Background: Much of the controversy surrounding the regulation of shellfish mariculture has centered on the extent to which shellfish farmers may take and sell common property wildstock shellfish from an aquaculture site. Litigation on this matter has been active since February 2000 when industry members filed suit in Alaska Trademark Shellfish asserting that the department acted unlawfully when it denied applications for permits for farm sites with populations of wild stock geoducks. The state argued that the constitution prohibited giving farmers any of the common property resource while the farmers argued that the constitution permitted the activity and existing statutes required it.

The Alaska Superior Court ruled that the constitution barred permitting a geoduck farm where significant populations of geoducks are present. The court defined a significant population as one that would attract and support a commercial fishery. Although the state originally argued that the constitution barred giving common property geoducks to farmers, the Murkowski Administration accepted and sought to implement the Superior Court’s interpretation of the Constitution. However, on appeal, the Supreme Court decided that the department lacked statutory authority to allow farmers to harvest any amount of common property shellfish.

After the Supreme Court’s decision in April 2004, the department immediately began working with shellfish farmers and fishermen to pass legislation to enable the department to implement the Superior Court’s decision and permit farmers to harvest and sell insignificant amounts of shellfish from their farm sites. While the legislation was introduced, it was too late in the session to get it passed.

In 2005, House Bill 198, supported by the department, farmers and divers and was passed by the Alaska Legislature, codifying the ruling of the Superior Court. Specifically, the legislation authorizes the department to permit shellfish farmers to harvest and sell an insignificant population of wild stock shellfish from a farm site; defined an insignificant population as a population of shellfish that, in the determination of the commissioner, would not attract and support a commercial fishery for that species of shellfish that, in the determination of the commissioner, would not attract and support a commercial fishery for that species of shellfish; and prohibited the department from issuing a permit for a farm site that has more than an insignificant population of the species intended for culture.

The legislation also included provisions to deal with seven sites (permitted to three farmers) that had a substantial amount of seed stock planted on them, but had not been surveyed to determine whether they included a significant population of wild stock geoducks. In an effort to address the constitutional prohibition against allowing farmers to harvest and sell significant populations of wild stock geoducks, and the statutory
prohibition against issuing a permit for a farm that holds a significant population of geoducks, the legislature authorized the commissioner to allow a farmer to harvest a significant amount of geoducks from a farm site in some instances. To permit the harvest, the commissioner must find the harvest to be in the public interest and that harvest by someone other than the farmer would unreasonably interfere with the operation of the farm. Furthermore, reading the provisions authorizing the commissioner to allow harvest of significant stocks in conjunction with the prohibition against permitting sites with significant stocks makes clear the legislature’s intent that the harvest of significant stocks be limited to sites permitted in the past.

Furthermore, the statute requires the farmer to pay reasonable compensation for the harvest and sale of the wild stock that exceeds an insignificant population. Reasonable compensation is required because shellfish are a public trust resource committed to the common use of the public and the state stands as a trustee to protect the interests of the people of the state. Consequently, granting exclusive rights to harvest a volume of geoducks can be permitted only if the public’s interests are protected.

Since November 2003, the department has worked to revise the aquatic farm regulations, collaborating with a stakeholder group consisting of parties with varied interests but with a substantial majority of the participants from the farming industry. Over the last two years, the department has held and facilitated a number of stakeholder meetings to seek the valuable input of this group, keep the group informed of the department’s thoughts and actions, and ensure that this group remains involved in the development of regulations.

On July 11, 2005, the Alaska Department of Fish and Game (ADF&G) published notice of a set of regulatory revisions for public comment. The comment period closed on August 10, 2005. The purpose of these revisions was to implement provisions of HB 198, which reflected a compromise between farmers and divers and support by the department, to deal with the wild stock issue. These revisions had been discussed in earlier stakeholder meetings revealing a significant divergence of views between the farmers and divers.

HB 198 prohibits the commissioner from issuing permits for any farm site that has more than an insignificant population of geoducks. To meet this legislative requirement, the regulations establish fees for each proposed farm site to cover biomass survey costs that would ensure farm sites did not contain significant populations of wild stock of the species being cultured. The regulations also address the statutory requirement that shellfish farmers restore wild stock populations at the end of the lease. Specifically, the regulations require farmers to provide a certificate of deposit that the department will use to reseed the site to the original levels if the permit holder does not reseed upon termination of farming operations. When the farmer reseeds the site to the department’s specifications, the certificate of deposit will be returned. Furthermore, the regulations define reasonable compensation, that is the compensation due to the public for harvest of an amount of shellfish greater than an insignificant amount.
ADF&G received public comments on the Phase II regulation revisions from a total of five associations or individuals. The majority of the comments received by ADF&G during this public comment period raised issues that had been articulated in meetings with stakeholders and were considered by the Department. ADF&G wants to thank those individuals for taking the time to provide comments. A summary of the specific issues addressed in those comments and an explanation of ADF&G’s response to these issues follows

**COMMENT: Use of “insignificant” throughout the regulations**

The proposed regulations defined insignificant as no more than 12,000 pounds per average 6-acre farm site. Some commenters wanted to modify the definition of insignificant to clarify what is meant by “no more than 12,000 lbs per average 6 acre farm site”. Recommendations were made by individuals for using lbs per one acre or by inclusion of a density level (geoducks per square meter). In addition, the regulations had some inconsistencies in the way this term was used that they felt should be corrected.

**RESPONSE:**

The final regulations clarify that an insignificant population of geoducks is

(A) no more than 12,000 pounds of geoducks on a six-acre aquatic farm site; or
(B) an average of no more than 2,000 pounds per acre of an aquatic farm site;”

As part of House Bill 198, “insignificant population" was defined as “a population of shellfish that, in the determination of the commissioner, would not attract and support a commercial fishery for that species of shellfish and the harvest and sale of the shellfish would not result in significant alteration in traditional fisheries or other existing uses of fish and wildlife resources if the population were included within an aquatic farm site.” In follow-up to this, the department staff evaluated the levels that would support and attract a commercial geoduck fishery. The level of 12,000 lbs geoduck per farm site was an amount identified as appropriate by farmers and commercial harvesters and acknowledged as such by these interests during legislative hearings. However, the legislation did not define the term “farm site” and 12,000 pounds of geoducks distributed over a very large area would be unlikely to attract a commercial fishery while the same amount concentrated in a smaller area would certainly attract a fishery. The Department determined that 12,000 pounds of geoducks would attract and support a commercial fishery if distributed on a farm site of six acres. Therefore, the department further defined the size of the farm site by using the average geoduck farm site of 6 acres at the time of the legislation. The Department understands from comments that this definition is hard to interpret for a smaller or larger sized farm site so the definition was expand to include the average poundage per acre.

The Department plans to provide details on the Aquatic Farm Program Joint-Agency Application package and through technical assistance materials to explain the numbers. Table 1 provides an example of the insignificant thresholds allowed for a farm site for various aquatic farm acreages. For a proposed farm site of 1 acre, a geoduck population...
of less than 2,000 lbs can reside on the farm site for it to be permitted. Likewise, a two-acre farm site could have a population totaling less than 4,000 lbs on the entire farm site for it to be permitted.

<table>
<thead>
<tr>
<th>Farm site Total Acreage</th>
<th>Calculated Average lbs. Over All Acres On the Farm Site</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Acre</td>
<td>Less than 2,000</td>
</tr>
<tr>
<td>2 Acres</td>
<td>Less than 4,000</td>
</tr>
<tr>
<td>3 Acres</td>
<td>Less than 6,000</td>
</tr>
<tr>
<td>5 Acres</td>
<td>Less than 10,000</td>
</tr>
<tr>
<td>10 Acres</td>
<td>Less than 20,000</td>
</tr>
<tr>
<td>15 Acres</td>
<td>Less than 30,000</td>
</tr>
</tbody>
</table>

**COMMENT: Survey user fee – amount and payment timing**

The regulations require payment of a fee not to exceed $5000 per day for subtidal farm sites or $2000 per day for intertidal sites to pay for a biomass survey to assess whether a site has less than a significant amount of wild stock present and might therefore qualify for an aquatic farming permit. Commenters were concerned about the amount of the required survey, the cost per day, and that there were no provisions in the regulations that allow for reduction of costs to the farmer if labor and equipment from the farmer was used. Other commenters were very concerned that they would lose a substantial amount of upfront investment if the survey results found significant numbers of geoduck on the site. They felt this was unfair. Recommendations were made by commenters to eliminate the per diem clause, make the survey user fee payment to the state within 30 days of the first harvest rather than up front before survey work was conducted, and to provide for a waiver of the fees if significant populations of geoducks were found on the site after a survey.

**RESPONSE:**

A survey is a necessary precondition to granting an operating permit for a shellfish farm site because the law prohibits granting a permit for a farm that has more than an insignificant amount of wild stock. Without a sound basis for determining that a proposed site meets this requirement no permit can be issued. Some of the cost concerns were provided to ADF&G during Stakeholder meetings held prior to publication of the proposed regulations.

The amount of the user fee remains at $5,000 and establishes a maximum amount that the aquatic farm applicant would have to pay per day for the Department to conduct the survey. This total does not cover all the expenses the Department may incur for this survey work, but approximates the majority of the cost for use of a state vessel, personnel and equipment once the vessel and survey crew have arrived on the site. Travel expenses to the site are covered by the Department. It remains ADF&G’s intent to work
cooperatively with the applicants to reduce the costs of the surveys below the capped amount wherever possible without jeopardizing the 1) safety of department field staff conducting the surveys and 2) accuracy of the survey work. The proposed regulations were modified to add the provisions for reducing the costs where possible.

The department cannot delay payment of survey fees until after harvest has occurred on the farm site. The statute requires the department to determine whether a site has a significant population of geoducks before issuing a permit. Therefore the survey must be completed well in advance of any harvest from the site since the site cannot be permitted until the survey has been completed and yields results confirming that the site does not have more than an insignificant population of resident shellfish. The department does not have funds to conduct a survey on a proposed site unless the applicant provides the survey fee.

The department is currently working on developing survey methods that take less time and therefore, will cost less.

**COMMENT: Harvesting of wild stock; reasonable compensation percentages**

Commenters had questions regarding the department’s timeframe for harvesting geoduck wildstock on permitted farm sites and how the department will determine what constitutes unreasonable interference with farming operations. Some commenters felt that the reasonable compensation percentages were too high.

**RESPONSE:**

**Reasonable Compensation**

For harvests of amounts of wild stock geoducks that exceed an insignificant amount, that is more than 2000 pounds per acre, reasonable compensation is set in regulation as a proportion of whichever is the greater of the average ex-vessel price paid in the most recent commercial fishery or the amount paid at the first point of sale. The proportion is set for live geoducks at 50 percent and for processed geoducks at 20 percent.

It is important to recognize that the requirement to pay reasonable compensation to the public for the harvest of wild stock from a farm site does not apply to the first 2000 pounds of geoducks harvested for each acre of a farm. Hence, a farmer may harvest and sell up to 2,000 pounds per acre with no payment to the public. Sale of this amount of wild stock may return between $2,500 and $15,000 per acre to the farmer depending on market conditions and whether the product is sold live or processed. Only after harvesting and selling 2000 pounds for each acre of a farm site will the farmer be required to pay any compensation. Thus for an average six acre farm site the farmer may sell up to 12,000 pounds of wild stock geoducks at a value that may total between $15,000 to $100,000 and pay no compensation.
Reasonable compensation for harvest of more than an insignificant amount of shellfish, that is more than 2000 pounds per acre, is a requirement under both the Alaska Constitution and the Alaska Statutes. The Alaska Constitution provides that fish are reserved to the people for common use. Furthermore, the Constitution provides “No exclusive right or special privilege of fishery shall be created or authorized in the natural waters of the State.” Wild stock shellfish are a common property resource held in trust by the state for the common use of the people. HB 198 authorizes granting a farmer the exclusive privilege to harvest an amount of geoducks greater than that permitted under existing court decisions only when specific conditions are met thereby safeguarding the public interest. The commissioner must find that the harvest is in the best interests of the state and that harvest by anyone other than the farmer would unreasonably interfere with the operation of the farm. Furthermore, the department must require reasonable compensation for the harvest and sale of wild stock in amounts greater than 2,000 pounds per acre. In establishing the level of compensation for the exclusive privilege to harvest the public resource the department must exercise the utmost good faith and a high duty of care to ensure that the public is protected to a degree consistent with the Constitution and the public trust doctrine. The department is responsible for assuring that the public as the owner of the resource receives fair value for the resource and the loss of its use.

The provisions of HB 198 allowing harvest and sale of more than an insignificant amount of wild stock geoducks from a farm site are intended to address a few farms permitted in the past. The requirement to pay reasonable compensation for harvests of excess amounts of geoducks is expected to apply to seven farm sites currently permitted to three farmers. HB 198 requires rejection of any application for a farm site that has more than an insignificant populations of wild stock shellfish and consequently, with the exception of the seven existing instances, we expect the need for a farmer to pay reasonable compensation to arise rarely if at all.

**Timing of Wild Stock Harvest**

ADF&G wanted to be flexible on the time needed to harvest wildstock to be responsive to the variances in each farmer’s operation and development plans. In order to address what is meant by reasonable amount of time to harvest and provide for a consistent timeframe for all farmers, ADF&G defined a time frame for this activity and determined a period within five years was adequate for harvest of wild geoducks. This also coincides with the current Department of Natural Resource’s 5-year production criteria for a farm site. The exact amount of time within this 5 year maximum would be worked out between the prospective farmer and the Mariculture Coordinator and specified in the aquatic farm operation permit.

ADF&G is obligated, and has the authority, to track all harvest of fish resources in the state including the common property fishery resources such as geoducks that may reside on a farm site. After the department issues an operating permit a farmer may harvest an insignificant amount of geoducks from a farm site but the state must account for that harvest to ensure appropriate restoration of the wild stock when the permit is relinquished and to gather information necessary to account for the resource.
COMMENT: Security requirement

In order to ensure that wild stocks will be restored on farm sites as required by AS 16.40.100(e), the regulations require a deposit to be provided to the department within thirty days after a farmer makes an initial harvest of wild stock. Commenters are concerned about the timeframe for the deposit, the replacement of wildstock to population levels that existed before the farming operations, and want to recommend possible credits for plantings on the site before termination.

Alaska statutes require each shellfish farmer to return the population of naturally occurring shellfish on a farm site to the level that existed when the permit was issued unless the shellfish were removed by a commercial fishery. The deposit will assure restoration of wild stock and consequently the deposit will not be required until the farmer begins harvest of the wild stock. This approach recognizes the financial burden that might be posed by a security deposit and assures that the cost will not arise until the farmer has an opportunity to generate income by selling wild stock from the farm.

COMMENT: Reporting of Harvest of Wildstock; Tracking Harvest using Fish Tickets;

Commenters were concerned about the ability to differentiate between wild and culture stocks, the reporting of harvest at delivery requirement, the authority for the fish tickets and CFEC card and were worried about the implications to the farmers once implemented. Commenters recommended the use of a logbook rather than fish tickets.

The regulations include reporting requirements so that the department can account for the harvest of the wild stock from a farm site. Careful tracking of the harvest of wild stock is necessary to determine a farmer’s obligation to restore the wild stock at the termination of the lease. Moreover the reports enable the department to determine whether the harvest by a farmer has exceeded an insignificant amount and thereby determine whether reasonable compensation is due to the state.

The department is confident that wild stock can be distinguished from farmed during the period in which farmers may harvest wild stock because there will be a significant difference in age between the wild and the farmed stock. The privilege to harvest wild stock will be limited to the initial five-year period of a farm site lease. Farmers should be able to distinguish based on age and because each farmer will be aware of the areas of the site that have been planted and the age and appearance of the planted stock.

ADF&G has the authority to issue interim use permits and associated cards referred to in the proposed Aquatic Farm regulations (refer to AS 16.43.140, 20 AAC 05.100, and 20 AAC 05.110). This is the best mechanism for the department to keep track of harvested wild geoducks. This is well-established protocol and is used for commercial geoduck
dive harvest and has minimal administrative costs to implement. This will provide the Department with a mechanism to help track the amounts being harvested on the farm site and keep track of the resources of the state. Processors are familiar with fish tickets as well. Establishing a new reporting system such as a logbook program with new data collection and reporting protocols would be costly and create a substantial likelihood of error in its initial use.

The proposed regulations required reporting to the department based on the time and place of “delivery” of harvested wild stock. To clarify and accommodate commenters concerns, ADF&G modified the term “delivery” in relation to reporting of wildstock harvest and replaced it with “landing.” Delivery as one commenter suggested “implies the point when the farmer turns over ownership.” ADF&G added a definition of landing to include “offloading shellfish for sale or for transport to a buyer for later sale” to help with clarifying this term.

**COMMENT: Assessment of insignificant populations**

Commenters wanted the definition of an insignificant population to be clarified more and to define the exact biological and statistical methodology. Other commenters wanted the upper bound to be used in the statistical methodology. Commenters provided recommendations for a new definition for different sized farm sites and for those in isolated habitats.

**RESPONSE:**

As summarized above, ADF&G provided more clarification to the definition of insignificant population, including additional text to the definition stating “no more than an average of 2,000 pounds per one acre.” Due to its complexity and technical nature, ADF&G intends to define the biological and statistical methodology to be used of the surveys in a guidance format and will provide explanation for this, where appropriate, in the Aquatic Farm Program Joint-Agency Application package and outreach materials that will be provided to farmers. These details do not need to be in the regulations.

ADF&G intends to use data from the subtidal surveys using a statistical method that will test the hypothesis that no more than 2000 lbs. of geoducks exists within a one acre plot. Surveys do not actually determine the total count of the geoduck population at the site, and depend on sampling protocol using segments where counts are taken to estimate the number of geoducks on the entire site. This approach is subject to some variability. The statistical analysis will therefore be based on a high percentage of chance that the estimate is correct (whether it is above or below 2000 lbs threshold). This will assure a reasonable level of confidence for the geoduck biomass estimate determined at the site while acknowledging the natural variability and difficulty of surveying geoduck populations.
This approach will ensure that ADF&G complies with constitutional, statutory, and legal decisions regarding common property fishery and prohibiting farm sites where populations of shellfish would attract and support a commercial fishery.