

BMPs for Regulators

Permitting lessons learned from 14 East Coast States that are still working this out

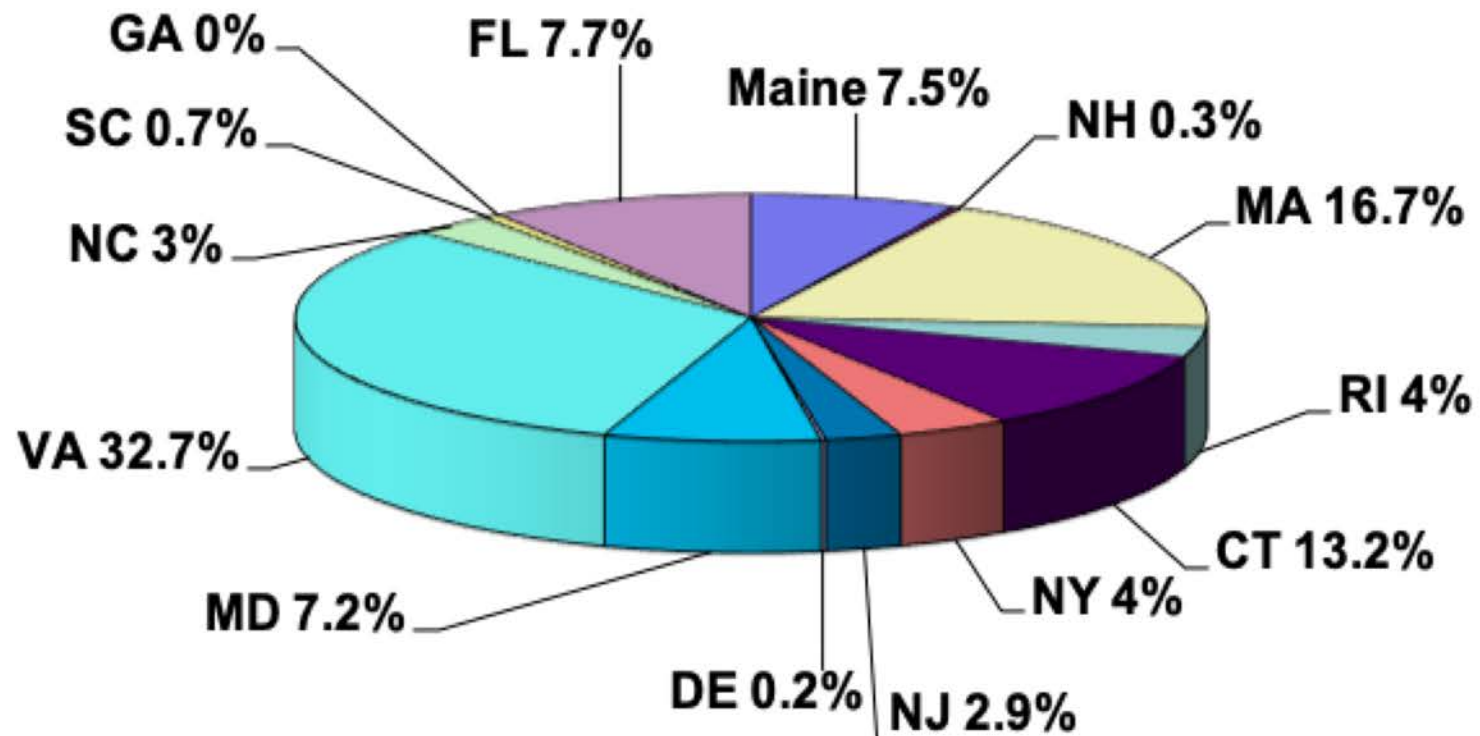


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Shellfish Aquaculture by State percent of total East Coast

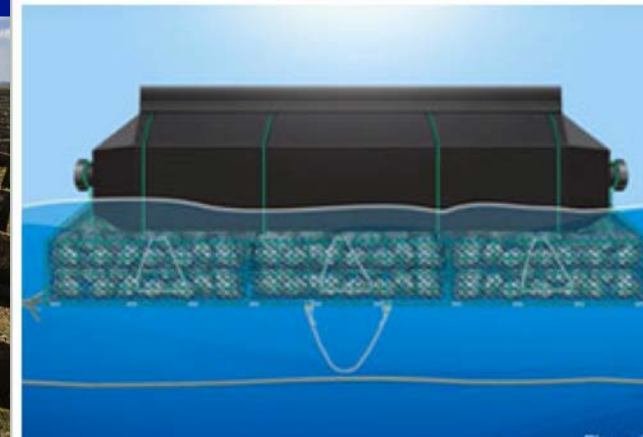
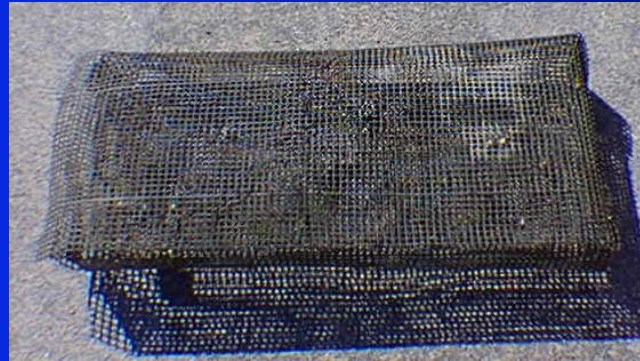
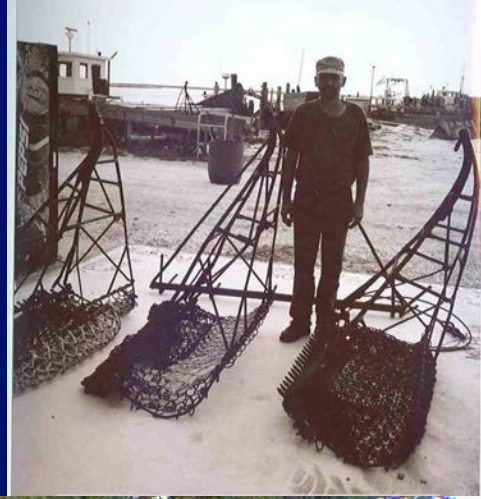
\$175 million farm gate

65% Oysters



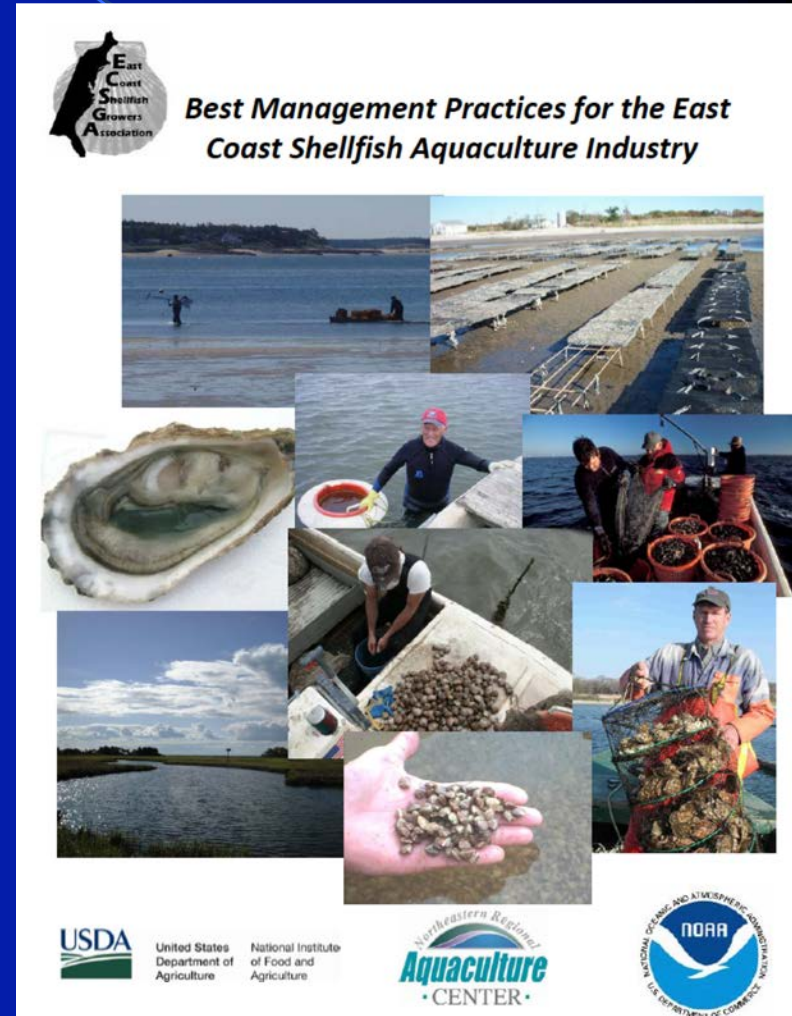
Adaptive Evolution

- 80's Vinyl coated wire, bird netting, ADPI bags
- 90's Aquatray, Seapa baskets, FLUPSY
- 00's OysterGro, Flip bags



Industry Best Practices Manual

- Top industry priority
- Re-drafted - release date soon!
- Worked with states that had existing BMPs (ME, MA, VA & FL)
- Allows growers to develop individualized operation manuals
- A marketing tool
- Permitting tool
- Guidance for new growers



Growers BMPs (simplified)

- Follow the rules
- Don't transport diseased or uninspected seed
- Pick up your trash
- Don't be an eyesore
- Stay within the lines
- Don't get anyone sick
- Be a good neighbor



Best Practices for Regulators

Not for every
state!

But worthy of
consideration



23 Federal Acts of Congress

- Agricultural Marketing Act
- Animal Health Protection Act
- Animal Medicinal Use Drug Clarification Act *
- Coastal Zone Management Act
- Endangered Species Act
- Federal Food Drug and Cosmetic Act
- Federal Insecticide, Fungicide, and Rodenticide Act *
- Fish and Wildlife Coordination Act
- Federal Meat Inspection Act *
- Federal Water Pollution Control Act (Clean Water Act)
- Food Safety Modernization Act
- Lacey Act
- Magnuson-Stevens Fishery Conservation and Management Act
- Moving Ahead for Progress in the 21st Century Act
- Marine Mammal Protection Act
- Migratory Bird Protection Act
- Minor Use and Minor Species Animal Health Act *
- National Environmental Policy Act
- National Historic Preservation Act
- National Marine Sanctuary Act
- National Invasive Species Act
- Non-indigenous Aquatic Nuisance Prevention and Control Act
- Outer Continental Shelf Lands Act *
- Rivers and Harbors Act

Federal Regulatory Agencies (15 so far)

Dept. of Agriculture : AMS, FSIS, APHIS {ARS, ERS, FSA, NASS, NIFA, RD, RMA}

Dept. of Commerce: NOAA-NMFS, Protected Resources

Dept. of Defense : ACOE (NOAA and FWS consultations)

Dept. of Health and Human Services : FDA CDC (CFSAN)

Dept. of Homeland Security : CISA, USCG

Dept. of Interior : BOEM, BSEE, FWS

Dept. of Transportation : FAA, FMCSA

Environmental Protection Agency – Clean Water Act and NPDES

White House: Council on Environmental Quality

Human Health

Federal Food, Drug and Cosmetic Act

Food Safety Modernization Act

- Interstate Shellfish Sanitation Conference
- National Shellfish Sanitation Plan
- Enforced by State Shellfish Control Authorities



National Shellfish Sanitation Plan

- Growing Area classification
- Harvest controls – *Vibrio* management
- Aquaculture – desiccation, birds
- Tagging
- Dealer shop sanitation and inspection
- Shipping and Handling
- Enforcement

Permitting

- ACOE - Rivers and Harbors Act
- Structures in navigable waters
- Consultations with NOAA Protected Resources and FWS
 - Endangered species, critical habitat, submerged aquatic vegetation, marine mammals and turtles, migratory birds,
- Coast Guard – Private Aids to Navigation
- State Regulations – Coastal Zone Management and local concerns

What is the Financial Impact?

- >1,300 state and federal laws.
- Independent economists quantified the costs.
- Studies are complete: salmonids, Pacific and Atlantic coasts shellfish, tilapia, catfish, hybrid striped bass.
- Peer-reviewed papers; infographics



The Effects of Regulations on the U.S. Shellfish Industry

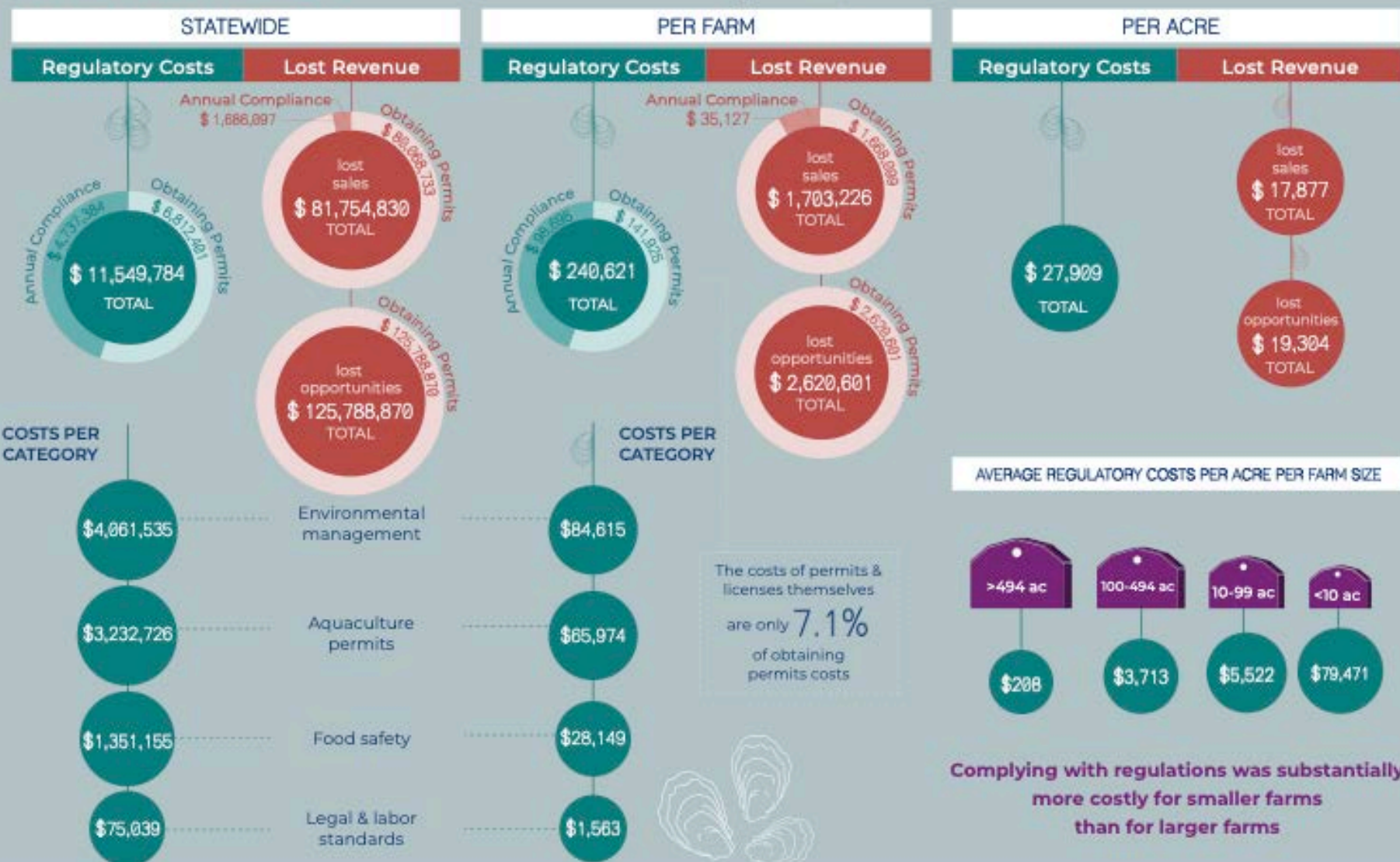
Pacific Coast Findings



For more information check the scientific article by van Santen et al. (2020) Aquacult. Econ. Manag.

AAEC-286NP | VSG-21-10

Design by Scite8 - Science Crunchers



Regulatory Costs East Coast

- Not yet published

	West Coast	East Coast
Regulatory Cost per farm (mean)	\$240,621	\$36,357
Regulatory Cost per farm (median)	\$58,769	\$4,377

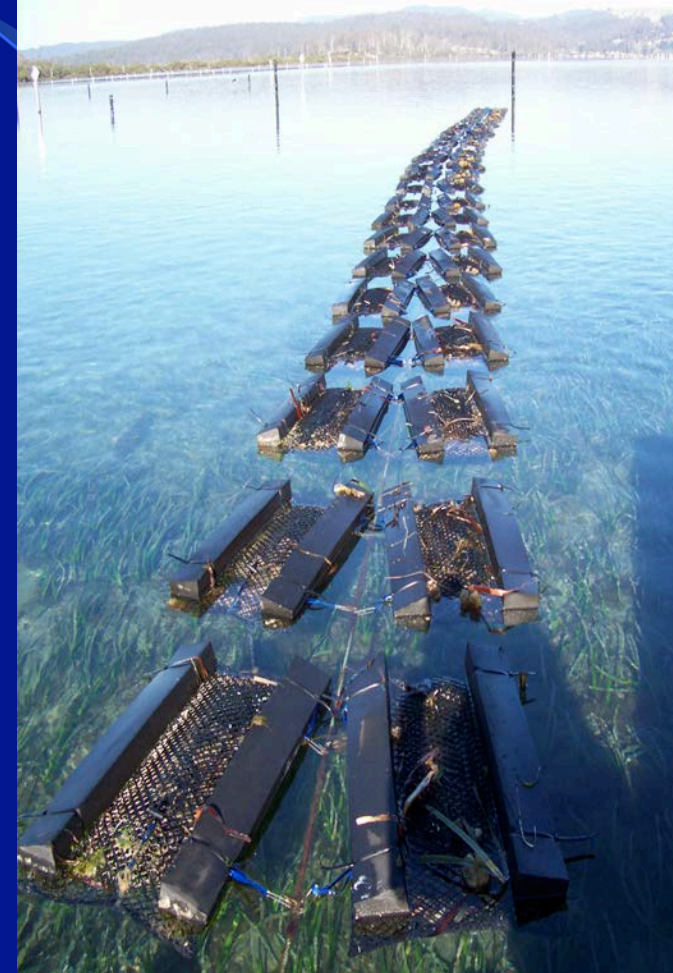
Substantially higher per acre for small farms compared to large

Generally – we like regulations

- Illnesses kill markets
- Pollution kills our crops
- Regulations ensure my competitor is not cutting corners
- But.....
- Regulations need to be rational, science-based, affordable and workable
- How can we justify 3-week resubmergence when the best science says bacteria purge in 48 hours?

Sometimes regulations are not the best tool

- Regulations depend on lots of surveillance, enforcement and penalties & often don't work.
- The regulated community spends a huge amount of time trying to get around bad regs.
- Often we find that industry-driven Best Practices are more effective because we are on the water all the time and peer pressure can be quite effective.
- Goal-driven rules stimulate experimentation.
- Regulations are best written in code **not statute!**



Rules for Regulators

Try to see
things
through the
eyes of the
regulated
community



When drafting regulations everyone has to be at the table

- DMR
- DOH
- NGOs

- scientists
- fishing groups
- a lawyer
- A clam cop
- but no politicians!



It really helps to have enforcement staff present at these meetings



- Helps to have enforceable regulations
- Need to get buy-in from regulators

Aquaculture crops are **not** part of the state's wild resource

- Acceptance of this by state regulatory authorities is a prerequisite.
- Crops are private property.
- Crops must be exempt from wild resource harvest restrictions such as: quotas, bag limits, seasons, minimum sizes & harvest methods.

Important permit elements

1.) Permit bond requirement

Can't allow farms to leave a mess in the commons

Bond duration should extend beyond the end of the lease

Encourage grower associations to pay into self insurance fund



Important permit element

2.) Use it or lose it

- Unfarmed leases should go back to the public
- Blocks speculative leasing
- Blocks unfair competition – leasing up grounds to prevent competition
- Blocks NIMBYs leasing grounds to prevent aquaculture
- Can be challenging to establish fair criteria



Important permit elements

3.) Tough penalties

- Tough enforcement penalties for significant grower violations.
 - **Significant** violations should not be tolerated
 - Penalties should be a real deterrent
 - Repeat violators should forfeit lease or be forced to sell
- Tough penalties for theft and vandalism



Important permit elements

3.) Tough penalties

- But – make sure the penalty fits the crime....
- We have Vibrio regulations with strict time to temperature requirements....
- But if the oysters are at 60F or 70 F the Vibrio doubling time is 8-13 hours. At 90F it is 15-30 minutes!



Important permit elements

4) Seed pathology inspections

- Seed pathology inspections for importation to protect wild and cultured resources.
- If the source waters for the seed have the same pathogens then waive the requirement. (you can't introduce a pathogen that is already there).
- Regional Shellfish Seed Biosecurity Program
RSSBP.org
 - Hatchery certification, best practices, mapping tools
- If you make it too hard to get seed you will kill your industry, or force them to become scofflaws

Important permit element

Keys to Permit Efficiency

- One stop permit application – all agency requirements on one form
- Central leasing authority – not local.
- Aquaculture Coordinator to keep permit applications moving through the process.
- Pre-application process to air ideas among stakeholders before filing a formal permit.



Desirable Permit Elements

- Experimental permits – small and temporary – restricted commercial sales, 2-5 yrs
- Full lease tenure - 10 yrs minimum
- Lease transferability – if same methods are to be used, it should be a simple buyer / seller agreement, not a full permit application.
- Should not need a new application to try similar gear. Experimentation should be encouraged, not stifled.



Site Survey

- If your enforcement tool is GPS then site your leases with GPS.
- Requiring a full site survey by a licensed land surveyor adds thousands to the cost of the permit with no benefit to anyone.



Desirable Permit Elements

- Try to find a way to regulate aesthetics
- Develop a training program as a permit prerequisite (Or Best Practices)
- Lease size maximums constrain development to preconceived norms and are a pernicious form of social engineering
- Residency requirements are popular but not constructive.

Preserve public access where possible

- Not every lease requires exclusive use
(eg. oysters spread on the bottom w/o cages)
- Some sites have submerged gear
(no anchoring or shellfishing, but perhaps allow fishing and boating)
- Some gear will require exclusive use rights (rafts and surface floats).



What is a navigation hazard?

- If you can still get from point A to point B – but you have to go around a farm, that is not a navigation hazard.
- It is called navigating!
- Many states have penalties for boaters damaging fish traps, weirs etc. Should also apply to boaters if they damage an aquaculture lease.

Access is critical

- You can't have farms if there are no commercial slips or boat ramps.
- Distance to the farm has big impacts on profitability.
- Aquaculture zones may **work if properly sited**, but they discourage some really great sites.



Resolve environmental concerns

- If ENGOs or resource managers have reservations about possible negative impacts work with Universities to research issues
- Growing body of scientific evidence showing positive ecological services from aquaculture.
- Almost as good as restoration, (not the same) but free to taxpayer
- Biggest challenge is stray gear after storms

In the early stages, consider setting limits to growth

- Fears of unrestricted growth may actually delay growth.
- Limits can be revisited.
- Ecological Carrying Capacity unlikely to be an issue before Social Carrying Capacity.
- SCC depends on how ugly and obtrusive the industry becomes. Industry sets their own destiny.



Establish tough penalties for farm theft or vandalism



- Must actually be an effective deterrent.
- Talk to enforcement about what forms of evidence are needed to convict.
- Judge education can be valuable.

Establish good notification process for proposed leases

- Neighbors need to feel like they have a voice
- Listen to valid concerns
- Most voiced concerns will be
- Need to have a judicious eye and good local knowledge to separate the real from the fabricated



Uniform lease markings

- Public needs to know where leases are and any use restrictions
- But landowners don't want too many unsightly buoys



**Cultured Shellfish
Are Protected By Law**

● Chapter 597.0045, Florida Statutes ●

REWARD

Up to \$2,500

for information leading
to the arrest and conviction
of individuals illegally
possessing or harvesting
cultured shellfish

REPORT VIOLATIONS

1-800-DIAL-869



CHARLES H. BRONSON, Commissioner

From
Florida

ATTENTION BOATERS!

SHELLFISH AQUACULTURE LEASE AREAS

within Alligator Harbor

OBSERVE MARKED AREAS



**When dive flag is present,
shellfish growers are in water
tending crops. Stay clear.**



**Restricted anchoring.
Avoid anchoring in clam beds
and any contact with the bottom.**



**Shellfish harvesting prohibited
except by leaseholder.**



From
Florida

Mark gear to limit debris



www.Nelcoproducts.com

- Marine debris is the new battleground
- Shoreline surveys to determine the biggest problems
- Mandate labeling to identify offenders
- Let industry peer pressure do its thing
- Help with dumpster expenses and beach cleanups

Improve public education

- Tours
- Web sites
- Signage
- Newsletters
- Press releases
- Oyster gardens

Extension folks
help a lot here

Growers and Regulators Need to Cooperate

- Foster an atmosphere of mutual respect
- Growers who take pride in their industry will self-regulate.
 - They will insist that competitors maintain the same standards that they have to.
 - They might even drop a dime on violators.
- Regulators who demonstrate appropriate levels of respect can expect the same
 - Don't write up the good guys on stupid rules and expect them to still respect you.

When Growers and Regulators are at War Everyone Loses

- Growers won't share information
- Regulators won't let growers in on the process of revising or writing regulations
- Regulations will have unintended consequences
- Regulated community feels abused
- Complaints to legislators restrict resources for agencies
- Regulators retaliate by being overzealous
- No one drops a dime
- Regulators are forced to craft regulations for the dumbest scofflaw that restrict the other 95%

Final thoughts

- Encourage experimentation
- The conventional wisdom may be wrong
- Don't constrain the industry with preconceptions about what may or may not work
- Foster a strong local grower's association



Questions?

East Coast Shellfish Growers Association

Your voice in DC

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