



Shellfish - Aquaculture Water Quality Standards

Coastal Zone Partners Workshop
December 7, 2007
Portsmouth, VA

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Department of Environmental Quality

Aquaculture/Shellfish Rulemaking Schedule



-  •NOIRA or NOPC Comment Periods
-  •DPB and Executive Reviews
-  •Public Comment Review, Ad Hoc Technical Advisory Committee (TAC), Proposal Development, Board Approval of Proposal for Public Hearing (June or September 08)
-  •Public Comment Review, Board Adoption (March or June 09)
-  •Final Publication, AGO Certification, EPA Approval, Effective Date

Purpose and Background

- Enhance high quality waters which are especially well-suited for shellfish or aquaculture operations. Safeguard important shellfish habitat areas and the sustainability of Virginia's aquaculture industry by providing additional water quality protection for these waters on Virginia's Eastern Shore.
- Governor's initiative to support aquaculture and he has requested ways be identified that encourage consideration of alternatives to the discharge of wastewater for treatment facilities on the Eastern Shore.



Purpose and Background

- The State Water Control Board has seen controversy generated over proposed new developments, with concern expressed over the associated discharges into Eastern Shore waters, especially seaside water.
- The Seaside Heritage Program is now moving into a management plan phase that strives to both protect coastal resources and ensure the growth of sustainable industries such as shellfish farming and ecotourism that depend on high water quality.



Aquaculture Statistics



- Hard clams are the second most valuable crop grown on the Eastern Shore, exceeded only by nursery plants.
- In 2003, Virginia aquaculture operations (clams, oysters, trout, catfish, and other species) grossed over \$32.5 million, with clam aquaculture, by far, representing the largest sector with \$20.3 million in sales.
- Clam production has expanded significantly in the last 15 years, from 30 million clams in 1991 to 178 million in 2005.
- In 2004, Eastern Shore companies sold 150 million market-size clams valued at \$23.9 million, increasing an additional 19% to 178 million clams in 2005.
- Five or six Eastern Shore firms contribute 75% of the annual state clam production.
- In addition to market-sized clam production, approximately eight private clam hatcheries (all but one located on the Eastern Shore) produce juvenile clam “seed” for aquaculture operations, generating an additional \$1.5 million in revenue in 2004.

ALTERNATIVES

- Enhancement and consolidation of the current DEQ tools available to protect water quality but need to be sensitive to other programs and the impact on other programs.





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ALTERNATIVES

- Existing water quality standards (WQS) for shellfish may need to be combined, clarified or explained (public hearing requirements for permit issuances in condemned waters, policy for shellfish growing waters, numerical criteria for toxics, nutrients and bacteria, antidegradation, etc..).



ALTERNATIVES

- What use will the rule focus on? Aquaculture / Shellfish / Both
- What pollution source will the rule focus on? Sewage (bacteria criteria)
- Where should the rule apply? The Notice focused on the Eastern Shore, both seaside and Bay side.



ALTERNATIVES

- Include into the WQS a new designation of “Aquaculture Enhancement Zones or Areas” for the waters that are used or could reasonably be used for shellfish aquaculture on the Eastern Shore of Virginia.
- For waters so designated, include a narrative criterion that would require applicants for point source dischargers to demonstrate that practicable alternatives to discharging pollutants to the listed waters have been evaluated and that the proposed discharge is the alternative that produces the least environmental impact.



ALTERNATIVES

- Work with VDH to discuss strengthening of the on-site sewage disposal (e.g. septic systems) requirements to prevent shifting the impact from surface water to ground water.
- Provide flexibility in the alternatives analysis procedure. Additional topics, such as cost, geographic restrictions, technological limitations and possible other issues could be evaluated for inclusion in the alternatives analysis procedure.
- Other alternatives may develop during comment period or ad hoc advisory committee.



Economic Cost-Benefit

- Benefits to shellfish aquaculture if regulatory or management practices change.
- Assessment of which regions have the capacity (economic, ecological, legal) to support increased shellfish aquaculture.



End

<http://www.deq.virginia.gov/wqs/rule.html#SHELL>

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