



North Carolina Shellfish Lease Program

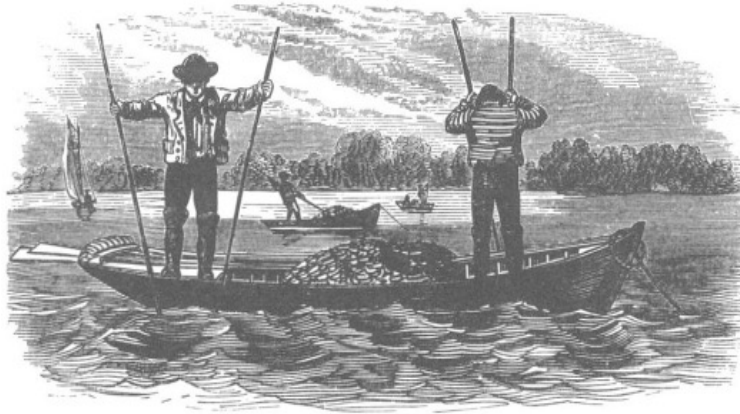
NC DEPARTMENT OF ENVIRONMENTAL QUALITY

NC Division of Marine Fisheries

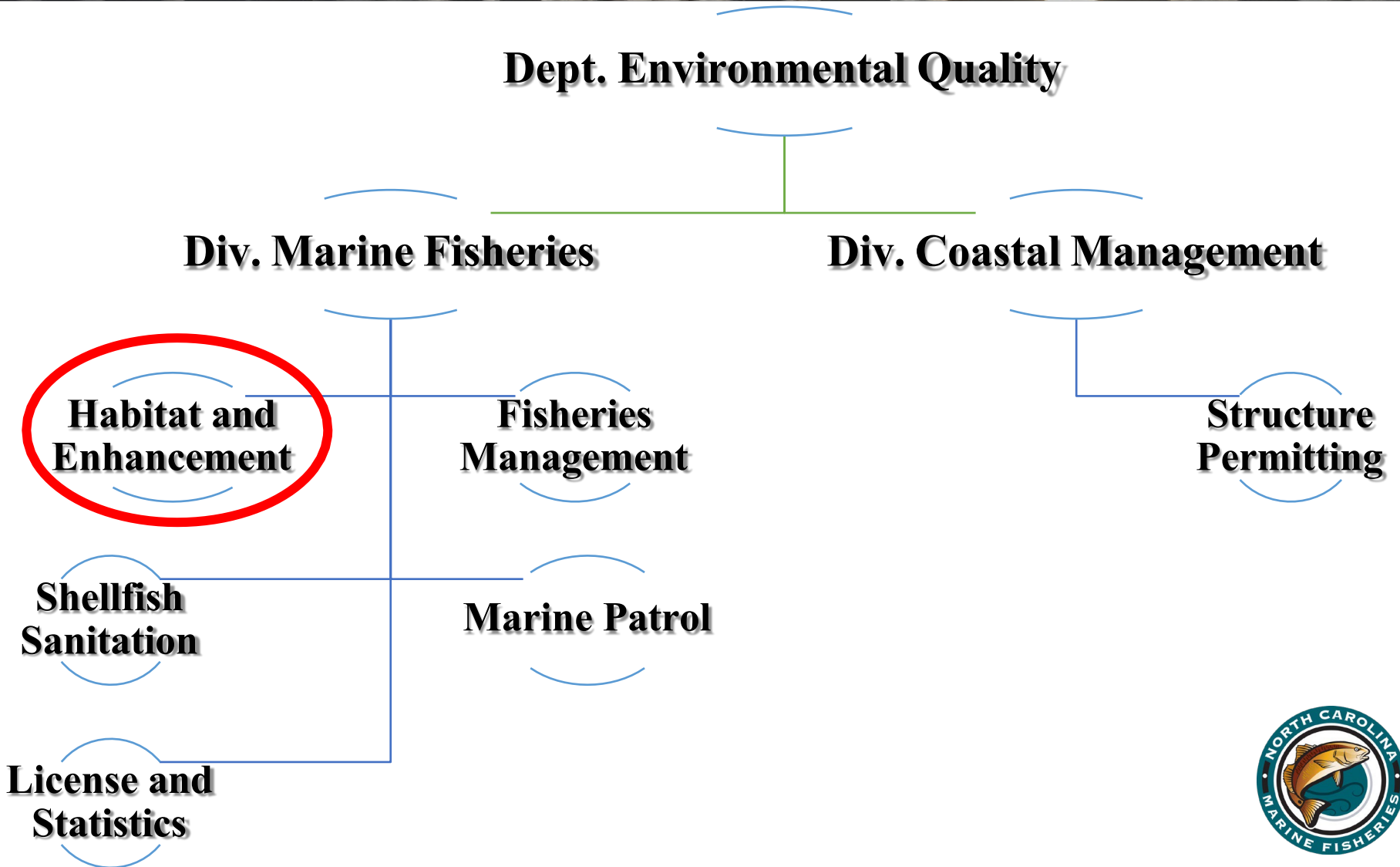


Historical Foundations

- 1858- North Carolina permits the private use of public trust waters for shellfish cultivation
- 1989- Legislation passes to allow for the option to extend leasing rights to the water column above existing shellfish bottom leases
- 2019- SB 648 ('Shellfish Aquaculture Bill') passes, commissioning a user conflict study and directing rule/policy changes to address these conflicts
 - Enacted two shellfish leasing moratoriums (New Hanover County and Bogue Sound)
 - Also allowed for the creation of Shellfish Enterprise Areas (SEAs) → study of SEAs in moratorium areas



Department Organization



Habitat and Enhancement Staff

Section Chief *Vacant*

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Public Trust Doctrine

- Certain natural and cultural resources are owned by the government, and preserved for public use
- Common law doctrine, also in North Carolina General Statute and Constitution
 - “Right to navigate, swim, hunt, fish, and enjoy all recreational activities in the watercourses of the State [and]... the right to freely use and enjoy the State’s ocean and estuarine beaches and public access to the beaches” N.C. GEN. STAT. § 1-45.1 (1985)



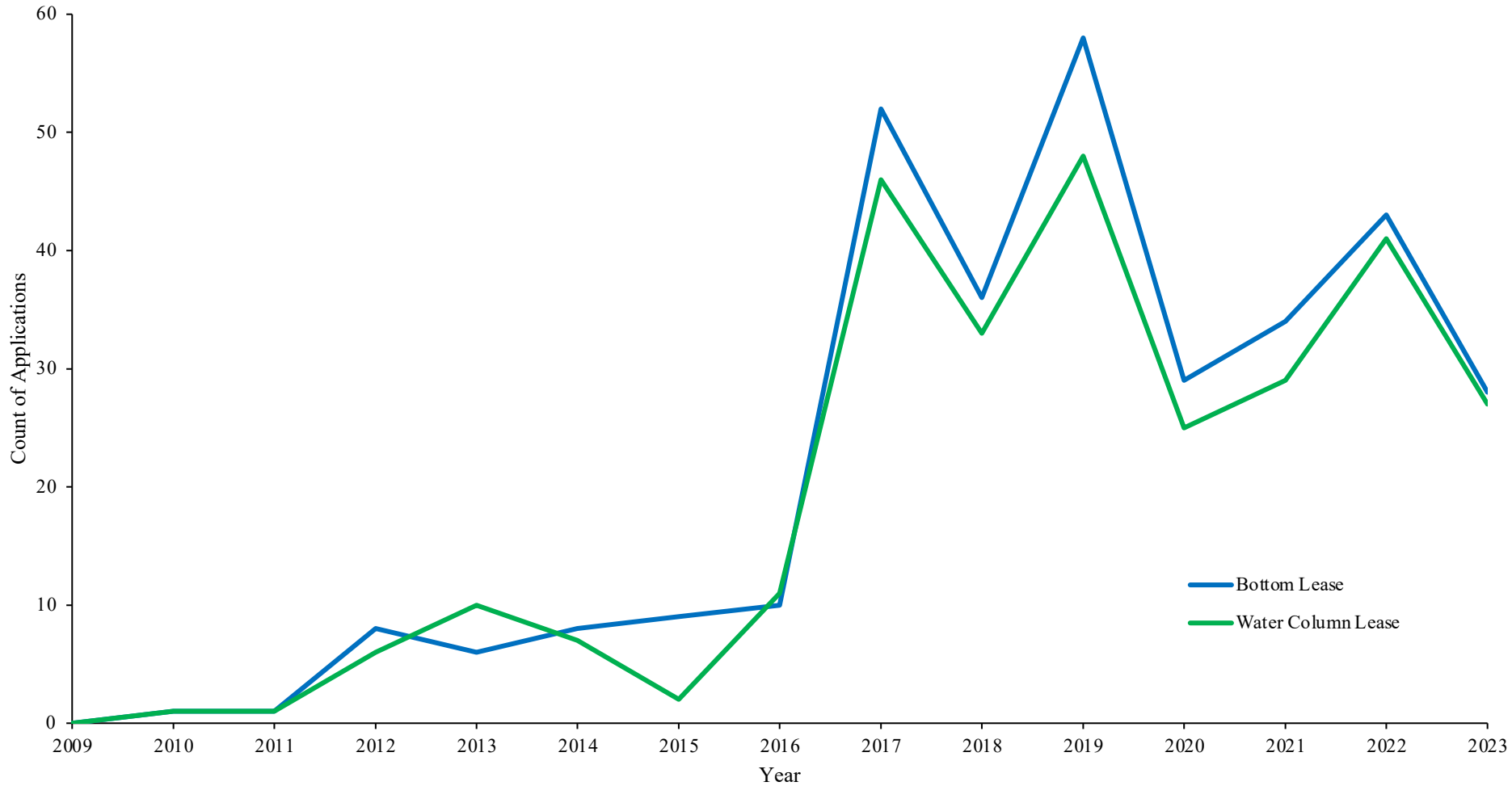
Public Trust Doctrine Exceptions

- The State can create certain exceptions for uses of public trust waters (i.e. shellfish leases)
- Legislature has determined aquaculture benefits the State and her citizens
 - Aquaculture operations may impact public trust uses, but must be *compatible*
- Viewshed is **not** a public trust right acknowledged under North Carolina common law



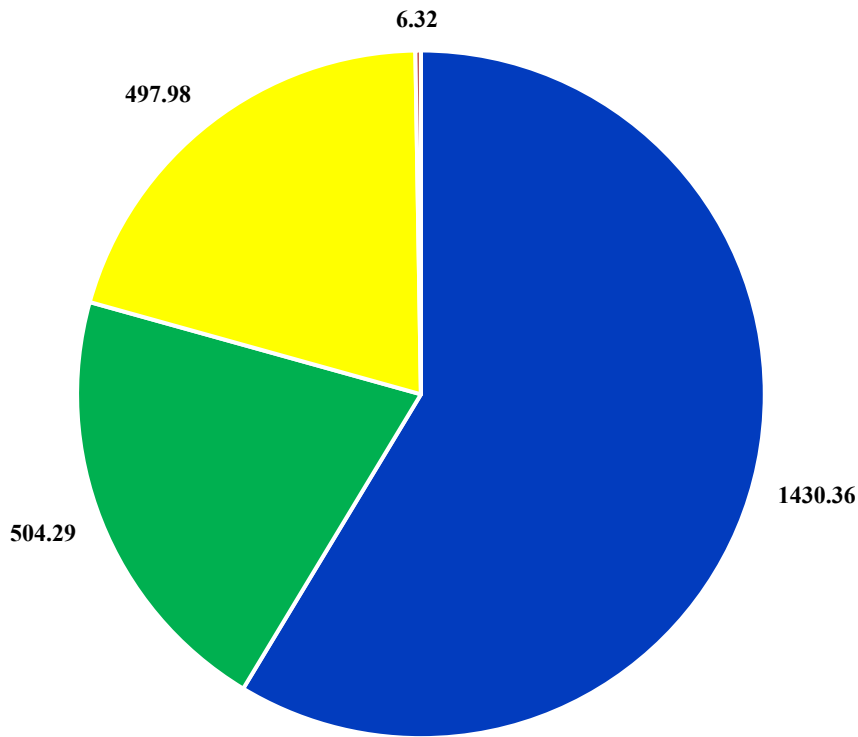
Industry Growth and Evolution

Number of Annual Shellfish Lease Applications

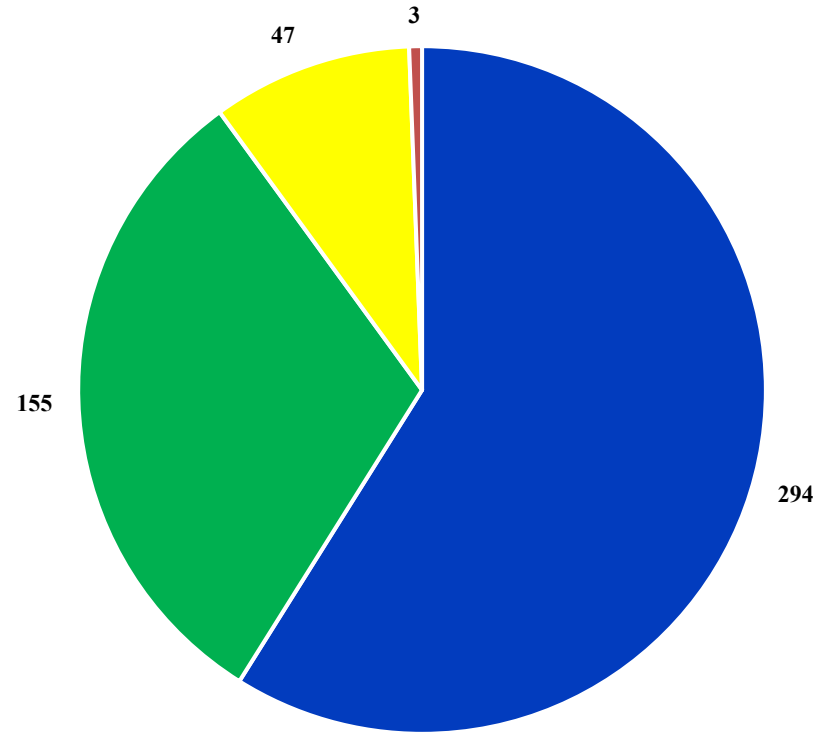


Industry Growth and Evolution

Leased Acres by Type



Lease Count by Type



■ Bottom ■ Water Column ■ Franchise ■ Research



Governing Authorities and Regulation



NC General Assembly

- Shellfish Bottom and Water Column Lease Minimum Standards (N.C.G.S. 113-202, 202.1)



STATUTES



NC Marine Fisheries Commission

- Shellfish Leases and Franchises (MFC Rules 15A NCAC 03O .0200)



RULES



US Army Corps of Engineers

- Nationwide Permit #48 Regional Conditions



Shellfish Lease Applicant Requirements

- Applicants must be residents of North Carolina
- May not hold or have interest in more than 50 acres of shellfish leases
- May not have more than three violations with Marine Patrol
- Any currently held leases over 5 acres must meet production



NCSGA



Shellfish Lease Statutory Minimum Standards

- Individual applications must be for between 1/2 and 10 acres
- Must not include an area closed to shellfish harvest
- Suitable for the cultivation and harvesting of shellfish in commercial quantities
- Must not contain a natural shellfish bed (<10 bu/acre)
- Must be **compatible** with other public uses
- May not infringe upon the rights of riparian owners
- Must meet any standards set by the MFC rulemaking process



Marine Fisheries Commission Rules

- Standards and definitions
- Application processing
- Production requirements
- Lease marking
- Riparian property permission guidelines
- Renewal schedule and process
- Reporting requirements
- Cancellation/termination
- Lease transfer process
- Protection of private shellfish interest



Marine Fisheries Commission Rule Changes

- Improve shellfish lease marking requirements
 - 3-12” corner pole requirement
 - Twelve vertical inches of reflective tape, visible 360°
 - Water column leases require a “caution” sign
 - Limit of 8 corner markers per lease
- Setback increased from 100’ to 250’ on developed shorelines
- 250’ buffer between new lease applications and existing leases
- ‘Cumulative Impact’ language for final application decisions
- Increased training requirements for new applicants
- AOP required for all leaseholders, beginning January 2023



Divisional Policy Changes

- Riparian landowner notification policy
 - Encourage broader feedback through public comment process
- Storm Prep and Gear Management Plan required by new applicants
 - Address marine debris concerns, encourage gear management BMPs
- Shellfish Cultivation Lease Review Committee
 - Vetting process for lease decision appeals by the public



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NC Marine Fisheries Commission

Shellfish Leases and Franchises (MFC Rules 15A NCAC 03O .0200)



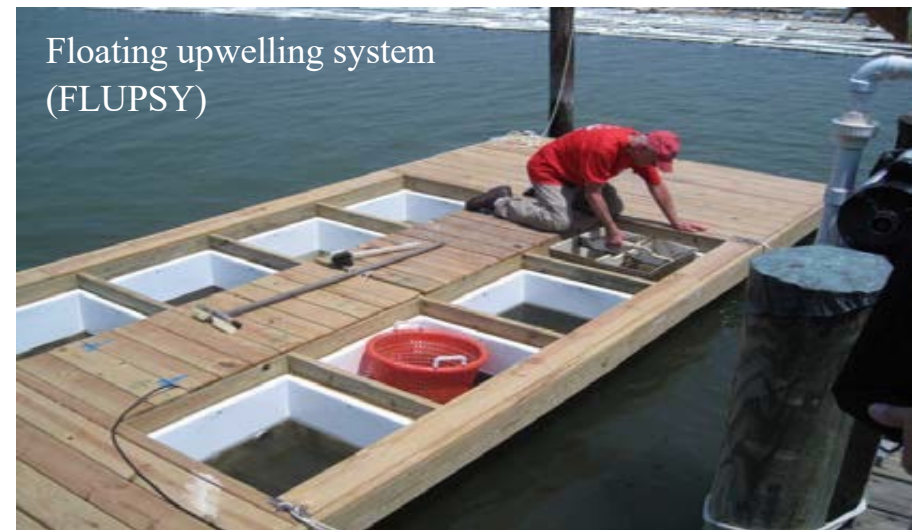
US Army Corps of Engineers

Nationwide Permit #48 Regional Conditions



US ACOE NWP #48

- Installation of buoys, floats, racks, trays, nets, lines, tubes, containers, and other structures into US navigable waters
- Discharges of dredged or fill material into US waters necessary for shellfish seeding, rearing, cultivating, transplanting, and harvesting



NWP #48 Conditions

- Submit Prior Notice of Construction (PCN)
- Less than 1/3 of waterbody coverage
- Less than 15% SAV coverage
- 250 feet minimum from USCG navigational aid
- 20-foot buffer from marsh for water column/cage use
- May not lease marked/unmarked channels
- Applicant must hold applicable CAMA permits



DMF State Aquaculture Permits

- **A**quaculture **O**peration **P**ermit- required to cultivate using gear
- **A**quaculture **S**eed **T**ransplant **P**ermit- move seed from prohibited waters
- **I**ntroduction and Transfer Permit- intro non-native species, or import natives
- **M**echanical Harvest Permit- use mechanical methods not in a PNA
- Polluted Area **R**elay Permit- move product out of polluted area
- **S**eed **O**yster **M**anagement **A**rea Permit- relay from SOMA's
- **U**nder **D**ock **O**yster **C**ulture Permit- personal use shellfish gear
- **S**hellfish **L**ease **R**estoration **P**ermit- transport product to closed area



Leases and Franchises



Shellfish Lease

- Over public trust waters
- Cannot be on productive bottom
- Rent charged
- Must meet annual production requirements



Franchise

- Over recognized submerged lands claim
- Can be on productive bottom
- No rent charged
- Must meet annual production requirements



Types of Shellfish Leases



Bottom

Water Column

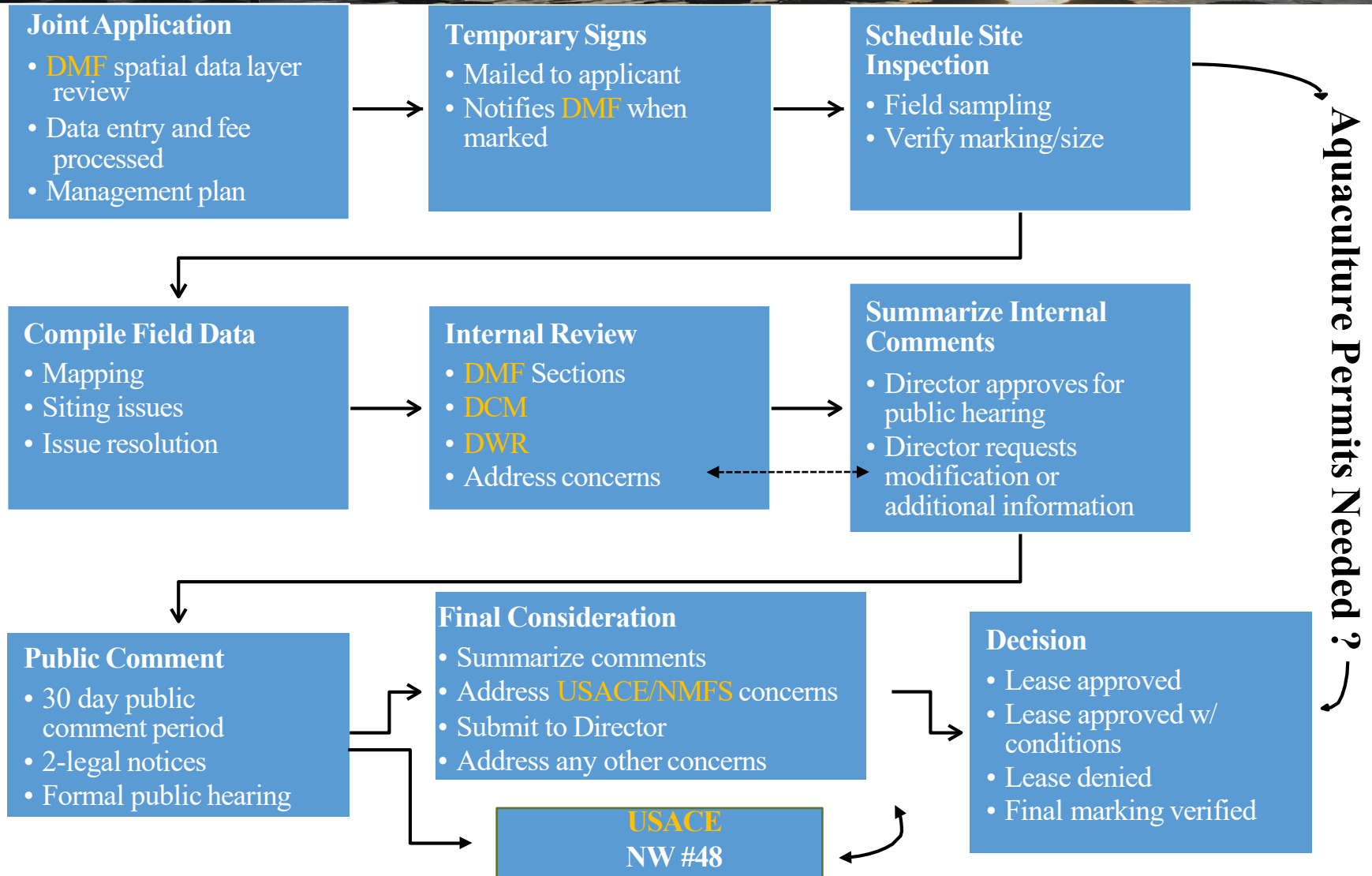
Extensive
(spat on shell, cultch)

Intensive
(bottom cages)

Intensive
(floating gear)



Shellfish Lease Application Process



Shellfish Lease Citing Criteria and Resources

Criteria

- Wave energy, depth, current
- Boating, fishing, recreation conflicts
- Adjacent land use
- Water quality (salinity, dissolved oxygen, etc.)
- Restrictions, closures, moratoriums

Resources

- Consultation with DMF, DCM, NC Sea Grant
- NC Shellfish Growers Association, other growers
- The North Carolina Shellfish Siting Tool – UNCW
- NCDMF Shellfish Aquaculture Tool





Legend

Leases

- Water Column
- Bottom
- Franchise
- Research Sanctuary
- Terminated
- Proposed - Bottom
- Proposed - Water Column



Shellfish Aquaculture Tool

<https://arcg.is/0v8nDu>

Site Investigation

- Random grid (25 samples/acre)
- Shellfish presence/density
- SAV presence/density
- Measure buffers
- Verify markers, acreage
- Other factors:
 - Nearby habitat
 - Navigation,
 - Docks
 - Unmarked channels
 - Public Trust usage
 - Adequate water depth

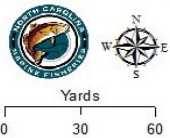


Site Investigation

1m² Hydraulic Patent Tongs



SAV Sampling



Proposed Lease Area

Acreage: 4.78



Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet



- ⊕ Sample with NO SAV
- ⊗ Sample WITH SAV
- Proposed Lease Area

Acreage: 4.78



Coordinate System: NAD 1983 StatePlane North Carolina FIPS 3200 Feet

Shellfish Lease Marking Requirements

- Poles must be 3-12in. diameter
- Extend \geq 4 ft. high water
- Shellfish lease number
- Leaseholder name
- Shellfish water column leases (sign indicating 'caution')
- Reflective tape visible from 360°
- Boundary markers every 50-150 ft.



Annual Rent

Fee	Bottom	Water Column
1 st yr. - rent prorated June 30	\$1 per acre	\$100 per acre
Annual rent	\$10 per acre	\$100 per acre
Renewal fee (10 yr. contract)	\$100	\$100



Minimum Commercial Production Requirements

July 1, 2019

Type	Production	Prior (per acre)	After (per acre)
Bottom	Produce:	10 bu.	20 bu.
	Plant:	25 bu. seed OR 50 bu. cultch	15,000 seed: <i>Extensive</i> 23,000 seed: <i>Intensive</i>
Water Column	Produce:	40 bu.	50 bu.
	Plant:	100 bu. seed OR cultch	23,000 seed



Benefits of Shellfish Leases

- Increase availability of fresh, local shellfish
- Direct economic stimulus (employment of workers and dealers)
- Indirect economic benefits (restaurants, gear manufacturers, hatcheries)
- Ecosystem services (restorative aquaculture)
- Spawning potential to enhance natural population (diploid)



Questions?

Shellfish Lease Program: <https://deq.nc.gov/shellfish-lease>

Shellfish Aquaculture Tool: <https://arcg.is/0LD5zS>

Frequently Asked Questions (FAQs): <https://deq.nc.gov/lease-faqs>

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