criteria requirements set forth by the South Florida Water Management District.
- (6) A management plan shall be submitted for all preserve areas identified by specific criteria in the land development regulations to identify actions that must be taken to ensure that the preserved areas will function as proposed. The plan shall include methods to address control and treatment of invasive exotic species, fire management, stormwater management (if applicable), and maintenance of permitted facilities. If applicable, a listed species monitoring program shall be submitted pursuant to Policy 7.1.2 (2)(i).
- (7) Off-site preservation shall be allowed to provide flexibility in the project design.
 - a. Within Receiving and Neutral Lands, off-site preservation shall be allowed for up to 50% of the vegetation retention requirement.
 1. Off-site preservation areas shall be allowed at a ratio of 1:1 if such off-site preservation is located within designated Sending Lands or at a ratio of 1.5:1 anywhere else.
 2. Like for like preservation shall be required for Tropical Hardwood and Oak Hammock vegetative communities.
 - b. Within non-NRPA Sending Lands, off-site preservation shall be allowed for up to 25% of the site preservation or vegetative retention requirement, whichever is controlling.
 1. Off-site preservation areas shall be contiguous to designated Sending Lands and shall be allowed at a ratio of 3:1.
 - c. Off-site preservation shall not be allowed in NRPA Sending Lands.
- (8) Density Bonus Incentives shall be granted to encourage preservation amounts greater than that required in this policy, as provided for in the FLUE for Receiving Lands and Rural Villages. Within one (1) year of the effective date of these amendments, Collier

County shall adopt specific land development regulations to implement this incentive program.

- (9) On-site preservation areas shall also conform to the Open Space requirements as specified in the Future Land Use Element. These preservations shall be part of and counted towards the Open Space requirements.
- (10) Existing native vegetation that is located contiguous to the natural reservation shall be preserved pursuant to Policy 6.5.2 of this element. Natural reservation is defined as that specified in CCME Objective 6.5 of this element;
- (11) Should the amount of wetland vegetation exceed the minimum vegetation requirements as specified herein, retention of wetland vegetation having significant habitat or hydrologic value is encouraged. Increased preservation shall be fostered through incentives including, but not limited to: clustered development, reduced development standards such as open space, setbacks, and landscape buffers, to allow for increased areas of preserved wetland vegetation. Significant habitat or hydrologic value is determined by wetland function, not the size of the wetland.

Policy Achievement Analysis:

Policy 6.1.2 specifies that within the County's Rural Fringe Mixed Use District, as designated on the FLUM, native vegetation shall be preserved on site through the application of various vegetation retention standards and criteria.

This Policy remains relevant and should be retained. However, the Policy should be modified to reflect the June 2010 Land Development Code amendments that implement specific subsections of the Policy; and, add an exemption from the native vegetation retention requirements for Federal and State parks, preserves and forests whose purpose is to manage land for conservation purposes.

[Planning Commission (CCPC) Comment from the August 27, 2010 EAR Workshop – Suggesting that the Policy be revised to clearly express the intent that Federal and State parks, preserves and forests shall comply with native vegetative retention requirements, but are not required to have a separate preserve onsite and a preserve management plan.]

[Environmental Advisory Council (EAC) Comment from the November 3, 2010 Adoption Hearing – The EAC is in agreement with the CCPC comment from the August 27, 2010 EAR Workshop.]

[Post EAC and CCPC Workshops and Adoption Hearings – Staff Comment – Staff concurs with the EAC and CCPC recommendations.]

Policy 6.1.6:

Exemptions from the native vegetation retention requirements of CCME Policy 6.1.2 – The requirements of Policy 6.1.2 shall not apply to, affect or limit the continuation of existing uses. Existing use shall be defined as: those uses for which all required permits were issued prior to June 19, 2002; or, projects for which a Conditional Use or Rezone petition was approved by the County prior to June 19, 2002; or, land use petitions for which a completed application was submitted prior to June 19, 2002. The continuation of existing uses shall include expansions of those uses if such expansions are consistent with, or clearly ancillary to, the existing uses.

Hereafter, such previously approved developments shall be deemed to be consistent with the Plan's Goals, Policies and Objectives for the Rural Fringe area, and they may be built out in accordance with their previously approved plans. Changes to these previous approvals shall also be deemed to be consistent with the Plan's Goals, Objectives and Policies for the Rural Fringe Area as long as they do not result in an increase in development density or intensity. On the County owned land located in Section 25, Township 26 E, Range 49 S (+/-360 acres), the

native vegetation retention and site preservation requirements may be reduced to 50% if the permitted uses are restricted to the portions of the property that are contiguous to the existing land fill operations; exotic removal will be required on the entire +/- 360 acres.

Policy Achievement Analysis:

Policy 6.1.6 makes all existing land uses exempt from the native vegetation retention requirements of CCME Policy 6.1.2 if the effected land uses were issued prior to June 19, 2002; or projects for which a Conditional use or Rezone petition has been approved by the County prior to June 19, 2002; or, land use petitions for which a completed application has been submitted prior to June 19, 2002.

This Policy remains relevant and should be retained.

[Environmental Advisory Council (EAC) Comment from the August 11, 2010 Workshop – Suggesting that the last sentence in the Policy be revised to read, “... exotic removal and preserve management will be...”]

[Post EAC and CCPC Workshops and Adoption Hearings – Staff Comment – No change is recommended, as the Policy was adopted as part of the Final Order amendments in 2002 to accommodate the expansion of the landfill. Preserve management is already required pursuant to Policy 6.1.2 (6) of this Element.]

OBJECTIVE 6.2:

The County shall protect and conserve wetlands and the natural functions of wetlands pursuant to the appropriate policies under Goal 6. The following policies provide criteria to make this objective measurable. The County’s wetland protection policies and strategies shall be coordinated with the Watershed Management Plans as required by Objective 2.1 of this Element.

Objective Achievement Analysis:

This Objective remains relevant and should be retained.

[Environmental Advisory Council (EAC) Comment from the August 11, 2010 Workshop – Suggesting staff include within the Objective the requirement for mitigation within the same drainage area as the initial wetland impact.]

[Post EAC and CCPC Workshops and Adoption Hearings – Staff Comment – No change is recommended to this Objective as part of the EAR-based amendments, as wetland impacts will be addressed as part of the Watershed Management Plans. Further, mitigation requirements for wetland impacts will be determined by the BCC with the adoption of the Watershed Management Plans.]

Policy Relevance:

Policy 6.2.1

As required by Florida Administrative Code 9J5-5.006(1)(b), wetlands identified by the 1994-95 SFWMD land use and land cover inventory are mapped on the Future Land Use Map series. These areas shall be verified by a jurisdictional field delineation, subject to Policy 6.2.2 of this element, at the time of project permitting to determine the exact location of jurisdictional wetland boundaries.

Policy Achievement Analysis:

Policy 6.2.1 requires that wetlands as identified by the 1994-95 SFWMD land use and land cover inventory are mapped on the Future Land Use Map series. These areas are to be verified by jurisdictional field delineation, subject to Policy 6.2.2 of this element, at the time of project permitting to determine the exact location of jurisdictional wetland boundaries.

This Policy remains relevant and should be retained. However, the Policy should be revised to include the correct Florida Administrative Code reference - "9J-5.006(1)(b)"; and, include the current SFWMD land use and land cover inventory reference.

Policy 6.2.3:

Collier County shall implement a comprehensive process to ensure wetlands and the natural functions of wetlands are protected and conserved. This wetland preservation and conservation process shall be coordinated with the Watershed Management Plan process, as referenced in Objective 2.1 of this Element. However, the process outlined within this policy is primarily based on directing concentrated population growth and intensive development away from large interconnected wetland systems. These wetland systems have been identified based on their type, values, functions, sizes, conditions and locations within Collier County. These systems predominantly occur east of the County's Urban boundary, as delineated on the Countywide Future Land Use Map (FLUM), within the Future Land Use Element (FLUE). Many of these wetlands fall within public lands or land targeted for acquisition. High quality wetlands systems located on private property are primarily protected through native vegetation preservation requirements, or through existing PUD commitments, conservation easements, or Stewardship Sending Area Designations, or via the NRPA or Sending designations within the Rural Fringe Mixed Use District or land/easement acquisition, or innovative landowner incentives. Protection measures for wetlands and wetland systems located within the northeastern portion of Collier County, excluding the community of Immokalee, are contained in the Rural Lands Stewardship Area Overlay (RLSA Overlay) of the FLUE (and as depicted on the FLUM). Protection measures for wetlands and wetland systems located within the Urban and Estates designated areas of the County shall be based upon the jurisdictional determinations made by the applicable state or federal agency. Where permits issued by such state or federal agencies allow for impacts to wetlands within Urban and Estates designated areas and require mitigation for such impacts, the permitting agency's mitigation requirements shall be deemed to preserve and protect wetlands and their functions, except for wetlands that are part of a Watershed Management Plan preserve area. The County shall direct impacts away from such wetlands.

The large connected wetland systems that exist at the landscape scale in Collier County shall be protected through various Land Use Designations and Overlays that restrict higher intensity land uses and require specific land development standards for the remaining allowable land uses. Collier County shall direct incompatible land uses away from these large landscape scale wetland systems through implementation of the following protection and conservation mechanisms:

(1) Conservation Designation

Best available data indicates that 76% of all wetlands found in Collier County are contained within the boundaries of the Conservation Designation as depicted on the Countywide Future Land Use Map. The overall purpose of the Conservation Designation is to conserve and maintain the natural resources of Collier County and their associated environmental, recreational, and economic benefits. The allowed land uses specified in the FLUE's Conservation Designation (Reference FLUE Land Use Designation Section IV.) will accommodate limited residential development and future non-residential development. These limitations support Collier County's

comprehensive process to direct concentrated population growth and intensive land development away from large connected wetland systems.

(2) Big Cypress Area of Critical State Concern Overlay (ACSC)

Best available data indicates that 74% of the County's wetlands are within the Big Cypress Area of Critical State Concern Overlay. The land development regulations contained in the ACSC Overlay District, as depicted on the Countywide Future Land Use Map, provide standards that facilitate the goal of directing higher intensity land uses away from wetland systems. The development standards for the ACSC Overlay (Reference FLUE Land Use Designation Section V.) specify that site alterations shall be limited to 10% of the total site. The majority of the land contained within the ACSC is also within the Conservation Designation and thus is subject to the land use limitations of that Land Use Designation.

(3) Natural Resource Protection Areas (NRPAs)

Major wetland systems and regional flow-ways were used as criteria to establish the NRPA Overlay District as shown on the Future Land Use Map, and as discussed in FLUE Land Use Designation, Section V.C. These areas include high functioning wetland systems and, although portions of the NRPA Overlay include lands within the Conservation Designation, represent approximately 12% of the County's wetlands, which are not located in Conservation Lands. Based on the relatively high concentration of wetlands within NRPA designated lands, incompatible land uses shall be directed away from these areas. Allowable land uses within NRPAs are also subject to native vegetation retention and preservation standards of 90%.

(4) Rural Fringe Mixed Use District Sending Lands

Best available data indicates that 16,000+ acres of wetlands are contained within designated Sending Lands and that such wetlands constitute approximately 70% of land cover in these areas. Incompatible land uses are directed away from the Rural Fringe Mixed Use District Sending Lands through an incentive-based Transfer of Development Rights (TDR) Program that allows land owners within these Sending Lands to transfer their residential density out of the Sending Lands to Rural Fringe Mixed Use District (and limited Urban) Receiving Lands. A complete description of the TDR Program is contained in the FLUE, Future Land Use Designation Description Section, Agricultural/Rural Designation, Rural Fringe Mixed Use District. Incompatible land uses are also directed away from Sending Lands through restrictions on allowable uses. Finally, allowable uses within these lands are also subject to native vegetation retention and preservation standards of 80% to 90%, as required by Policy 6.7.1 of this Element.

(5) Flowway Stewardship Areas [re-numbered to reflect merger of Ordinance No. 2002-32 and 2002-54]

Flowway Stewardship Areas have been designated within the Rural Lands Stewardship Area Overlay (RLSA), as depicted on the Future Land Use Map, and are shown on the Rural Lands Study Area Natural Resource Index Map Series. Flowway Stewardship Areas (FSAs) are for the most part privately owned wetlands that are located within the Camp Keais Strand and Okaloacoochee Slough. These lands form the principal wetland flowway systems in the RLSA. The Overlay provides an incentive to permanently protect FSAs through the creation and transfer of Stewardship Credits. It also contains provisions that eliminate incompatible uses from the FSAs and, which establish protection measures.

(6) Watershed Management Plans

Collier County will establish watershed management plans throughout the County, but with particular emphasis on the Urban and Estates designated areas. These watershed management plans shall be established in accordance with Objective 2.1 of this Element and will include the preservation or, where feasible, creation of landscape-scale wetland conservation areas to act as habitat, natural water quality treatment and

water quantity retention/detention areas. The County shall direct incompatible land uses away from such large-scale wetlands.

Collier County shall allow for more intensive development to occur in Rural Fringe Receiving Lands, North Golden Gate Estates, the Rural-Settlement Area District, and the Urban Designated Areas subject to the land uses identified in the Future Land Use Element, the Immokalee Area Master Plan, and the Golden Gate Area Master Plan. These areas account for only 6% of Collier County's wetlands. Except for tidal wetlands within the coastal portion of the Urban Designated Area and wetlands that are part of an established watershed management plan, the County finds that the wetland systems in these areas are more fragmented and altered than those systems located within the Conservation Lands, ACSC and NRPA Overlays, and Rural Fringe Sending Lands.

On a project-specific basis, wetlands and wetland functions shall be protected through the following mechanisms:

- (1) Federal and State jurisdictional agency review and wetland permitting;
- (2) Vegetation preservation policies supporting CCME Objective 6.1;
- (3) Wetland protection policies supporting CCME Objective 6.2;
- (4) Clustering provisions specified in the Rural Fringe Mixed Use District of the FLUE
- (5) The protection of wetlands that are part of an established watershed management plan, as per Objective 2.1 of this Element.
- (6) Land or easement acquisition.
- (7) Land owner incentives, such as transferable development rights, tax relief, or USDA grants for restoration.

Policy Achievement Analysis:

Policy 6.2.3 requires Collier County to implement a comprehensive process to ensure that wetlands and the natural functions of wetlands are protected and conserved. The process outlined within this policy is primarily based on directing concentrated population growth and intensive development away from large connected wetland systems. High quality wetlands systems located on private property are primarily protected through native vegetation preservation requirements, or through existing PUD commitments, conservation easements, or Stewardship Sending Area Designations, or through the Natural Resource Protection Areas or Sending designations in the Rural Fringe Mixed Use District. The large connected wetland systems that exist at the landscape scale in Collier County are protected through various Land Use Designations and Overlays that restrict higher intensity land uses and require specific land development standards for the remaining allowable land uses.

This Policy remains relevant and should be retained.

[Environmental Advisory Council (EAC) Comment from the August 11, 2010 Workshop – Suggesting that provision (6) of the Policy be revised to include that the watershed management plans contain designated areas to be protected from development so as to preserve habitat, water flows, recharge areas and to prevent future flooding.]

[Post EAC and CCPC Workshops and Adoption Hearings – Staff Comment – No change is recommended, as wetlands will be addressed as part of the Watershed Management Plans.]

Policy 6.2.5:

Within the Rural Fringe Mixed Use District, and that portion of the Lake Trafford/Camp Keais Strand System which is contained within the Immokalee Urban Designated Area, Collier County shall direct land uses away from higher functioning wetlands by limiting direct impacts within wetlands based upon the vegetation requirements of Policy 6.1.2 of this element, the

wetland functionality assessment described in paragraph (2) below, and the final permitting requirements of the South Florida Water Management District. A direct impact is hereby defined as the dredging or filling of a wetland or adversely changing the hydroperiod of a wetland. This policy shall be implemented as follows:

- (1) The County shall apply the vegetation retention requirements of Policy 6.1.2 of this element to preserve an appropriate amount of native vegetation on site. Wetlands shall be preserved as part of this vegetation requirement according to the following criteria:
 - a. The acreage requirements of Policy 6.1.2 of this element shall be met by preserving wetlands with the highest wetland functionality scores. Wetland functionality assessment scores shall be those described in paragraph (2) of this policy. Wetlands having a WRAP score of at least 0.65 or a Uniform Wetland Mitigation Assessment Method score of 0.7 shall be preserved on site. This policy is not intended in all cases to require preservation of wetlands exceeding the acreage required by Policy 6.1.2 of this element. Within one year, the County shall develop specific criteria to be used to determine when wetlands having a WRAP score greater than 0.65 or a Uniform Wetland Mitigation Assessment Method score of greater than 0.7 shall be required to be retained exceeding the acreage required by Policy 6.1.2 of this element.
- (2) In order to assess the values and functions of wetlands at the time of project review, applicants shall rate functionality of wetlands using the South Florida Water Management District's Wetland Rapid Assessment Procedure (WRAP), as described in Technical Publication Reg-001, dated September 1997, and updated August 1999, or the Uniform Wetland Mitigation Assessment Method, F.A.C. Chapter 62-345. The applicant shall submit to County staff, agency accepted WRAP scores or Uniform Wetland Mitigation Assessment Method scores. County staff shall review this functionality assessment as part of the County's EIS provisions and shall use the results to direct incompatible land uses away from the highest functioning wetlands according to the requirements found in paragraph (1) above.
- (3) All direct impacts shall be mitigated for pursuant to the requirements of paragraph (6) of this policy.
- (4) Single family residences shall follow the requirements contained within Policy 6.2.7 of this element.
- (5) The County shall separate preserved wetlands from other land uses with appropriate buffering requirements. The County shall require a minimum 50-foot vegetated upland buffer adjacent to a natural water body, and for other wetlands a minimum 25-foot vegetated upland buffer adjacent to the wetland. A structural buffer may be used in conjunction with a vegetative buffer that would reduce the vegetative buffer width by 50%. A structural buffer shall be required adjacent to wetlands where direct impacts are allowed. Wetland buffers shall conform to the following standards:
 - a. The buffer shall be measured landward from the approved jurisdictional line.
 - b. The buffer zone shall consist of preserved native vegetation. Where native vegetation does not exist, native vegetation compatible with the existing soils and expected hydrologic conditions shall be planted.
 - c. The buffer shall be maintained free of Category I invasive exotic plants, as defined by the Florida Exotic Pest Plant Council.
 - d. The following land uses are considered to be compatible with wetland functions and are allowed within the buffer:
 1. Passive recreational areas, boardwalks and recreational shelters;
 2. Pervious nature trails;
 3. Water management structures;
 4. Mitigation areas;
 5. Any other conservation and related open space activity or use which is comparable in nature with the foregoing uses.
 - e. A structural buffer may consist of a stem-wall, berm, or vegetative hedge with

suitable fencing.

(6) Mitigation shall be required for direct impacts to wetlands in order to result in no net loss of wetland functions.

a. Mitigation Requirements:

- 1. "No net loss of wetland functions" shall mean that the wetland functional score of the proposed mitigation equals or exceeds the wetland functional score of the impacted wetlands. However, in no case shall the acreage proposed for mitigation be less than the acreage being impacted.**
- 2. Loss of storage or conveyance volume resulting from direct impacts to wetlands shall be compensated for by providing an equal amount of storage or conveyance capacity on site and within or adjacent to the impacted wetland.**
- 3. Protection shall be provided for preserved or created wetland or upland vegetative communities offered as mitigation by placing a conservation easement over the land in perpetuity, providing for initial exotic plant removal (Class I invasive exotic plants defined by the Florida Exotic Pest Plant Council) and continuing exotic plant maintenance.**
- 4. Prior to issuance of any final development order that authorizes site alteration, the applicant shall demonstrate compliance with paragraphs (6)a.1, (6)a.2, and (6)a.3 of this policy. If agency permits have not provided mitigation consistent with this policy, Collier County will require mitigation exceeding that of the jurisdictional agencies.**
- 5. Mitigation requirements for single-family lots shall be determined by the State and Federal agencies during their permitting process, pursuant to the requirements of Policy 6.2.7 of this element.**

b. Mitigation Incentives:

- 1. Collier County shall encourage certain types of mitigation by providing a variety of incentives in the form of density bonuses and credits to open space and vegetation retention requirements. Density bonuses shall be limited to no more than 10% of the allowed density.**
- 2. Preferred mitigation activities that would qualify for these incentives include, but are not limited, to the following:**
 - (a) Adding wetland habitat to or restoring wetland functions within Rural Fringe Mixed Use District Sending Lands,**
 - (b) Creating, enhancing or restoring wading bird habitat to be located near wood stork, and/or other wading bird colonies.**
- 3. Within one (1) year of the effective date of these amendments, Collier County shall adopt specific criteria in the LDC to implement this incentive program, and to identify other mitigation priorities.**

Policy Achievement Analysis:

Policy 6.2.5 requires that within the Rural Fringe Mixed Use District, Collier County is to direct land uses away from higher functioning wetlands by limiting direct impacts within wetlands based upon the vegetation requirements of Policy 6.1.2. This policy was adopted as part of the County's Rural Fringe Amendments. Although Policy 6.2.5 states the vegetation requirements for the Rural Fringe Mixed Use District and that portion of the Lake Trafford/Camp Keais Strand System which is contained within the Immokalee Urban Designated Area, shall be based upon the native vegetation retention requirements of Policy 6.1.2 of this Element, the Policy does not specify the percent requirement of retained native vegetation which applies to that portion of the Lake Trafford/Camp Keais Strand System which is contained within the Immokalee Urban Designated Area. This should be clarified in Policy 6.2.5 and/or in Policy 6.1.2. Section 6.2.5 (6)(5)(b)(3) should be removed as the specific criteria to implement the incentive program and to identify other mitigation priorities have previously been adopted in the Land development Code.

[Environmental Advisory Council (EAC) Comment from the August 11, 2010 Workshop – Suggesting that specific native vegetation requirements for Lake Trafford/Camp Keais Strand System be clarified.]

[Collier County Planning Commission (CCPC) Comment from the August 27, 2010 Workshop – Suggesting that specific native vegetation requirements for Lake Trafford/Camp Keais Strand System be clarified.]

[Post Collier County Planning Commission (CCPC) Staff Comment – Native vegetation retention standards for the Lake Trafford/Camp Keais Strand System will be addressed as part of the Immokalee Area Master Plan amendments.]

[Environmental Advisory Council (EAC) Comment from the November 3, 2010 Adoption Hearing – Suggesting that any necessary cross reference(s) to another Element be provided.]

[Post EAC and CCPC Workshops and Adoption Hearings – Staff Comment – Staff concurs with the EAC and CCPC recommendations.]

Policy 6.2.7:

Within the Estates Designated Area and the Rural Settlement Area, the County shall rely on the wetland jurisdictional determinations and permit requirements issued by the applicable jurisdictional agency, except for wetlands that are part of a Watershed Management Plan preserve area. The County shall direct impacts away from such wetlands. This policy shall be implemented as follows:

- (1) For single-family residences within Southern Golden Gate Estates or within the Big Cypress Area of Critical State Concern, the County shall require the appropriate federal and state wetland-related permits before Collier County issues a building permit.
- (2) Outside of Southern Golden Gate Estates and the Big Cypress Area of Critical State Concern, Collier County shall inform applicants for individual single-family building permits that federal and state wetland permits may be required prior to construction unless the proposed residence is within a watershed management conservation area identified in a Watershed Management Plan developed pursuant to policies supporting Objective 2.1 of this Element, in which case the appropriate jurisdictional permit is required prior to the issuance of a building permit. The County shall also notify the applicable federal and state agencies of single-family building permits applications in these areas.
- (3) Within North Golden Gate Estates and the Rural Settlement Area, Collier County shall incorporate certain preserved and/or created wetlands and associated uplands into the County's approved watershed management plans, as per Objective 2.1 of this Element. The size and location of wetlands incorporated into the watershed management plans will be based upon the approved requirements for such plans. The County may issue single-family building permits within or adjacent to such wetlands, subject to appropriate mitigation requirements, which preserve the functionality of the wetland within the applicable watershed management plan. For a proposed residence which is to be located within a watershed management conservation area identified in a Watershed Management Plan developed pursuant to policies supporting Objective 2.1 of this Element, the appropriate jurisdictional permit is required prior to the issuance of a building permit.
- (4) Collier County shall continue to work with federal and state agencies to identify properties that have a high probability of wetlands and animal listed species occurrence. The identification process will be based on hydric soils data and other applicable criteria. Once this identification process is complete, the County will determine if the process is sufficiently accurate to require federal and state wetland approvals prior to the issuance of a building permit within these areas. The County shall use information on wetland and/or listed species occurrence to inform property owners of the potential existence of wetlands and/or listed species on their property.
- (5) Within one year after Watershed Management Plans are accepted by the Board of County Commissioners, Collier County shall develop and implement additional means to protect wetland systems identified in each Plan for preservation or restoration. Means to consider

include innovative landowner incentives, transferable development rights, tax relief, land or easement acquisition, state and federal grants, and enhanced regulations.

Policy Achievement Analysis:

Policy 6.2.7 stipulates that within the Estates Designated Area and the Rural Settlement Area, the County is to rely on the wetland jurisdictional determinations and permit requirements issued by the applicable Jurisdictional agency, except for wetlands that are part of a Watershed Management Plan preserve area.

This Policy remains relevant and should be retained.

[Environmental Advisory Council (EAC) Comment from the August 11, 2010 Workshop – Suggesting that wetland mitigation occur within the same watershed.]

[Post EAC and CCPC Workshops and Adoption Hearings – Staff Comment – No change is recommended, as wetlands will be addressed as part of the Watershed Management Plans. Further, mitigation requirements for wetland impacts will be determine by the BCC with the adoption of the Watershed Management Plans.]

OBJECTIVE 6.3

The County shall protect and conserve submerged marine habitats.

[This Objective is provided for contextual purposes only; no change is proposed]

Policy Relevance:

Policy 6.3.2

Impacts to sea-grass beds shall be minimized by locating boat docks more than 10 feet from existing sea-grass beds. Where this is not possible, boat docks shall be sited to impact the smallest areas of sea-grass beds possible, be no lower than 3.5 feet NGVD, have a terminal platform no greater than 160 square feet, and have the access dock be no wider than 4 feet.

Policy Achievement Analysis:

Policy 6.3.2 stipulates that impacts to sea-grass beds are to be minimized by locating boat docks more than 10 feet from existing sea-grass beds. Where this is not possible, boat docks are to be sited in such manner as to impact the smallest area of sea-grass beds possible, and to be no lower than 3.5 feet NGVD, have a terminal platform no greater than 160 square feet, and have the access dock be no wider than 4 feet.

This Policy remains relevant and should be retained.

[Environmental Advisory Council (EAC) Comment from the August 11, 2010 Workshop – Suggesting that a reference to the required maintenance dredging permit be inserted within the Policy; and additional Policies be added, if necessary, to protect sea grasses from dredging activities.]

[Post EAC and CCPC Workshops and Adoption Hearings – Staff Comment – No change is recommended, as dredging is regulated by the State of Florida and Federal government, not the County. Maintenance dredging is generally allowed by these agencies. Mitigation may be required and determined during permitting with the State and Federal agencies.]

Seagrass protection issues are required to be addressed by the Florida Fish and Wildlife Conservation Commission pursuant to the Florida Manatee Management Plan adopted by the State in December 2007. The plan calls for implementation of a statewide seagrass management plan, creation of an interagency statewide seagrass monitoring plan, and evaluation of the feasibility of a rule for the protection of the state's seagrass resources.]

Policy 6.3.3

The protection of sea-grass beds shall be a factor in establishing new, or revising existing, speed zones to regulate boat traffic.

Policy Achievement Analysis:

Policy 6.3.3 states that the protection of sea-grass beds is to be a factor in establishing new, or in revising existing, speed zones to regulate boat traffic. Due to the new FWC Rule Change, FWC does not allow for speed zones to be established based on benthic resources.

This Policy is no longer relevant and should be deleted.

[Environmental Advisory Council (EAC) Comment from the August 11, 2010 Workshop – Suggesting that the Policy be retained, but revised to reflect protection of manatee habitat.]

[Planning Commission (CCPC) Comment from the August 27, 2010 EAR Workshop – Suggesting that the Policy be retained as written.]

[Environmental Advisory Council (EAC) Comment from the November 3, 2010 Adoption Hearing – Suggesting that the Policy be retained as written.]

[Post EAC and CCPC Workshops and Adoption Hearings – Staff Comment – Staff concurs with the EAC and CCPC that the Policy should be retained as written.]

OBJECTIVE 7.1:

The County shall direct incompatible land uses away from listed animal species and their habitats. The County relies on the listing process of State and Federal agencies to identify species that require special protection because of their endangered, threatened, or species of special concern status. Listed animal species are those species that the Florida Fish and Wildlife Conservation Commission has designated as endangered, threatened, or species of special concern, in accordance with Rules 68A-27.003, 68A-27.004, and 68A-27.005, F.A.C. and those species designated by various federal agencies as Endangered and Threatened species published in 50 CFR 17.

[This Objective is provided for contextual purposes only; no change is proposed]

Policy Relevance:

Policy 7.1.2

Within areas of Collier County, excluding the lands contained in the RLSA Overlay, non-agricultural development, excluding individual single family residences, shall be directed away from listed species and their habitats by complying with the following guidelines and standards:

- (1) A wildlife survey shall be required for all parcels when listed species are known to inhabit biological communities similar to those existing on site or where listed species are directly observed on the site. The survey shall be conducted in accordance with the requirements**

of the Florida Fish and Wildlife Conservation Commission (FFWCC) and U.S. Fish and Wildlife Service (USFWS) guidelines. The County shall notify the FFWCC and USFWS of the existence of any listed species that may be discovered.

- (2) **Wildlife habitat management plans for listed species shall be submitted for County approval. A plan shall be required for all projects where the wildlife survey indicated listed species are utilizing the site, or the site contains potential habitat for listed species. These plans shall describe how the project directs incompatible land uses away from listed species and their habitats.**
- (a) **Management plans shall incorporate proper techniques to protect listed species and their habitat from the negative impacts of proposed development. Developments shall be clustered to discourage impacts to listed species habitats. Open space and vegetation preservation requirements shall be used to establish buffer areas between wildlife habitat areas and areas dominated by human activities. Provisions such as fencing, walls, or other obstructions shall be provided to minimize development impacts to the wildlife and to facilitate and encourage wildlife to use wildlife corridors. Appropriate roadway crossings, underpasses, and signage shall be used where roads must cross wildlife corridors**
1. **The following references shall be used, as appropriate, to prepare the required management plans;**
 - a. **South Florida Multi-Species Recovery Plan, USFWS, 1999.**
 - b. **Habitat Management Guidelines for the Bald Eagle in the Southeast Region, USFWS, 1987.**
 - c. **Ecology and Habitat Protection Needs of Gopher Tortoise (*Gopherus polyphemus*) Populations found on Lands Slated for Large Scale Development in Florida, Technical Report No. 4, Florida Game and Fresh Water Fish Commission, 1987.**
 - d. **Ecology and Development-Related Habitat Requirements of the Florida Scrub Jay (*Aphelocoma coerulescens*), Technical Report No. 8, Florida Game and Fresh Water Fish Commission, 1991.**
 - e. **Ecology and Habitat Protection Needs of the Southeastern American Kestrel (*Falco Sparverius Paulus*) on Large-scale Development Sites in Florida, Nongame Technical Report No. 13, Florida Game and Fresh Water Fish Commission, 1993.**
 2. **The County shall consider any other techniques recommended by the USFWS and the FFWCC, subject to the provisions of paragraph (3) of this policy.**
 3. **When listed species are directly observed on site or indicated by evidence, such as denning, foraging or other indications, priority shall be given to preserving the listed species habitats first, as a part of the retained native vegetation requirement contained in Policy 6.1.1 and Policy 6.1.2 this element. The County shall also consider the recommendations of other agencies, subject to the provisions of paragraph (3) of this policy.**
- (b) **For parcels containing gopher tortoises (*Gopherus polyphemus*), priority shall be given to protecting the largest most contiguous gopher tortoise habitat with the greatest number of active burrows, and for providing a connection to off site adjacent gopher tortoise preserves.**
- (c) **Habitat preservation for the Florida scrub jay (*Aphelocoma coerulescens*) shall conform to the guidelines contained in Technical Report No. 8, Florida Game and Fresh Water Fish Commission, 1991. The required management plan shall also provide for a maintenance program and specify an appropriate fire or mechanical protocols to maintain the natural scrub community. The plan shall also outline a public awareness program to educate residents about the on-site preserve and the need to maintain the scrub vegetation. These requirements shall be consistent with the UFWS South Florida Multi-Species Recovery Plan, May 1999, subject to the provisions of paragraph (3) of this policy.**

- (d) For the bald eagle (*Haliaeetus leucocephalus*), the required habitat management plans shall establish protective zones around the eagle nest restricting certain activities. The plans shall also address restricting certain types of activities during the nesting season. These requirements shall be consistent with the UFWs South Florida Multi-Species Recovery Plan, May 1999, subject to the provisions of paragraph (3) of this policy.
 - (e) For the red-cockaded woodpecker (*Picoides borealis*), the required habitat protection plan shall outline measures to avoid adverse impacts to active clusters and to minimize impacts to foraging habitat. Where adverse effects cannot be avoided, measures shall be taken to minimize on-site disturbance and compensate or mitigate for impacts that remain. These requirements shall be consistent with the UFWs South Florida Multi-Species Recovery Plan, May 1999, subject to the provisions of paragraph (3) of this policy.
 - (f) In areas where the Florida black bear (*Ursus americanus floridanus*) may be present, the management plans shall require that garbage be placed in bear-proof containers, at one or more central locations. The management plan shall also identify methods to inform local residents of the concerns related to interaction between black bears and humans. Mitigation for impacting habitat suitable for black bear shall be considered in the management plan.
 - (g) For projects located in Priority I and Priority II Panther Habitat areas, the management plan shall discourage the destruction of undisturbed, native habitats that are preferred by the Florida panther (*Felis concolor coryi*) by directing intensive land uses to currently disturbed areas. Preferred habitats include pine flatwoods and hardwood hammocks. In turn, these areas shall be buffered from the most intense land uses of the project by using low intensity land uses (e.g., parks, passive recreational areas, golf courses). Golf courses within the Rural Fringe Mixed Use District shall be designed and managed using standards found in that district. The management plans shall identify appropriate lighting controls for these permitted uses and shall also address the opportunity to utilize prescribed burning to maintain fire-adapted preserved vegetative communities and provide browse for white-tailed deer. These requirements shall be consistent with the UFWs South Florida Multi-Species Recovery Plan, May 1999, subject to the provisions of paragraph (3) of this policy.
 - (h) In order to protect loggerhead (*Caretta caretta*) and other listed sea turtles that nest along Collier County beaches, projects within 300 feet of the MHW line shall limit outdoor lighting to that necessary for security and safety. Floodlights and landscape or accent lighting shall be prohibited. These requirements shall be consistent with the UFWs South Florida Multi-Species Recovery Plan, May 1999, subject to the provisions of Policy 7.1.2(3).
 - (i) The Management Plans shall contain a monitoring program for developments greater than 10 acres.
- (3) The County shall, consistent with applicable GMP policies, consider and utilize recommendations and letters of technical assistance from the Florida Fish and Wildlife Conservation Commission and recommendations from the US Fish and Wildlife Service in issuing development orders on property containing listed species. It is recognized that these agency recommendations, on a case by case basis, may change the requirements contained within these wildlife protection policies and any such change shall be deemed consistent with the Growth Management Plan.

Policy Achievement Analysis:

Policy 7.1.2 provides guidelines and standards for directing non-agricultural development, except for individual single-family residences, away from listed species and their habitats. This policy does not apply to lands located within the RLSA.

This Policy remains relevant and should be retained. However, the Policy should be modified to remove the references to specific wildlife publications and plans listed in the Policy; add a general reference to publications utilized by the FFWCC and USFWS as their technical assistance, since the most current information used by these agencies should be used in protecting listed species; and, delete the reference to mitigation for black bear habitat, as no such mitigation is required by the FFWCC or USFWS.

[Environmental Advisory Council (EAC) Comment from the August 11, 2010 Workshop – Suggesting to add a provision in (e) to encourage the retention of old growth slash pines for RCW nesting habitat.]

[Post EAC and CCPC Workshops and Adoption Hearings – Staff Comment – No change is recommended, as the Policy requires adverse impacts to active red-cockaded woodpecker (RCW) clusters and their foraging habitat be minimized, and where adverse effects cannot be avoided, to compensate or mitigate for impacts that remain. Old growth slash pines may not necessarily be located in the best RCW foraging habitat, depending on how impacted the site is, and may be more sensitive to die off with habitat restoration efforts.]

Policy 7.1.3

For the County's Rural Lands Stewardship Area (RLSA) Overlay, as designated on the FLUM, listed species shall protected pursuant to the RLSA policies found in the Future Land Use Element.

Policy Achievement Analysis:

Policy 7.1.3 requires that, for the County's Rural Lands Stewardship Area (RLSA) Overlay, as designated on the FLUM, listed species are to be protected pursuant to the RLSA policies found in the Future Land Use Element.

This Policy remains relevant and should be retained.

[Environmental Advisory Council (EAC) Comment from the August 11, 2010 Workshop – Suggesting to add the word, “be” before “protected” in the Policy text.]

[Post EAC and CCPC Workshops and Adoption Hearings – Staff Comment – Staff concurs with the EAC and CCPC recommendations.]

Policy 7.1.6:

The County shall evaluate the need for the protection of listed plants and within one (1) year of the effective date of this amendment adopt land development regulations addressing the protection of listed plants.

Policy Achievement Analysis:

This Policy is no longer relevant and should be deleted, as the Land Development Code amendment to implement this Policy has been adopted.

[Planning Commission (CCPC) Comment from the August 27, 2010 EAR Workshop – Suggesting that the Policy be retained, but revised to reflect the continuance of the Policy objective.]

[Post EAC and CCPC Workshops and Adoption Hearings – Staff Comment – Staff concurs with the EAC and CCPC recommendations.]

OBJECTIVE 7.2

Historical data from 1990-1996 shows that the average number of manatee deaths in Collier County due to incidents with watercraft is approximately 3.2 per year per 10,000 boats. Through Policies 7.2.1 through 7.2.3, the County's objective is to minimize the number of manatee deaths due to boat related incidents.

Objective Achievement Analysis:

Collier County's Manatee Protection Plan (NR-SP-93-01) was adopted within the Collier County Land Development Code (LDC, Section 2.6.22 by adoption of Ordinance No. 95-58) in May of 1995, but was not officially adopted into the County's Growth Management Plan until December 16, 2003, by the adoption of Ordinance 2003-67. The Manatee Protection Plan (MPP) has played a pivotal role in the Florida Fish and Wildlife Conservation Commission's (FFWCC) decision-making process since its adoption. In the years since the MPP was adopted, the FFWCC's Bureau of Protected Species Management's permitting staff has depended primarily upon the MPP to provide consistent direction for the siting of boat facilities within Collier County's jurisdictional waters. Moreover, the MPP lays out regulatory groundwork for the protection of manatee habitat, such as seagrass beds.

This Objective remains relevant and should be retained. However, the Objective should be revised to reflect the most up-to-date, best available data on manatee deaths in Collier County waters.

Policy Relevance:

Policy 7.2.2:

Sea-grass beds shall be protected through the application of Policies 6.3.1, 6.3.2 and 6.3.3 of this element.

Policy Achievement Analysis:

Policy 7.2.2 stipulates that sea-grass beds are to be protected through the application of Policies 6.3.1, 6.3.2 and 6.3.3 of this element.

This Policy remains relevant and should be retained. However, the Policy should be revised to reflect the proposed deletion of Policy 6.3.3, as it is no longer relevant.

[Environmental Advisory Council (EAC) Comment from the August 11, 2010 Workshop – Suggesting to retain the reference to Policy 6.3.3 within the Policy.]

[Post EAC and CCPC Workshops and Adoption Hearings – Staff Comment – Staff concurs with the EAC recommendation.]

OBJECTIVE 7.3:

Analysis of historical data from 1996-1999 shows that the average number of sea turtle disorientations in Collier County is approximately equal to 5% of the hatchlings from all nests in the County. Through the following policies, the County's objective is to minimize the number of sea turtle disorientations.

Objective Achievement Analysis:

This Objective remains relevant and should be retained. However, the Objective should be revised to reflect the most up-to-date, best available data on sea turtle disorientation as follows, "Analysis of historical data from 2005 – 2009 shows that the average number of sea turtle disorientations in Collier County is approximately equal to 4% of all the nests in the County..."

Policy Relevance:

Policy 7.3.1:

The County shall apply the lighting criteria contained in Policy 7.1.2(2)(i) of this element in order to protect sea turtle hatchlings from adverse lighting conditions.

Policy Achievement Analysis:

Policy 7.3.1 requires the County to apply the lighting criteria contained in Policy 7.1.2(2)(i) of this element in order to protect sea turtle hatchlings from adverse lighting conditions.

This Policy remains relevant and should be retained, but the reference to Policy 7.1.2(2)(i) should be revised to read, 7.1.2(2)(h).

OBJECTIVE 7.4:

The County shall continue to improve marine fisheries productivity by building additional artificial reefs.

[This Objective is provided for contextual purposes only; no change is proposed]

Policy Relevance:

Policy 7.4.1:

The County should continue to apply for reef construction grants and annually place more materials on the existing permitted sites.

Policy Achievement Analysis:

Policy 7.4.1 states that the County should continue to apply for reef construction grants and annually place more materials on the existing permitted sites. Collier County applies for artificial reef grants through FWC on a yearly basis. Since 2004, the Coastal Zone Management (CZM) Department has been awarded three FWC grants for reef monitoring and deployment. Also, CZM staff has applied for other grants through NOAA for marine debris removal.

This Policy remains relevant and should be retained. However, the Policy should be revised to refer to "other funding opportunities."

OBJECTIVE 9.1:

The County shall implement and update biennially a hazardous materials emergency response element as part of its Comprehensive Emergency Management Plan.

[This Objective is provided for contextual purposes only; no change is proposed]

Policy Relevance:

Policy 9.1.6:

A training program shall be developed for emergency response personnel.

Policy Achievement Analysis:

Policy 9.1.6 requires a training program to be developed for emergency response personnel.

This Policy remains relevant and should be retained, but the Policy should be revised to reflect that a training program has been established.

Policy 9.1.7:

The Collier County Emergency Management Department shall be responsible for developing, implementing, and evaluating the effectiveness of the plan, including periodic updates.

Policy Achievement Analysis:

Policy 9.1.7 tasks the Collier County Emergency Management Department with developing, implementing and periodically updating the hazardous materials emergency response element.

This Policy remains relevant and should be retained, but the Policy should be revised to reflect current departmental reference.

OBJECTIVE 9.2:

The County shall verify the management and disposal practices of identified businesses that are potential generators of hazardous waste, at a rate of 20% of these businesses per year.

[This Objective is provided for contextual purposes only; no change is proposed]

Policy Relevance:

Policy 9.2.3:

The Collier County Pollution Control and Prevention Department shall work with the Florida Department of Environmental Protection (FDEP) to establish a new cooperative agreement between the County and FDEP. The purpose of this agreement shall be to ensure an additional layer of regulatory oversight in enforcing businesses to be compliant with federal, state and local hazardous waste management regulations.

Policy Achievement Analysis:

Policy 9.2.3 states that, Collier County Pollution Control Department shall work with the Florida Department of Environmental Protection (FDEP) to establish a new cooperative agreement between the County and FDEP. The purpose of this agreement shall be to ensure an additional layer of regulatory oversight in enforcing businesses to be compliant with federal, state and local hazardous waste management regulations.

This Policy remains relevant and should be retained. However, the Policy should be revised to reflect that the cooperative agreement has been established and will be maintained; suggest deleting “establish a new” and replace with, “and maintain a.”

OBJECTIVE 9.4:

The County shall continue to implement its local storage tank compliance program.

[This Objective is provided for contextual purposes only; no change is proposed]

Policy Relevance:

Policy 9.4.3:

All storage tank systems in Collier County shall adhere to the provisions of Section 62-761 or 62-762, Florida Administrative Code (F.A.C.) as applicable. Unless otherwise provided for within Section 62-761, F.A.C., individual storage tank systems shall adhere to the provisions of Section 62-761, F.A.C., in effect at the time of approval of the storage tank system.

Policy Achievement Analysis:

Policy 9.4.3 states that all tank systems shall adhere to the provisions of Sections 62-761 or 62-762, Florida Administrative Code, as applicable.

This Policy remains relevant and should be retained. However, the Policy should be revised to delete the second sentence, as it is redundant.

OBJECTIVE 10.1:

Priorities for shoreline land use shall be given to water dependent uses over water related land uses and shall be based on type of water-dependent use, adjacent land use, and surrounding marine and upland habitat considerations. The Collier County Manatee Protection Plan (NR-SP-93-01) May 1995 restricts the location of marinas and may limit the number of wet slips, the construction of dry storage facilities, and boat ramps, based upon the Plan's marina siting criteria.

[This Objective is provided for contextual purposes only; no change is proposed]

Policy Relevance:

Policy 10.1.1:

Priorities for water-dependent and water-related uses shall be:

- a. **Public recreational facilities over private recreational facilities;**
- b. **Public Boat Ramps;**
- c. **Marinas**
 1. **Commercial (public) marinas over private marinas;**
 2. **Dry storage over wet storage;**
- d. **Commercial fishing facilities;**
- e. **Other non-polluting water-dependent industries or utilities;**
- f. **Marine supply/repair facilities;**
- g. **Residential development.**

Policy Achievement Analysis:

Policy 10.1.1 prioritizes water-dependent and water-related uses according to public and private recreational facilities, public boat ramps, marinas, commercial fishing facilities, other non-polluting water-dependent industries or utilities, marine supply/service facilities, and residential development.

This Policy remains relevant and should be retained.

This Policy is affected by changes to Chapter 163, Florida Statutes, which were adopted into law in 2005, as follows:

163.3178 (2)(g): Expands requirement of coastal element to include strategies that will be used to preserve recreational and commercial working waterfronts, as defined in s. 342.07, F.S.

[The CCME already contains marina siting criteria and the FLUE allows water dependent and water related uses in the Urban designated waterfronts. Conservation designated lands do not allow marinas.]

[Environmental Advisory Council (EAC) Comment from the August 11, 2010 Workshop – Suggesting that additional strategies to preserve recreational and commercial working waterfronts be included within the CCME.]

Policy 10.1.5:

Marinas and all other water-dependent and water-related uses shall conform to all applicable regulations regarding development in marine wetlands. Marinas and water-dependent/water-related uses that propose to destroy wetlands shall provide for general public use.

Policy Achievement Analysis:

Policy 10.1.5 requires marinas and all other water-dependent and water-related uses to conform to all applicable regulations regarding development in marine wetlands. Where wetlands are proposed to be destroyed, public access shall be provided.

This Policy remains relevant and should be retained. However, the Policy should be revised for proper sentence structure and to consistently refer to marine wetlands (perhaps modify second sentence to replace “Marinas” with “Development of marinas” and to insert “marine” before “wetlands”).

[Planning Commission (CCPC) Comment from the August 27, 2010 EAR Workshop – Suggesting that the term “marine wetlands” be reworded for clarity.]

[Environmental Advisory Council (EAC) Comment from the November 3, 2010 Adoption Hearing – Suggesting that clarification or definition of “marine wetlands” is needed.]

Policy 10.1.6:

All new marinas, water-dependent and water-related uses that propose to destroy viable, naturally functioning marine wetlands shall be required to perform a fiscal analysis in order to demonstrate the public benefit and financial feasibility of the proposed development.

Policy Achievement Analysis:

Policy 10.1.6 requires all new marinas, water-dependent and water-related uses that propose to destroy viable, naturally functioning marine wetlands to perform a fiscal analysis in order to demonstrate the public benefit and financial feasibility of the proposed development. It is not appropriate to refer only to “viable, naturally functioning marine wetlands” as the proposed destruction of any marine wetlands should be subject to the fiscal analysis requirement. Also, it is not necessary to refer to “public benefit” in this policy since Policy 10.1.5 requires such uses to be available “for general public use” which is a public benefit.

This Policy remains relevant and should be retained. However, the Policy should be revised for proper sentence structure and to perhaps modify to: replace “All” with “For development of all”; insert “, the applicant” following “wetlands”; and, to delete both “viable, naturally functioning” and “public benefit and.”

OBJECTIVE 10.2:

The County shall continue to insure that access to beaches, shores and waterways remain available to the public and continue with its program to expand the availability of such access and a method to fund its acquisition.

[This Objective is provided for contextual purposes only; no change is proposed]

Policy 10.2.1:

Existing access for the public to the beach shall be maintained by new development. New beachfront development shall show on their site-plans existing beach access ways and the

proposed development shall continue that access way, relocate it on the site, or donate it to the County.

Policy Achievement Analysis:

Policy 10.2.1 requires that existing access for the public to the beach is to be maintained by new development. New beachfront development will show on their site-plans existing beach access ways and the proposed development will continue that access way, relocate it on the site, or donate it to the County. Further, the County maintains beach access after it has been transferred via deed or easement.

This Policy remains relevant and should be retained. However, to make the Policy consistent with Objective 1.1, the Policy should be revised to read, "...relocate it on the site as deemed appropriate by Collier County..."

OBJECTIVE 10.3:

Undeveloped coastal barriers shall be maintained predominantly in their natural state and their natural function shall be protected, maintained and enhanced.

Objective Achievement Analysis:

This Objective remains relevant and should be retained.

[Environmental Advisory Council (EAC) Comment from the August 11, 2010 Workshop – Suggesting that a reference to maps contained in the Land Development Code be added.]

[Post EAC and CCPC Workshops and Adoption Hearings – Staff Comment – The undeveloped coastal barriers identified in the text of the Land Development Code and CCME Policy 10.6.1 are identified by the Federal Coastal Barrier Resources System. A reference to the Federal Coastal Barrier Resources System maps should be provided in CCME Objective 10.3.]

OBJECTIVE 10.4:

Developed coastal barriers and developed shorelines shall be continued to be restored and then maintained, when appropriate by establishing mechanisms or projects which limit the effects of development and which help in the restoration of the natural functions of coastal barriers and affected beaches and dunes.

Objective Achievement Analysis:

This Objective remains relevant and should be retained. However, the Objective should be revised to reflect needed grammatical changes, such as "Developed coastal barriers and developed shorelines shall continue to be restored and maintained. Establish mechanisms or projects which limit the effects of development and restores the natural functions of coastal barriers including beaches and dunes."

[Environmental Advisory Council (EAC) Comment from the August 11, 2010 Workshop – Suggesting that Objective be revised to read, "...continue to be restored and then maintained..."]

OBJECTIVE 10.5:

For undeveloped shorelines, provide improved opportunities for recreational, educational, scientific, and esthetic enjoyment of coastal resources by protecting beaches and dunes and by utilizing or where necessary establishing construction standards, which will minimize the impact of manmade structures on the beach and dune systems.

Objective Achievement Analysis:

This Objective remains relevant and should be retained.

[Environmental Advisory Council (EAC) Comment from the August 11, 2010 Workshop – Suggesting to insert, “mangroves” after “beach and dune systems” or add another Policy to address protection of coastal mangroves.]

[Post EAC and CCPC Workshops and Adoption Hearings – Staff Comment – No change is recommended, as the undeveloped coastal barriers identified by the County and Federal Coastal Barrier Resources System also include adjacent mangrove systems. Protection is also provided by either conservation easements or Special Treatment overlay within the County. In addition, State and Federal permits require minimizing the impacts to mangroves.]

OBJECTIVE 10.6:

The County shall conserve the habitats, species, natural shoreline and dune systems contained within the County’s coastal zone.

[This Objective is provided for contextual purposes only; no change is proposed]

Policy Relevance:

Policy 10.6.2:

For shoreline development projects where an EIS is required, an analysis shall demonstrate that the project will remain fully functional for its intended use after a six-inch rise in sea level.

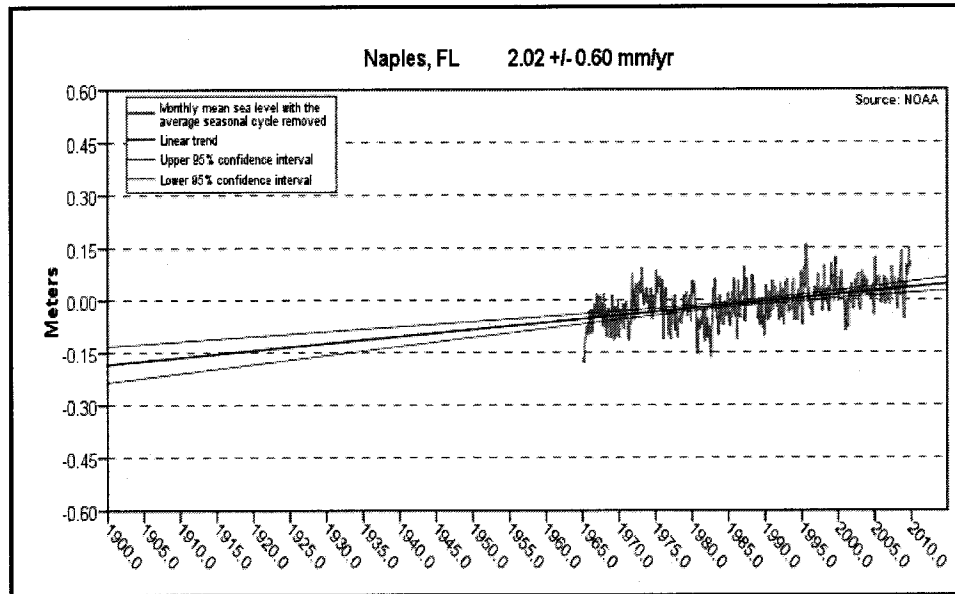
Policy Achievement Analysis:

Policy 10.6.2 requires shoreline projects where an EIS is required, to provide an analysis demonstrating that the project, remain fully functional for its intended use after a six-inch rise in sea level. NOAA indicates that at current rates it will take 75 years to reach a 6” increase (2.02mm / year). If the higher rates suggested by the SWFRPC Draft Climate Change report are used (2.3 mm/year) it will still take approximately 66 years to reach a 6 “ rise (refer to link below from NOAA). These time frames are well beyond the accepted planning horizon.

NOAA Link: http://tidesandcurrents.noaa.gov/sltrends/sltrends_station.shtml?stnid=8725110

The mean sea level trend is 2.02 millimeters/year with a 95% confidence interval of +/- 0.60 mm/yr based on monthly mean sea level data from 1965 to 2006 which is equivalent to a change of 0.66 feet in 100 years.

Mean Sea Level Trend – 8725110 Naples, Florida



2009 SWFRPC Draft Climate Change Report (excerpt below):

Potential Climate Futures: This study began by examining three sea level rise “severity” scenarios: best case, worst case, and moderate case are based upon the results of Table 4, below. This table is based on using Tables 9-1 and 9-2 of the USEPA Report "The Probability of Sea Level Rise." Basically, the formula is multiplying the historic sea level rise (2.3 mm/yr) in Southwest Florida (closest point used is St. Petersburg, Fl., Table 9-2) by the future number of years from 1990 plus the Normalized Sea Level Projections in Table 9-1. For the study the 90% probability is considered the best case, the 50% probability the moderate case, and the 5% probability the worst case scenario.

Staff believes that current building regulations, in combination with the National Flood Insurance Program, provide adequate protection for all residents within the Special Flood Hazard Area (SFHA) (100 year floodplain). The building code requires all buildings to be built at or above the 1% flood elevation set by the FEMA Flood Insurance Rate Map (FIRM) program. FIRM maps use existing sea level and they will be updated every 5 years. The building code requires all facilities within the SFHA be brought into compliance with the Flood Damage Prevention ordinance with any major renovation (improvement of greater than 51 % value of building). All buildings with federally backed mortgages are required to obtain flood insurance.

This Policy is not relevant and should be deleted. However, one or more policies should be added to require the County to monitor and work with federal, state and regional agencies to plan for sea level rise in the future.

[Planning Commission (CCPC) Comment from the August 27, 2010 EAR Workshop – Suggesting that the Policy be retained as written to account for life expectancy of buildings of over 75 years.]

[Environmental Advisory Council (EAC) Comment from the November 3, 2010 Adoption Hearing – The EAC is in agreement with the CCPC comment from the August 27, 2010 EAR Workshop.]

[Post EAC and CCPC Workshops and Adoption Hearings – Staff Comment – Staff concurs with the EAC and CCPC recommendations.]

OBJECTIVE 12.1:

The County will maintain hurricane evacuation clearance times as required by state law. An evacuation clearance time shall be defined as having residents and visitors in an appropriate refuge away from storm surge prior to the arrival of sustained Tropical Storm force winds, i.e., winds equal to or greater than 39 mph. To further these objectives, for future mobile home developments located outside of the storm surge zone, such development shall include on-site sheltering or retro-fitting of an adjacent facility. The Collier County Emergency Management Department shall seek opportunities to increase shelter facilities and associated capacities under the direction of the Department of the Florida Division of Emergency Management.

Objective Achievement Analysis:

While population growth has stabilized, the county is still considered to have a deficit of shelter space that can be utilized for its population. Seasonal populations, economy and storm surge expected without regard to category supports the need for additional shelter space.

This Objective remains relevant and should be retained.

This Objective is affected by changes to Chapter 163, Florida Statutes, which were adopted into law in 2006, as follows: [Note: This is not a mandate, rather an option should the County desire to increase residential density within the CHHA through a GMPA.]

163.3178(9)(b) Requires the addition of a new section establishing a level of service for out-of-county hurricane evacuation of no greater than 16 hours for a category 5 storm for any local government that wishes to follow the process in s.163.3178(9)(a) but has not established such a level of service by July 1, 2008. Ch. 2006-68, LOF.

Policy Relevance:

Policy 12.1.1:

Collier County will develop and maintain a comprehensive public awareness program. The program will be publicized prior to May 30th of each year. Evacuation zones, public shelters and evacuation routes shall be printed in each local newspaper, displayed on the Collier County Emergency Management website, and the availability of this information will be discussed on local television newscasts. This information shall also be made readily available to all hotel/motel guests.

Policy Achievement Analysis:

Policy 12.1.1 states that a comprehensive awareness program will be developed and publicized prior to May 30th of each year. Evacuation zones and routings will be printed in each local newspaper. This information will be made readily available to all hotel/motel guests and other alternative media forums. The County cannot ensure that this information gets printed in each publication.

The Policy remains relevant and should be retained. However, the Policy should be revised to remove the phrase, "printed in" and replace with "provided to."

Policy 12.1.3:

The County shall continue to identify and maintain shelter space for 32,000 persons by 2006 and 45,000 by 2010. Shelter space capacity will be determined at the rate of 20 square feet per person.

Policy Achievement Analysis:

Policy 12.1.3 requires that the County continue to identify shelter space that complies with Red Cross standards for 32,000 persons by 2006 and 45,000 persons by 2010. Shelter space will be determined at the rate of 20 square feet per person. Collier County recommends that these dates and numbers be revised based upon the figures computed from the Southwest Florida Regional Planning Council's Hurricane Evacuation Study Update.

This Policy remains relevant and should be retained. However, the Policy should be revised to reflect current shelter space figures of 32,000 persons by 2012 and 45,000 persons by 2015.

Policy 12.1.5:

On-site shelters within mobile home parks or mobile home subdivisions shall be elevated to a minimum height equal to or above the worst case Category 3 hurricane flooding level, based upon the most current National Oceanic and Atmospheric Administration's storm surge model, known as Sea, Lake, and Overland Surges from Hurricanes (SLOSH). The wind load criteria for buildings and structures designated as "essential facilities" in the latest Florida Building Code, shall guide the design and construction of the required shelters. Shelters shall be constructed with emergency electrical power and potable water supplies; shall provide glass protection by shutters or other approved material/device; and shall provide for ventilation, sanitary facilities and first aid equipment. A telephone, automatic external defibrillator (AED) and battery-operated radio are also required within the shelter.

Policy Achievement Analysis:

This Policy remains relevant and should be retained, except that the last sentence should be amended to read, "battery operated radio with NOAA weather S.A.M.E. (Specific Area Message Encoded) capability."

Policy 12.1.7:

The County shall update the hurricane evacuation portion of the Collier County Comprehensive Emergency Management Plan prior to June 1st of each year by integrating all appropriate regional and State emergency plans in the identification of emergency evacuation routes.

Policy Achievement Analysis:

This Policy remains relevant and should be retained.

[Planning Commission (CCPC) Comment from the August 27, 2010 EAR Workshop – Suggesting to add the requirement to "coordinate with municipalities."]

[Post EAC and CCPC Workshops and Adoption Hearings – Staff Comment – Staff concurs with the CCPC recommendation.]

Policy 12.1.9:

Collier County shall annually update its approved Hazard Mitigation Plan, formerly known as the "Local Hazard Mitigation Strategy" through the identification of new or ongoing local hazard mitigation projects and appropriate funding sources for such projects.

Policy Achievement Analysis:

This Policy remains relevant, but should be revised to read, "Collier County through its Local Mitigation Working Group shall annually update its approved Local Mitigation Strategy (LMS),

through the identification and review of new or ongoing local hazard mitigation projects including, appropriate funding sources for such projects.”

Policy 12.1.11:

The County will continue to coordinate with Collier County Public Schools to ensure that all new public schools outside of the Coastal High Hazard Area are designed and constructed to meet the Public Shelter Design Criteria, as contained in “State Requirements for Educational Facilities” (1999).

Policy Achievement Analysis:

This Policy remains relevant and should be retained, except that the referenced date should be revised to reflect the year 2007.

Policy 12.1.12:

The County will continue to work with the Board of Regents of the State University System to ensure that all new facilities in the State University System that are located outside of the Coastal High Hazard Area are designed and constructed to meet the Public Shelter Design Criteria, as contained in “State Requirements for Educational Facilities” (1999) and the Florida Building Code.

Policy Achievement Analysis:

This Policy remains relevant and should be retained, except that the referenced date should be revised to reflect the year 2007.

Policy 12.1.13:

The County will continue to mitigate previously identified shelter deficiencies through mitigation from Developments of Regional Impact, Emergency Management Preparedness and Enhancement grants, Hazard Mitigation and Pre-disaster Mitigation Grant Programs funding, and from funds identified in the State’s annual shelter deficit studies.

Policy Achievement Analysis:

This Policy remains relevant and should be retained. However, cost-sharing and other requirements sometimes are not acceptable to the County. The Policy should be revised to delete the word “from” after the word “and”; and, add the phrase, “...as funding requirements permit.” at the end of the paragraph.

Policy 12.1.14:

Prior to adoption of the 2007 Annual Update and Inventory Report (A.U.I.R.), Collier County shall evaluate whether to include hurricane shelters in the 5-year schedule of Capital Improvements.

Policy Achievement Analysis:

This Policy is no longer relevant and should be deleted, as the Board of County Commissioners does not support the inclusion of hurricane shelters within the 5-year schedule of Capital Improvements.

Policy 12.1.15:

All new nursing homes and assisted living facilities that are licensed for more than 15 clients will have a core area to shelter residents and staff on site. The core area will be constructed to meet the Public Shelter Design Criteria that is required for new public schools and public community colleges and universities (“State Requirements for Educational Facilities,” 1999). Additionally this area shall be capable of ventilation or air conditioning provided by back-up generator for a period of no less than 48 hours.

Policy Achievement Analysis:

This Policy remains relevant and should be retained. However, the Policy should be revised to make consistent with current State and Local guidelines: delete the phrase, "...for more than 15 clients"; delete "48 hours" and replace with "72" hours; and revise the date reference to reflect "2007."

Policy 12.1.17:

Collier County is currently conducting a hurricane evacuation re-study. If warranted by the results of these studies, further restriction on development may be proposed.

Policy Achievement Analysis:

This Policy remains relevant and should be retained. However, for clarity and accuracy, the County recommends revising the Policy to read, "Hurricane Evacuation Studies for Collier County are periodically conducted by the State of Florida and Federal Authorities. If warranted by the results of these studies, further restriction on development may be proposed."

OBJECTIVE 12.2:

The County shall ensure that publicly funded buildings and publicly funded development activities are carried out in a manner that demonstrates best practice to minimize the loss of life, property, and re-building cost from the effects from hurricanes, flooding, natural and technological disaster events. Best practice efforts may include, but are not limited to:

- a. Construction above the flood plain;**
- b. maintaining a protective zone for wildfire mitigation;**
- c. installation of on-site permanent generators or temporary generator emergency connection points;**
- d. beach and dune restoration, re-nourishment, or emergency protective actions to minimize the loss of structures from future events;**
- e. emergency road repairs;**
- f. repair and/or replacement of publicly owned docking facilities, parking areas, and sea walls, etc.**

[This Objective is provided for contextual purposes only; no change is proposed]

Policy Relevance:

Policy 12.2.5:

The County shall consider the Coastal High Hazard Area as a geographical area lying within the Category 1 storm surge zone as presently defined in the 2001 Southwest Florida Regional Planning Council's Hurricane Evacuation Study, or subsequently authorized storm surge or evacuation planning studies coordinated by the Collier County Emergency Management Department and approved by the Board of County Commissioners.

Policy Achievement Analysis:

Policy 12.2.5 requires the County to consider the coastal high-hazard area as that area lying within the Category 1 evacuation zone as defined in the 2001 Southwest Florida Regional Planning Council Hurricane Evacuation Study.

It should be noted that the draft 2011 Evacuation Study has been completed, but is still under review by staff and the State.

This Policy is affected by changes to Chapter 163, Florida Statutes, which were adopted into law in 2006, as follows:

163.3178(2)(h) Requires a change to the definition of the Coastal High Hazard Area (CHHA) to be defined as the area below the elevation of the category 1 storm surge line as established by the SLOSH model. Ch. 2006-68, LOF.

This Policy remains relevant and should be retained, except that the definition of the CHHA should be revised consistent with 2006 legislative changes.

OBJECTIVE 12.3:

The County shall develop and maintain a task force that will plan and guide a unified County response to post-hurricane disasters.

[This Objective is provided for contextual purposes only; no change is proposed]

Policy Relevance:

Policy 12.3.2:

After a hurricane that necessitated an evacuation, the Board of County Commissioners shall meet to hear preliminary damage assessments. This will be done prior to re-entry of the population. At that time, the Commission will activate the recovery task force and consider a temporary moratorium on building activities not necessary for the public health, safety and welfare.

Policy Achievement Analysis:

Policy 12.3.2 states that, after a hurricane that necessitated an evacuation, the Board of County Commissioners will meet to hear preliminary damage assessments. This will be done prior to re-entry of the population. At that time, the Commission will activate the recovery task force and consider a temporary moratorium on building activities not necessary for the public health, safety and welfare.

This Policy remains relevant and should be retained. However, the Policy should be revised to remove the second sentence, and change “will” to “may” in the last sentence.

Policy 12.3.3:

The Recovery Task Force shall include the Sheriff of Collier County, the Community Development and Environmental Services Division Administrator, the Comprehensive Planning Director, the Zoning and Land Development Review Director, the Emergency Management Director and other members as directed by the Board of County Commissioners. The Board should also include representatives from municipalities within Collier County that have received damage from the storm to become members of the Recovery Task Force.

Policy Achievement Analysis:

Policy 12.3.3 recommends that the recovery task force will include local law enforcement authorities, the Community Development Administrator, Public Works Administrator, Planning and Zoning Director, Emergency Management Director and other members as directed by the Board of County Commissioners. Representatives from municipalities receiving damage from the storm should also be members of the recovery task force.

This Policy remains relevant and should be retained. However, the Policy should be revised to reflect current departmental references.

OBJECTIVE 12.4:

The County shall make every reasonable effort to meet the emergency preparedness requirements of people with special needs such as the elderly, handicapped, the infirmed and those requiring transportation from a threatened area. In the event of a countywide emergency, such as a hurricane or other large-scale disaster, the County Emergency Management Department shall open and operate one or more refuges for persons listed on the County's Special Needs Registry and their caregivers. Medical and support equipment at such refuges will include, but not necessarily be limited to, respirators, oxygen tanks, first aid equipment, disaster cots and blankets, and defibrillators.

Objective Achievement Analysis:

This Objective remains relevant and should be retained. However, the Objective should be revised as follows: delete, "people with special needs" and replace with "Persons with Special Needs (PSN)" within the first sentence; delete "...the County Emergency Management Department shall..." and replace with "...the County Emergency Management Department in coordination with the Collier County Health Department and other officials shall..."