

Rural Concerns Advisory Committee

April 16, 2024

4:00 pm

Extension Auditorium

22712 W Newberry Road, Newberry, FL 32669

Pages

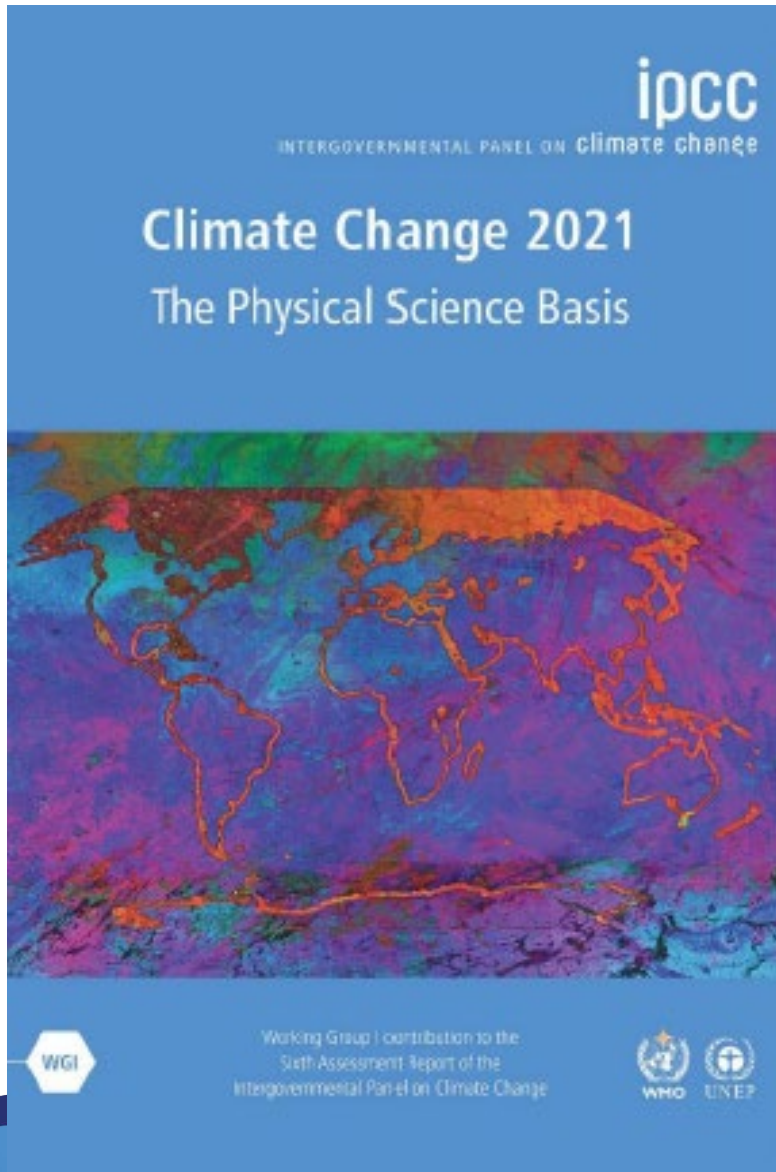
1.	Call to Order	
2.	Approval of the Agenda	
3.	New Business	
3.1	Impact of Climate Change on Alachua County's Agriculture and Rural Lands -- Shane Williams, Stormwater Engineer, Environmental Protection	1
4.	Approval of Minutes for 3-19-2024 meeting	28
5.	Attendance Report	31
6.	Chair Comments	
7.	Committee Member Comments	
8.	Public Comment	
9.	Next Meeting	
10.	Adjournment	



Impact of Climate Change on Alachua County's Rural and Agricultural Lands

April 16, 2024

So What Does the Future Look Like?



- Climate projections are based on the assumption that little effort is made to limit the rise in global temperature.
- Extreme temperatures, drought, and precipitation intensity will increase.
 - This may significantly impact Alachua County's rural and agricultural areas.
 - These impacts will challenge and disrupt farming, livestock, and rural livelihoods.

Crop Failure and Reduced Yields

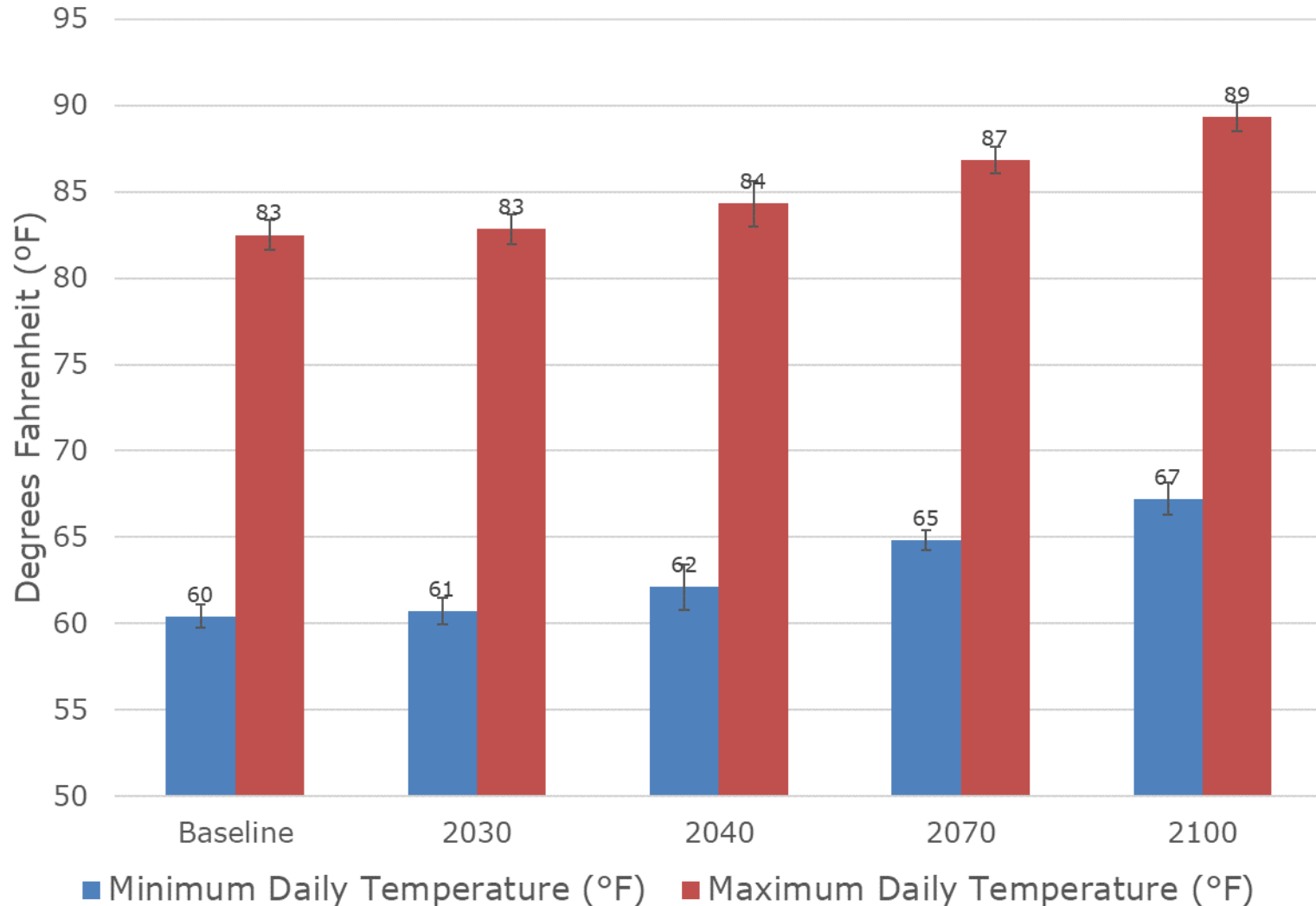
- Drought and heat can lead to water stress, reducing soil moisture and reducing crop yields.
- Flooded crops can result in crop failure.
- Reduced crop yield affects producers financially, which also affects farm workers
- Heat also affects worker productivity and increases risk of heat related illness/injury

Fertilizer Use and Water Scarcity

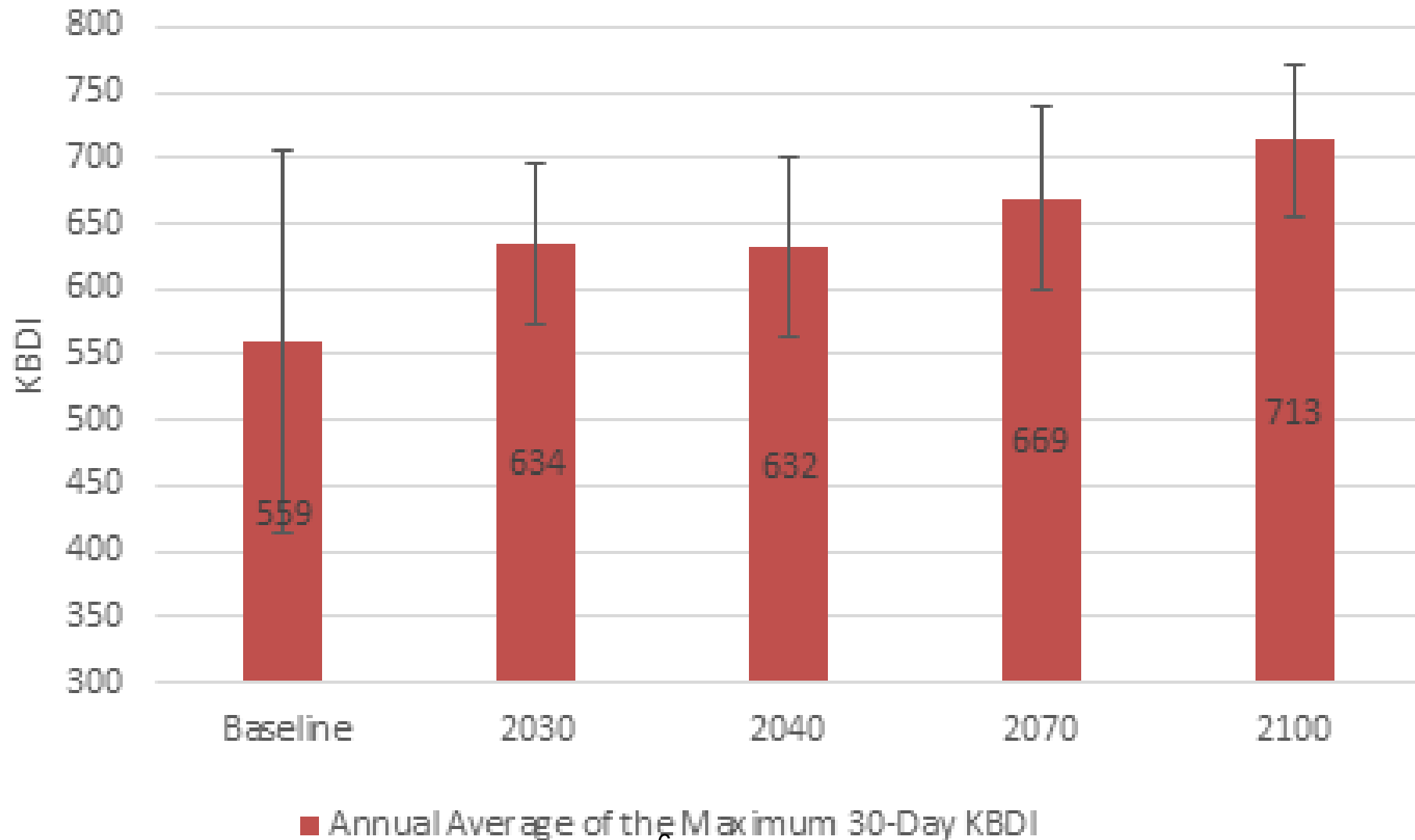
- Because of decreasing crop yields, the farm sector may increase fertilizer and irrigation use.
- Surface and groundwater quality may be further degraded.
- Potential for competition for water with other users.

Temperature Slide

- Maximum daily temperature rising about a degree a decade.
- Minimum is also rising. Cool temperatures overnight help lower body temperature.



Keetch-Byram Drought Index

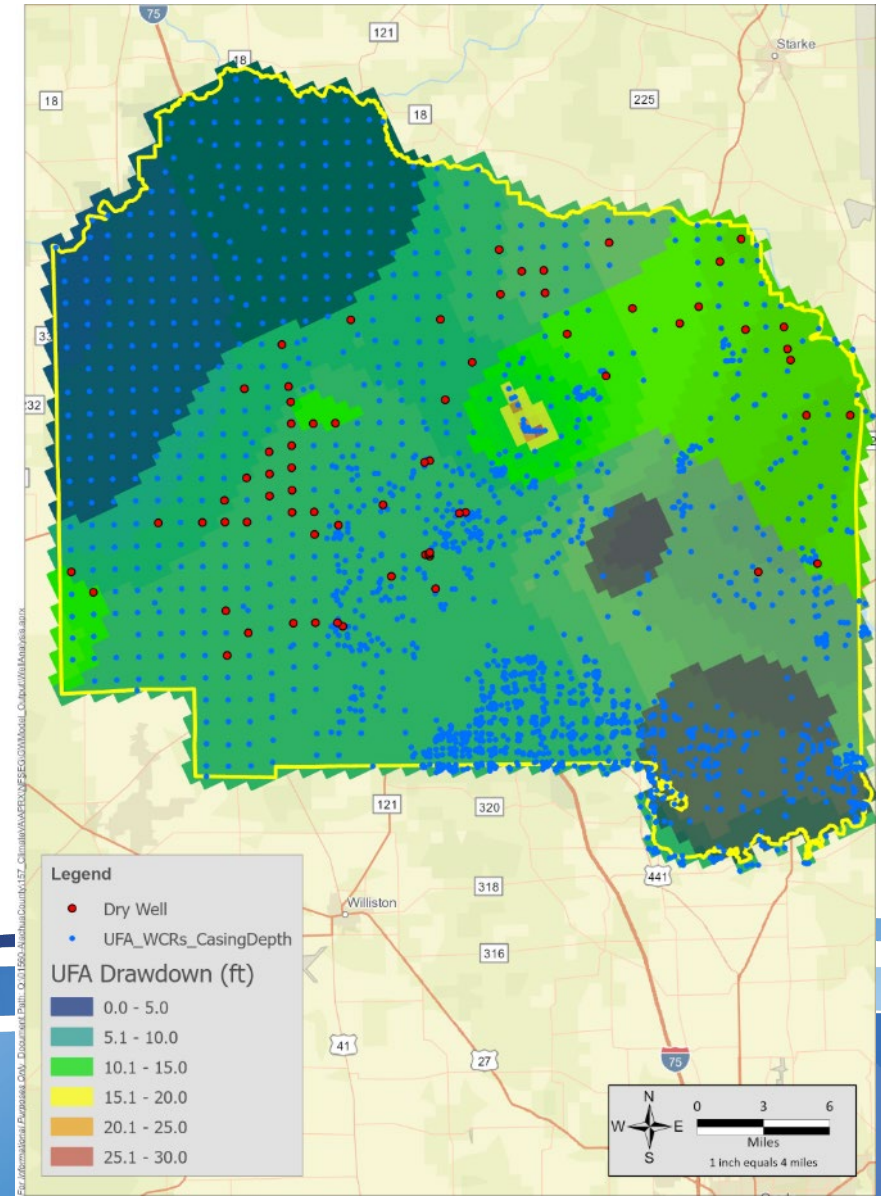


Maximum Heat Index – NOAA Alert Days per Year

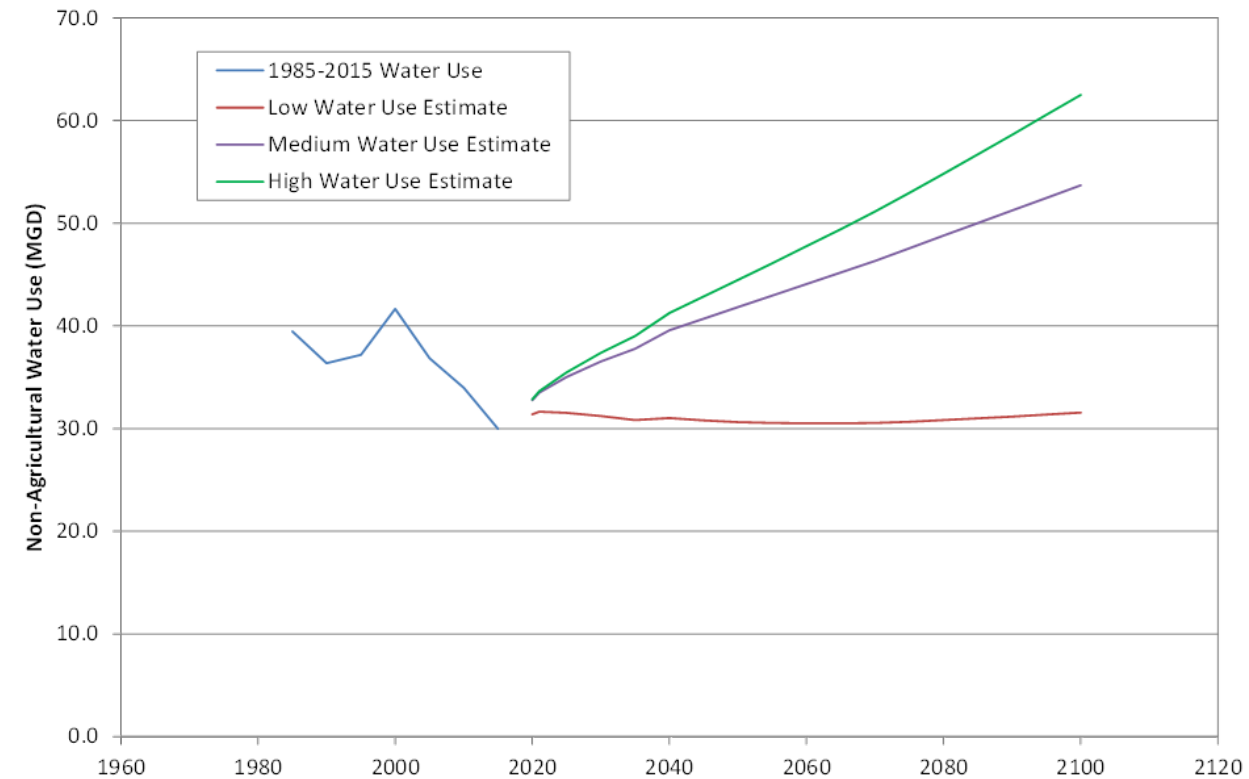
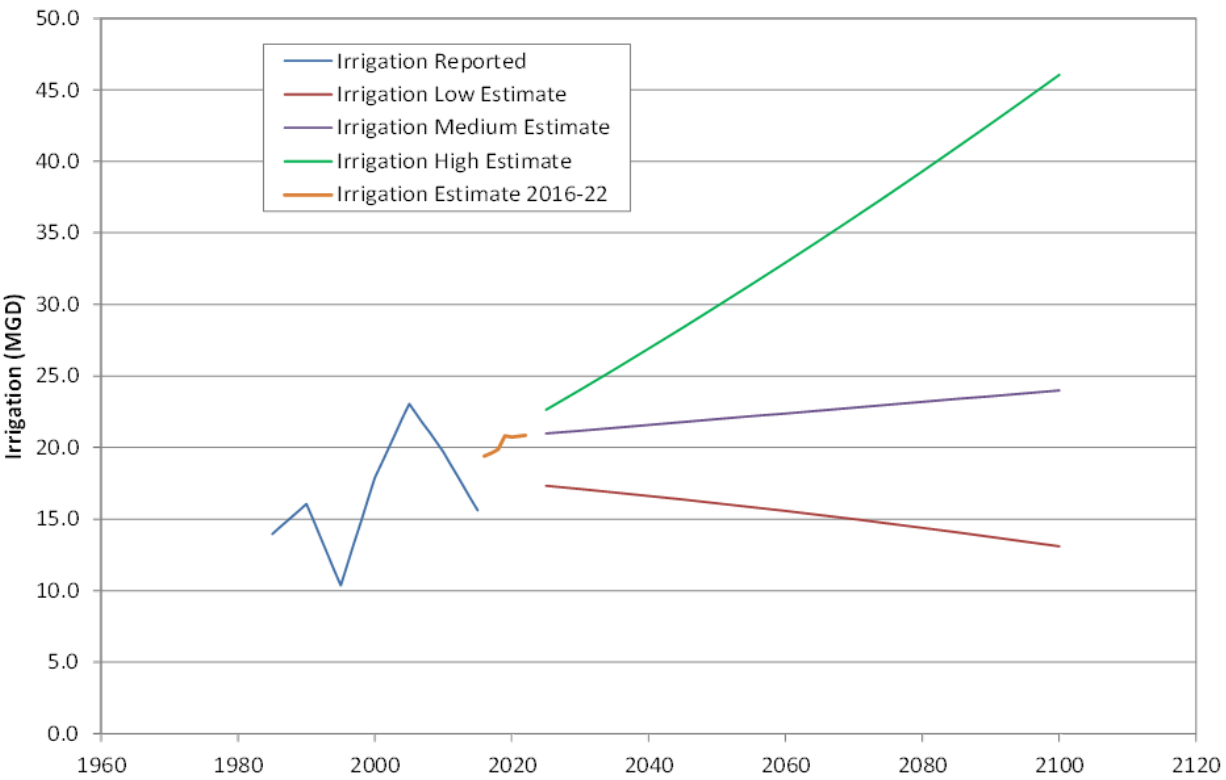
	Very Warm (80 – 89)	Hot (90 – 104)	Very Hot (105 – 129)	Extremely Hot (≥ 130)
Baseline	26	64	95	36
2030	23	51	94	53
2040	27	55	81	70
2070	24	54	75	107
2100	20	43	68	138

Groundwater and Surface Water Impacts

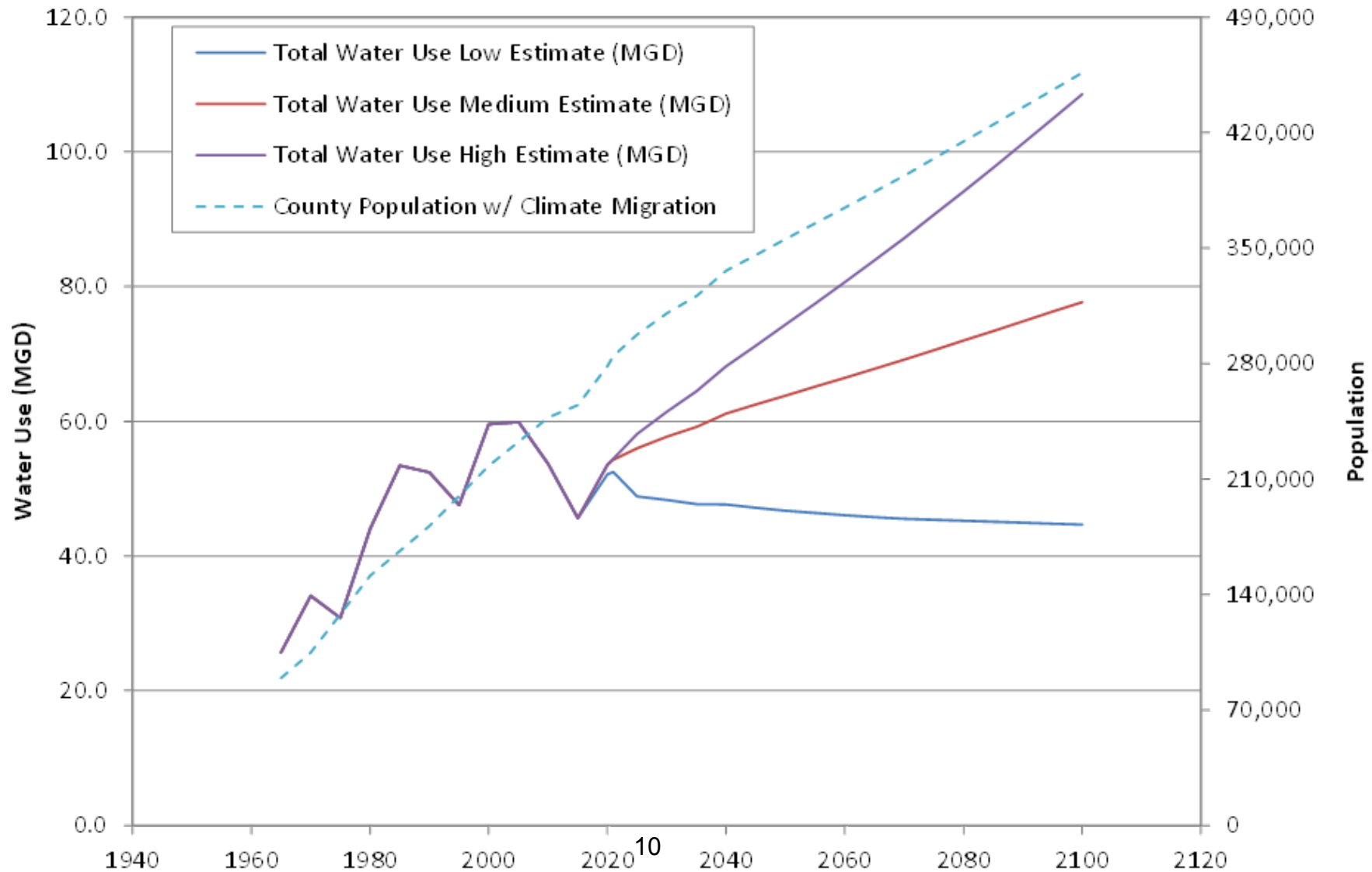
- Trend towards more extreme rainfall itself may not lead to general decline in groundwater level but may result in more variation.
 - In dry years may be lower than current conditions in some areas.
 - Climate change will increase demand, and this is what could cause decline.
- In the long-term surface water levels and flows will be reduced.
 - Decreased water quality in lakes.



Projected Ag and Non-Ag Water Use



Total Projected Water Use



Crop Modeling

- Goal was to assess the potential impact of climate change on crop yield under different irrigation and fertilization practices.
- Looks at three crops grown in the County that had appropriate crop models already developed.

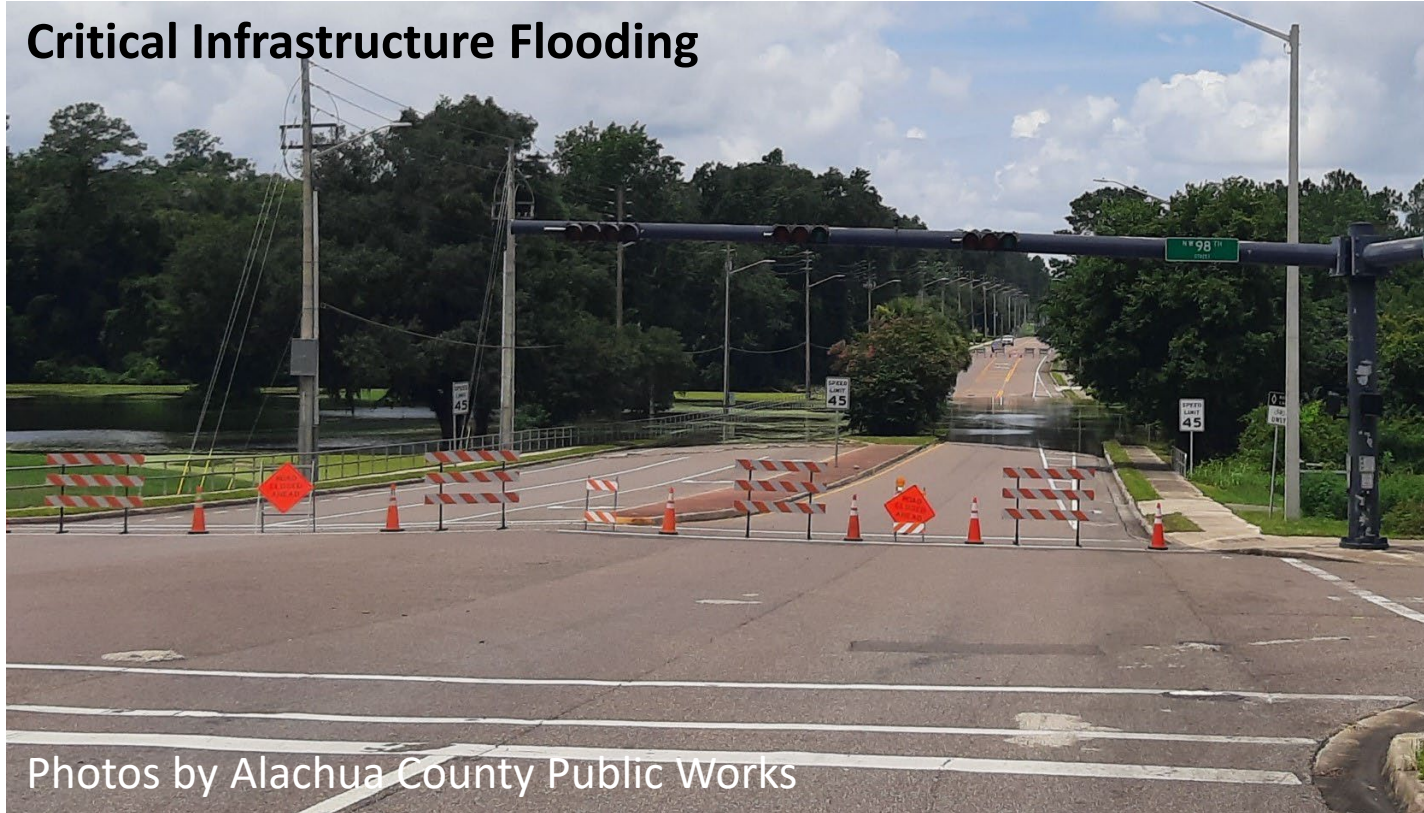
What Does This Mean for Local Agriculture?

- Crop modeling indicates increased irrigation and fertilizer needs. This has potential negative impacts on surface and groundwater quality.
 - Corn will see significantly reduced yields regardless of increased irrigation and fertilizer application.
 - Snap beans will maintain yields until about 2040.
 - Bahia grass for forage will do well and yields will increase.



Extreme Rainfall: What is at Risk?

Critical Infrastructure Flooding



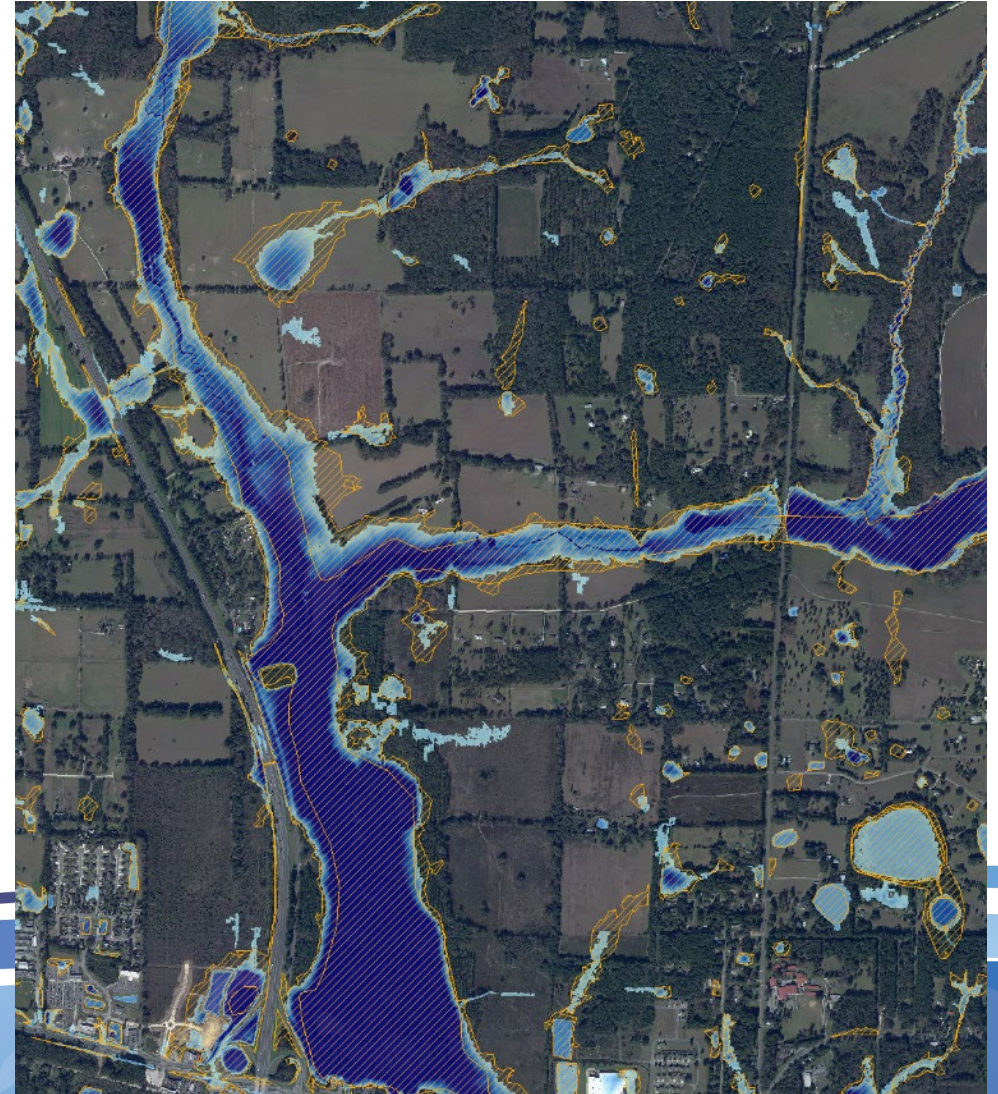
Photos by Alachua County Public Works



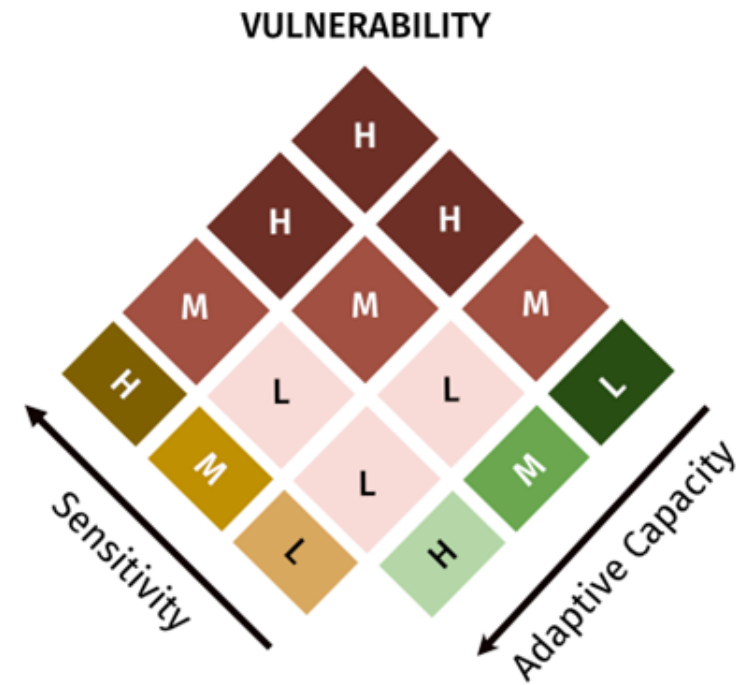
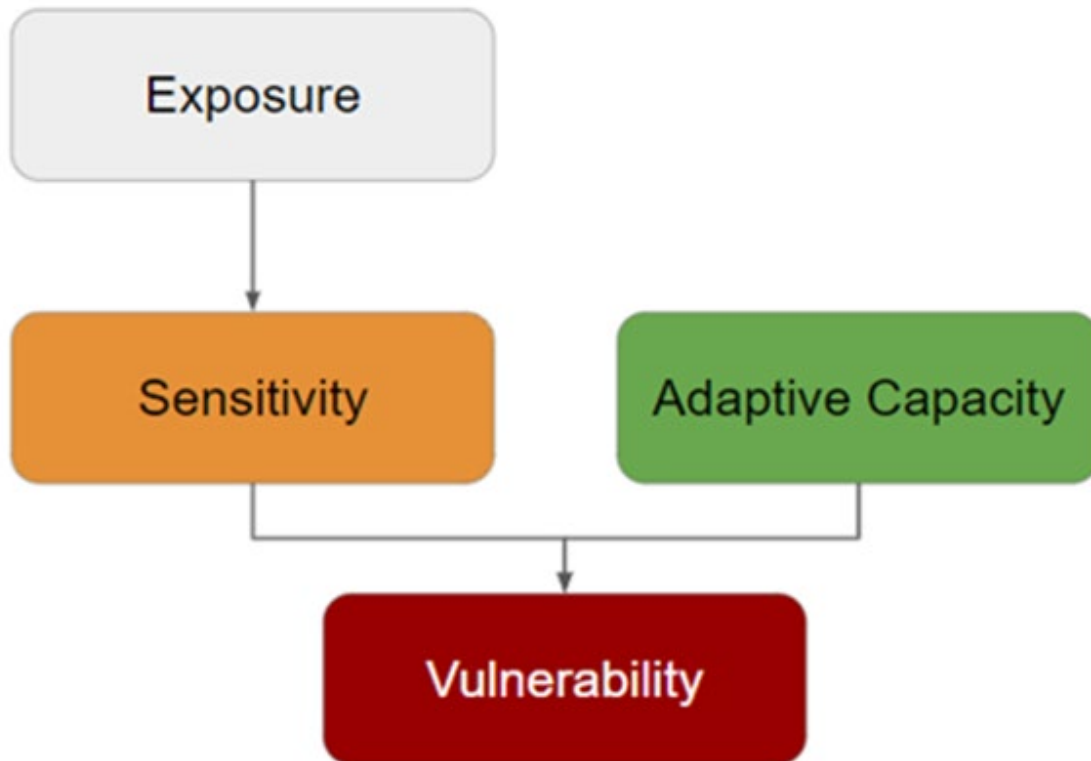
Property Flooding

Countywide Inundation Model

- Over 14,000 stormwater pipes and structures.
- Calibrated against observed flooding from
 - Hurricane Irma (2017) and
 - Tropical Storm Elsa (2021).
- Current, 2040, and 2070 conditions.



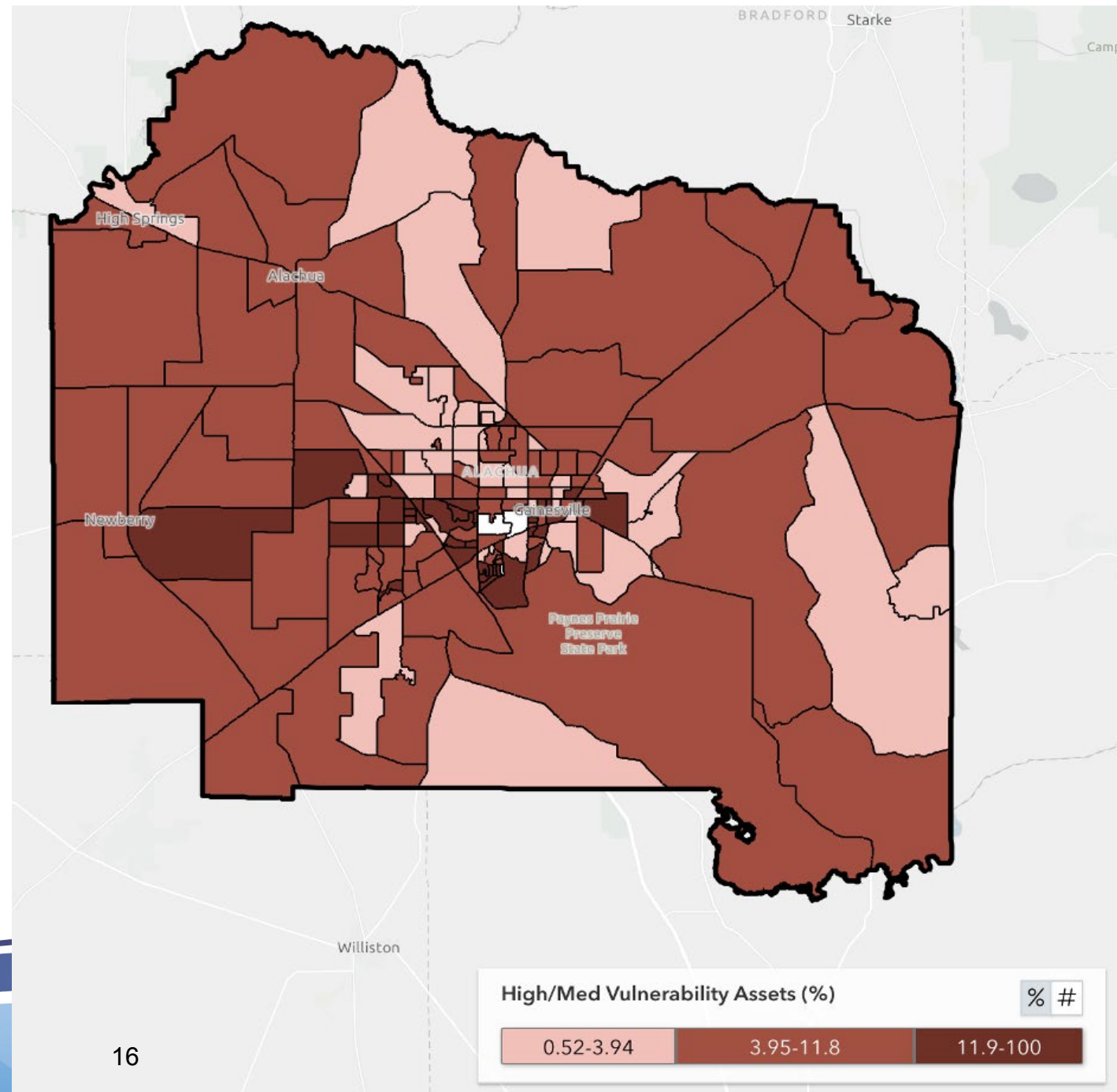
How Do We Measure Vulnerability?



Residential Vulnerability to Extreme Rainfall

**Percent of Residential Properties
Highly Vulnerable to Current
100-Year Rainfall-Induced
Flooding by Census Block Group.**

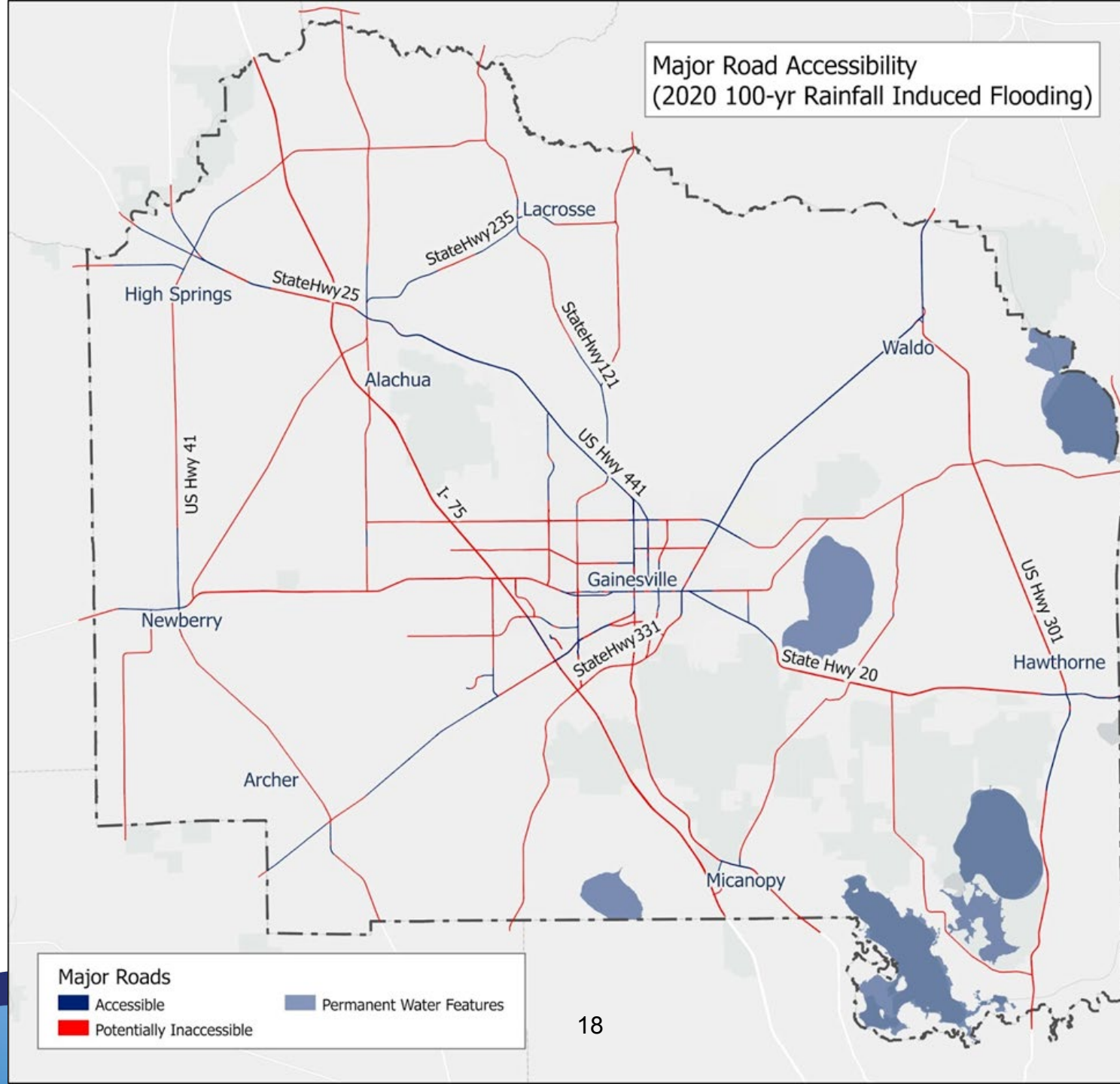
**8% of residential properties
were highly vulnerable
countywide in 2020, This will
rise to 12% in 2040 and 15% in
2070.**



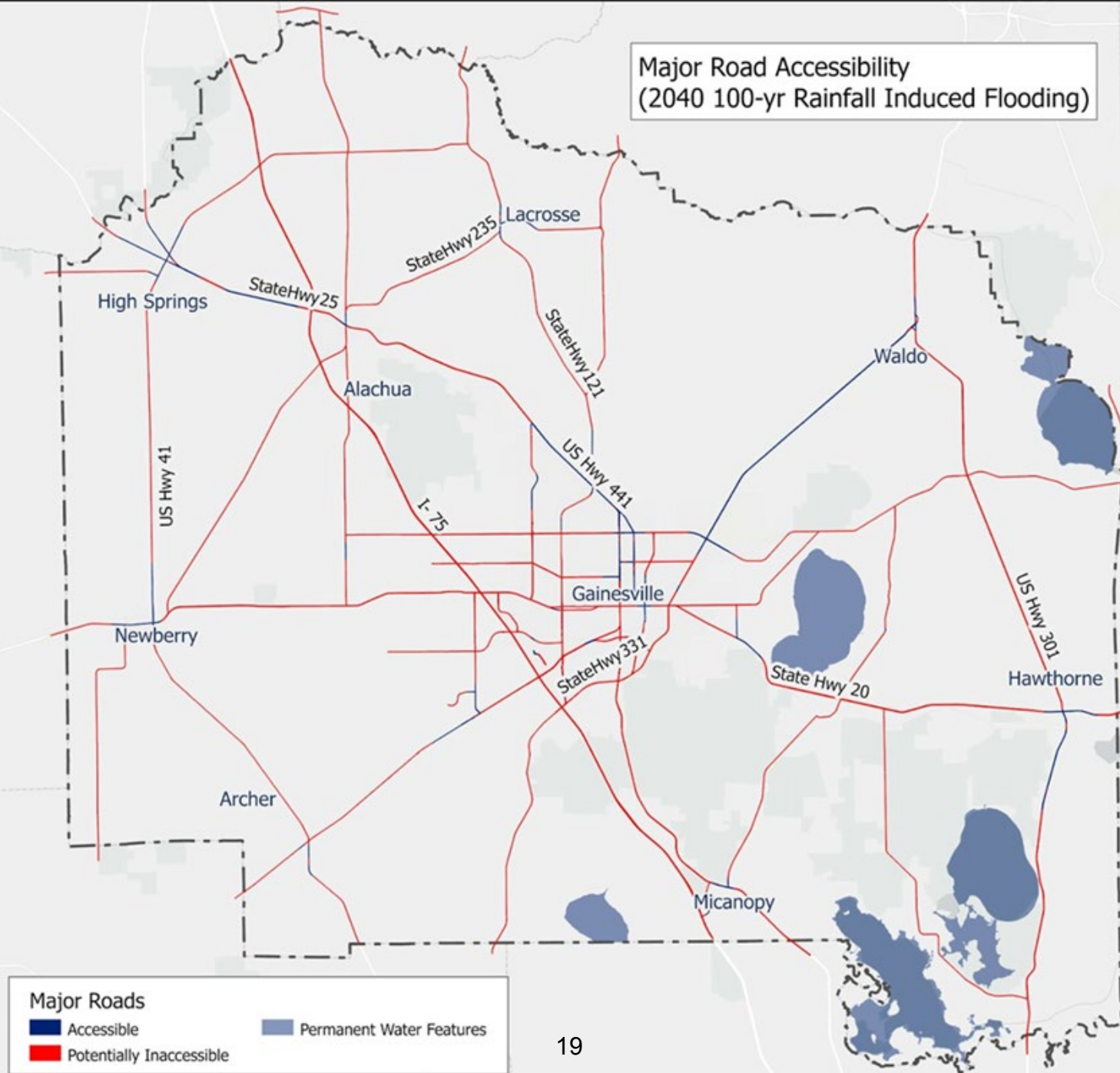
Flooding on Agricultural Land

- Agricultural lands and other undeveloped lands we only measure exposure to flooding.
- The Vulnerability Analysis determined that 51% of all undeveloped land was exposed to flooding in 2020.
- This will rise to 60% in 2040 and 64% in 2070.

Major Road Accessibility
(2020 100-yr Rainfall Induced Flooding)



Major Road Accessibility
(2040 100-yr Rainfall Induced Flooding)

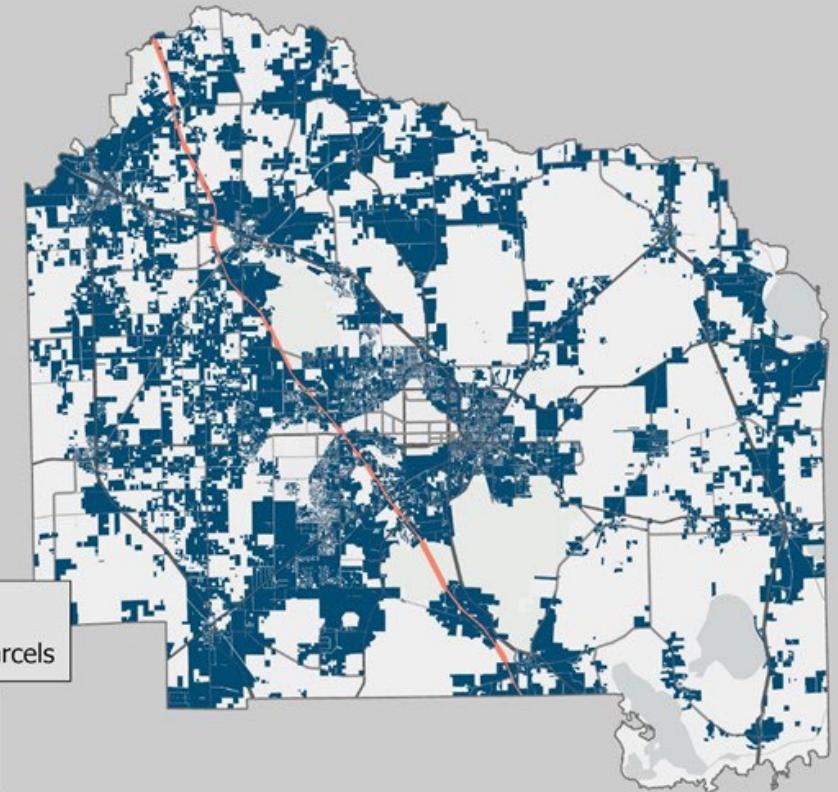
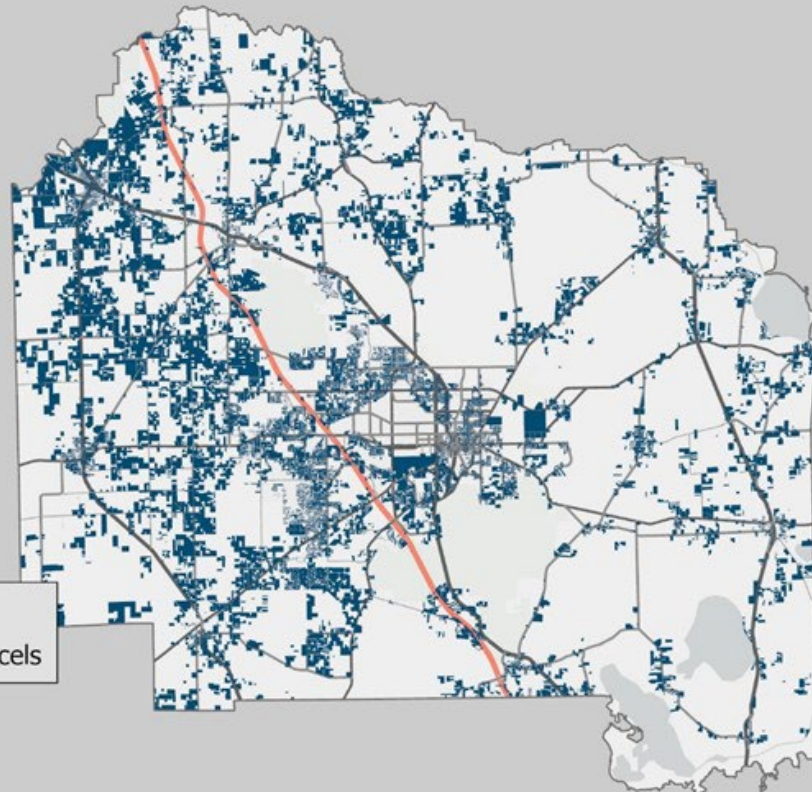


Other Impacts

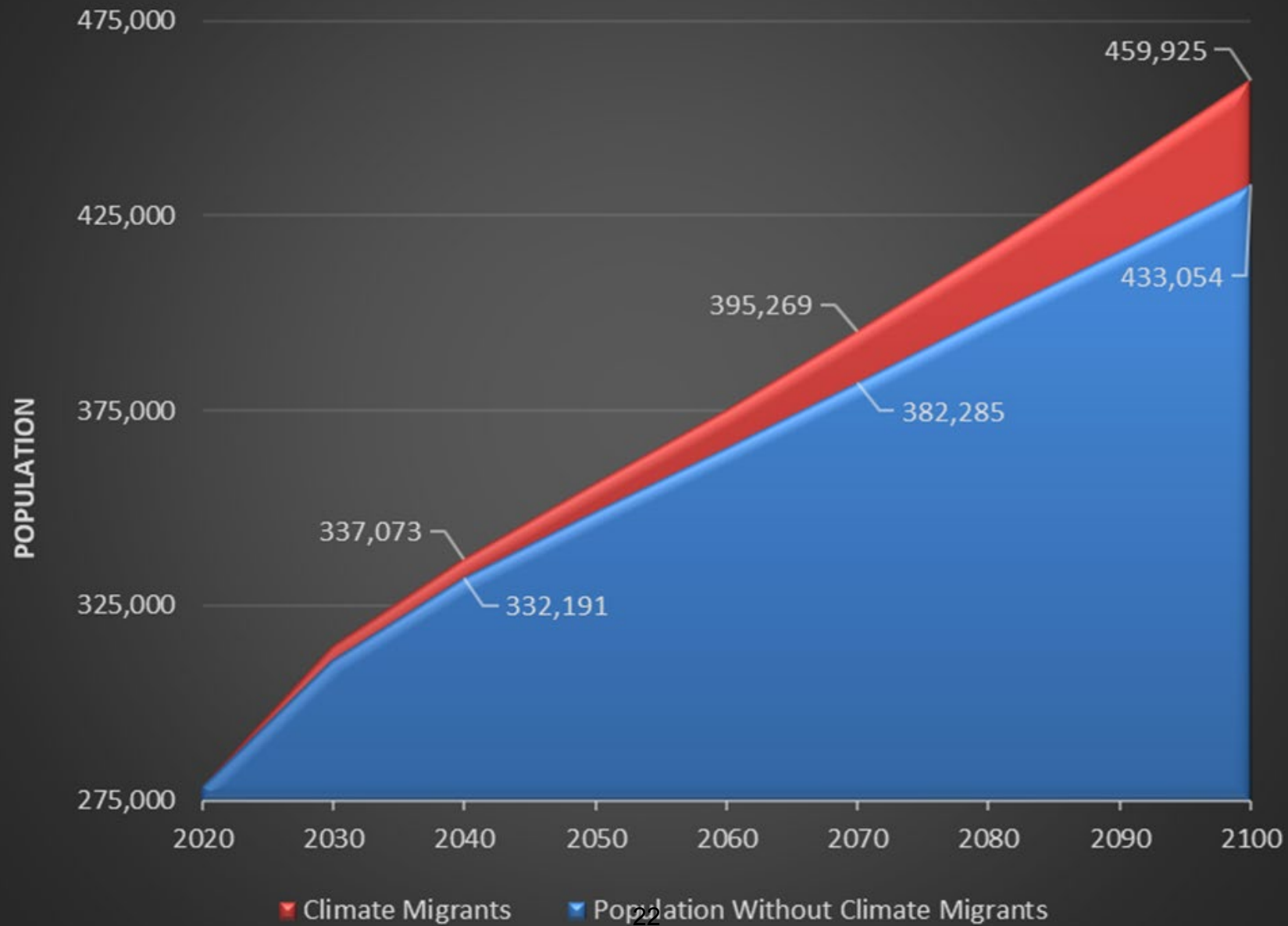
- Drought and extreme temperatures, combined with more extreme precipitation can increase soil erosion.
- Increase in wildland-urban interface combined with drought will increase wildfire risk.
- Migration:
 - Out of rural areas due to economic losses
 - increased development pressure due to migration from coastal areas

Wildland Urban Interface

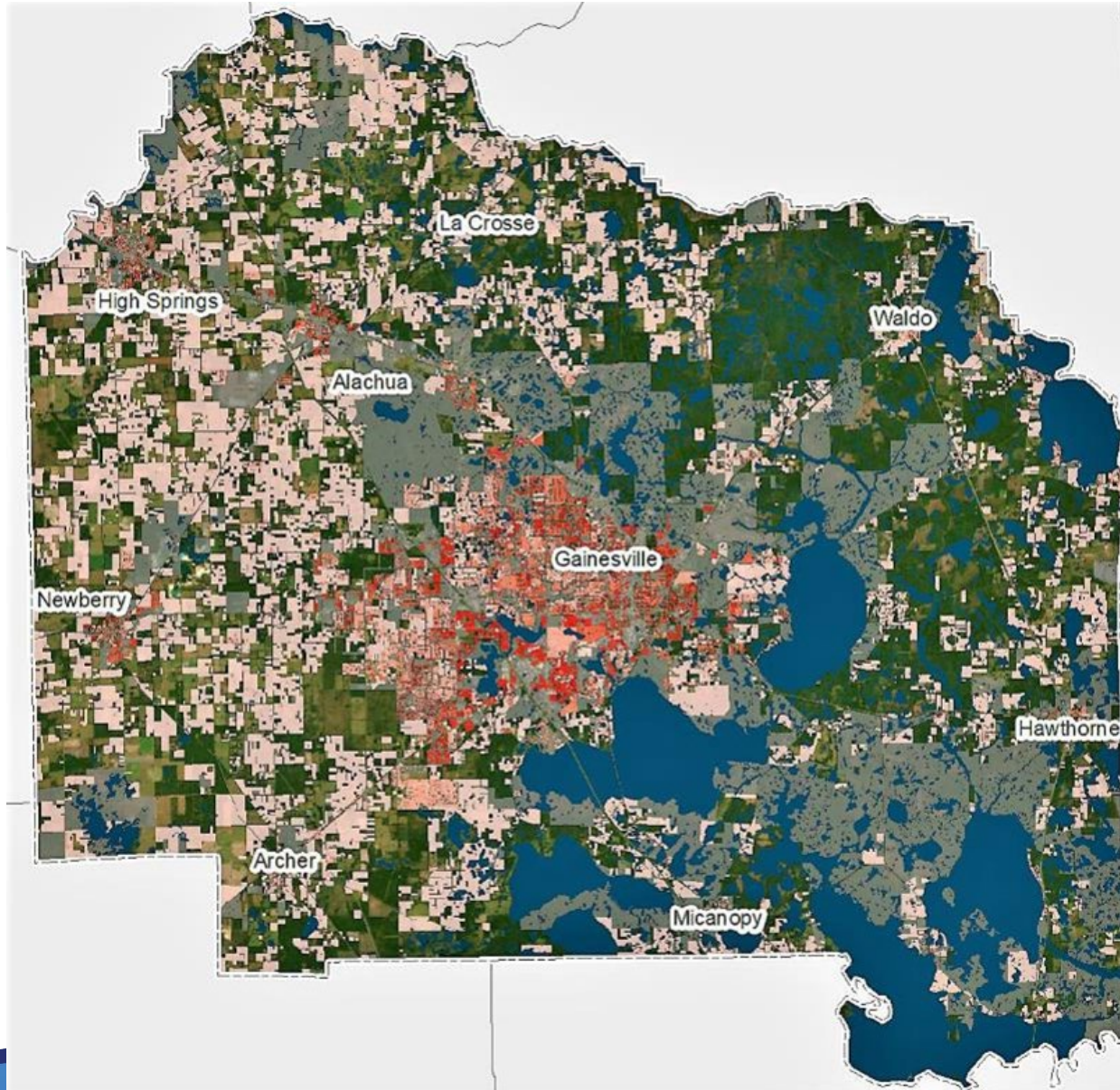
Wildland Urban interface will increase with population growth.
33% increase by 2040, 67% by 2070, 97% by 2100



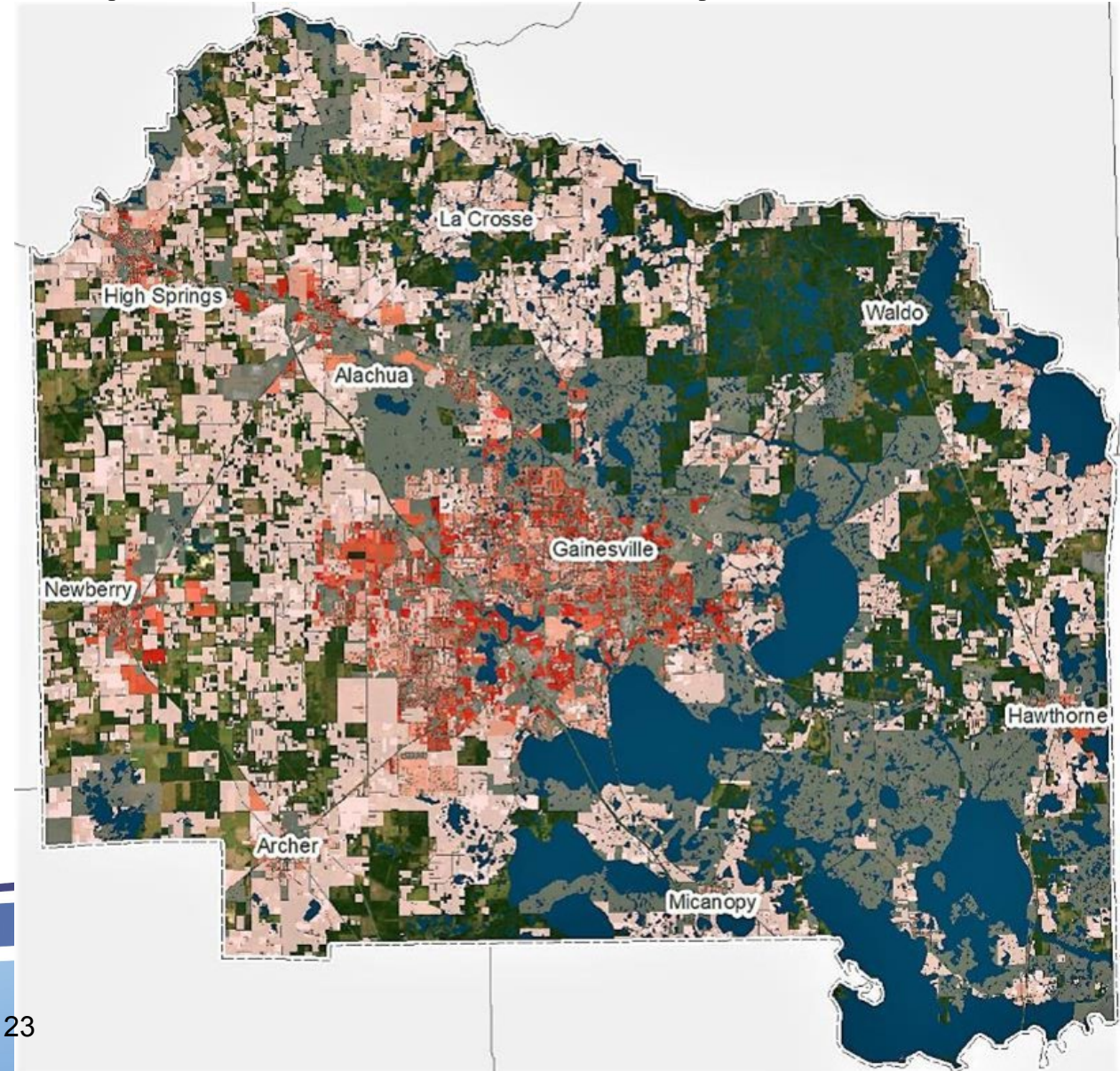
BEBR Population Projections for Alachua County Including Climate Migrants



Current and 2100 Population Density



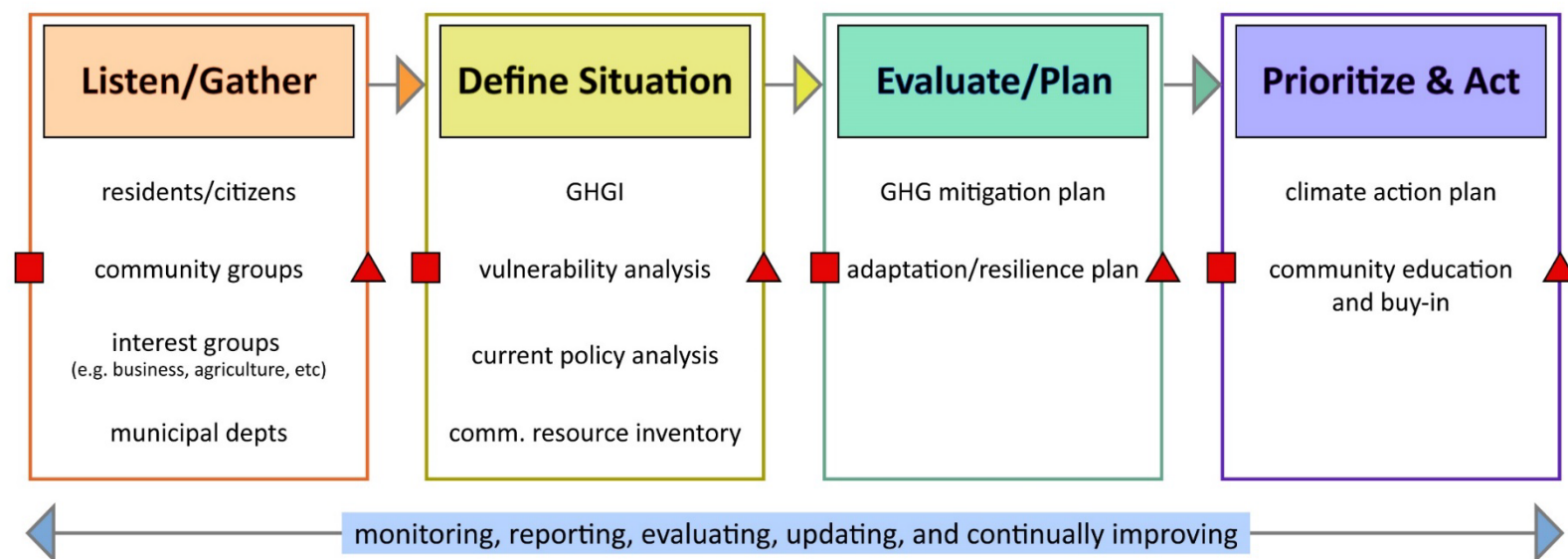
23



Next Step: Climate Action Plan

- The results will be used to evaluate and plan where adaptation efforts are needed.

Climate Action Planning Process: Phases



*adapted from "Guiding Principles for City Climate Action Planning", UN Habitat for a Better Urban Future

■ Beginning of Phase <ul style="list-style-type: none">define benchmarkscreate plan of actiondetermine timelinecriteria to move on	▲ End of Phase <ul style="list-style-type: none">summation of findingscriteria to move on met?
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Potential Action Areas

- Physical Infrastructure
 - Implementing water management and conservation strategies
 - Investing in climate-smart agriculture and technologies
- Policy
 - Requiring sustainable land management practices to prevent soil erosion
 - Implement policies that can reduce heat related injury and illness
- Planning
 - Hold planning exercises with farmers to understand impact of climate change
 - Ensure existing agricultural land is protected when planning for population growth

Potential Action Areas

- Communication
 - Promoting drought-resistant and heat-tolerant crop varieties
 - Educate farmers and workers on the health risks of extreme heat
- Finance
 - Find methods to support farmers and farm workers with financial assistance during challenging seasons

Questions?

Draft
Rural Concerns Advisory Committee
Meeting Minutes

Date: March 19, 2024
Time 4:00 pm
Alachua County UF/IFAS Extension Office
22716 W Newberry Rd., Newberry, FL

1. Call to Order

COMMITTEE MEMBERS PRESENT:

Dr. Rodney Clouser (Chair), Jordan Callaham (Vice Chair), Janet Hearn, Micky McMillan, George Mells, John Nix, Juan Salva, Dr. Cindy Sanders, Amy Van Scoik

COMMITTEE MEMBERS ABSENT:

None

STAFF PRESENT:

Ken McMurry, Senior Planner, Growth Management
Ben Chumley, Principal Planner, Growth Management
Brian Kauffman, Assistant Director, Public Works

PUBLIC PRESENT:

None

Chair Clouser called the meeting to order at 4:06 pm. There were 6 members physically present at the start of the meeting, which was confirmed to satisfy the requirement for at least a quorum physically present under County Advisory Board Guidelines. He recognized that there were no members of the public present but that, if any arrived, public comment would be taken at the appropriate points on the agenda. He said that, per the County Advisory Board Guidelines, Mr. Salva as Alternate member and physically present can vote today.

Ms. Callaham joined the meeting at 4:08 pm, Ms. Van Scoik joined the meeting at 4:13 pm, and Mr. Nix joined the meeting at 4:18 pm.

2. Approval of the Agenda

Chair Clouser asked for a motion to approve the agenda. Motion was made by Dr. Sanders to approve the agenda; seconded by Ms. Hearn.

ACTION: Motion passed unanimously

3. New Business

3.1 Update on Pavement Management Program, Transportation Capital Improvement Program (TCIP) FY 2023 FY 2032, and use of infrastructure surtax funds – Brian Kauffman, Asst. Director, Public Works

Mr. Kauffman gave an update and answered questions on the Transportation Capital Improvement Program. Staff projected on the screen an online interactive map that showed road segments, bridges, and signals included in the TCIP; and maps of roads with weight restrictions and related signage. Mr. Kauffman passed out copies of a recent TCIP monthly status report from Public Works to the County Commission and said that he could get upcoming status reports to the Committee either through staff or an online link.

There were questions and discussion by Committee members regarding specific road segments in the TCIP, timing and prioritization of projects, the project bidding process, and ranking of road project priorities. There was additional discussion regarding funding and special improvement districts, dedication to and acceptance of roads by the County, gas taxes, County mobility fees paid by new development, and weight restrictions and enforcement on County roads.

3.2 Discussion of RCAC 2024 Meeting Schedule

Chair Clouser said the Committee generally meets 9 to 10 months of the year with breaks in the summer and November and December depending on the holidays. There was discussion by Committee members regarding school breaks and holidays. Motion was made by Mr. Nix to take breaks in June and December and to hold November as a potential break, seconded by Dr. Sanders.

ACTION: Motion passed unanimously

Chair Clouser said the Committee generally tries to meet once a quarter on the east side of the County. There was discussion by Committee members regarding meeting locations at the Extension Office and on the east side of the County. Motion was made by Dr. Sanders to hold meetings in February, May, August, and November on the east side of the County at the County Health Dept. if available followed by Grace Knight Conference Room, seconded by Ms. Callahan.

ACTION: Motion passed unanimously

4. Approval of minutes for 02-20-2024 meeting

Motion was made by Mr. Nix to approve the minutes for the 02-20-2024 meeting; seconded by Mr. Mells.

ACTION: Motion passed unanimously

5. Attendance Report

Mr. McMurry said the current Attendance Report showed all members in compliance with the attendance policy at this time and he summarized the attendance requirement. He said the Attendance Report is always sent out with the meeting materials and that if members have any

questions, they should ask staff. Chair Clouser encouraged members to let the community know about the current vacancies on the Committee.

6. Chair Comments

Chair Clouser said he presented the RCAC annual workplan to the County Commission on Feb 27th. He said he also talked about information from the recent Census of Agriculture and about the loss of agricultural land in Alachua County. He said the Commissioners expressed interest in efforts related to agricultural lands preservation, determining criteria for choosing agricultural lands to protect, and the potential for collaboration between RCAC and the County Land Conservation Board. He said a member of the public complimented him at the meeting on the overall operation of the RCAC.

He asked the Committee for their input on requesting staff to talk with Andi Christman about RCAC involvement in efforts related to agricultural lands preservation and determining criteria to rank agricultural lands for protection. There were questions and discussion by Committee members regarding contacts at the University of Florida; the importance of supporting small and local farms, and long-term strategies; and development pressures on agricultural lands. Motion was made by Ms. Hearn that staff should talk with Andi Christman about the possibility of having a joint meeting with Rural Concerns Advisory Committee and the Land Conservation Board; seconded by Mr. Nix.

ACTION: Motion passed unanimously

7. Committee Members Comments

Mr. McMurry had follow-up information from Gus Olmos, County Solid Waste and Resource Recovery Director, on Mr. Mells' question regarding the use of County waste collection facilities by outside residents. He said that according to information provided by Mr. Olmos, staff monitor for non-County residents as best they can; additionally, non-County residents have the option to purchase a permit to use County facilities. There were questions and discussion by Committee members regarding the potential and need for future monitoring for non-County residents at the facilities.

Ms. Callaham said there is an upcoming vote in Newberry on charter schools. There were questions and discussion by Committee members regarding related issues and impacts on rural areas.

8. Public Comments

There were no public present.

9. Next Meeting

April 16, 2024, at the Alachua County Extension Office, Newberry

10. Adjournment

Motion was made by Ms. Callaham to adjourn the meeting; seconded by Ms. Hearn.

ACTION: Motion passed unanimously

Chair Clouser called the meeting to a close at 5:41 pm.

03/20/2024

Attendance Report

Rural Concerns Advisory Committee

Staff Liaison: Ken McMurry

Member Position	Term Start	Term End	8-15-23	9-19-23	10-17-23	01-16-24	02-20-24	03-19-24	Meetings Attended
Callaham, Jordan Member from the Farm Bureau	10-01-2021	9-30-2024	P	P	P	P	A	P	5 of 6
Clouser, Rodney Member from UF-IFAS	10-01-2022	9-30-2025	A	P	P	P	P	P	5 of 6
Hearn, Janet Residing in Unincorporated Area Outside Urban Cluster...	10-01-2023	9-30-2026	P	P	A	P	P	P	5 of 6
McMillan, Micky Actively Involved in Agriculture and/or Silviculture	02-01-2024	9-30-2026	--	--	--	--	P	P	2 of 2
Mells, George Residing in Unincorporated Area Outside Urban Cluster...	10-01-2022	9-30-2025	P	P	P	P	P	P	6 of 6
Nix, John Actively Involved in Agriculture and/or Silviculture	10-01-2023	9-30-2026	--	--	P	P	P	P	4 of 4
Salva, Juan Alternate Member Chosen At Large	03-10-2020	9-30-2024	P	A	P	P	P	P	5 of 6
Sanders, Cindy Member from County Extension Office	10-01-2023	9-30-2026	P	P	A	P	A	P	4 of 6
Van Scoik, Amy Actively Involved in Agriculture and/or Silviculture	06-01-2023	9-30-2025	P	P	P	P	A	P	5 of 6
VACANT Residing in Unincorporated Area Outside Urban Cluster...	--	9-30-2027	--	--	--	--	--	--	--
VACANT Member Chosen At Large	--	9-30-2025	--	--	--	--	--	--	--
VACANT Actively Involved in Agriculture and/or Silviculture	--	9-30-2026	--	--	--	--	--	--	--

P = Present

A = Absent

Attendance is defined as being physically present at the meeting for one hour or 50% of the length of the meeting, whichever is shorter. Any regular or alternate member whose attendance is less than 50% of the last 6 consecutive meetings shall automatically be removed from the advisory committee.