

Suffolk County Aquaculture Lease Program Advisory Committee

MEETING SUMMARY

March 22, 2007

Meeting Number 6

Location: Cornell Cooperative Extension Education Center – 423 Griffing Avenue, Riverhead

Start/End: 4:00 p.m. / 6:00 p.m.

Attending: *Members*
Tom Isles, Gordon Colvin, Debbie Barnes, Karen Rivara, Martin Trent, Cornelia Schlenk, Edward Bausman, Arnold Leo, Gregg Rivara, Jim McMahon, David Conover, Vivian Vilorio-Fisher, John Aldred, Carrie M. Gallagher

Staff
D. Davies, L. Fischer, J. Kohn, M. Mulé, M. Weiss, C. Einemann

Other
Gregory Greene, Keith Brewer, Kim Paulsan, William Wise, Mike Osinski, Floyd Carrington, Bill Taylor, Kevin McAllister, Bill Pell, Kevin Anderson, Nathan Andruski, Laura Stephenson, Michael Kujawa, Jed Quaranta, “Barley” J. Dunne, Michael Commando

Tom Isles began the meeting by giving a quick overview of the agenda. A brief summary of the preceding meetings and what has transpired to date was provided. Suffolk County handed out a packet to the ALPAC members containing: an agenda; a categorization of public comments from the kick-off meetings; a tentative SEQRA time line; minutes from the January 31, 2007 and the February 6, 2007 ALPAC meetings; as well as a transcript of the February 6, 2007 meeting.

Summary of previous meeting comments: Suffolk County distributed a summary that categorized the meeting comments as positive and negative. Cornelia Schlenk raised the question that the list was incomplete and might be misleading. She questioned whether it was worth having. DeWitt Davies noted that all comments are posted on the website and are up for discussion. Furthermore, the record for the February 6, 2007 meeting was amended to reflect comments received by Mr. Floyd Carrington.

Hydraulic dredging: Arnold Leo stated that hydraulic dredging gives an economic advantage to the dredgers and puts the hand harvesters at an economic disadvantage. He voiced concern that dredgers will flood the market with product in seasons of high demand. Several committee members recommended that is type of harvesting not be permitted. Greg Rivara stated that the NYSDEC has prepared a GEIS on shellfish

relays, which discusses the topic of hydraulic dredging and might be a good reference. Debbie Barnes noted that the DGEIS was not targeted to aquaculture operations.

Shellfish Diseases: this issue needs to be included.

Moving Temporary Assignments: Moving Temporary Marine Area Use Assignment holders to a new lease location would pose a hardship to oyster culturists because of the time it would take, the loss of identity for their product, and the uncertainties concerning the new site.

Water quality: In response to comments made at the February 6, 2007 ALPAC information meeting, Gregg Rivara read an e-mail from Dr. Robert Cerrato stating that hydraulic dredging would not cause hypoxia and that shellfish aquaculture would not impact phytoplankton or cause depletion. Mr. Rivara submitted these e-mails for the record. (attached)

Lease locations: Mr. Rivara addressed the comment from the previous meeting about all the leases would need to be surveyed by a licensed surveyor. Mr. Rivara stated that using a differential GPS (DGPS) should be more than sufficient to mark the boundaries of lease plots and that Virginia, Connecticut and New Jersey uses DGPS.

Arnold Leo expressed concerns over how and who will be determining lease areas. Mr. Leo said that identifying areas for leases should be done with local input. Greg Greene responded that this part of the program is still in the planning phase and input from the committee and local commercial fishermen is necessary and will be obtained.

Karen Rivara suggested that a meeting should be set up with commercial fishermen to identify areas of fishing activity and that shellfish farmers identify all existing farms so they could be incorporated into the shellfish aquaculture program's surface water use map. Ms. Rivara stated that a lot of effort and time is needed to establish a good cultivation area and this should be factored into how long leases should be given.

Mr. Leo expressed concerns over the identification of suitable productive habitat for shellfish. Mr. Leo felt ground truthing is an important and necessary part of the identification process. Mr. Greene responded that some ground truthing may be necessary, however, it is still too early in the planning process to initiate and will not be executed until preliminary shellfish cultivation zone areas have been identified. Mr. Leo then asked if ALPAC will be able to review this methodology before it is applied. Mr. Isles assured that ALPAC will be closely involved and will provide input on this issue.

Greg Greene and Jeff Kassner then gave a brief overview of the Preliminary Draft Scoping Document. Mr. Kassner explained how the scoping document was developed and identified some of the issues that will require ALPAC input.

Gordon Colvin questioned why the Preliminary Draft Scoping Document discussed only one alternative to the “no action” alternative. He felt that the range of lease options, such as size, location, duration, be provided as alternatives. It was noted that the County will either have or not have a leasing program and that the development of the leasing program itself will consider the range of alternatives as part of the mitigation of impacts.

John Aldred raised the question as to whether or not potentially positive and favorable impacts can be included in the GEIS in addition to adverse impacts. It is likely that both will be included in the GEIS since shellfish aquaculture can have both positive and negative impacts. (Mr. Aldred later submitted a written statement reflecting his comments – attached)

Other issues raised included: how will fishing areas be determined?; the US Army Corps of Engineers has issued a new general special permit for aquaculture; and that best management practices for shellfish aquaculture have been developed.

Mr. Davies advised ALPAC that the Council on Environmental Quality (CEQ) would like to participate in the scoping hearing. Mr. Isles asked if there were any objections. There were none, so the CEQ will be asked to participate. Any comments raised by CEQ will be addressed.

A concern was expressed about the environmental impact of derelict gear and abandoned lease areas. It was expressed that lessees need to be held accountable and that performance bonds might need to be required. If the lessee is required to remove all aquaculture gear, derelict gear should not be an issue.

The method of notifying the local area about the upcoming scoping hearing was discussed. It was recommended that the local weekly papers be notified of the hearing in addition to the official county papers.

Mr. Aldred suggested that: an aquaculture plot rotation system, whereby the location is changed over time, be added to the list of mitigation measures, pinhooking and gill netting be added to types of fishing activity considered in the scoping document; and transient gear aquaculture be considered as one form of aquaculture.

Hon. Vivian Vilorio-Fisher questioned whether her position as a voting member of CEQ is in conflict with her membership on ALPAC. Jenny Kohn remarked that she will look into this matter.

The issue of Temporary Marine Area Use Assignments was brought up in the fact that there might be existing monitoring data at those sites which may be useful in determining the prior history of the study area.

Tom Isles requested that members of ALPAC provide any additional comments on the Preliminary Draft Scoping Document to the County by April 2, 2007 so that the

scoping process can remain on schedule. The next step will be the preparation of the Draft Scoping Document on the DGEIS which will be the subject of the public hearing to be scheduled.

Materials Submitted by Gregg Rivara follow:

Published in the Letters section of the East Hampton Star March 23, 2003

Larry Penny
c/o The Editor
The East Hampton Star
East Hampton, NY
editor@easthamptonstar.com

RE: Nature Notes (March 14, 2003)

ANOTHER VIEW FROM AFAR:

Larry Penny and/or his information sources failed to account for the most significant food source in his discussion of food constraints as they relate to shellfish mariculture. Most of the food that molluscan filterfeeders such as clams, mussels, oysters, and scallops consume is detritus--- primarily the minute remains of dead plant tissues including, but not limited to, leaves and stems of marsh grasses and submerged aquatic vegetation (seagrasses), leaves of deciduous forest trees, and other plant and animal remains that wash into the estuaries from inland AND coastal sources. While phytoplankton algal species are important in their diets, these molluscan shellfish select their food based on particle size---not on food species or type.

As long as your coastal and inland forests include deciduous trees, as long as your saltmarshes and seagrass meadows thrive and remain productive, and as long as your freshwater sources are not dammed and/or diverted, sufficient supplies of plant and animal detritus will continue to enter your estuaries and coastal waters and support native molluscan shellfish AS WELL AS cultured molluscan shellfish. These two shellfish groups are not mutually exclusive by any means as long as the natural sources of their waterborne foods remain productive and unimpeded.

In coastal bays and estuaries that receive treated human and animal waste (from permitted discharges) and untreated wastes (from land runoff following rain and snowmelt), those wastes also provide detritus for filterfeeding shellfish. In a way, those shellfish help to "clean-up" coastal waters; however, they may be "polluted" according to U.S. Food and Drug Administration standards and/or require some form of natural or artificial cleansing prior to human consumption.

Another view from afar,

E. W. "Ed" Cake, Jr., Ph.D.
Oyster Biologist and Biological Oceanographer
Chief Science Officer
Gulf Environmental Associates
2510 Ridgewood Road
Ocean Springs, MS 39564-4235
Cell Phone: 228-324-9292
E-mail: edcake@datasync.com

Hi Bob:

I am a member of the Suffolk County Aquaculture Lease Program Advisory Committee (ALPAC). At our recent public "kickoff" meetings held in Southold and Southampton, a few speakers mentioned that hydraulic harvesting should not be allowed because it creates anoxic conditions in the estuary.

I remember that the effects of hydraulic harvesting came up at The Nature Conservancy's Peconic Bay Aquaculture Advisory Committee meetings in 2001-2002. I also recall you saying that one storm would stir up the bay more than a few harvesters. The anoxia question is new however. Any thoughts on the validity of this claim with respect to the Peconics?

Thanks,

Gregg.

Gregg Rivara
Aquaculture Specialist
Cornell University Cooperative Extension of Suffolk County
3690 Cedar Beach Road
Southold, NY 11971

631-852-8660 ext. 35
631-852-8662 fax

gjr3@cornell.edu
<http://www.cce.cornell.edu/~suffolk/Programs/MARhome.htm>

Gregg,

I would like to see the evidence, because I still have a hard time believing that it would happen.

For one thing, buried organic matter gets decomposed over time, with the juicy, potentially high BOD material disappearing first. Buried organic material is pretty refractory, so dredging it up and exposing it would not create high BOD. There might be some chemical oxygen demand, caused by exposing, for example, iron sulfides. But, generally 95-99% of dredged material settles within a minute or two. Dredging plumes, even those caused by very large hydraulic dredges, are not detectable after a few hours because of dispersal and settlement. Clams and most other bivalves are able to tolerate such short term oxygen depression.

In addition to storms, more resuspension occurs on every tidal cycle than could ever be produced by a harvesting operation. Why aren't storm events and tidal resuspension implicated in causing hypoxia?

Bob

Robert M. Cerrato
Marine Sciences Research Center
Stony Brook University
Stony Brook, NY 11794-5000

Phone: (631) 632-8666
Fax: (631) 632-8820

From: rcerrato@notes.cc.sunysb.edu
Sent: Friday, March 16, 2007 1:56 PM
To: gjr3@cornell.edu
Subject: Re: hydraulic harvesting effects
Follow Up Flag: Follow up
Flag Status: Red

Hi Bob:

Here's another idea that was brought up at one of the recent ALPAC public meetings: shellfish aquaculture will take away phytoplankton from other species ("there's no free lunch") causing these species (and those that harvest them) to decline. Other than the fact that most commercially important bivalve species are omnivores (for example also consuming detritus) and that they can couple pelagic production to the benthos (providing more food to benthic organisms), didn't some of your recent brown tide work show that at least with clams, there's a feed back loop so that the clams create conditions favoring more phytoplankton than if they weren't there?

Thanks for your take on this.

Gregg.

Gregg Rivara
Aquaculture Specialist
Cornell University Cooperative Extension of Suffolk County
3690 Cedar Beach Road
Southold, NY 11971

631-852-8660 ext. 35
631-852-8662 fax

gjr3@cornell.edu
<http://www.cce.cornell.edu/~suffolk/Programs/MARhome.htm>

Gregg,

Shellfish have declined in most bays on LI, so the "carrying capacity" of these bays for shellfish production is much higher than at present. It looks like that extra production is being eaten by zooplankton at present, rather than some other bivalve. The most likely scenario is that aquaculture would lower zooplankton production (and mainly small things like ciliates not copepods).

You are correct -- we did find evidence for positive feedback, with higher grazing producing greater juvenile growth and greater scope for growth in adults. The most likely cause is a change in plankton composition that favored better bivalve growth.

Bob

Robert M. Cerrato
Marine Sciences Research Center
Stony Brook University
Stony Brook, NY 11794-5000

Phone: (631) 632-8666
Fax: (631) 632-8820

From: rcerrato@notes.cc.sunysb.edu
Sent: Friday, March 16, 2007 4:51 PM
To: gjr3@cornell.edu
Subject: Re: Phytoplankton reduction due to grazing
Follow Up Flag: Follow up
Flag Status: Red

compiled weeks of March 12+19, 2007

Gregg Rivara wrote:
Hello List:

I am interested in hearing how other underwater land controlling agencies deal with finding and marking the corners of shellfish leases. Is DGPS good enough?

Thanks in advance.

Gregg Rivara
Aquaculture Specialist
Cornell University Cooperative Extension of Suffolk County

Gregg,

The Virginia Marine Resources Commission is the agency which is responsible for leasing bottoms for culture activities. Within the Habitat Management division of VMRC there is an engineering and surveying group which does the surveying (for a \$510 fee) for subaqueous leases. Check out this web address: <http://www.mrc.state.va.us/hmac/hmoverview.shtm#es>

Let me know if you need additional Virginia information.

Cheers,
Mike O. (Oesterling, VA Sea Grant Extension)

In NJ, leaseholders are supposed to use 2 stakes on each corner. When the applicant files for the lease, they pick out the area, up to 2 acres and they stake the corners. I'm not sure if the state DEP Bureau of Shellfisheries actually uses GPS to confirm them. However after those corners have been staked, the leasee usually goes back year after year to restake, the stakes are often broken off but the stubbs remain and they can usually find them to put in new ones.

Gef (Flimlin, Rutgers Cooperative Extension)

Greg:

Gef is correct for the shallow waters of the coast. In deep water of Delaware Bay the corners are surveyed in (I suspect they now use GPS) but the state. There is a fee associated with this. Stakes are not used because of water depth, but long pieces of PVC are used to make floats that mark the corners. Various bands of colors, etc are used to differentiate. Once fixed there is no need for further survey.

John (Kraeuter, Rutgers University)

In recent years, the Maine Dept. of Marine Resources has increased its activity in checking lease boundaries, by having Marine Patrol come out annually to the sites and checking them with the equipment they have on their vessels (WAAS or DGPS). They do this during the growing season, as corner markers are often pulled in winter, because of ice.

Dana

Dana Morse
Extension Associate
Maine Sea Grant College Program

greg,
md dnr uses high quality gps to set original corners with stakes. after that the lessee can keep his own. stakes are the preferred method but marker buoys can be used. leases are generally sized so that they have four sides and they are supposed to be "as rectangular as possible". most cases they are. some of the guys used to replace corner stakes with ice buoys during winter - back when we used to get a lot of ice. not much used these days.
biggest problem areas we have are in populated rivers like western shore where there are a lot of water skiers, wake boarders, and jet skis. they don't like stakes on lease corners - something to do with having a skier and a boat on opposite sides of a pole, i guess :-)

Don Webster
University of Maryland

Hi Greg

How are you? I hope all is well down that way.

Usually we require the lease holders to mark the corners with lobster pot buoys with letters and numbers on them identifying the lease. On some sites in very shallow water or near navigation areas the marking can be a pole stuck in the mud or lit navigation markers.

The applicant gives me the GPS coordinates. As you can imagine the accuracy of these numbers varies greatly. When I chart those using GIS I had one 30 miles inland and another 50 miles south east of Block Island. I then chart them on GIS and use those coordinates in the lease. I know there will be differences between what the lease holder marks out and my GIS coordinates. I just accept it if it's not too far out. I visit the farms yearly so I pretty much know where they are.

I hope this helps. Give me a yell if you need I can provide any more info.

Regards
Dave (Alves, RI Aquaculture Coordinator)

By phone:

Russ Babb of the NJ Department of Fish and Wildlife, Delaware Bay Office (856-785-0730):

They use differential GPS (Trimble brand). They feel they get sub-meter accuracy with this unit. They charge \$35 per corner which includes a concrete block, line and plastic jug painted orange with the lessee's lease number on it. The lessee is responsible for replacing these with something more substantial; most popular is a heavy block with chain and a 4" PVC pipe with concrete in the bottom for a buoy. The buoys can be painted with a special color combination (like lobster or conch pot buoys) and also include the lot and corner numbers.

Davies, DeWitt

From: John Aldred [jaldred@town.east-hampton.ny.us]
Sent: Monday, March 26, 2007 3:37 PM
To: 'DeWitt Davies'
Subject: Scoping Comments

DeWitt,

It seems to me that one of the big questions regarding what goes into the GEIS is whether or not potentially adverse impacts will be mirrored by potentially favorable impacts. In the document we reviewed last Thursday, there were some potentially favorable impacts mentioned, such as an augmentation of spawning potential, exertion of positive influences on water quality, expansion of economic opportunities (including for commercial fishermen – as many testified to in the public sessions). However, there was also a discussion revolving around interpreting SEQRA as looking for only potentially adverse impacts to be included in the EIS. It seems to me that some of these impacts cut both ways, depending on who is looking at them. For example, structures placed on bottom may impact the benthos but provide more substrate for other, or perhaps the same organisms; commercial fishing activities may be impacted by culture activities, but there may be commensal relationships between the two, both for the target organisms (such as conch potting on culture sites – also part of the public testimony) and with regard to social impacts (some commercial fishermen may see culture activity as another tool available to them to maintain their economic viability). I spoke to our Town attorney about this and she agreed that, while the focus of a GEIS should be on negative environmental impacts and their mitigation, description of positive aspects is also central to the document. I do think that where there is a question as to the negative or positive, such as in the examples above, the discussion in the document should reflect that debate.

Another general question I have involves the time frames involved in looking at environmental affects. Gardiners and Peconic Bays were used to grow oysters intensively, especially in the early part of last century. By all accounts that I've heard, this period coincided with a relatively robust commercial fishery, for which there should be evidence in the record. Similarly, Great South Bay contained a famously prolific clam population during the 1960's and 70's, for which there is presumably corresponding data regarding water quality, plankton abundance and composition, etc. My point is that there should be an attempt to look at conditions in the past when large numbers of shellfish existed in a system, since projecting impacts on the system from conditions as they now or have only recently existed may not provide as complete a picture as would be provided by including that analysis.

I also feel that it is important to define elements of productivity and include aspects of 'ground truthing' environmental conditions, at least in the sites chosen as aquaculture zones where no other documentation exists. Otherwise there may be a never ending debate regarding issues of productivity. For example, the PEP deep water shellfish survey doesn't go beyond Hedges Banks, just east of Shelter Island. If potential zones were first located by process of elimination with respect to the clearly identifiable parameters (channels, SAV beds, etc.) and the areas which would result in 'significant reduction of established commercial fishing activities' (through interviews and meetings with baymen), the resulting potential aquaculture zones, or maybe only those in question, could be then 'ground truthed' against pre-established limits defining elements of productivity, especially relating to the 'indicated presence of shellfish in sufficient quantity and quality and so located as to support significant hand raking and/or tonging harvesting'.

One final thought is with respect to the issue of harvesting methods (mainly hydraulic dredging) and their impact on the product price. I think it would be useful to assess the practices in other states in the region and factor that into the analysis, since the product price wouldn't only be affected by practices carried out within our bays. Also, everybody's price (culturist and wild harvester) would be affected by harvest efficiency in the surrounding region.

John

John Aldred
East Hampton Town Shellfish Hatchery
159 Pantigo Road
East Hampton, NY 11937
631-668-4601, phone and fax
631-871-9175, cell
jaldred@town.east-hampton.ny.us

3/27/2007