



South Carolina Department of Health and Environmental Control
Healthy People. **Healthy Communities.**

SC Beach Preservation Technical Advisory Committee

Shoreline Stabilization
December 6, 2021



Agenda

- 9:30 – 9:45 Welcome & Introductions
- 9:45 – 10:15 What is Beach Preservation?
- 10:15 – 10:45 Shoreline Stabilization – OCRM Perspective
- 10:45 – 11:00 BREAK
- 11:00 – 12:00 Best Practices: Process Pathways
- 12:00 – 12:45 LUNCH
- 12:45 – 1:15 Breakout: Process Pathways
- 1:15 – 1:30 Wrap up + Next Steps

TAC Charge & Expected Outcomes

Examine

Examine research and information

- Shoreline Stabilization
- Beach Nourishment
- Dune Restoration
- Land Management

Evaluate

Evaluate existing and alternative shoreline policies

- Current state statutes and regulations

Inform

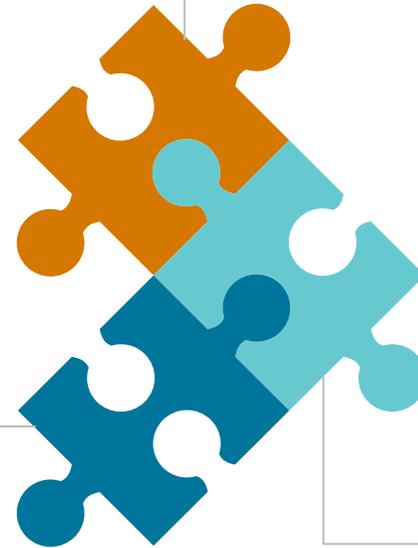
Inform the SC Beach Preservation Committee

- Final Report summarizing:
 - Discussion and deliberation
 - Policy options for consideration

Topics for Discussion

In 2018, the South Carolina Beachfront Management Act (Act) was amended, and a new policy of beach preservation was adopted. In light of this change and the increasingly complex challenges faced by local and state governments, there is a need to evaluate current and future beachfront management tools.

**Beach Nourishment
Dune Restoration**



Shoreline Stabilization

Land Management

SC Beach Preservation Process



TAC Timeline



What is Beach Preservation?



What is Beach Preservation?

Maintaining the current state or status quo

Preserving natural functions

Pro-actively maintaining the functionality of the beach/dune system

Protecting and **enhancing** natural beach processes

Balancing habitat and environmental concerns with current development

Protecting the highly dynamic ecological processes and functions that shape, form and maintain the beach, dunes and nearshore habitat.



South Carolina Department of Health and Environmental Control
Healthy People. **Healthy Communities.**

Shoreline Stabilization

OCRM Perspective

Shoreline Stabilization

Long term:

- Nourishment
- Nourishment and Groins
- Offshore Breakwater

General Permits

Short term:

Emergency Orders

- minor renourishment
- sand scraping
- sand bags
- other technology,
methodology or structure



Nourishment



Nourishment



Nourishment with Groins



Offshore Breakwaters



<https://gis.dhec.sc.gov/renourishment/>



South Carolina Department of Health and Environmental Control
Healthy People. **Healthy Communities.**

General permits



Emergency Orders





48-39-320(C)

- (C) ...the Office of Ocean and Coastal Resource Management, may allow the use in a pilot project of any technology, methodology, or structure, whether or not referenced in this chapter, if it is reasonably anticipated that the use will be successful in addressing an erosional issue in a beach or dune area.



Proviso 34.44 Wave Dissipation Device

- The deployment of a qualified wave dissipation device seaward of the setback line or baseline pursuant to a study conducted by the Citadel or a research university is not construction and meets the permitting exception contained in Section 48-39-130(D)(2).

A qualified wave dissipation device is a device that:

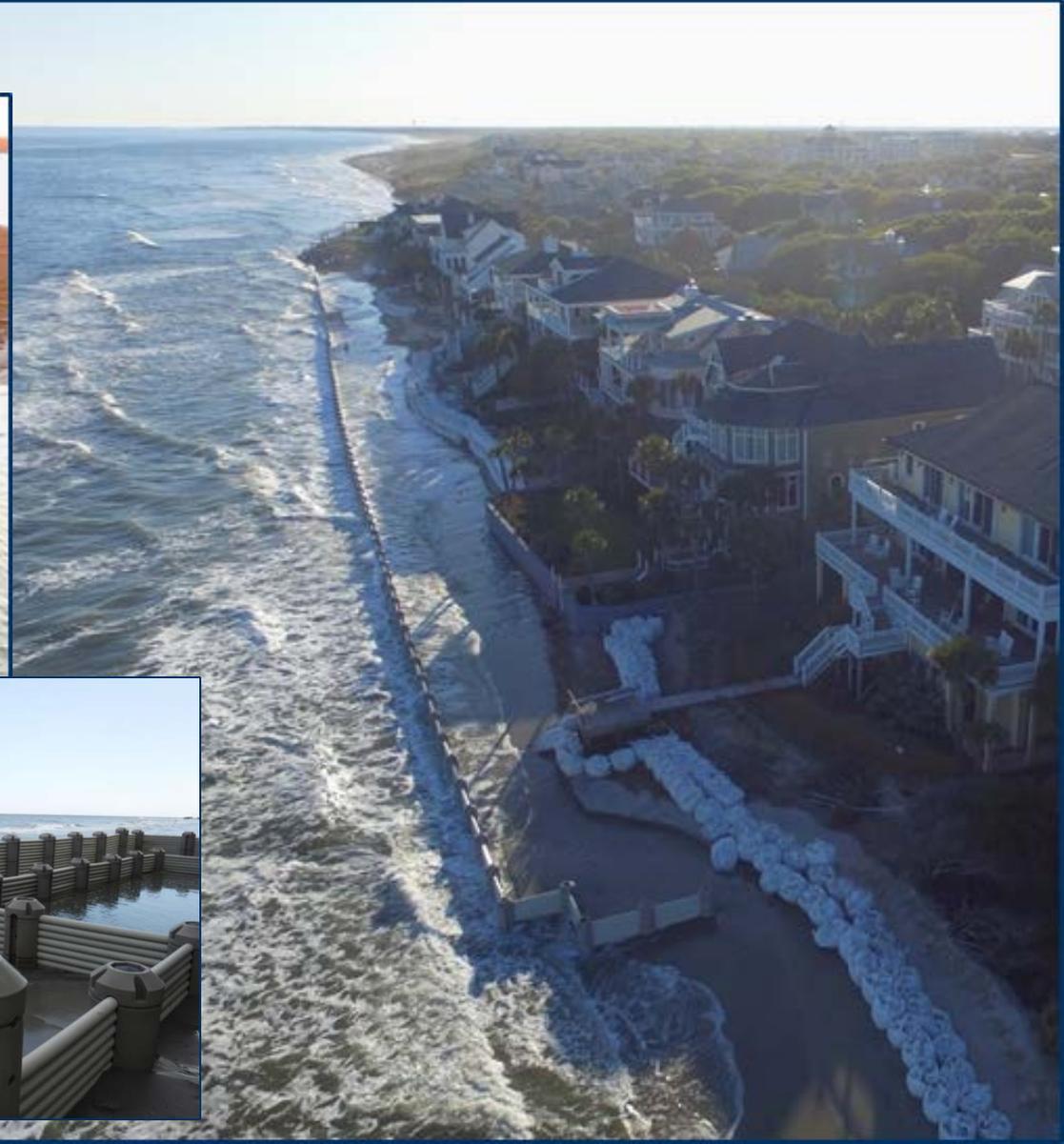
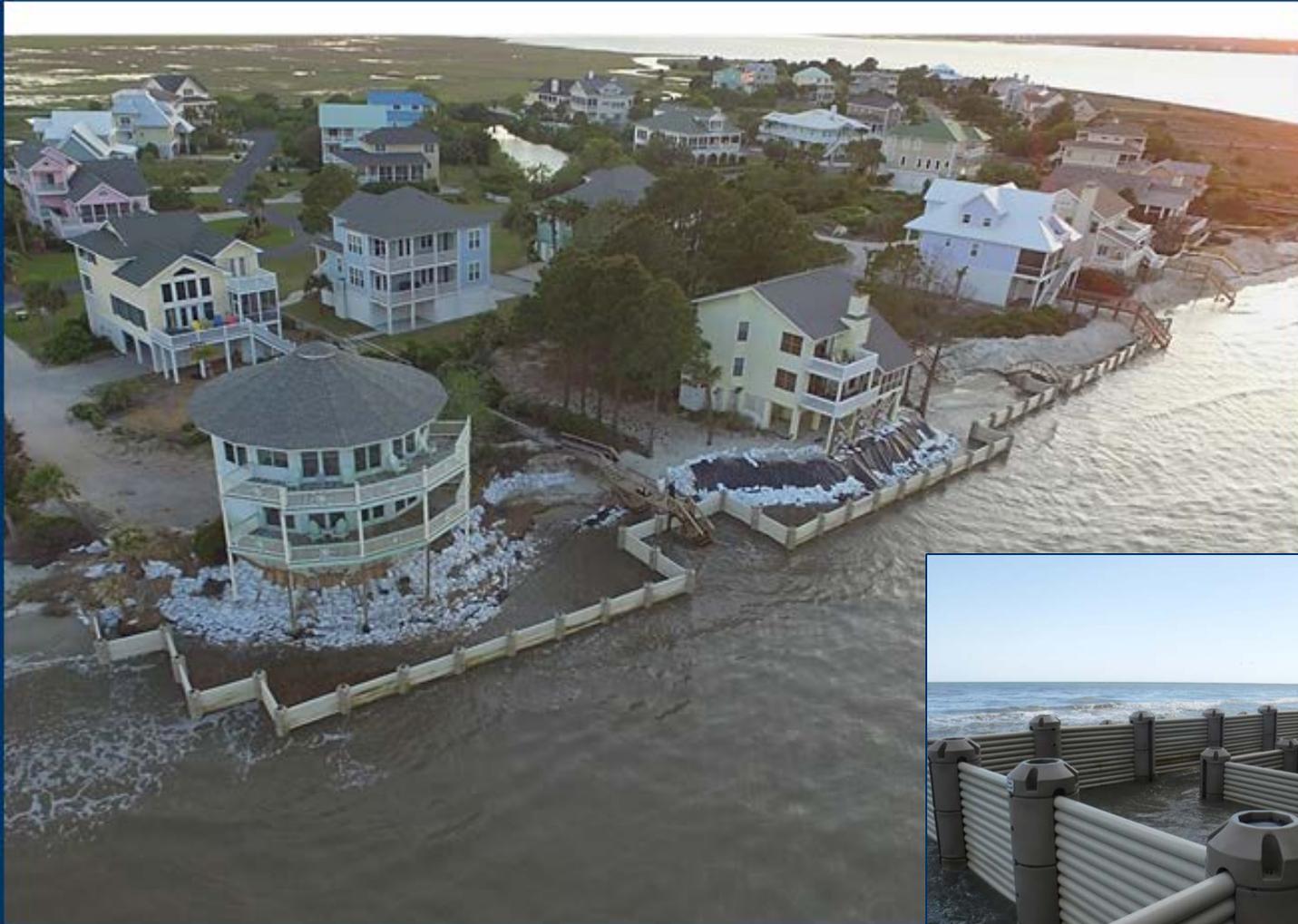
- (1) is placed mostly parallel to the shoreline;
- (2) is designed to dissipate wave energy;
- (3) is designed to minimize scouring seaward of and adjacent to the device by permitting sand to move landward and seaward through the device;
- (4) the horizontal panels designed to dissipate wave energy can be deployed within one-hundred twenty hours or less and can be removed within one-hundred twenty hours or less;



- (5) does not negatively impact or inhibit sea turtle nesting or other fauna;
- (6) can be adjusted after initial deployment in response to fluctuations in beach elevations; and
- (7) otherwise prevents down-coast erosion, protects property, and limits negative impacts to public safety and welfare, beach access, and the health of the beach dune system.



South Carolina Department of Health and Environmental Control
Healthy People. **Healthy Communities.**





Lessons Learned and Challenges

- **The need for robust and sound scientific methodology to study new technologies.**
 - The state spent nearly \$100,000 in order to thoroughly study the proposed technology.
- **Pay close attention to any potential impacts to threatened or endangered species, as well as native flora/fauna.**
 - The state was sued for violation of the Endangered Species Act.
 - The state spent approximately \$17,000 on legal fees.
- **The need for a removal process of the proposed technology once the study is complete.**
 - The state paid to remove the pilot structures on Harbor Island.



Lessons Learned and Challenges here

- **Ensure that public access is maintained.**
 - At some locations, there was no public access along the beach for large portions of the tidal cycle.
- **Be aware of future activities on the beach that may be impacted by or impact the study and technology.**
 - Future renourishment or sand scraping could be affected.
- **Consider potential impacts to adjacent properties.**
- **Ensure that the technology isn't having a negative effect on the beach; if it does, have a process to address it.**



Short Break



Process Pathway & Approaches

What's Working Well

- Processes
- Approaches
- Best Practices

Challenges & Hurdles

- Current Challenges with the Process

How can OCRM be more efficient, effective & flexible in considering and evaluating new technologies for shoreline stabilization?

Lunch





Old Way

New Way

Process Pathways & Approaches

- **Current Process / Approach**
 - If there is a *new* technology, could current best practices or processes be used to evaluate what is most appropriate?
- **Modified or New Process**
 - Do existing pathways need to be modified or new ones (ie, ad hoc advisory panel) need to be created?

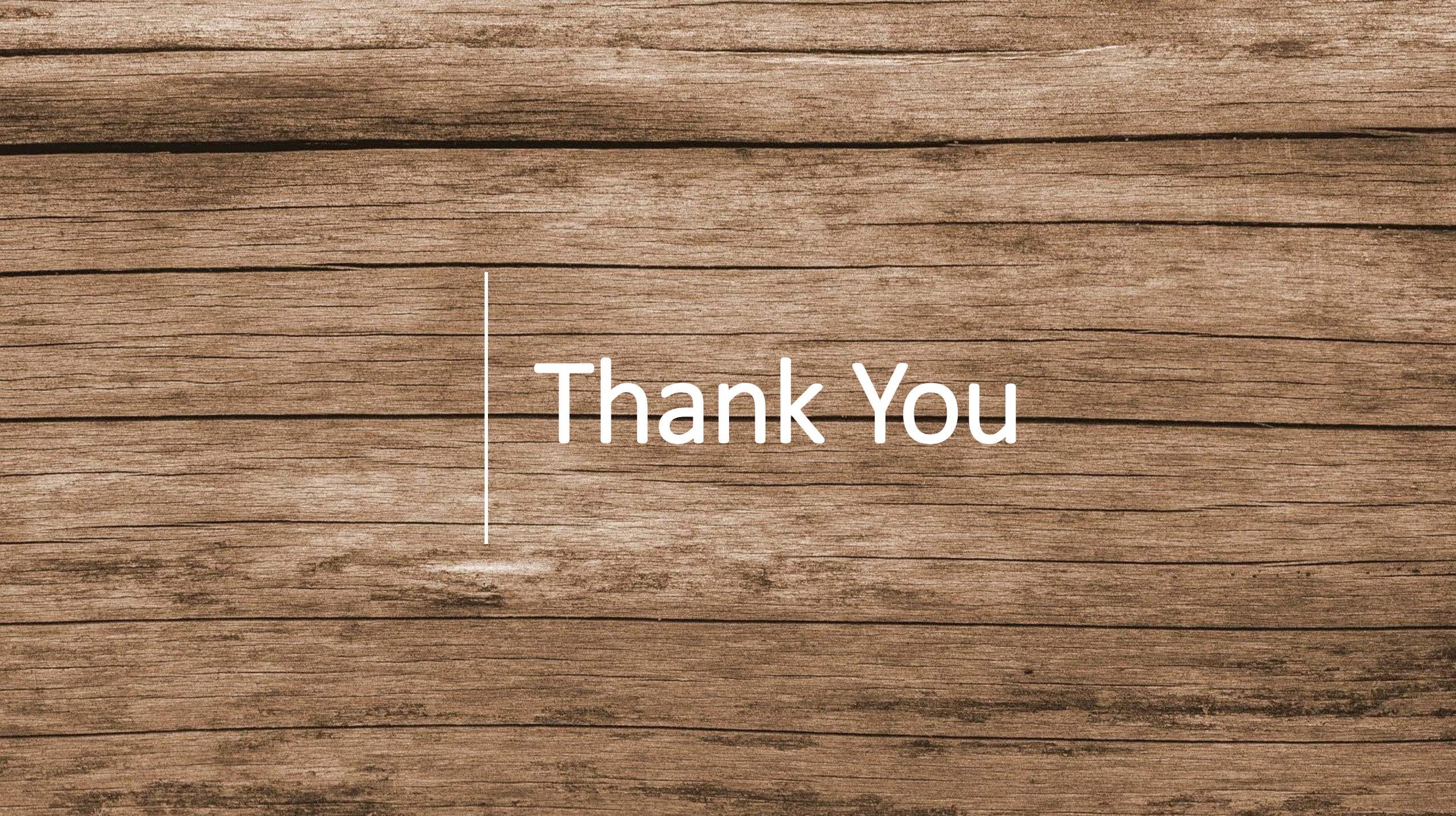


Next Steps

- **Meeting Summary**
 - A high-level summary of the meeting (presentation slides, decision points and takeaways) will be provided within the next 2 weeks
- **Next Meeting**
 - Opportunity to further discussions from today
 - Identify and Discuss Study Parameters
 - Minimum requirements, establishing controls, thresholds, evaluating impacts, etc.
 - January 2022
- **Provide Your Feedback**

TAC Timeline





Thank You