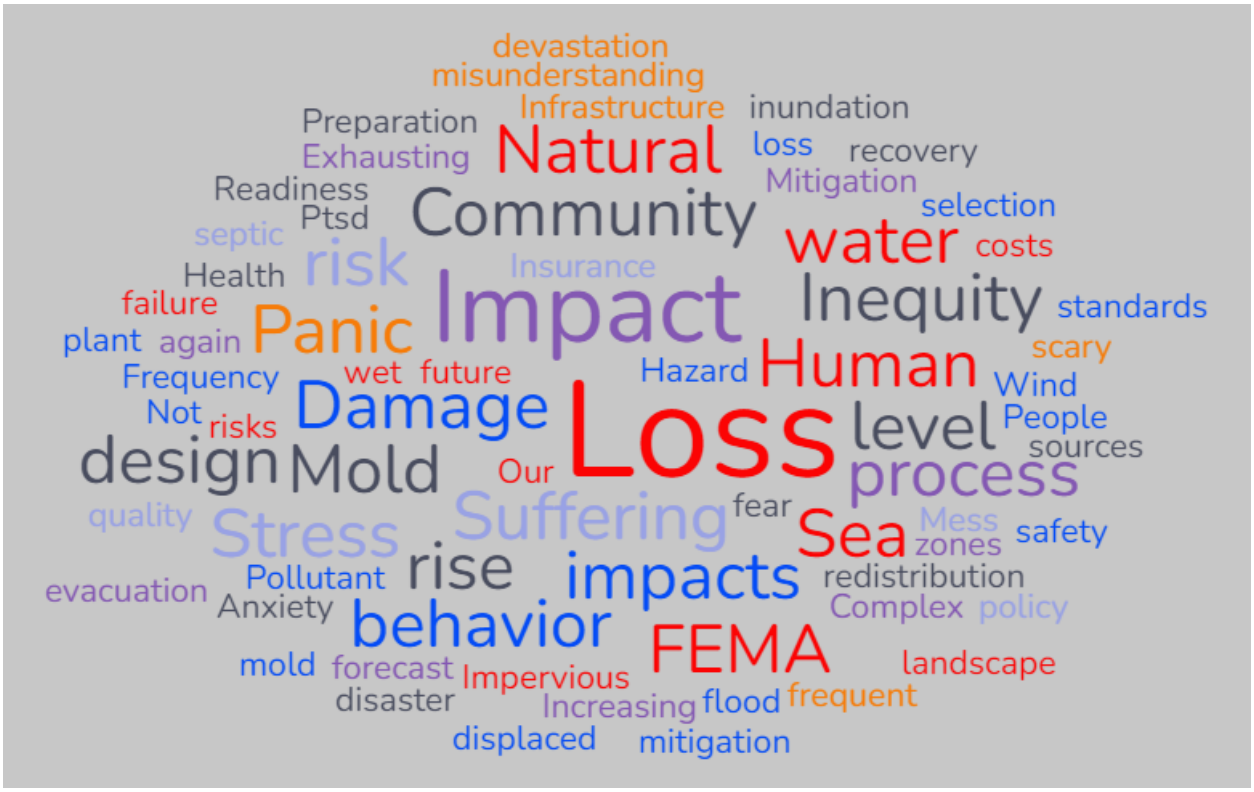
1. **WHAT WORD(S) COMES TO MIND WHEN YOU HEAR "FLOODING"?**



2. **WHAT WORD(S) COMES TO MIND WHEN YOU HEAR "FLOODING ADAPTATION"?**

3. WHAT DO YOU HOPE TO TAKE AWAY FROM THIS SYMPOSIUM?

- Increased hope

Tools/resources

- Tool requirements
- Better tools to help my community
- Tools
- Resources***
- Flooding data needs*
- Current research and trends*
- Funding-grants available**
- Community education needs
- Nature-based solution ideas

Information sharing

- Success stories, specifically for areas with old infrastructure*
- Case studies*
- Flood protection ideas (i.e. tigerdam) success stories*
- Learn about resilient projects being implemented
- Learn from other similar area experiences
- Ideas on mitigation/recovery efforts from other communities
- Experiences in resilience
- Ideas on flooding adaptation to apply to my town
- Ideas and insights on working with other departments, external utilities, authorities as well as helping the public
- Different perspectives of thinking about flooding
- Novel approaches to building resilient communities
- New adaptation methods for coastal flooding
- Dealing with hurdles
- New perspectives
- Local/regional policy solutions
- Alternatives*
- New contacts for site design with NBS and GI for inland (not waterfront)
- Gain insight to improve my GIS flooding model
- BMPs
- New understanding of Florida's resilience trajectory
- State efforts
- Having more folks aware of what NOAA can provide/help with
- Choices
- Costs for projects
- New strategies
- Creative solutions

3. cont.

Information sharing (cont)

- New ideas*/solutions
- New opportunities
- A better trajectory or adjustment to the gradual inevitability of increased inundation
- Better my knowledge about flooding
- Learn some lessons to apply in SC
- Strategy to facilitate county's commitment to act
- Get the most up-to-date information

New connections

- New connections******
- New partners
- New collaborations**
- Make new contacts to help the county develop a program
- Networking opportunities*

4. WHAT FLOODING ADAPTATION RESEARCH QUESTIONS OR KNOWLEDGE NEEDS DO YOU HAVE?

Economics

- Cost/benefit sweet spot
- Evaluation of $ value of Nature based solutions and other adaptations
- More info on implementing resiliency in the built environment—much focus on new construction. How to retrofit at the best cost/benefit New & flashy is nice, but how to upgrade/maintain existing infrastructure?
- Mitigation financing vs. insurance savings (like an ESCO)

Resource/tool/data needs

- New people in local government working on sustainability need to know what tools to focus on and what background information to acquire when flooding has a potential effect on wastewater, drinking water, emergency management, personal property, insurance etc. (it's a breadth of background info!)
- Need a "place" to find latest technology easily—and how to procure it
- Better projection tools and community input for smaller counties
- Better understanding and real estimates of future rainfall*
- Future mapping census level
- Local knowledge and vulnerability mapping
    - McKenna and Brenda @ East Central Florida Regional Planning Council can help with this! mkorzeniewski@ecfrpc.org
- Using technology to minimize the time of response
- Update design storm rainfall amounts

Understanding risk

- How can we better/best communicate the risks associated with development and redevelopment in the special flood hazard area (SFHA)?
- Understand risks from SW ponds? In "safe areas"
- Impacts on drinking water
- Risk Rating 2.0 needs to be fixed!
- How can we better show/explain flood risks to the community? (Exact locations for risk)
- Risk assessment of coastal communities

Planning/Development-related

- What do we have to support green infrastructure/NBS (inland)—"evidence"/"Proof" for insurance, code change, standards for site development…?
- Solutions for multiform/compound flooding
- Building affordable housing that is resilient
- Updated land planning and county regulations
- Master plan for flooding adaptation
- What are potential increased design standards with good ROI? (#CodePlus)

4. cont.

Planning/development-related (cont.)

- As a local floodplain manager: How to aid homeowners with homes that trigger substantial damage (financially)? Designs for more than life/safety—how to prevent post-event economic suffering?
- Do we need to update our building codes beyond the state code? What local jurisdiction is doing this well?
- How can we facilitate the integration of landscape architecture into engineering design for nature-based solutions?

Mitigation/Adaptation

- Continued information on how we can expect nature-based solutions to function in real settings. Balance between green/grey/hybrid options, what's worked, etc.
- Resiliency alternatives aside from increase elevation*
- How do we make managed retreat a bigger part of the conversation? Equitable, just and mutually beneficial retreat as a preferred approach instead of a last resort?

Policy-related

- How do we encourage leaders/communities to implement changes that are needed to have a positive/resilience impact?
- How to determine when "fastest growing" is not a good thing and get buy-in for that with electeds?
- Use of CRS and other tools to identify and incentivize local agency initiatives

Misc.

- Nature doesn't follow political boundaries How do we tackle flooding issues at the regional scale?
- Wetland health—how can we make wetlands more resilient?
- Human behavior/mental health
- Role of insurance market and policies that can meaningfully address property insurance crisis
- Education materials
- Funding sources
- Visual/Design communication? UF FIBER!

5. WHAT OPPORTUNITIES/NEEDS EXIST FOR COLLABORATION BETWEEN ACADEMIA, INDUSTRY, MUNICIPALITIES, NGOS, ETC.?

Outreach/education

- Crash course for resiliency standards across departments
- Unified messaging re: risk and solutions
- Education about nature-based solutions
- Expand FEMA training to develop a more comprehensive graduate certificate in floodplain stewardship building on the certified floodplain manager program of ASFPM and FL Floodplain Managers—require local governments to "employ" certified floodplain managers
- Require relators to disclose prior flooding to potential buyers
    - *Response to this:* Florida's newly effective **House Bill 1049** ("HB 1049") ushers in an additional requirement for sellers of residential real estate: to disclose potential flood risks. Beginning on October 1, 2024, sellers must complete a "Flood Disclosure" form before executing a sales contract, marking a shift toward greater transparency in property transactions.
- Make flood inundation maps easy to find for non-technical people
- Government staff need "pretty graphs" to convince elected officials to try novel ideas and pilot projects*
- Networking and learning from others' experiences—sharing resources
    - Sharing lessons-learned*
    - Student engagement
    - Implementation stories

Grants/funding*

- Translating funding from technical jargon to "real world"
- Developing project concepts from scratch as interdisciplinary /cross-sector teams and stewarding these ideas—building community buy-in and funneling into funding opportunities

Research

- Making research more accessible and/or utilizing government sites for pilot projects
- Non-residential flood protection measures beyond panels

Ideas for collaboration

- Folks working on resilience, housing, insurance and insurance regulation need to identify common interests*
- Community involvement
- Breaking down silos between departments and maintaining consistent collaboration among entities
- Multi-generational long-range adaptation planning re: transportation and utility infrastructure for where future growth is favored
- Actionable science

5. cont.

Ideas for collaboration (cont.)

- Design and research (UF FIBER)*
- Academics need to experience real world flood fighting and what communities/government deal with post-hurricane
    - Local government & research*
- Planning + design + research + policy for elevated community
- Does Canada need stormwater infrastructure improvement? What provinces need more people to address this?
- Water quality/water storage conservation planning (UF Center for Landscape Conservation Planning)
- Collaboration between engineers and landscape architects for living shorelines design (please contact Adrian Sakr: adriansakr@ufl.edu)
- Need consolidated network to identify resources and expertise*
    - SE Sustainability Directors Network (southeastsdn.org) can help with this

6. WHAT ROADBLOCKS HAVE YOU RUN INTO WHEN PLANNING/IMPLEMENTING FLOODING ADAPTATION PROJECTS?

Lack of capacity:

- Finding/accessing funding that does not overwhelm small city staff capacity
    - Krista with Resilient Florida Program can help! Krista.Slyter@FloridaDEP.gov
- Low-capacity offices **
- Funding*****
- Understanding needs of different areas within the same county
- Grant compliance schedule limitations
- Trying to mitigate funding without raising taxes on residents
- Timelines are always rushed—not enough support
- Willingness to wait for funding
- Resilient Florida Program match requirement for small towns that are just barely above the financially disadvantaged cut-off.
    - Resilient Florida match requirement is listed as 50% but the actual expectation is 1:1 (which is 100% match)

Political climate/lack of understanding:

- Politics**
- Decision makers focus on short-term reelection, not on leadership for long-term improvements*
- Convincing elected officials/residents it's worth the investment/cost*
- A lot of communities that are at risk don't have a seat at the table/voice in decision-making**
- Resistance from local residents to living shorelines projects*
- Misinformation and lack of interest from county elected officials
- Reliance on hard infrastructure
- Fears of "takings" and Bert J. Harris claims and litigation
- Pushback for SI/SD from the community and local officials
- Needing to be proactive instead of reactive*
- Poor communication, lack of vision, competing priorities
- How to set realistic expectations for adaptation outcomes
- Finding the right way to balance the gray/green continuum for solutions
- Cost/benefit analysis is limiting
- Approval for projects from local officials
- Rebuild vs. relocate—who benefits and who pays?
- Continued interest in designing to regulatory standards is a roadblock—need to plan for the future today!

6. Cont.

Competing interests

- Integrating multiple agencies with conflicting missions
- Fix problematic structures vs. let it get destroyed, collect insurance $ and move on
- Hubris from engineers
- Right to work on private property

Permitting

- Time constraints*—especially when trying to obtain permits for mitigation funding
- FDEP 404 permitting makes it cost-prohibitive for governments to plan resiliency projects
    - Mariana Kendall (Mariana.Kendall@FloridaDEP.gov) can help with this
- Red tape and short memory of politicians

Policy and funding not aligned

- Need "proof" something works in order to get better insurance
- Innovation is sometimes tough to get accepted—early adopters…
    - Krista with Resilient Florida Program can help! Krista.Slyter@FloridaDEP.gov

Lack of data/practices

- Outdated data for modeling
- Outdated assumptions for modeling and $
- Outdated planning practices (land use)
- Lack of future precipitation data