

CITY OF PENSACOLA
CLIMATE MITIGATION & ADAPTATION TASK FORCE
Thursday, July 5, 2018 ~ 3:30 p.m.
HAGLER/MASON Conference Room
2nd Floor, City Hall

AGENDA

1. Call to Order/Welcome/Quorum
2. Approval of Minutes—June 7, 2018
3. Draft Report Review
4. Priorities Discussion
5. Timeline Discussion:
Draft Completion: Tentatively July
Stakeholders Review: Tentatively July/August
Final Report Presentation: Tentatively September 13 at City Council Meeting
6. Presentation Discussion
7. Request relevant photos, graphics, and references for final report design
8. Announcements
9. Public Forum
10. Adjourn

**The next meeting of the Climate Mitigation and Adaptation Task Force:
Thursday, August 2, 2018, 3:30 p.m.**

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MINUTES OF THE CLIMATE MITIGATION AND ADAPTATION TASK FORCE

June 7, 2018

3:30 p.m.

Members Present: Elaine Sargent, Chair, Laurie Murphy, Vice Chair, Cynthia Cannon, Tim Haag, Carrie Stevenson, Mark Gibson

Members Absent: Dr. Haris Alabasic, Christy Johnson

Others Present: See attached sign-in sheet

Staff: Council Executive Don Kraher, Elaine Mager, Sonja Gaines

1. Call to Order/Welcome/Quorum: The meeting was called to order by Chair Sargent. A voting quorum was not present at the beginning of the meeting.
2. Approval of Minutes—February 1, 2018, April 5, 2018 and May 3, 2018: Once a voting quorum was present, **motion to approve the minutes of the February 1, 2018, April 5, 2018 and May 3, 2018 meetings was made by Vice Chair Murphy, seconded by Member Cannon. The motion was passed unanimously.** (Member Gibson, non voting member)
3. Draft Report Discussion:

Chair Sargent opened discussion on the draft report. Member Cannon noted that the introduction was now included in the draft report and that Member Haag was going to work on the glossary. She wondered how necessary it was to include the glossary and if it was not necessary to move forward, that the report needs to be put in the final draft format, so that it can be sent out to the stakeholders for their review and comment back so that the report can be finalized for presentation to the City Council.

Chair Sargent indicated that the glossary wasn't the hang up, it is the public health section. The Task Force had a guest speaker last month, and she reviewed notes that were distributed to the Task Force. Member Cannon commented that it would be helpful if Task Force members could review documents prior to the meeting and submit any comments or suggestions to the Council Executive. The actual meeting doesn't need to be the impetus for commenting. That can all happen through review and comment back to the Council Executive.

Chair Sargent indicated that her notes were pretty much the same as what was captured in the minutes. She shared the comments with Dr. Uejio; however he has not responded to her. The city also has an audio tape of his comments for members of the Task Force.

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There were only 2 members of the Task Force present at the May meeting, so members of the public were recognized to ask questions as well. Dr. Gloria Horning came forward and talked about BRACE, since Dr. Uejio had mentioned BRACE as being a mechanism for climate impact mitigation. She added some information about BRACE to her notes. He made some recommendations in very broad terms. Member Murphy mentioned the new mosquito that has been reported, the Asian Bush Mosquito that is now a health concern that transfers health issues beside the Zyka and West Nile virus.

Member Stevenson indicated the Public Health section has been included in the draft report for a long time, it just needs to be consistent with other sections so that it **contains an objective as well as policy recommendations. It could include to make sure the public is aware of these or to partner with the health department to make people more aware of the issues, where there are public warnings, pollen alerts or heat advisories.** Need to figure out the objectives and then which of the listed items could become policy recommendations.

Member Cannon indicated that a good objective would be to enhance awareness of these issues and make broad recommendations on what we have learned.

Chair Sargent stated that Dr. Uejio made a recommendation to enhance surveillance of mosquitos to mitigate vector born disease. Discussion occurred on who would do the surveillance, the County or the Health Department.

Member Cannon indicated that Public Health should stay its own section, that it include **an objective that is geared toward awareness of these new issues that are going to arise.** There may not be a lot of policy recommendations, but the **recommendation from the presentation to increase surveillance be included** as well as any other recommendations.

Also working with other municipalities and governmental entities, intergovernmental coordination could be a good **recommendation.**

Chair Sargent suggested wording that **the City of Pensacola will work with other governmental agencies, Escambia County, and the Health Department to enhance surveillance of mosquitoes to mitigate vector born disease using the baseline comparisons to understand the changes that may be happening through the mapping process.**

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Vice Chair Murphy mentioned that the panhandle region is underfunded now, so that she assumes the agencies responsible for the handling mosquitoes as well as ticks don't have the funding to do the enhanced surveillance. Could this be a grant opportunity?

Member Cannon suggested a **recommendation to review their budget issues to come up with solutions or something along those lines to focus discussions on what's needed in the budget to address these health issues. If they are not solved, they just get worse in the communities.**

The **occupational exposure and the use of federal government guidelines for working outside to prevent injuries and cognitive difficulties** was also one of Dr. Uejio's recommendations and is a good one to include. It might already be in place. Possibly a **recommendation would be to make sure those guidelines do exist and that they are updated and if they don't exist that they need to have guidelines in place for working outside.**

Further discussion occurred regarding the 89.6 degree F limit for exposure while working outside especially in our area during the summer. Member Gibson indicated that the Navy has a black flag that they fly when it reaches 90 degrees where there are no outdoor, physical activities performed. They can still work if they have certain controls in place, like shaded canopies, light colored clothing, fans, etc. It would be difficult to require these guidelines be followed. Member Cannon suggested that the federal guidelines could be listed as a resource. Member Gibson suggested language that it could be implemented as applicable.

Member Cannon stated that the **climate impacts that impact public health in Florida should be included either in the objective or why the awareness is so important.**

Vice Chair Murphy indicated that she would like to see included under the public health objective in light of what happened after Hurricane Maria, **for nursing homes or assisted living facilities have access to generators** and that could be a **recommendation due to storms, power outages and heat.** Member Gibson suggested possibly **working with emergency management to get a review of their facilities.**

Chair Sargent indicated that Dr. Uejio did talk about power outages and how it would affect the elderly, nursing homes, hospitals, etc.

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Member Haag cautioned about generators. Just because a generator is there may not solve the problem. During Hurricane Ivan and other hurricanes there were issues with fuel delivery. Just because you have a generator, doesn't mean fuel will be there to run the generators. Once a generator is in place, it will kick off some additional requirements.

Member Cannon suggested a **recommendation that the City of Pensacola works with emergency management to make sure that these types of facilities are getting adequately prepared and getting the proper maintenance and procedures** so that emergency responders are not getting stress out over incidents that could have been avoided by some simple check. In the recommendation, **make sure that coordination is in place.**

Chair Sargent indicated that she would get a draft written up to reflect the Public Health objectives and recommendations and the draft design for the Task Force's review, hopefully in July.

Member Stevenson reviewed several updates she included in the draft report. On page 5, some clarification of the Florida Department of Economic Report. Also, the adaptation section on Page 10, the second bullet under policy recommendations, she distributed suggested language for the Adaptation Action Area.

Vice Chair Murphy reviewed her edits to the draft report, mainly some grammar changes, typos, etc. on pages 4 and 5. On page 6, discussion occurred on the wording for LEED. The second bullet was amended to add **Throughout the community, support...** On the eighth bullet, the wording was amended to read **The City of Pensacola should** install or purchase renewable energy, such as solar panels or other renewable power on municipal buildings, and incorporate LEED design. On Page 9, discussion occurred on the last bullet under transportation. Suggested amendment was to **continue to review and support City Codes that help to create greater connectivity and work towards a more bike and pedestrian friendly infrastructure in the community. and to strike the last part of the sentence, for example, the adoption of form-based methodology in all city districts.** Discussion occurred on the last two bullets under built environment dealing with stormwater drainage impact studies and develop permeable surfaces. Not every new development needs to have an impact study done, it is not realistic. New development is not required to fix legacy flooding. Where there are existing problems, there could be more scrutiny of those development sites so that they didn't contribute more impact to those sites. Add more green infrastructure, on-site infiltration instead of runoff and management of stormwater. **Vice Chair Murphy indicated that she would**

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rework those two bullets to make them clearer. Also reviewed proposed changes on Page 11, and 12. On page 13, the third bullet from the bottom that starts out: The City of Pensacola shall work in coordination...inflow program development, added language, **including Low Impact Development** to reduce...

Chair Sargent also noted on the last bullet under Public Utilities the need to insert the year in two different places in that bullet. Discussion occurred on who would determine what the year would be. On page six, the Task Force agreed to change the renewable energy target date to 2030. Member Cannon stated she would not be comfortable picking dates for that bullet. Member Gibson stated that perhaps EPA would require them to meet certain standards. The Chair might want to reach out to them and inquire about a realistic goal and does it depend on federal government or EPA requirements. If a realistic determination cannot be made, since the City doesn't regulate electric utility operations, then this bullet should be removed.

Chair suggested leaving the first sentence in the bullet, down to sources. Member Gibson stated that **the City could request of the companies what their plan would be to reduce** GHG emissions. Member Haag suggested adding **reduced** or zero GHG emission sources. Zero GHG emission sources won't be achieved immediately. Member Cannon suggested **reduced with a goal of achieving a zero.**

Under Local Utilities, the second bullet under Policy Recommendations, the City of Pensacola shall develop, implement and coordinate water conservation initiatives...Member Haag would like to **include language regarding well head protection.** The City and County both have well head protection programs and they differ. The County's is more effective and offers a bit more protection of public water supplies. **He will submit some language that would strengthen the City's wellhead protection ordinance to mimic or reflect the protection provided by Escambia County's.**

4. Adjusted Time Line Discussion

Once all these updates are made to the draft report, the Chair will then layout the final version of the draft report. Hopefully, this will be forwarded to the Task Force prior to the July 5 Task Force Meeting, so that at that meeting it can be approved and distributed by email to the stakeholders for their review and comment. The Council Executive will distribute to the stakeholders and will receive comments back from them. One of the proposed stakeholders is the City's Environmental Advisory Board. They meet the same day as the Task Force. The Environmental Advisory Board members will be able

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to make comments back to the Council Executive and will also be able to appear at the August meeting of the Task Force with any additional comments. Member Haag reminded the Task Force that the BARC and BARC/TAC meets bi-monthly, so that there is a potential for not getting their comments back by August. Member Cannon indicated that she could get with BARC members and staff to share the report and get their comments. The Presentation of the Final Report to City Council would most likely be at their September 13th City Council meeting. At the August Task Force meeting, any of the stakeholders could come and present their comments to the Task Force.

5. Request relevant photos, graphics, and references for final report design:

Chair Sargent requested any relevant photos, graphics and charts to include in the final report design. She would need them within the next 2 weeks. Member Stevenson indicated there were some charts on climate change projections, low, medium and high in the DEO report that could possibly be used. Member Cannon indicated she would see what she could find.

6. Announcements:

Vice Chair Murphy announced the 2nd annual World Water Day march to be held on Friday, June 8. Meet at the Pita Pit, Palafox and Garden, bring your own signs and march to Plaza DeLuna. The march is about anything to do with plastic pollution in the waterways or oil drilling. There will be four speakers, including Christian Wagley, Dr. Enid Sisskin, Escambia County Commissioner Grover Robinson and City Council Member Sherri Myers.

Also, she announced a presentation that Emerald Coastkeepers is sponsoring that will be held on June 15 in the Hagler/Mason Conference room on coal ash and training on how to comment on the NPDES Draft Wastewater Permit for the Christ Plant, to get the community engaged on how to comment and be a part of renewing the permit, and more transparency with water quality testing.

7. Public Forum:

Christian Wagley announced that the CRA Overlay District formed base code proposals will be discussed at the Planning Board meeting on Tuesday, June 12. It will go to the City Council in August for their consideration. Part of the standards being considered at the Planning Board is to adopt a standard from DOT, Chapter 19, called traditional

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neighborhood development. These are standards that would allow for narrower streets, more sidewalks, more use of public space for people and not just for cars going fast.

Beverly Perry stated that formed base codes are one of the most important things to mitigate climate change and deserve a lot of emphasis in the report from the Task Force. She inquired as to whether the Task Force had decided on their priorities and will they be expressed to the public in ways they can understand as how it applies to their daily living.

Under the public health and emergency management, she hoped the Task Force would give weight to the associated costs to low income people on their health and safety. How climate change affects them every day, how they are able to take care of their homes in the summer, code enforcement considerations or building considerations for low income people.

Chair Sargent suggested putting on the next agenda a priorities discussion, so that the Task Force can speak on what is the most important thing to mitigate and adapt to climate change. In the public health element, perhaps a little more can be said about transportation, what happens in an emergency situation. What are the impacts to public health. A recommendation could be **that the City works with emergency management on these issues.**

Vice Chair Murphy asked how to take the information and relay it to the general public so that it is not so complicated and technical. How is it going to benefit them personally? How many people would understand it? Who is going to be there at a public meeting to discuss and break down some of those components.

8. Adjourn: There being no further business to come before the Task Force, the meeting was adjourned at 5:10 p.m.

City of Pensacola Climate Mitigation and Adaptation Task Force Meeting
Thursday, June 7, 2018
Hagler/Mason Conference Room, 2nd Floor
City Hall, 222 West Main Street
3:30 P.M.

PLEASE SIGN IN

NAME (Please Print)	Agenda Item	Telephone Number	Address
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Ryan Bowman		337-499-8293	1642 Eagle St
Beverly Perry		850-341-1128	bjperry@gmail.com
Christian Wagby			
NEIL RICHARDS			
GRABIA HORNING			
TUCKER	Gibson		
SUTTER			
Mark Gibson	Gibson		
Candace	Gibson		



Overview

"Adaptation Action Area" or "Adaptation Area" is an optional comprehensive plan designation for areas that experience coastal flooding and are vulnerable to the related impacts of rising sea levels for the purpose of prioritizing funding for infrastructure needs and adaptation planning. Local governments that adopt an Adaptation Action Area may consider policies within the coastal management element to improve resilience to coastal flooding.

Florida communities have been actively and increasingly addressing both coastal and inland flooding over the last several decades. This has partly been in response to increasing risk and exposure, but it has also reflected a major paradigm shift from post disaster recovery to proactive resilience that prevents and mitigates risks. This new awareness has stimulated innovative approaches: increasing partnerships and outreach, new risk assessment tools, and forward-thinking mechanisms in planning. An example of one of these multi-layered community collaborative responses is the leadership in Palm Beach, Broward, Miami-Dade, and Monroe Counties via the Southeast Florida Regional Climate Change Compact (SFRCC). Statewide, there are more trailblazing communities that have laid the foundation for adaptation to current and future coastal flooding risk. By addressing current flood issues with updated policy and design criteria, these communities instill co-benefits as they integrate planning and regulatory objectives to address impacts related to sea level rise. Effective strategies are now supported by State Statute to promote and support further adaptation initiatives around Florida.

Adopted into the Florida Statute in 2011 through the Community Planning Act, Adaptation Action Areas provide a flexible and optional framework that can be applied to the entire State through individual local action. At the request of coastal communities, DEO created this guidance to assist communities understand how they can use Adaptation Action Areas to adapt to coastal flooding. Florida (Chapter 163, Fla. Stat.) requires each local government authority to create, adopt and maintain a comprehensive land use plan. The local comprehensive plan is a key driver of development and redevelopment because it outlines legally enforceable guidelines and strategies, directly influencing the decision-making process. Comprehensive plans can be amended to create strategies for merging growth with resilience. This creates possibilities for continuously revisiting and updating best practices for sustainable development, post-disaster redevelopment, green infrastructure, water management, and protection of natural resources. In the context of sea level rise, planning today via tools such as Adaptation Action Areas improves the preparedness and resilience of communities, in a way that persists over time.

The voluntary policy option described here is a formative way to assist local governments in addressing the potential hazard impacts associated with sea level rise. This Guidebook is intended to be a "how-to" illustration to guide local governments interested in integrating Adaptation Action Areas into policy and operational frameworks. This Guidebook will describe a broad process for engaging community stakeholders,

Elaine Sargent handout 6/7/2018

Public health and climate change mitigation and adaptation policy—Florida Panhandle

Notes from presentation by Dr. Chris Uejio, May 3, 2018

Local utilities and health departments are top actors in creating resiliency.

Major issue: Power grid/power outages, infrastructure failures creating critical emergency situations

Climate impacts that impact public health in Florida include:

- Heat waves
- Increase in extremes in weather and severity of impacts
- Air allergies—pollen season longer because of higher humidity
- Mental health issues related to dealing with disasters (hurricanes, flooding, etc.)
- Infectious diseases, especially vector-borne

Recommendations in broad terms:

- Vector-borne diseases:
 - ✧ Recommendation: Enhanced surveillance of mosquitos to mitigate vector-borne disease; ideally a baseline comparison
 - Panhandle region is under-funded now.
 - Cite article on CDC study finding increase i tick and mosquito infections:
<https://www.nytimes.com/2018/05/01/health/ticks-mosquitoes-diseases.html>

- Air-borne?

- Occupational exposure:
 - Use Federal government guidelines for working outside to prevent injuries, cognitive difficulties, etc.
 - Recommendation: City should know guidelines and practice in all city work outside.

<https://www.cdc.gov/niosh/docs/2016-106/pdfs/2016-106.pdf>

32° Celsius Limit (89.6° F) limit for exposure while working outside?

Task Force member Cynthia Cannon asked about grant opportunities...

Possible temporary grant opportunities related to critical issues such as the recent Zika virus outbreak

- Critical infrastructure from public health perspective
 - Recommendation: Know emergency shelters, wastewater facilities, security, etc.

NOAA is taking lead. ?

Hospitals can't be built in potential C3 hurricane-impacted areas.

Hospitals should be built so that ideally we do not have to transport patients to another location during extreme weather event.

Harden physical buildings.

Cynthia Cannon asked about references to counties/cities using best practices now:
Sarasota County has a good comprehensive emergency management plan.
Certain hospitals in Miami and Tampa Bay are prepared.

- BRACE
- Expand access to health care. Resilience.
What can City Council do?
Supportive services
Mental health care access
- Increase monitoring drinking water quality.
Increase monitoring of unprotected groundwater.
(More rain, more stormwater runoff)

June 5, 2018:

Website is not working. www.bereadyalliance.org

BRACE: Be Ready Alliance Coordinating for Emergencies

BRACE is under contract with the City of Pensacola, the Escambia County Board of County Commissioners and the Town of Century to provide Citizen Corps and Community Emergency Response Team coordination.

Mission: BRACE is a local network that links community, governmental and faith-based organizations, businesses and volunteers during disasters to address emergency-management issues.

BRACE CEO: Greg Strader, 850-444-7135, gstrader@bereadyalliance.org

BRACE serves as the Citizen Corps & CERT Coordinator for Escambia County, City of Pensacola and Town of Century

Escambia CERT (Community Emergency Response Team)
www.escambiacer.org

CERT program offers disaster preparedness training based on a standardized FEMA curriculum.

Facebook page says CERT Basic Training is scheduled for June 22, 23, and 24.

Escambia County's Be Ready Escambia page:
myescambia.com/our-services/public-safety/beready

City of Pensacola:
www.cityofpensacola.com/722/Emergency-Preparedness

Cynthia Carnon handout
6/7/2018

Climate Mitigation and Adaptation Task Force
June 7, 2018

Community Stakeholders:

BARC & BARC/TAC (this group includes local elected officials, Northwest Florida Water Mgmt District, FDEP, The Nature Conservancy and several federal agencies)

Pensacola Chamber of Commerce

Gulf Power

Innisfree Hotels, Pensacola Beach (Dave Robau has contact)

Pensacola Environmental Advisory Board

Neighborhood Associations (City to provide list of association presidents)

Agencies that have representatives on the task force, i.e. FDOT, Pensacola NAS, 350 Pensacola, Emerald Coastkeepers, UF/IFAS, UWF, ECUA, to circulate for comment as needed.

DRAFT Report
Climate Mitigation and Adaptation Task Force
City of Pensacola

Task Force Members:

Elaine Sargent, Chairman, 350 Pensacola

Laurie Murphy, Vice Chairman, Emerald Coastkeeper

Dr. Haris Alibašić, University of West Florida

Cynthia Cannon, AICP, Santa Rosa County

Carrie Stevenson, Escambia County

Christy Johnson, AICP, FDOT

Tim Haag, Emerald Coast Utilities Authority

Dr. Wade Jeffrey, University of West Florida, **Advisor**

Mark Gibson – Installation Environmental Program Director, NAS Pensacola

Revised 1-25-2018

Revised 2-8-2018

Revised 2-25-2018

Revised 4-4-2018

Revised 4-17-2018

Revised June 4, 2018

Revised June 23, 2018

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Introduction

The imperative for climate adaptation and mitigation planning stems from overwhelming evidence of climate change and the effects on coastal cities and regions. Researchers and scientists point to the changing climate as a direct result of human activities with devastating consequences for communities around the world. The climate related threats include intense rain and flood events, sea level rise, droughts, and heat waves.

Addressing climate change differs from city to city and region to region, and among other factors is based on available funding, community needs and demands, and existing extreme weather threats.

The City of Pensacola and its regional partners, including counties and other local governments, set an aggressive and overarching climate-planning objective to address underlying climate change threats. The planning process includes an appointment of the Climate Mitigation and Adaptation Task Force. The report produced by the Task Force provides a general outline of the direction for the city of Pensacola and the region to undertake specific actions to counter threats of climate change and extreme weather.

Task Force Goals and Objectives

The goals and objectives of the Climate Mitigation and Adaptation Task Force shall include, and are not limited to:

Advance adaptation and mitigation strategies to enhance the city's and regional resilience and preparedness for withstanding the likely adverse effects of climate change, including flooding resulting from heavy precipitation, rising sea levels, intense hurricanes, heat waves, and other extreme weather events;

Promote a program of education, incentives, and public outreach to encourage residents, business owners, governments, and organizations to participate in the Climate Adaptation and Mitigation Plan;

Generate suggestions to obtain federal and state grants, investments in energy efficiency and other financial resources to offset program costs. Measures may include the initiatives to conserve energy and reduce greenhouse gas (GHG) emissions within government operations and incentives for homeowners, businesses and organizations to save energy, reduce costs and decrease Greenhouse Gas emissions.

The Climate Change Threats to Northwest Florida and the City of Pensacola

As noted in the Climate Central report and projections, Pensacola faces several risks associated with global warming, including sea level rise, multiplying extreme flood of risk in Pensacola region (Strauss et al. 2014, p. 51).

Can someone find this document and reference specific risks to the Escambia County? I could not find the 2016 report.

Florida Department of Economic Opportunity report "Coastal Vulnerability Assessment: Escambia County, Florida" dated July 23, 2016

A Blueprint for Addressing Climate Change at the Municipal Level

Local governments are typically the first responders when an extreme weather event affects their communities. Coastal communities in particular have long dealt with the aftermath of disastrous hurricanes and floods, with devastating consequences to local economies. Continuing the efforts to be better prepared to proactively address these events will result in a highly resilient community.

(Add more explanation of the climate change impacts we face locally.)

Planning for Energy Efficiency and Climate Change Mitigation

GHG emissions have undeniably been affecting the climate. The reduction of GHG emissions can decrease the extent of climate change. Remaining at the status quo or increasing the GHG emissions will escalate changes in climate. Climate change mitigation refers to the actions to decrease GHG emissions to reduce the ultimate magnitude of climate change. Some of these actions also have the potential to contribute to cost savings, green jobs, and local economic development. The City of Pensacola and surrounding area can take actions to assess energy use and GHG emissions to achieve the carbon footprint reductions.

The recommendations provide a *blueprint* for moving forward:

- ☐ Adopt a pledge to reduce the GHG emissions and join programs that provide planning tools such as: The Northwest Florida Clean Cities Coalition, Transformative Actions Program (TAP), Be Ready Alliance Coordinating for Emergencies (BRACE), USGS Sea-level Rise Simulation and Inundation Models, USGS Wetland Change Models, USGS Surface Elevation and Shoreline Erosion Models, and the Gulf TREE through Northern Gulf of Mexico Sentinel Site Cooperative.
- ☐ The mayor should join the Mayors Climate Protection Agreement similar to other cities in Florida. Joining the Climate Protection Agreement will support a mitigation initiative to reduce future impacts of climate change through pledge reductions in GHG emissions.
- ☐ Join ICLEI—Local Governments for Sustainability. ICLEI provides guidance for local climate action, including ClearPath™ —an “online software platform for completing greenhouse gas inventories, forecasts, climate action plans, and monitoring at the community-wide or government-operations scales.”
- ☐ Commit to meet a 100% renewable energy target by 2030.
- ☐ Support and encourage energy efficiency efforts, including the *Energy Star* labeling program and LEED.

- ☐ Encourage the start of a special adaptation action area group similar to the Southeast Florida Regional Compact. This group could be called the Northwest Florida Regional Compact and would study the outcome of adaptation strategies.
- ☐ Complete an inventory of GHG emissions and prepare a climate adaptation plan, as have many municipalities and counties around the state.
- ☐ Incorporate language about climate change in updated comprehensive plans, and pass local laws or codes that uphold those values.
- ☐ Include the following sectors: transportation, water resources/utilities, natural resources, agriculture, and disaster risk as part of the climate change planning process.
- ☐ Reduce GHG emissions from municipal operations, including increasing energy efficiency and conservation measures. In addition to reducing negative environmental impact, these efforts may provide for cost avoidance and savings.
- ☐ Install or purchase renewable energy, such as solar panels or other renewable power on municipal buildings, and incorporate LEED design.
- ☐ Educate the public about the changing climate, and involve and engage local citizens and volunteers in the processes of adaptation and mitigation. Encourage and incentivize local businesses and residents to reduce their energy consumption.
- ☐ Support regional and statewide policies to promote and develop renewable energy systems, net-metering, and installation of solar and geothermal projects.

Planning for Resilience and Climate Change Adaptation

The City of Pensacola has the opportunity and responsibility to start planning to ensure the community is resilient to climate change. The first course of action is to better understand what changes are likely at the local (and regional) level and to continue to make sure to prepare for these changes. Climate change **adaptation** refers to the actions organizations adopt to reduce the impacts of the climate changes that either have already occurred or will inevitably occur. **Resilience** is the capacity of communities and organizations to withstand stress and catastrophe, and to recover and adapt successfully in the face of threats or disaster.

Below are some of the initiatives that the City of Pensacola can undertake to increase the community's resilience to climate change impacts:

- ☐ Develop the emergency management plans and FEMA all-hazard mitigation plans that include climate change projections and adaptation strategies, and participate in the National Flood Insurance Program as well as FEMA's Community Rating System (CRS). The City of Pensacola is currently ranked 7 out of 10 on the FEMA CRS scale, resulting in a 15% annual discount in flood insurance for all insured properties. Surrounding communities have reached levels 5 (Pensacola Beach, Santa

Rosa County) and 6 (Escambia County). The City should continue making a concerted effort to improve the CRS rating. Acting on the suggestions made in this report would contribute significantly to improving this rating.

- ☐ Consider current sea level rise (SLR) projections to inventory and map municipal infrastructure that may be vulnerable to climate change, and make plans and budget to replace, move or harden, or add supportive infrastructure at appropriate times as those models indicate.
- ☐ Utilize local authority to protect open space, wetlands, and riparian buffers to increase resilience to extreme weather events.
- ☐ Become an active participant on the policy board of the Pensacola and Perdido Bay Estuary Program; encourage climate resilience strategies in addition to water quality improvement.
(Tim Haag will work on rewording.)
- ☐ Incorporate Better Site Design, Low Impact Development (LID), and Green Infrastructure principles into local codes and planning decisions to increase resilience of streams, bayous and floodplains to heavy precipitation events. Protect the natural riparian (natural shoreline) zones of these water bodies and incentivize restoration of living shorelines instead of hardening (stone, wood and concrete seawalls). Utilize Escambia County's LID Reference Manual and create incentives for its use within the City and region.
- ☐ Use a watershed-level rather than site-level approach to stormwater runoff and flooding.
- ☐ Encourage higher density development where appropriate as an urban stormwater best-management practice. More compact development patterns generate less stormwater runoff overall than low-density development.

Areas of Emphasis for Climate Preparedness—

Comprehensive Plan Climate Mitigation and Adaptation Element

Goal: Achieve a sustainable, climate resilient community by promoting energy efficiency and greenhouse gas reduction strategies; protecting and adapting public infrastructure, services, natural systems and resources from climate change impacts; and continuing to coordinate and communicate locally and regionally to monitor and address the changing needs and conditions of the community.

Greenhouse Gas Emissions Reduction Goals

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

Policy Recommendations:

- The City of Pensacola shall mitigate its contribution to global climate change by reducing the government operations greenhouse gas emissions to X% below 2016 levels by 2020, and citywide greenhouse gas emissions to 17% below 2005 levels by 2025 and 82% below 2010 levels by 2050. The City will continue to regularly monitor and track the progress of programs and initiatives that contribute to the final reaching of these goals.
- The City of Pensacola shall encourage research for increasing the proportion of electricity generated by alternative and renewable energy sources within the City, such as solar, wind, geothermal and ocean energy technologies.
- The City of Pensacola should plan for and facilitate the development of infrastructure that provides public access to alternative fuels and electric vehicle charging stations by 2020. Actions should include:
 - Preparing for deployment and optimal distribution of a regional system;
 - Negotiating inter-local agreements with County, State, and private entities to share existing and proposed infrastructure; and
 - Incentivizing and improving processes and programs for installation of alternative fuel and electric vehicle charging infrastructure (including City-owned parking lots and buildings).

Transportation

Objective: Advance transportation and land-use choices that: reduce fossil fuel use and vehicle miles traveled; improve the mobility of people, goods, and services; provide a diverse, efficient and equitable choice of transportation options; and increase the City's resilience to the impacts of climate change.

Policy Recommendations:

- The City of Pensacola shall continue to encourage mixed land uses which promote functional, walkable mixed-use development designs and projects by providing flexibility in development review for these projects, revising the zoning and land development codes to support such projects, and promoting the adoption of land development codes that support and establish sustainable development patterns, especially in areas identified as high risk to sea level rise. Discourage and/or prevent development in flood zones, areas of social vulnerability, near wetlands and the coastal regions. Property damage (built and environmental) and environmental justice issues create economic losses. Reduce future development in established areas of inundation until traffic and infrastructure (roads, bridges, stormwater) studies and cost-benefit analysis of such designs have been completed based on traffic/runoff. Preserve and grow mixed-use and dense development neighborhoods in low hazard (non-historically flooded) areas, making essential services and businesses accessible through multimodal means of transportation.
- The City of Pensacola shall continue to seek to diversify fuel options for public transit and fleet vehicles, expand infrastructure for charging electric and hybrid electric vehicles and incentivize parking for alternative fuel vehicles. Adopt a policy that discourages expansion of roadways that add more lanes to grow capacity. Focus on the maintenance and the improvements of "vital

streets” or existing roads where appropriate. Evaluate the adoption of a complete streets concept, looking at street design from a pedestrian/biking perspective as well as the importance of traffic calming. Any new road project would need to meet the following criterion before approval: Roadway will serve as a connector between areas to reduce driving miles, consequently decreasing carbon footprint and emissions.

- ☐ Review and support new city codes that help to create more bike- and pedestrian-friendly infrastructure for our communities.

Built Environment

Objective: Improve the climate resilience and energy-efficiency of new and existing buildings and public infrastructure, and develop adaptation strategies for areas vulnerable to climate change-related impacts.

Policy and Initiative Recommendations: The City of Pensacola shall encourage greener, more efficient and climate resilient construction practices.

- ☐ Build all new construction of county-owned city or public facilities to Leadership in Energy and Environmental Design™ (LEED) standards.
- ☐ Utilize national guidelines and performance benchmarks for sustainable land design, construction and maintenance practices, as developed by The Sustainable Sites Initiative™ (SITES™).
- ☐ Reevaluate the base finish floor elevation standards concerning projected sea level rise scenarios and flooding potential.
- ☐ Seek ways to install solar panel demonstration projects on City buildings.
- ☐ Use Energy STAR rated appliances and HVAC equipment within City buildings.
- ☐ Incorporate building design specifications that increase resistance to impacts from more intense storm events.
- ☐ Encourage all building/construction personnel to have NPDES training and erosion/sediment control training.
- ☐ Require all new development designs to produce stormwater drainage impact study.
(Laurie Murphy will work on rewording this.)
- ☐ Develop permeable surfaces and green incentives for residents and businesses throughout the City of Pensacola. *(Laurie Murphy will work on rewording this.)*

Policy Recommendations:

- ☐ Work cooperatively to review and re-evaluate current zoning codes, regulations and policies according to sustainable community development practices, such as those outlined in the criteria rec-

ommended by the United States Green Building Council's Leadership in Energy and Environmental Design for Neighborhood Development (LEED-ND) certification, or by application of a national rating system for local governments, such as the STAR Community Index™ (STAR), and NPDES stormwater permit.

- ☐ Identify areas of frequent “nuisance flooding” and create a public database for future reference, which will dis-incentivize construction in historically and newly flooded area.
- ☐ Create an Inland Flooding Adaptation Action Area.
- ☐ Create a mechanism for transfer of ownership for properties in high hazard areas to create green space and mitigate flood risks.
- ☐ Limit public expenditures in coastal high hazard areas.
- ☐ Reduce development density in high flood zones/coastal high hazard areas.

Policy Recommendation: The City of Pensacola shall continue to review policies and promote programs which advance greenhouse gas reduction and energy conservation strategies; promote compact, transit-oriented, pedestrian-friendly development; further green construction practices and the design of climate-sensitive and energy efficient buildings; encourage cluster development in order to retain or create native vegetative communities; and address the resilience and survivability of buildings and infrastructure to rising sea levels, tropical storms, storm surge, and other climate change impacts, thoroughly evaluate and re-evaluate coastal land use.

Policy Recommendation: The City of Pensacola shall evaluate the costs and benefits of adaptation alternatives in the location and design of new infrastructure as well as the fortification or retrofit of existing infrastructure.

Policy Recommendation: Assess and quantify the multiple environmental, social, and economic benefits of green infrastructure, as trees, forests, wetlands, and waterways provide natural protection and increase resilience by improving air quality, providing shade, reducing heat, storing surface water and retaining stormwater runoff through green stormwater initiatives. Furthermore, conservation and expansion of green infrastructure decisions should include measurements of meeting the Greenhouse Gas mitigation targets, public health, and safety goals, and climate change adaptation priorities.

- ☐ The City of Pensacola shall utilize the City Tree Ordinance fund to maximize the benefits of trees throughout the community to absorb carbon dioxide, rebuild urban riparian zones, provide passive cooling for buildings, and provide shade for more walkable streets.
- ☐ The City of Pensacola shall continue to maintain annual certification as a Tree City USA Community in partnership with the Florida Forest Service and the Arbor Day Foundation. Tree City USA designation demonstrates the commitment of the city in protecting, conserving, and managing trees on the city-owned property to ensure that the benefits of healthy, native, urban forests and trees are fully utilized.
- ☐ The City of Pensacola shall partner with other area organizations by joining the Six Rivers Cooperative Invasive Species Management Area (CISMA) as a partner-member. The Six Rivers

CISMA Partnership is comprised of local, private, and public partners who work together to control invasive species in the NW Florida region. The City of Pensacola has many wetlands and stormwater areas that are predominantly comprised of invasive species. Controlling these species followed by the establishment of native species will improve the effectiveness of stormwater management in wetlands.

Emergency Planning

Objective: Ensure exceptional planning and coordinated emergency preparedness and post-disaster management in the context of climate change.

Policy and Initiative Recommendations:

- ☐ The City of Pensacola shall coordinate with Escambia County and regional planning agencies to ensure adequate planning and response for emergency management in the context of climate change by maximizing the resilience and self-sufficiency of, and provide access to, public structures, schools, hospitals and other shelters and critical facilities.
- ☐ The City of Pensacola shall develop plans and monitor programs to address the impacts of climate change on households and individuals especially vulnerable to health risks attributable to or exacerbated by rising temperatures, to include low-income families and the elderly.
- ☐ The City of Pensacola shall continue to communicate and collaboratively plan with other local, regional, state and federal agencies on emergency preparedness and disaster management strategies. This includes incorporating climate change impacts into updates of local mitigation plans, water management plans, shelter placement and capacity, review of significant traffic ways and evacuation routes, and cost analysis of post-disaster redevelopment strategies.
- ☐ The City of Pensacola shall work to encourage dialogue between residents, businesses, insurance companies and other stakeholders, through public education campaigns and workshops to increase understanding regarding the potential impacts of climate change on our coastal communities and evaluate the shared costs of action or inaction in human, ecological and financial terms.
- ☐ The City of Pensacola shall work with the Florida Division of Emergency Management and other agencies to incorporate sea level rise and increasing storm surge impacts into the remapping of potential hazard areas in coastal zones by 2020. Revised hazard area designations should better reflect the risks to communities associated with climate change and allow reevaluation of suitability for development or redevelopment in these areas.
- ☐ The City of Pensacola shall cooperatively develop model codes and policies to encourage post-hazard redevelopment in areas with less vulnerability to storm surge, inundation, flooding, sea level rise and other impacts of climate change, and incentivize locally appropriate mitigation and adaptation strategies.

Public Utilities

Objective: Ensure the resilience of existing water resources, water, and wastewater infrastructure to the impacts of climate variability and change to protect future water quality and quantity, and minimize the potential for flood damage and water shortages, while improving the energy efficiency of utilities and

reducing carbon emissions and climate impacts. Work with energy provider utilities on mitigation of climate change by transitioning to zero GHG emission energy sources (e.g., renewable energy).

Policy Recommendations:

□ The City of Pensacola shall, by 2020, coordinate with local service providers to ensure that water and wastewater service planning and policy development considers methods for reducing utilities' "carbon footprint," including the best management practices recommended in American Waterworks Association Florida Vision 2030, which have been recognized by utilities as appropriate utility responses to climate change. Also, additional means of reducing demand for traditional energy sources at the water and wastewater treatment facilities, such as through the production of energy through cogeneration systems, should be explored.

□ The City of Pensacola shall develop, implement and coordinate water conservation initiatives, in partnership with water and wastewater utilities, as part of long-term water supply planning, and seek the continued support of the Northwest Florida Water Management District and other agencies.

(Tim Haag will add language regarding well-head protection and coordination of City and Escambia County)

□ The City of Pensacola shall support recurring and continued development of local integrated models and continuous data collection, to help predict and track the impacts of sea level rise on groundwater levels, saltwater intrusion, and drainage infrastructure through enhanced development and application of local aquifer and hydraulic models and the use of down-scaled climate models.

□ The City of Pensacola shall work in coordination with local utilities to maintain and advance infrastructure protection, utility location, and adaptation through infiltration and inflow program development to reduce the flow of groundwater and stormwater to wastewater collection and treatment facilities.

□ The City of Pensacola shall work with utility services to investigate the feasibility of relocating above-ground utilities underground in areas vulnerable to high winds and frequent power disruption due to storms.

□ The City of Pensacola shall send to electric utilities that provide power to the area within the City of Pensacola a formal statement declaring the City's desire to receive electric energy from zero GHG emission sources (e.g., renewable energy). The City shall also send a request to these utilities to transition to renewable energy sources, with a goal of 100% zero GHG emissions. Furthermore, the City shall request a long-term plan from these utilities for making this transition.

Public Health

Climate change influences public health in Florida through higher average temperatures and an increase of the frequency, intensity, and duration of extreme weather—heat waves, heavy rains, drought, tornadoes, hurricanes, and storm surge. The impacts to public health include an increase in aeroallergen-related asthma and other respiratory diseases, vector-borne and water-related diseases, heat-related deaths and illnesses, and mental health issues related to dealing with disasters such as hurricanes and flooding. Power grid/power outages and infrastructure failures due to severe weather compound the

effects on public health. All communities are impacted, but the most vulnerable are the poor, the elderly, young children, the sick, households of color, and people with disabilities.

Objective: Prepare and protect the public from adverse health impacts of climate change.

Policy Recommendations:

- ☐ The City of Pensacola and City subcontractors shall know Federal guidelines and best practices to prevent injuries, cognitive difficulties, and other hazards related to working outside in weather extremes such as high temperature and humidity. The guidelines may require providing shade, rest, or cooling to outdoor workers. The City should also encourage local businesses to follow the recommendations.
- ☐ The City of Pensacola shall increase the resilience of critical infrastructure when appropriate to support human health and well-being.
- ☐ The City of Pensacola shall work with other governmental agencies and the Escambia County Health Department to support drinking water quality monitoring and source water protection.
- ☐ The City of Pensacola shall work with other governmental agencies and the Escambia County Health Department to support enhanced surveillance of mosquitos to mitigate vector-borne disease. Long-term and consistent vector mosquito surveillance can create a baseline to identify periods with heightened risk.
- ☐ The City of Pensacola shall partner with the Escambia County Health Department, emergency management organizations such as Be Ready Alliance Coordinating for Emergencies, and public utilities to prepare and protect the safety, health and well-being of the public in the event of a hurricane or other severe weather event.
- ☐ The City of Pensacola shall partner with Escambia County and the Escambia County Health Department to notify the public of heat advisories, pollen alerts, and other climate-related health warnings.

Outreach

Objective: Increase opportunities in the community to learn about climate change, participate in decision-making, engage in a green economy, utilize green infrastructure, study health impacts, and reduce population vulnerability.

Policy Recommendations:

- ☐ The City of Pensacola shall continue to engage stakeholders, regional, state and federal partners, academia, practitioners and climate scientists, in exchanging information, best practices and policy solutions, regarding local climate change impacts and mitigation and adaptation strategies.

- The City of Pensacola shall promote partnerships between local government agencies, universities, professionals and practitioners, to foster an environment for connecting scientific research and education with practical applications that will contribute to the resilience and adaptation within the built and natural environments to the impacts of climate change. Work with University of West Florida faculty to promote climate education events.
- The City of Pensacola shall partner with innovative construction projects to showcase the changes they incorporate in new construction to mitigate for flooding and other climate impacts.
- The City of Pensacola shall promote partnerships between local middle and high school career and academic academies to encourage student internships and learning opportunities to develop and educate local talent.

Beulah Middle School Pre-Engineering/STEM

Escambia High Engineering Academy

Pine Forest High Home Builders Association of West Florida Green Construction Trades Academy

West Florida High School Academies of Civil Engineering & Architecture, Cox Telecommunications, and Gulf Power

Washington High School Marine Science Academy

Economic Development and Resilience

Policy recommendations:

- The City of Pensacola shall encourage the development of “green” industry and business which diversify the local economy and contribute benefits towards a sustainable future.
- The City of Pensacola shall continue to develop plans and programs in coordination with local municipalities, power companies, and private partners to reduce greenhouse gas emissions and create “green” job opportunities throughout the community, by
 - Expanding the market for energy efficient products and services;
 - Supporting alternative and renewable energy production through innovative financing; and
 - Promoting and incentivizing energy conservation retrofits.
- The City of Pensacola shall seek to strengthen the local economy by promoting green economic growth and green-collar work training programs in order to: create resilience; reduce reliance on fossil-fuel-based economies; provide a positive focus for economic development; advance the use of sustainable materials, technologies and services; and encourage local jobs in sustainable businesses which offer a living wage and make it possible for regional climate change goals to be met.

- ☐ The City of Pensacola shall review codes and regulations to enable and encourage eco-industrial development and business practices in line with the concept of the circular economy. Specifically, businesses models and land development patterns should be supported which promote by-product exchanges (so that one company's waste stream is another's source of raw materials) as to more efficiently use resources (materials, water, energy) throughout society.

Task Force Findings and Recommendations

- ☐ Incorporate a Climate Mitigation and Adaptation Element into the City's Comprehensive Plan (as opposed to updating each element of the Comp plan with climate adaptation and mitigation policies).
- ☐ Seek funding to develop a Climate Action Plan or Climate Resilience Plan.
- ☐ Conduct a Vulnerability Assessment and establish resilience strategies based on those findings. Utilize the existing FDEO Vulnerability Assessment of Escambia County which includes detail related to the City of Pensacola.
- ☐ Reestablish and fund the City of Pensacola Office of Sustainability (or similar program) to implement the Climate Action Plan and to provide an annual review and assessment of climate adaptation and mitigation of policies and strategies.
- ☐ Engage the Environmental Advisory Board (or appropriate entity) to work with city council and city planning staff to ensure the city's Land Development Code addresses mitigation and adaptation policies
- ☐ Pursue grant opportunities for City and regional partners to develop climate adaptation programming.

Addendum

Community Concerns and Priorities

Develop Task Force priorities, for example, clean energy solutions, to start discussion with the community.

Gather community feedback on the Task Force's proposed climate change policies and establish priorities based on that feedback.

Create and implement a community-wide survey (see Satellite Beach report) and prioritize action areas based on resident feedback.

Create a page on City website dedicated to climate resilience information.

Appendix

Resolution of the Pensacola City Council Creating a Climate Change Task Force

References and Sources:

Alibašić, H. (2018). Sustainability and Resilience Planning for Local Governments: The Quadruple Bottom Line Strategy (Forthcoming). <http://www.springer.com/us/book/9783319725673>

Alibašić, H. (2018). Leading Climate Change at the Local Government Level. In Farazmand, A. (Ed.) Global Encyclopedia of Public Administration, Public Policy, and Governance. Springer International Publishing, AG, Cham. https://doi.org/10.1007/978-3-319-31816-5_3428-1

Strauss, B., C. Tebaldi, S. Kulp, S. Cutter, C. Emrich, D. Rizza, and D. Yawitz (2014). Florida and the Surging Sea: A Vulnerability Assessment With Projections for Sea Level Rise and Coastal Flood Risk. Climate Central Research Report, pp 1-58.

Luber, G., K. Knowlton, J. Balbus, H. Frumkin, M. Hayden, J. Hess, M. McGeehin, N. Sheats, L. Backer, C. B. Beard, K., L. Ebi, E. Maibach, R. S. Ostfeld, C. Wiedinmyer, E. Zielinski-Gutiérrez, and L. Ziska, 2014: Ch. 9: Human Health. Climate Change Impacts in the United States: The Third National Climate Assessment, J. M. Melillo, Terese (T.C.) Richmond, and G.W. Yohe, Eds., U.S. Global Change Research Program, pp 220-256. doi:10.7930/J0PN93H5.

Malhotra, K., Baltrus, P., Zhang, S., McRoy, L., Immergluck, L. C., & Rust, G. (2014). Geographic and racial variation in asthma prevalence and emergency department use among Medicaid-enrolled children in 14 southern states. *Journal of Asthma*, 51(9), pp 913-921.

Broward County Climate Action Plan - Local Strategy to Address Global Climate Change
[Can someone provide a link or reference to this plan? We should not include the entire document here. The Broward County faces different sets of land use, development and other issues.]

City of Punta Gorda Adaptation Plan
[Same as above]

Community Resiliency in the City of Satellite Beach
[Same as above]

Coastal Vulnerability Assessment: Escambia County, Florida
[Where is this document? I cannot located the 2016 document.]

Other resources:

Escambia Low Impact Design BMP Manual (2016)

<https://myescambia.com/our-services/natural-resources-management/water-quality-land-management/low-impact-design>

Workforce Education. Escambia County School District.

<https://ecsd-fl.schoolloop.com/career>