

### City of Palm Coast Agenda

City Hall 160 Lake Avenue Palm Coast, FL 32164 www.palmcoastgov.com

Planning and Land
Development Regulation
Board

Chair Glenn Davis
Vice Chair Clinton Smith
Board Member Robert J. DeMaria
Board Member Sybil Dodson-Lucas
Board Member Christopher Dolney
Board Member Jake Scully
Board Member Charles Lemon
Alternate Board Member Suzanne
Nicholson
Alternate Board Member Thomas
Oelsner
School Board Rep David Freeman

Wednesday, January 15, 2020

5:30 PM

City Hall

#### RULES OF CONDUCT:

>Public comment will be allowed consistent with Senate Bill 50, codified at the laws of Florida, 2013 – 227, creating Section 286.0114, Fla. Stat. (with an effective date of October 1, 2013). The public will be given a reasonable opportunity to be heard on a proposition before the City's Planning & Land Development Regulation Board, subject to the exceptions provided in §286.0114(3), Fla. Stat.

- >Public comment on issues on the agenda or public participation shall be limited to 3 minutes.
- > All public comments shall be directed through the podium. All parties shall be respectful of other persons' ideas and opinions. Clapping, cheering, jeering, booing, catcalls, and other forms of disruptive behavior from the audience are not permitted.
- >If any person decides to appeal a decision made by the Planning and Land Development Regulation Board with respect to any matter considered at such meeting or hearing, he/she may want a record of the proceedings, including all testimony and evidence upon which the appeal is to be based. To that end, such person will want to ensure that a verbatim record of the proceedings is made.
- >If you wish to obtain more information regarding Planning and Land Development Regulation's Agenda, please contact the Community Development Department at 386-986-3736.
- >In accordance with the Americans with Disabilities Act, persons needing assistance to participate in any of these proceedings should contact the City Clerk's Office at 386-986-3713 at least 48 hours prior to the meeting.
- >The City of Palm Coast is not responsible for any mechanical failure of recording equipment
- >All pagers and cell phones are to remain OFF while the Planning and Land Development Regulation Board is in session.
- A Call to Order and Pledge of Allegiance
- B Roll Call and Determination of a Quorum
- C Approval of Meeting Minutes

City of Palm Coast Created on 1/10/20

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- 1 MEETING MINUTES OF THE DECEMBER 4, 2019 PLANNING AND LAND DEVELOPMENT REGULATION BOARD MEETING
- D Public Hearings
  - 2 PRESENTATION CLIMATE CHANGE AND SEA LEVEL RISE
- **E** Board Discussion and Staff Issues
- F Adjournment

#### City of Palm Coast, Florida Agenda Item

Agenda Date: 1-15-2020

Department Item Key	PLANNING 7589	Amount Account #
Subject MEETING MINUTES OF THE DECEMBER 4, 2019 PLANNING AND LAND DEVELOPMENT REGULATION BOARD MEETING		
Background :		
Recommended Action : Approve as presented.		



## City of Palm Coast Minutes PLANNING AND LAND

City Hall 160 Lake Avenue Palm Coast, FL 32164 www.palmcoastgov.com

DEVELOPMENT
REGULATION BOARD

Chair Glenn Davis
Vice Chair Clinton Smith
Board Member Robert J. DeMaria
Board Member Sybil Dodson-Lucas
Board Member Christopher Dolney
Board Member Jake Scully
Alternate Board Member Charles
Lemon
Alternate Board Thomas Oelsner
School Board Rep David Freeman

Wednesday, December 4, 2019

6:30 PM

**COMMUNITY WING OF CITY HALL** 

#### **RULES OF CONDUCT:**

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#### A Call to Order and Pledge of Allegiance

Chair Smith called the December 4, 2019 Special Planning and Land Development Regulations Board (PLDRB) meeting to order at 6:30PM.

#### B Roll Call and Determination of a Quorum

City of Palm Coast Created on 1/10/20

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Present and responding to roll call were:

Chair Smith

Mrs. Lucas

Mr. Dolney

Mr. DeMaria

Mr. Scully

Mr. Oelsner

Mr. Lemon

Mr. Freeman

Excused:

Chair Davis

#### C Approval of Meeting Minutes

1 MEETING MINUTES OF THE NOVEMBER 20, 2019 PLANNING AND LAND DEVELOPMENT REGULATION BOARD MEETING

#### **Pass**

Motion made to approve as presented by Board Member DeMaria and seconded by Board Member Dolney

Approved - 7 - Board Member Christopher Dolney, Board Member Robert DeMaria, Board Member Jake Scully, Vice Chair Clinton Smith, Board Member Sybil Dodson-Lucas, Alternate Board Member Thomas Oelsner, Alternate Board Member Charles Lemon

#### D Public Hearings

2 59 FAWN LANE, A SETBACK VARIANCE, APPLICATION # 4157

Mr. Ray Tyner, Deputy Chief Development Officer, gave an introduction on this agenda item including the history of this parcel. He also introduced Mr. Bill Hoover, Senior Planner.

Mr. Bill Hoover, Senior Planner, gave a presentation which is attached to these minutes.

Mrs. Lucas questioned the age of the Oak tree on the subject property. Mr. Hoover reasoned based on the following formula (1" per 8 years) that the tree is roughly 250 years old. Mr. Hoover further explained that adding the deck would not cause any interference with the infrastructure. Mrs. Lucas questioned who would bear the financial responsibility of caring for the tree. Mr. Hoover explained that the owner would bear the burdon of care of the tree.

Ms. Fatima Sena, applicant, addressed the PLDRB members and gave a presentation which is attached to these minutes.

Mr. DeMaria questioned whether or not the second condition should be reworded from excluding music to excluding any entertainment from 7PM to 7AM on the outside deck. Ms. Sena responded that due to the limited parking spaces (8) there are no plans to have live entertainment such as bands.

Chair Smith opened this agenda item to public comment at 6:55PM.

Ms. Norma Pippins, co-owner of the Fawn Project, addressed the PLDRB members and is in favor of this agenda item.

Pastor Jeff Barexdale, Life Coast Church, addressed the PLDRB members and is in favor of this agenda item.

Mr. DeMaria made a motion to approve with an additional restriction in item #2 to strike music and add the word entertainment. This motion was not seconded and therefore failed.

#### **Pass**

Motion made to approve as presented by Board Member Scully and seconded by Board Member Dolney

Approved - 7 - Board Member Christopher Dolney, Board Member Robert
DeMaria, Board Member Jake Scully, Vice Chair Clinton Smith, Board Member
Sybil Dodson-Lucas, Alternate Board Member Thomas Oelsner, Alternate
Board Member Charles Lemon

AN AMENDMENT TO THE PALM COAST PARK DEVELOPMENT OF REGIONAL IMPACT DEVELOPMENT ORDER TO AMEND THE USES IN BUSINESS/INSTITUTIONAL TRACTS, MEMORIALIZE AND AMEND CONDITIONS, AND REVISE PROCESS FOR ADDING LANDS AND CONVERSION OF ENTITLEMENTS

Mr. Ray Tyner, introduced this item along with history of the Development of Regional Impact. He also introduced Mr. Jose Papa, Senior Planner, who gave a presentation which is attached to these minutes. He also explained that one presentation would be given for agenda items #3 and #4. However, two separate votes would be required.

Mr. Lemon asked for clarification on Tract 17 being both residentential and commercially zoned. Mr Papa confirmed that the proposal is to include residential into the mix of existing commercial uses.

Mr. DeMaria asked if these parcels are on septic system. Mr. Papa clarified that these parcels are on City water and central sewer.

*Mr. Michael Chiumento, representive for the applicant, addressed the PLDRB members.* 

Mr. Oelsner, questioned whether a power substation upgrade is required (electrical-FP&L)? Mr. Chiumento, clarified that all the right of ways have been given to FP&L. Mr. Oelsner rephrased his question, will this proposed change in the MPD agreement eat into excess capacity for other growth in the area or will the excess capacity be maintained? Mr. Chiumento explained that initally this project was approved for approximately 3,600 residential units and 3.5 million square feet for office/retail/industrial. When the project was initially discussed a review was done by both the State and the City capacity needs for water, sewer, electricity, and roads (etc.). were all evaluated and is part of Development of Regional Impact (DRI) document. So the requested changes are not in addition to but merely changing some of the uses. Mr. Tyner added that the DRI includes a conversion factor (which allows a conversion from non-residential to residential) and this amendment includes a required analysis that has the applicant prove that there are no adverse effects from this proposal.

Mr. Freeman, questioned that the agenda item that listed tracks 15 -18 are included in the proposal however track 16 is the school site. Mr. Papa clarified that track 16 is not included in the proposal. Mr. Tyner pointed out that there is a addentum that was given out to the PLDRB members this evening clarifiying the proposed changes. This addendum is attached to these minutes.

Chair Smith open this item to public comment at 7:27PM.

Mr. John Links, 54 LaMancha Drive, questioned the location of the proposed development modification. Mr. Tyner clarified the area that Mr. Links is questioning is the area for the Matanzas West Multi-family development, (located at the south west corner of Belle Terre Parkway and Matanzas Woods Parkway) and that item was heard by the PLDRB at a previous meeting.

Mr. Walter Dehart, 33 Leaman Lane, wanted to get a copy of the map. Mr. Tyner informed Mr. Dehart that the map is available at the City's website: PalmCoastgov.com. Mr. Dehart asked that the PLDRB members "go slow" with future development in this area.

Mr. Bob Dance, 12 Bud Hollow, questioned if the apartments (previously discussed by Mr. Links) are age restricted. Mr. Chiumento informed Mr. Dance that nothing has been determined with regard to that question. Mr. Dance also was not in favor of the number of the apartments and the height of the buildings proposed. Mr. Dance is not in favor of more development in this area. Chair Smith clarified that the apartment development project is not on the agenda for tonight and therefore not open to comment. Also he clarified that the apartment project has some 1 bedroom apartments not all were 1 bedroom and that all the apartments were proposed as market rate. Therefore, there would not be any tax credits.

Amy, resident of the B section, questioned the development in the area of the B & L sections and asked the PLDRB to consider limiting growth in this area.

Mr. Mike LeButti, L section, questioned the development in the area of L section and the affects of high-density building in this area.

Ms. Laurie Savoka, 69 Buttermilk Drive, questioned the track across from the fire station which had been rezoned for multi-family units.

Ms. Linda Little, 45 Londonderry Drive, questioned if a proposed new school is included in the plan for Palm Coast Park.

Ms. Becky Mitchell, Butterfield Drive, wishes the PLDRB members to go slow on apartment developments and how the lack the business in Flagler County might affect these new resident's ability to find work.

Mr. Rick Lees, Ludlow Lane, questioned the availability of schools, the orange signs, announcing the dates of the public meetings are not maintained on the properties. Questioned who will be paying for all this new development.

Chair Smith closed this item to public comment at 7:50PM.

Mr. Tyner clarified the Development of Regional Impact (DRI) process as a follow up to address for some of the questions brought up during the public comment section. The application for a DRI is reviewed by a number of agencies (state, county and city level) to look at the impacts for a proposed development. A developer has to pay for the impact fees to support the infrastructure of any new developments, which includes a transpaction impact fee, school concurrancy, fire impact fees, parks impact fees, along with utility impact fees. Mr. Tyner also explained the conversion factor that is built into a DRI agreement, meaning the conversion process used to covert from a commercial unit to a residential unit within a DRI site. Mr. Tyner clarified that the City nor the citizens pay for the infrastructure, the developer pays for the build out of all infrastructure facilities. Mr. Tyner clarified that the Land Development Code (LDC) requires all neighbors within 300 feet of the parcel being impacted by a rezoning be notified in writing of the plan to rezone. Finally, he clarified that the Comprehensive Plan calls for diversity of home types (i.e. single family, apartments, town homes, and condos), along with being consistent with the neighborhoods proposed.

Chair Smith mentioned that not all people who want to buy a home need to have a job. He further stated that a number of people work from home (via the internet) and others commute to other cities for work (i.e. Jacksonville, Orlando).

#### **Pass**

Motion that PLDRB recommend approval of Application # 4165 (DRI Amendment) to the City Council and find that based on the Staff Report and the testimony and evidence presented, the request meets the applicable provisions of the Land Development Code and is consistent with the Comprehensive Plan as per the written findings contained the staff report by Board Member Dolney and seconded by Board Member Dodson-Lucas

Approved - 7 - Board Member Christopher Dolney, Board Member Robert DeMaria, Board Member Jake Scully, Vice Chair Clinton Smith, Board Member

Sybil Dodson-Lucas, Alternate Board Member Thomas Oelsner, Alternate Board Member Charles Lemon

4 AN AMENDMENT TO THE PALM COAST PARK MPD-DEVELOPMENT
AGREEMENT TO ALLOW RESIDENTIAL HIGH DENSITY USE ON TRACTS 15, 17,
AND 20; ALLOW RESIDENTIAL MEDIUM DENSITY USE ON TRACT 22, ALLOW
COMMERCIAL ON TRACT 17, AND LIMIT INDUSTRIAL USES TO US-1

Mr. Jose Papa gave a presentation for this agenda item under agenda item #3.

Chair Smith opened this agenda item to public comment at 8:02PM.

Mr. Tom Olney, 78 Butterfield Drive, requested that the PLDRB provide some assurances of what can be expected by the citizens, much the same as the DRI gives the developer certain assurances of what can be expected.

Mr. Roland Cruz, B section, questioned the quality of life as a result of the amount of development (density) and urged the PLDRB members to go slow.

Mr. McClain, asked how many live up in this area being discussed.

Chair Smith clarified the difference between agenda item #3 and #4. Mr. Papa clarified the location of items # 3 and #4, which involves tract 22 which is located along Belle Terre Parkway and 3 tracts along US #1.

Mr. Bob Dance, 12 Bud Hollow, questions the impact of more development and its impact on fire and police.

Mr. Matt Spence, 38 Bickwick Lane, questioned the lack of commercial development in the area.

Chair Smith closed the public comment section on this item at 8:15PM.

Chair Smith asked Mr. Tyner to clarify if there are any tax incentives for Palm Coast Park and Mr. Tyner answered no there are not any tax incentives for Palm Coast Park.

Chair Smith informed the public that the next steps of agenda items #3 and #4 are to be the City Council public meetings.

Mr. Scully clarified for the public that the full agendas are available on the City of Palm Coast website.

#### **Pass**

Motion that PLDRB recommend approval of Application # 4171 (MPD Amendment) to the City Council and find that based on the Staff Report and the testimony and evidence presented, the request meets the applicable provisions of the Land Development Code and is consistent with the Comprehensive Plan as per the written findings contained the

staff report by Board Member Dolney and seconded by Board Member Dodson-Lucas

Approved - 7 - Board Member Christopher Dolney, Board Member Robert DeMaria, Board Member Jake Scully, Vice Chair Clinton Smith, Board Member Sybil Dodson-Lucas, Alternate Board Member Thomas Oelsner, Alternate Board Member Charles Lemon

#### E Board Discussion and Staff Issues

Mr. Tyner mentioned that the PLDRB December 18th meeting will most likely be cancelled and that the PLDRB members will be notified by this Friday if that is the case.

#### F Adjournment

Motion made that the meeting be adjourned by Mr. Dolney and the motion was seconded by Mrs. Lucas. The meeting was adjourned at 8:16 PM.

Respectfully Submitted by: Irene Schaefer, Recording Secretary

#### 5 ATTACHMENTS

## City of Palm Coast, Florida Agenda Item

Agenda Date: 1/15/2020

DepartmentPLANNINGAmountItem Key7582Account

#

Subject PRESENTATION - CLIMATE CHANGE AND SEA LEVEL RISE

#### Background:

The Beautification and Environmental Advisory Committee are bringing forth a presentation addressing the subject of Climate Change and Sea Level Rise. This presentation includes recommendations that are being requested to be incorporated into both the City's Land Development Code and the City's Comprehensive Plan.

#### **Recommended Action:**

Presentation and discussion purposes only.

To: The Planning and Land Development Regulation Board From: The Beautification and Environmental Advisory Committee (BEAC)

Chairman Davis and Members of the 'Palm Coast Planning and Land Development Regulation Board':

The Beautification and Environmental Advisory Committee was created on February 21, 2006 by city council resolution 2006-07. Section 2 of the resolution specifies our objectives, operations and responsibilities. As one aspect of the committee's responsibilities we have initiated an 'Environmental Agenda' each year. The subject of the agenda for 2019 has been the very important, timely, and relevant subject of 'Climate Change and Sea Level Rise' (CCSLR).

The BEAC has studied this issue and believes that its' importance warrants us presenting a written report to the planning Board and City as specified by our resolution. The report included here entitled 'The Threat of climate Change and Sea Level Rise for Palm Coast' contains the data and information we have gathered and makes recommendations that we state are to "minimize negative impacts".

The BEAC holds that CCSLR is an issue of increasing importance, especially to coastal communities like ours, and that a proactive approach is better than a 'wait and see' what develops attitude. Therefore, it is our hope this report will begin a community-wide discussion on CCSLR that will result in guidelines we all commit to taking into consideration as the City of Palm Coast, our city, moves forward.

Jeffery C. Seib, Chairman

// . EccEdward Beier

Alenn Partelow

Robert Knapp

#### The Threat of Climate Change and Sea Level Rise for Palm Coast Recommendations to Minimize Negative Impacts

A Report to the City of Palm Coast By the Beautification and Environmental Advisory Committee (BEAC)

#### Introduction

Climate change and sea level rise (CCSLR) is recognized world-wide as a phenomenon that has the potential to threaten the very existence of life on earth. It is prudent to immediately begin the process of incorporating CCSLR planning into our mechanisms of community management at all levels. According to our charter it is the responsibility of the BEAC to provide the city of Palm Coast with information and present recommendations on environmental issues that are of importance to the people of Palm Coast. This report will present the current knowledge of CCSLR, future trends, present a background of causative factors of CCSLR, and make conclusions and recommendations for policies to be included into the Palm Coast Comprehensive Plan to be taken into account whenever amendments or other actions are brought before the city council. The conclusions and recommendations presented here could be seen as controversial or as too little or too much, but the fact remains that we are in it now and doing nothing is not an option.

#### Background

CCSLR is no longer a futuristic prediction of what may happen. It is happening now. From melting Northern Hemisphere artic ice caps to the warmest months ever, the all time records keep falling. Statistical probability calculations, the same methods that determine political polling trends, advertising concepts, and insurance rates, paint a worsening picture of a world rapidly falling into decline with the latest data showing a possible future food crisis as long-term droughts and extremely high growing season temperatures limit crops and livestock production. The projected time frame has shortened; major to catastrophic climatological effects could begin as soon as the next ten years. We now have annual increases in the number and intensity of forest fires, and more 'super' intense tropical storms and hurricanes. Experts predict that warm season temperatures in many southern cities will rise to uninhabitable, life-ceasing levels that may result in a world-wide refuge crisis as millions try to escape.

At one time the achievements of scientific research were highly praised all over the world. However, in our lifetimes peoples attitudes towards science have changed from a deep belief in the many discoveries and advances in agriculture, medicine, communications, space, and other fields, to a cynical doubting and disbelief even as the pace of new scientific advances and benefits increases every day. This science doubting has resulted in negative attitudes towards many current research achievements, such as the determination of the exact causes of CCSLR and the methods required to repair the damage already done. Some people believe that CCSLR is just another scientific 'scare tactic' and will soon be forgotten. There are elements in our community, some very powerful, that see CCSLR as a factor that will somehow inhibit their vision of Palm Coast's future. The time is now that we all come together and recognize that 'business as usual' is not an option and agreeing on a framework to go forward taking all our values into consideration equally is the best way to go. But the fact remains that the scientific community overwhelmingly is calling for attention to CCSLR as the primary issue of our time. Research and development organizations such as NASA, NOAA, and The United Nations, and many others (see Appendix 1), have studied this and published their results in peer-reviewed journals and are in agreement of the conclusions that are reported within this report.

According to the experts the currently rapidly rising temperature of the earth is due to the "greenhouse effect" -that is, the increased concentration of certain heat trapping gases in the atmosphere that prevent heat dissipation and cause world-wide temperature increases.

The primary greenhouse gases are Carbon Dioxide (CO2), Methane (CH4), and Nitrous Oxide (N2O) that have been measured using radioactive isotope technology that are now at the highest level in 800,000 years (see Figure 1). In the historic record previous times of higher levels of these gases occurred over a period of 10,000 to 100,000 years. The present steep rise of atmospheric greenhouse gases began with the onset of the Industrial Revolution when huge world-wide increases in the burning of fossil fuels occurred and are continuing today (Figure 2).

World-wide temperature has already increased by 1.0 degree Celsius during this time period. To avoid catastrophic climate changes scientists have called for a cap on temperature increases of 1.5 degree Celsius by the end of this century (Figure 3). Accepted scientific research evidence shows that the temperature increases of the last one thousand years and especially the previous approximately 220 years are not due to historic reasons of

increased solar and/or volcanic activity, but rather, to the increased burning of fossil fuels.

In the area of the natural environment world-wide biodiversity is in the midst of a massive loss of entire populations of species that has been estimated to rival the mass extinctions of asteroid strikes or times of extreme volcanic eruptions. Insect pollinators are now experiencing huge population losses due to CCSLR events. These extinctions are equivalent to the loss of the dinosaurs that occurred 65 million years ago. Statistical analysis of the rates of species declines show that mass extinctions will increase in numbers as CCSLR increases. Oceans polluted with tons of plastic waste and the Amazon rain forest burned to the ground are events that are happening now and continuing into the future.

#### Conclusions

Coastal cities including Palm Coast should begin preparing now for the impacts of CCSLR in order to safeguard their communities' social, cultural, environmental, and economic resources. The entire state of Florida will be impacted more severely by any CCSLR events. Local government's involvement and action are needed in any number of areas. Our changing climate along with population increases makes water supply planning and management one of the top critical challenges for Palm Coast. The probability of the super storm with intensities and storm surge will continue as we are currently seeing increases in both flooding and major property damages. This type of flooding is both an inland and a coastal issue that leads to a lower capacity of the soil to absorb precipitation because aquifers are full and groundwater has no place to go. As the water table rises water and sewage delivery and retrieval systems may be operating under water. Salt water intrusion may contaminate water well systems.

The transportation system also needs attention in the CCSLR environment. Roadway infrastructure may be damaged by flooding and higher water table levels. Road bases can become saturated causing premature base failure. More frequent flooding and higher water table levels may increase the frequency of waterborne illnesses, and lead to contaminated water supply systems.

Home and building infrastructure is an area that requires another 'look' by city officials with the purpose of incorporating new and innovative technologies in order to achieve resilience in the CCSLR environment. New building construction (both public and private) should include some level of

'hardening' as protection for the increasing intensity and number of higher storm surge, and more extensive flooding and wind events. Building construction is almost always financed by loans and the banks and other lending agencies financing these very expensive developments will ultimately seek relief from the state if these properties go bankrupt or default on their loans due to these climate change impacts. Home construction will need to develop a set of standards that take into account adequate current and future CCSLR conditions.

The natural environment is an area where climate change scientists call for communities to maintain areas of undeveloped lands, especially wetlands and surrounding overflow drainage areas that can serve as holding places where floodwaters and storm surge can soak into aquifers. The elevation of Palm Coast is very low thus making the drainage system of utmost importance. This additional reservoir system can alleviate potential extreme water events and help to lower water tables ultimately relieving some of the damage to structures and roadways and channel water away from developed areas. To further insure the well-being of our community (both people and property) we need to address this sooner rather than later.

#### Recommendations

- Incorporate CCSLR into the "2035 Vision for the City of Palm Coast" Comprehensive Plan.
- The city of Palm Coast commit to reducing the carbon footprint by becoming recognized for energy efficiency green technology and proactive planning for CCSLR.
- Insure the water supply and sewage retrieval systems are capable of operating in an environment of rising water tables'
- Enact and include in the Comprehensive Plan policies that follow a 'resiliency approach' toward CCSLR that focuses on 'adaptive capacity' which builds into the system the ability to positively react and deal with issues and retain city services at peak levels.

- Declare in the downtown 'Innovation District' all development will take advantage of incentives for energy efficient 'green' technology, and provide commercial building construction in all of Palm Coast the option to receive 'green' incentives. Residential home construction and home and commercial retrofitting should take advantage of energy saving technology incentives.
- All building and home construction in any flood, storm surge, or wind damage prone areas will have infrastructure hardening standards to prevent losses.
- All new roadways and any reconditioning of older roadways in flood prone areas will have a water table analysis that takes into account possible CCSLR negative effects.
- The Comprehensive Plan will protect all the remaining wetlands in the City and require that developers in flood and storm surge areas retain more undeveloped forests and wetlands in order to serve as sea level rise and flooding 'horizontal levees'; that is, retain floodwaters as in a large reservoir.

Some years ago, former Palm Coast Mayor Jon Netts when urging other council members to approve building the new city hall at Towne Center in the face of overwhelming public opposition in a referendum spoke of "being bold" and going forward with the construction. Now is the time for the City of Palm Coast to again be bold and recognize CCSLR and begin to do something about it.

Only by adopting some, all, or an entire palette of similar ideas can the City of Palm Coast truly move into the 21<sup>st</sup> century and insure Palm Coast will be here for us into the 22<sup>nd</sup> century and beyond.

Figure 1. Amount of Atmospheric Carbon Dioxide Over 800,000 Years.

CO2 during ice ages and warm periods for the past 800,000 years

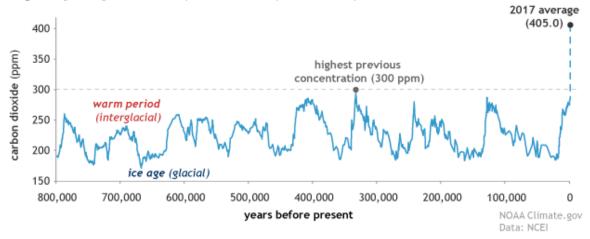


Figure 2. Atmospheric Greenhouse Gas Levels for the Previous 2000 Years.

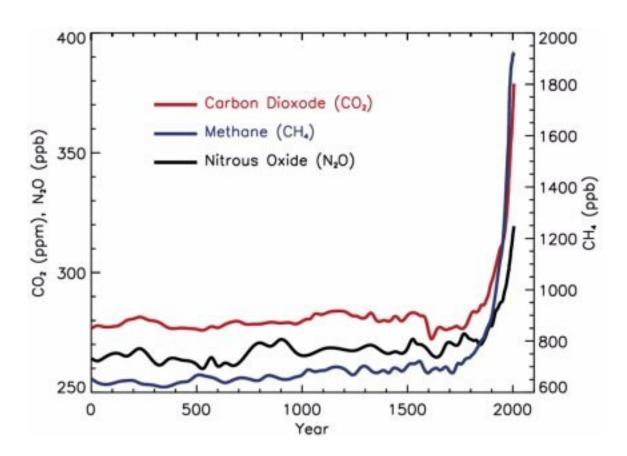
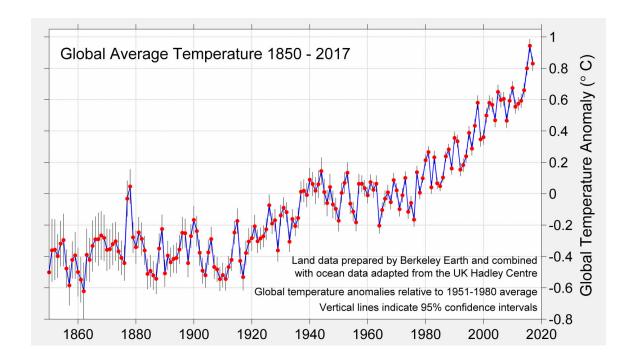


Figure 3. Earth Temperature Increases 1850 - 2017.



Appendix 1. Partial List of Agencies Supporting CCSLR Studies and Results.

American Association for the Advancement of Science (AAAS)

American Chemical Society (ACS)

American Medical Association (AMA)

American Metrological Society (AMS)

US National Academy of Sciences

Intergovernmental Panel on Climate Change (IPCC)

American Society of Agronomy (ASA)

World Health Organization (WHO)

International Union of Concerned Scientists

United Nations (UN)

National Wildlife Federation (NWF)

Audubon Society

World-Wildlife Fund (WWF)

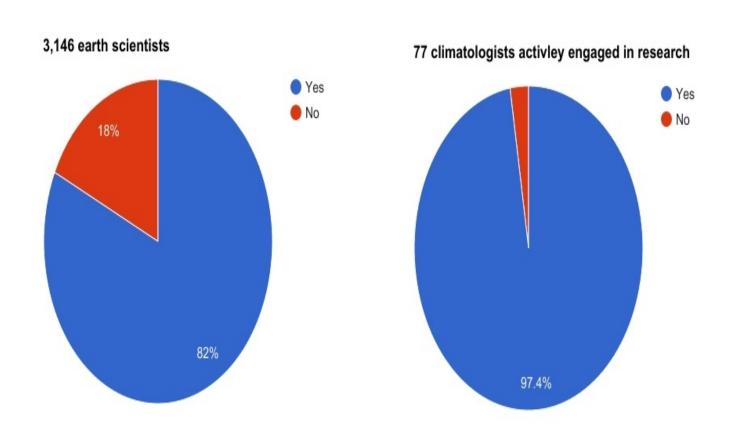
# The Threat of Climate Change and Sea Level Rise (CCSLR) to the City of Palm Coast

- The Beautification and Environmental Advisory Committee (BEAC) studied this issue as part of our Environmental Agenda for 2019
- We prepared this report and recommendations that we believe are prudent first steps in a process that will result in a greater awareness and preparedness to meet this potential threat

## The Threat-Background

- The science of CCSLR is real and the methods used to establish that reality are based on sound scientific principles, the same as those used in medical, agricultural, engineering research and in the calculation of auto, home, and life insurance rates and benefits
- The people conducting this research are not elitist, they are hard working folks like you and I presenting comprehensive, factbased solutions to a problem

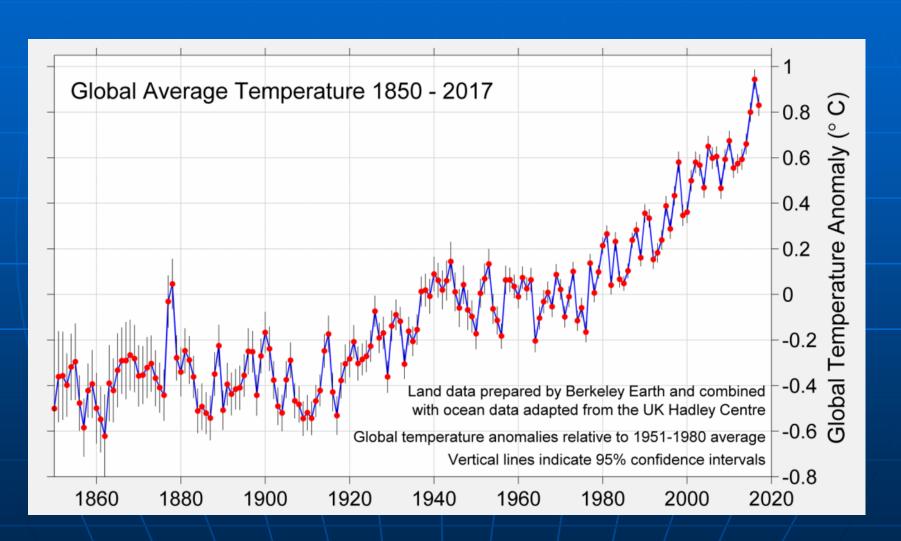
## Scientists views on CCSLR



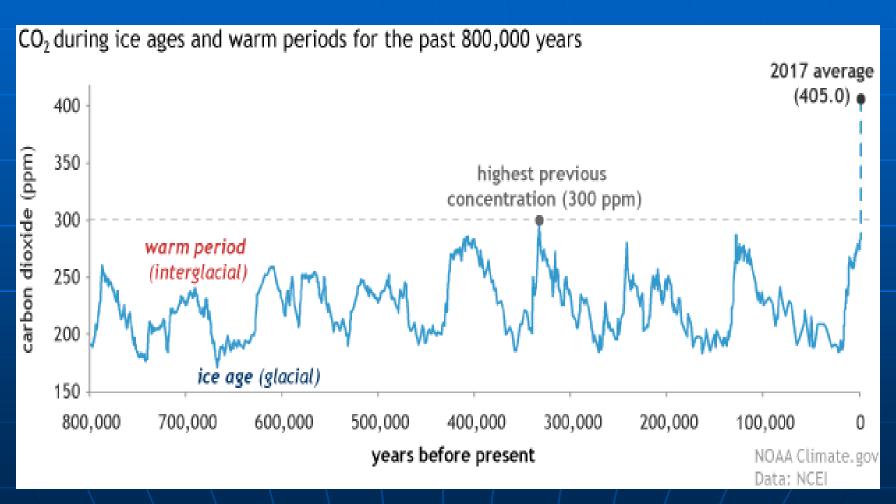
# Partial List of Organizations Supporting CCSLR Research

- American Association for the Advancement of Science (AAAS)
- American Chemical Society (ACS)
- American Medical Association (AMA)
- American Metrological Society (AMS)
- US National Academy of Sciences
- Intergovernmental Panel on Climate Change (IPCC)
- American Society of Agronomy (ASA)
- World Health Organization (WHO)
- Union of Concerned Scientists
- National Wildlife Federation (NWF)
- Audubon Society
- World-Wildlife Fund (WWF)
- UNFCCC United Nations Framework Convention on Climate Change -Paris Climate Agreement with 187 Country Signatories

## A Rapidly Warming Planet



## Historic Levels of Primary Greenhouse Gas CO2



## Sea Level Rising Right Now in South Florida



## Increasing Property Damage



## More Intense Storms



## And Storm Surge



# Sea Level Rise with Extreme Temperature Increase Over 2.0 degrees C (4-6 degrees F) 60m = 196 feet



## Wetland Holding Floodwaters



## Wetland 'Reservoir'



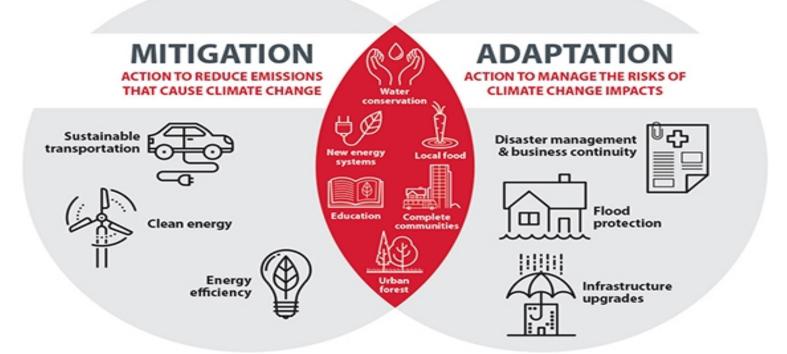
The roots of wetland plants can bind and remove as much as 90 percent of sediments present in runoff or streamflow.

### Recommendations

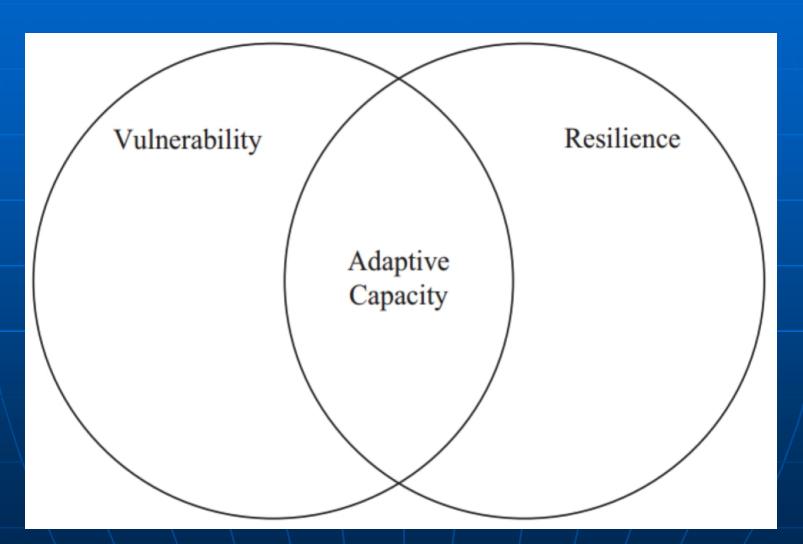
- Incorporate CCSLR into the "2035 Vision for the City of Palm Coast" Comprehensive Plan.
- The City of Palm Coast commit to reducing the carbon footprint by becoming recognized for energy efficiency green technology and proactive planning for CCSLR.
- Insure the water supply and sewage retrieval systems are capable of operating in an environment of rising water tables'
- Enact and include in the Comprehensive Plan policies that follow a 'resiliency approach' toward CCSLR that focuses on 'adaptive capacity' which builds into the system the ability to positively react and deal with issues and retain city services at peak levels.

## Resiliency

#### **Building Climate Resilience**



## **Adaptive Capacity**



## Recommendations Continued

- Declare in the downtown 'Innovation District' all development will take advantage of incentives for energy efficient 'green' technology, and provide commercial building construction in all of Palm Coast the option to receive 'green' incentives.
- Residential home construction and home and commercial retrofitting should take advantage of energy saving technology incentives.
- All building and home construction in any flood, storm surge, or wind damage prone areas will have infrastructure hardening standards to prevent losses.

## Recommendations Continued

- All new roadways and any reconditioning of older roadways in flood prone areas will have a water table analysis that takes into account possible CCSLR negative effects.
- The Comprehensive Plan will protect all the remaining wetlands in the City and require that developers in flood and storm surge areas retain more undeveloped forests and wetlands in order to serve as sea level rise and flooding 'horizontal levees'; that is, retain floodwaters as in a large reservoir.