

**Revised Initial Recommendation of the Department of Planning and Zoning  
Addressing CDMP Amendment Application No. 5  
October 20, 2010**

**This document replaces in its entirety the previously published Staff Initial Recommendation for  
Application No. 5, dated August 25, 2010.**

**Application No. 5  
TEXT AMENDMENT**

**APPLICATION SUMMARY**

Applicant/Representative:	Miami-Dade County Department of Planning and Zoning / Marc C. LaFerrier, AICP, Director, Miami-Dade County
Element(s) to be Amended:	LAND USE ELEMENT
Requested Text Changes:	Modify the text of Open Land Subarea 4 (East Everglades Residential Areas) in the Land Use Element of the Comprehensive Development Master Plan (CDMP), to allow agriculture production including nurseries and tree farms and limited raising of livestock.
Amendment Type:	Standard Text Amendment

**RECOMMENDATIONS**

Staff:	<b>ADOPT WITH CHANGE AND TRANSMIT</b> (August 25, 2010, and further revised on October 20, 2010)
Community Council:	<b>NOT APPLICABLE</b>
Planning Advisory Board (PAB) acting as Local Planning Agency:	<b>ADOPT WITH CHANGE AND TRANSMIT</b> (October 4, 2010)
Board of County Commissioners:	<b>TO BE DETERMINED</b> (November 3, 2010)
Final Recommendation of PAB acting as Local Planning Agency:	<b>TO BE DETERMINED</b> (2011)
Final Action of Board of County Commissioners:	<b>TO BE DETERMINED</b> (2011)

Staff recommends **ADOPT WITH CHANGE AND TRANSMIT** the proposed text amendment for the following reasons:

**Conclusions and Principal Reasons for Recommendations:**

1. Open Land Subarea 4 is primarily located within “Management Area 1: Modified Environment” of Miami-Dade County’s East Everglades Area of Critical Environmental Concern. Management Area 1 is subject to the East Everglades Zoning Overlay Ordinance as established in Section 33B, Article II, of the Miami-Dade County Code (Code). This proposed text amendment would allow consideration of land uses for private property that are more consistent with the land uses currently allowed by the Code for Management Area 1.
2. Open Land Subarea 4 currently allows ‘seasonal agriculture’ as a use that may be considered for approval and the County’s East Everglades Resources Planning Project publication, entitled “Agricultural Use” (1978), indicates that this Subarea has had some agricultural uses for several decades. Land within this Subarea is zoned as GU (Interim), which allows for agricultural use, and AU (Agriculture). Although the text of the Comprehensive Development Master Plan (CDMP) currently restricts the type of allowable agriculture to row crops, container nurseries or other agricultural uses that are seasonal or “above ground” uses, additional agricultural uses may be appropriate for Open Land Subarea 4.
3. Miami-Dade County supports the agriculture industry and recognizes that high land cost, and competition for farmland for other uses, such as water resource management and residential development, has reduced the acreage available to farmers to produce winter crops and products that must be grown in a subtropical climate. This proposed CDMP amendment would offer farmers and other agriculturalists flexibility in choosing the type of agriculture, or type of crop or product, that is best suited to conditions in Open Land Subarea 4.
4. Historical County documents indicate that part-time farmers have kept a small number of fowl, rabbits, pigs, or cows in this area, and residents in this area are interested in legalizing the keeping of these animals. However, any concentration of animals, or commercial operations involving animals, would be likely to have a negative impact on surface and groundwater and therefore would not be appropriate for this sensitive area. For these reasons, only *limited raising of animals* is recommended for this text amendment. All proposed uses for Open Land Subarea 4 shall be more specifically defined through proposed amendments to the Code and related land development regulations.
5. Text in the section entitled Open Land Subarea 4 of the CDMP states, “Uses that could compromise groundwater quality shall not occur west of the Turnpike Extension.” Since surface water and groundwater in the Subarea interact freely, land use activities directly impact groundwater. Therefore, to preserve the quality of surface and groundwater in the immediate area, and to maintain water quality in nearby ecosystems such as the Everglades National Park and associated downstream water bodies, the Department recommends amending the County Code to ensure that site design and activities associated with these proposed land uses will not impact water resources.

The Department believes that through application of current site development standards, including containment of stormwater runoff, and proposed Code amendments, water quality will not be impacted by these proposed uses. Water quality concerns related to livestock raising will be further addressed through Code amendments to restrict this activity, which may include limitations on the number of animals allowed per parcel of land or acreage, or other similar limitations.

### **Requested Text Amendment:**

Staff proposes to change the text of Open Land Subarea 4 (East Everglades Residential Areas) in the Land Use Element of the CDMP to remove the term “seasonal agriculture” and allow agriculture production and limited raising of livestock. The proposed text amendment (See Appendix A) would read as follows as amended since the applications report was published on June 5, 2010:

**Open Land Subarea 4 (East Everglades Residential Areas).** This subarea is bounded on the north, west and southwest by Everglades National Park, on the east by Levee 31N, and on the south by SW 168 Street. Uses which may be considered for approval in this area are ~~seasonal~~ agriculture production and limited raising of livestock<sup>1</sup> ~~nurseries, tree farms~~ and rural residences at a density of 1 dwelling unit per 40 acres, or 1 dwelling unit per 20 acres if ancillary to an established agricultural operation, or 1 dwelling unit per 5 acres, after such time as drainage facilities become available to protect this area from a one-in-ten-year flood event in keeping with the adopted East Everglades zoning overlay regulation (Section 33B, Code of Miami-Dade County) and compatible and necessary utility facilities. Uses that could compromise groundwater quality shall not occur in this area.

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<sup>1</sup> Miami-Dade County shall formulate and adopt amendments to Miami-Dade County Code Section 33B Areas of Critical Environmental Concern, Article II, East Everglades, and adopt land development regulations applicable to land designated Open Land Subarea 4 (East Everglades Residential Areas) to specifically address the type of agriculture production uses and the limited raising of livestock uses that may be allowed; that considers water quality and that there is no flood protection provided in this Subarea.

## STAFF ANALYSIS

### Description of Open Land Subarea 4 and Existing Land Uses

Open Land Subarea 4 (East Everglades Residential Areas) is generally west of the Kendall Tamiami Executive Airport, and bounded on the north, west and southwest by Everglades National Park, on the east by the L-31N Canal, and on the south by SW 168 Street. The boundaries of the Subarea are depicted, along with other information, on the map entitled, "Application No. 5", located at the end of this report. The Subarea is approximately 5,635 acres in size, or 8.8 square miles (thus the common name for this area, "the 8 and ½ Square Mile").<sup>1</sup> Existing land uses in Subarea 4 include various types of agriculture, undeveloped land, residential use, and transportation, communication, and utility uses. Agriculture types include tropical fruit crops, tree farms, and vegetable crops such as okra. Some agricultural activities are year-round uses and are not consistent with the adopted CDMP and do not have required County permits. Animals observed in the area include horses, goats, fowl, and some hogs; the maintenance and raising of animals for commercial purposes is not permitted in the Subarea. The Subarea also includes residential structures, and some structures that support agricultural uses. According to Department of Environmental Resources Management staff, some of these structures, or building densities, have not been permitted by the County.

Approximately 41% of Subarea 4 is owned by government agencies; including the SFWMD, the United States Army Corps of Engineers, Everglades National Park, and a 306 acre parcel of land that belongs to the Federal Aviation Administration (FAA). This FAA-owned property is a radar and antenna site that supports aviation activities throughout South Florida.

Open Land Subarea 4 is generally a low-lying area with elevations between 5.5 and 8.5 feet above mean sea level (msl) and contains prairie wetlands. According to Federal Emergency Management Agency (FEMA) records, approximately the eastern half (diagonal line from the northeast to the southwest) of Subarea 4 is in FEMA flood zone X (moderate to low flood risk area, usually the area between the limits of the 100-year and 500-year floods) and the western portion of the Subarea is the higher risk flood zone AH (Areas with a 1% annual chance of shallow flooding, usually in the form of a pond, with an average depth ranging from 1 to 3 feet).<sup>2</sup>

Numerous properties within Subarea 4 have jurisdictional wetlands and must have a Class IV Wetlands Permit from the Miami-Dade County Department of Environmental Protection (DERM) for development activity; this permit addresses allowed land uses, and any proposed grading or filling. The Class IV permit also requires onsite retention of stormwater because "cut and fill criteria" are applicable to this hydrologic basin.

### CDMP Land Use and Zoning for Open Land Subarea 4

In the CDMP, the Open Land future land use category is divided into five subareas. Each of these subareas is low-lying and contains wetlands; however, each subarea's allowed uses vary due to the characteristics within each subarea. As stated in the CDMP, the Open Land category contain lands that are "intended to serve one or more of the following functions: production such as agriculture, limestone extraction or other resource based activity such as development of

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<sup>1</sup> A group of residents has formed and is currently working to establish the name, "Las Palmas", for an eastern portion of the Subarea.

<sup>2</sup> <http://msc.fema.gov/webapp/wcs/stores/servlet/info?storeId=10001&catalogId=10001&langId=-1&content=floodZones&title=FEMA%20Flood%20Zone%20Designations>.

potable water supplies; rural residential development at a maximum density indicated for the specific Open Land subarea, but no greater than one unit per five acres; recreation; compatible utility and public facilities . . . and conservation, maintenance or enhancement of environmental character.” The CDMP specifically states that “Because the Open Land areas primarily consist of wetlands, all proposed uses will be reviewed on a case-by case basis.” Uses which may be considered for approval in Subarea 4 are as follows:

“ . . . seasonal agriculture and rural residences at a density of 1 dwelling unit per 40 acres, or 1 dwelling unit per 20 acres if ancillary to an established agricultural operation, or 1 dwelling unit per 5 acres, after such time as drainage facilities become available to protect this area from a one-in-ten-year flood event in keeping with the adopted East Everglades zoning overlay regulation (Section 33B, Code of Miami-Dade County) and compatible and necessary utility facilities. Uses that could compromise groundwater shall not occur in this area.”

#### Seasonal Agriculture

The CDMP provides for ‘seasonal agriculture’ as an allowed land use within Open Land designated areas as noted above. A footnote on CDMP page I-63 defines seasonal agriculture as:

“...agricultural activities which occur during the months November through April on land at natural elevation, or which occur during the months May through October on land that is, or has been bedded or filled to an elevation at or above Miami-Dade County flood criteria, and given that no additional off-site drainage will occur.”

The language for seasonal agriculture was added to the CDMP in 1988 because: 1) Open Land designated areas are low-lying and wet for significant periods throughout the year causing a significant risk to year round crops; 2) farming practices in various flood-prone areas put pressure on management agencies to draw down water levels near prime conservation areas; and, 3) requests for additional fill on properties could alter the wetlands and drainage patterns of the area.

The Department has, since 1988, interpreted the term seasonal agriculture to apply only to row crops, since that is what has typically been grown between May through October and November through April. These limited growing seasons allow the grower to grade his land into a system of rows and furrows in the wet season and/or farm at grade during the dry season. Recently, the agricultural uses allowed under “Seasonal Agriculture” have been expanded by the Department of Planning and Zoning to include:

- 1) in-ground agricultural activities at natural grade without additional fill for crops that have no more than an annual growing season, and
- 2) above-ground agricultural activities, such as container nurseries, which can be removed or raised during wet periods.

This interpretation has allowed some limited additional agricultural uses to growers in the Open Land areas.

#### East Everglades Zoning Overlay

The underlying zoning districts in the Open Land Subarea 4 are GU (Interim), which allows for agricultural use, and AU (Agriculture). These underlying zoning districts are superseded by the East Everglades Zoning Overlay (Chapter 33B of the Miami-Dade Code). The 1981 ordinances

that established the East Everglades as an Area of Critical Concern were preceded by the East Everglades Resources Planning Project, and several years of planning, studies, and publications jointly created by a steering committee and representatives from Miami-Dade County, the SFWMD, the Florida Department of Environmental Regulation, and Everglades National Park. The reasons for critical designation of this area are recorded as Sections 33B-13(c)(1) through (6) of the County Code and are summarized below:

1. Recharge of Biscayne Aquifer: the area is upgradient from major public and private drinking water wells that supply water to Miami-Dade and Monroe County. Maintaining high groundwater levels in this area helps to provide a freshwater head which prevents the intrusion of salt water into the base of the Biscayne Aquifer.
2. Surface water supply from the area to Everglades National Park (ENP) is critical for the ecosystems there. ENP ecosystems in turn support the nursery zones of Florida Bay and the Ten Thousand Islands and is essential to the maintenance of many fisheries of the Florida coast, the Gulf of Mexico and the Atlantic Ocean.
3. Flood storage capacity- the area of critical concern can retain large quantities of surface water during the wet season and then slowly release it providing needed fresh water to downgradient ecosystems and the aquifer.
4. Water quality maintenance- this area filters water for Everglades ecosystems and the aquifer. The Code also states, "Introduction of excess nutrients and other chemicals through development can quickly overload the natural assimilative capacity of the system."
5. Protection of economic vitality of Miami-Dade County- the County recognizes the cost of flood protection in wetlands and the additional costs of impacting critical water supplies.
6. Vegetation, wildlife, and other natural features- this area has rare geology that is able to support threatened and endangered plant and animal species.

As noted in the Principal Reasons section above, Open Land Subarea 4 is located within "Management Area 1: Modified Environment" of the East Everglades Overlay Ordinance. Management Area 1 conditionally allows residential uses and the following uses are permitted: agricultural use, or agricultural support housing or detached dwelling units at densities of no greater than one (1) unit per forty acres. The definition of "agricultural use" includes horticulture, row crops, groves, and nurseries, and excludes noxious exotic species. Permitted uses for Management Area 1 do not include the maintenance and raising of animals for commercial purposes.

According to County Code Section 33B-26 (Environmental performance standards), there are certain restrictions impacting agricultural uses in Management Area 1. The use of fill is limited to one half acre per development. Any shallow ditching allowed for agriculture shall not serve as a continuous conduit for transporting water to the extent that it has a significant adverse effect on the natural hydrologic regimen of the immediate vicinity of the parcel proposed for development. Where permitted, roads must be designed with bridges and culverts such that they will not interrupt or divert natural sheet flow. The Code also provides standards for allowed agricultural activities, including management to prevent the establishment of exotic species, required onsite retention of stormwater, and no restriction of surface water sheet flow due to elevated planting beds or structures.

## **Support for the Agriculture Industry and Land for Agriculture in Miami-Dade County**

Policies in the CDMP and provisions in the County Code support the Miami-Dade agriculture industry. CDMP policies and programs recognize that high land cost, and competition for farmland for other uses, such as water resource management and residential subdivision development, has reduced the acreage available to farmers for producing winter crops and products that must be grown in a subtropical climate. The loss of agricultural land in the East Everglades area could jeopardize the economic diversity and vitality of the Miami-Dade County economy (Section 33B-13(d)(9) of the County Code).

Records show that Open Land Subarea 4 historically had residential uses and diverse types of row crops and small groves on small parcels of land (1-10 acres) within a two mile radius of the L-31N and C-111 canals. Crops included tomato, boniato, calabaza pumpkin, squash, malanga, yucca or sweet cassava and cane. Ornamental nurseries and tropical fruit groves were also present, including banana, avocado, citrus and mango. Historical reports associated with the East Everglades Resources Planning Project also indicate that farmers have kept a small number of fowl, rabbits, pigs, or cows in and around Open Land Subarea 4. Some residents in this area are working to legalize the keeping of these animals. However, the Department is concerned that a concentration of animals, or some commercial operations involving animals, would have a negative impact on water resources and downstream ecosystems and therefore would not be appropriate for this sensitive area. The raising of livestock can involve activities such as concentrated feed areas, manure and pasture management, and erosion control that can impact water resources and downstream ecosystems. For these reasons, only limited raising of animals is recommended.

### **SFWMD 8.5 Square Mile Mitigation Project Phases I and II**

The SFWMD plans to begin a mitigation project to restore the natural flow of surface water to 383 acres of land within the western portion of Open Land Subarea 4. If there are no delays, construction for Phases 1 and 2 of the mitigation project is proposed to commence in October/November 2010 and be completed by July/August 2011. Basically, the mitigation project area will be either seasonally or perpetually inundated by the restored surface water flow. The SFWMD explained that Phase III of this project will involve an additional 90 acres and will extend eastward along the northern boundary of this Subarea.

A soil and groundwater assessment was completed by SFWMD contractors to identify pollutants that could potentially adversely affect the future ecological environment ("future aquatic community") including plant and animal species within the project area. Agrichemicals (organochlorine pesticides) and arsenic, barium, cadmium, chromium, lead, mercury, selenium, silver, copper, zinc, and Total Organic Carbon concentrations were studied. The SFWMD contractors identified "disturbed lands" or formerly cultivated areas including agricultural uses such as tropical plant nurseries/groves, and equipment maintenance/storage areas, and solid waste areas that contain exotic invasive plants and some contaminated soils.

As a result of this study, the restoration project will involve the removal of exotic vegetation and scraping of soil (removal of soil to the depth of limerock). The SFWMD will be managing some soils scraped from this area to minimize aquatic species' exposure to levels of contaminants, including agrichemicals, that exceed one or more critical environmental protection thresholds.

This mitigation area is separated from adjacent privately owned property within Open Land Subarea 4 by an earthen berm or levee called the L-357W. The SFWMD will begin restoration



work to remove agricultural chemicals from soils on the west side of the berm in the near future. Since Subarea 4 is prone to flooding and surface and groundwater interact directly in this area, the Department recommends that the use of agricultural chemicals on the east side of the levee be kept to a minimum. Onsite retention of stormwater will help ensure that agrichemicals are filtered and retained onsite and will not travel west and south into the mitigation area, Everglades National Park, Manatee Bay, or affect the groundwater of the Biscayne Aquifer. This type of site development would also be more consistent with existing text for Open Land Subarea 4 which states, "Uses that could compromise groundwater shall not occur in this area."

## **Environmental and Flood Risk Concerns**

### Environmental Concern

Farmers and other agriculturalists are encouraged to choose crop types and farming techniques that control and minimize the use of fertilizer and pesticide and conserve water. Section 33B-13(d)(1) of the East Everglades Overlay, states that pesticides, fungicides, and fertilizers used in agricultural operations may pose water quality risks. The Code explains that excess nutrient loads, pesticides, and other pollutants can reduce biodiversity and productivity in nursery grounds for Gulf of Mexico and Atlantic fisheries, bird species, and Everglades fauna.

The Miami-Dade County Department of Environmental Resource Management (DERM) recommends the development of an appropriate zoning overlay or zoning rules to account for the unique environmental and flooding characteristic of Open Land Subarea 4. Revisions to the East Everglades Zoning Overlay (Section 33B of the County Code) could implement the provisions of this text amendment. Appropriate revisions to the County Code will limit the number of animals allowed on property in the Subarea and thereby minimize additional nutrient releases. Class IV wetland permit requirements and other Chapter 24 County Code criteria for onsite stormwater retention should also help ensure that surface water management on agricultural properties, regardless of the crop types, will not compromise groundwater quality.

### Flooding

As noted above, Open Land Subarea 4 is subject to seasonal flood conditions. The Code recognizes that this area is subject to seasonal flooding (Section 33B-24) and establishes that there is no flood protection plan for this area. Instead, flood mitigation is occurring to offset anticipated groundwater level increases that will result from nearby Comprehensive Everglades Restoration Plan projects and related wetland restoration work. The C-357 canal is not designed to provide flood protection, it is designed to collect anticipated additional groundwater and route it to reservoirs south of this area. Similarly, the L-357W Levee is designed to mitigate for planned increases to surface water sheet flow and minimize flooding to the east, but does not provide flood protection. For these reasons, the County shall formulate Code amendments to reflect potential seasonal flood conditions (as also described in footnote no. 1 on page 5-4 of this report).

The County Code also establishes intent to protect sheet flow of surface water in the East Everglades Zoning Overlay area. Environmental performance standards, Section 33B-26, shall continue to dictate fill and ditching limitations for sites within this Subarea. In general, a maximum of one-half acre of fill will be allowed per development but no site fill shall impede the rate of volume of surface water flow or create significant backwater conditions, regardless of the land use.

Based upon the above analysis, the Staff recommends to **ADOPT WITH CHANGE and TRANSMIT** the proposed text application.

## **Consistency Review with CDMP Goals, Objectives, Policies, Concepts and Guidelines**

The following CDMP goals, objectives, policies, concepts and guidelines will be enhanced or maintained if the proposed text change is approved:

Policy LU-3B. All significant natural resources and systems shall be protected from incompatible land use including Biscayne Bay, future coastal and inland wetlands, future potable water-supply wellfield areas identified in the Land Use Element or in adopted wellfield protection plans, and forested portions of Environmentally Sensitive Natural Forest Communities as identified in the Natural Forest Inventory, as may be amended from time to time.

Policy LU-8C. Through its planning, capital improvements, cooperative extension, economic development, regulatory and intergovernmental coordination activities, Miami-Dade County shall continue to protect and promote agriculture as a viable economic use of land in Miami-Dade County.

Objective CON-6 Soils and mineral resources in Miami-Dade County shall be conserved and appropriately utilized in keeping with their intrinsic values.

Land Use Element, Open Land section, page I-61: Because Open Land areas primarily consist of wetlands, all proposed uses will be reviewed on a case-by-case basis. No particular use, other than rural residential use at specified densities is definitively allowed.

Land Use Element, Open Land Subarea 4 section, page I-64: Uses that compromise groundwater quality shall not occur in this area.

Land Use Element, Concepts section, page I-69: #14. Encourage agriculture as a viable economic use of suitable lands.

Policy CON-4A. The aquifer-recharge values of wetland areas shall be maintained and, where feasible, enhanced or restored. There shall be no further positive drainage of wetlands to accommodate urban development or agricultural uses.

The following CDMP goals, objective, policies concepts and guidelines will be impeded if the proposed text change is approved:

Policy LU-3B and text on page I-69 of the Land Use Element that addresses compromises to groundwater, listed above, could be impeded if agricultural production increases nutrient loads in Open Land Subarea 4.

Policy CON-4A, listed above, could be impeded if agricultural production leads to significant filling or ditching and interruption of surface water sheet flow in the East Everglades area.

### APPLICATION NO. 5

**Legend:**

- FEMA Zone X
- FEMA Zone AH
- FEMA Zone A
- SFWMD Restoration Project
- Approx. Boundary Phase I & II
- Approx. Boundary Phase III
- Canal
- Open Land Subarea 4
- Everglades National Park
- Publicly Owned Land within Subarea

**Scale:** 0 0.25 0.5 1 Miles

**Sources:** Miami-Dade County, FEMA, SFWMD  
**Map by:** Miami-Dade County Department of Planning and Zoning  
**Date:** August 17, 2010

## **APPENDICES**

- Appendix A: Application Report