NY Bight Draft Wind Energy Areas: Preliminary Fisheries Perspectives

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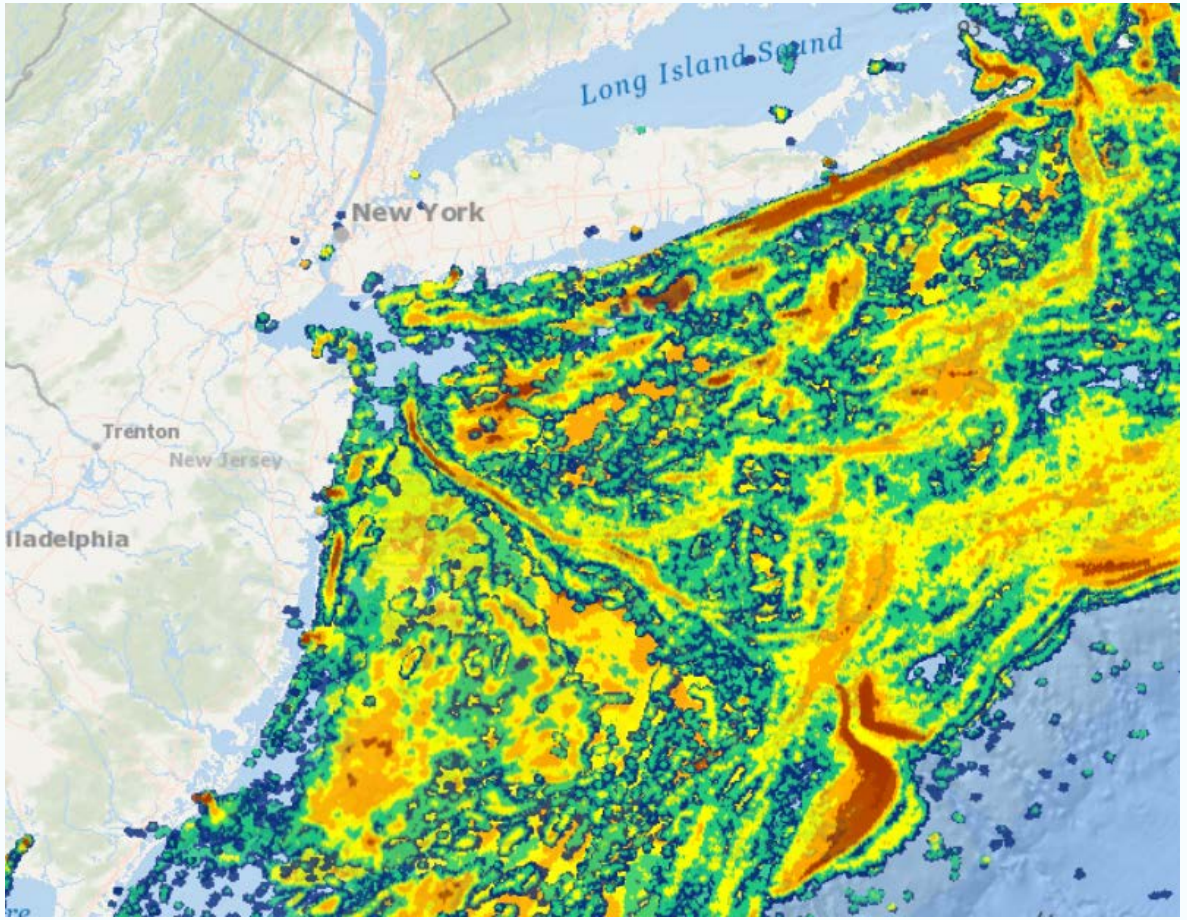
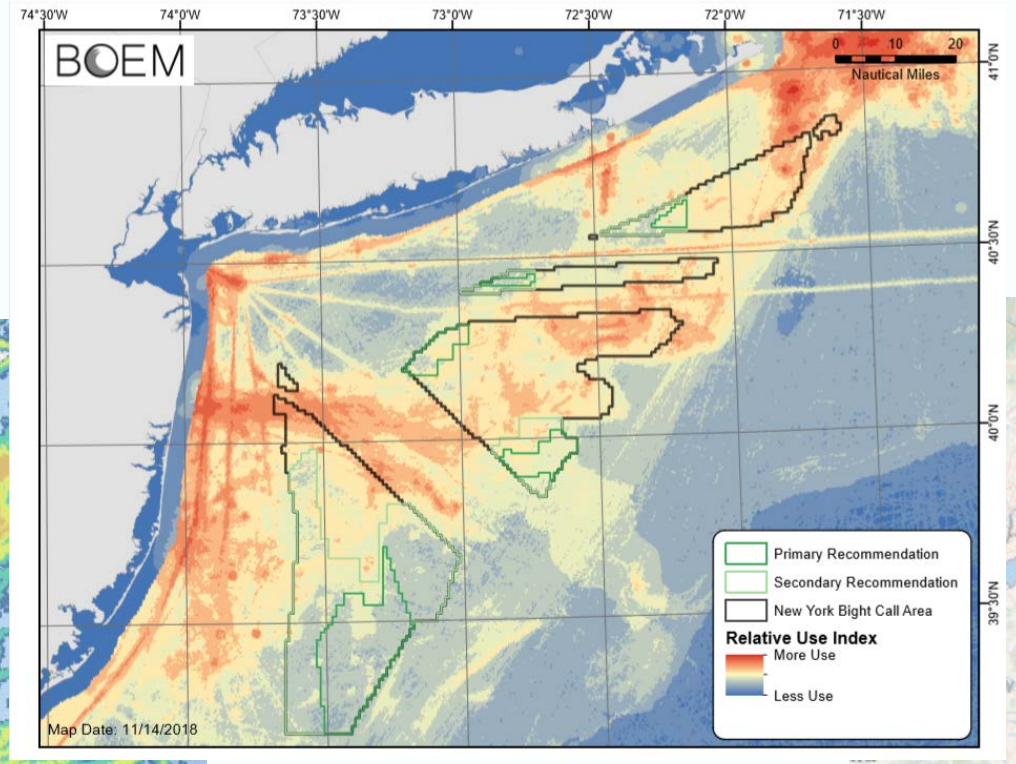
Responsible Offshore Development Alliance

NY Bight Call Areas with 2011-2016 Groundfish, Herring, Mackerel, Scallop, Squid, Surfclam/Ocean Quahog VMS Overlaid

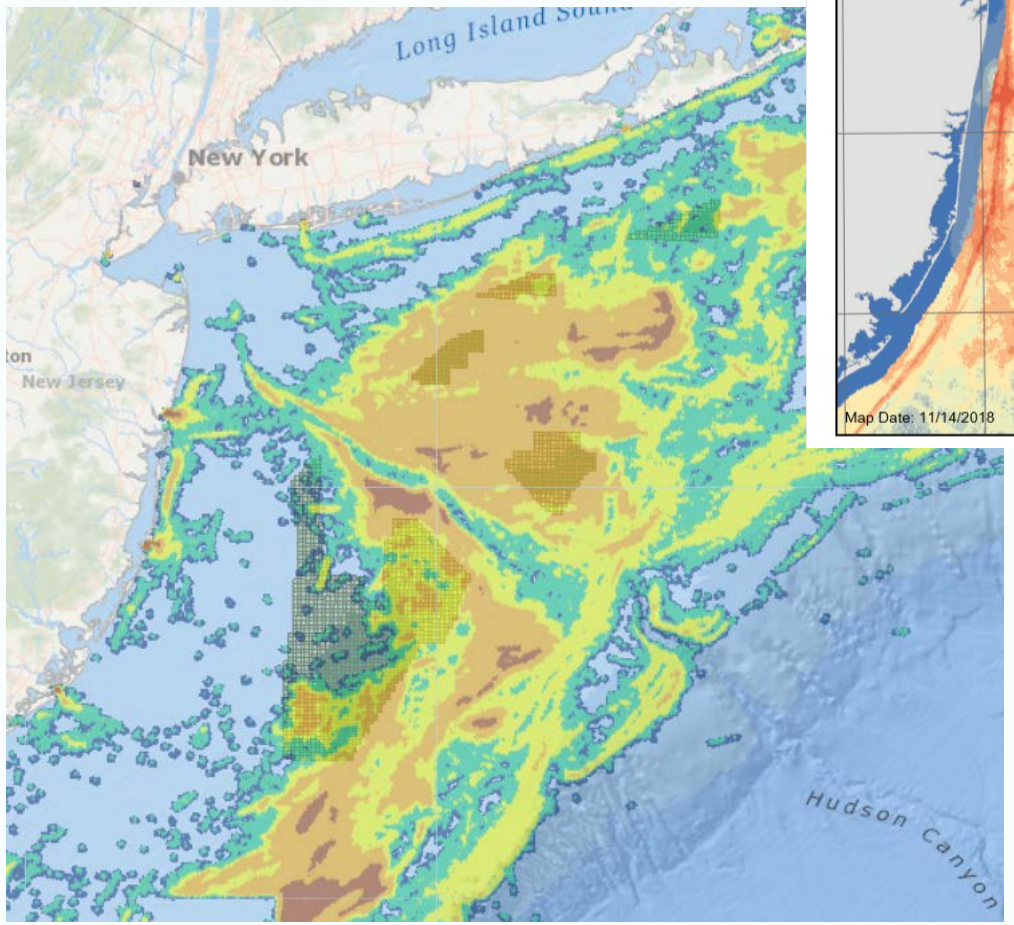


(Commercial fishing occurs in every acre of the Bight)

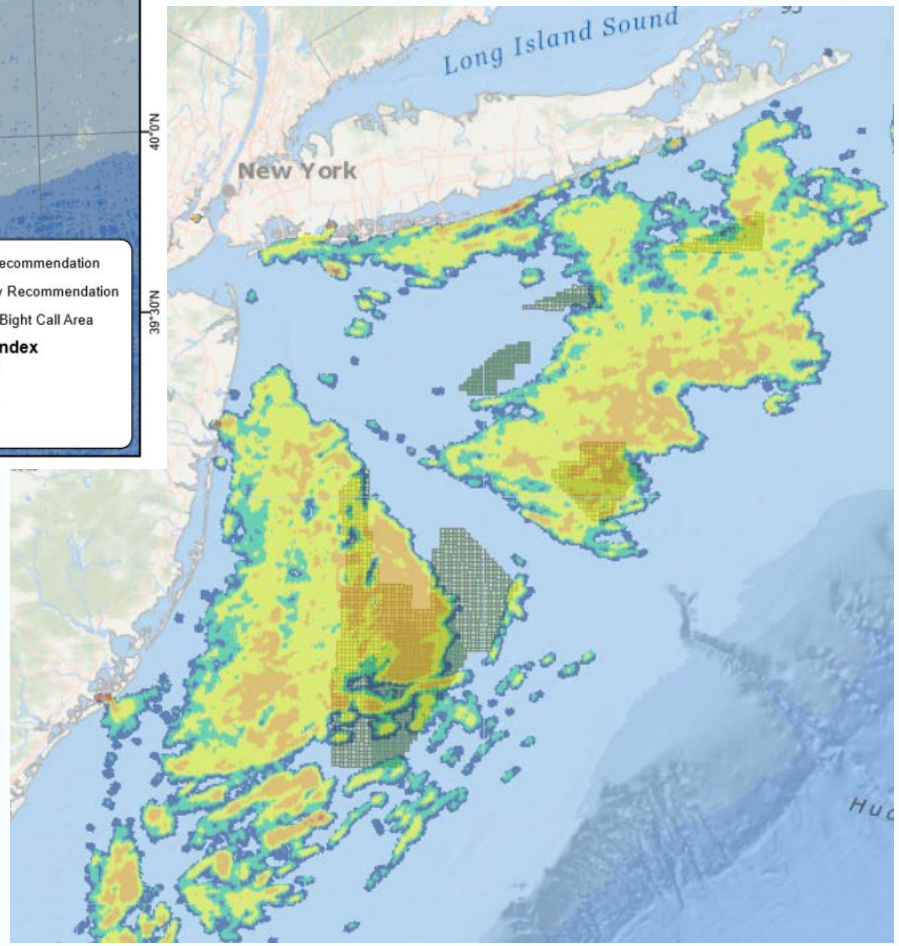
BOEM “Fishery Relative Use Index”: only a first step for identifying fishery dependence. The importance of an area is highly specific to the most impacted fisheries, ports, and gear types



Scallop 2015-2016 VMS



Surfclam/quahog 2012-2014 VMS



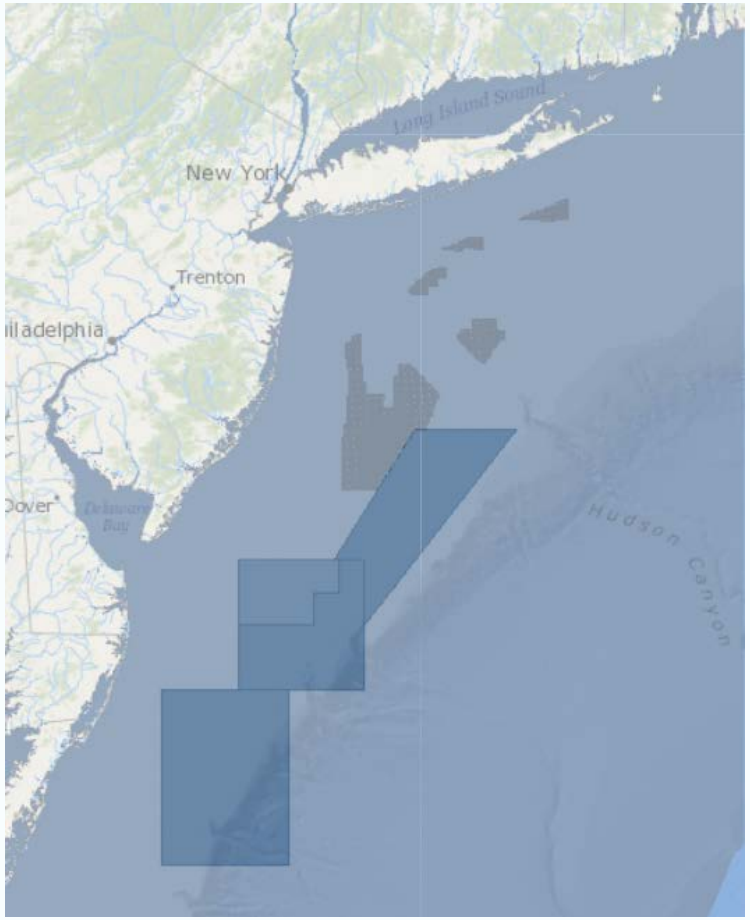
NY Bight: The Cold Pool

- 20–60 m thick band of cold, near-bottom water from spring to fall over the midshelf and outer shelf of the Mid-Atlantic Bight and Southern Flank of Georges Bank
  - Remnant winter water bounded by the seasonal thermocline above and warmer slope water offshore
  - Exists due to unique geographic conditions creating minimal mixing
  - The coldest Cold Pool water is located in the NY Bight from late spring to summer (Lentz 2016)

- The position and strength of Cold Pool may be the main driver of the strength and frequency of the summertime coastal upwelling events in coastal NJ, which fuel the entire benthic community of living marine resources in the NJ Shelf (Glenn et al. 2004)

- Extremely biologically important area and several species are sensitive to slight temperature variations
  - E.g., short periods of elevated temperatures have significant effects on surfclam mortality (4-11% in years with only 2°C increase in average September water temp in the Bight) (Narvaez et al. 2014)

Must Consider Impacts to Fishery Resources Outside of Lease Areas, Too



Hudson S area adjacent to highly productive Elephant Trunk Access Area (scallop fishery)

- Potential consequences for all life stages, particularly for bivalves
- Changes in larval dispersion
- Sediment plumes impacting filter feeding
- Hardening bottom habitat impacting settlement
- Displacement of fishing effort
- Much more research needed to identify, avoid, & mitigate impacts

Specific Impacts: Estimating Fisheries Costs

- Ex-vessel revenue:
  - RI DEM study showed much higher ex-vessel impacts than initially estimated for Equinor lease site ($76 million to MA, $70 million to NJ, and $10 million to RI over six years alone); impacts from some proposed areas likely to be much higher
  - Certain fisheries require substantial additional analysis that has not yet occurred; *e.g.,* monkfish and some small pelagics do not have specific VMS codes
- Multiplier effects:
  - Very few studies on full impacts to ports, shoreside infrastructure, and downstream supply chain activities
  - *E.g.*, risk of loss of NJ port infrastructure if nearshore scallop grounds lost; would have cascading effect on other NJ-based fisheries
- Accounting for annual spatial variations:
  - *E.g.,* In 2018, mackerel fishery was largely prosecuted around Hudson North; massive impacts in one year could have outsized effects on fishery infrastructure, permit distribution, etc. in subsequent years

Specific Impacts: New York Ports

Fairways North (in order of landings importance by gear, dark and light green):

- Trawl: scup, fluke, black sea bass, squid, butterfish, and whiting
- Gillnet: monkfish, skates, dogfish (processor closed after Hurricane Sandy), and bluefish; monkfish and skates are $1 million+ gillnet fishery for NY (5-7 vessels)
- Port of Shinnecock down to 6 trawlers in 2010 due to groundfish reductions and catch shares; began to rebound due to increased dayboat (trawl) scallop fishing; *significant impacts in Fairways North threaten viability of entire trawl fishery*
- Light green areas would mostly impact dayboat (trawl) scallopers; these vessels also trawl for the other stocks above

Fairways South:

- High dollar value for squid, scup, black sea bass, fluke
- Could be particularly important squid revenue due to trimesters with open landings until 80% is caught
- Scup quotas are seasonally large so small numbers of trips can be highly lucrative (up to $50,000 or more if 50,000-lb. trip limit in Winter 1/ 18,000-lb. trip limit in Winter 2; currently 28,500 including rollover)

Hudson North:

- Northern portion (adjacent to Equinor lease site): squid, fluke, black sea bass, some dayboat scallops
- Southern portion: squid, black sea bass, scup, fluke, whiting

Hudson South:

- NY fishermen only impacted by a sliver in the far eastern portion: squid, scup, black sea bass, fluke, dayboat scallops

Specific Impacts: New Jersey Ports

Roughly 50,000 fishing jobs including processing, transportation and wholesale and retail sales; highest in the Mid-Atlantic

New Jersey's Seafood Retail Industry has annual sales of $2.1 billion

Hudson North:

- Extremely important for NJ shellfish (scallop, surfclam, quahog) (Atlantic City, Pt. Pleasant, Barnegat, Cape May)
- Mid-water trawl for squid, mackerel, scup, butterfish (Pt. Pleasant, Cape May)
- Bottom trawl and gillnets for monkfish, tilefish (Belford, Pt. Pleasant, Barnegat)

Hudson South:

- Extremely important for NJ shellfish (scallop, surfclam, quahog) (Atlantic City, Pt. Pleasant, Barnegat, Cape May)
- Winter flounder, black sea bass (Pt. Pleasant)

Fairways South:

- Mid-water trawl for squid, mackerel, scup, butterfish (Cape May, Pt. Pleasant Barnegat, Belford)
- Scallops (Pt. Pleasant, Barnegat, Cape May)

Fairways North:

- Less impact on NJ fishermen as the southern portions of the proposed areas are closer to NJ geographically and fished more regularly
- Most impacts would be to winter fishing for squid and mackerel

Specific Impacts: Massachusetts Ports

Massachusetts is the home to many fishing ports, including the Port of New Bedford - the highest grossing commercial fishing port in the United States, generating $9.8 billion in economic value annually

The Port of New Bedford is an international seafood hub and home port to commercial fishing vessels from New York and New Jersey

<u>Revenue Impacts (2011-2016):</u>

Fairways North: $19,831,573

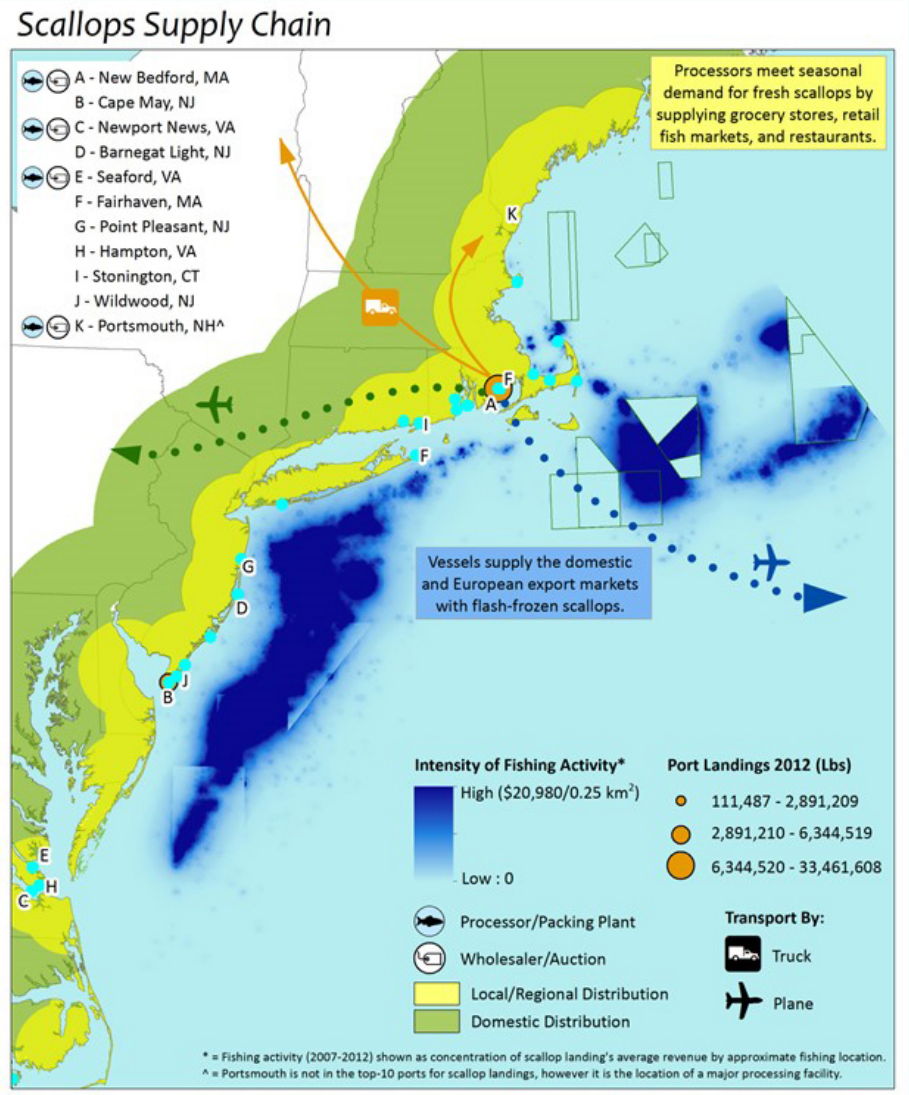
Fairways South: $14,124,199

Hudson North: $93,286,796

Hudson South: $115,379,000 (estimate)

<u>Fisheries Impacted:</u>

- Atlantic Scallop
- Summer Flounder
- Scup
- Black Sea Bass
- Surfclam
- Ocean Quahog
- Atlantic Mackerel
- Squid
- Butterfish
- Lobster
- Jonah Crab



Specific Impacts: Cumulative Impacts

- Decisions regarding which areas to lease need to account for how fisheries are already affected by existing active lease areas
- *E.g.*, squid fishery already heavily impacted by Northeast lease areas, Empire Wind project, Northeast Canyons and Seamounts Marine National Monument, and other sites
- *E.g.*, the active lease area off NJ & the NY Draft Wind Energy Area Recommendations together form a high percentage of Atlantic City surfclam fleet area fished
  - Further analysis should be done to differentiate between the hand-shucked surfclam areas and machine-shucked surfclam areas fished; these are two separate and distinct fleets of vessels

Process Suggestions

- Significantly more work is required to accurately identify economic impacts on fishery, state, port, and individual levels; as well as cumulative impacts
- Research is lacking on potential impacts to Cold Pool from, *e.g.*, changes in currents, water column mixing, localized atmospheric changes, & cable installation and how to minimize ecosystem-scale effects
- Lease areas should be kept as small as practicable to allow for adaptive management & research to inform future impact avoidance
- Transit patterns must be studied and traffic lanes identified in coordination with U.S.C.G. to avoid transit conflicts among users, *before* Final Sale Notice

A Final Suggestion

- Be realistic about the time needed to collect and analyze the necessary data!
  - Federal personnel resources, research funding, and access to fishery input are extremely limited due to the large number of active projects
  - Much of the information needed to inform this process requires novel analysis: *even when* the necessary data are readily available, creating the products takes significant man- and computing-power
  - This process is not a “gold rush” and we have it in our ability to get it right by using thoughtful, deliberate, and evidence-based methods
  - Mistakes could be extremely costly to both industries, state and federal governments, consumers, and taxpayers