

Lennar Construction Corporation's  
Land Use Planning Amendment Application 1502812/PC 18-2

EXHIBIT 4

EXHIBIT K

**PC 18-2 Miramar  
Broward County  
Comprehensive Plan Analysis**

Presented by



September 28, 2017



# Broward County Comprehensive Plan supports DENYING this application

*POLICY 5.04.03 Broward County shall strongly encourage the preservation of open space areas. Amendments to the Broward County Land Use Plan which would result in the loss of open space shall be strongly discouraged and be required to address how open space and recreation needs of the existing and projected residents of the community will be met, including how the negative impacts of the loss of open space on surrounding neighborhoods will be minimized or mitigated.*

# **Broward County Comprehensive Plan Goal:**

Smart growth and green/energy efficient and sustainable land use patterns. Goal a.00.00.

*“Promote and coordinate a desirable, sustainable and Efficient land use pattern for the benefit and enjoyment of all Broward County residents, visitors and economic Interests which maximizes preservation and conservation of natural resources.”*

# Broward County Comprehensive Plan – CLIMATE CHANGE ELEMENT

Adopted 12/08/2015 Ordinance Number 2015-54

Objective 19.1. Mitigate the causes of climate change while providing for cleaner energy solutions and a more energy efficient way of life for visitors and residents.

HOW???

- **By Saving Miramar's last remaining forest**
- Create a Mitigation Area/Nature Preserve/Everglades Exploration Park
- Using Mitigation Bank Funds - Install Green Energy systems (wind and solar)



# Miramar's Comprehensive Plan supports **Denying** Lennar's proposed land use application

- Purpose stated in its title: “*To guide **Miramar's Future** Growth and Community Improvement*”
- 150+ page document serves as our **City's 'Constitution'**
- “Statement of Legislative Intent” – Overarching guidance directing all Decision-Makers:
  - “*The overall (guiding) intention of the Plan, as **applied...***  
“*Will protect the public health, safety, and welfare.*””
  - “*The terms “**shall**” and “will” are to be construed as mandatory in this Plan.*” (page II)
- “**The** mission of the (City) organization is to enhance the quality of life within our community through a proactive and effective **government.**”

# Protecting Residents' **welfare, public health and safety** as mandated by our Comprehensive Plan.

- Impact of saturating the market with 385 new homes on our **community's Welfare**
- Critical public health and safety issues impacting all Miramar residents
  - Traffic, resident and student safety, water quality, environment, flooding
- Our Comprehensive **Plan's** mandate to decision-makers “protect the **public's** health, safety and welfare”
- Our Comprehensive Plan mandates **Lennar's application** **DENIAL** and not transmitting it to our City Commissioners.
  - Present an alternative that our Comprehensive Plan and citizens support



# Devastating Impact Lennar's proposed 385 home development on our home values

- Lennar's Proposed development, added to approved DRC housing projects, will result in an over-supply of homes in our city placing many Miramar citizen's welfare and quality of life at risk!
  - Will result in **major home value declines** that will affect EVERY Miramar Home-owner
  - Resulting in a **reduction to our City's "Life-Blood"**-- our Property Tax Base
- Clearly violating the guidance mandated by our Comprehensive Plan:
  - Promoting orderly, well-managed, and beneficial growth of the community
  - Minimizing risks to the **public's welfare**.
  - Supporting a vibrant economic tax base
  - **Consistent with Miramar's character**
  - Contributing to our overall Quality of Life

# Protecting Community **Welfare**: 10-year history of Miramar Housing Values



Source: [www.zillow.com/homes/miramar/](http://www.zillow.com/homes/miramar/)



# Protecting Community **Welfare**: Lennar's Impact on Housing Values

- Currently 285 homes for sale in Miramar (as of Sep 2017)<sup>1</sup>
- Today: Housing market supply & demand in equilibrium
  - Forecast meager 1.9% growth in 2017<sup>1</sup>
- 1290 new residence now approved by DRC for construction before  
**Lennar's + 386 = 1676**<sup>2</sup>

OVER SUPPLY of **1676** homes (550% surge in supply)

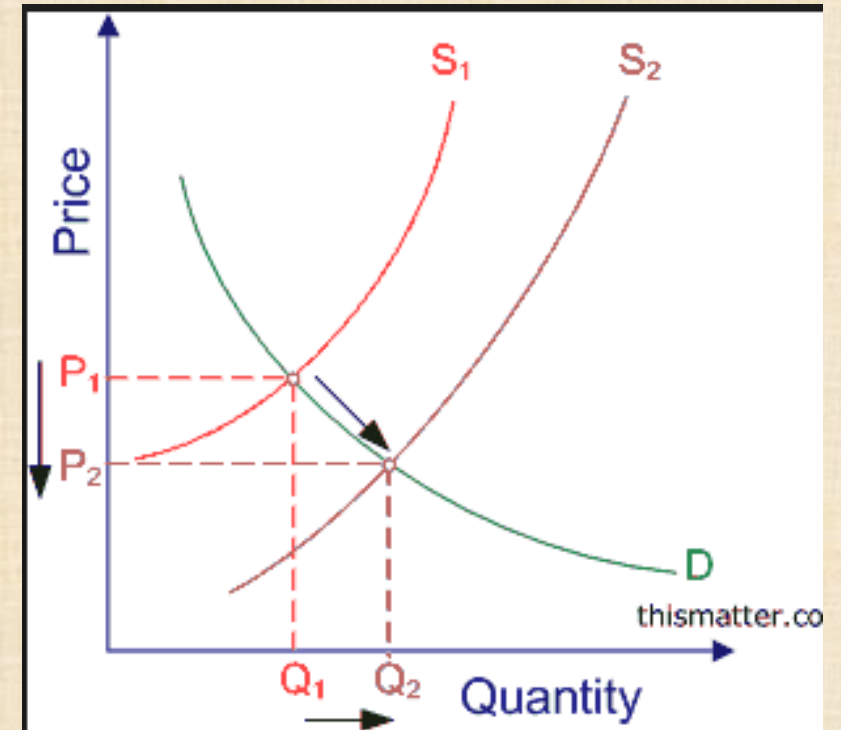
Sources: <sup>1</sup> [www.zillow.com/homes/for\\_sale/Miramar-FL](http://www.zillow.com/homes/for_sale/Miramar-FL)

<sup>2</sup> City of Miramar DRC Project Listing 15 Sep 2015



# Protecting Community **Welfare** : Lennar's Impact on our Housing Values

- Today Supply ( $S_1$ ) and Demand ( $D$ ) in Equilibrium  
Quantity of 285 homes ( $Q_1$ ) = \$240K Price ( $P_1$ )
- Graph represents a 60% increase in supply ( $Q_2$ )  
Constant demand = 60% decrease in Price ( $P_2$ )
- Future prices with 500% (1676) surge in supply  
PRICES SINK OFF THE CHART





# Protecting Community Welfare : Lennar's Impact on Housing Values

Resulting in another 2007 Miramar  
*“Market Melt-Down”*

housing



- Our Comprehensive Plan- mandates Denying **Lennar's application**

# Protecting Community **Welfare** : Lennar's Impact on Housing Values

- **Our Comprehensive Plan's** #1 Objective mandate to our Decision-Makers:

*“Promote **orderly** and beneficial growth and development of the community through the adoption, implementation and consistent updating of this Future Land Use Element. Eliminate (**and prevent**) land uses which are inconsistent with **Miramar's** character and do not contribute to the quality of life desired by its citizens.”*

*Comprehensive Plan Future Land Use Element: Permitted Uses in Future Land Use Categories. Objective 1*

- Our Comprehensive Plan clearly **mandates DENYING Lennar's application!**



# Protecting Community **Welfare** : Lennar's Impact on Housing Values

- Lennar's proposed 385 home development (added to the list of 1200 homes) approved by the DRC are **neither "orderly" -- nor "beneficial"** to our Community
- This proposed development is **NOT consistent with our community's character and the promotion of our community's welfare and values.**
- Lennar's proposed land use clearly **offers no improvements or contributions** to the Quality of Life desired by Miramar Citizens.
- Our Comprehensive Plan clearly **mandates DENYING Lennar's application!**



# Protecting Community **Welfare & Safety** : Lennar's Impact on Traffic

(How did we get into this productivity killing and aggravating mess?)





# Protecting Community **Welfare & Safety** : Lennar's Impact on Traffic

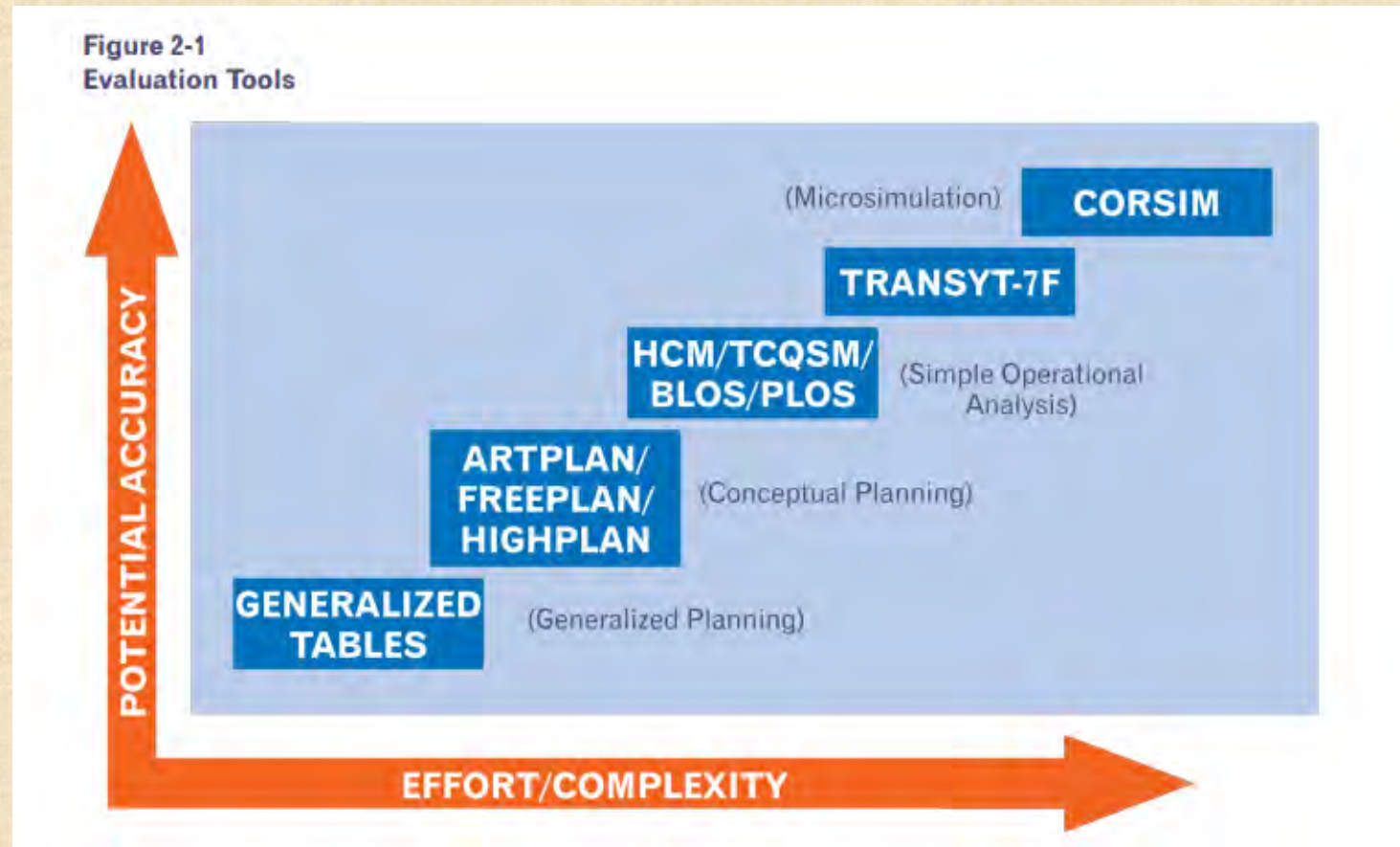
(How did we get into this productivity killing and aggravating mess?)

- Morning commutes require 35 – 40 minutes to travel 3 miles down Miramar Parkway to access I-75
- Miramar citizens suffer wasted valuable time – **impacting our welfare and quality of life**  
12,000 residents x \$25/hour = \$250,000 loss in productivity DAILY!
- Traffic Congestion: serious **Safety threat** to citizens requiring emergency ambulance, fire, or police assistance
- City Planners hand-cuffed by outdated traffic planning methodologies:  
Miramar Land Development Code 508.10.2, dated 31 March 2016:  
*“The LOS of road segments to be determined by the Broward County Trips Model of February 21, 1989” ... that's right... **1989!!!***



# FDOT 2013 Recommended Traffic Planning and Evaluation Tools – IGNORED?

Developers like Lennar “conveniently” use antiquated 25 year-old traffic tables to calculate “impact” requirements when more effective computer driven assessment tools have been available for years.





# Protecting Community **Welfare & Safety** : Lennar's Impact on Traffic

- Construction companies using these outdated and inaccurate models to their full advantage to “claim **no impact**” **while residents suffer the consequences..**
- **City Planners' Failure to consider cumulative effects** of approved projects
  - 1200 new homes and businesses approved by Development Review Committee
  - Impact of 5000-seat amphitheater to feed onto Miramar Parkway.
  - Impact of new “Mega-Mall” located 3 miles south of Miramar.
- **Unnecessary addition of 1000 more vehicles making 3600 trips every day**  
**Violates our Comprehensive Plan:**  
Policy 8.4. “Miramar *shall* establish Land Development Code regulations that *employ traffic calming measures*”

# Lennar's invalid Traffic “Remedy” Assumptions

- Pembroke and Bass Creek Road Overpasses will relieve congestion
  - **Assumes 3000+ Driver's will “back-track” 3 miles to access Miramar Parkway from Pembroke Rd, Bass Creek Rd, 184<sup>th</sup> Ave.**
  - 184<sup>th</sup> Ave single-lane stop sign can serve 20 cars per minute as cars attempt to enter this busy congested street from Bass Creek Rd
  - Miramar Parkway remains **residents'** only access to I-75

ALL NOT CONSIDERED **IN LENNAR'S PROPOSED REMEDIES**



# Lennar's invalid Traffic “Remedy” Assumptions

- ***“Added I-75 on-ramp and “express” lanes will alleviate existing congestion.”***
  - No I-75 express lane entry or exit from Miramar Pkwy
  - Drivers still forced to merge into one lane entering I-75
  - Express lanes will make matters worse as drivers exit the Express Lane at the same point Miramar residents merge onto I-75 from Miramar Parkway
  - 2020 Mega-mall will flood I-75 and Turnpike with thousands of more vehicles making matters worse for Miramar drivers
- ***Lennar’s proposed Traffic Circle in front of Everglades High School “will provide relief for the traffic congestion” caused by their developments 1000 vehicles***

# Protecting Community **Welfare & Safety** : Lennar's Proposed Dangerous Traffic Circle- it just won't fit...

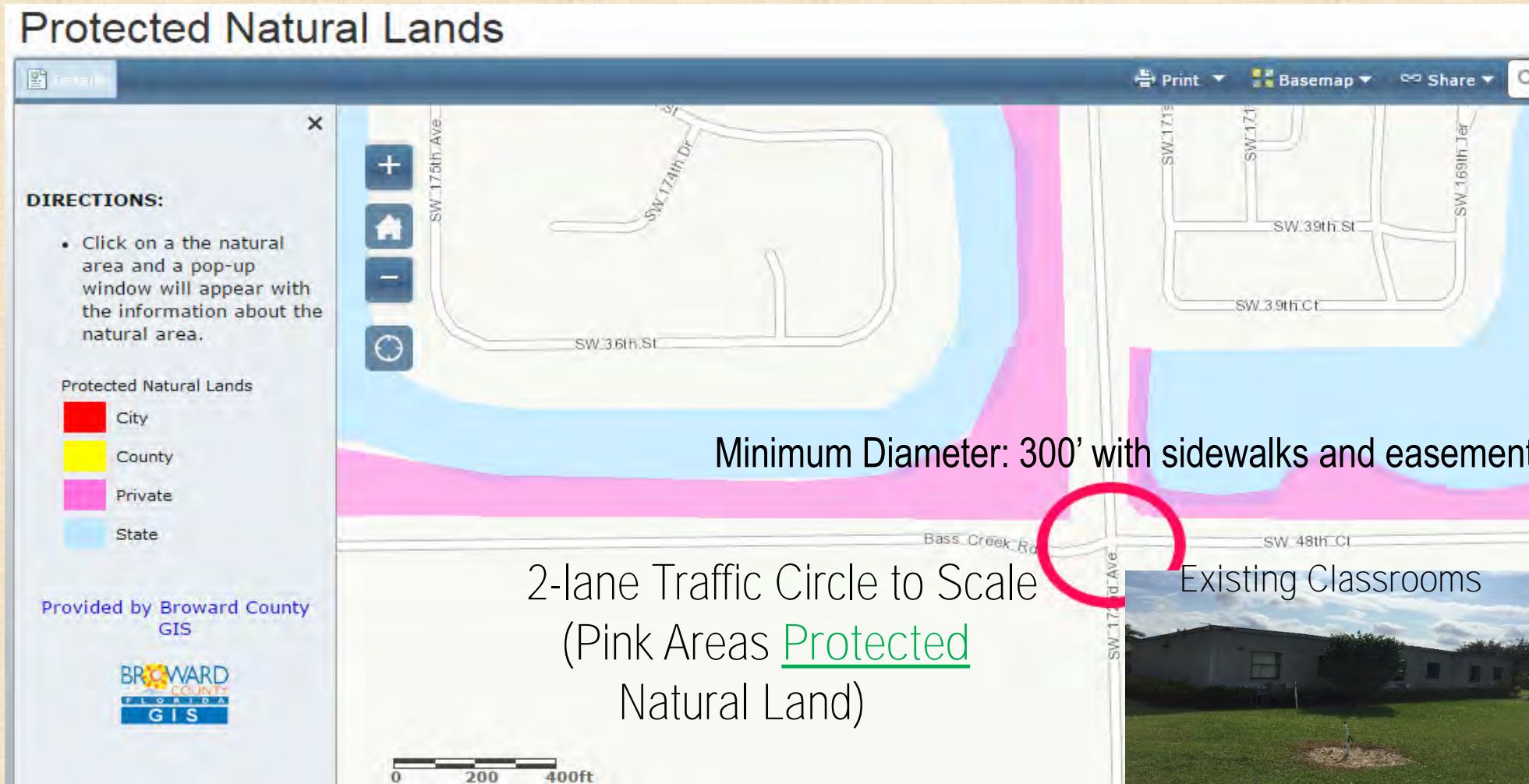
- **City's mandate to Lennar:** *"The geometry of the proposed roundabout shall accommodate the cross section of both Bass Creek Road and SW 172 Avenue (four-lane divided) at this intersection."* Miramar Economic Development Department Comments to Lennar's Traffic Study -- 23 Feb 2016
- Federal Highway Administration, Office of Safety mandates to City: **"Large** trucks, buses, and emergency vehicles dictate the roundabout's dimensions: Roundabout (2 lanes) minimum diameter will be up to 220' for large trucks and buses. Crosswalks to be located away from edge of the **circulatory roadway**... minimum crosswalk setback of 20 ft on both sides of the road is required."  
"Roundabouts: An Informational Guide." FHWA RD 00-067 – June 2000
  - Traffic Circle size and diameter requirements: ~300 ft
  - Existing road width on 172nd Ave at proposed location = ~55'
  - **Where will be the extra 245' required roadway come from?**



# Lennar's Proposed 4-lane Traffic Circle: **Protecting Community Welfare & Safety**

Where will be the extra 245' required roadway come from?

- school property?
- surrounding **protected natural lands?**



# Protecting Community **Welfare & Safety** : Lennar's Proposed Traffic Circle violates our Comprehensive Plan

- **“The Americans with Disabilities Act: requires all new and modified intersections, including roundabouts, be accessible to, and usable by, people with disabilities.”**
  - **Pedestrian traffic signals will be required** (FHA, Office of Safety –“Intersection Safety- Roundabouts,” 15 December 2015)
- Miramar (Florida) drivers are ranked 5<sup>th</sup> worst drivers in the country.

*Kiplinger Report “Where you live has a huge effect on car insurance.” 21 May 2015.*
- Miramar Drivers not familiar with negotiating the hazards of a traffic circle.
- **Danger to Everglades High School’s 2,500 students and staff** at busy and hazardous traffic circle.
- Lennar’s proposed Traffic Circle **“Solution” violates Comprehensive Plan: Policy 2.1.9:**  
**“The City shall...implement strategies, consistent with Florida’s “Safe Ways to School Program”, which reduce hazardous conditions and provide direct, unobstructed and safe access for pedestrian travel (including sidewalks, bicycle paths, signage and signalization) to existing and new school facilities.”**
  - **Comprehensive Plan Policy 8.4. “Miramar shall ... employ traffic calming measures”**



# Lennar's Dangerous Traffic Circle: Jeopardizing Resident and Student Safety

- Numerous **Safety Hazards** to be caused by 4-years of Construction and Dump Truck traffic (3000 trips per day)
- **Lennar's "Traffic Circle"** located directly adjacent to our High School and two blocks from our Elementary School
- Safety hazard for students biking and walking across fast-moving trucks and cars
- Traffic will be even more congested as students use the signalized cross walk to get to and from school
- School buses/delivery trucks attempting hazardous tight-turns with fast moving cars



# Protecting Community **Welfare & Safety** : Lennar's Proposed Dangerous School Traffic Circle

- Lennar's proposed development will result in hundreds of trucks, heavy construction equipment, and workers transiting this construction zone corridor further **escalating the safety hazard** in our community.
- Resulting in a serious safety threat to school buses, pedestrians, cyclists, and drivers.
- Lennar's development will create a dangerous and impossible student learning (and living) environment.
- **Lennar's Proposed Development Violates our Comprehensive Plan:**  
*Policy 8.4. "Miramar shall establish Land Development Code regulations that **employ traffic calming measures**...within residential and mixed use developments, thus **reducing accidents rates** and providing a safer environment."*
- *Our Comprehensive Plan's Goals, Objectives, and Policies to "Protect Our Residents' Safety, Health and **Welfare**" -- demands DENYING Lennar's Application!*



# Forest Destruction- Debris Removal- Truck Traffic

- Dump Truck traffic alone will exponentially magnify the danger
  - 120 acres of average 50' tall trees and underbrush must be cleared
  - Root systems averaging 10' below surface to be removed
  - Total trees, roots and underbrush to be cleared = 20 vertical foliage yards
  - Chipping and compacting ratio (C<sup>2</sup>R): 20 to 1
  - 120 acres =  $580,800 \text{ yds}^2 \times 20 \text{ VFY} \div 20 \text{ C}^2\text{R} = \underline{580,800 \text{ yd}^3}$  of debris to remove
- Dump truck capacity of 10 yd<sup>3</sup> = 58,080 truck loads over 365 days:  
159 dump truck loads every day for one year to haul away debris
- **In direct violation of our Comprehensive Plan's "Traffic Calming" and "Resident Safety" mandates**
- **Our existing traffic congestion will get much worse if Lennar's application is not DENIED!**

# Destroying our forest for 385 single-family homes Means hauling in a “mountain” of fill blasted from local quarries

- 2018 Land Development Code: Buildings must be 8.5' NGVD property elevation above Sea Level
- Current City standard is “ngvd 29” vs “navd 88”
  - Outdated 1929 sea level standard vs 1988 (more accurate) calculations
  - Equates to ~1.5 ft
- Property surveyed at 4' ngvd 29 = 2.5' above actual
- Requiring 6' elevation increase + 1.5' of back-fill for root system replacement, grading, compression and rain erosion
- = 7.5' of elevation increase with fill required over 120 acres



# Boca Raton adjusted Sea Level Rise Calculation: 1 ½ ft lower than outdated 1929 NGVD model

CONTROL STATIONS REPORT			
NAME: 103	DATE LAST RECOVERED: 07/25/2007		
STAMPED: BOCA RATON FLORIDA	STATUS: EXISTING		
TOWNSHIP: 47	RANGE: 42	SECTION: 25	STABILITY: C
FIELD BOOK: 1211FF	FIELD BOOK PAGE: 12	NAVD88 VERTICAL CONSTRAIN:	
NGVD 29 FEET: 9.589	NGVD 29 AGENCY: PBCO	NGVD 29 DATE: 07/23/1975	VERTICAL 29 By: Gary L. Beaty
NAVD 88 FEET: 8.022	NAVD 88 AGENCY: PBCO	NAVD 88 DATE: 07/23/1975	VERTICAL 88 By: Gary L. Beaty
VERTICAL CONTROL SURVEY DRAWING NO. S-3-02-1673	VERTICAL DISK: Y		
HORIZONTAL ACCURACY:	HORIZONTAL AGENCY:	HORIZONTAL CONSTRAIN:	
Y72:	X72:	N90:	E90:
FIELD BOOK HORIZONTAL:	FIELD BOOK PAGE HORIZONTAL:		
CONVERGENCE 90:	SCALE FACTOR 90:	POINT NO:	
HORIZONTAL CONTROL SURVEY DRAWING NO:	HORIZONTAL 90 BY:		
APPROXIMATE LATITUDE: 26 20 34.1	APPROXIMATE LONGITUDE: 80 06 38.1		
MONUMENT TYPE: BOCA RATON BRASS DISK	HORIZONTAL DISK: N		
GPS ACCURACY:	GPS NO:	GPS HORIZONTAL AGENCY:	
DATE CREATED 98:	N98:	SCALE FACTOR 98:	
CONVERGENCE 98:	E98:	DATUM:	ADJUSTMENT:
		GPS HORIZONTAL 98 BY:	
N=No Y=Yes 10=First Order 21=Second Order Class I 22=Second Order Class II 30=Third Order 2=0.02m Local Accuracy 3=0.03m Local Accuracy			
It is the responsibility of the user to verify the data by referring to the Certified Survey on file in the Office of the County Engineer.			
<b>MEMO</b>	THE STATION IS A BOCA RATON ROAD DEPARTMENT 2 INCH BRASS DISK LOCATED AT SW 12TH AVENUE BETWEEN 7TH AND 8TH STREET RETAINER WALL, EAST SIDE OF 12TH AVENUE AND THE SOUTH CORNER OF THE WALL.		
	*DISK NOT STAMPED "103".		

# Additional truck traffic as a consequence to replacing our 120 acre wetland forest with 385 single-family homes

- 120 acres =  $580,800 \text{ yds}^2 \times 7.5'$  of fill = **4,356,000 yd<sup>3</sup>** of fill needed to be trucked in to meet 8.5' actual height above sea level (NAVD 88 elevation)
- Dump truck capacity = 10 yd<sup>3</sup> of rock and fill = 435,600 truck loads ÷ 2 years
  - + **1000** truck loads every day for 2 years + 150 truck loads of debris removal
  - = 1150 x 2 (in and out) = 2300 total daily trips.

2300 additional trips by dump trucks EVERY day for 2 years

- Years of hundreds of trucks littering our roads, dirt, dust, debris, and NOISE.
- Impacting our traffic, affecting our health and destroying our quality of life!
- **In direct violation of our Comprehensive Plan's "Traffic Calming" and "Resident Safety" mandates... ENOUGH IS ENOUGH!!!**



# Lennar's Threats to our Community

Our Comprehensive Plan: **“Protect Our Health, Safety and Welfare”**

- THREATENS STUDENT HEALTH AND SAFETY

- 2500 students and staff to be exposed to years of construction **noise, dust, and dirt.**
- Thin walled portable classrooms located less than 100 ft from construction site.
- Students forced to eat lunch outside.
- 4 years of **impossible learning environment**



# Threats to Our Students **Health, Welfare & Safety:** Construction Noise

“**Noise** is an underestimated threat that can cause a number of short- and **long-term psychological and physiological effects** such as sleep disturbance, cardiovascular effects, poor work and school performance, and hearing impairment.



- “**Impairment** of early childhood development and education **caused by noise** may have **lifelong effects** on academic achievement and health.”



(source: World Health Organization, Regional Office of Europe Health Report.)



# Protecting Our Children's **Health, Welfare & Safety** : Unhealthy and Impossible Learning Environment

*Noise* has emerged as a leading environmental nuisance, and recommend schools and their surrounding communities maintain noise levels below 35 decibels inside schools *maximum outdoor noise levels not to exceed 45 dB*.  
(source: World Health Organization)

## Noise Levels of Construction Equipment at 50 feet:

- Pile Driver:	101 dB
- Rock drill:	98 dB
- Paver:	89 <u>db</u>
- Jackhammer:	88 <u>db</u>
- Truck:	88 <u>db</u>
- Grader:	85 <u>db</u>
- <u>Pnuematic</u> Hammer:	85 <u>db</u>
- Bull dozer:	85 <u>db</u>
- Concrete Mixer:	85 <u>db</u>



(US Dept of Transportation, Bureau of Transportation National Transportation Library Report, "Noise and Vibration During Construction.")

## **Health, Welfare & Safety:**

### **Lennar's Threats to our Students and our entire Community**

- Lennar Corporation's construction crews and equipment will generate noise in excess of twice the recommended level in close proximity to our schools
- Requiring thousands of fast-moving Dump Trucks and other heavy equipment **adding to the congestion on our City's streets over a 4-year period**
- Littering our roads and polluting our air and water with dirt, dust, and debris
- **Do be followed by this development's 1000 vehicles making almost 4000 trips every day**
- Generating construction noise that for years will echo through our classrooms, our homes, and throughout our community affecting the health and welfare of residents, students, pets, and wildlife long after Lennar's project is complete-  
Yet we remain to suffer the effects.



# Health, Welfare & Safety: Lennar's Threat to our Schools

- Failure to perform the required “Due Diligence” in assessing this threat with other agencies as required in our Comprehensive Plan:
  - Policy 2.1.5 “*The School Board shall monitor and participate in the City’s and Broward County plat review and site plan review processes, the Development of Regional Impact (DRI) process, the land use plan amendment process and other development order/permit processes that may have an impact on current or planned public educational facilities in the City of Miramar.”*
  - Policy 5.18 “*The City will coordinate with the Broward County Planning Council, the South Florida Regional Planning Council, adjacent municipalities, the Broward County Technical Advisory Committee, appropriate agencies or ad hoc committees, in the development, review and recommendation of efficient countywide guidelines to coordinate the identification and location of facilities with countywide significance which may be locally unwanted land uses...”*
  - Record requests indicate these agencies’ “participation” and “coordination” on identified safety and health concerns not accomplished as mandated by our Comprehensive Plan.

# Health, Welfare & Safety:

## Lennar's Threats to our Students and our entire Community

- Lennar Corporation's construction crews and equipment will generate noise in excess of twice the recommended level in close proximity of our schools
- Construction noise that for years will echo through our classrooms, our homes, and throughout our community affecting the health and welfare of residents, students, pets, and wildlife long after Lennar's project is complete- yet we remain to suffer the effects.
- Our Comprehensive Plan's mandate to our City Decision-Makers is clear:
  - “*Guide Miramar's Future Growth and Community Improvement*”
  - “Enhance the quality of life within our *community*”
  - Most Importantly: “Protect the public health, safety, and welfare”
- The Decision to DENY Lennar's Application is Vital to our Community!




# We're living under the Threat of Climate Change *... we must do something about it – NOW!*



*“Climate change is not a hoax. More droughts and floods and wildfires are not a joke -- they are a threat to our children’s future and in this election you can do something about it.”*

*~Barack Obama 9/6/2012  
DNC*



“ IF WE WANT TO PREVENT THE WORST EFFECTS OF CLIMATE CHANGE BEFORE IT’S TOO LATE, **THE TIME TO ACT IS NOW.**”

—PRESIDENT OBAMA

#ActOnClimate

GO.WH.GOV/CLIMATE

# Broward County Comprehensive Plan

## CLIMATE CHANGE ELEMENT

Adopted 12/08/2015 Ordinance Number 2015-54

*“Achieve a sustainable, climate resilient community by: promoting energy efficiency and greenhouse gas reduction strategies; **protecting... natural systems and resources.**”*

Meaning our decision-makers must be committed to  
Saving Our Remaining Wetland Forests!



# Climate Change threats to Miramar Residents

*“Toxic greenhouse gas concentrations in the atmosphere will continue to increase... A concerted effort to eliminate existing gas concentrations is needed.”* - The Environmental Protection Agency

Increased greenhouse gas concentrations impact the health and safety of all Miramar citizens:

- Sea Level Rise
- Increase the acidity of the oceans
- Increase the frequency, intensity, and/or duration of extreme events (i.e., hurricanes)
- Influence the patterns and amounts of precipitation
- Increase Earth's average temperature
- Shift ecosystem characteristics
- Reduce polar ice caps and permafrost
- Increase threats to human health (source: [www3.epa.gov/climatechange/science/future.html](http://www3.epa.gov/climatechange/science/future.html))

**Lennar's** proposed development will devastate our **City's** last - and best - defense against toxic greenhouse gases and the effects of Climate Change— our **community's** 120 acre Wetland Forest now faces possible destruction by **Lennar's** planned development

# Lennar's planned development threatens our community's best means of defense and accelerating the danger

- Each acre of our wetland forest is estimated to absorb 272,000 pounds of CO<sub>2</sub> over a 20 year lifespan\*)
- Left undisturbed, our **City's** 120 acre wetland forest will remove over 3 million pounds of harmful greenhouse gases from the air we breathe over the next 20 years
- But when trees are destroyed (by developers like Lennar) all stored carbon is immediately released back into the atmosphere, further increasing concentrations of toxic greenhouse gas into the air we breathe.



# Lennar Development's Threatened the Destruction of our City's last remaining wetland forest

*"Trees are our planet's most effective weapons to eliminate toxic greenhouse gases from the air we breathe...Loss of forests contributes as much as 30 percent of global greenhouse gas emissions each year--rivaling emissions from the global transportation sector."*

Source: Council of Foreign Relations Report, "Deforestation and Greenhouse-Gas Emissions," December 21, 2009

**Our Comprehensive Plan recognizes and protects these valuable resources:**

*"Ensure the **protection of natural resources**, discourage urban sprawl, promote "Smart Growth" and energy efficient development and land use patterns... in an effort to reduce greenhouse gases."*

Future Land Use Element: Development Review Requirements - Objective 2

# Our Comprehensive Plan Ensures... the **protection** of this vital Community resource

- Ensure a high quality of life for present and future residents of the City of Miramar through the **protective use and conservation of the City's natural resources.**

Conservation Element. Goal

- Lennar's planned development will threaten and destroy our community's best means of defense – and accelerate the danger.

Lennar's application for land use change must be DENIED!



# Our Wetland Forest Protects our Community's Critical drinking water supply

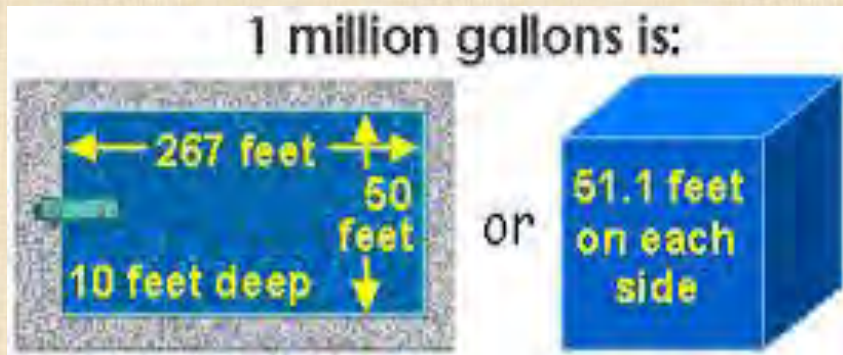
Without these dense trees and vegetation to absorb this runoff, tons of silt and other contaminants would be washed into the nearby canals and lakes which feed into the Everglades and our source of drinking water.





# Lennar's Application Ignores Stormwater Management

- Sea level rise is more than doubling the risk of storm surge (source: [www3.epa.gov/climatechange/science/future](http://www3.epa.gov/climatechange/science/future))
- Deforested Property size: 120 acres
- One inch of rain falling on 1 acre of ground is equal to 27,154 gallons (now absorbed by wetlands)
- 25 year, 3 day rainfall storm = 16 inches\* x 27,512 gallon/acre x 120 acres = 52,140,000 gallons



or Enough water to fill  
Hard Rock stadium  
drained into the one  
small drainage lake  
over 3-days...

- 2017 Hurricane Harvey dumps 25 TRILLION gallons on Houston in 3-days... it could happen here!!!
- Lennar's Application -- Exhibit "E": "*There are no perimeter discharge requirements (for this property) based on the 25 year, 3-day storm.*"  
- \*Director, South Broward Drainage District



# Protecting Community **Welfare & Safety** : Lennar's Application Ignores Stormwater Management



Hurricane Irma dumps only 10 inches of rain on Miramar in 48 hours

(source: National Weather Service)

# Protecting Community **Welfare & Safety** : Lennar's **threat** to our Community's drinking water supply

- Maintaining the safety of our drinking water supply hinges on controlling contamination, effective control of our torrential rainfall runoff, preventing salinity invasion from sea level rise.
- A balance that our city officials are today struggling to maintain.
- Continual over-development resulting in Urban Sprawl has shifted the balance as witnessed in cities like **Flint, Michigan** – and here in Miramar!



# Protecting Community's **Welfare & Safety** : Threats to our Community's drinking water supply

- Miramar City Department of Utilities announced **the need to “super-chlorinate”** our drinking water supply. Warning citizens, “you may notice different taste and/or odor in your tap **waters” announcing** this treatment is potentially life-threatening to aquatic life.
- Warning residents with medical conditions (i.e., on dialysis) “consult your physician for special instructions.”
- Our water supply is presently threatened by contamination and sea-level rise.
- This threat will get worse if **Lennar’s** proposed development is allowed to proceed.

(Source: Miramar Utilities Department, Notice to Residents, October 2015.  
[www.ci.miramar.fl.us/utilities/docs/notices/superchlorination\\_090915.pdf](http://www.ci.miramar.fl.us/utilities/docs/notices/superchlorination_090915.pdf))

# Consequences of Lennar's Proposed Destruction

- Severe flooding and nutrient deposits into downstream waters have often followed forest and marsh destruction proving the vital roles these wetlands play.
- Forests and freshwater marshes have suffered major acreage losses to human development.
- Degraded by excessive deposits of nutrients and sediment from construction and farming.
- This realization has **spurred enhanced protection** and restoration of these ecosystems such as the Everglades (Source: [www.epa.gov/wetlands/wetlands-classification-and-types#marshesecosystems](http://www.epa.gov/wetlands/wetlands-classification-and-types#marshesecosystems))



# Preserving our 120 Acre Wetland Forest - the smart choice!

- Forested watersheds offer higher-quality water than any alternative land uses
- All alternatives – development – increase the amounts of pollutants in runoff.
- Water Quality is higher as forests regulate soil erosion and reduce sediment load
- Undisturbed forest with understory, leaf litter, and organically enriched soil is the best watershed land cover for minimizing erosion
- Forests can substantially reduce the need for treatment for drinking water and thus radically reduce costs of supplying water.

(Source: United Nations Food and Agriculture Organization Report, “Managing forests for cleaner water for urban populations,”

S. Stolten and N. Dudley, 2006.)



# Our 120 Acre Wetland Forest Protects our Water Supply

- Miramar is blessed with a 120 acre wetland forest that acts as **nature's** water filter.
- Lennar's "environmental" assessment states the property contains "*high quality sawgrass*", and is a "*herbaceous marsh community*"
- Essential and very effective natural water purification system
- Our Wetland Forest keeps erosion and pollution from flowing into our water supply and absorbing rainwater, sending cleaner water into our underground aquifers.
- Our City cannot afford to fall into the same destructive mindset as Flint, Michigan

(Source: <http://www.nature.org/ourinitiatives/habitats/riverslakes/protecting-clean-water-for-people-and-nature.xml>)

- Miramar must preserve its 120 acre natural water purification system



# Our Comprehensive Plan Ensures... **protecting our water supply** by preserving our wetland forest

- Conservation Element Goal: *Ensure a high quality of life for present and future residents of the City of Miramar through the protective use and conservation of the City's natural resources.*
- Policy 1.1 *To reduce the amount of high nutrient runoff entering the Snake Creek Canal, continue to require adherence by new development and redevelopment to South Florida Water Management District (SFWMD) **rules**...*

# Our Comprehensive Plan Ensures... **protecting our water supply** by preserving our wetland forest

- Objective 5. *To protect groundwater aquifer recharge areas and prevent flooding, maintain site standards for impervious/pervious area ratios and on-site detention/retention facilities, as part of a Master Local Area Drainage Plan.*
- Objective 2. *Coordinate with the SFWMD (owner) to maintain and enhance, where **possible, the Everglades Buffer Strip in Miramar as part of Broward County's inventory of urban wilderness areas which will be preserved as open space in perpetuity.***

Now's the time for our decision-makers and commit to **protecting our drinking water supply**- now- and for generations to come.

Preserve our water supply – **DENY** Lennar's application!



# Our Comprehensive Plan is clear...

- *“As part of the Land Development Code, **protect present and future environmentally sensitive lands** by requiring their dedication for preservation in perpetuity and by designating them as natural reservations on both the Future Land Use and Zoning Maps”*

Conservation Element Policy 7.8



# Our Comprehensive Plan is clear...

**“The overall intention of the Plan, as applied will protect the public health, safety, and welfare.”**

- **Lennar’s application seriously threatens our Community’s Heath-Safety-Welfare!**
- **Our City’s rapidly vanishing wildlife are valuable residents of our Community too!**
- **Deserving of equal protection guaranteed by our Comprehensive Plan**



# Lennar's Misleading and Inaccurate Application Environmental Impact attachment ... **Absence of Wildlife**

*“All areas of the site were carefully evaluated for **wildlife utilization**, particularly along the perimeter and any open areas in the canopy where faunal use might be expected to be greatest. No listed fauna were observed on the parcel, and no critical habitat was present onsite or in any of the directly adjacent areas.”*

*“No confirmed listed species were identified on the site and the site exhibits very low wildlife utilization as determined by both direct and **“indirect”** survey **methods**”*

# Lennar's Misleading, Inaccurate, and Twice Revised "Report" (16 pages)

## ***Draft Ecological Evaluation and Preliminary Wetland Determination **Revision #2** Miramar 117.69 Acre Parcel***

***Miramar, Florida***

Prepared For:  
**Lennar Homes, LLC**  
c/o Mark Sustana, General Counsel  
730 NW 107th Avenue Suite 300  
Miami, FL 33172

Prepared By:  
**Jim Goldasich, PWS**  
3/5/2015

***J. J. Goldasich and Associates, Incorporated***

Boca Raton, Florida





# Lennar's Contradictory Environmental Report

No endangered animals were observed on the property, and no critical habitat was present onsite or in any direct adjacent areas.

YET... the author reports:

- *“Black and Turkey vultures observed”*
  - Both protected under the Migratory Bird Treaty Act of 1918
- *“Osprey observed”*
  - Listed as a Species of Special Concern by the Florida Fish and Wildlife Conservation Commission (FWC)
- *“The dense Melaleuca forest cover on the property would preclude the feeding practices of osprey.”*
- **This “thorough” site evaluation somehow “overlooked” the dozens of endangered and threatened species observed living on and near the property by Miramar residents**

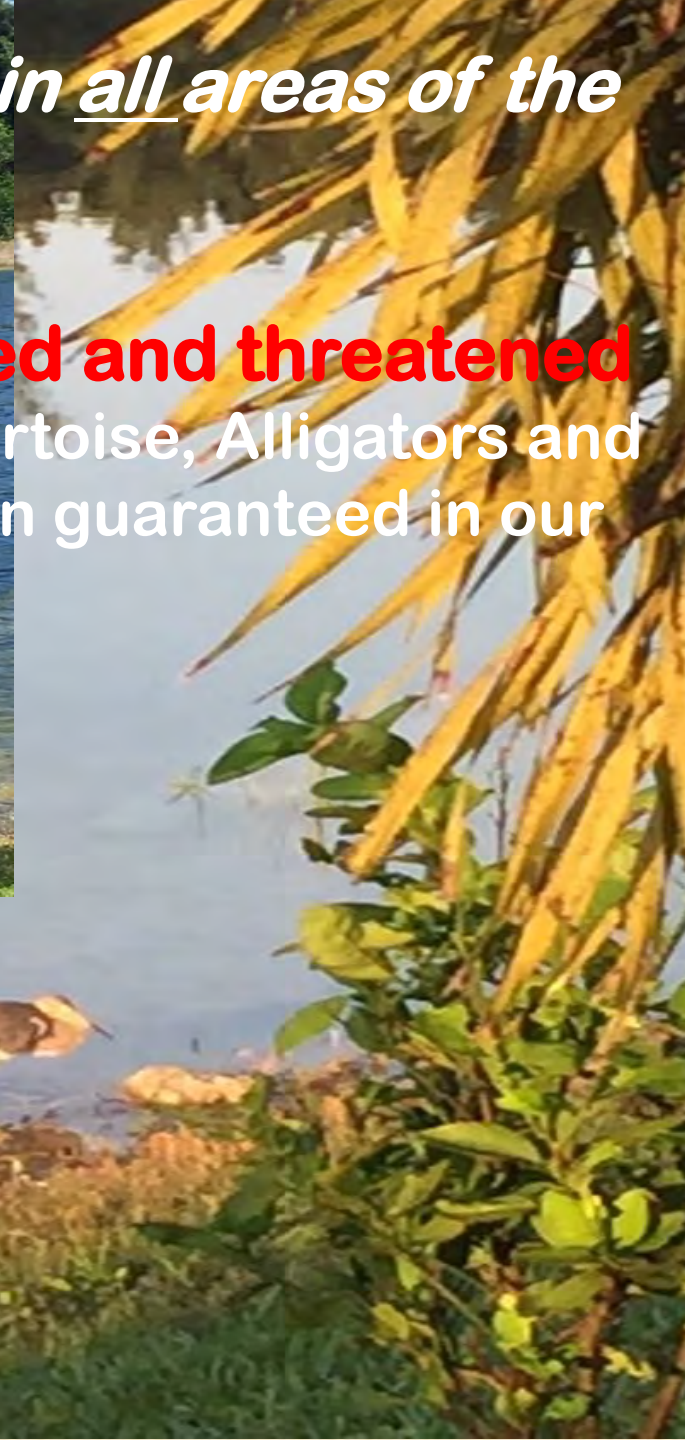
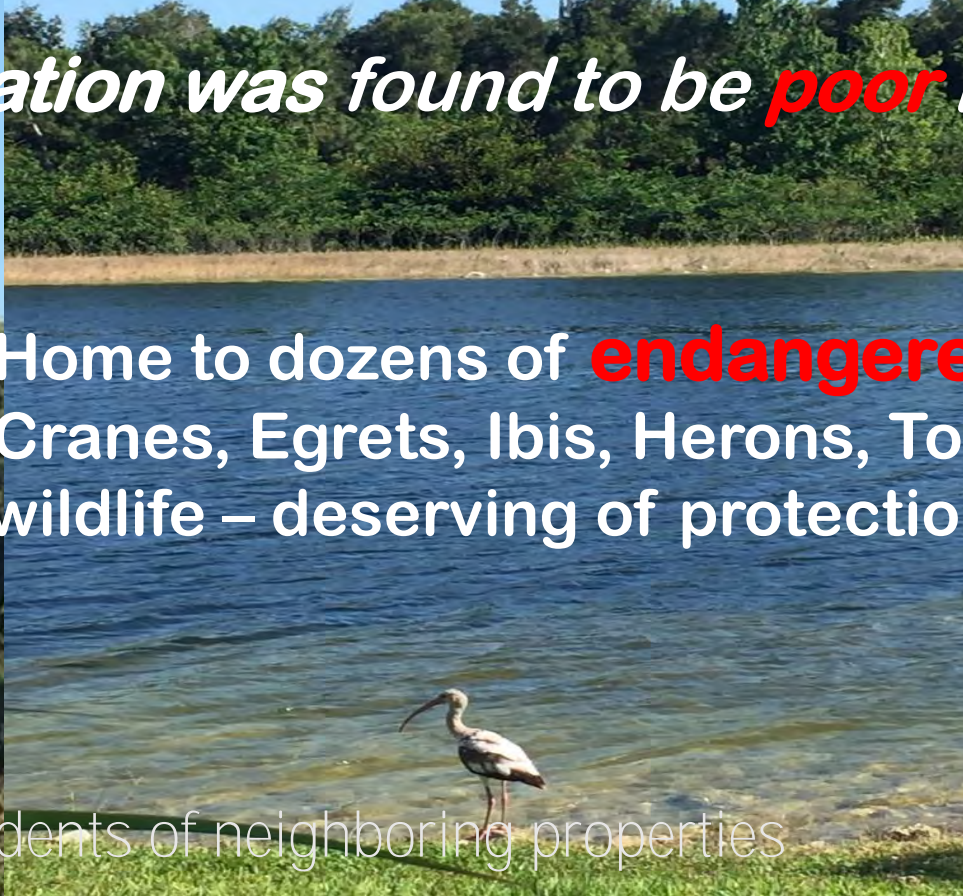




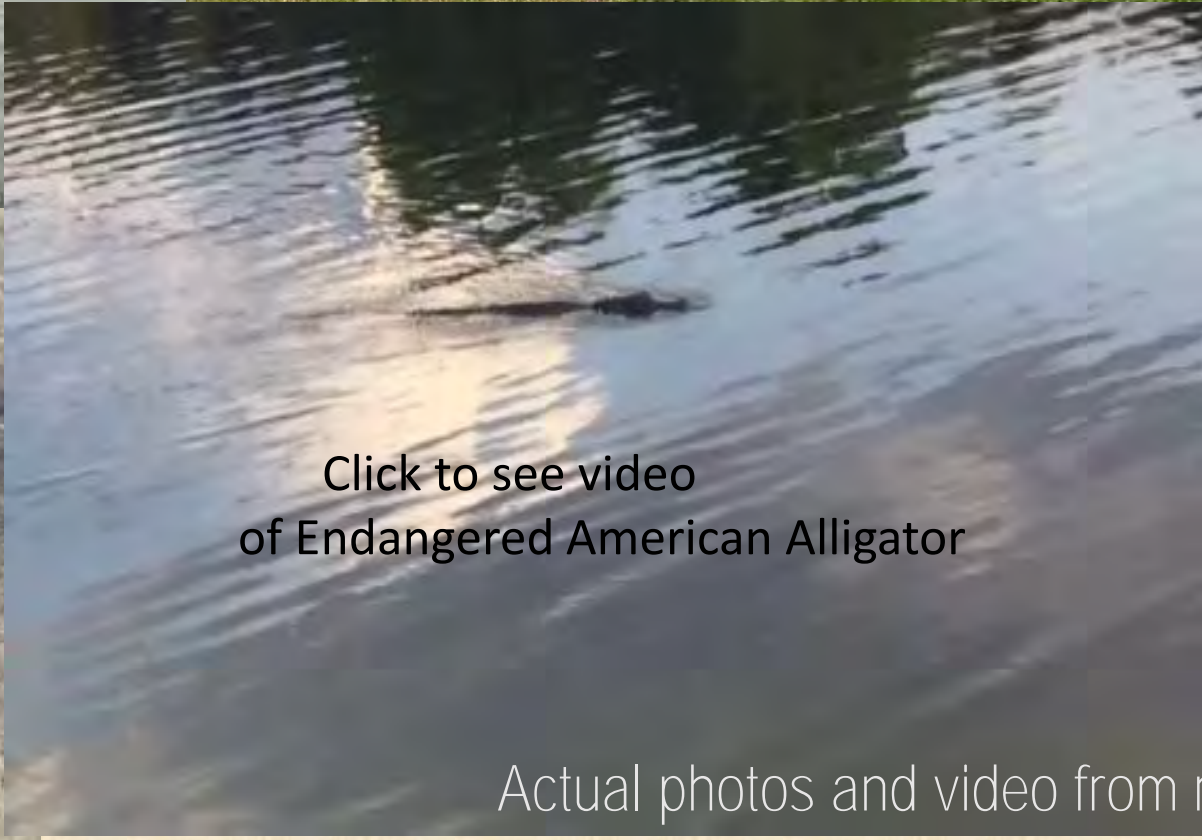
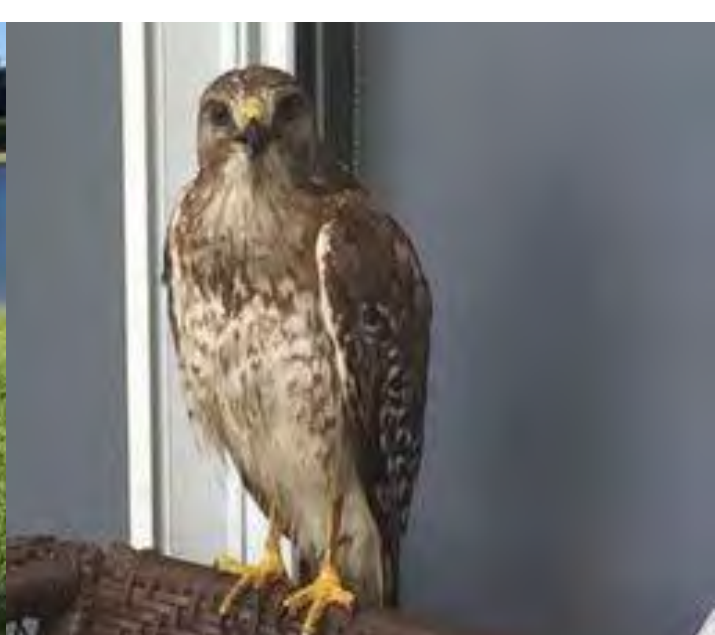
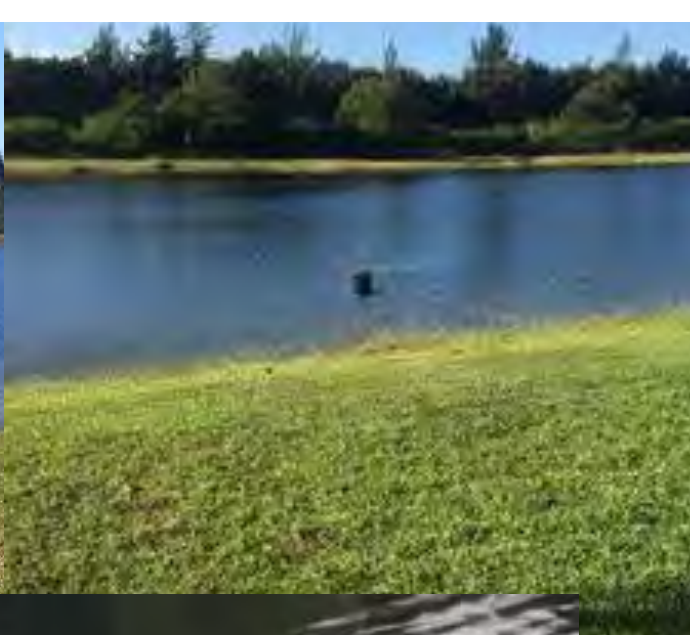
*“the overall wildlife utilization was found to be **poor** in all areas of the site”*

In fact, this wetland forest is Home to dozens of **endangered and threatened** species including Whooping Cranes, Egrets, Ibis, Herons, Tortoise, Alligators and other amazing and beautiful wildlife – deserving of protection guaranteed in our Comprehensive Plan

Actual photos and videos from residents of neighboring properties







[Click to see video  
of Endangered American Alligator](#)



Actual photos and video from residents of neighboring properties



**“the overall wildlife utilization was found to be poor in all areas of the site”**



Click to see video of  
Endangered Gopher Tortoise  
building a nest to lay its eggs

Actual photos and video from residents





# Lennar's Contradictory Report

- Report states property contains: “ *high quality sawgrass*” (pg. 15)
- Entire property characterized as “*herbaceous marsh community*” (pg. 15)

National Garden Association attests to this marsh wetland **forest's community's** value:

- “*Herbaceous plants* are also called “**tender** perennials.” Herbs (medicinal and culinary) can be annuals (completing their lifecycle in one growing season)
- Herbaceous plants can also be woody perennials (meaning the stems are persistent throughout the winter months)

Source: [garden.org/nga/searchqa/answer/30333](http://garden.org/nga/searchqa/answer/30333)

A flourishing and healthy Eco-system



Site Photo 7: Areas of high quality  
Sawgrass Marsh Community

# Lennar's report states presence of Lichens...

- “*Lichens are beneficial for several reasons...*” -- US Forest Service
  - Lichens directly benefit humans through their **ability to absorb pollutants**
  - Absorbing heavy metals, carbon, sulfur and other man-made pollutants released into the atmosphere
  - Able to survive in harsh environments where algae cannot.
  - Lichens enable algae to **extract toxic carbon dioxide from the atmosphere** through photosynthesis and **transform it into oxygen**, which we all need to survive (source: US Forest Service Report, “Why are Lichens Important” [www.fs.fed.us/wildflowers/beauty/lichens/importance](http://www.fs.fed.us/wildflowers/beauty/lichens/importance))



# Lennar's Suspect "Draft-Preliminary Evaluation" Admittedly -- Not an objective "analysis"

Author admits his assessment and data interpretations designed to produce Lennar's desired results:

- *"All field surveys were conducted during daylight hours in January 2015 and were **designed to verify, confirm and augment the office assessment results** generated during the (Lennar) scoping phase of the project."*
- *"(Simply) **designed to verify, confirm and augment** the (Lennar) office assessment results (previously) **generated**"*
- Author warns additional detailed assessments required: *"Data were also produced for further in-depth analysis..."*
- "No analysis or objective evaluation of any kind has been performed by Planners
- Lennar's findings and data interpretations remained unquestioned.

# Lennar's highly edited and Incomplete Report

- “As discussed earlier in this report, there are two community types on the property:”
  - 1) Melaleuca
  - 2) “... high quality sawgrass-herbaceous marsh **community**” (page 15 of 16)
- “High Quality Sawgrass – Herbaceous Marshes” never mentioned earlier in the report as published and was evidently edited out
- Lennar apparently figured nobody would read the full report
- City Planners apparently have yet to read it either

What else was edited out???



# Lennar's Misleading and Inaccurate "Draft Evaluation"

- "Invasive exotic plants and trees *including... Swamp Bay and Red Bays* dominate the property ... **dispersed** throughout the site."

- Swamp Bay and Red Bay are not invasive exotic trees  
2015- The Florida Exotic Pest Plant Council List

- Red Bay Trees described by Dr Kim Coder:

*" At the edge of streams, springs, and swamps hides the Red Bay Tree. Red Bay (Persea borbonia), with its evergreen aromatic leathery leaves, dark blue fruit hanging on into winter, and reddish bark, is a jewel among trees."*



Dr. Kim D. Coder, Professor of Tree Biology & Health Care, University of Georgia,  
"Redbay (Persea borbonia): Drifting Toward Oblivion." May 2012



# Lennar's Suspect "Report" Data and Methodologies

- *"Following the comprehensive review of the August 2013 report on the Miramar site... the ensuing field surveys **were then conducted.**"*
  - No references given to source of 2013 Report
- *"The site exhibits very low wildlife utilization as determined by both direct and indirect survey methods"*
  - **No description of what are "indirect" survey methods or what indirect data extracted by "indirect" methods**
  - Suspect indirect data given the same weight as direct data
  - **Even "direct" data is suspect and of questionable validity**
- *"... random pedestrian transects designed to confirm current **site conditions**... All of the areas of the site were then evaluated in the field by biologists"*
- Thoroughly canvassed all 120 acres of swampy, Lauderhill Muck wetland marsh forest during some unidentified January day -- **by some unidentified "biologists"** - REALLY???





## Questions posed to the author with no response:

- Where is this “**August 2013 Assessment**” that is the foundation of **Lennar’s** Report?
- What data was abstracted solely from this unverified 2013 Report?
- What data was abstracted using “**indirect**” methods – define indirect methodologies?
- What data was interpreted solely from viewing aerial (google map) photographs?
- Number of days taken to completely canvas **author’s** claimed “**thorough evaluation**” of all areas of this densely wooded and marshy 120 wetland forest?
- Who were these “**biologists**” and what are their credentials?

# Similar Questions posed to City Planners:

- Submitted to City Planners -18 April 2016:

“Please provide City’s comments to Lennar’s “Preliminary Environmental Report” which makes no reference to water quality impact, Wetland Benefit Index, or adherence to our City’s Development Code or Comprehensive Plan’s environmental codicils.”

- Answer received 21 May 2016:

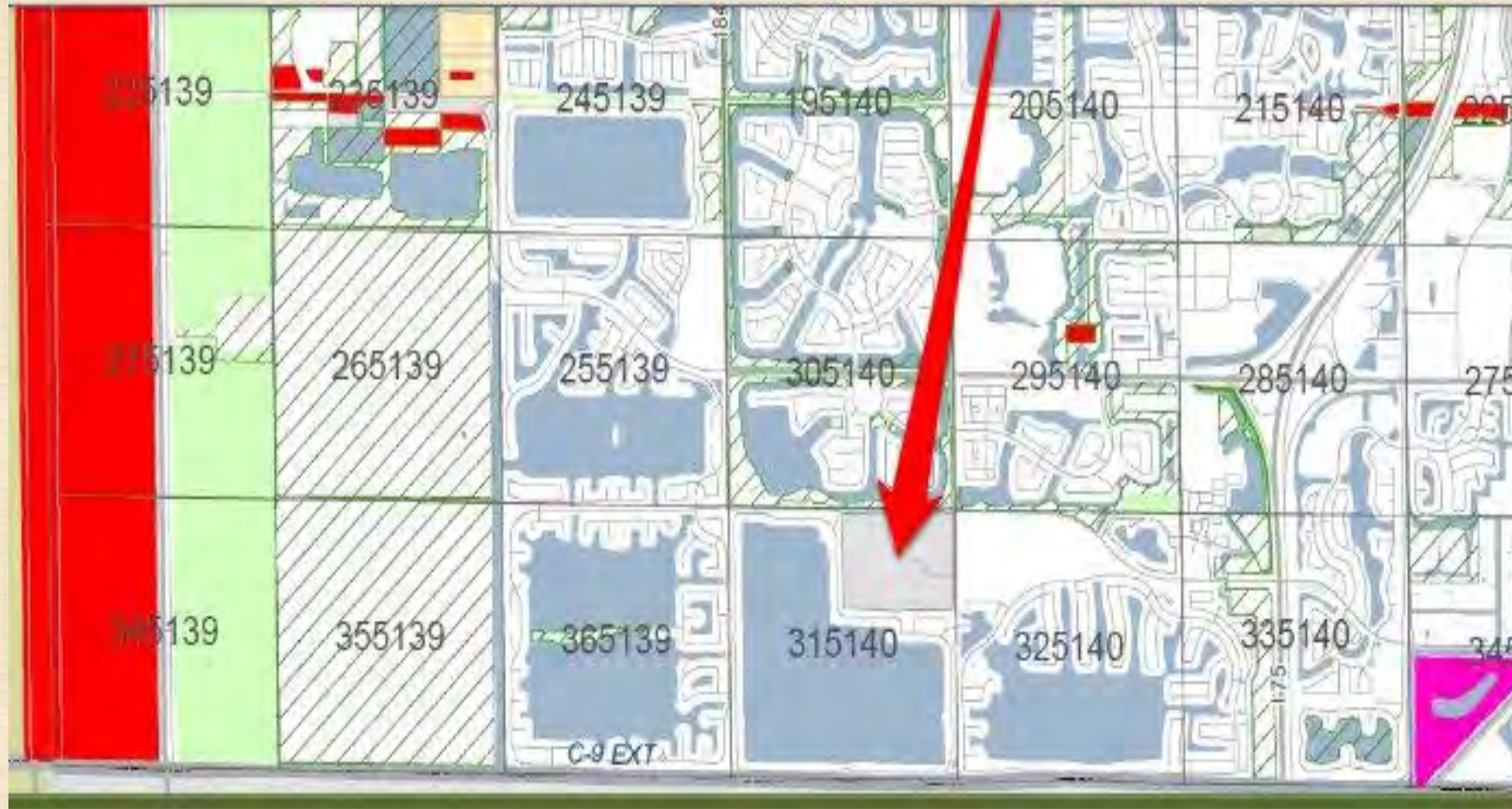
*“City staff notes that if wetlands are found to be contained within the amendment site, the County and Army Corps of Engineers will be required to identify how the wetlands will be preserved/mitigated.”*

*“Furthermore, water quality is (not) reviewed (until) the platting process.”*

So where are these assessments? Once Lennar’s application is approved, our wetland forest and all its benefits will be lost forever - in clear violation of our Comprehensive Plan!



# Broward County Wetland Designation Map - 2015



-  Wetland Cabbage Palm  
Dominant canopy of Cabbage Palm with entrained wetlands
-  Wetland Exotic Brazilian Pepper  
Predominant canopy species of Brazilian Pepper.
-  Wetland Exotic Melaleuca  
Predominant canopy species of Melaleuca.
-  Wetland Improved Pasture  
Disturbed and/or reseeded and regularly maintained, contains entrained wetlands.
-  Wetland Shrub & Brushland  
Typical dominant species such as Wax Myrtle and Willow, contains entrained wetlands.
-  Wetland Under Development / Mitigation
-  Wetland Unimproved Pasture  
Disturbed and irregularly maintained with stands of trees and shrubs contains species of Brazilian Pepper.
-  Wetland/Non-Wetland Mixed Community
-  Lakes, Canals and Major Water Bodies

**Adopted: September 17, 2015**

# Lennar's Report: Misleading and Incomplete

- Fails to identify ecotone's "Wetland Benefit Index (WBI)
- Our Comprehensive **Plan's** Conservation Element Policy 7.3 states:

*The City shall distribute land uses in a manner that avoids or minimizes to the greatest degree practicable, the effect and impact on wetlands...*

*"1. Wetlands with a WBI value greater than or equal to 0.80  
... all land uses except for conservation uses are incompatible "*

- Earth **Advisor's** report May 2017 calculates "Wetland Benefit Index" of .91



# **Wetlands Benefit Index: Identifies functions useful to society and to supporting our environment**

- Regulating rain runoff and flow to control flooding
- Providing pressure against saltwater intrusion
- Buffering against storms and waves
- Catching sediments
- Retaining nutrients
- Removing toxins
- Producing medicinal plants
- Providing wildlife habitat

(Source: NAU Lecture Series #25. <http://www2.nau.edu/~doetqp-p/courses/env320/lec25/Lec25.html>)

# Lennar's Application Environmental Report remains unquestioned



Yet this Lennar contracted “ecologist” and the SFWMD director suggest this valuable treasure’s **destruction** and replacement with 385 single-family homes is preferred to **the preservation** of this thriving wetland eco-system.



# History is full of Lennar's Absurd Final Solution Logic: “...**Destroy** our City's last remaining wetland forest”

*We had to destroy the village  
- in order to save it”*

Ben Tre, Vietnam 1968



- Will our Community forever suffer the consequences from our City's Decision-makers making the same mistakes ???
- The Facts- supported by our Comprehensive Plan- demand **Denying** Lennar's application



# **Comprehensive Plan supports establishing this wetland forest as a Nature Preserve creating an Exploration Park with Renewable Energy Sources**

Broward County Comprehensive Plan – CLIMATE CHANGE ELEMENT

Adopted 12/08/2015 Ordinance Number 2015-54:

Greenhouse Gas Emissions Reduction, Renewable Energy Production and Distribution

Objective 19.1. Mitigate the causes of climate change while providing for cleaner energy solutions and a more energy efficient way of life for visitors and residents.



# Establishing a Nature Preserve and Everglades Exploration Park with Renewable Energy Sources: Supported by our Comprehensive Plan

Objective 6. Protect natural, cultural and historical resources. CP 6.01.01

Continue to obtain land set-asides for environmental preservation in western Miramar, as future development occurs.

Policy 5.1 *Secure Federal and State Funding along with Use* land dedications, long-term lease agreements, open space requirements, easements, fee-simple purchase and other appropriate mechanisms to preserve environmentally sensitive lands or areas of native vegetation, which warrant preservation pursuant to the Land Development Code.

Policy 5.2 Pursue with the appropriate entities, for the purposes of preserving undeveloped land, the acquisition of land in the vicinity of ~~I-75 and Pembroke Road~~, and for the purposes of a nature center or similar educational use, the acquisition of land in *proximity of* the Everglades Buffer, specifically the 120 acre parcel located at 72<sup>nd</sup> Ave and Bass Creek road across from Everglades High School, west of S.W. 104<sup>th</sup> Avenue.

# Code Supports establishing a Nature Preserve and Mitigation Bank

- Section 901.1. The purpose of this chapter is to provide regulations; to utilize... open space and trees as an effective means of conserving energy; to preserve open space, and to maintain and improve the aesthetic quality of the City of Miramar, thereby promoting the health and general welfare of the citizenry.
- In addition, it is the policy of the city commission that every effort shall be made to preserve and maintain natural vegetation within the City of Miramar...
- Lennar willing to pay over \$8 Million to “Mitigate” their Destruction
- Why not keep **developers’** money in Miramar and Broward County?



# Code Supports establishing a Nature Preserve and Mitigation Bank

- Lennar willing to pay over \$8 Million to “Mitigate” their Destruction

- Mitigation Bank credit price for one acre:
  - 2013 price: ~ \$450,000 per acre

**120 Acres = \$54,000,000**

- ALL WHILE PRESERVING THE FOREST’S NATURAL BENEFITS... and
  - ALL without the added health, safety, and welfare dangers of development... and
  - No additional tax-payer money to fund additional infrastructure
- Why not keep **developers’** money in Miramar and Broward County?



# What does Denying Lennar's Application mean to Miramar Citizens?

- Clear Expression of City Leadership's commitment to its citizens
  - Safety, Health, Welfare – our Quality of Life is important
  - **Send the message “Miramar is the place to live if you value a great quality of life – where our environment and your well-being is paramount!”**



# Establishing this wetland forest as a Nature Preserve creating Everglades Exploration Park with Renewable Energy sources

Concept is already supported by our Comprehensive Plan

- Conservation Element. Objective 2.

*Coordinate with the SFWMD (owner) to maintain and enhance, where possible, the Everglades Buffer Strip in Miramar as part of Broward **County's** inventory of urban wilderness areas which will be preserved as open space in perpetuity.*

- Future Land Use Element Policy 1.12

*Permit the following uses within the Conservation land use category:*

- a. Passive outdoor recreational uses such as wildlife sanctuaries and feeding stations, nature centers and trails, outdoor research stations and walkways.*

# Establishing this wetland forest as a Nature Preserve creating Everglades Exploration Park with Renewable Energy sources

Concept is already supported by our Comprehensive Plan

- Objective 6. Continue to obtain land set-asides for environmental preservation in western Miramar, as future development occurs.
- Policy 5.1 Use land dedications, long-term lease agreements, open space requirements, easements, fee-simple purchase and other appropriate mechanisms to preserve environmentally sensitive lands or areas of native vegetation...



# Establishing this wetland forest as a Nature Preserve creating Everglades Exploration Park with Renewable Energy

- Concept is already supported by our Comprehensive Plan VI. Recreation and Open Space Element. Goal 1

Provide adequate and accessible parks and facilities to meet the recreation needs of all current and future Miramar residents.

- Objective 1.1...increase developed park and open space acreage in the City by 25 acres by 2015 through aggressive capital programming, contributions and fees from private developers, and effective intergovernmental coordination.
- Policy 1.1.1 Continually look for opportunities to place park land adjacent to school site
- Objective 11: Increase **Miramar's** attractiveness to tourists through the establishment of a land use pattern and development regulations aimed at enhancing the **area's** natural and man-made environments.

# Establishing this wetland forest as a Nature Preserve creating Everglades Exploration Park with Renewable Energy sources

- Concept is already supported by our Comprehensive Plan

Policy 1.1.5 Continue to provide a minimum of four (4) acres of park land and open space for each 1,000 residents, concurrent with new demand as measured by the **City's** Concurrency Management System. In addition, continue to provide a minimum of recreational facilities, as per the Florida Recreation and Parks Association Level of Service standards for recreational facilities.

- $120 \text{ Acres} \div 4 = \underline{30,000 \text{ residents}}$  recreational space/facilities fulfilled!
- Tax revenue from increased existing Miramar home values will off-set potential loss from **Lennar's** proposed development— **WITHOUT** the added tax-burden levied on residents to expand existing support infrastructure.



# It's been done before and can become a unique Miramar community recreation and tourist attraction





# Miramar Nature Preserve and Eco-Exploration Park

- Build on Success of Turtle Bay located in Redding, CA
- Fulfills +50 City Comprehensive Plan Goals, Objectives, Policies

## TURTLE BAY VISITATION 2014

**2014 Attendance:  
104,000**

Memberships

**5,600**

Visitors were from

72% Shasta County

20% Other CA counties

7% USA (outside CA)

1% International



13,000

School Children  
attended field trips



600

People reached  
Off-campus educational  
outreach



3,250

Guests on Sundial  
Bridge tours

Guests Hosted at Animal Programs

37,700



Parrot  
Playhouse

16,200



Butterfly  
House

19,200



Walk on the  
Wild Side  
Animal Show

8,000



Fish  
Feedings

10,000



Other Animal  
Programs



In Conclusion:

**Denying Lennar's Application will protect residents' welfare, public health, and safety as mandated by our Comprehensive Plan**

- Avoid Safety Hazards to residents and school children
- Preserve the many benefit now provided by our last remaining wetland forest
- Avoid Threats to citizen safety caused by storm-surge, sea-level rise, erosion, air-quality, drinking water, flooding, pollution, and noise
- Supports over 100 goals, objectives, and policies outlined in our Comprehensive Plan
- Facts presented overwhelmingly supports application DENIAL by not transmitting this application for City Commision consideration
- Preserving this City Treasure for future generations to enjoy



# Lennar's Inaccurate "No-impact" Environmental Report

- Not scrutinized by City Planners and blindly accepted as "valid"
- No **previous "office assessment"** found - queries to author ignored
- Suspect Methodology- Missing information - queries to author ignored
- Grossly incomplete yet Lennar insists:

*"The data generated during this ecological evaluation should be considered as ...the final wetland mitigation requirements for this **property**"*

- Report "**sanitized**" by Lennar prior to submission to City Planners  
(2 rounds of revisions)



# Hurricane Irma: A Wake-Up Call...

*“It’s ridiculous luck. Twenty to Thirty miles would have made a huge difference.”*

Professor Phil Klotzbach, meteorologist and professor at Colorado State University, which issues annual storm season projection

- The last Category 3 storm or higher to hit Florida was Wilma in October 2005. It sliced across Florida with 120 mph winds, killing five people and causing an estimated \$21 billion in damage.
- Our 120 Acre Wetland Forest is a **critical life-saving barrier** against increasingly deadly hurricane storm surge, winds, and flooding



# Lennar's Application responses ignores the Hurricane Threat

## 10. HURRICANE EVACUATION ANALYSIS

**(Required for those land use plan amendments located in a hurricane evacuation zone (1) as identified by the Broward County Emergency Management Division).**

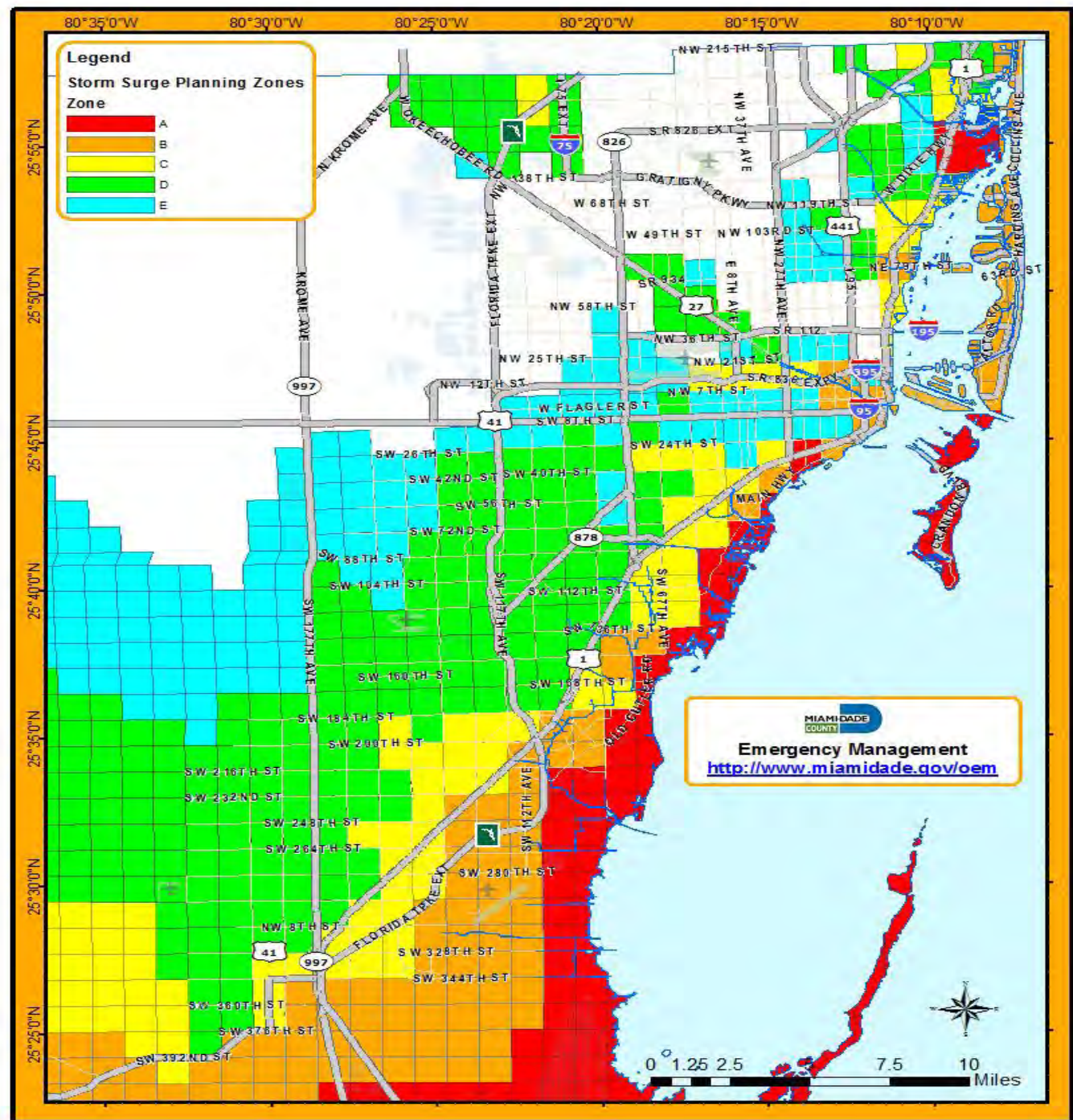
**Provide a hurricane evacuation analysis based on the proposed amendment, considering the number of permanent and seasonal residential dwelling units (including special residential facilities) requiring evacuation, availability of hurricane shelter spaces, and evacuation routes and clearance times. The hurricane evacuation analysis shall be based on the best available data/modeling techniques as identified by the Broward County Emergency Management Division.**

The Subject Property is not located within an evacuation zone.

- Property is located adjacent to Miami-Dade **Hurricane Evacuation Zone 3**
- Broward County has ignored studies reflecting new threat of Storm Surge
- Miami-Dade recognizes this dangerous threat to its citizens

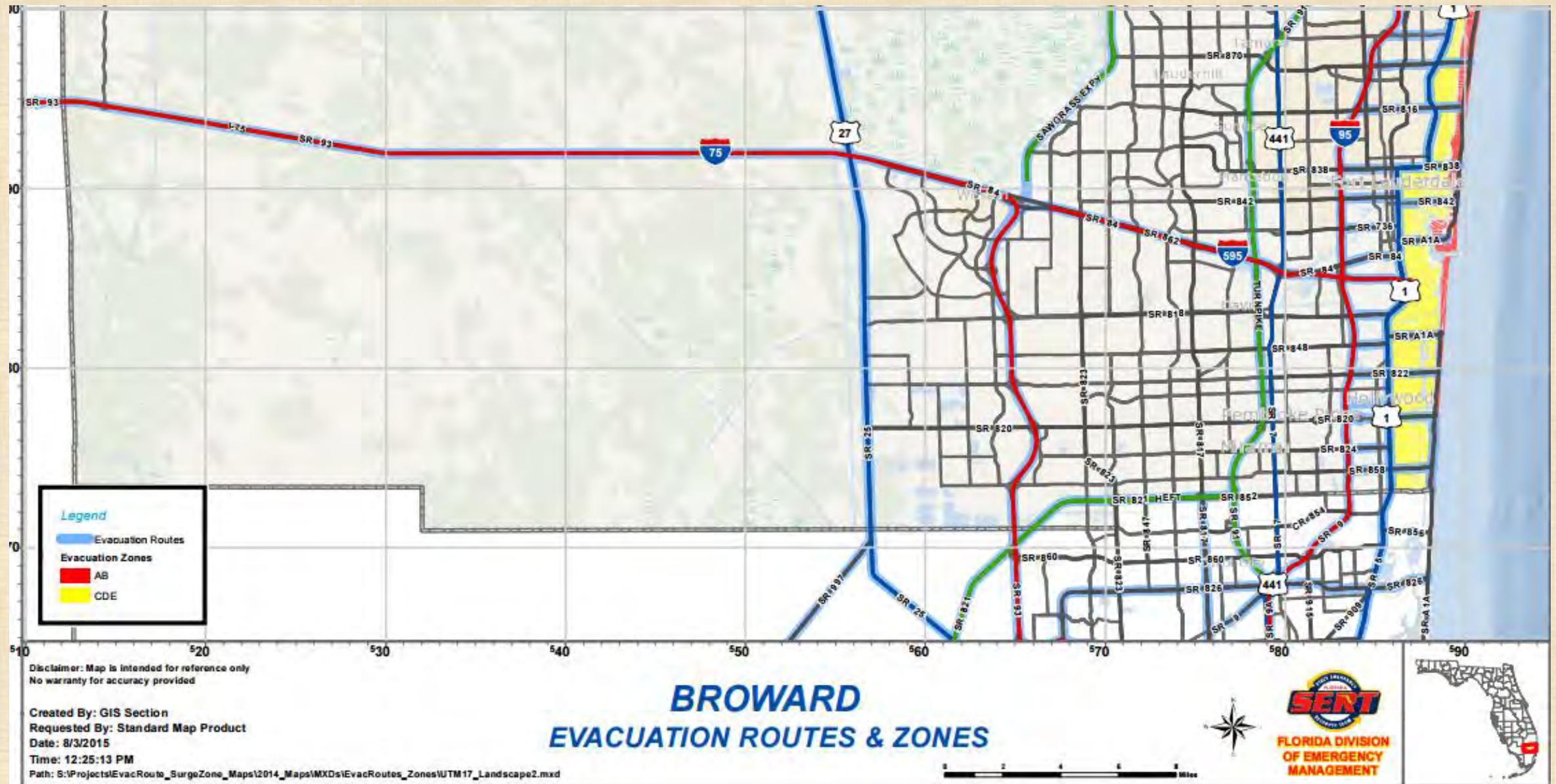


# Hurricane Evacuation: Miami- Dade vs Broward County





# Broward County Hurricane Evacuation Areas





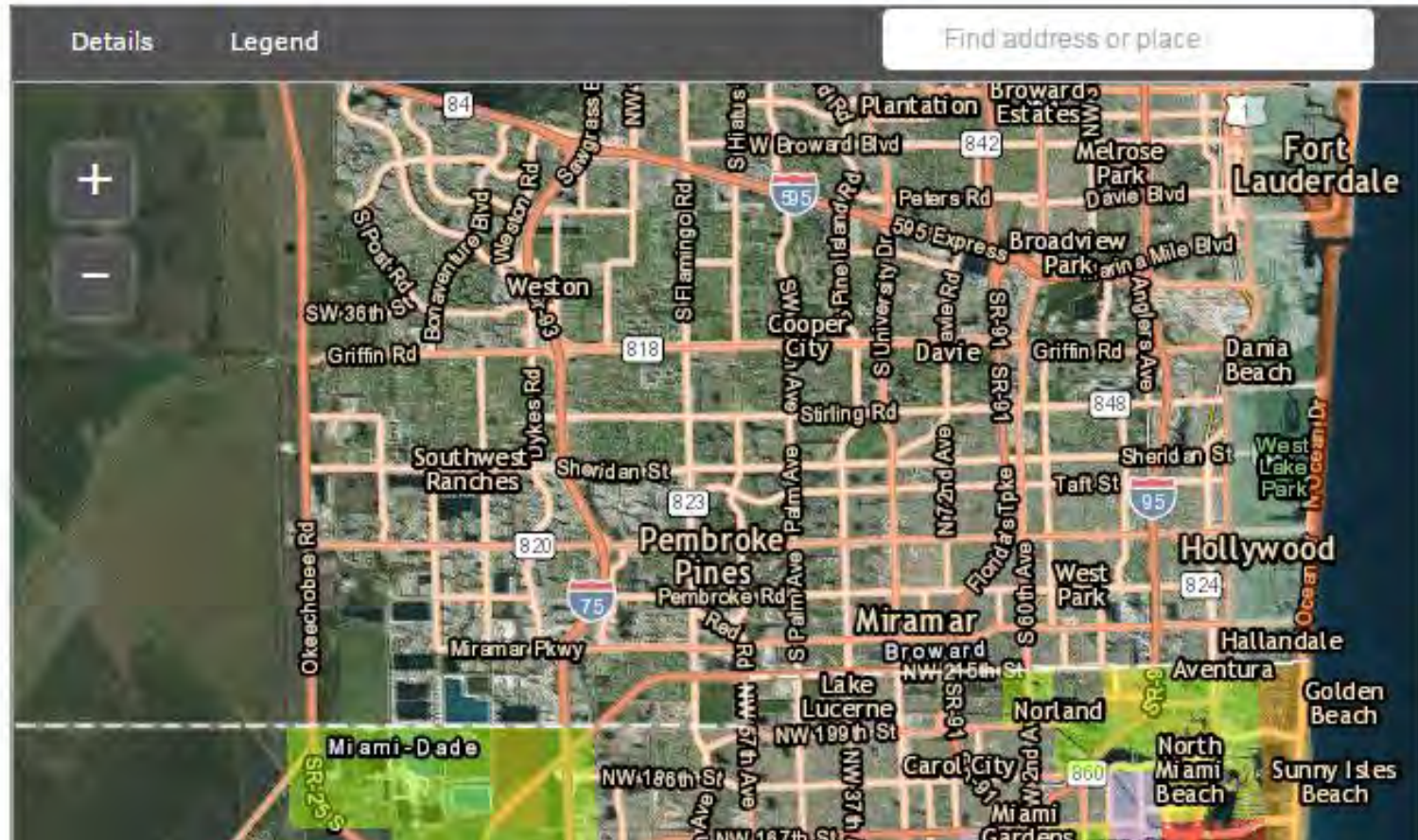






[Home](#) / [Disaster Preparedness Maps](#)

**Know Your Zone - Evacuation Zones**





# Lennar's Application responses ignores the Hurricane Threat

- Broward County and the City also appear to be Ignoring the threat
- Our 120 Acre Wetland Forest is a critical life-saving barrier against increasingly deadly hurricane storm surge, winds, and flooding
- Needed to protect our community from possible devastation
- The overall intention of Miramar's Comprehensive Plan, **... protect the residents' health, safety and welfare."**
- **Demands Denying Lennar's Application!**

# Stormwater Management: There is no safe solution

- Construction site erosion control measures ineffective against our torrential 52 million gallon downpours

- Check dams
- Filter berms
- Grass-lined channels
- Riprap
- Chemical stabilization
- Mulching
- Seeding
- Sodding
- Soil roughening





# Sea Level Rise: The Threat is Real!

Even if our City and County governments choose to ignore scientists' warnings

- *South Florida, taxpayers are already paying the price for climate change as salt water pushes through porous bedrock into coastal drinking-water supplies, and rivers and canals choked by heavy rains have a harder time draining into the ocean*
- *. A recent Florida Atlantic University study estimated that **just 6 more inches of sea level rise — very plausible within two decades — would cripple about half of South Florida's flood control capacity.***

<http://sealevel.climatecentral.org/news/florida-and-the-rising-sea>



# Property located on Special Flood Hazard Area (depth to 3 feet)



## LEGEND



SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A	No Base Flood Elevations determined.
ZONE AE	Base Flood Elevations determined.
ZONE AH	Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
ZONE AO	Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.

<http://www.broward.org/PermittingAndLicensing/Licensing/Engineering/FloodZonemaps>  
<http://bcgis.maps.arcgis.com/>

### D. Local Areas of Particular Concern as identified within the Broward County Land Use Plan.

There are no designated Local Areas of Particular Concern (LAPC's) located on, or adjacent to, the Subject Property, including parcels that may be designated LAPC's, Natural Resource Areas (NRA's), Environmentally Sensitive Lands (ESL's), or native Upland Tree Resources.

### E. Priority Planning Area Map and Broward County Land Use Plan Policy A.03.05 regarding sea level rise.

The Amendment Area is not located in a Priority Planning Area for Sea Level Rise.



**Proposed Development located in a “Flood Zone” requiring “mountains” of fill from locally blasted quarries**

## **Other Lennar’s Application “Oversights”**

**D. Local Areas of Particular Concern as identified within the Broward County Land Use Plan.**

There are no designated Local Areas of Particular Concern (LAPC’s) located on, or adjacent to, the Subject Property, including parcels that may be designated LAPC’s, Natural Resource Areas (NRA’s), Environmentally Sensitive Lands (ESL’s), or native Upland Tree Resources.

**E. Priority Planning Area Map and Broward County Land Use Plan Policy A.03.05 regarding sea level rise.**

The Amendment Area is not located in a Priority Planning Area for Sea Level Rise.

# SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT ENVIRONMENTAL RESOURCE PERMIT APPLICANT'S HANDBOOK

- If your project is not related to a single family residence, and contains impervious surfaces, stormwater treatment, or affects the flow of surface water beyond certain thresholds stormwater review will be required.
- Compliance with the criteria herein constitutes a presumption that the proposed activity is in conformance with the conditions for issuance
- However, the criteria set forth in this Volume II are designed to be flexible.

Other words: **We trust you**, Lennar, not to flood our lakes and homes, fill our canals with polluted runoff poisoning our drinking water supply – REALLY???



# Lennar's Incomplete Application Responses

**The information should include the wet season water level for the Subject Property, design storm elevation, natural and proposed land elevation, one (1) hundred year flood elevation, acreage for proposed water management retention area, elevations for buildings, roads and years, storage and runoff calculations for the design storm and estimated time for flood waters to recede to the natural land elevation.**

Permitting requirements mandate that resulting development must meet the adopted level of service requirements.

- Are we willing to trust Lennar with our families safety and health?  
NO!
- If this Amendment is approved – **there's** no turning back

# Non-responsive local government

- Citizen Inquiries to Environmental Impact
- **School Children's safety/learning environment**
- Traffic prediction methodologies
- Hurricane Evacuation
- Housing values



All ignored



# Administrative “Irregularities”

- Lennar Allowed 3 Applications for this Land Use Plan Amendment
    - 11 March 2015
    - 29 June 2015
    - 3 November 2015
  - Only Paid for processing one application
  - Planners giving Lennar Special Treatment
    - Community standard is 3 homes (dwelling units) per acre x 120 acres = 360
    - 360 vs Lennar’s 385
      - *“We’ll address that in the Platting and Permitting phase.”*
- City of Miramar Principal Planner, Eric Silva
- If Lennar’s Application is approved... it will be too late!

# Administrative “Irregularities”

- Group has submitted several formal requests for information regarding reports and City comments affecting this LUPA over the last 12 months
- Provided piecemeal bits of meaningless chaff for a year-
- **City ignoring “Sunshine” Transparency Laws**



# Lennar's Application errors

**F. "Endangered" or "threatened species" or "species of special concern" or "commercially exploited" as per the Florida Fish and Wildlife Conservation Commission (fauna), the U.S. Fish and Wildlife Service (flora and fauna), or the Florida Department of Agriculture and Consumer Services (fauna). If yes, identify the species and show the habitat location on a map.**

No endangered or threatened species or species of special concern or commercially exploited species are known to inhabit the Subject Property.

Photos and videos prove existence of dozens of threatened and endangered species

# Lennar's Application errors

## **G. Plants listed in the Regulated Plant Index for protection by the Florida Department of Agriculture and Consumer Services.**

The Applicant is not aware of any plants on the Subject Property that are listed in the Regulated Plan Index for protection.

- 120 Listed Endangered and Threatened Plant Species in Broward and Miami-Dade
  - Many existing in wetland areas like our 120 acre wetland forest
- Lennar's suspect "**Environment Report**" demands verification
- Waiting for EPA and ACE studies not an option for Miramar Citizens
  - Irresponsible waste of taxpayer dollars
  - Once LUPA is approved... it will be too late to preserve our **City's** last remaining wetland forest



# Lennar's Application errors

## **3. Identify any planned drainage improvements, including year, funding sources and other relevant information.**

The proposed surface water management system will consists of inlets and culverts that collect and convey stormwater runoff which will overflow into the lake portion of the wetland mitigation are on the Subject Property. This system will provide for the necessary water quality treatment, attenuation of peak storm events, and protection of roadways, perimeter areas and buildings. The surface water management system has an outfall to the north that is connected to the SBDD master surface water management system.

- “Overflow” of pollutants and runoff to dump into Lakes owned by Silver Lakes HOA
- Property currently under mitigation
- Not belonging to “subject property”

# Lennar's Application errors: incomplete

- 5. If the area in which the amendment is located does not meet the adopted level of service and there are no improvements planned (by the unit of local government or drainage authority) to address the deficiencies, provide an engineering analysis which demonstrates how the site will be drained and the impact on the surrounding properties.**

**The information should include the wet season water level for the Subject Property, design storm elevation, natural and proposed land elevation, one (1) hundred year flood elevation, acreage for proposed water management retention area, elevations for buildings, roads and years, storage and runoff calculations for the design storm and estimated time for flood waters to recede to the natural land elevation.**

Permitting requirements mandate that resulting development must meet the adopted level of service requirements.



# Lennar's Application errors

## **D. Local Areas of Particular Concern as identified within the Broward County Land Use Plan.**

There are no designated Local Areas of Particular Concern (LAPC's) located on, or adjacent to, the Subject Property, including parcels that may be designated LAPC's, Natural Resource Areas (NRA's), Environmentally Sensitive Lands (ESL's), or native Upland Tree Resources.

Property under Mitigation – therefore *is* LAPC

# Lennar's Application errors

An initial wetland analysis was conducted for the Subject Property on July 27, 2013. The results of the analysis is provided as **Exhibit K**. Appropriate wetland mitigation will be determined during the permitting process.

Property is already under Mitigation  
Once this LUPA is approved... it will be too late!



# Lennar's Application errors

**E. Priority Planning Area Map and Broward County Land Use Plan Policy A.03.05 regarding sea level rise.**

The Amendment Area is not located in a Priority Planning Area for Sea Level Rise.

# Lennar's Application errors

**The information should include the wet season water level for the Subject Property, design storm elevation, natural and proposed land elevation, one (1) hundred year flood elevation, acreage for proposed water management retention area, elevations for buildings, roads and years, storage and runoff calculations for the design storm and estimated time for flood waters to recede to the natural land elevation.**

Permitting requirements mandate that resulting development must meet the adopted level of service requirements.

- Grossly incomplete response to this critical issue that directly **impacts Miramar citizens' safety and health**
- Flooding is a real and dangerous threat – made worse by sea-level rise/Climate Change
- Silt and pollutant run-off threatens drinking water supply and Everglades pump operations



# Flood Threat

**Soils – Describe whether the amendment will require the alteration of soil conditions or topography. If so, describe what management practices will be used to protect or mitigate the area's natural features.**

According to the *Broward County Natural Resource Map Series*, Lauderdale-Dania-Pahokee soils are present on the Subject Property. The Lauderdale soil series consist of shallow, well drained soils that are suitable for development. Development on the Subject Property will require that the elevation of the Subject Property be increased to appropriate elevation for flood protection.

# Lennar's Application errors

- Applicant not the owner as specified by ordinance
- Legal Description incorrect (different from Broward Tax Rolls)
- **Drainage analysis not in accordance with South Broward Drainage District's Adopted Level of Service**
  - Required Off-site Discharge/Storm Sewer/Flood Plain Routing/On site storage/Antecedent Water Level values not identified
  - **"... collect and convey stormwater runoff which will overflow into the lake portion of the wetland mitigation are(a) on the subject property."**



# Issues not adequately addressed by the applicant or local planners

- Land use Element. Development Review Requirements. Objective 2
- By 2012, complete the full revision of the Land Development Code which will ensure the protection of natural resources, discourage urban sprawl, promote “**Smart Growth**” and energy efficient development and land use patterns which account for existing and future electrical power generation and transmission systems in an effort to reduce greenhouse gases, encourage the use of innovative land development techniques, promote community aesthetics, ensure the availability of the infrastructure needed to support development, and comply with the Broward County Land Use Plan.
- Policy 2.1 The City shall enforce the Land Development Code provisions for minimum adequate stormwater management including wetland preservation/restoration, open space, including historic and archaeological sites, safe and convenient on-site traffic flow, adequate parking, landscaping and signage and standards and clustering of residential units, by 2012.
- Policy 2.2 Continue to maintain and improve the **City’s** Concurrency Management System which will ensure that the necessary facilities and services are available concurrent with the impacts of development, the City of Miramar shall review all

# Issues not adequately addressed by the applicant or local planners

- Miramar Comprehensive Plan. Future Land Use Element. Development Review Standards. Objective 8. Continue to enforce development review standards
- Future Land Use Element. Policy 8.3 The City may grant an application for a development permit consistent with the **City's** Land Use Plan when it has determined that the following requirements are met:
  - a. Traffic circulation, recreational, drainage and flood protection, potable water, solid waste and sanitary sewer public facilities and services will be available to meet the established level of service standards, consistent with Chapter 163.3202(g) Florida Statutes and the concurrency management policies of Broward County.
  - b. Local streets and roads will provide safe, adequate access between buildings within the proposed development and the trafficways identified on the Broward County Trafficways Plan prior to occupancy.
- These **Requirement's** have NOT been met -- **Lennar's** application responses regurgitate City Land Use Code – no specifics on HOW it meet these requirements



# Issues not adequately addressed by the applicant or local planners

Comprehensive Plan. Intergovernmental Coordination Element. Objective 6

The City of Miramar shall pursue identification and implementation of joint planning areas for the purposes of joint infrastructure service areas, corridor and community redevelopment, environmental conservation, adverse development impacts

Policy 6.2 “**Joint Planning Areas**” described in Policy 6.1. shall be established through formal agreements among the necessary governmental bodies and shall include and not be limited to as many of the following planning considerations as possible:

- a. Cooperative planning and review of land development activities within the areas covered by an agreement

# DRC Planned Projects as of October 2015

PROJECT NAME	LOCATION	APPLICATION #	DESCRIPTION	PROJECT MANAGER	STATUS/DATE
Miramar Park of Commerce Phase IV - MPC-29	Miramar Park of Commerce Phase IV Premier Parkway	13-SP-12 Site Plan	223,912 square feet of warehouse/distribution space	E. Rose	DRC Approved Com. Approved Bldg. Permit Issued Built
Space Coast Credit Union	Southeast corner of Miramar Parkway and Dykes Road	#13-SP-08 Site Plan # 13-VE-01 Vacation of Easement	3,673 square foot with drive thru	M. Alpert/IBI	DRC Approved Com. Approved Bldg. Permit Issued Built
Sunshine Shell Gas Station	6924 Miramar Parkway	#12-SP-10 Site Plan Amendment Canopy extension	Renovation	M. Alpert	DRC Approved Com. Approved Bldg. Permit Issued Built
Starbucks	SW 160th Avenue	# 13-SP-06 Site Plan	1,770 sq. ft. freestanding drive-thru restaurant	T. Ivy Jordan/Miller Legg	DRC Approved Com. Approved Bldg. Permit Issued Built
Dollartree	University Drive & Miramar Boulevard	#13-SP-02 Site Plan	10,000 square-foot retail store	M. Alpert/Kimley-Horn	DRC Approved Com. Approved Bldg. Permit Issued Built
Texas Roadhouse	3141 SW 160th Avenue	# 13-SP-01 Site Plan	7,309 square foot restaurant	H. Zombek/Calvin, Giordano & Assoc. Inc.	DRC Approved Com. Approved Bldg. Permit Issued Built
Broward College Southwest Center	SW 145 Avenue, east of I-75 and south of Pembroke Road	#13-SP-04 Site Plan	89,360 square-foot classroom building	T. Ivy Jordan/IBI	DRC Approved Com. Approved Bldg. Permit Issued Built
PROJECT NAME	LOCATION	APPLICATION #	DESCRIPTION	PROJECT MANAGER	STATUS/DATE
Foxcroft Homes Replat	Foxcroft Road	#13-SUB-01 Replat #09-DRC-06 Site Plan	Proposed 300 single family homes  * This project was built instead of Waterview Townhomes	L. Hall	DRC Approved Com. Approved Bldg. Permit Issued Built
Miramar Park of Commerce MPC 28	Premier Parkway and east of Palm Avenue	#12-SP-17 Site Plan	81,490 square foot warehouse distribution facility with loading docks and associated parking	T. Ivy Jordan	DRC Approved Com. Approved Bldg. Permit Issued Built

PROJECT NAME	LOCATION	APPLICATION #	DESCRIPTION	STATUS/DATE	TOTAL UNITS
Casa Sant'Angelo Senior Housing	16800 Miramar Parkway (Blessed John XXIII Church site)	#1404231 Site Plan #1404235 Conditional Use	112 residential units on 5.306-acre site Request for Allocation of Reserve Units and Bonus Sleeping Rooms	DRC Review	112
Toledo Isles	4100 SW 160 Ave (West side of Dykes Road, S. of Miramar Parkway/north of Bass Creek Road)	#1401956 Site Plan #1300811 Land Use Plan Amendment	20 single-family units on a 10-acre site	DRC Review	20
Atlantic Commons at Miramar	East of Flamingo Road and south of the Homestead Extension of the Florida Turnpike	# 1400079 Site Plan # 1400077 Parking Variance	340 Apartments on a 28.3-acre site	DRC Approved Com. Approved Bldg. Permit Review	340
Modera II	West side of Red Road, South of the Turnpike	#13-SP-09 Site Plan #13-VAR-05 Parking Variance #13-VAR-04 Building Separation Variance	380 residential units on 25.443 acres	DRC Approved Com. Approved	380
Calabria	SE corner Miramar Blvd & University Dr.	#12-SP-14 Site Plan Amendment	#12-SP-14 Site Plan Amendment - 145 Townhomes	DRC Approved Com. Approved	145
Hatfield Properties	6315 SW 27th Street	#1501965	4 Townhouses		4
Univision Property	Southwest Corner of Bass Creek Road and SW 172nd Avenue	#150809 - Site Plan #150812 - Land Use Plan (Map) Amendment #1502814 - Master Zoning Plan #1502815 - Re-Zoning	537 single-family homes subdivision		385
The Palms at Miramar	6336 SW 27th Street	#1503507 - Site Plan	9 multi-family unit building in TOC		9
Boardwalk Apartments	SW 50th Street & Flamingo Road	#15403511 - Boardwalk Rezoning from 2B, NB to RM - 25, MFR #1500280-Board Rezoning from RM-16 to RM-25, MFR #1503513 -Variance Building Separation #1503514 - Variance - Minimum Unit Size	280 Multi-Family Residential Units		280
<b>TOTAL</b>					<b>1827</b>



**EXHIBIT L**  
**Choose Mitigation, not Development**  
**Turning the Univision Site into the Miramar Nature Reserve**

**Land Use Planning Amendment application 1502812**



Prepared by  
**Save Miramar Wildlife**  
**Earth Advisors, Inc.**  
9 May 2017

9 May 2017

**Project:** Environmental Assessment and recommended uses for the 117 acre parcel at corner of SW 37<sup>th</sup> Court and SW 172<sup>nd</sup> Ave (Univision site). Options for the property in lieu of developing it for residential housing are requested.

**Recommendation:** The Univision site has quality wetland soils and conditions to be used as a wetlands mitigation bank for development projects, allowing it to become a nature reserve that can: Increase property values for surrounding neighborhoods, meet green space and blue space goals for the City of Miramar, provide needed acreage in Broward County for development wetland mitigation, and provide outdoor education opportunities for Everglades High School and surrounding education institutions.

**Overview:** Earth Advisors has met with Save Miramar Wildlife and supports the opinion for restoring this 117 acre property to be a community green space instead of developing it. The location of this property across from schools and adjacent to existing neighborhoods that have voiced their support for preserving this property, gives it a location and community support for the City of Miramar to vote to deny this proposed land use plan amendment (LUPA.)

This 117 acre wetland area is located in a densely populated residential area and is across the street from two schools. Voting to designate it as a property for development wetlands mitigation, through purchase and management by the City of Miramar, it can become a valuable green asset to the City of Miramar and all South Florida. Keeping this property a green space will contribute to improving air quality, meet increasing demands for storm water management (and flood control) in this region, and provide urban green space for vegetation and wildlife. To many Miramar residents in surrounding neighborhoods, keeping this property green increases the aesthetic value of the hundreds of surrounding homes, businesses, churches, and schools.

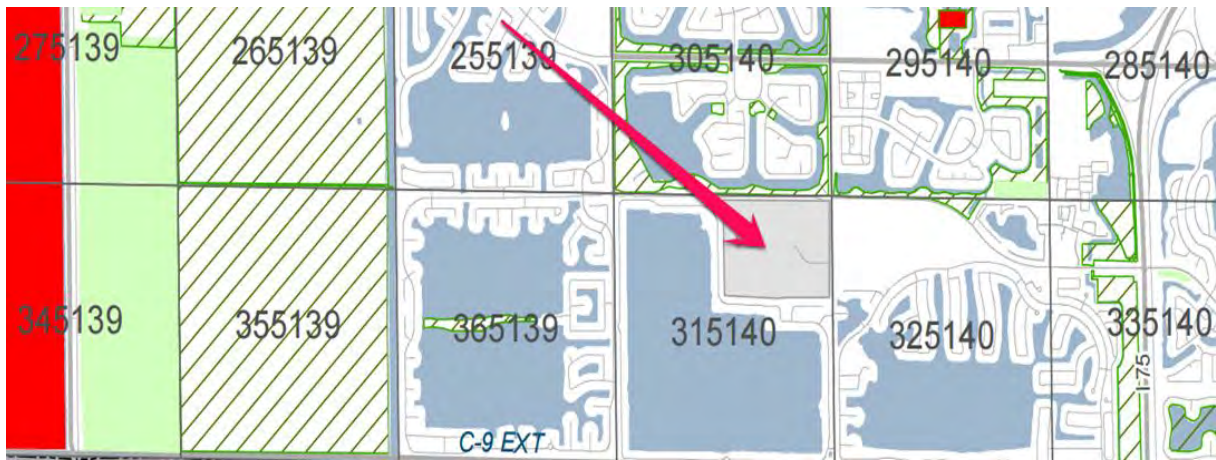
The addendum of this report provides further research and information produced by Save Miramar Wildlife volunteers about the environmental benefits and values to be gained from preserving this property, and the threats to the environment being researched and reported that they want the City of Miramar to learn and include when permitting development projects. The environmental elements that are provided by green spaces consist of this area's contributions to air and water quality, wildlife habitat sustainability, and the aesthetic value this area adds to the local community.

Earth Advisors encourages governmental agencies to partner with local businesses, private organizations, and local residents to pursue the alternative course of action to redirect Lennar's proposed development to East Miramar, and begin planning and implementing a wetlands mitigation program for this property- establishing this area as an officially proclaimed nature reserve.

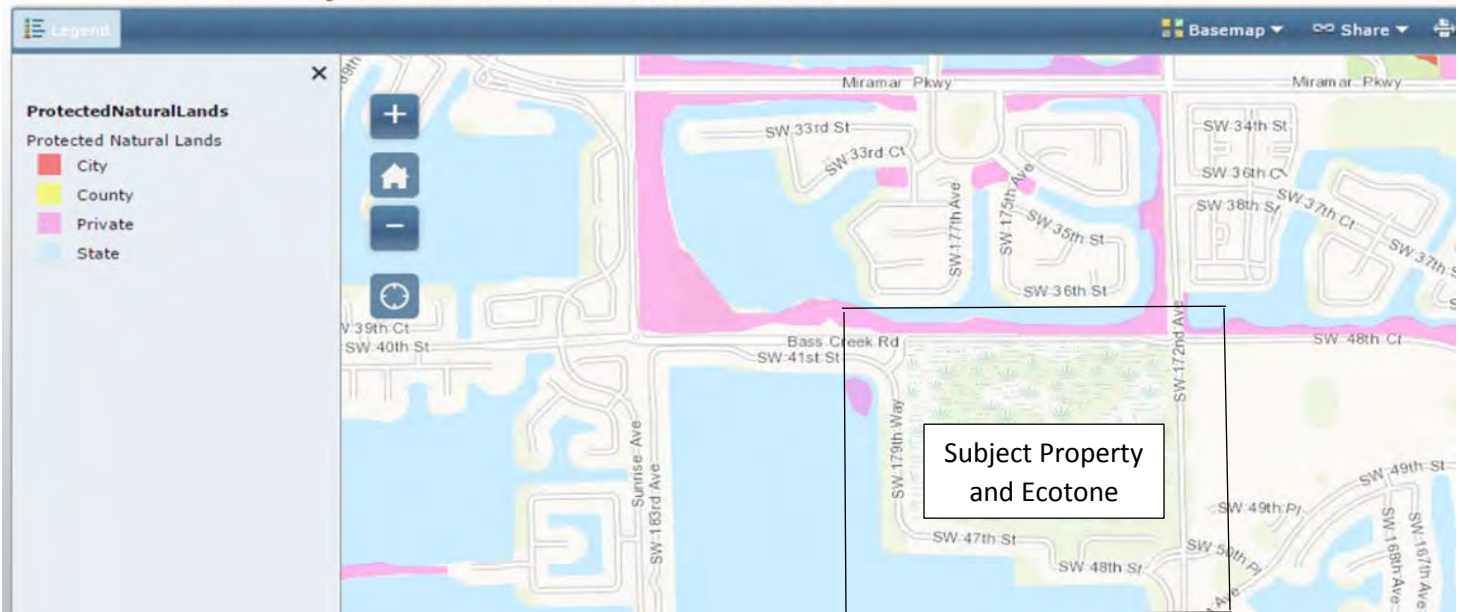
**Subject Property Environmental Characteristics:** This property is classified as a forested wetland, with hydric soils and elevations that allow for flooded and/or ponded conditions to support wetland vegetation. These base conditions can be preserved, with removal of invasive vegetation and installation of overstory, understory, and groundcover native wetland plants, to provide wetland mitigation credits of restoration or creation. The opportunity exists to be a wetlands mitigation site for development projects needing these credits, since there are not current sites available in Broward County. The property can gain a WBI of 0.9 or greater based on being restored with native wetland plant species, surpassing the City of Miramar minimum WBI of 0.8 for properties to be considered for conservation and not development.

Broward County shows this property with current land use "Wetland Under Development/Mitigation". **Choosing this property for wetlands mitigation and not development is what the surrounding residents request of the City of Miramar.**





### Broward County Protected Natural Lands



The Univision property has natural areas and water bodies around it as seen in the Broward County Protected Natural Lands screenshot above. Restoring the property to be a forested wetland, with an ecotone to transition into the surrounding wetland prairies and open water bodies, is what the local residents of Miramar want for this property. The City of Miramar can gain further community support and actions to develop the plan for this property to become a nature reserve. A successful example for this is seen in the 100 acre Green Cay Wetlands of Boynton Beach, Florida.



## EXHIBIT M

Choose Mitigation, not Development  
Turning the Univision Site into  
the Miramar Nature Reserve

Land Use Planning Amendment application 1502812



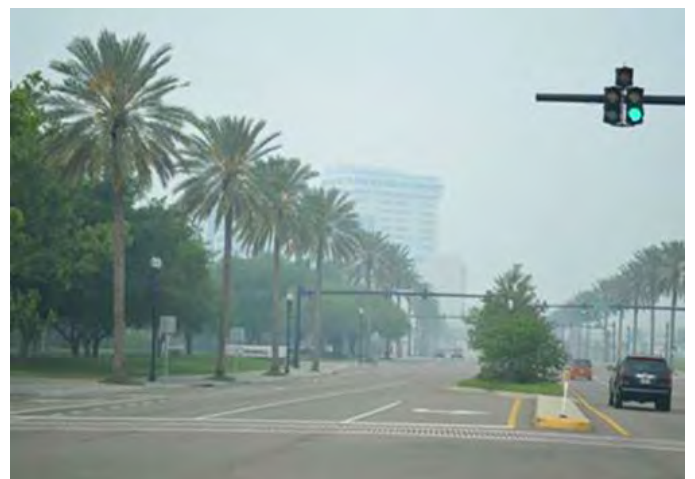
### ADDENDUM: Environmental Issues and Concerns presented by the Miramar Citizens' Coalition

The following information and opinions are a follow up to environmental concerns shared by City of Miramar residents about this property and development activities in previous meetings. Community volunteers have spent many hours researching this information and reviewing the potential impacts for development of the property. They have also reviewed the Comprehensive Plan and plans for surrounding communities to inform city staff about current environmental issues that can affect the City of Miramar, such as climate change, sea level rise, water quality management, air quality management, and other issues.

#### Miramar's Wetland Forest's Preserves Air Quality

If left undisturbed, this 120 acres of dense forest will **remove 2,715,800 pounds** of harmful greenhouse gases from the air we breathe.<sup>1</sup>

Conversely, the consequences of destroying this 120 acre wetland forest will immediately **release 29,000,000 pounds** of toxic greenhouse gases now stored in this forest's soil, root systems and flourishing foliage.<sup>2</sup> This forest is also teeming with beneficial Lichens that absorb heavy metals, carbon, sulfur and other man-made pollutants typically associated with South Florida's toxic vehicle emissions. Lichens also enable algae to **extract toxic carbon dioxide from the air** through photosynthesis and **transform it into oxygen**, which all life needs to survive.<sup>3</sup>





### Contributions to Water Quality and Erosion Prevention

The thousands of trees and plants thriving in this 120 acre wetland forest helps purify our drinking water supply. Wetland forests substantially reduce the need for treatment for drinking water and thus radically reduce costs of supplying drinking water to all South Florida residents.<sup>4</sup>

Water Quality surrounding forests is significantly higher as they act as a natural sponge absorbing heavy rainfall, regulating soil erosion, and reducing sediment load.

Undisturbed wetland forests like the subject property with understory, leaf litter, and organically enriched soil is the best watershed land cover for minimizing erosion.

The subject property's wetland forest's watershed offers higher-quality water than any alternative land use.<sup>5</sup>



**Forests are the best form of land use for sustaining water quality.** Studies clearly show that the amount of forestland within a watershed is an indicator of water quality and healthy aquatic ecosystems. In urban areas, trees and forests are part of what is referred to as the community's "green infrastructure" and help reduce storm water runoff. In rural areas, forests protect

municipal water supplies, mitigate the impacts of flooding, replenish groundwater aquifers, and provide recreation and critical fish and wildlife habitat, as well as a variety of wood products.<sup>6</sup>

As Lennar's Site Photos clearly demonstrate, this lush forested area represents the ideal combination of water filtering trees, grasses, shrubs, and extensive root

systems that profoundly mitigate the flooding and erosion that would otherwise devastate the local community's interconnected networks of lakes and canals.

With an average annual rainfall of over 60 inches, this marshy, wetland forest serves as a sponge to absorb the millions of gallons of runoff that would otherwise inundate the city's stormwater evacuation systems. Moreover, Miramar Land Development Code mandates that stormwater evacuation systems contain the area's maximum 25-year, **3-day stormwater runoff of 16 inches**. Spread over this property's 120 acres equates to **52,140,000 gallons of water** (enough to fill Hard Rock Stadium.) Today, this rainfall is effectively absorbed by this marshy wetland forest. With a single day record of over 15 inches in a 2014 Florida tropical deluge, flooding is a serious threat to all residents.<sup>7</sup>

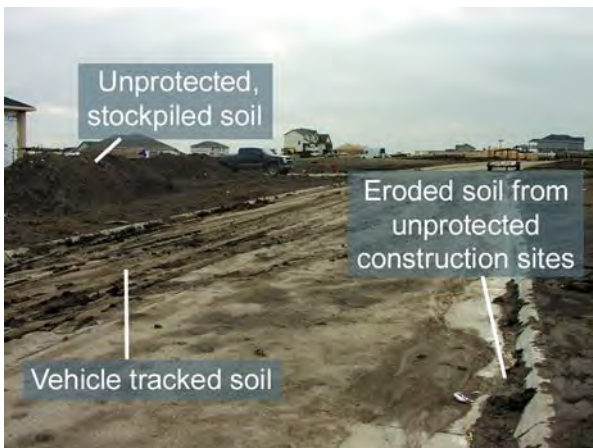
This 3-day rainfall is **double the amount of rain** associated with South Florida's 1992 Hurricane Andrew. This devastating storm generated 14 foot storm surges and caused a staggering \$26 Billion in damages to South Florida.<sup>8</sup> If such a calamity were to happen today, without this forest to absorb such storm's cascading rainfall, the result deluge would cause life-threatening, and property-damaging flooding. Likewise, such storms would render our drinking water supply unsafe when combined with storm-surge and salt-water contamination. This wetland forest effectively serves as a barrier absorbing much of the impact of storms, and surge while protecting hundreds Miramar residents.



Lennar Ecological Evaluation Site Photo 7: **"Areas of high quality sawgrass marsh"**



Hurricane Wilma's meager 3 inches of rain resulted in serious flooding and caused millions of dollars in damage to South Florida homes and businesses.<sup>9</sup>



**The City of Miramar is now challenged with maintaining the safety and quality of our drinking water supply. Without the protection afforded by this wetland forest, the situation will get worse.**

This struggle to maintain safe drinking water for Miramar residents is evidenced by the alarming Utility Department's October 2015 letter to residents:



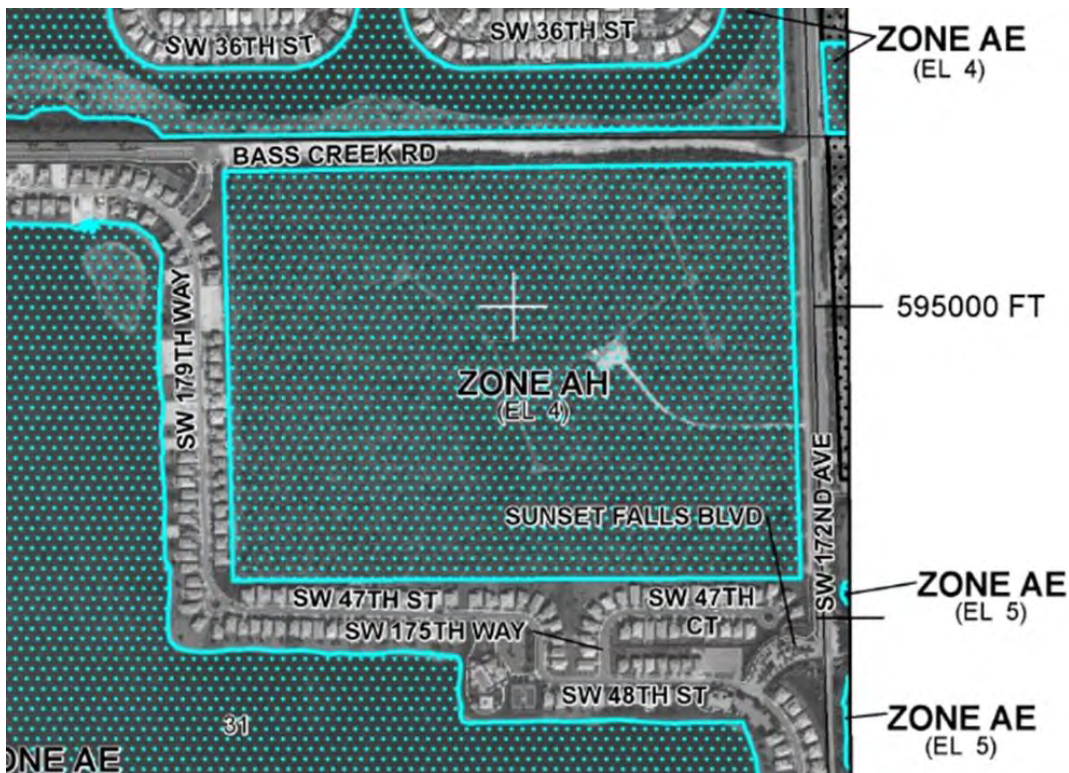
*“As a preventative maintenance process to maintain water quality, the City of Miramar’s Water Treatment Plants will temporarily change the method of water chlorination. As a result, from October 7th to October 23rd, you may notice a different taste and/or odor in your tap water. Please be assured that the conditions are temporary and should not be harmful to your health; however, if you are on kidney dialysis, please consult your physician for special instructions. If you have tropical fish or other aquatic animals, contact your local tropical fish store to determine the proper treatment of the water before adding it to your fish tank.”<sup>10</sup>*

Eliminating the City’s natural water purification system afforded by this 120 acre wetland forest would be extremely short-sighted, potentially dangerous, and not in the best interests of its residents. Particularly considering this area and its surrounding lakes are **located in potentially dangerous flood zones**.

**Subject Property and Surrounding Areas Located in Designated Flood Zones**

Contrary to the information Lennar provided City Planners in their application for the Land Use Plan Amendment, Miramar’s last remaining wetland forest is located in **“Special Flood Hazard Area” AH<sup>11</sup>** indicating an **expected water level rise up to 3 feet above normal** in the event of a dangerous storm<sup>12</sup>.

Broward County Flood Zone Map<sup>13</sup>

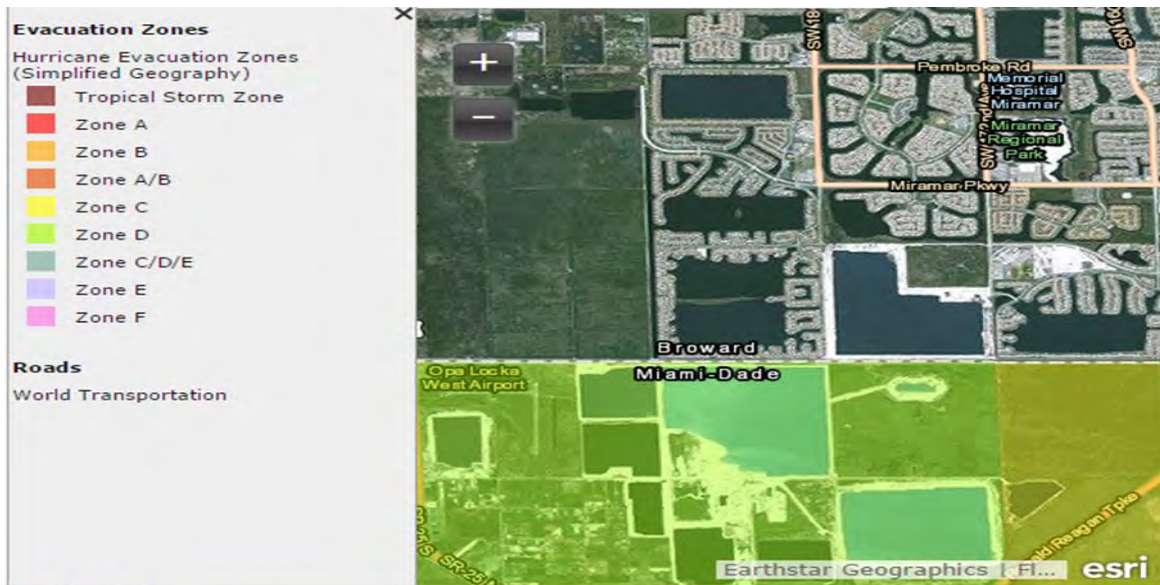


The lakes and canals surrounding this property (depicted in green) are the designated “Floodways” which now buffer, absorb, and transfer our annual over 60 ” of tropical rainfall to the neighboring waterways and into Everglades Buffer Zone located less than one mile from the surrounding area. Recognizing the importance of stormwater management and flood way protection, Florida Building Code 2014.5 dictates this floodway **“must be reserved in order to discharge the base flood.”<sup>14</sup>**

Additionally, Broward County depicts the area’s 4’ elevation above sea level based on the antiquated National Geodetic Vertical Datum of 1929 (NGVD 29) which was replaced by FEMA in 2007 with the more accurate North American Vertical Datum of 1988 (NAVD 88) for determining standardized publishing of flood elevations. Local government’s refusal to institute these more accurate standards represents a significant threat to all Broward

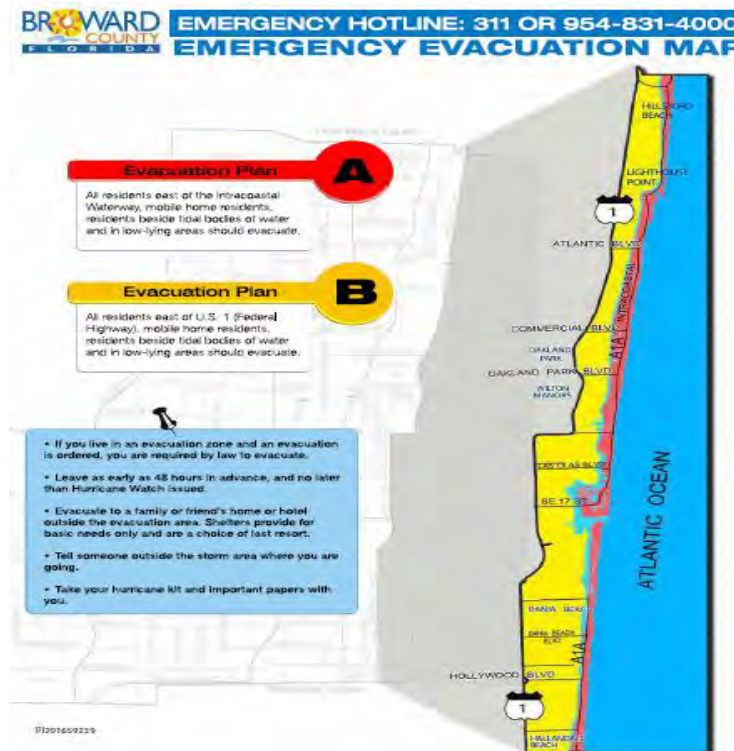
County residents. According to the 2007 US Geological Survey’s Control Station Report for Boca Raton Station 103, the actual **elevation difference is an alarming 1.5 feet lower, and more prone to dangerous flooding than previously determined** using the old NGVD 29 standard.<sup>15</sup> The implications of such an oversight can be catastrophic in light of Broward County’s failure to recognize the threat of deadly hurricanes and storm surge. **Potential Storm Surge Devastation facing Miramar**

As the following Miami-Dade Evacuation zone map indicates, Miramar borders a Hurricane 3 level storm surge evacuation zone as depicted in yellow.<sup>16</sup> Inexplicably, **Broward County has failed to recognize the life-threatening threat such storms poses to Miramar residents.** The Broward County Evacuation Map (below) depicts the absence of any evacuation areas west of US 1-- as if there exists an invisible wall that will prevent devastating storm surge.<sup>17</sup>



[View Larger Map](#)

**Evacuation Route and Zone Maps**





It should be remembered that in 2005, Hurricane Katrina's Category 3 winds estimated at 125 mph created a 28' storm surge wall, which smashed into the coastline at a speed of 20 mph.<sup>18</sup> The devastating effects of the surge extended over 20 miles inland resulting in 1400 deaths, wreaking over \$75 Billion in damage, and years for the devastated areas to recover.<sup>19</sup>

Located only 10 miles from the coast, the threat of a similar disaster in Miramar is real when compounded with intense rainfalls like the 14 inches of torrential rain Hurricane Katrina dumped over southern Florida in 24 hours.<sup>20</sup>

**Miramar's 120 acre wetland forest serves as a valuable guardian and mitigating barrier to these life-threatening storm effects for thousands of Miramar residents.** Destroying this valuable community asset and replacing it with an unnecessary and unwanted 385 single-family home development would be an irresponsible act that would expose local residents to dangerous and potentially life-threatening levels of toxic pollution.

#### **Unlawful Toxic Pollution Lennar's Proposed Development will inflict on local schools and residents**

The Florida Air and Water Pollution Control Act of 2012 (FS 403.021) defines Pollution as *"the presence in the outdoor atmosphere or waters of the state of **any substances, contaminants, noise, or manmade or human-induced impairment of air or waters...** which are or may be potentially harmful or injurious to human health or welfare, animal or plant life, or property or which unreasonably interfere with the enjoyment of life or property."*<sup>21</sup>

Florida Law further mandates, *"It is hereby declared that the prevention, abatement, and control of the pollution of the air and waters of this state are affected with a public interest, and the provisions of this act are enacted in the exercise of the police powers of this state for the purpose of protecting the health, peace, safety, and general welfare of the people of this state."*<sup>22</sup>

#### **Noise Pollution will endanger local churches, schools, local residents and pets**

Lennar's proposed 4-year construction project will subject local churches, Everglades High School and Dolphin Elementary School students, staff and over 2,500 local residents and their pets to dangerous levels of noise and dust that pose a significant health danger to this existing densely populated area.

Everglades High School is located less than 100 feet from Lennar Corporation's proposed construction site, which will take over four years to complete. The noise, dust, and debris from the destruction of this 120 acre forest generated by chain saws, chipping grinders, and other heavy equipment, will be immediately followed by four years of dangerous and health threatening construction noise and dust in direct violation of Florida's Air and Water Pollution Control Act.<sup>23</sup>

Supporting Florida's Air and Water Pollution Control Act, the World Health Organization declares, *"**Noise is an underestimated threat that can cause a number of short and long-term psychological and physiological effects such as sleep disturbance, cardiovascular effects, poor work and school performance, and hearing impairment. Impairment of early childhood development and education caused by noise may have lifelong effects on academic achievement and health.**"*<sup>24</sup>



The World Health Organization further warns that noise is a leading environmental problem, and recommends **schools and their surrounding communities maintain noise levels below 45 decibels.**<sup>25</sup> Clearly, Lennar’s proposed development locate next to local schools would create noise pollution that would impact our children’s health and learning environment, clearly in violation of Florida law.

With hundreds of fast-moving dump trucks and other heavy construction vehicles and workers exposing our children and local residents to unhealthy and unsafe noise levels, while generating hazardous, noise and dust-filled learning and living environments.

**Noise Levels of Construction Equipment at 50 feet:<sup>26</sup>**



- Pile Driver:	<b>101 dB</b>
- Rock drill:	<b>98 dB</b>
- Paver:	<b>89 dB</b>
- Jackhammer:	<b>88 dB</b>
- Truck:	<b>88 dB</b>
- Grader:	<b>85 dB</b>
- Pneumatic Hammer:	<b>85 dB</b>
- Bull dozer:	<b>85 dB</b>
- Concrete Mixer:	<b>85 dB</b>

World Health Organization’s mandated outdoor noise level: **45 decibels.**

**Life-threatening Construction Dust and Particle Matter Pollution generated by Lennar’s Proposed Development**

An even more egregious violation of Florida’s Air and Water Pollution Control Act would be the resulting toxic dust and particle matter pollution this development would inflict upon Everglades High School students and the surrounding community. The EPA has labeled “dust generation” as air pollution, containing excessive fugitive dust and particulate matter (PM) emissions can significantly impact human health.<sup>27</sup> According to the Asthma and Allergy Foundation of America, **40% of all children, and 30% all adults** in the US already **suffer from a respiratory illness.**<sup>28</sup> Introducing an immense construction site into a densely populated area as proposed by Lennar will pose a life-threatening environment for thousands of Miramar students and local residents.





Fugitive dust particles generated by construction sites like Lennar's, are comprised mainly of soil minerals (i.e. oxides of silicon, aluminum, calcium, and iron), but can also consist of pollen, and plant spores released during deforestation.<sup>29</sup> Surrounding trees, vegetation, aquatic life, lakes and streams located near a massive construction site as proposed by Lennar will also suffer life-threatening effects. Chemical contamination carried by construction dust particles essentially suffocates plant leaves and surrounding vegetation, and prevents oxygen for diffusing into water resulting in similar suffocation in local aquatic life.<sup>30</sup>



Particles can be so small that they pass through the nasal passage, travel to the deepest parts of the lungs, and cause damage. To compound the problem, toxic and cancer-causing chemicals can attach themselves to PM and can produce much more profound effects when inhaled. The tiniest of particles can even pass through the lungs into the bloodstream. People most at risk from breathing particulate pollution are children, the elderly, and people with respiratory or heart disease. Healthy people can be affected as well, especially outdoor exercisers. Fugitive dust and **particulate matter emissions have been linked to: Asthma, Emphysema, Chronic Obstructive Pulmonary Disease, Chronic Bronchitis, and Heart Disease.**<sup>31</sup>

Wind generation of dust particles can cause the erosion and contribute to the soiling and discoloration of personal property, requiring monetary costs for repeated cleanup activities. Constant fugitive dust soiling can lead to adverse effects on property values.<sup>32</sup>

EPA published studies have estimated the amount of particulate emissions (dust) generated from construction sites like Lennar's proposed development.<sup>33</sup> These reports identified the amount of dust and particle matter generated by construction site area clearing, outside fill delivery and compaction, wind erosion, road creation, housing construction, and the particulate emissions generated by construction vehicles. Applied to this specific site, EPA estimates that clearing a 120 acre forest, introducing the 3.5 million cubic yards of fill required to elevate this 3' flood zone to the city code mandated 8' elevation (NAVD 88), create 2 miles of residential roads, and build 385 large, single-family homes over a 4-year period would generate over **50,500 tons of toxic dust and particulate matter pollutants** that would rain down on Miramar residents and our local schools over a four-year period. (Exhibit A)

## 120 acre wetland forest and Surrounding Ecotone's "Wetland Benefit Index" Calculation



With a **Wetland Benefit Index (WBI) of .91** -- this area deserves preservation. (Exhibit B)<sup>34</sup>

Miramar's Comprehensive Plan Conservation Element Policy 7.3 states:

***"The City shall distribute land uses in a manner that avoids or minimizes to the greatest degree practicable, the effect and impact on wetlands... Wetlands with a WBI value greater than or equal to 0.8 ... all land uses except for conservation uses are incompatible."***<sup>35</sup>

This area's WBI is established according to Broward County Wetland Benefit Index, Procedures for Evaluating Wetland Benefit Index Criteria, which complies with Section 27-337 of the Aquatic and Wetland Resource Protection Ordinance, Standard Operating Procedure No. 008, October 25, 1995. In spite of the obvious benefits of removing toxic gases from the air we breathe, and purifying the water we drink, this outdated and anachronistic methodology and capricious Florida statute classifies this property's Melaleuca tree as an "invasive exotic." Ignoring the Melaleuca's over 450 commercial and medicinal uses it is commonly called the "Tea Tree."<sup>36</sup> Melaleuca oil is a natural, analgesic, antiseptic, and antioxidant with immune system stimulating benefits. Melaleuca oil is also commercially used as a natural, insecticidal, decongestant, anti-inflammation, antiviral, and digestive benefitting treatment for many common health issues.<sup>37</sup> Referred to as a, "medicine cabinet in a bottle," this property's Melaleuca wetland forest and its surrounding ecotone provides significant benefit to the surrounding community and its indigenous wildlife population.<sup>38</sup>

### **Impact of 120 acre development's stormwater runoff and landscaping fertilizers leeching into local lakes**

Nationwide, polluted runoff and storm water is considered to be the greatest threat to clean water.<sup>39</sup> Anything that enters a storm sewer system is discharged untreated into the water bodies we use for swimming, fishing and, in some cases, drinking water. Stormwater collection systems are connected to canals that flow either to larger regional lakes, rivers, wetlands or to the ocean significantly impacts on South Florida's water quality.<sup>40</sup>

The loss of this forest's natural filtration to development will cause profound groundwater changes with developments such as Lennar's lead to greater increases in flooding during and immediately after South Florida's



typical afternoon tropical down-pours. Many native fish and other aquatic life cannot survive when these conditions prevail.<sup>41</sup>

Destroying this 120 acre wetland forest will forever eliminate this areas many benefits to the community, while replacing it with 385 homes and miles of roadways will expose local residents, lakes, and wildlife to life-threatening consequences. The danger posed by this development's stormwater runoff, and landscaping fertilizer leeching will predictably result in the poisoning of this area's surrounding lakes, and now plentiful wildlife.<sup>42</sup>



Urban stormwater runoff (or "non-point source pollution") washes chemicals (oil, gasoline, salts, etc.) and litter from surfaces such as roadways and parking lots into streams, wetlands, rivers and oceans. The more impervious the surface (e.g., concrete, asphalt, rooftops), the more quickly pollutants are washed into our community waterways. Drinking water, aquatic life and the health of our entire ecosystem can be adversely effected by this process.<sup>43</sup>

Currently, the dense natural landscape of this wetland forest's trees and underbrush acts as mini-reservoirs, controlling runoff at the source. In light of Miramar's over 60 inches of annual rainfall, the existing natural landscape reduces the millions on gallons of polluted runoff that would otherwise flood the surrounding area by<sup>44</sup>

- Intercepting and holding rain on leaves, branches and bark
- Increasing infiltration and storage of rainwater through the tree's root system
- Reducing soil erosion by slowing rainfall before it strikes the soil

The porous and varied terrain of natural landscapes like this wetland forest and its grasslands traps rainwater and allows it to filter slowly into the ground. In contrast, impervious (nonporous) surfaces like roads, parking lots and rooftops prevent rain from infiltrating into the ground. Most of the rainfall remains above the surface, where it runs off rapidly in unnaturally large amounts. This 385 home development and miles of paved streets and parking lots will contain a single storm sewer system that will concentrate runoff through smooth, straight conduits. This runoff gathers speed and erosional power as it travels underground. When this runoff leaves the storm drains and empties into the adjoining lake, its excessive volume and power will blast out the shoreline, damaging vegetation and wiping out aquatic habitat. These increased storm flows carry sediment loads from construction sites and other denuded surfaces and eroded shorelines.<sup>45</sup>

Non-point source stormwater pollution such caused by this proposed development will increase the pollutants carried into nearby lakes, which feed into the Everglades and our drinking water supply. The pollutants include:<sup>46</sup>

- Oil, grease and toxic chemicals from vehicles
- Trash and litter carelessly thrown onto streets
- Pesticides and nutrients from lawns and gardens
- Heavy metals from roof shingles, motor vehicles and other sources
- Viruses, bacteria and nutrients from pet waste and failing sewer systems
- Thermal pollution from dark impervious surfaces such as streets and rooftops
- Sediment



This development's stormwater runoff not only transports these pollutants into our surrounding lakes, but also carry higher water temperatures from streets, roof tops and parking lots, which can prove deadly to aquatic life, wildlife populations, kill native vegetation, and foul our drinking water supply.<sup>47</sup>

This planned 385 home development and miles of neighborhood roads now plans to channel these millions of gallons of polluted runoff into a single culvert severely which will result in eroding neighboring protected natural lands and area residents' lakeside properties. This unabated runoff will deposit toxic effluent into the neighboring lakes that feed into the Everglades.<sup>48</sup> In addition, this proposed development will continually dump dangerous fertilizer compounds like nitrous oxide and phosphates that will further add to the pollution of Miramar's and water supply with catastrophic consequences.

### **Impact of 120 acre development's fertilizers, herbicides and pesticides polluting our groundwater and local lakes**

Nutrient pollution is one of America's most widespread, costly, and challenging environmental problems. Nutrient pollution in ground water can be harmful, even at low levels as fertilizers produce nitrous oxide when absorbed into soil. Nitrous oxide is 300 times more dangerous than carbon dioxide, with infants and young children particularly vulnerable to nitrogen-based nitrates in drinking water.<sup>49</sup> Lawn fertilizers containing pesticides, herbicides, dissolved salts and nutrients are a major source of pollutants in South Florida area waterways, especially considering our heavy tropical summer downpours that wash these toxic sediments into our water supply.<sup>50</sup>





Too much nitrogen and phosphorus in the water causes algae to grow faster than the ecosystem can handle. Significant increases in algae harm water quality, food resources and habitats, and decrease the oxygen that fish and other aquatic life need to survive.<sup>51</sup>

The combination of Miramar's interconnected lakes warm temperatures, almost stagnant water flow, and residential over-use of yard chemicals makes this area especially perceptible to the growth of harmful algae blooms. Algae blooms cover surface water with a thick green slime that eliminates oxygen in the water, suffocate and eventually kill aquatic and land wildlife that depend on a healthy oxygen-rich ecosystem. Algae blooms are also harmful to humans, pets, and plants due to its extreme toxin contents and bacterial growth that contaminates plant life, lakes and ground water supplies. When this algae and other organisms die and decompose, they generate a harmful and unpleasant odor that permeate the air over vast distances.<sup>52</sup>

Miramar's lakes, canals, and our entire water supply is at risk of contamination because of its shallow depth, high soil porosity, and location in densely a populated area. Recent consensus has been reached among Federal and State agencies that the south Florida ecosystem, and the Everglades in particular, should be protected in order to protect our drinking water supply.<sup>53</sup> **Allowing Lennar to replace Miramar's last remaining 120 acre wetland forest with 385 single-family homes ignores the serious health and safety risks this development will inflict upon local residents and our drinking water supply.**



**Slimy Toxic algae cyanobacteria blooms pollute the St. Lucie River.<sup>54</sup> It's happened before- it can happen again.**

Other South Florida community planners and decision-makers have made the catastrophic mistake of ignoring the serious threats posed by over-development, as now facing the City of Miramar. As recently as last summer, over-development resulted in excessive deposits of phosphates and nitrogen to pour into nearby lake, canals, and rivers causing massive toxic cyanobacteria algae plumes. Described by local residents as "Smells definitely like a toilet"; It's like "dead, rotten fish." <sup>55</sup> Residents also blamed the algae for headaches, respiratory issues and even rashes. This avoidable disaster prompted Governor Scott to **declare a state of emergency** in Martin, St. Lucie, Palm Beach, and Lee Counties.<sup>56</sup> If only local decision-makers (Development Review Committees, Planning and Zoning Boards, and City Commissioners) understood the risks and consequences of their fateful decision to destroy existing natural lands, like Miramar's 120 acre wetland forest, and replace them with developments like Lennar is proposing, **such a disaster and the many pending lawsuits against local governments -- all could have been avoided.**

### **Miramar's Reliance on Under-funded and over-burdened Governmental Agencies**

Government agencies at all levels are facing severe budgetary constraints, and being tasked to do more- with less. The City of Miramar shares this challenge requiring inter-agency support to perform many necessary municipal functions.<sup>57</sup> City Planners acknowledge they lack the resources and expertise to perform critical tasks, as reflected in the lack of scrutiny given to ensuring the completeness and verifying the accuracy of Lennar's LUPA application responses<sup>58</sup>.

Regrettably, the city decision-makers of these now disaster-stricken areas, faced with the same budgetary and resource constraints, blindly delegated their entrusted responsibility to protect residents to under-staffed and over-burdened county, state, and federal agencies to "make the right decision." This abrogation of authority and responsibility resulted in the governor declaring a state of emergency. **The City of Miramar is now at the same cross-road.**

Government agencies simply lack the planning and monitoring resources needed to protect its citizens and perform their mandated responsibilities. In Broward County, the Environmental Protection and Growth Management Department responsible for preventing similar disasters in their jurisdiction confessed in its 2012 Environmental Benchmarks Report":

*"Since 2009, monitoring data for many of the (environmental) benchmarks was unavailable, reflecting economic pressures on government to reduce staff and cut costs."<sup>59</sup>*





Likewise, this report identifies that **Broward County has no algae bloom monitoring** due to funding and contract issues with Nova Southeastern University who performs these and other important services.<sup>60</sup> Sadly, this important Broward County report has not been published or made available in over 5 years, which is likely attributed to budget and staffing cutbacks. Coupled with their failure to update the Broward County Hurricane Evacuation and Disaster Preparedness Plans to reflect the increased threat of sea level rise and storm surge, Broward County is not equipped to determine the true impact and impending disastrous consequences this proposed development will have on the residents of Miramar.

Prima facie evidence suggests the disaster-stricken cities and counties along the St Lucie river assumed the risks associated with over-development by relying on proven past paradigms of “crossing their fingers-hope for the best” by approving proposed developments such as Lennar’s.<sup>61</sup> Motivated by the hope that the additional tax-revenue generated from these new developments would provide the much needed funding to support the growing needs of their communities and governments, this short-sighted and miscalculated assessment reflects the disastrous consequences of this misguided mandate to “Grow at All Costs.” What these cities and decision-makers failed to recognize is that their tax revenues and community’s property values could have significantly grow organically by efforts to preserve, rather than develop, their natural open space.<sup>62</sup> **A valuable lesson to be heeded by Miramar decision-makers.**

#### **Land Value Increase in properties located near Nature Preserves and open areas**

The Office of Legislative Research (ORL) recently released a report determining the impact of preserving open space on property values. According to the Impact report, the economic contributions of public park land and open space are twofold:<sup>63</sup>

1. They often increase nearby property values (resulting in more property tax revenue)
2. They avoid the costs associated with providing municipal services to residential developments that might otherwise be located on the site.

The ORL report further notes that homebuyers are generally willing to pay more for property located close to parks and open space stating the real estate industry found that 77.7% of home buyers rated natural open space as either “essential” or “very important.”<sup>64</sup> In one such instance, **home values increased over 32%** when located next to a natural preserved greenbelt, similar to the area now under consideration by City of Miramar decision-makers.<sup>65</sup> Sadly, last summer’s toxic algae cyanobacteria blooms that enveloped the St. Lucie River could have been avoided. This catastrophic disaster and the declaration of a state of emergency with pending legal action serves as a harbinger for Miramar’s decision-makers, who now find themselves in the same situation. The compounding failures of local governments’ failure to protect the public interest and safety by failing to comply with state statutes and their own Comprehensive Plans, could have averted this disaster—and avoid such future catastrophes. Miramar decision-makers must consider Lennar’s application as contrary to the criteria listed in Florida statute 373.414 and **must be denied.**

#### **Florida Statute: 373.414 “Additional criteria for activities in surface waters and wetlands”**

(1) As part of an applicant’s (*Lennar*) **demonstration that an activity regulated under this part..., is not contrary to the public interest.**

(a)... **the governing board or the department shall consider and balance the following criteria:**

1. Whether the activity will adversely affect the public health, safety, or welfare or the property of others;
2. Whether the activity will adversely affect the conservation of fish and wildlife, including endangered or threatened species, or their habitats;

3. Whether the activity will adversely affect navigation or the flow of water or cause harmful erosion or shoaling;
4. Whether the activity will adversely affect the fishing or recreational values or marine productivity in the vicinity of the activity;
5. Whether the activity will be of a temporary or permanent nature;
6. Whether the activity will adversely affect or will enhance significant historical and archaeological resources under the provisions of s. 267.061; and
7. The current condition and relative value of functions being performed by areas affected by the proposed activity.

Local Miramar residents and the nearly 10,000 signators of the petition to stop this proposed development, have clearly expressed this proposed development is contrary to their public interest reflecting their lost all faith in bureaucratic governmental agencies to protect them from future tragedy as befell the residents impacted by the St Lucie River disaster.<sup>66</sup> The recent performance failures of these “trusted” agencies in their failure to anticipate the disastrous consequences of developments like Lennar’s, exemplifies the critical importance of the City of Miramar’s Planning and Zoning Board to not add to the workload of over-burdened agencies by wasting their scarce remaining resources, and our tax-payer dollars **by denying the proposed Land Use Plan Amendment application #1502812 now!**



### Recommendations

1. Deny Lennar’s proposed Land Use Plan Amendment application #1502812, and do not transmit for further consideration.
2. City of Miramar’s Planning and Zoning Board, and duly elected Commissioners place the health, safety, and quality of life of the City’s residents ahead of its quest for growth and increased tax revenue in all future planning initiatives.
3. Preserve this vital community asset for future generations by administratively recognizing this area as a “protected area of special interest.” Absent efforts for the donation of this non-commercially viable property from current owners, secure state and federal funding now available for establishing the “Miramar Nature Preserve.”
4. Transform the campaign promises Miramar Commissioners, and the goals set forth in their Comprehensive Plan by encourage Lennar to use their estimated \$20M allocated to acquire this 120 acre wetland forest property, and locate their proposed development into East Miramar. Collaborate with County, State, and Federal elected officials and agencies to propose an attractive offer of tax incentives and set-asides that will entice Lennar to build in East Miramar.



5. Collaborate with County, State, and Federal elected officials and agencies to update and modify Miramar's hurricane evacuation plans and routes, with reference to NAVD -88 sea level heights for all future codes, ordinances, and planning regulations.

Exhibit A:

**Toxic Dust (PM) generated by Destruction and debris removal of Existing 120 Acre wetland Forest over 48 months**<sup>67</sup>



PM emissions were estimated using calculations generated using EPA derived formulas. PM emissions from demolition, site preparation, and general construction, truck transport of debris, delivery and dumping of fill, bulldozing, compacting, and indirect emissions from transport and construction vehicles were determined for the estimated 4-year period.

Assumptions:

- 50% of PM generation reduced by constant watering and other industry standard dust mitigating techniques
- 120 acres of average 50' tall trees and underbrush must be cleared
- Root systems averaging 10' below surface to be removed
- Total trees, roots and underbrush to be cleared = 20 vertical foliage yards
- Chipping and compacting ratio (C<sup>2</sup>R): 20 to 1
- 580,800 yd<sup>3</sup> of debris to be removed
  - 120 acres= 580,800yds<sup>2</sup> x 20 VFY ÷ 20 (C<sup>2</sup>R )
- Dump truck capacity of 10 yd<sup>3</sup> = 58,080 truckloads for debris removal
- 3.5 million yds. of fill required to elevate property to code
- Total Site Traffic volume of 2,157 trips/day
- PM/1000 gal diesel fuel (equipment)
  - Heavy Construction — 0.42 tons/acre/mo.
  - Other Construction — 0.265 tons/acre/mo.

**EPA estimated PM generation from debris removal (includes mitigation) over 12 months**

- Particulate emissions for deforestation and chipping: 1.2 tons/acre per month: 1,728 tons
- Wind erosion: .4472 tons per acre per year (pg. 4-15): 53.7 tons
- Vehicle emissions: 6048 tons
- 58,080 Vehicle Track-Out PM generation: 0.0309 ton/day: 11.3 tons

**Total Emissions: 7410 tons**



EPA estimated PM generation from **site preparation** over 48 months

- 3.5 million yds. of fill required to elevate property to code
  - Dump truck capacity of 10 yd<sup>3</sup>:
  - .0309 ton/day Track-In PM generation generated by 350,000 truckloads : 60.1 tons
  - Wind erosion: .4472 tons per acre per year 214.7 tons
  - Vehicle Emissions including bulldozing, compaction and grading: 36288 tons

**Total Emissions: 36,563 tons**

EPA estimated PM generation from **roadway development** over 48 months

- .42 tons PM per acre/month: **Total Emissions: 2419 tons**

EPA estimated PM generation from **home site construction** 385 homes on 120 acres over 48 months

- Construction site PM: .032 tons per acre/month: 184.3 tons
- Site Traffic volume of **2,157 trips/day**
  - Heavy Construction equipment — 0.42 tons/acre/mo. 2419.2 tons
  - Other Construction — 0.265 tons/acre/mo. 1526.4 tons

**Total Emissions: 4130 tons**

**TOTAL PM/ DUST EMISSIONS OVER 48 MONTHS: 50,522 tons**

**Any proposed development of this densely populated area with two nearby schools would expose thousands of residents and our children to the direct toxic effects of dangerous particle matter and dust emissions in direct violation of the City of Miramar’s Comprehensive Plan’s MANDATE TO PROTECT RESIDENTS’ HEALTH, SAFETY, and AND QUALITY OF LIFE.**

Exhibit B- Potential WBI based on restoration of site

WETLAND BENEFIT INDEX WORKSHEET

Points possible  
EAI Scientific Points Assessment

**1 Fish and Wildlife Value/Diversity (Select as many as apply)**  
*Apply to Freshwater, Saltwater, brackish and mitigation systems)*

Fish or shellfish	1	1
Waterfowl or wading birds	1	1
Furbearer	1	1
Amphibians, aquatic macroinvertebrates & reptiles	1	1
Endangered or threatened fauna	2	2

**2 Hydrophyte Dominance**  
*Apply to Freshwater, Saltwater, brackish and mitigation systems)*

> 80 %	3	3
> 65% < 80%	2	
> 51% < 65%	1	

**3 Intactness of wetland community (IAW 62-340.300(2)(d) "D" Test)**  
*Apply to Freshwater, Saltwater, brackish and VOLUNTARILY created mitigation)*

Unaltered	5	
Altered Hydrology A. Slight	4	4
B. Moderate	3	
C. Extreme	2	

**4 Connectedness surface water hydrology (Select one category)**  
*Apply to Freshwater, Saltwater, brackish and mitigation systems)*

Major connection (Flowing water or floodplain)	5	5
Minor connection (runoff collection point, etc.)	3	
Isolated from surface water system	2	

**5 Connectedness , location in Ecotone landscape (Select one category)**  
*Apply to Freshwater, Saltwater, brackish and mitigation systems)*

Located within or directly contiguous to a significant natural area over greater than 25% of the parcel boundary.	5	5
Located directly adjacent to a significant natural area by less than 25% of the parcel boundary	3	
Located within 3000 feet of a significant natural area and separated by suitable natural lands, or forming a direct corridor with or between other		



significant natural lands	2	
Located more than 3000 feet from a significant natural area and separated by unsuitable lands, or developed areas only	1	

## 6 Hydroperiod

*Apply to Freshwater systems*

> 5 months inundated or saturated	3	3
> 3 months < 5 months inundated or saturated	2	
< 3 month inundated or saturated	1	

## 7 Soils

*Apply to Freshwater, Saltwater, brackish and mitigation systems)*

Organic soil classified hydric soil, or required replacement soil in mitigation areas > / = 12" or any thickness over bedrock or caprock	5	5
Organic soil classified hydric soil, or required replacement soil in mitigation areas > / = 6" - 12"	4	
Soil classified as hydric soil, or required replacement soil in mitigation areas > / = 1 < 6"	3	
Organic soil classified hydric soil, or required replacement soil in mitigation area < / = 1"	2	

## 8 Native, Non-exotic or mitigation plant cover

*Apply to Freshwater, Saltwater, brackish and mitigation systems)*

> 95%	4	
> 75% < 95%	3	
> 25% < 75%	2	
> 10% < 25%	1	1
> 10%	0	

## 9 Habitat Diversity

*Apply to Freshwater, Saltwater, brackish and mitigation systems)*

> 3 communities embedded in site	5	5
2 or 3 communities	3	
One community, mosaic	2	
One community, monoculture	1	

## 10 Habitat Diversity within 1000 feet

*Apply to Freshwater, Saltwater, brackish and mitigation systems)*

> 3 alternative habitats available	3	3
2 or 3 alternative habitats available	2	
One alternative habitat	1	

highest point score possible = **44**

40

WBI = 0.91





## REFERENCES

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- <sup>1</sup> University of Florida, IFAS Extension Report, Publication #FOR285, “Miami-Dade County's Urban Forests and Their Ecosystem Services”, Escobedo, Klein, et. al.
- <sup>2</sup> Congressional Research Service Report, “Carbon Sequestration in Forests”, Ross W. Gorte, Specialist in Natural Resources Policy August 6, 2009) <https://fas.org/sgp/crs/misc/RL31432.pdf>;
- <sup>3</sup> (source: US Forest Service Report, “Why are Lichens Important” [www.fs.fed.us/wildflowers/beauty/lichens/importance](http://www.fs.fed.us/wildflowers/beauty/lichens/importance)
- <sup>4</sup> (Source: United Nations Food and Agriculture Organization Report, “Managing forests for cleaner water for urban populations,” S. Stolton and N. Dudley, 2006.)
- <sup>5</sup> Ibid.
- <sup>6</sup> [http://fpr.vermont.gov/forest/ecosystem/water\\_quality](http://fpr.vermont.gov/forest/ecosystem/water_quality)
- <sup>7</sup> <https://www.scientificamerican.com/article/florida-deluge-was-all-time-record>
- <sup>8</sup> “Hurricane Andrew: 20 Facts You May Have Forgotten”, Huffington Post, 24 August 2012. [http://www.huffingtonpost.com/2012/08/21/20-facts-hurricane-andrew-anniversary\\_n\\_1819405.html](http://www.huffingtonpost.com/2012/08/21/20-facts-hurricane-andrew-anniversary_n_1819405.html)
- <sup>9</sup> <http://www.sun-sentinel.com/news/weather/hurricane/sfl-2005-wilma-story.html>
- <sup>10</sup> City of Miramar, Department of Utilities, “Notice to Residents”, October 2015.
- <sup>11</sup> [http://www.floridadisaster.org/Mitigation/SFMP/Documents/5th%20Ed\\_FBC\\_FloodProvisions\\_070115.pdf](http://www.floridadisaster.org/Mitigation/SFMP/Documents/5th%20Ed_FBC_FloodProvisions_070115.pdf)
- <sup>12</sup> <http://www.broward.org/PermittingAndLicensing/Licensing/Engineering/FloodZonemaps>; and <http://bcgis.maps.arcgis.com/>
- <sup>13</sup> <http://www.broward.org/PermittingAndLicensing/Licensing/Engineering/FloodZonemaps>; and <http://bcgis.maps.arcgis.com>
- <sup>14</sup> [http://www.floridadisaster.org/Mitigation/SFMP/Documents/5th%20Ed\\_FBC\\_FloodProvisions\\_070115.pdf](http://www.floridadisaster.org/Mitigation/SFMP/Documents/5th%20Ed_FBC_FloodProvisions_070115.pdf), page 7.
- <sup>15</sup> NGS-Boca Raton-PBC Control Station 103 Report, Field Book 1211FF, page 12, 7/25/2007.
- <sup>16</sup> <http://www.miamidade.gov/fire/library/OEM/evacuation-zone-map-2013.pdf>
- <sup>17</sup> <http://www.broward.org/Hurricane/Documents/HurricaneEvacMap.pdf>
- <sup>18</sup> <https://www.wunderground.com/prepare/storm-surge>
- <sup>19</sup> <http://www.nhc.noaa.gov/surge/>
- <sup>20</sup> <http://www.nhc.noaa.gov/outreach/history/#katrina>
- <sup>21</sup> “Florida Air and Water Pollution Control Act.” FS 403.021. [http://www.leg.state.fl.us/statutes/index.cfm?App\\_mode=Display\\_Statute&URL=0400-0499/0403/0403.html](http://www.leg.state.fl.us/statutes/index.cfm?App_mode=Display_Statute&URL=0400-0499/0403/0403.html)
- <sup>22</sup> Ibid.
- <sup>23</sup> The Florida Air and Water Pollution Control Act of 2012 (FS 403.021) <https://www.flsenate.gov/Laws/Statutes/2012/Chapter403/All>

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<sup>24</sup>World Health Organization, Regional Office of Europe Health Report. [www.euro.who.int/en/health-topics/environment-and-health/noise/data-and-statistics](http://www.euro.who.int/en/health-topics/environment-and-health/noise/data-and-statistics)

<sup>25</sup> Ibid.

<sup>26</sup> US Dept of Transportation, Bureau of Transportation - National Transportation Library Report Chapter 12, "Noise and Vibration During Construction." [ntl.bts.gov/data/rail05/ch12.pdf](http://ntl.bts.gov/data/rail05/ch12.pdf)

<sup>27</sup> US Environmental Protection Agency, Department of Environmental Conservation, Alaska Department of Commerce "Fugitive Dust. Frequently Asked Questions." <https://dec.alaska.gov/air/ap/docs/Fugitive%20Dust%20FAQs%203-31-11.pdf>

<sup>28</sup> <http://www.aafa.org/page/allergy-facts.aspx>; <http://acaai.org/news/facts-statistics/allergies>

<sup>29</sup> Ibid.

<sup>30</sup> Ibid.

<sup>31</sup> Ibid.

<sup>32</sup> Ibid

<sup>33</sup> "Estimating Particulate Matter Emissions from Construction Operations," Emission Factor and Inventory Group, Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency, February 2016. [nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=9100KK1W.TXT](http://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=9100KK1W.TXT)

<sup>35</sup> "Broward County Procedures for Evaluating Wetland Benefit Index Criteria." Pursuant to Section 27-337 of the Aquatic and Wetland Resource Protection Ordinance. Standard Operating Procedure No. 008. October 25, 1995<sup>34</sup>

<sup>35</sup> City of Miramar, Comprehensive Plan, adopted 17 August 2017

<sup>36</sup> <http://www.melaleuca.info/about/over-450-exclusive-wellness-products?card-refer=card--over-450-products>

<sup>37</sup> <http://www.healthguidance.org/entry/16018/1/The-Many-Uses-of-Melaleuca.html>

<sup>38</sup> Ibid.

<sup>39</sup> <https://www.sfwmd.gov/community-residents/what-can-you-do>

<sup>40</sup> Ibid.

<sup>41</sup> <http://www.treebenefits.com/calculator/ReturnValues.cfm?climatezone=Central%20Florida>

<sup>42</sup> Broward County Commissioners' 2012 Environmental Benchmarks Report, March 2013, Environmental Protection and growth Management Department. pgs 16; 72-94.

<sup>43</sup> <https://www.sfwmd.gov/community-residents/what-can-you-do>

<sup>44</sup> Ibid.

<sup>42</sup> [https://www3.epa.gov/npdes/pubs/nps\\_urban-facts\\_final.pdf](https://www3.epa.gov/npdes/pubs/nps_urban-facts_final.pdf)

<sup>46</sup> Ibid.

<sup>47</sup> Ibid