

From: [Kelly Toy](#)
To: [BrownScott, Jennifer](#)
Subject: FW: Dungeness Bay Lease
Date: Friday, August 28, 2015 2:40:04 PM
Attachments: [Oyster Farming Methods.docx](#)
Importance: High

With attachment.....

From: Kelly Toy
Sent: Friday, August 28, 2015 2:39 PM
To: 'BrownScott, Jennifer'
Subject: RE: Dungeness Bay Lease
Jennifer,

Yes, Pacific Oysters is the most common species grown on farms in this area. I've attached a summary of growing methods commonly used and a couple of old pictures of what the farm looked like before we had to close.

Kelly

From: BrownScott, Jennifer [mailto:jennifer_brownscott@fws.gov]
Sent: Wednesday, August 26, 2015 5:03 PM
To: Kelly Toy
Subject: Re: Dungeness Bay Lease

Thanks Kelly, that will be a big help. I really appreciate all the detail since I am new to aquaculture. Attending the presentation on Olympia Oysters was a great way to get my feet wet (no pun intended). I am guessing you guys are talking about Pacific Oysters for commercial sale at this site.

Thanks again and have a great night!
-jennifer

Jennifer Brown-Scott
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On Wed, Aug 26, 2015 at 4:34 PM, Kelly Toy <ktoy@jamestowntribe.org> wrote:
Jennifer,

What I mentioned before was doing some test plots of a couple of different methods. At the time of the application we were planning to use the methods in the description but it looks like the culture method now would be more on bottom culture, which may include bags and nets. The methods described in the application are more for specialty oysters, which involves a lot more labor and expense. The direction now is to keep costs low and volume of oysters high. The application should include all the potential area that could be used for the farm. Farming is generally conducted on a rotation, planting and harvesting successive year classes. Before we stopped growing oysters we were using most of the lease, which had posts and lines. All the equipment was moved when we closed the oyster farm. I will try and get you a more detailed description soon.

Kelly

From: BrownScott, Jennifer [mailto:jennifer_brownscott@fws.gov]

Sent: Wednesday, August 26, 2015 3:52 PM

To: Kelly Toy

Subject: Re: Dungeness Bay Lease

Kelly,

I have taken a look at the application you referenced and it appears that the description may be different than what you had mentioned to me in the spring. I think you had mentioned placing some bags out to see if they survived. This application appears to request use of the entire lease acreage and use of lines.

It would really be helpful if you could send me a detailed description of the type of aquaculture application you are proposing to use, a map of the area that you will be using, and the dates that you propose to have equipment on the site as well as deployment/harvest/and removal dates.

Thank you,

Jennifer

Jennifer Brown-Scott

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On Wed, Aug 26, 2015 at 2:48 PM, Kelly Toy <ktoy@jamestowntribe.org> wrote:

There is a description of the oyster culture methods in the NWP48 application which has been at the corp for 6 years. I thought the Army Corp developed programmatic permits, and conducted programmatic consultations with NMFS and USFWS, to ensure all activities comply with ESA and EFH requirements. I'm having a hard time understanding which federal regulations or policies need to be met that would be specific to Dungeness Bay as opposed to any other farm in Puget Sound. Hope this gets resolved soon.

Kelly

From: BrownScott, Jennifer [mailto:jennifer_brownscott@fws.gov]

Sent: Wednesday, August 26, 2015 2:10 PM

To: Kelly Toy

Subject: Re: Dungeness Bay Lease

Kelly,

Great question! We are trying to get a full understanding of our jurisdiction as it pertains to the Use Easement Deed granted by the state so we know which/if any federal regulations and policies we must meet as we discuss/approve the activity.

Do you have a written proposal of the activity you are planning on conducting?

Thanks for your patience,

Jennifer

Jennifer Brown-Scott

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On Wed, Aug 26, 2015 at 1:44 PM, Kelly Toy <ktoy@jamestowntribe.org> wrote:

In Exhibit B (Plan of Operations) of the lease it states that the size, location and culture methods used to grow oysters, as well as geoduck, will be discussed and approved by DNR and USFW prior to establishment. Does this need further clarification?

Kelly

From: BrownScott, Jennifer [mailto:jennifer_brownsconfig@fws.gov]

Sent: Wednesday, August 26, 2015 1:12 PM

To: Kelly Toy

Subject: Re: Dungeness Bay Lease

Thanks for your email. We are looking for clarification on our jurisdiction as it relates to aquaculture within the DNR Use Easement.

I'll let you know where we stand as soon as I know.

-jennifer

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On Wed, Aug 26, 2015 at 11:38 AM, Kelly Toy <ktoy@jamestowntribe.org> wrote:

Jennifer,

Scott Chitwood informed me that you are still waiting for the solicitor's opinion concerning our lease. I'm assuming you have a copy of the lease and was wondering if the solicitor's opinion concerns the legality of the DNR lease? If not, what opinion about the lease are you waiting for? Jamestown would like to move this forward as soon as possible, which as you know involves USFWS as the lead for the ESA consultation. Thanks.

Kelly

Kelly Toy

Shellfish Manager

Jamestown S'Klallam Tribe

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Oyster Farming & Aquaculture: There are 4 main techniques for raising oysters in Puget Sound; Beach or Bottom Cultured (or Intertidal Cultured), Rack & Bag Cultured, Longline Cultured and Suspended Culture. Two additional variations are Bag to Beach and Tumbling. Bag to Beach is a combination of Rack & Bag cultivation & Beach cultivation. Jamestown has used several of these methods in Dungeness and Sequim Bay. The harvest cycle for oysters is usually 2 to 3 years, with the exception of tumbled which is less than 2 years. The following link contains more information and pictures of the methods described below; <https://wsg.washington.edu/wordpress/wp-content/uploads/publications/Small-Scale-Oyster-Farming.pdf> .

Bottom or Beach Cultured Oysters: Beach/Bottom Cultured Oysters, also called Intertidal Cultured Oysters, are oysters which are raised on tidal beaches with sandy or rocky bottoms. Spat (very small seed attached to shell or "cultch") or seed oysters are distributed over existing oyster beds and left to mature naturally. Seeded cultch will be distributed over the growing area. This method produces clustered oysters which are later shucked. Planting seed oysters (>1") involves staking down a small mesh net over the oysters to prevent the seed from being washed away. The net is removed when the oysters reach a larger size, generally a few months later depending on the growth rate.

Rack & Bag Cultured Oysters: Rack & Bag cultured oysters (also called On Bottom Cages) are grown in mesh cages or bags which are generally staked about one to two feet off the bottom. Oysters raised by the rack & bag method are protected from predators and do not become cramped for space as they grow. They also do not have to filter as much sand & mud in order to get nutrients, thus they grow faster. They develop a deeper cup than beach cultured oysters. However, if the oyster is raised entirely this way then they are pampered and their shells are brittle which makes them difficult to shuck without breaking.

Longline Cultured Oysters: Longline culture is a variation of off bottom culture where long ropes with seedling oysters attached are suspended. This suspension method is usually done horizontally and staked about one to two feet above the bottom in an intertidal region. But sometimes the lines are suspended vertically in deep water. Longline cultured oysters have a sturdier shell and firmer meats than suspension tray raised oysters because the longline does allow for more interaction with the environment and requires more tenacity for the oyster to remain attached to the line whereas cage oysters simply sit there.

Bag to Beach Cultured Oysters: Oysters raised by the bag to beach method combine two oyster farming methods. Rack & bag oysters are taken from their pampered environment and put into the beach culture environment during their last 6 months before harvesting. This allows them to "toughen up" a bit, giving them stronger, less brittle shells and firmer meats.

Tumbling: Some oysters which are raised by the suspension method are put through an additional step where they are periodically tumbled. This strengthens their shells and adds firmness to the meats. It also adds a distinctive look to the shell as it becomes smoother from tumbling.

Jamestown's oyster farm in Dungeness Bay used a combination of long line and bottom culture. Oysters were harvested and placed into large totes and then totes removed at high tide using a barge. We are assuming that harvest methods will remain the same. Jamestown would like to determine the most optimal culture methods as soon as possible and the types of culture methods used will be dependent on the market and other economic factors. Below are a couple of old pictures of the farm in 1996.

