Changes In Maryland Shellfish Aquaculture

A History of Oyster Harvests and Laws in Maryland

- 1904: General License System implemented.
- 1938: Oyster Police established. Collected fines, and set limits to protect oyster stocks.
- 2008: Oyster Shell Tax.

- 2008: Oyster Aquaculture Law.
- 2013: Oyster Shell Tax.

- 2015: Oyster Shell Tax.

- 2016: Oyster Shell Tax.


- 2018: Oyster Shell Tax.

- 2019: Oyster Shell Tax.

- 2020: Oyster Shell Tax.

- 2021: Oyster Shell Tax.

- 2022: Oyster Shell Tax.

- 2023: Oyster Shell Tax.

- 2024: Oyster Shell Tax.

- 2025: Oyster Shell Tax.

- 2026: Oyster Shell Tax.

- 2027: Oyster Shell Tax.

- 2028: Oyster Shell Tax.

- 2029: Oyster Shell Tax.

- 2030: Oyster Shell Tax.

- 2031: Oyster Shell Tax.

- 2032: Oyster Shell Tax.

- 2033: Oyster Shell Tax.

- 2034: Oyster Shell Tax.

- 2035: Oyster Shell Tax.

- 2036: Oyster Shell Tax.

- 2037: Oyster Shell Tax.

- 2038: Oyster Shell Tax.

- 2039: Oyster Shell Tax.

- 2040: Oyster Shell Tax.
Science and politics

- Scientists, watermen and Maryland politics from 1880
- Documents political opposition over a century
- Social justifications used
- Politics trumped progress … until recently

1992 Oyster Roundtable

- Formed by DNR Secretary
- Professionally facilitated
- Membership of widely diverse interests
- Full consensus or no agreement
- “No one gets all; all get some”
- Led to action plan that developed Oyster Recovery Partnership, tributary zones, managed reserves and other concepts
2003 Task Force on Seafood and Aquaculture

• Created by General Assembly
• Two sections with 40 members
  – Seafood
  – Aquaculture
• Wide membership base
• 18 month investigation
• Supported by the Maryland Aquaculture Development Conference
• Legislation submitted for 2005 legislature

Analysis of Problems

• Lack of coordination between agencies
• Untimely delays for water column permits
• Historic dislike for private culture
• Constrained by archaic laws and regulations accumulated over years
• Lack of input to highest levels of state government on regular basis
• Previous legislation only defined roles and responsibilities of MDA, DNR, and UMD
Aquaculture Review Board

• State agencies responsible for permitting (Agriculture, Natural Resources, Health, Environment, Board of Public Works)
• Regular meetings keep permits moving
• Pre-application meeting for applicants
• Chaired by Aquaculture Coordinator
  – Coordinate, streamline, track and ensure communications channels are open with applicant at all stages; document agency problems

Aquaculture Coordinating Council

• 17 members
  – MDA, DNR, MDE, DHMH, DBED, NRP, UMCP, UMCES, UME, 3 TFL, 3 Industry, House, Senate
• Advisory body to the Governor and legislature
• Annual report to Governor and Environmental Committee Chairs
• Wide range of legislative charges
• Developed Best Management Practices
Governor O'Malley and aquaculture

- Aug 2008 - Governor O'Malley visits shellfish aquaculture businesses on the coastal bays
- Noted increase in Virginia industry in both hard clams and oysters
- Recognized aquaculture benefits to economy and environment
- Called for plan to spur development to him within 60 days
Lease Law Provisions

- Changed from legislative to regulatory framework for management
- Deleted county prohibitions on leasing
- Allowed corporations to hold leases
- Allowed nonresident leasing
- Deleted acreage limitations
- Replaced with “use or lose” program with oversight monitoring and production requirements

Key Provisions: Other

- Planting requirements
  - 1 million seed / acre on 1/4 annually
  - Waiver if unavailable or other factors
  - Requires production plan with application
- Clearance zones
  - 150’ from channels, pound nets, marinas, launching ramps and PSFAs
  - 50’ from shoreline except by agreement of riparian owner
Public Shellfish Fishery Areas

• Modified Natural Oyster Bars (NOB) to Public Shellfish Fishery Areas (PSFA) which remain reserved for public harvest
• Can be reclassified upon petition and survey weighed against defined criteria
• Determined by past 3 years harvest data and surveying to obtain quantitative information to base decision; regulatory process

MD Shellfish Management Plan

• Expands sanctuaries but allows leasing in them
• Public Shellfish Fishery Areas for harvest
• Study areas for testing power dredging
• Expanded technology for theft prevention
• New laws and regulations targeting theft reduction
Industry Development Support Programs

Oyster Aquaculture Education & Training Program Project 2a

- Three-year UM Extension project
- Classroom and on-site training
- Print and electronic training material
- Oyster Hatchery Short Course
- Annual Aquaculture Conference
- Meshes with ORP Remote Setting Project
- Programs: regional workshops; gear field day; investment seminar; HACCP training; risk management seminars; marketing workshops
Financial Support

• MARBIDCO
  — $2.2 million between capital and disaster funds
  — Additional fund infusion in 2012
  — Low interest, non-collateralized loans
  — 3 to 4.5% interest; 40% principal forgiveness

• Natural Resources Conservation Service
  — $1 million in EQIP grant funds
  — Bottom culture for development of habitat
  — Renovate existing substrate
  — Addition of new stabilization substrate
  — Planting seed

• UM Extension provided assistance in developing application and business plans

Remote Setting Training

• Cooperative project with Oyster Recovery Partnership (ORP)
• Integration into training program
• Systems provided for seed production
• 30 tanks, pumps, blowers, plumbing
• 6 current systems loaned in 2 week blocks
• Growers provide cultch and labor
• Free larvae and on-site instruction
Remote Setting Site

Example: Deal Island Remote Setting Site at the DNR facility with tanks, pump, blower, piping and valves in place

2011 Summary

- Operating Locations: 5
- Total Participants: 16
- Sets completed: 20
- Total larvae used: 218 million
- Estimated SOS produced and planted: 32 million

- Bagged Shell Used: 9,950 Bags (4,975 bushels)
- Loose Shell Used: 1,270 bushels
- Crushed Shell Used: 1,800 bushels

All watermen/growers purchased shell from the State
2011

- Reorganized state government
- Centralized aquaculture permitting
- Moved positions from MDE and MDA
- Created Aquaculture Division in DNR
  - Headed by Karl Roscher
  - Five staff positions for support
- Regional General Permit 1 from USACOE
  - 50 acre bottom lease
  - 5 acre bottom cages
  - 3 acre surface float
  - 20,000 acre total

2012 Initiatives

- DNR authority to set water column lease application fees and annual rental rate
- DNR authority to set seed and market sizes
- Shorten & combine public notification periods
- Working to shorten permit process to 120 days
- New lease harvester permit procedures
- Access to shell for bottom stabilization and remote setting
New Lease Applications

• Existing leases = 4,900 acres (fm ~7,000)
• 1,100 + new acres in past year
• Approving at rate of at least 2 per month
• Size 1 to 400+ acres
• 16 applications for sanctuary leases
• Program participation increasing
• Many applicants are watermen

42 Newest

• 23 bottom and 19 water column
• 35 Tidal Fish License holders

• Dorchester – 13
• St. Mary’s – 14
• Queen Anne’s – 4
• Wicomico - 3

• Somerset – 3
• Talbot – 4
• Worcester - 1
PROGRESS TO DATE

• Growers have begun to innovate
• New business have started
• Support businesses have been formed
• New markets have been penetrated
• Early production increased >50%

Preparation is critical for success
• Better tillage equipment needed
  – Oyster dredge
  – Crab dredge
  – FMC harrow
New Methods and Gear

- Surface floats
- Bottom cages
  - Came from *C. cariakensis* experiments
  - Can use unprepared bottom

- Generally for raw bar animals
- Higher capital and labor costs