

Developing Shellfish Aquaculture Regulations

Second Public Workshop 2/26/13

Comments received from the last meeting

Comment

- Make lease areas “off limits” to recreational users
- Give Delaware residents priority for leases.
- When will applications be accepted?
- Check navigation/other user concerns with some sites
- Will imported seed need to be approved/tested?

Response

- Not legally an option—these are “public trust” areas.
- The law did not give priority to DE residents; therefore, the regulations cannot.
- Applications will be accepted after regulations are in place.
- Currently getting input on navigational and other concerns.
- Yes, growers will need to contact the Fish & Wildlife before importing seed, and have seed from out of state tested/approved.

Comments Continued

Comment

- Will other sites be considered for SADA?
- Will all types of gear be available?
- Will lessees/other users be able to harvest natural clams in lease sites?

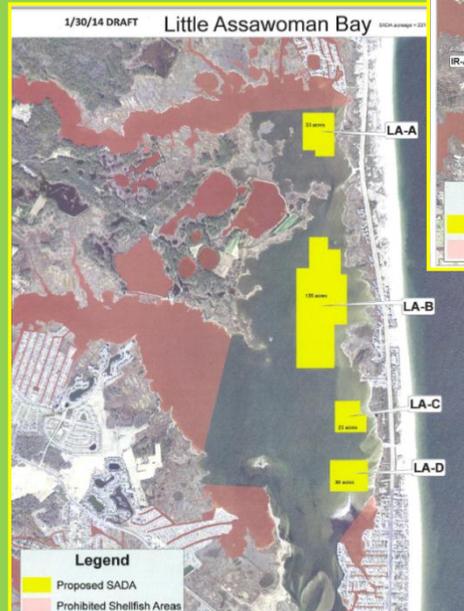


Response

- Certainly, but they have to meet criteria.
- Considering all gear types, asking for feedback to see if there are conflicts.
- 1st, the hard clam survey should ensure that sites are not in high-density clam spots, but, to protect the equipment and the resource, there will be no harvest of wild clams.

Comments about Maps

- Have had additional input from Shellfish Sanitation (LA-A not an option) and Enforcement about locations
- Examining other areas, getting comments (too close to navigational channel, too much other site use, interference with other species)



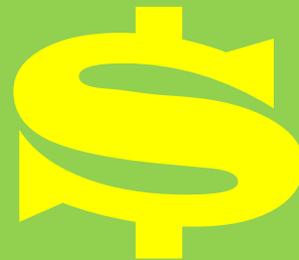
Lease Corner Survey



- Hydrographic surveyor
 - Pro: experienced surveying on water, ready and able to mark accurately.
 - Con: most expensive option (est. \$4500)
- Certified Land surveyor
 - Pro: licensed surveyor, less expensive option (est. \$500-\$2500), still able to mark legal corners, willing to survey subaqueous leases
 - Con: not experienced in subaqueous surveying, may need transport/help with setting corners
- Costs in line with other states, not a large portion of the overall cost of doing business

What Are the Start-up/Continuing Costs of Shellfish Aquaculture?

- Variable, dependent on many factors
 - What species?
 - What gear?
 - What intensity (100,000+ shellfish)?
 - Experience of grower/employees?
 - Labor costs?
 - Equipment costs?
 - Set up?



Oyster Culture (cultchless bottom culture)

- Based on VIMS 2012 Oyster Budget (small scale oyster operation)
 - Slight adjustments made to incorporate Delaware legislation-set costs, and projected state-specific start-up costs.
 - VIMS estimates 2 years to start harvesting oysters, but notes that some areas may take 3+ years to get to harvest size
 - There is no return on investment or profit until harvest.
 - <http://www.vims.edu/research/units/centerspartners/map/aquaculture/index.php>

VIMS Introduction to Budget

- “This small-scale cultchless oyster enterprise budget is intended to characterize a typical operation since the numbers are based on industry surveys and interviews. However, each oyster farm is different and numbers need to be modified to account for those differences. Capital structure, production practices, location, etc. vary and affect costs and returns. In particular, labor estimates should be carefully considered so these costs reflect your operation. Labor is the costliest budget item and therefore affects profit more than other categories.
 - * An important note of caution-this budget stops at the ‘farm gate’ and does not include marketing costs. The budget assumes that a wholesale distributor does the marketing. Thus costs, such as additional refrigerated transportation, shipping costs and packaging materials are not considered.”

Operating Expenses	Cost Year 1	Cost Year 2	Item % of Total Cost to Harvest
Oyster seed (triploid, 8mm) X 100,000	\$2,000	\$2,000	6.5%
Seed Import Testing	\$600	\$600	1.9%
Labor, Employment tax, Workers' Comp	\$9,646	\$9,646	31.6%
Boat and Truck Fuel	\$1,943	\$1,943	6.3%
Boat and Truck Maintenance	\$700	\$700	2.3%
Misc. Equipment Maintenance, Supplies, Expendable Supplies	\$2,982	\$42	4.9%
Annual Interest on Loan (boat, motor, trailer)	\$705	\$705	2.3%
Boat and Truck Insurance	\$1,284	\$1,284	4.2%
Liability Insurance	\$550	\$550	1.8%
Performance Bond	\$400	\$400	1.3%
Legal fee, LLC Registration, Accounting (tax) Fees, Business Tax	\$1,250	\$750	3.3%
Winch, Truck, Cages Depreciation	\$8,989	\$8,989	29.4%
Bags (seed and grow out) Depreciation	\$200	\$200	0.6%
Application Fee	\$300	\$0	0.5%
Corner Survey	\$1,500	\$0	2.4%
Lease Fee (resident)	\$100	\$100	0.3%
Shellfish Harvester License	\$25	\$25	0.08%
Total Cost Year 1	\$33,174		
Total Cost Year 2		\$27,934	
Total Investment Before Harvest			\$61,108

Clam Culture Budget

- Adapted from “Aquaculture in North Carolina: Clams Inputs, Outputs and Economics” by the North Carolina Department of Agriculture and Consumer Services, 2001
 - Slight adjustments made to incorporate Delaware legislation-set costs, and projected state-specific start-up costs.
 - NC estimates that it will take 3 years from planting to the first harvest.
 - There is no return on investment or profit until harvest.
 - <http://www.ncagr.gov/markets/aquaculture/Clam01.pdf>

NC Introduction to Budget

- “The economics of clam farming presented in Clam Budgets is based on information obtained from NC clam farmers. The budgets should be used as a guide for prospective clam farmers, who should construct a business plan with supporting budgets and financial projections before any investment decision is made.”

Investments	Year 1 Costs	Year 2 Costs	Year 3 Costs	Item % of Total Cost until Est. Harvest
Nets	\$299	\$299	\$299	2%
Rebar & Sandbags	\$867	\$867	\$867	6%
Hand Graders	\$110	\$0	\$0	0.2%
Site Survey	\$1,500	\$0	\$0	3.5%
Lease Application	\$300	\$0	\$0	0.7%
Shellfish Harvester License	\$25	\$25	\$25	0.2%
Lease Fee	\$100	\$100	\$100	0.7%
Harvest Rake	\$385	\$0	\$0	0.9%
Misc. (waders, hip boots, buckets, etc.)	\$550	\$0	\$0	1.3%
Truck, Boat, Motor Depreciation	\$465	\$465	\$465	3.2%
Share of Office Equipment/Overhead	\$638	\$638	\$638	4.4%
Clam Seed (12 mm seed from NJ) x 100,000	\$2,250	\$2,250	\$2,250	15.7%
Seed Import Testing	\$600	\$600	\$600	4.2%
Labor	\$1,402.50	\$2,805	\$4696.25	21%
Truck & Boat Fuel/Oil	\$650	\$650	\$650	4.5%
Repair & Maintenance of Equipment	\$241	\$241	\$241	1.7%
Harvest Bags	\$194	\$194	\$194	1.3%
Interest on Costs	\$962	\$962	\$962	6.7%
Depreciation of Equipment	\$2,196	\$2,196	\$2,196	15.3%
Liability Insurance	\$550	\$550	\$550	3.8%
Performance Bond	\$400	\$400	\$400	2.8%
Total Year 1	\$14,684.50			
Total Year 2		\$13,242		
Total Year 3			\$15,133.25	
Total Investment Before Harvest				\$43,059.75

Marking of Aquaculture Lease Sites

- The land will be marked when surveyed, and the leaseholder will maintain the markings.
- Markings need to be consistent, for public safety and lease protection.
- Each corner of an acre lease marked with a PVC pipe of at least 4 inches in diameter
 - And an orange diamond placard 12"x12"
 - With 24" of reflective tape on pole and placard
 - Lease number in 3" letters
- Gear individually marked with white buoy.

Further Comments/Questions?

