



**BOEM** BUREAU OF OCEAN & ENERGY MANAGEMENT



BUREAU OF SAFETY AND ENVIRONMENTAL ENFORCEMENT

# Carbon Management Research Project Review Meeting

August 7, 2024

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# BOEM & BSEE Mission and Jurisdiction

BOEM manages the responsible development of America's offshore energy, mineral and geological resources in an environmentally and economically responsible way.

BSEE oversees operations and provides enforcement related to safety, environmental stewardship and conservation for activities on the OCS operations.

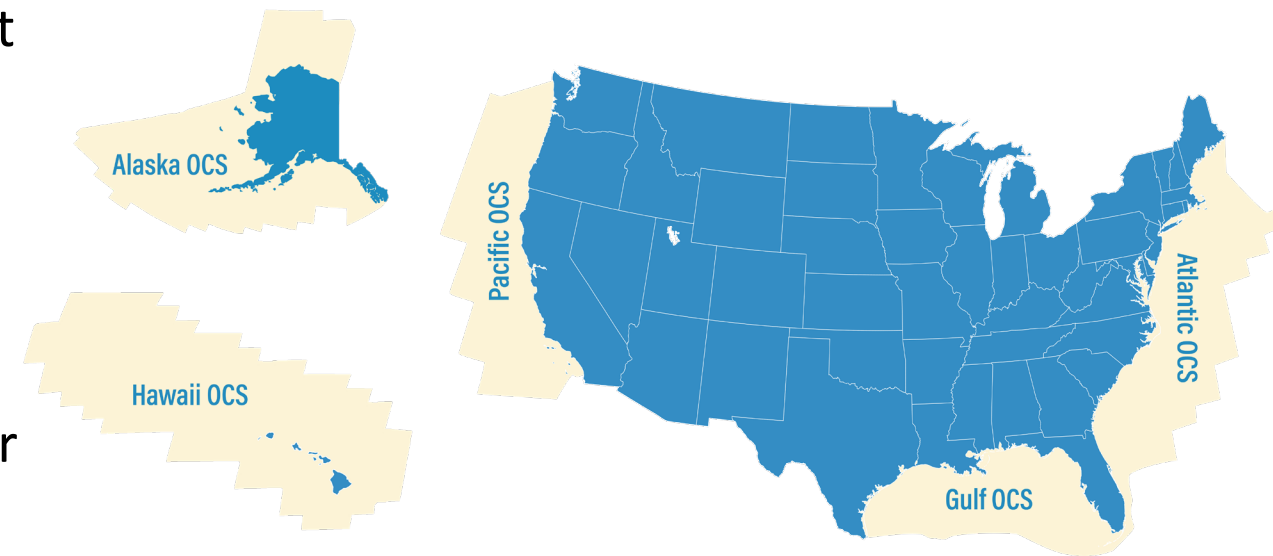
Our primary mission areas are conventional energy, renewable energy, and marine minerals.

Our core statutory mandate is provided by the Outer Continental Shelf Lands Act (OCSLA).

## 3.2 billion acres

of the Outer Continental Shelf

*Larger than the size of the nations' land acreage!*



# Carbon Sequestration Rulemaking

The Infrastructure Investment and Jobs Act (IIJA, November 2021) amended the OCSLA and authorizes DOI to administer leases, easements, and rights-of-way (ROW) on the Outer Continental Shelf (OCS) that **“provide for, support, or are directly related to the injection of a carbon dioxide stream into sub-seabed geologic formations for the purpose of long-term carbon sequestration”**.



Bureau of Ocean Energy Management

Authority to issue leases and grants and review/approve operational plans



Bureau of Safety and Environmental Enforcement

Authority over operational permitting, safety, and environmental risk



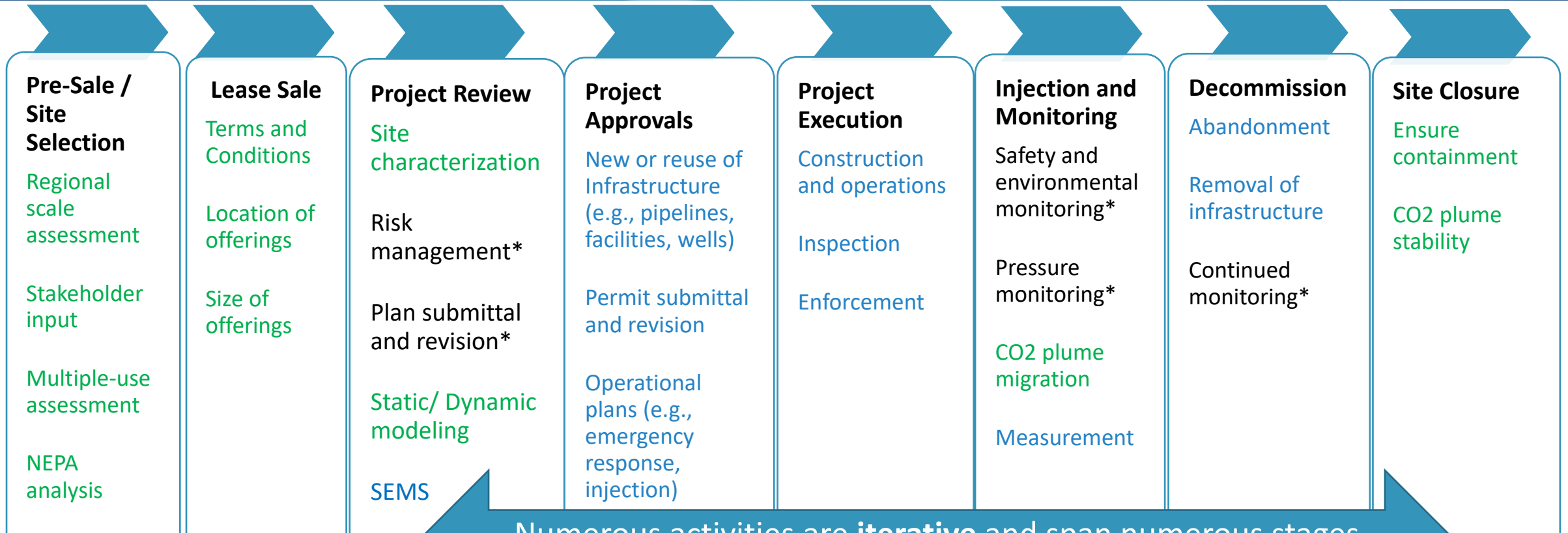
# Carbon Sequestration Rulemaking

## Topics considered in the rulemaking:

- Financial & economic considerations
- Environmental considerations
- Pre-lease exploration/site characterization
- Leasing
- Plans
- Liability
- Operations, facilities, and pipelines
- Well qualification and offset infrastructure
- Emergency response and mitigation
- Decommissioning



# Regulatory Actions Overlaid with Offshore CS Project Lifecycle



Numerous activities are **iterative** and span numerous stages (e.g., SEMS, risk management, monitoring, plume assessment)

**GREEN** indicates BOEM responsibilities  
**BLUE** indicates BSEE responsibilities  
**BLACK\*** indicates shared BOEM/BSEE responsibilities

**Our rulemaking uses the best available science and considers the various perspectives of diverse stakeholders.** We have undertaken extensive outreach efforts in the rulemaking process and are committed to advancing **inclusivity, equity,** and **environmental justice** in its policies and decisions.

- *Industry trade organizations*
- *Individual companies (upon request)*
- *Tribes*
- *Non-government organizations (NGOs)*
- *Labor organizations*
- *Environmental Justice groups*
- *Foreign governments and regulators*
- *International organizations*
- *Academia*
- *U.S. State governments*
- *U.S. Federal agencies*

# BOEM Environmental Studies

## BOEM FY24 Studies:

- Understanding Offshore Carbon Sequestration Impacts on the Marine Environment: *Literature Synthesis for Informing Management*
- Gulf Coast Community and Cultural Impact Baselines Survey

## Other study topics of immediate interest:

- CO<sub>2</sub> pressure management
- CO<sub>2</sub> leakage and environmental impacts
- Sound in the marine environment



# BSEE Study Topics of Immediate Interest

## Relevant CS topics related to BSEE's mission:

- Repurposing of surface and subsurface infrastructure and integrity requirements
- Impacts of CO<sub>2</sub> in original flow modeling of depleted reservoirs
- Impact of rapid cooling on shale strength and installed materials
- Blowout modeling for saline and depleted reservoirs
- Critical assessment of differences between EOR and CS operations for plume migration, associated risks and leak response



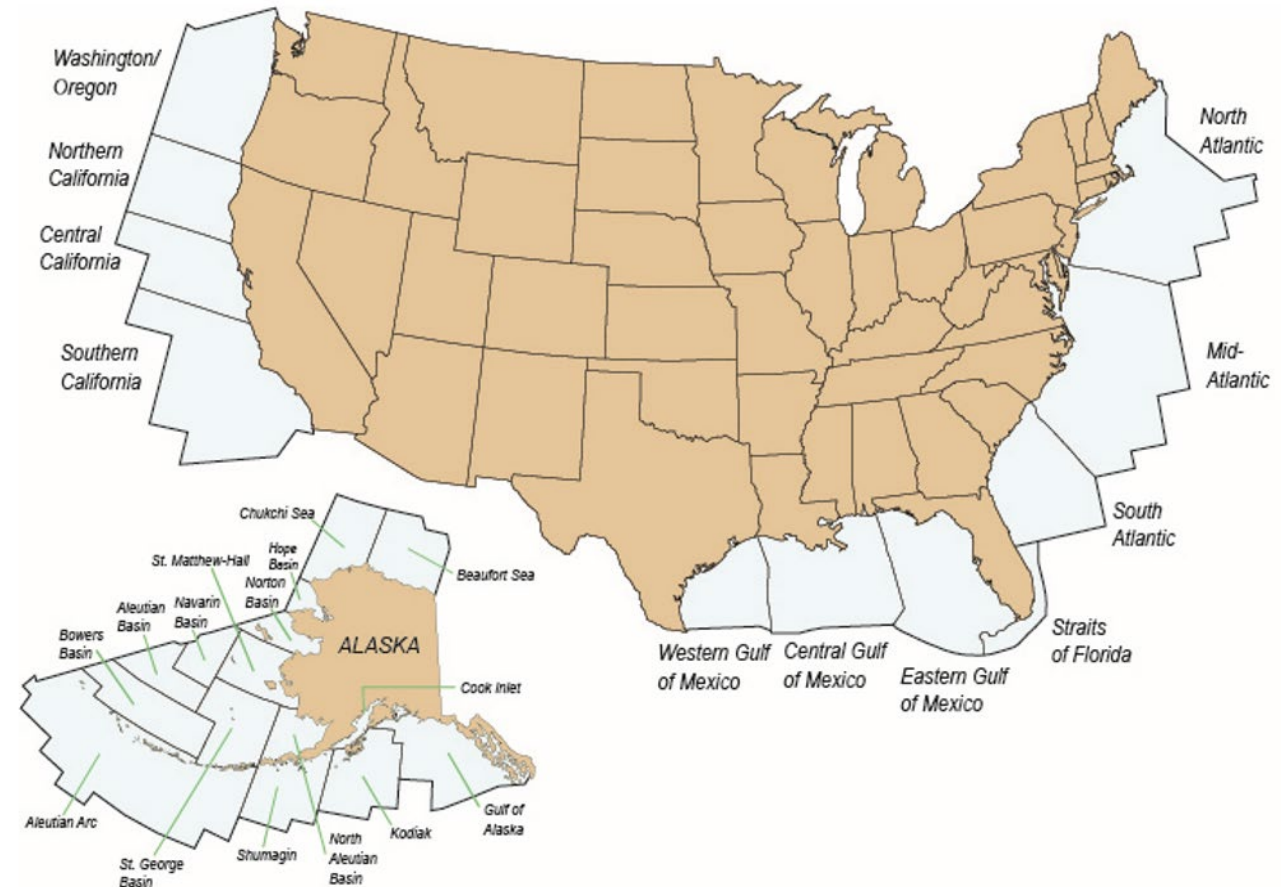
# National Outer Continental Shelf CS Assessment

## BOEM Carbon Storage National Assessment

### Methodology Report published in April 2024

- Identifying & characterizing subsurface storage locations
- Estimating storage capacity
- Inform leasing, environmental, regulatory, and multiple-use decisions

To do this we are building upon our existing geologic framework & leveraging the work from other federal agencies, universities, private sector, etc.



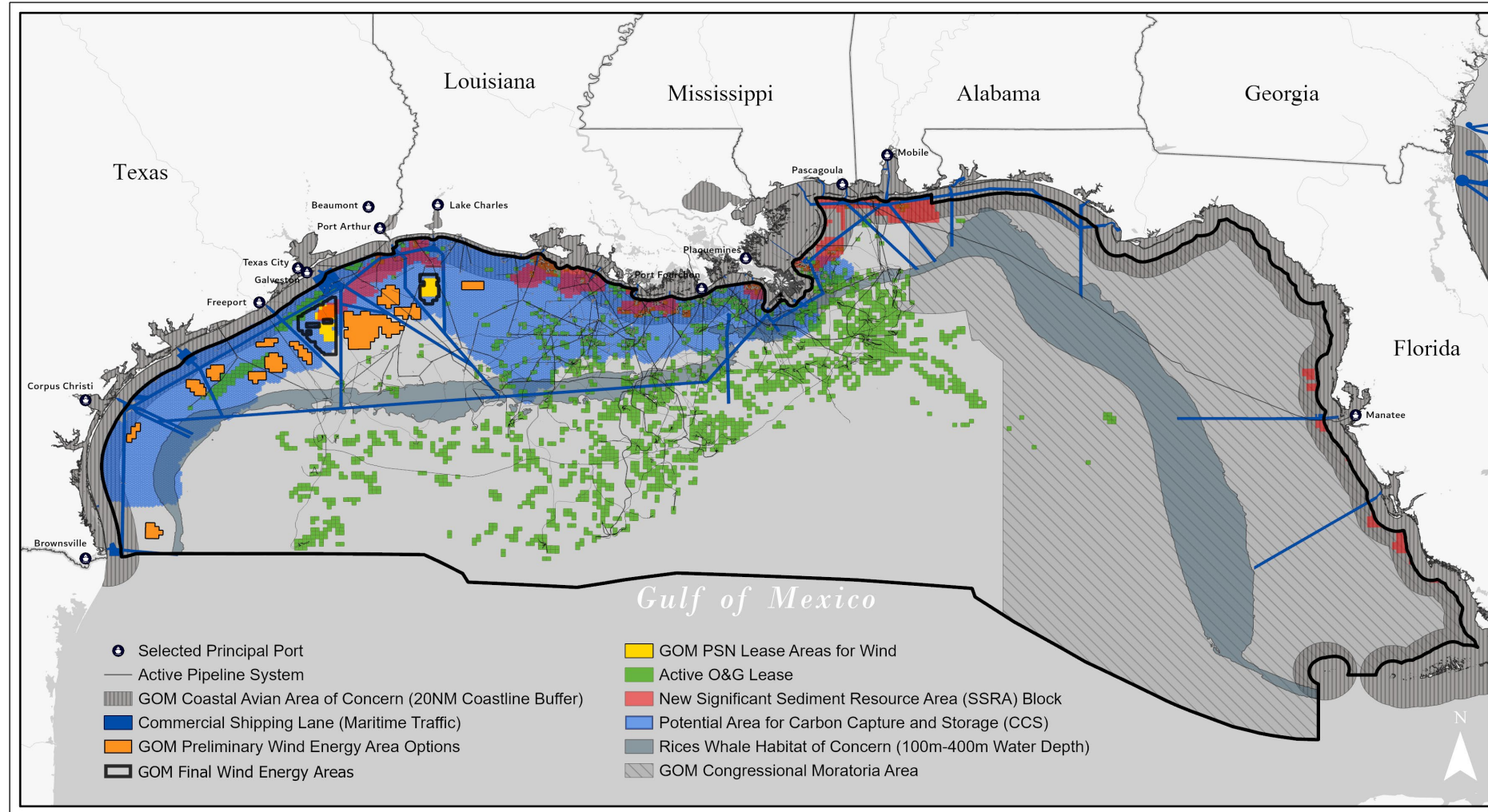
# The Gulf is a Mature Energy, Multiple Use Basin

## BOEM's & BSEE's Authorities:

- Conventional Energy
- Marine Minerals
- Renewable Energy
- Carbon Sequestration
- *Hydrogen*

## Other Users & Resources!

- Fisheries
- Ecosystem Services
- Transportation & Shipping
- Recreation
- Defense / Security



# To Address This Multiple Use In Terms of Sustainability...

## We must ...

- **Acknowledge & Accept** – *Social, Economic, Environmental, & International Components*
- **Recognize & Engage All Stakeholders & Partners**
- **Accept that Change & Transition are Occurring**
- **Build Upon What We Already Know** – *Lessons from the Conventional Energy Industry*
- **Collaboration!** – *the Highest Level of Partnership*
- **Use of the Best Available Information** – *Social, Economic, Tribal, & Environmental*

## To Do this We Are ...

- **Using Adaptive Management:** *Adapt & Adjust as We Learn*
- **Mapping the Different Activities:** *Now & for the Future using State-of-the-Art Tools*
- **Anticipating, Seeking Out, Addressing:** *Cause/Effect Relationships, Cumulative Impacts, & Mitigations*
- **Ecosystem-Based Approach to Mgmt:** *Use The Best & Most Recent Information Available*

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