



Florida Seaport Transportation and  
Economic Development Council

## **Seaport Environmental Management Committee**

**Tuesday, September 1, 2020  
1:30-4:30 p.m.**

**Teleconference  
Phone Number: (646) 558-8656  
Meeting ID: 654 023 9803**

**TAB 1**  
**Call to Order**



Florida Seaport Transportation and  
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**Seaport Environmental Management Committee  
AGENDA**

**Tuesday, September 2, 2020  
1:30-4:30 p.m.**

1. Call to Order, Welcome
2. Roll Call
3. Approval of February 5, 2020 SEMC Meeting Minutes
4. Guest presentation by U.S. Army Corps of Engineers, Engineering Research and Development Center (ERDC): Institutionalizing Resilience at U.S. Seaports
5. Agency Updates
  - a. Florida Department of Environmental Protection (FDEP)
  - b. Florida Department of Economic Opportunity (DEO)
  - c. U.S. Army Corps of Engineers-Civil Works and Regulatory Division
  - d. Florida Inland Navigation District (FIND)
  - e. Florida Fish & Wildlife Conservation Commission
  - f. Environmental Protection Agency Region 4
6. Open Discussion
  - a. FDEP- Turbidity Rule
  - b. Florida Ocean Alliance Strategic Plan
  - c. Diesel Emission Reduction Program (DERA) Grants
  - d. National Environmental Policy Act (NEPA)
  - e. Seaport Resiliency
  - f. Other Issues
7. Adjourn

**TAB 2**  
**Roll Call**

## Seaport Environmental Management Committee Roll Call

[illegible]

**TAB 3**  
**Approval of February 5, 2020 Meeting**  
**Minutes**

# F S T E D

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## Florida Seaport Transportation and Economic Development Council

### MEETING SUMMARY SEAPORT ENVIRONMENTAL MANAGEMENT COMMITTEE

February 5, 2020  
9:00 - 12:00 p.m.  
Meeting

The Seaport Environmental Management Committee (SEMC) meeting was called to order at approximately 9:02 a.m. by Chairman Chris Cooley. Casey Grigsby called roll. Attending in person were the following members and guests:

<b>Chris Cooley, Chair</b>	Port Tampa Bay
Eric Green	JAXPORT
Becky Hope	PortMiami
Fred Wong	JAXPORT
Basil Binns	PortMiami
Bob Musser	Port Canaveral
Jason Hight	Florida Fish and Wildlife Conservation Commission (FWC)
Gregory Garis	Florida Department of Environmental Protection (FDEP)
Vivian Shic	HULFT
Laura Pullins	HULFT
Bill Huffman	Patrick Engineering
Scott Becher	Patrick Engineering
Jimmy McDonald	CDM Smith
Fred Aschauer	Lewis Longman & Walker
Doug Wheeler	Florida Ports Council
Casey Grigsby	Florida Ports Council
Mike Rubin	Florida Ports Council
Jessie Werner	Florida Ports Council
Jeff Littlejohn	Littlejohn, Mann, & Associates, Consultant to Florida Ports Council
Matt McDonald	Littlejohn, Mann, & Associates, Consultant to Florida Ports Council

**Tab 3, Approval of the Minutes, August 28, 2019**, was taken up. A motion was made by Ms. Hope, seconded by Mr. Wong, and passed approving the minutes.

**Tab 4, Agency Updates, was taken up.**

The first agency to present was the Florida Department of Environmental Protection (FDEP), represented by Gregory Garis:

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- Mr. Garis provided an update on the progress of the state's efforts to assume federal wetlands permitting authority under Section 404 of the Clean Water Act. Currently working with US Fish and Wildlife Services and the National Marine Fisheries to develop the framework for review of endangered species and how to do that without consultation. Mr. Garis advised that there is a biological assessment being developed for all federally listed species within the state and this will likely be included in the package submitted to Environmental Protection Agency (EPA) for approval of the assumption.
- He reinforced that most port activities will likely remain under the regulatory jurisdiction of the U.S. Army Corps of Engineers, due to their connection to interstate waters, and the assumption should not affect FDEP's regulatory authority as it relates to most seaport projects.
- He advised that FDEP merged the beaches program within the office of resiliency and coastal protection in November of 2019. Therefore, a lot of the permitting and planning through the beaches and ports program will now be through the resiliency and coastal protection program. This will focus staff resources on coastal resiliency, whether they are regulatory, or science based.
- Mr. Garis provided an update on rulemaking, including 62B-41 and 62B-49, which was revised pursuant to Joint Administrative Procedures Committee (JAPC) comments related to application consistency with Inlet Management Plans (IMP) and are final as of November 2019. These are just updating for consistence to IMPs and should not affect port permitting issues.
- Rulemaking on the Coastal Construction Control Line to update the definition of an eligible structure and how FDEP approves lighting structures.
- 62B-36 – cost sharing for beach and inlet management projects, this will result in a slightly different reporting requirement, and not likely to affect ports.
- He provided a brief overview regarding FDEP's proposed rulemaking regarding turbidity criterion which led to open discussion between the members concerning turbidity issues and ensuring this issue is tracked by FPC.
- Chair Cooley asked Mr. Garis about wastewater discharge from scrubber wash water and whether it was covered in a National Pollutant Discharge Elimination System (NPDES) permit. Mr. Garis said he would have to follow up on that. Mr. Musser discussed differences between open/closed loop systems and the difficulties of managing discharge of such wastewaters within ports.

Jason Hights provided an update from Florida Fish and Wildlife Conservation Commission (FWC)

- Mr. Hights initially discussed the 404-assumption program and FWC is waiting to see how FDEP works out issues with federal agencies. They have the first upcoming meeting with all agencies to work out any remaining issues, with a focus on discussing wildlife issues with US Fish and Wildlife Services.
- Discussed the Port Everglades working group and that FWC remains a part of the group.
- Briefly discussed legislative updates related to session. Senate Bill 812 regarding a bill that makes the location of endangered species excluded from public records requests. There was also a bill allowing FWC to use drones in their land management research.



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- Chair Cooley asked if there was a better contact for review of imperiled species issues. Mr. Hights indicated that he would provide the best email address after the meeting and Ms. Grigsby would then circulate to the entire SEMC group.

Casey Grigsby read an email update from the Corps Civil Works Branch:

- Issuance of NMFS South Atlantic Regional Biological Opinion. The current South Atlantic Regional Biological Opinion (SARBO) was last updated in 1997 and does not include critical species and habitats. Any dredging projects which may affect any corals or critical habitats in the southeast will wait for the new SARBO. This affects projects for Port Everglades and Miami Harbor.
- The status of current or upcoming projects was provided including:
  - Fernandina – needs maintenance dredging that has been identified in the project management to develop a path moving forward.
  - JaxPort – deepening continues with Contract A with expected completion in Spring 2020, Contract B expected completion summer 2020, and schedule for Contract C with award fall 2020. Harbor O&M for fiscal 2021 is scheduled for award winter 2020.
  - Port Canaveral – dredging is complete and closeout underway.
  - Port of Palm Beach – dredging was completed Dec. 2019
  - Port Everglades – on hold waiting on SARBO
  - PortMiami – on hold waiting on SARBO
  - Port Tampa Bay – fiscal year 2020 maintenance dredging is scheduled for contract award summer 2020
  - Port Manatee – offloading of DMNA scheduled for contract award fall 2020 with dredging ongoing.
- Ms. Grigsby indicated she would email the project updates out to the group.

Mr. Musser provided an update on what he heard from Mark Crosley at Florida Inland Navigation District (FIND) from a prior meeting. At the meeting it was announced funding was open for recreational projects for ports along the intercoastal.

**Tab 5, Open Discussion, was taken up.** Several topics were discussed, including:

- FDEP Turbidity Rule revision – Littlejohn provided an overview of the written provided related to the FDEP Turbidity Rule revisions, LMA and FPC staff will continue tracking and provide updates to the SEMC as they come.
- Florida Oceans Alliance Strategic Plan – Grigsby provided an update that the draft plan was complete and FPC board was reviewing the draft, which should be published by Oceans Day on Feb. 25. Additional information is provided in meeting packet.
- Diesel Emissions Reduction Act (DERA) Grant Program – The federal DERA Grant application is open; Region 4 would likely receive approximately \$4 million. Deadline for federal grant is Feb. 26. This is separate from the Florida DERA grant program, where FDEP applied \$25 million of the Volkswagen Settlement to state Diesel Emissions

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Reduction Act (DERA) projects. Discussion about past successful state projects with FDEP for state DERA funding.

- Per-and polyfluorinated substances (PFAS) – Brief update on the constituent PFAS and FDEPs assessment and investigation. FDEP is using EPA's health advisory level and does not have defined water quality standards for PFAS. FDEP is using these health advisory standards to require rule-based assessment and cleanup (62-780), but there are no cleanup standards to cleanup to. As part of the stakeholder group, Littlejohn Mann is tracking the issue for FPC and will continue to monitor and update.
- National Environmental Policy Act (NEPA) – Littlejohn provided update that on Jan 9, new proposed rule for NEPA was published in the Federal Register. Introduces two new limits for production of NEPA documents. For EIS 2 years 300 pages, for an EAA or supplemental EIS it will be 1 year and 75 pages. However, they will be pushing bulk of documents to appendices, but the new timelines are helpful. We should also be mindful of the specific language of what constitutes minimal involvement of funding and if so, you can be exempt from NEPA. Also, the removal of cumulative impacts to be considered under NEPA is a big update and has been replaced with reasonably close and causal relationship. Rule will be final March 7, 2020.
- Seaport Resiliency Report – Grigsby and Littlejohn provided an update on the FPC resiliency report. The report was well received by partners, stakeholders, and agencies. FPC sits on three committees for resiliency on behalf of the Florida seaports. Chair Cooley discussed how Tampa Bay is conducting its own self-assessment and performs annual hurricane exercises. They are also doing a vulnerability assessment to take their resiliency study to the next step and show the ports are making progress.
- Alternative Fuels Report – Grigsby and Littlejohn provided an update report which was recently published and very well received. Canaveral discussed their safety protocols for LNG and their discussions with residents.
- Resilience Office – general update on the Chief Resilience Officer of FDEP will be speaking at lunch. The office's newsletter was included in the packet. FPC looking for opportunities to work with the CRO and partner with them moving forward.
- Mr. Littlejohn provide brief update on proposed WOTUS rule with additional memo in the meeting packet. This is more of an FYI as it will not impact ports very much.
- Chair Cooley announced Port Tampa Bay will be hosting the AAPA Environmental Committee March 26-27 and would like FPC's participation and anyone else that would like to attend.
- Mr. Musser brought up open discussion on noise abatement for water construction projects. When following the SARBO, it requires noise abatement, and projects require bubble curtains which are now attracting listed species.
- Mr. Musser discussed a cleanup hosted at Canaveral with Royal Caribbean in coordination with Keep America Beautiful. Chair Cooley discussed Keep Tampa Beautiful and planning an annual cleanup event at Tampa Bay. Also working to expand other cleanup programs and push it through AAPA and Keep America Beautiful.

Chair Cooley asked for any other open discussion, hearing none, the meeting was adjourned at 12:00 pm.

## **TAB 4**

# **Guest Presentation: Institutionalizing Resilience at U.S. Seaports**

# How do seaports value resilience assessments? Decision making, capacity building, and implementation

Calls for resilience assessments are commonplace in discourses about maritime transportation and commerce due to increasing recognition of seaports' vulnerabilities to natural hazards (e.g., sea level rise and storms). Yet, the question of how resilience assessments impact seaport planning and decision-making processes is not well understood. This research will assess the value of the process and outcomes

of resilience-related studies for U.S. seaports. Investigators will interview seaport staff involved in resilience planning efforts – for example, seaport director/managers, safety planners, and environmental specialists. Findings will elucidate: (1) how stakeholders value the key aspects of the resilience assessment process for decision making; (2) the types of resilience enhancement strategies that seaports typically pursue after engaging in a resilience assessment process; and (3) the role such assessments play in building seaport adaptive capacity.

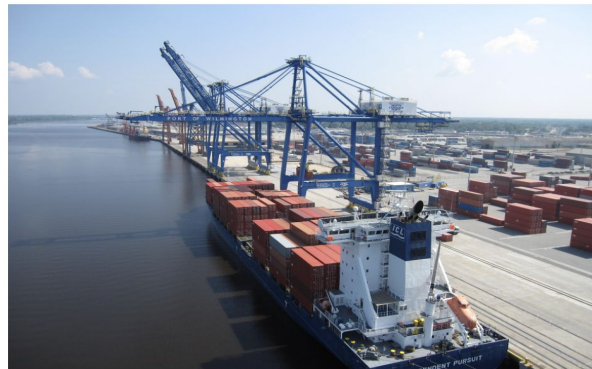


Figure 1 – Port of Wilmington, NC (Photo: A. Becker)

## Significance

Insights from this study will guide the development of the *Resilience Assessment Guide for Ports and the Marine Transportation System* developed in partnership by the DHS Cybersecurity and Infrastructure Security Agency and the US Army Corps of Engineers. The overall intent of this research is to identify the benefits and limitations of resilience assessments for seaports, as this knowledge will improve guidance materials that are designed to help seaports undertake their resilience endeavors by highlighting lessons learned and best management practices.

## Project Team

Principal Investigator: Prof. Austin Becker, URI Department of Marine Affairs

Research Assistant: Ellis Kalaidjian, URI Department of Marine Affairs

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**TAB 5**  
**Agency Updates**

**TAB 5a**  
**Florida Department of Environmental  
Protection (FDEP)**

**TAB 5b**  
**Florida Department of Economic  
Opportunity (DEO)**

**TAB 5c**  
**U.S. Army Corps of Engineers-**  
**Civil Works and Regulatory**  
**Division**



**TAB 5d**  
**Florida Inland Navigation District (FIND)**

**TAB 5e**  
**Florida Fish & Wildlife Conservation**  
**Commission**

**TAB 5f**  
**U.S. Environmental Protection Agency**  
**Region 4**

**TAB 6**  
**Open Discussion**

**TAB 6a**  
**FDEP Turbidity Rule**

**TAB 6b**  
**Florida Oceans Alliance Strategic Plan**

## **Executive Summary**

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### **THE CRITICAL NEED FOR A STRATEGIC POLICY PLAN**

Florida's Blue Economy is based on its ocean and coastal resources. It is large, diversified, and critical to the state's prosperity and people's quality of life. However, due to declining water quality, damaged natural habitats, and vulnerability of both human-built and natural infrastructure, Florida's Blue Economy is at risk. To generate a roadmap for Florida's leaders and policymakers to protect, restore, and grow the state's Blue Economy, the Florida Legislature awarded a grant to the Florida Ocean Alliance to create a Strategic Policy Plan for Florida's Oceans and Coasts (referred to as the Strategic Policy Plan or Plan).

This Strategic Policy Plan builds on efforts by citizens, governmental agencies, legislators, and Governor DeSantis, including the 2020 Florida Legislature Clean Waterways Act (Senate Bill 712) and Public Financing of Construction Projects (Senate Bill 178). This Plan and its recommendations are a call for bold actions to implement a comprehensive and integrated ocean and coastal policy for Florida's Blue Economy.

Florida has essential, valuable, and iconic natural resources and human-built infrastructure along its 8,436 miles of coastline, the second longest coastline among U.S. states and territories (National Oceanic and Atmospheric Administration, 2019a). These assets create a sustainable and profitable economy in the state. An economic analysis undertaken by the Florida Ocean Alliance, using the most recent annual economic data available from 2018, reveals the magnitude and importance of Florida's Blue Economy:

- Florida's coastal counties generated more than \$797 billion of economic value or 77% of the state's more than \$1 trillion economy.
- Direct and indirect use of ocean and coastal resources contributed \$73.9 billion to the state's economy.
- More than one million jobs in Florida were directly and indirectly created by activities that used ocean and coastal resources.

Understanding the threats to Florida's Blue Economy is critical to mitigation and effective planning. Two important types of threats are those primarily generated locally, such as pollution, failing and inadequate infrastructure, and poverty, and those arising from global changes or events, such as sea level rise, increase in extreme storms, and pandemics. Beyond their individual impacts, global threats can exacerbate the effects of local threats. Now, more than ever, strategic planning and actions are needed to address these threats and reduce their impacts on Florida's Blue Economy.

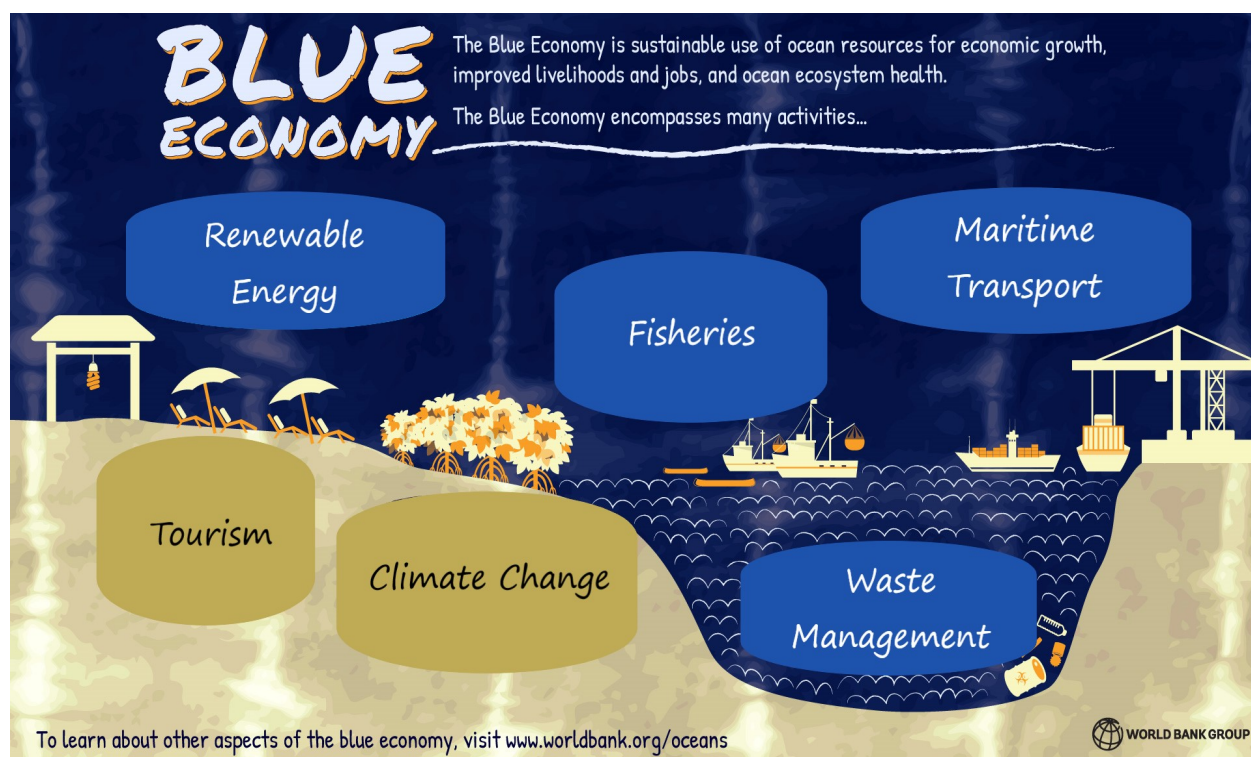


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*The Blue Economy consists of a diverse range of established and emerging ocean and coastal industry sectors that include tourism, commercial and recreational fisheries, aquaculture, ports, maritime industries, transportation, communications, and energy.*

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The COVID-19 pandemic that began affecting Florida in March 2020 has resulted in tragic loss of life and significant direct and indirect economic losses. As public and private agencies move from emergency response to recovery, long-term investment and management solutions are needed. Florida has an opportunity to make strategic decisions and investments in its Blue Economy to restore prosperity, improve resilience, and promote sustainability. This Plan focuses on vulnerabilities, threats, and opportunities that existed before the pandemic and will persist after it. In addition, the supporting economic report provides an essential baseline for the pre-COVID Blue Economy that can be used to evaluate short-term economic impacts and long-term recovery.



## RECOMMENDATIONS FOR FOUR KEY ISSUES AND CROSS-CUTTING THEMES

Created with public and private input, this Strategic Policy Plan outlines strategies and actions that will lead to a stronger Blue Economy and more secure future. It focuses on four key interrelated issues:

- **Blue Economy** – Developing and expanding the resources that support a major portion of Florida's economy.
- **Ocean and coastal resilience** – Ensuring the elements of Florida's Blue Economy are more resilient to the effects of local and global threats.
- **Human and natural infrastructure** – Improving the water, wastewater, stormwater, power infrastructure, and natural habitats that support Florida's diverse and valuable living resources.
- **Implementation, outreach, and financing** – Building and sustaining broad support and partnerships for executing the Plan with accountability and transparency.

Several cross-cutting themes were identified as vital to success of this Plan:



- **Transformational action** – Provide resilience for Florida's oceans and coasts and obtain associated economic benefits via partnerships among state and local governments, industries and businesses, non-governmental organizations, universities and research institutions, and the public to implement fundamental changes.
- **Innovation** – Incentivize technologies; develop a highly trained and skilled workforce; and applying bold and new approaches to planning, regulation, and management of Florida's oceans and coasts.
- **Equity** – Ensure the costs and benefits associated with actions are distributed fairly to all socioeconomic categories and communities.
- **Integration** – Maximize beneficial outcomes by establishing a statewide framework for communication of proposed actions, coordination to ensure compatibility, cooperation for effective and efficient use of resources, and collaboration to achieve success.
- **Education and outreach** – Promote awareness, understanding, and active engagement through clear, consistent, and factual messages to the public.
- **Funding** – Develop a talented workforce, improve aging infrastructure, enhance coastal community resilience, improve data collection and monitoring, and use clean technologies by leveraging existing resources and making strategic investments.

## VISION OF SUCCESS

As Florida, the nation, and the world recover from COVID-19, strategic planning, action, and investment are imperative to position the state for a more rapid recovery, sustained economic stability, growth, and prosperity. By integrating the high-priority actions of this Plan and building on the actions taken by the 2020 Florida Legislature, we envision the following Florida of the future:

*In the year 2030, Florida has become an international leader in ocean and coastal issues by investing in innovative technologies and solutions that address resilience and sustainability, restore clean coastal waters, improve air quality, and deliver measurable ecological and economic value and returns to the state. Floridians recognize and embrace oceans, coasts, bays, estuaries, and beaches as the heart of the state's identity, quality of life, and economy, and they support investments in sustainable actions.*

With a common vision and by working together, we can accomplish these goals.

## HIGH-PRIORITY STRATEGIES AND ACTIONS

High-priority strategies and actions have been identified that can be implemented in the near-term, without a need for extensive resources (**Table 1**). Taking these steps, as soon as possible, will allow for economic expansion and improved resilience.

The top priority action is to create a forward-thinking, innovative, statewide, public-private partnership under the Executive Office of the Governor, similar to Space Florida, CareerSource Florida, and other executive-level state partnerships. The purpose of this public-private partnership is to bring together key representatives from the public sector and private industry so they can apply their experience, expertise, and resources to solving ocean and coastal issues. This structure would provide a connected leadership that is critical to the implementation of the Plan.

*Creation of a public-private partnership under the Executive Office of the Governor is the critical first step to implementing the Plan and building a stronger Blue Economy.*

**Table 1. High-Priority Strategies and Actions for the New Public-Private Partnership**

After the public-private partnership is established, the following strategies and actions for the four key issues are the priority for implementation.		
Issue	Strategy	Actions
<b>Blue Economy</b>	Understand, support, and expand Florida's Blue Economy.	Evaluate risk-based vulnerabilities in ocean and coastal industries, small businesses, and supply chains to determine where key investments will increase resilience and protect the economy.
		Prepare a sustainable blueprint for Florida's Blue Economy that focuses on resilience, innovation, and synergies between key ocean and coastal industry sectors and the workforce.
<b>Ocean and Coastal Resilience</b>	Foster resilience to local and global threats.	Make policy changes to position Florida as a leader in identifying, developing, and using clean technologies to improve community health and economic resilience.
		Prepare a statewide analysis of current and future risks and vulnerabilities in human-built and natural infrastructure and devise actions to ameliorate risks, including funding and incentives for implementation.
		Update standards and permits for human-built and natural infrastructure to incorporate designs and practices that provide better protection from the impacts of climate change and other local and global threats.
<b>Human and Natural Infrastructure</b>	Ignite and sustain the Blue Economy by investing in 21 <sup>st</sup> century approaches to restoring, protecting, and improving human and natural systems.	Prioritize replacement and upgrades to coastal human-built and natural infrastructure (e.g. wastewater, stormwater, potable water, bridges, roads, energy networks, living shorelines, coral reefs, beach nourishment) to improve water and air quality, treatment efficiencies, and resilience.
		Engage with state and federal partners to invest in ocean and coastal clean water and air infrastructure projects that create jobs, diversify the workforce, advance the Blue Economy, and improve human and ecological health.
		Protect, restore, and manage coastal and marine habitats and living resources that have a critical need for intervention by reducing pollution and other local threats, and mitigating impacts from climate change.
<b>Implementation, Outreach, and Financing</b>	Develop partnerships that leverage resources.	Coordinate with all partners and the Florida Legislature to establish new and innovative mechanisms to incentivize investments in ocean and coastal planning, restoration, and stewardship.
		Require accountability and transparency from all partners responsible for implementing actions.

*For further actions, recommendations, and details, see the full report: "Securing Florida's Blue Economy: Strategic Policy Plan for Florida's Oceans and Coasts" at the FOA website: <http://www.floridaoceanalliance.org/>.*

The Florida Ocean Alliance gratefully acknowledges the support of the Florida Legislature and the Florida Department of Environmental Protection for funding this Strategic Plan. This work was funded in part through a grant agreement from the Florida Department of Environmental Protection, Florida Resilient Coastlines Program, by a grant provided by the Office of Resilience and Coastal Protection. The views, statements, findings, conclusions and recommendations expressed herein are those of the authors and do not necessarily reflect the views of the State of Florida or any of its sub-agencies.

**TAB 6c**  
**Diesel Emission Reduction Program**  
**(DERA) Grants**

**TAB 6d**  
**National Environmental Policy Act**  
**(NEPA)**

**TAB 6e**  
**Seaport Resiliency**

**TAB 6f**  
**Other Issues**



## Fact Sheet: Safety and Security Precautions for Ammonium Nitrate

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On August 4, an explosion in Beirut, Lebanon, reportedly involved approximately 2,750 tons of ammonium nitrate. The Fertilizer Institute (TFI) and Agricultural Retailers Association (ARA) extend our thoughts prayers to all of the people in Lebanon. As we continue to learn more about the factors that contributed to this tragic event, TFI, ARA, and our members remain committed to ensuring the safety and security of our employees, their families, and the communities in which they operate.

The fertilizer supply chain in the United States operates with the highest possible standards to promote safety and security. Ammonium nitrate, which is used in both mining and agriculture activities, is highly regulated at the state and federal level, including by the Department of Homeland Security (DHS),<sup>1</sup> the Environmental Protection Agency (EPA),<sup>2</sup> the Occupational Health and Safety Administration (OSHA),<sup>3</sup> and the Department of Transportation (DOT).<sup>4</sup>

TFI and ARA have jointly developed industry-led safety and security initiatives such as the [Guidelines for Storage and Transportation of Ammonium Nitrate](#) and the [ResponsibleAg](#) program. ResponsibleAg ensures that agricultural retailers understand and are in compliance with the numerous federal regulations that apply to their facilities, including those administered by EPA, OSHA, DHS, and DOT. Since its creation over five years ago, over 3,400 audits have been completed and over 1,300 facilities have been certified by the ResponsibleAg program.

TFI, ARA, and OSHA also created the [Fertilizer Safety and Health Partners Alliance](#) to advance our shared commitment to safety and the engagement of the fertilizer and agricultural retail industries with OSHA and other federal agencies. Moreover, TFI, ARA, and our member companies work with safety experts such as the National Fire Protection Association (NFPA) to ensure its codes reflect industry advancements and best practices for product safety and storage.

The following information may also be of interest:

- As with other plant nutrients, ammonium nitrate helps us grow the food, fuel and fiber that feeds our world. Half of crop yields are attributable to fertilizer, hence its importance to farmers and food production.

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<sup>1</sup> [6 C.F.R. Pt. 27](#) (CFATS) and [33 C.F.R. §105](#) (U.S. Coast Guard)

<sup>2</sup> [Emergency Planning and Community Right-to-Know Act \(EPCRA\)](#)

<sup>3</sup> [29 C.F.R. § 1910.109\(i\)](#); [OSHA Fertilizer Industry Guidance on Storage and Use of Ammonium Nitrate](#)

<sup>4</sup> [49 C.F.R. Parts 171-178](#), DOT Hazardous Materials Regulations

## Fact Sheet: Safety and Security Precautions for Ammonium Nitrate

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- Ammonium nitrate is a dry, solid material primarily in granular form and comprises approximately 1 percent of all fertilizer nutrients utilized in the United States.
- Ammonium nitrate is used by farmers for its agronomic and environmental benefits. It is used primarily on pastureland, hay, fruit, and vegetable crops.
- Ammonium nitrate fertilizers are safe when handled in accordance with U.S. regulations and industry guidelines. As indicated by the U.S. Chemical Safety Board during Congressional testimony, there have been no accidental detonations of ammonium nitrate where facilities complied with existing federal regulations.<sup>5</sup>

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<sup>5</sup> Statement-Response of U.S. Chemical Safety Board Chairman Rafael Moure-Eraso; [“Oversight of Federal Risk Management and Emergency Planning Programs to Prevent and Address Chemical Threats, Including the Events Leading Up to the Explosions in West, TX and Geismar, LA”](#), Senate Committee on Environment and Public Works, June 27, 2013 (Page 221)



**TAB 7**  
**Adjourn**