

## **2. ALTERNATIVE PREDICTIONS OF FUTURE CONDITIONS**

The Corps is proposes to use a set of standardized Permit Review Criteria with the determination of criteria to be based upon a Natural Resources Overlay Map that identifies the locations where a project has a probability to adversely affect one or more natural resources. The Corps will determine, after consideration of comments submitted on this EIS, whether to implement the Permit Review Criteria or the alternative (no-action) continuation of current practice of identifying issues to be reviewed in a permit application. The criteria proposed are those natural resource issues that have the potential to be influenced by the results of a Corps permit decision. To discover this, the Corps compared five predictions of future conditions that could result from a combination of Corps and non-Corps decisions. These are called Ensembles. The five Ensembles (predicted futures) each have a map of the landscape as it might appear in 20+/- years. Each future includes legends that suggest ideas for various conditions or constraints applied to the permit and other decisions. These five Ensembles were in turn developed from what are called "alternatives" "developed by the Alternatives Development Group (ADG). The Corps initiated and hosted this group of community and agency representatives. The membership was balanced to represent the range of views of the community and to provide a mix of expertise. This section of the EIS (Section 2) describes the development of the Ensembles (predicted futures) that started with the ADG "alternatives" but ended with the actual Permit Review Criteria that the Corps proposes to implement.

### **2.1 EIS ENSEMBLES**

Through professionally facilitated meetings, the ADG defined 12 evaluation issues, agreed to 62 measurement factors, and then created and evaluated 28 alternatives". A final report of their work is found as an Appendix. As described in Section 1.1, the EIS study area was divided into sub-areas. Any individual ADG alternative covered only one of the four sub-areas. Several alternatives would apply to the same sub-area.

The Corps used the ADG work to assemble five EIS alternatives (called "Ensembles") each of which cover the entire study area.

Each of the alternatives" are described by a map and a legend.

Each map depicts what the landscape may or may not look like in 20+/- years. Many of the areas that are currently "native vegetation" but are predicted to be developed will require authorization by the Corps for wetland fill. Development could occur without wetland fill but based on previous permit decisions this is impracticable for some landowners. Most of the intensification of agricultural uses can occur without Corps permits. Therefore, the map represents a potential result of future individual decisions by the Corps, landowners, Counties, and others.

Each legend describes site design considerations, type of activity, mitigation, and other criteria that are or are suggested to be applied by the Corps, landowner, Counties, or other decision-makers to future projects inside the area delineated.

The maps delineate areas of "development", "agriculture", and "preserves" to characterize the predicted or suggested activity. They are not proposals that the Corps designate land use. They are used to quantify the effects of changes to the Corps or other regulatory agency's regulatory programs. For example, Ensemble S includes a legend "Development - Compensate Offsite for Wide Ranging Species". This legend (described at 2.3.4.2) suggests the Corps or other decision-makers require off-site

compensatory mitigation for future development in the area delineated. Therefore, Ensemble S is evaluated as if the future projects in this area were constructed with the criteria applied. For the evaluation factor related to wildlife, Ensemble S would be considered to have less adverse impact than another alternative that did not have the explicit criteria. However, for the evaluation factor related to economic sustainability, Ensemble S would be considered to have an adverse effect (higher costs). For each alternative, the EIS presents estimates of acres of wetland fill, area of habitat lost, change in water quality, etc. The reader can then see the tradeoffs between the various evaluation factors resulting from a change in criteria.

Four of the ADG alternatives" (one for each sub-area) and one of the EIS alternatives (Ensemble R) represent the current County Comprehensive Plans (that is, if all decisions matched these plans and these plans were not amended in the next twenty years). The remaining alternatives include ideas that the ADG members collectively or individually presented which they felt might occur or would like to see occur. The Corps may or may not receive applications that all mirror any single one of the maps.

Presentation of the five maps is simply a technique to identify the five different quantities of wetland fill that the Corps may be asked to authorize through permit applications in the next 20+ years. The five sets of legends provide ideas for criteria that could be adopted by the Corps and other decision-makers in the projects requiring wetland fill. The evaluation section of the EIS (Section 4) compares potential impacts and benefits if the fill is authorized and/or the criteria applied.

Some of the criteria found in the Ensembles are outside the jurisdiction of the Corps to implement. Much of the landscape could change (that on uplands) without Corps involvement. However, this EIS presents the larger picture to better place the Corps role in context with other Federal, State, local, and individual landowner actions. For example, the Lee County Comprehensive Plan states "Permitted uses in Wetlands consist of very low density residential and recreational uses that will not adversely affect the ecological functions of wetlands" and, later, "...the county will not undertake an independent review of the impacts to wetlands..." Collier County's Area of Environmental Concern Overlay "...has no regulatory effect." Both Counties refer the landowner to State and Federal permitting programs. Therefore, the landowner will look to other parts of the County Plans for criteria on density, type of activity, etc., and will be able to look at the EIS and Federal laws for criteria on wetlands.

### 2.1.1 IDENTIFICATION OF CRITERIA IN ADG ALTERNATIVES.

Each legend represents suggested review criteria. Each alternative map has from three to six legends. In order to identify all of the suggested criteria, a coding system was applied as described in Chapter VII of the Final Report from the Alternatives Development Group" (Appendix D). Each legend was then categorized into "families" and "subfamilies." A "family" is the general land cover characteristic of the legend. A "subfamily" is the narrative criteria applied to the legend. For example, the legends **Urban & Industrial** and **Develop (Compensate off-site for wide ranging species)** all envision that Corps Permits and/or other decisions will result in urban and/or suburban land cover. These legends are assigned to the same "Development" family. However, the **Develop (Compensate off-site...)** legend in ADG Alternative B2A envisions that the Corps' Permit decision will include off-site compensation. This criteria is not explicitly described by the **Urban & Industrial** legend of ADG Alternative B1A. Therefore, the two legends are assigned to different subfamilies within the "Development" family. Numerical codes are assigned to ease subsequent analysis. In this example, all three legends are coded family number 100 (Development). The **Urban** and **Industrial** legends are coded subfamily number 110 and the **Develop (Compensate off-site...)** is assigned subfamily number 130. The result is analogous to having a set of building blocks, each piece representing a unique subfamily code. Each of the alternatives" can then be depicted as assemblies of these building blocks.

### 2.1.2 OVERLAY OF ADG ALTERNATIVES

Using this coding scheme, the alternative maps were then overlaid to find which geographic locations were mapped with similar legends. The results are presented by figure VII-1 of the Final Report from the Alternatives Development Group (Appendix D), repeated here as **Figure 3A**. For 67% of the study area, the alternatives" mapped the same general land cover characteristic (family). These are the areas with crosshatching. Within any single crosshatch area, however, the alternatives" presented different descriptive language or criteria (subfamilies). Fundamentally, the alternatives do not vary the land cover type but vary in the review criteria to be applied. For 25% of the study area, the alternatives mapped a combination of two land covers. For example, in some locations the two might be Development and Preserve, or Preserve and Agriculture, etc. These are the areas in gray. For the remaining 8% of the study area, shown in white, the alternatives" map more than two covers.

### 2.1.3 DEVELOPMENT OF THE ENSEMBLES

Each "Ensemble" comprises four of the alternatives" created by the ADG. The ADG subdivided the study area into four pieces (called "Zoom A", "Zoom B" or "The Hub", "Zoom C", and "Zoom D") and created several alternatives for each. Each Ensemble selects one alternative from Zoom A, one from Zoom B, one from Zoom C, and one from Zoom D so that the Ensemble covers the entire study area. Alternatives with similar characteristics were placed in the same Ensemble. For example, Ensemble R consists of the alternative in Zooms A that represents the Lee County Comprehensive Plan, the alternatives each from Zoom B, C, and D that represent the Lee County and Collier County Comprehensive Plans. The other Ensembles were assembled based on a combination of: the similarity in the proportion of acreages mapped for land cover types (for example: alternatives within each Zoom that map the largest number of acres for the Development family are placed in Ensemble Q); the similarity of the suggested criteria (for example, the alternatives within each Zoom whose legends describe similar criteria to maintain the low density mix of uses within the Rural family are placed in Ensemble S); and the similarity of the individual alternative maps when joined to their neighbors.

### 2.1.4 CRITERIA ELIMINATED FROM EVALUATION

The subfamily coding system was used to ensure that all criteria found in the entire set of alternatives were represented in the Ensembles. For example, one of the alternatives" not assembled into an Ensemble describes criteria for Golden Gate Estates, but those criteria are duplicated in another alternative that was incorporated into Ensemble S.

### 2.1.5 USE OF ENSEMBLES

The evaluations in this EIS are presented by comparing five Ensembles, labeled Q, R, S, T, and U.

## 2.2 IMPLEMENTATION

The Corps anticipates that distribution and use of the EIS will enable a reduction in process time in some geographic areas and to more quickly focus efforts on relevant issues on complex projects. The following are the anticipated uses of this EIS.

First, the EIS places information in one document so that the public and reviewers are better informed of some of the tradeoffs between various environmental and other issues relevant to future reviews of permit applications. In particular, this will assist the permit reviewer to understand the terminology and interrelationships of the issues.

Second, the EIS discloses estimates of the collective effect of prospective decisions. The Ensembles presented by this EIS describe several "futures" that might result from a combination of actions by many landowners and, for those subset of projects that involve fill in wetlands, actions by the Corps. A landowner submits an application to the Corps requesting authorization to place fill in wetlands in order to construct some project on some parcel of land. The Corps considers the characteristics of the parcel

and the benefits and impacts ascribed to the proposed project to decide whether or not to issue a Department of the Army Permit (Permit). The Permit, if issued, authorizes the placement of fill. The parcel's "land cover type" changes from wetland to something else (for example, residential). For any single parcel that includes wetlands, a prediction of the future (say twenty years) land cover type depends on the combination of: (1) whether the landowner proposes to fill the wetlands; and (2) what the Corps decides after considering the project specific information. All of the landowners in the study area could possibly construct all of their projects in such a way that would result in a land cover type map that exactly matches Ensemble R. However, it is not unlikely that some of the landowners' applications and the Corps' permit decisions will not exactly match any one particular Ensemble. The Ensembles do not represent all the possible combinations of projects and permits but instead represent a range of possibilities. Each Ensemble represents the collective total of all the projects, including the subset of those with permit decisions rendered by the Corps. The accompanying evaluation of those Ensembles present the collective total benefits and impacts. The Corps permit reviewer can then better give appropriate weight to the project's incremental contribution to the cumulative total effect compared to the individual impact and/or benefit of the proposed project.

Third, the EIS lists the concerns that landowners can anticipate arising during application reviews. The Corps has direct jurisdiction over a subset of the evaluation factors presented in the EIS. However, the Corps permit decision does consider the effects of its decision on many of the other factors. No single application will see all of the EIS factors applied in its review. However, the evaluation results reported for some factors are particularly worrisome. For example, the magnitude of habitat loss for many of the wildlife listed under the Endangered Species Act will, if the loss occurs, greatly reduce the potential for recovery of the species. Factors such as these are picked out and listed in the Draft Permit Review Criteria in the Appendix. If adopted, this document will be used by the Corps to formally focus review effort on projects that affect these factors. It must be noted that the Corps can review these issues now under current law but through proposed use of the Permit Review Criteria existing manpower will be more consistently applied and applied only on applications needing that review.

Fourth, the EIS will facilitate, in geographic areas with fewer concerns, future development of General Permits or other mechanisms to expedite the Corps' administrative processes. The Overlay of Alternatives Map (Section 2.1.2) describes many of the geographic areas as having similar fundamental land cover characterization. The Corps intends to use the information in the EIS in developing several General Permits that cover this area, including ones for Golden Gate Estates and Lehigh Acres. The General Permits would include conditions or provisions to address the concerns described in the Permit Review Criteria. An example would be criteria for project design that, if implemented across many projects, would preserve habitat. Development of future General Permits is not part of the proposed action and appropriate NEPA analysis will be done if and when the Corps makes such a proposal.

## 2.2.1 USE OF THE "OVERLAY OF ALTERNATIVES" MAP

The Ensembles propose the same land cover type for 67% of the study area. For example, the alternatives created by the ADG variously use legends such as "urban," "industrial," or "development" on 14% of the study area to indicate that the land cover will be commercial, retail, residential and other types of urban or suburban development. These areas of similarity are mapped with cross-hatching on **Figure 3a**. The remaining cross-hatching represents development within the Lehigh Acres, Golden Gate Estates, and rural areas (8.8%), agricultural areas (5.4%) and preservation areas (38.8%). (This figure is also found in Chapter VII of the Final Report from the Alternatives Development Group.)

### 2.2.1.1 Sixty-Seven Percent of Overlay Map

Within the 67% crosshatched area, the Corps still will review certain details of the development's design to understand the impacts and benefits to various issues as required under Federal Law.

### 2.2.1.2 Thirty-Three Percent of Overlay Map

For the remaining 33% crosshatched portion of the study area, the Ensembles do not agree on the land cover types. For 25% of the study area, the difference is between two land cover types, for example, one Ensemble maps "preserve" and the others "development." This 25% is shown in gray on **Figure 3a**. For the remaining 8%, shown in white on **Figure 3a**, there are three or more land cover types mapped.

### 2.2.1.3 Twenty-Five Percent of Overlay Map

For the 25% (gray) area, the fundamental disagreement is on the appropriate geographic boundary between two adjacent land cover types, and commonly this is between "preserve" and some other land cover type. The quantity and location of native vegetation that is or is not preserved influenced many of the evaluation factors (presented in Chapter 4), particularly those related to wetland functions and fish and wildlife habitat. The focus of the Draft Permit Review Criteria in the Appendix has most of its questions related to wildlife reflecting this.

**INSERT FIGURE 3a OVERLAY OF ALTERNATIVES MAP**

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**FIGURE 3a. OVERLAY OF ALTERNATIVES**

#### 2.2.1.4 Eight Percent of Overlay Map

For the 8% (white) area, review of permit applications will be challenging. The evaluations in this EIS ascribe benefits to the local economy from expansion of development but the evaluations also show serious incremental impacts to natural resources. There is not a defined "threshold" number of acres of preserve or development where unequivocally a certain number of these acres are considered to be the ideal balance between natural resources and economic development. This EIS presents multiple evaluation factors and expresses each as relatively simple indices (such as percent of study area) that could be used to compare the many benefits and impacts.

#### 2.2.2 THE PROPOSED ACTION: PERMIT REVIEW CRITERIA"

The Permit Review Criteria and associated map is found at Appendix H. This document will be used by Corps Project Managers to base the level of effort in reviewing a applications for Department of the Army Permit under Section 404 of the Clean Water Act on the potential cumulative direct and indirect effects.

The Corps' decision whether to issue or deny a Permit is based on site and project specific information. The information is gathered to support the evaluation and weighing of the impacts and benefits of the proposed project on many factors, including but not limited to wetlands, wildlife, endangered species, and water quality. The decision will consider both the direct and immediate effects and the indirect (cumulative and secondary) effects of the proposal.

The Corps will use this document to focus effort on those factors relevant to the review of the individual projects. In geographic areas where there are few concerns the Corps may at some time in the future be able to reduce the processing time through administrative mechanisms such as General Permits.

The document lists many issues. Each issue has its own map. For example, a particular species has a map showing areas with a high probability that species habitat is present and a high potential that the loss of that habitat will adversely affect the species.

The number of issues applicable to a particular project will depend on how many of the individual maps intersect the project location in addition to other information. A location with a larger number of issues will receive a greater rigor of review. However, the maps do not predetermine the Corps permit decision. The maps are necessarily based on regional or statewide mapping programs. The applicant can submit and the Corps will use site-specific information to confirm the map (for example, whether habitat is actually present) or find the issue is not applicable due to the nature of the project.

The list of issues is a subset of the factors evaluated in the EIS. The five maps in the alternatives section of the EIS delineate areas of "development", "agriculture", and "preserves" based on various ideas of how the land in the study area may be or should be distributed in 20+ years. These maps represent the potential result of many individual decisions by the landowners, Counties, Corps, and others. One map represents the County Comprehensive Plans, that is, if all individual decisions collectively matched these plans and these plans were not amended in the next twenty years. These maps were used to prepare five estimates of acres of wetland fill, area of habitat lost, change in water quality, and other factors. Many of the ideas presented in the alternative maps to the Comprehensive Plan are ones beyond the Corps authority to implement. For example, if a project is designed to not require any fill in wetland or any construction in navigable waters, then the landowner's decision to build that project would not undergo a Corps permit review. However, the EIS presented, by comparing the evaluations of the five Ensembles, the difference potential effect of all projects to better understand the influence of the portion requiring wetland fill. The issues selected have the greater potential for degradation or improvement resulting from a Corps permit decision.

The narrative accompanying each issue is divided into four paragraphs: a description of the concern; the site-specific characteristics identifying the applicability of the issue to the project; a description of how the map was drawn; and information on assessment of the effect of the project. The map descriptions include references to the Florida Department of Transportation Land Use, Cover and Forms Classification System (FLUCFCS). This was used since is often used by applicants describing their project sites and is thought to be ease the convenience of future revisions of these maps with updated information.

The Permit Review Criteria are independent of the Comprehensive Plan. For example, the landowner would present a proposed project to either Collier County or Lee County. The County's review is based on the policies and criteria described in the County's Comprehensive Plan and other implementing ordinances, some of which (such as density) are keyed to the Future Land Use Map. Both Collier County and Lee County require that appropriate State and Federal permits be obtained either before issuance of the County Development Order or commencement of construction. If the proposed project involves fill in wetlands, the landowner also submits a permit application to the State under the joint application process with the Corps. The Corps' review is based on the policies published in the Code of Federal Regulations including the Guidelines for Specification of Disposal Sites for Dredged or Fill Material (404(b)(1) Guidelines) issued by the U.S. Environmental Protection Agency under Section 404(b)(1), 40CFR230. The Project Review Criteria has been developed consistent with the 404(b)(1) Guidelines, particularly Subpart B. The Permit Review Criteria acting in concert with the Comprehensive Plan, will assist all levels of government to support the Clean Water Act and Endangered Species Act.

### 2.2.3 ADDITIONAL ANALYSIS.

The evaluation factors used to analyze the effects presented in this EIS are not elaborate. Their purpose is to present the differences between the Ensembles. They are incorporated into the Permit Review Criteria to ensure this information is used in review of permit applications. The Corps recognizes that this EIS represents just one step in the development of an appropriate analysis that can appropriately describe the many ecological relationships and other issues across the landscape. The Corps is committed to, after the publication of this EIS, working with the U.S. Fish and Wildlife Service and other agencies to develop more detailed analysis tools to be ultimately incorporated into the Corps' decision processes. For example, there are fairly specific guidelines for protection of bald eagle nests from construction and other activities in the vicinity of the nest. There is no similar document (with such specificity) for many of the other evaluation factors. Once the detailed analysis tools are available to be used in project development and design, then these can be applied not only to review of applications but also to a re-evaluation of the predicted total change in the landscape to determine whether, and to what extent, there are adverse effects as defined by the Endangered Species Act.

### 2.2.4 PRESUMPTION

The many individual maps related to natural resource questions are overlaid on the figure in the Permit Review Criteria (repeated as Figure 3c on the following page). The area shaded represent areas with high potential value for wildlife and other wetland functions compared to the remainder of the area. Those projects requiring a Corps permit will undergo more rigorous review then in others. In addition, if site specific information confirm the presence and value of the natural resource, the Corps will presume alternative locations are available in areas of less value and expect an analysis over a large geographic area to determine whether any are practicable

### 2.2.5 ILLUSTRATIONS

Several hypothetical applications follow that illustrate the use of the two maps. The project sites are marked on **Figures 3b** and **3c**.

#### 2.2.5.1 Illustration "G"

The landowner for site "G" proposes to clear and fill wetlands to construct canals and dikes for agriculture. Some alternatives map this location as agriculture, some as preserve. This is part of the 25% of the study area that is "gray." The project is located within the gray area of the Natural Resources Overlay Map. Individual natural resource maps affected are those for the Florida panther and Audubon's caracara. The site is near areas mapped for four other species.

#### 2.2.5.2 Illustration "L"

The landowner for site "L" proposes to clear and fill wetlands to construct infrastructure for a residential development. All alternatives map this location for development but some map a wide preserve on either shore of the river. This is part of the 67% of the study area that is cross-hatched. The project is located within the gray area of the Natural Resources Overlay Map. The individual natural resource map affected is for the Scrub jay. The site is near areas mapped for four other issues, one of which is potential habitat connection along the shoreline.

#### 2.2.5.3 Illustration "J"

The landowner for site "J" proposes to clear and fill wetlands to construct homes. Some of the Ensembles map this location as residential development of this nature and other Ensembles map the remnant of the Picayune Strand as preserve. This is within the 25% of the study area that is "gray." The project located within the gray area of the Natural Resource Overlay Map. The individual natural resource maps affected are for the Florida panther, Red cockaded woodpecker, Flowway, Habitat connection, Herbaceous marsh, and is an area with high percentage of wetland.

#### 2.2.5.4 Illustration "K"

The landowner for site "K" proposes to clear and fill wetlands to construct homes. All of the Ensembles map this location for residential development and therefore it is part of the 67% of the study area that is cross-hatched. This project is outside the gray area of the Natural Resource Overlay Map. The project site is near areas mapped as Herbaceous marsh.

#### 2.2.5.5 Illustration "H"

The landowner for site "H" proposes to clear and fill wetlands to construct a residential development. One of the Ensembles maps this location for residential development but others map it as agriculture or preserve. This area is within the 8.4% of the study area that is shown as "white". The project is located within the gray area of the Natural Resources Overlay Map. The individual natural resource maps affected are for the Florida panther, Red cockaded woodpecker, Flowway, Habitat Connection, and is in an area with a high percentage of wetland.

### 2.2.6 Result

The Corps will prioritize its attention to projects that affect natural resources that have a high potential for adverse impact from the cumulative impacts of future individual permit decisions as described by the evaluations in this EIS. Potential cumulative impacts will influence the individual permit decision. This EIS does not replace consideration of individual circumstances unique to the site. In addition, others besides the Corps are encouraged to use this document since it represents visions presented by representatives of the community.

## 2.3 DESCRIPTION OF ENSEMBLES.

### 2.3.1 ALTERNATIVE FUTURES CONSIDERED

As detailed in the previous section, the Corps developed five of alternative "Ensembles" in an effort to streamline the presentation of the mass of information from the many alternatives developed by the ADG

(Appendix D). **Table 1** shows the relationship between the Ensembles and the alternatives" developed by the ADG. **Table 2** provides the expected land use acreages within the study area for each of the Ensembles. These Ensembles differ in their specific levels of preservation and protection of resources, as well as the development potential (see **Figure 4** comparing the expected land use distribution under the various Ensembles, and **Figures 5 through 9** which are maps depicting typical land use patterns expected under the various Ensembles).

**INSERT FIGURE 3b**

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**FIGURE 3b. SITE LOCATIONS FOR ILLUSTRATIONS ON OVERLAY MAP**

**INSERT FIGURE 3c**

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**FIGURE 3c. SITE LOCATIONS FOR ILLUSTRATIONS OF NATURAL RESOURCES OVERLAY MAP**

**INSERT TABLES 1 and 2**

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**TABLE 1. RELATIONSHIP BETWEEN THE ALTERNATIVE ENSEMBLES AND THE 28 ADG ALTERNATIVES**

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**TABLE 2. EXPECTED LAND USE FOR SOUTHWEST FLORIDA STUDY AREA FOR ALTERNATIVE ENSEMBLES**

**INSERT Figure 4**

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**FIGURE 4. COMPARISON OF EXPECTED LAND USE UNDER THE ALTERNATIVE ENSEMBLES**

**INSERT FIGURE 5**

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**FIGURE 5. ENSEMBLE Q**

**INSERT FIGURE 6**

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**FIGURE 6. ENSEMBLE R**

**INSERT FIGURE 7**

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**FIGURE 7. ENSEMBLE S**

**INSERT FIGURE 8**

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**FIGURE 8. ENSEMBLE T**

**INSERT FIGURE 9**

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**INSERT FIGURE 9. ENSEMBLE U**

## 2.3.2 ENSEMBLE Q

This grouping of alternatives builds on the Comprehensive Plans and provides a larger acreage of development than the comprehensive plan. The Ensemble also suggests the establishment of new flowways or restoration of historic flowways. The alternatives used to assemble this Ensemble are: Zoom A, Alternative 4; Zoom B, Alternative 4A; Zoom C, Alternative 4; and Zoom D, Alternative 4.

**2.3.2.1 Legend: Development** Within the Urban areas, flowways improvements were shown in various locations and connected to the Preservation areas. Some of these are as described in the South Lee Watershed Plan presented by the South Florida Water Management District. The western end of Golden Gate Estates was included in the Urban designation. An increase in density within Golden Gate City is also proposed.

**2.3.2.2 Legend: Development (Transition)** Those lands currently in agriculture that will likely change to the Urban designation.

**2.3.2.3 Legend: Lehigh Redevelopment** Suggests Lee County should consider redevelopment alternatives, particularly for the Greenbriar Area, to restore flowways.

**2.3.2.4 Legend: Lehigh Water Storage** An area in southeast Lehigh Acres was identified as potential use for water storage.

**2.3.2.5 Legend: Agriculture** The definition for Agriculture is the same as the Comprehensive Plan.

**2.3.2.6 Legend: Rural** The definition is the same as the Comprehensive Plan.

**2.3.2.7 Legend: Golden Gate Estates** The remainder of Golden Gate Estates would retain the same Rural Residential designation as found in the Comprehensive Plan.

**2.3.2.8 Legend: Preserve** Flowways are proposed through the urbanized areas and, within Preservation Lands, removal or culverting of various roads to restore flowways, for example, culverts under I-75 and Tamiami Trail to improve sheetflow of surface waters. Preservation Lands include lands surrounding Ten Mile Canal and certain flowways leading to Six Mile Cypress Slough and others leading to the Caloosahatchee River. Of the Ensembles, this one proposes the narrowest footprint for Preservation Lands within Camp Keais Strand, restricting it to areas not currently under agriculture, but proposes culverts in the Strand to improve flows.

**2.3.2.9 Legend: Mining Lands** Mining lands are shown separate from Agriculture".

**2.3.2.10 Legend: Pending Review** Two areas are designated Pending Review as the group preparing the alternative could not agree whether to designate the location as development or preservation.

## 2.3.3 ENSEMBLE R

This grouping of alternatives represents the "status quo" and incorporates the Lee County and Collier County Comprehensive Plans, including the implementing policies and procedures for approval of projects. The alternatives used to assemble this Ensemble are: Zoom A, Alternative 1; Zoom B, Alternative 1; Zoom C, Alternative 1; Zoom D, Alternative 1.

**2.3.3.1 Lee County Comprehensive Plan (Ordinance 89-02 with amendments)**  
Chapter II (Future Land Use) of the Lee County Comprehensive Plan states the first goal is “To maintain and enforce a Future Land Use Map showing the proposed distribution, location, and extent of future land uses by type, density, and intensity...” Under this first goal are listed approximately 22 categories. Other goals in this chapter and other chapters in the Ordinance provide specific policies for evaluation of proposed development designs or rezoning. Chapter XIII (Procedures and Administration) states “...all development and all actions taken in regard to development orders shall be consistent with the plan...” The Ordinance also provides for a Year 2010 Overlay which divides the County into 105 sub-districts. Within each district is assigned an acreage for each land designation within that district. The number of acres are those proposed for the year 2010. No development orders will be issued which exceed these acreage numbers. This overlay is being replaced by a Year 2020 Overlay which divides Lee County into 20 Planning Communities. Therefore, the Future Land Use Map shows “build-out” acres for each designation, but the acres projected for the year 2020 will be something less. The Ordinance itself states “With the exception of Cape Coral and Lehigh Acres, the County’s urban areas will be built out by 2020.” Due to the difficulty of mapping these 2020 projections, the alternative was created using the “build-out” map. It appears the evaluations were generally performed using “build-out” although at least one sub-group discussed the 2020 overlays while preparing their evaluations.

**2.3.3.2 Collier County Future Land Use Element of the Growth Management Plan (Ordinance 97-67)** The Collier County Ordinance states the goal is “To guide land use decision-making...” and provides several objectives and policies. The ordinance also defines approximately twelve land use designations that “...generally indicate the types of land uses for which zoning may be requested.” For each designation, the ordinance describes the uses and standards to be applied and shows the properties affected on the Future Land Use Map. Note that Ordinance 97-67 is the amendment of the current Future Land Use Element and is not in effect (as of May 11, 1998) while concerns raised by the Florida Department of Community Affairs(DCA) are resolved. The Land Development Code (Ordinance 91-102) implements applicable portions of the Growth Management Plan. Article 2, Zoning, includes, among other things, a requirement for open space and for special requirements in areas of environmental sensitivity designated as Special Treatment Overlay District. Article 3, Development Requirements, includes, among other things, a requirement for an Environmental Impact Statement for certain projects, and various requirements for protection of natural vegetation and endangered species.

**2.3.3.3 Land Use Legends** The Ensemble uses five land use legends: Agricultural; Industrial; Preserve; Rural; and Urban. The Lee County Future Land Use Map shows 22 land use designations and the Collier County Future Land Use Map shows 12. These 34 designations were collapsed into five simply to ease the preparation of other alternatives and for convenience in evaluation. Agricultural represents Density Reduction/Groundwater Resource (Lee) and Agricultural/Rural Mixed (Collier). Industrial represents Industrial Development, Industrial Interchange, Industrial Resource (Lee) and Industrial District (Collier). Preserve represents Wetlands, portions of Density Reduction Groundwater Resource (Lee), and Agricultural/Rural Mixed Use District (Collier) that currently are or are proposed to be preserved and managed to maintain natural resource values. Rural represents Rural, Rural Community (Lee), Estates Designation, and Rural Settlement Area District (Collier). Urban represents Central Urban, Suburban, Outlying Suburban, Urban Community, University Community, the various Interstate Highway Interchange areas (except for the Industrial and the Industrial Commercial types), Public Facilities (other than certain parks that were placed in the preserve legend). New Community, and the various Airport areas (Lee), Urban and Commercial sub-districts under the Urban Designation (except for the Industrial District), Urban Residential Sub-district, and Mixed Use Activity Center Sub-District (Collier).

## 2.3.4 ENSEMBLE S

This grouping of alternatives represents the Ensemble that provides greater emphasis on listed species and their habitat, particularly wide-ranging species such as the Florida panther and the Florida black bear. Other foci of this Ensemble are restrictions on the clearing of native vegetation, preservation and restoration of habitat corridors and flowways, and increased regulatory and public awareness of the presence and extent of sensitive resources. The alternatives used to assemble this Ensemble are: Zoom A, Alternative 2; Zoom B, Alternative 2A; Zoom C, Alternative 2; and Zoom D, Alternative 2A. In some cases, some particular criteria were proposed for one alternative, but not explicitly repeated in others. Therefore some of the narratives below note to which portion of the study area the criteria applies (each portion labeled either Zoom A, B, C, or D).

**2.3.4.1 Legend: Development** Within Zoom A, flowway improvements are proposed. Within Zoom C, the Ensemble proposes encouraging planting of emergent and shoreline planting in stormwater retention lakes and continuation of the Corps standards for wetland protection. The alternative also adopts what are called "Urban Zone" criteria that requires project designs will: restore flowways; retrofit residential septic systems and package treatment plants; provide adequate hurricane shelters and evacuation times; restore or retrofit buffer zones around wetlands, flowways, natural streams, rivers and creeks; and, meet Pollution Load Reduction Goals when set.

**2.3.4.2 Legend: Development - Compensate for Wide Ranging Species** An area is mapped for Development with a requirement for off-site compensatory mitigation for wide-ranging species.

**2.3.4.3 Legends: Lehigh Acres Zone and Lehigh Acres Greenway** Allows development but proposes criteria that includes: identify existing wetlands, location of historic flowways, and potential water storage areas (per pre-Townsend Canal); identify development concentrations; identify xeric oak scrubs; transfer development rights from important resource areas (existing wetlands, xeric scrub) to development clusters; redistribute/reassign densities for a more balanced community that includes an appropriate mix of uses (i.e., mix of single-family, multifamily, etc.); geographically cluster people to central area of Lehigh Acres where highest land and least amount of wetland are located and move development away from the eastern and southeastern areas of Lehigh Acres; adjacent rural lands should have opportunities to be included in Lehigh Acres planning process to prevent urban sprawl in unregulated areas; abandon major infrastructure plans that promoted growth inconsistent with these criteria; where zones vacated, abandon/retrofit infrastructure (canals, roads); create regional stormwater management facilities to benefit Caloosahatchee/Orange Rivers, water quality restoration and protect Hickey and Bedman Creek watersheds. Since the projected growth is generally in an "L" pattern for near future, try to develop a "greenway" approximately 2 miles wide that extends north from State Road 82 along the County line on the east side of Lehigh Acres and connect north to Greenbriar Swamp and Hickey Creek, Bedman Creek watersheds (which include wetlands, scrubs and water storage); and a potential appropriate location for a regional water storage facility is adjacent to existing Harnes Marsh.

**2.3.4.4 Legend: Golden Gate Estates - Zone 1** Zone 1 is the more densely developed western Golden Gate Estates. Criteria proposed include: avoid/minimize and mitigate wetland impacts; culverting entrance roads; address listed species concerns; development of an educational pamphlet on resource issues; and, implementation of a Florida Yards and Neighborhood program.

**2.3.4.5 Legend: Golden Gate Estates - Zone 2** Zone 2 is the eastern portion of Golden Gate Estates toward Picayune Strand. Criteria proposed include: no more than 10% fill; no more than 50% fill in pervious areas; no impeding sheet flow; elimination of exotics; develop pamphlet on resource issues; Florida Yards and Neighborhood program; and culverting entrance roads. Zone 2 would also be designated a receiving area for mitigation.

**2.3.4.6 Legend: Agriculture - Limited Intensification** The Ensemble “assumes limited intensification of use, that is, no changes that require additional loss of native habitat, no changes (such as intensification of citrus) that would lower hydrology. For example, range and improved range stay the same, vegetable crops change or go to fallow field and back again. No golf course or ranchette development, as these are not associated with true agriculture.” The Ensemble assumes rotation of crops but no additional clearing.

**2.3.4.7 Legend: Rural Low Density Criteria - Zoom A** In Rural Residential, the alternative adds development of greater planning detail to identify existing flowways, forested habitats, and seasonal wetlands that are large or contiguous to one another. This information would then be used to protect these areas in a connected landscape as the area develops. Within Zoom C, two areas of rural are mapped immediately adjacent to Golden Gate Estates, one area north of Golden Gate Estates and one area south. For the north area, the criteria include: avoid and minimize impacts to wetlands; protect nesting areas; mitigate wide-ranging species including mangrove fox squirrels, off-site; and, maintain or improve hydrology (for example, weirs in Cocohatchee Canal). For the south area, the criteria include: avoid and minimize impacts to wetlands; protect red-cockaded woodpecker habitat or mitigate off-site when their viability is affected; mitigating off-site for wide-ranging species (black bear); and maintain or improve hydrology (for example, the depth of the I-75 canal). For both north and south areas, the alternative also adopts the Buffer Transition Zone criteria that requires project designs will: result in no net loss of wetland acreage and function; result in no net loss in historical water table height and recharge area; not alter water sheet flow characteristics; contribute to the restoration of historic flowways; preserve buffer zones around wetlands, flowways, natural streams, rivers, and creeks; not impact water quality; not contribute to hurricane shelter deficit nor increase evacuation times; and implement the principals adopted by the Estero Bay Agency on Bay Management (copy enclosed in Appendix F).

**2.3.4.8 Legend: Preserve Criteria** Within Zoom A, the area of Preservation Lands was drawn to emphasize connections between the Rural Residential and Airport preservation areas to the Six Mile Cypress Slough and between the Slough and Estero Bay. Preservation Lands were also drawn in wetland areas in the Rural areas between Lehigh Acres and the Caloosahatchee River. Within Zoom B, the mapping of Preserve used the Land Conservation/Preservation Strategy Map adopted by the Estero Bay Agency on Bay Management (copy enclosed in Appendix F), added connections to the boundary of the CREW for long range species, and proposes riparian corridors through the urban areas. Within Zooms C and D, the Ensemble proposes expansion of preserves beyond that mapped by the Comprehensive Plan and provides the following criteria for project design and review: no public utilities; no new or expanded transportation; no well-field expansion; restoration or retrofit of certain areas with hydrologic problems (the retrofits listed are: add culverts under Tamiami Trail; "fix" I-75 canal plugs; protect Rookery Bay watershed; "fix" District 6 drainage basin works; "fix" Cocohatchee Canal; restore Clam Bay; and "fix" Golden Gate Canal to protect Naples Bay); and use as mitigation receiving areas only those portions of Preservation Lands that are currently not in public ownership.

**2.3.4.9 Mining:** Mining is not identified separately as a category but is classified as either Rural or Preserve depending on the ultimate use.

## **2.3.5 ENSEMBLE T**

This Ensemble seeks to increase the area of preserves through restore, retrofit, and redevelopment of vacant lands within Lehigh Acres, greater protection afforded to isolated wetlands, and limitation on the extent of clearing and filling activities, within Golden Gate Estates and other areas. Agricultural activities are proposed to be limited to existing acreage with limited intensification therein. Flowways and connectivity of habitat would be improved and/or restored. The alternatives used to assemble this Ensemble are as follows. The alternatives used to assemble this Ensemble are: Zoom A, Alternative 3A; Zoom B, Alternative 2B; Zoom C, Alternative 3A; and Zoom D, Alternative 3. In some cases, some

particular criteria was proposed for one alternative, but not explicitly repeated in others. Therefore some of the narratives below note to which portion of the study area the criteria applies to (each portion labeled either Zoom A, B, C, or D).

**2.3.5.1 Legend: Development** Within Zoom D, the Ensemble proposes flowway improvements along the Cocohatchee Canal, Golden Gate Canal, and sloughs in eastern Naples, coordinated with improvements within Preservation Lands.

**2.3.5.2 Legend: Lehigh Acres Development and Lehigh Acres - Acquire, Restore, Fix (ARF)** Within Lehigh Acres, this Ensemble proposes an Acquire, Restore, Fix (ARF), similar to the Restoration, Retrofit, and Redevelopment (3 R's) approach proposed for another alternative, to remove roads and canals in vacant areas to restore hydrology and preserve wildlife habitat.

**2.3.5.3 Legend: Agriculture and Agriculture - Maintain Intensity** Areas would remain agricultural" but also delineated a sub-area where there would be no intensification in activity.

**2.3.5.4 Legend: Agriculture - If End go to Preserve** Current agriculture would continue with limited intensification but if agriculture ceases, then the lands would be placed in preservation.

**2.3.5.5 Legend: Golden Gate Estates Criteria** Within Zoom C, permitting would continue under the current processes but with additional protection afforded isolated wetlands by the following criteria: no General Permits; determination of wetland jurisdiction prior to Collier County permitting; reconnection of wetlands along historic flowways; and, limitations on the clearing of residential lots. Within Zoom D, criteria are: no more than 10% fill; no more than 50% fill in pervious areas; no impeding sheet flow; elimination of exotics; develop pamphlet on resource issues; Florida Yards and Neighborhood program; and culverting entrance roads. This area would also be designated a receiving area for mitigation.

**2.3.5.7 Legend: Rural** No particular criteria noted.

**2.3.5.8 Legend: Preserve** Within Zoom A, the areas mapped Preserve provided filter marshes along Ten Mile Canal and the canals leading from Lehigh Acres. In addition, lands south of the Airport are proposed to be preserved. Within Zoom B, the areas mapped Preserve were based on an assembly of several items: the preserves shown in the Comprehensive Plan, all proposed acquisitions; the Strategic Habitat Conservation Area mapping for the Florida Panther; and, the Priority 1 and 2 areas of the Florida Panther Habitat Preservation Plan. It was found that all mapped eagle nests, rookeries, rare native plant communities, seasonal wetlands and flowways, and various coastal resources of interest were encompassed within these areas. Within Zoom D, the Ensemble proposes culverts within Camp Keais Strand and across Tamiami Trail to improve flowways.

**2.3.5.9 Legend: Pending Review** The group preparing the alternative could not agree whether to designate the location as development or preservation.

**2.3.5.10 Mining:** Mining is considered in the Agricultural category to the extent consistent with the Comprehensive Plan.

## 2.3.6 ENSEMBLE U

This Ensemble proposes the largest area of preserve among the Ensembles through criteria that limit the conversion of natural vegetation to other land cover types. This criteria also seeks to increase the difficulty of placing fill in wetlands by "strict" application of the presumption, under the EPA Section 404(b)(1) guidelines, that alternative non-wetland sites are available. The alternatives used to assemble

this Ensemble are: Zoom A, Alternative 5; Zoom B, Alternative 3B; Zoom C, Alternative 1A; and Zoom D, Alternative 1A. In some cases, some particular criteria was proposed for one alternative, but not explicitly repeated in others. Therefore some of the narratives below note to which portion of the study area the criteria applies to (each portion labeled either Zoom A, B, C, or D).

**2.3.6.1 Legend: Development** Flowways are included through the urban areas.

**2.3.6.2 Legend: Development: Urban Zone and Lehigh Acres Urban Zone** For the Urban Zone within Zoom A, the alternative proposes "...a presumption that alternatives exist to locating dredge and fill activities in creeks, rivers, other historic flowways and adjacent wetlands; and to locating dredge and fill activities in isolated wetlands identified as important to wading birds, other species of concern, water quality, groundwater recharge or flood control." The proposal also describes numerous criteria for the Corps to apply during permit review. For example, certain limits to the use of Nationwide and General Permits, promotion of the restoration of flowways, and restoration of buffer zones. The proposal states the vision is, in part, to "...direct development into this zone...while maintaining watershed integrity within the zone."

**2.3.6.3 Legend: Lehigh Acres ARF Zone** For the Acquire, Restore, Fix (ARF) Zone within Lehigh Acres, the alternative proposes that the "Corps strictly applies the Section 404(b)(1) Guidelines, including: (1) a strong presumption that practicable alternatives exist outside of the ARF Zone to dredge and fill activities (except restoration/retrofit activities)..." The proposal also describes numerous criteria for the Corps to apply during permit review. For example, certain limits to the use of Nationwide and General Permits, application of the criteria of the Big Cypress Area of Critical State Concern regulations, and restoration of flowways. The proposal states the vision is, in part, to "...protect and restore critical resources..." The complete set of criteria is enclosed in Appendix F.

**2.3.6.4 Legend: Golden Gate Estates Criteria** A flowway program is suggested though without details. Within the more densely developed western Golden Gate Estates, criteria proposed include: avoid/minimize and mitigate wetland impacts; culverting entrance roads; address listed species concerns; development of an educational pamphlet on resource issues; and, implementation of a Florida Yards and Neighborhood program. Within the eastern portion of Golden Gate Estates (toward Picayune Strand), criteria proposed include: no more than 10% fill; no more than 50% fill in pervious areas; no impeding sheet flow; elimination of exotics; develop pamphlet on resource issues; Florida Yards and Neighborhood program; and, culverting entrance roads. The eastern portion would also be designated a receiving area for mitigation.

**2.3.6.5 Legend: Agriculture and Agriculture - Maintain Intensity** Some portions of the areas mapped Agriculture propose additional criteria that current agricultural activities would continue but intensification would be limited.

**2.3.6.6 Legend: Rural Residential Zone** Within Zoom A, the proposal provides criteria for an Agricultural Zone and a Buffer Zone. These would be applied to the Rural Residential designation of this alternative. The proposal provides "...a strong presumption that alternatives exist outside.." either the Buffer Zone or Agricultural Zone and includes numerous criteria for the Corps to apply during permit review. The proposal states the vision is, in part, that agricultural "...should remain in agricultural use, compatible with conservation purposes..." and to "...discourage urban expansion in and through..." the Buffer Zone. The complete set of criteria is enclosed in Appendix F.

**2.3.6.7 Legend: Rural Development Criteria.** Criteria proposed are: one residential unit per five acres (overall); clustering; preserve 50% of the land area in natural state; maintain corridors, flowways with connectivity outside project boundaries; and 100% wetland preservation/restoration.

2.3.6.8 Legend: Preserve Within Zoom A, this Ensemble proposes denial of all permits in the areas mapped Preserve. The proposal states the vision is, in part, that these areas would be "...off limits to future development activity." The complete set of criteria is enclosed in Appendix F. Within Zoom B, the areas designated Preserve were based on the Land Conservation/Preservation Strategy Map adopted by the Estero Bay Agency on Bay Management. Included are flowways through the urban areas and within existing agricultural areas. Within Zoom D, areas mapped as Preserve include historic flowways within Golden Gate Estates and along Camp Keais Strand.

2.3.6.9 Legend: Mining Lands Mining lands are mapped with no comment.

## **2.4 ALTERNATIVE FUTURES NOT WITHIN JURISDICTION OF LEAD AGENCY**

The charge to the ADG specifically set forth the goals for the development of alternatives which protect natural environmental values, provide for sustainable economic growth, manage appropriate changes in water flows and quality, and respect public involvement and private rights. Some of the specific aspects set forth in a particular alternative will not be within the jurisdiction of the Corps. First, the Corps has jurisdiction over the placement of fill in wetlands and other Waters of the United States. Wetlands cover a portion of the study. Only those projects that are dependent upon the filling of wetlands will be reviewed by the Corps. Second, the Corps only reviews activities proposed by and to be performed by the landowner. The Ensembles describe a range of possible activities that may or may not be proposed by the landowners. However, the analysis of the cumulative benefits and impacts presented by the Ensembles are within the purview of the Corps because the Corps must consider the cumulative impacts of its decision to issue a permit. Even though the permits that will be issued are only a subset of all the activities that will occur in the study area, the activities authorized by these permits will contribute to the cumulative total.

## **2.5 COMPARISON OF CRITERIA**

**Table 3** summarizes the issues found in the Permit Review Criteria that the Corps proposes to implement, lists the criteria suggested by the Ensembles and compares the evaluation factors that were considered in the development of the Proposed Action (standardized identification of issues by use of the Permit Review Criteria).

## **2.6 MITIGATION**

Unavoidable impacts proposed in applications for a Federal dredge and fill permit will be evaluated on a case-by-case basis, and compensatory, project-specific mitigation for wetland acreage and function will be addressed at that time.

## **2.7 AUTHORITIES TO IMPLEMENT**

The U.S. Army Corps of Engineers [U.S. Fish and Wildlife Service, and the U.S. Environmental Protection Agency] will exercise its [their] authority as described below.

### **2.7.1 U.S. ARMY CORPS OF ENGINEERS**

Pursuant to Section 404 of the Clean Water Act, the Corps of Engineers has regulatory authority to permit the discharge of dredged or fill material into wetlands and other waters of the United States at specified disposal sites. The Corps conducts a public interest review of the probable impact of the proposed activity and its intended use. The review covers nineteen (19) factors, including effects upon conservation, fish and wildlife values, recreation, water quality, and cultural values. The guidelines pursuant to Section 404(b) of the Act require that impacts to the aquatic environment be avoided and minimized to the extent practicable. Also, unavoidable impacts are to be compensated (mitigated) to the extent practicable. A permit is typically issued provided that the proposed use is not contrary to the public interest, and is in compliance with the guidelines promulgated by the EPA pursuant to Section 404(b) of the Clean Water Act.

In determining whether to issue a permit, the Corps must also comply with other requirements including, but not limited to, the Section 7 of the Endangered Species Act of 1973 (50CFR part 402), the National Environmental Policy Act of 1969, the Coastal Zone Management Act, Sections 401, 404, and 404b(1) of the Clean Water Act of 1977, Section 10 of the Rivers and Harbors Act of 1899, Fish and Wildlife Coordination Act, and other applicable Federal laws. Modifying land for new uses also involves zoning, land use planning, water management, and other regulatory/planning requirements at the local, regional, State, and Federal level.

The Administrator of the EPA has the authority to prohibit the specification of any defined area, and to deny the use of any such defined area, for the placement or excavation of fill material. This veto authority can be exercised (only after notice and opportunity for public input and review) where the discharge of materials will have an unacceptable adverse effect on potable water supplies, fishery areas, wildlife areas, or recreational areas.

Memoranda of Agreement between the Department of the Army and the Department of the Interior (USFWS), the Department of Commerce (National Marine Fisheries Service), and the EPA allow the “elevation” of the decision to issue a permit above the District level pursuant to Section 404(q) of the Clean Water Act. These decisions to elevate are typically the result of: insufficient interagency coordination (procedural failure or failure to resolve concerns raised by the commenting agency(s)); significant new information being developed that did not previously exist; or the project raising environmental issues of national importance requiring policy level review. The permit decision is first elevated to the Division level, and if not resolved there, the commenting agency has the option to further elevate the decision to the national level, where the office of the Secretary of the Army would review the record, and Corps Headquarters would issue guidance to the District Engineer as to the disposition of the permit application.

## 2.7.2 U.S. FISH AND WILDLIFE SERVICE

Section 7 of the Endangered Species Act (16 U.S.C. 1531 *et seq.*) (ESA) outlines the procedures for Federal interagency cooperation to conserve Federally listed species and designated critical habitats. Section 7(a)(1) directs all Federal agencies to utilize their authorities in furtherance of the purposes of the ESA by carrying out programs for the conservation of species listed pursuant to the ESA. Section 7(a)(2) requires that each Federal agency, in consultation with the Secretary (Secretary of the Interior/Secretary of Commerce) shall ensure that any action authorized, funded, or carried out is not likely to jeopardize the continued existence of a listed species or result in the destruction or adverse modification of designated critical habitat.

Consultation with the U.S. Fish and Wildlife Service and the National Marine Fisheries Service (Services) in accordance with Section 7 of the ESA was not completed for any alternative presented in this DEIS. (The term “Services” is used to generically refer to both agencies together. This is not meant to imply that all actions discussed herein are taken by the Services jointly.) Actions proposed within the framework of this EIS will undergo consultation, either formal or informal, as appropriate.

The Corps will prepare biological assessments for “major construction activities” which may significantly affect the quality of the human environment as referred to in the National Environmental Policy Act of 1969 (42 U.S.C. 4321 *et seq.*). Major construction activities include dams, buildings, pipelines, roads, water resource developments, channel improvements, and other such projects that modify the physical environment and that constitute major Federal actions.

Although a biological assessment may not be required for all projects proposed within the framework of this EIS, formal consultation cannot be initiated until an assessment of effects is completed. The Corps may submit a biological assessment, or some other form of biological evaluation, early to benefit from the informal consultation process. The Corps may also request early consultations with the Services to

reduce the conflicts between listed species or critical habitat and Proposed Actions. Early consultation is an optional process that occurs before a prospective applicant files an application for a Federal permit. To qualify, a prospective applicant must provide the Corps, in writing: (1) a definite proposal outlining the action and its effects; and (2) intent to implement the proposal, if authorized.

A biological evaluation will be completed if listed species or critical habitat may be present in the action area. The Corps may designate the applicant or a non-Federal representative (often a consultant) to prepare the evaluation, although the Corps is responsible for the content of the evaluation and for the findings of effect. The evaluation ensures the Corps involvement and increases the chances for resolution during informal consultation.

The evaluation will address all listed and proposed species found in the action area, not just those listed and proposed species likely to be affected, to help make the determination of whether the proposed actions are likely to adversely affect listed species and critical habitat. Because proposed species will be addressed, the evaluation will help determine the need for conference as well as formal consultation. The evaluation should include a detailed description of all aspects of the proposed action; the results of surveys to determine the presence of listed species or their habitat; an analysis of the likely effects of the proposed action on the species or critical habitat based on biological studies, review of the literature, and views of species experts. The evaluation should also describe any known unrelated non-Federal activities, or cumulative effects, which are reasonably certain to occur and that are likely to affect listed species or critical habitat.

If, after review of the biological evaluation, the Corps determines that a proposed project has no likelihood of adverse effect, the Corps will request written concurrence from the Services. The Services' letters of concurrence, based on review of all biological information, completes informal consultation. Although not required, the Corps may also request written concurrence from the Services if a proposed action will have no effect on listed species or critical habitat. If the Corps determines that a proposed action may adversely affect listed species or critical habitat, the Corps will initiate formal consultation through a written request to the Services. The Services may meet or communicate with the Corps and applicant to gather additional information necessary to conduct the consultation. With early coordination and cooperation, the Services ensure the Biological Opinion, including an Incidental Take statement, is prepared and delivered within 135 days of initiation of formal consultation.

### 2.7.3 U.S. ENVIRONMENTAL PROTECTION AGENCY

The Environmental Protection Agency (EPA) has the authority to administer the Clean Water Act (CWA) statutes and regulations, except for State water quality certification (Section 401) which is administered by the Florida Department of Environmental Protection.

The Clean Water Act (CWA) Section 404 dredge and fill program has not been delegated to the Florida Department of Environmental Protection and is administered by the Army Corps of Engineers. The EPA's role in the CWA Section 404 process is to provide independent comments on proposed permit applications to ensure the CWA Section 404(b)(1) Guidelines are met. In addition, the EPA has the authority to elevate permit objections under the CWA Section 404(q) process for projects that involve aquatic resources of national importance. In addition, under the CWA Section 404(c) "veto authority" the EPA must determine whether the proposed discharge of dredged or fill material will have an unacceptable adverse effect on either municipal water supplies, shellfish beds and fishery areas, wildlife, or recreational areas. The veto authority may be used before, during or after the Army Corps' action on a permit application. The EPA may also exercise this authority in the absence of a permit application. The EPA is the only Federal agency that has the regulatory authority to veto a proposed project and to that end, the EPA has the final decision but also the burden of proof.

## 2.7.4 FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

Section 401 of the CWA requires any applicant for a Federal permit that may result in a discharge of a pollutant into waters of the United States to obtain a certification in which the discharge originates. This certification must pertain not only to the construction of a facility, but also to the subsequent operation of the facility. In Florida, issuance of a State stormwater permit in accordance with Chapter 62-25, Florida Administrative Code (F.A.C.), or an Environmental Resource Permit (ERP) in accordance with Part IV of Chapter 373, Florida Statutes constitutes State water quality certification. Alternatively, a No-Permit-Required letter from the State signifies compliance with State water quality certification procedures.

Authorization for use of Sovereign submerged lands (under Chapter 18-21, F.A.C.) are reviewed concurrent with the ERP application and one cannot be issued without the other. "Sovereign submerged lands" means those lands including but not limited to, tidal lands, islands, sand bars, shallow banks, and lands waterward of the ordinary or mean high water line, beneath navigable fresh water or beneath tidally-influenced waters, which the State of Florida acquired title on March 3, 1845, by virtue of statehood, and which have not been heretofore conveyed or alienated. Authorization for use of Sovereign submerged lands can be issued by the State permitting agency or through an action of the Governor and Cabinet sitting as the Board of Trustees of the Internal Improvement Trust Fund.

Section 307 of the Coastal Zone Management Act of 1972 requires agencies conducting development projects which directly affect a states coastal zone to comply to the maximum extent practicable with the state's approved coastal zone management program. The Act also requires any non-Federal applicant for a Federal permit to conduct an activity affecting land or water uses in the state's coastal zone to furnish a certification that the proposed activity will comply with the state's coastal zone management program. The issuance of an ERP constitutes compliance with the State of Florida coastal zone management program under Section 380.23(3) (c), Florida Statutes.

## 2.7.5 SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Section 401 of the CWA requires any applicant for a Federal permit that may result in a discharge of a pollutant into waters of the United States to obtain a certification in which the discharge originates. This certification must pertain not only to the construction of a facility, but also to the subsequent operation of the facility. In Florida, issuance of a State stormwater permit in accordance with Chapter 62-25, Florida Administrative Code (F.A.C.), or an Environmental Resource Permit (ERP) in accordance with Part IV of Chapter 373, Florida Statutes constitutes State water quality certification. Alternatively, a No-Permit-Required letter from the State signifies compliance with State water quality certification procedures.

Authorization for use of Sovereign submerged lands (under Chapter 18-21, F.A.C.) are reviewed concurrent with the ERP application and one cannot be issued without the other. "Sovereign submerged lands" means those lands including but not limited to, tidal lands, islands, sand bars, shallow banks, and lands waterward of the ordinary or mean high water line, beneath navigable fresh water or beneath tidally-influenced waters, which the State of Florida acquired title on March 3, 1845, by virtue of statehood, and which have not been heretofore conveyed or alienated. Authorization for use of Sovereign submerged lands can be issued by the State permitting agency or through an action of the Governor and Cabinet sitting as the Board of Trustees of the Internal Improvement Trust Fund.

Section 307 of the Coastal Zone Management Act of 1972 requires agencies conducting development projects which directly affect a states coastal zone to comply to the maximum extent practicable with the state's approved coastal zone management program. The Act also requires any non-Federal applicant for a Federal permit to conduct an activity affecting land or water uses in the state's coastal zone to furnish a certification that the proposed activity will comply with the state's coastal zone management program. The issuance of an ERP constitutes compliance with the State of Florida coastal zone management program under Section 380.23(3) (c), Florida Statutes.

## 2.7.6 LOCAL GOVERNMENT

Chapter 163, Florida Statutes, requires local governments to prepare, adopt, and implement comprehensive plans that encourage the most appropriate use of land and natural resources in a manner consistent with the public interest. All public and private development is required by this statute to conform with the area's local government comprehensive plan adopted pursuant to the statute. Lee County's Comprehensive Plan is found at Ordinance 89-02 with amendments. Collier County's Future Land Use Element of the Growth Management Plan is found at Ordinance 97-67.