



January 2008

# Aquaculture Program Newsletter

An occasional newsletter designed for leaseholders and others interested in aquaculture in Maine. Suggestions are welcome!

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## Mark Your Site for Liability Protection!

According to federal law, leaseholders who place structures (gear) in the water must apply to the U.S. Coast Guard for a determination as to what type of navigational marking is required, and then install and maintain those markers.

In the past, it was sometimes difficult to obtain a timely response about marking determinations. However, it appears that this issue has been resolved, and the process should be more prompt.

Leaseholders who do not comply with the Coast Guard marking requirements may have greater liabilities in the event that a vessel runs into the gear, making this not only a legal issue but a business issue as well.

If you have gear on the lease, and you have not already obtained your marking requirements, contact the U.S. Coast Guard Private Aids to Navigation. If you have internet access, go to <http://www.usharbormaster.com/> and register on the web site to begin the application process. If you do not have internet access, call the District 1 office at 617-223-8358.

As always, you must also follow DMR lease marking regulations, including appropriately labeled corner markers. DMR has tried to design the marking requirements so they do not conflict with Coast Guard requirements, but let us know if that happens so we can adjust the rules.

## DMR Research Priorities

When DMR aquaculture staff recently conducted its annual review, we observed that, compared to the recent past, this past year has been relatively calm. But the calm is based largely on what is not happening rather than what is. And while we may have enjoyed a lull, I am concerned that some weather may be headed this way. Shellfish aquaculture continues to enjoy less controversy relative to finfish. However, members of the public are raising a variety of issues that could affect shellfish growers. Questions arise around how many shellfish farms an estuary can safely support, sediment turbidity associated with bottom harvest, mussel seed from aquaculture sites smother-

ing adjacent clam and worm flats, eel-grass shading, pathogen movement, wildlife interactions, and uncertainty that "my" bay might become saturated by aquaculture.

No sooner has finfish aquaculture settled into a new and confusing permitting regime, it is faced with permit renewals with the potential for revisions and more confusion. DMR is working with DEP to ensure that we obtain only information that is scientifically reliable and relevant. And while sea lice and ISA appear to be under control, the USDA is planning to close its APHIS office in Eastport that has coordinated fish health practices between Maine and New Brunswick.

Controversy is inherent in most public processes, but our goal is to minimize needless controversy by informing and educating both the industry and the public. Maine's aquaculture industry has a good environmental track record but this fact is not commonly appreciated. We are looking for ways to develop and present more scientific and technical information about aquaculture to the public so that the absence of knowledge does not contribute to misinformation, exaggeration and ignorance.

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Several projects under way at DMR promise to contribute useful information to this effort. These include:

- documenting bottom conditions under mussel rafts;
- tracking eelgrass density under suspended oyster lines;
- analyzing MePDES data to support streamlining the finfish permit;
- assessing the effect of mussel aquaculture on adjacent clam flats;
- developing less invasive bottom drags and techniques for mussel harvest; and
- updating our web page to convey an accurate picture of aquaculture in Maine.

Other work is still a wish. Inventorying indigenous pathogens along our coast would help us manage fish and shellfish disease. Knowing more about interactions between aquaculture and seabirds would help avoid harming seabird restoration and conservation efforts and make leasing decisions more predictable. And removing unnecessary regulatory impediments to new aquaculture could promote innovation into improved husbandry techniques including polyculture.

We at DMR want feedback from the aquaculture industry and the public about our research priorities and welcome suggestions for improvement in all of our communication efforts.

*John Sowles*



## **What Lease Information Can DMR Keep Confidential?**

This is a question we are sometimes asked by leaseholders, and unfortunately it is a complicated question to answer because there are so many different laws and rules that apply.

Maine has a very strong “Freedom of Access” law that says that all government information is public unless it is specifically listed as confidential. For aquaculture, there are several parts of the law that make data confidential to one degree or another.

The simplest types of data are the ones that are public. All lease application materials, general correspondence, fish health data, rental payments and bond information, transfer permit applications, importation permit applications, and any other information that is not specifically exempted is public information.

In general, annual lease reports are considered confidential, with the exception that the municipality may receive a copy. The annual lease report confidentiality could be challenged, at which point the leaseholder would receive a notice and the opportunity to justify the confidentiality of the data. This process is established in the Marine Resources laws, and has specific procedures and timelines.

If you would like to know more about this topic in general, or have specific questions, please contact Samantha Horn Olsen at 624-6554 or [Samantha.horn-olsen@maine.gov](mailto:Samantha.horn-olsen@maine.gov). A document that details data confidentiality and the laws that govern the release of data is available.

*Samantha Horn Olsen*

## Investigation of benthic conditions under mussel farms

Over the past several years, Marcy Nelson and I have dived under a number of mussel-raft farms between Casco Bay and Stonington. During some of those dives we noted a buildup of organic matter, dropped shell and living mussels, and anoxic conditions. The degree of impact to benthic infauna and the surrounding ecological community under these rafts became a concern.

To investigate the response of the benthic community under these farms we revisited two sites, that in our experience represented moderately and severely impacted sites. We collected underwater video and sediment samples under the rafts, five meters from the edge and thirty meters from the edge of the rafts. We also collected sediment samples from a reference location where bottom conditions were thought to be similar to beneath the rafts but outside of raft influences.

Sediment samples were passed through a 1 mm. sieve, and all material retained was jarred, fixed in formalin, and subsequently stained for species identification. Chris Heinig, and MER Inc., a Brunswick consulting firm, identified all organisms found in each replicate sample.

Results showed very low diversity under the rafts and no clear pattern of lowered diversity under or near the rafts compared to 30 meters away. Little benthic infauna was found under rafts and at the severely impacted site, sediments were clearly anoxic by odor. The moderately impacted site did not exhibit anoxic conditions.

Here is where the reference site became extremely important and informative. Reference samples also had little infauna in each sample. While differences were apparent, these differences were the result of very small sample sizes in terms of organisms identified. A fifty percent reduction

under one farm was the result of finding two organisms in a reference location but only one at the raft location. Diversity was considered poor under the rafts at one location because only one organism was identified. Reference samples also showed low diversity due to few organisms identified. Life under the rafts sampled was minimal, just as it was at reference stations.

What did this sampling tell us? It appears that siting of mussel rafts is appropriate in that they have not been located over sensitive environments. While samples under the rafts sampled showed some impact, there was not much there to affect in the first place. In the worst case, organic buildup under the rafts, while clearly visible to the eye, has essentially made an inhospitable bottom potentially less hospitable; but with little or nothing there to be affected, is it of concern?

We know that organic buildup under mussel rafts can be "remediated" through biological consumption and degradation over time. The effect is not permanent. Hence, where buildup has been documented, a rational and practical response is to shift the rafts over a new footprint where possible. At both farms sampled, lease holders were able to identify past practices that might have contributed to organic buildup and changes that they could employ to reduce future drop-off.

Finally, nets and ropes dropped to the bottom continue to be of concern both from an ecological perspective and from a diver safety perspective.

A more complete summary of this sampling event will be posted to the DMR Aquaculture Web page shortly.

*Jon Lewis*

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## Emergency Shellfish Leases

Emergency shellfish permissions and leases are little-used tools, but could be extremely useful in case of a fuel spill, major storm, or disease event that threatens the health and safety of a shellfish crop.

There are two types of emergency aquaculture permissions. First, there is an emergency permission. When shellfish are threatened in a non-disease emergency (such as an impending storm or approaching oil spill), the aquaculturist must submit a brief, one-page form or letter prior to moving the shellfish, but may then move them immediately. The DMR then must respond within 48 hours with a "Letter of Permission" or a denial. If the permission is granted, the shellfish may remain at the new location for 10 days, or until an emergency lease request is processed. If the permission is denied, the shellfish must be returned to a legal lease site within 3 days.

For disease-related emergencies, no temporary permission is allowed, but a leaseholder may still apply for an emergency lease. Emergency leases may be issued for up to 6 months or until a new standard or experimental lease application is processed, provided the application is received within 60 days of the granting of the emergency lease.

The Emergency Shellfish Relocation Form is located at [http://www.maine.gov/dmr/aquaculture/aquaculture\\_lease\\_applications.htm](http://www.maine.gov/dmr/aquaculture/aquaculture_lease_applications.htm), and may be used to request an emergency *letter of permission*. The form can be faxed or emailed to DMR. Aquaculturists interested in applying for an emergency *lease* should contact an aquaculture staff person, or in the case of an emergency outside of office hours, the Marine Patrol.

*Samantha Horn Olsen*

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## Aquaculture Lease Inspection Program

The 2007 season for aquaculture lease inspections has wrapped up; this marks four years of the program. Sites that were inspected in 2004 and were properly located and marked and met all conditions of the lease agreements were due for a revisit. Only 4 of the farms inspected last year needed to be revisited this year – 3 for lack of markings and 1 for being significantly off-site. Two sites also reported problems with buoys being cut.

For biosecurity purposes, officers selected a handful of finfish sites to visit. Priority was given to farms stocked with fish in 2007.

As of December 20th, 39 leases had been inspected (including 8 finfish farms). Few problems were reported:

- 5 sites were not marked properly; they were missing one or more corner markers or did not indicate “SEA FARM”.
- 5 leases were located outside their legal boundaries; errors ranged from 56 to 150+ feet.
- 1 lease was cited for having loose debris and another received complaints by recreational fishermen due to a sunken raft causing hang-ups.

Feel free to contact me (633-9502) if you have any questions, comments or concerns. We are always looking to improve the program. Have a safe winter.

*Marcy Nelson*

## Fish and Shellfish Health

DMR continues to face significant challenges funding adequate fish and shellfish health programs. Nonetheless, we are moving forward to update chapter 24 to include rules for health testing for cultured cod, haddock and halibut. Having rules in place will be important as we see those species cultured more frequently. We also continue our strong partnership with provincial officials in New Brunswick to jointly manage ISA.

On the shellfish front, despite 2 unsuccessful applications, DMR, in partnership with the MAA, the University of Maine, and Microtechnologies, Inc. are still looking for grant funding for a survey of shellfish diseases in coastal waters. This type of basic data collection and analysis is essential to help protect against imported disease from other jurisdictions and to better understand if and how growers may want to adapt their practices to protect our local stocks and farms based on what diseases occur already in wild and cultured populations.

Another very important outcome of this work would be to have a baseline of information to use as a reference point as we face warming water temperatures and unauthorized species introductions in the fu-

ture. Knowing where we are starting from will help us anticipate where we might be headed!

We are also pursuing, in partnership with the Maine Aquaculture Association, the National Aquaculture Association, and Senator Snowe’s office, funding for the National Aquatic Animal Health Plan. The NAAHP would support surveillance, certification and outreach programs for aquatic animal diseases that may affect interstate movement.

The NAAHP is important for two reasons: the continuation of the ISA program in Eastport is largely dependent on obtaining funding from USDA through the NAAHP, and if we see new diseases in Maine that need a quick reaction, that will be much easier to accomplish if the NAAHP is in place, instead of scrambling for new money.

The fate of that funding is uncertain at this point, as we follow the roller coaster that is the Farm Bill. We’re working hard and crossing our fingers that we are successful.

*Samantha Horn Olsen*

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## Legislation and Rulemaking Update

The 2006-2007 legislative season was a successful one for the aquaculture program. DMR's technical changes bill passed, which included some important changes such as making it illegal to mark an area as an aquaculture site unless you actually have a lease or LPA license..... seems obvious, but it had to be spelled out!

Several other bills that were aimed at adding additional regulatory requirements to the aquaculture permitting process were ultimately defeated. And some needed updates were made in the DEP statutes to continue to exempt aquaculture opera-

tions from the Natural Resources Protection Act permit requirements.

For 2008, the DMR has proposed some technical changes and one substantive bill regarding aquaculture. The substantive bill would require the farmer to dispose of other finfish (like Pollock) which are trapped in net-pens with cultured fish like salmon and cod, rather than throwing them back. This is to prevent the spread of any disease that might be present in the cage.

The legislation also clarifies that leaseholders do not need a harvester's license unless the crop is bivalve

molluscan shellfish. For those harvesters who need a license, the legislation allows the DMR to create a system whereby leaseholders with shellfish harvesting licenses may specify unlicensed assistants that are helping with the harvest.

Clarifying the requirement for a harvester's license is important because the National Shellfish Sanitation Program Model Ordinance (MO) requires it. All shellfish coming out of the water, whether from leases or the wild, must be tagged with a harvester tag (not a dealer tag) in order for FDA to find us in compliance with the MO.

These bills will be heard by the Marine Resources Committee in the coming months. If you have any questions or comments, please feel free to contact me.

In upcoming rulemaking, the Department will propose updates to chapters 2 and 21 that will bring the shellfish relay program into compliance with the Model Ordinance. The existing rules are impractical and not in FDA compliance and badly need a rewrite. Industry members who currently relay shellfish will be consulted prior to finalizing the formal rule proposal.

*Samantha Horn Olsen*



Photo Credit: J. Sowles, DMR

## New Hearing Officer Joins DMR Aquaculture Program

DMR has a new Aquaculture Hearing Officer. Diantha Carrigan Robinson joined the DMR Aquaculture staff in January, 2007, succeeding Mary Costigan. Robinson, who was born in Damariscotta and grew up in South Bristol, lives in Bremen and has worked extensively in Maine government at both the state and local levels.

A graduate of Smith College and Boston University School of Law, Robinson worked in administration at the Darling Center in its early years and after law school spent 4 years in private law practice in Portland, with the firms of Monaghan and Perkins, Stephen L. Perkins, Esq., and Jensen, Baird, Gardner, Donovan, & Henry.

She served as Maine Public Utilities Commissioner from 1977-82, as Commissioner (and Chairman for 2 years) of the Maine Health Care Finance Commission from 1983-91, and worked as Assistant Director of State and Federal Relations for the Maine Municipal Association from 1992-96.

She has also served on the Maine Board of Environmental Protection, the Citizens' Advisory Board of the Maine Land Use Regulation Commission, the Maine Board of Pesticides Control, and the Bremen Planning Board. She chaired the Friends of Bigelow, a grass-roots organization that led an initiative petition drive to create the 40,000 acre Bigelow Preserve in the western Maine mountains. She has been chairman of the Bremen Board

of Assessment Review since its founding in 1990.

In recent years, Robinson has volunteered extensively at her childrens' school and operated a small business doing landscape design, teaching, and gardening. She studied architecture at the University of Maine at Augusta and landscape design at the Landscape Institute of the Arnold Arboretum at Harvard University. She and her family enjoy using a variety of small boats on Muscongus Bay, and she has sailed much of the coast between Boothbay and Mt. Desert.

A lifelong resident of the Maine coast, she says, "Learning about the world of aquaculture in Maine is a fascinating and eye-opening experience. Aquaculture offers an opportunity to develop new business opportunities that will allow people along the coast to continue to work in local fisheries, at a time when some traditional fisheries are in decline. DMR's aquaculture program strives to minimize conflicts between aquaculture and other uses of the coastal waters. This will be an ongoing challenge as the coast continues to face increasing real estate development, plus an influx of people with little historical understanding of the traditional ways of life and work here. It's a learning curve for all of us, and I am delighted to be a part of it."

Diantha C. Robinson can be reached at the DMR Fisheries Lab in Boothbay at 633-9531 or by email to [diantha.robinson@maine.gov](mailto:diantha.robinson@maine.gov).



**WE'RE ON THE WEB!!**

<http://www.maine.gov/dmr/aquaculture/index.htm>

*Lease descriptions, maps, forms, applications, brochures, issue papers, lease decisions, and more!*