

2007-01261

Malon 18

# Nationwide Permit 48 Report Form

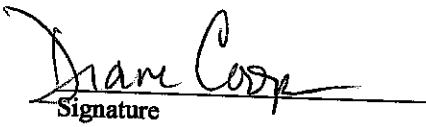


US Army Corps  
of Engineers  
Seattle District



1. Name of Company  <b>Taylor Shellfish</b>		Address  <b>SE 130 Lynch Road Shelton, Washington</b>	
Point of Contact  <b>Diane Cooper</b>			
Phone Number  <b>(360) 426-6178</b>		Email Address  <b>DianeC@taylorshellfish.com</b>	
2. <input checked="" type="checkbox"/> Attach a copy of permit, license or lease from a state or local agency specifically authorizing commercial aquaculture activities at the Project Area(s) described below (must be obtained prior to March 12, 2007).  Note: If there are multiple project areas, you must include the location, size, description of culture and harvesting method, name of cultivated species, for each project area. Attach separate forms as appropriate.			
3. Project Location: : <input checked="" type="checkbox"/> Attach map(s) showing the vicinity of the project and the boundaries of the project area.			
Latitude See attached maps.		Project Street Address (if applicable)  NA	
Longitude See attached maps			
4. Size of Project Area  Approximately 60 acres		5. Description of Culture and Harvesting Method  See attached description matrix.	
6. Name of the Cultivated Species  Manila, geoduck, littleneck clams, Pacific, Kumamoto, Olympia, Eastern oysters.		7. Are canopy predator nets being used?  Yes.	
8. Yes <input checked="" type="checkbox"/> We comply/will comply with all Nationwide Permit general and regional conditions.			

Please indicate if the aquaculture activity includes and of the following:

Pre-construction Notification (PCN) Activity		Yes	No
1.	The Project Area is greater than 100 acres.		
2.	There is any reconfiguration of the aquaculture activity, such as relocating existing operations into portions of the project area not previously used for aquaculture activities.		x
3.	There is a change in species being cultivated.		x
4.	There is a change in culture methods (e.g., from bottom culture to off-bottom culture).		x
5.	Dredge harvesting, tilling, or harrowing is conducted in areas inhabited by submerged aquatic vegetation.		x
<b>Has PCN been Triggered?</b>			
YES	<p>If yes for any of the above, then pre-construction notification has been triggered.</p> <ul style="list-style-type: none"> <li>• Submit the NWP 48 Reporting Form</li> <li>• Submit the PCN Form section of this form below.</li> </ul>		
NO	For all projects that do not trigger the pre-construction notification requirements of NWP 48, submission of a brief report is required. The form above will satisfy this requirement.		
Report Form Completed By:			
D. Cooper Name (Print)	 Signature	6/13/07 Date	

Following submission of this one-time report, no further reporting is necessary. However, if there are any changes to the operation that require Department of the Army authorization, then pre-construction notification is required if the proposed changes meet any of the pre-construction notification triggers. Yearly pre-construction notification will not be required for continued operation of existing shellfish aquaculture operations that trigger only pre-construction notification activities 1 and 5.

Replaces original license as of 1/2/2007, to reflect growing area changes

State of Washington  
Department of Health  
Office of Shellfish and Water Protection

## SHELLFISH OPERATION LICENSE AND CERTIFICATE OF APPROVAL

THIS IS TO CERTIFY that the

**TAYLOR SHELLFISH COMPANY INC**

establishment owned or operated by

**JEFF PEARSON**

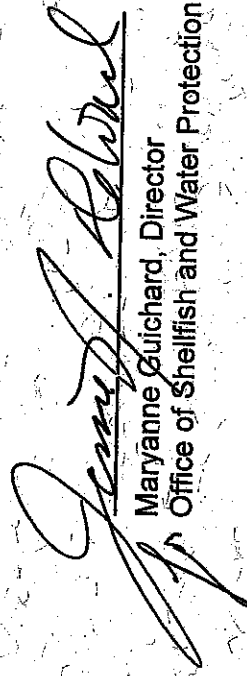
located at

130 LYNCH ROAD SE  
SHELTON, WA 98584

has been inspected and found to meet the sanitary requirements of Chapter 69.30 RCW and the rules and regulations of the State Board of Health, and is hereby licensed as a commercial shellfish operation. A certificate of approval as prescribed in Chapters 69.30 RCW and 246-282 WAC is hereby granted for the harvesting of shellfish for human consumption from the following general location(s):

Bay Center, Bruceport, Cedar River, Eld Inlet, Hammersley Inlet, Hood Canal 3, Hood Canal 8, McMicken Island, Nahcotta, Naselle River, Nemah River, Nisqually Reach, North Bay, North River, Oakland Bay, Peate Passage, Pickering Passage, Samish Bay, Skookum Inlet, Stony Point, Stretch Island, Totten Inlet, West Key Peninsula

Effective Date of Change: 1/2/2007  
Original Issue Date: 9/29/2006  
License No.: 0046  
Washington Cert. No.: WA- 0046-SP  
Shucker-Packer



Maryanne Guichard, Director  
Office of Shellfish and Water Protection

This license/certificate expires 9/30/2007, and is revocable and NOT transferable.

Appendix B

# Taylor Resources Chapmans Cove

General Information								
Bed ID #	Specific Location	Bed Name	Bay or Inlet	County	Aquatic Farm Reg	DOH Cert #	Sec., Twp. & Rge.	Gr. Area Class.
TOB22	Chapman C.	Dike 1	Oakland Bay	Mason	8256-04	WA-46-SP	10,15,16-20N-3W	conditional
TOB23	Chapman C.	Dike 2	Oakland Bay	Mason	8256-04	WA-46-SP	10,15,16-20N-3W	conditional
TOB24	Chapman C.	Dike 3	Oakland Bay	Mason	8256-04	WA-46-SP	10,15,16-20N-3W	conditional
TOB25	Chapman C.	Dike 4	Oakland Bay	Mason	8256-04	WA-46-SP	10,15,16-20N-3W	conditional
TOB26	Chapman C.	Dike 5	Oakland Bay	Mason	8256-04	WA-46-SP	10,15,16-20N-3W	conditional
TOB27	Chapman C.	Dike 6	Oakland Bay	Mason	8256-04	WA-46-SP	10,15,16-20N-3W	conditional
TOB28	Chapman C.	Dike 7	Oakland Bay	Mason	8256-04	WA-46-SP	10,15,16-20N-3W	conditional
TOB29	Chapman C.	Dike 8	Oakland Bay	Mason	8256-04	WA-46-SP	10,15,16-20N-3W	conditional
TOB30	Chapman C.	Dike 9	Oakland Bay	Mason	8256-04	WA-46-SP	10,15,16-20N-3W	conditional
TOB31	Chapman C.	Dike 10	Oakland Bay	Mason	8256-04	WA-46-SP	10,15,16-20N-3W	conditional
TOB32	Chapman C.	Dike 11	Oakland Bay	Mason	8256-04	WA-46-SP	10,15,16-20N-3W	conditional
TOB33	Chapman C.	Dike 12	Oakland Bay	Mason	8256-04	WA-46-SP	10,15,16-20N-3W	conditional
TOB34	Chapman C.	Dike 13	Oakland Bay	Mason	8256-04	WA-46-SP	10,15,16-20N-3W	conditional
TOB35	Chapman C.	Dike 14	Oakland Bay	Mason	8256-04	WA-46-SP	10,15,16-20N-3W	conditional
TOB36	Chapman C.	Dike 15	Oakland Bay	Mason	8256-04	WA-46-SP	10,15,16-20N-3W	conditional
TOB37	Chapman C.	Dike 16	Oakland Bay	Mason	8256-04	WA-46-SP	10,15,16-20N-3W	conditional
TOB38	Chapman C.	Dike 17	Oakland Bay	Mason	8256-04	WA-46-SP	10,15,16-20N-3W	conditional
TOB39	Chapman C.	Dike 18	Oakland Bay	Mason	8256-04	WA-46-SP	10,15,16-20N-3W	conditional
TOB40	Chapman C.	Dike 19	Oakland Bay	Mason	8256-04	WA-46-SP	10,15,16-20N-3W	conditional
TOB41	Chapman C.	Area 20	Oakland Bay	Mason	8256-04	WA-46-SP	10,15,16-20N-3W	conditional
TOB42	Chapman C.	Area 21	Oakland Bay	Mason	8256-04	WA-46-SP	10,15,16-20N-3W	conditional
TOB43	Chapman C.	Area 22	Oakland Bay	Mason	8256-04	WA-46-SP	10,15,16-20N-3W	conditional
TOB44	Chapman C.	Area 23	Oakland Bay	Mason	8256-04	WA-46-SP	10,15,16-20N-3W	conditional
TOB45	Chapman C.	Area 24	Oakland Bay	Mason	8256-04	WA-46-SP	10,15,16-20N-3W	conditional
TOB46	Chapman C.	Area 25	Oakland Bay	Mason	8256-04	WA-46-SP	10,15,16-20N-3W	conditional
TOB47	Chapman C.	Area 26	Oakland Bay	Mason	8256-04	WA-46-SP	10,15,16-20N-3W	conditional
TOB48	Chapman C.	Area 27	Oakland Bay	Mason	8256-04	WA-46-SP	10,15,16-20N-3W	conditional
TOB49	Chapman C.	Area 28	Oakland Bay	Mason	8256-04	WA-46-SP	10,15,16-20N-3W	conditional
TOB50	Chapman C.	Area 29	Oakland Bay	Mason	8256-04	WA-46-SP	10,15,16-20N-3W	conditional
TOB51	Chapman C.	Area 30	Oakland Bay	Mason	8256-04	WA-46-SP	10,15,16-20N-3W	conditional
TOB52	Chapman C.	Area 31	Oakland Bay	Mason	8256-04	WA-46-SP	10,15,16-20N-3W	conditional
TOB53	Chapman C.	Area 32	Oakland Bay	Mason	8256-04	WA-46-SP	10,15,16-20N-3W	conditional
TOB55	Chapman C.	Area 33	Oakland Bay	Mason	8256-04	WA-46-SP	10,15,16-20N-3W	conditional
TOB56	Chapman C.	Area 34	Oakland Bay	Mason	8256-04	WA-46-SP	10,15,16-20N-3W	conditional
TOB57	Chapman C.	Area 35	Oakland Bay	Mason	8256-04	WA-46-SP	10,15,16-20N-3W	conditional
TOB58	Chapman C.	Area 36	Oakland Bay	Mason	8256-04	WA-46-SP	10,15,16-20N-3W	conditional
TOB59	Chapman C.	Area 37	Oakland Bay	Mason	8256-04	WA-46-SP	10,15,16-20N-3W	conditional
TOB60	Chapman C.	Area 38	Oakland Bay	Mason	8256-04	WA-46-SP	10,15,16-20N-3W	conditional
TOB61	Chapman C.	Area 39	Oakland Bay	Mason	8256-04	WA-46-SP	10,15,16-20N-3W	conditional
TOB62	Chapman C.	Area 40	Oakland Bay	Mason	8256-04	WA-46-SP	10,15,16-20N-3W	conditional
TOB63	Chapman C.	Area 41	Oakland Bay	Mason	8256-04	WA-46-SP	10,15,16-20N-3W	conditional
TOB64	Chapman C.	Area 42	Oakland Bay	Mason	8256-04	WA-46-SP	10,15,16-20N-3W	conditional
TOB65	Chapman C.	Area 43	Oakland Bay	Mason	8256-04	WA-46-SP	10,15,16-20N-3W	conditional

# Taylor Resources *Chapmans Cove*

General Information								
Bed ID #	Specific Location	Bed Name	Bay or Inlet	County	Aquatic Farm Reg	DOH Cert #	Sec., Twp. & Rge.	Gr. Area Class.
TOB66	Chapman C.	Area 44	Oakland Bay	Mason	8256-04	WA-46-SP	10,15,16-20N-3W	conditional
TOB67	Chapman C.	Area 45	Oakland Bay	Mason	8256-04	WA-46-SP	10,15,16-20N-3W	conditional
TOB68	Chapman C.	Area 46	Oakland Bay	Mason	8256-04	WA-46-SP	10,15,16-20N-3W	conditional
TOB69	Chapman C.	Area 47	Oakland Bay	Mason	8256-04	WA-46-SP	10,15,16-20N-3W	conditional
TOB70	Chapman C.	Area 48	Oakland Bay	Mason	8256-04	WA-46-SP	10,15,16-20N-3W	conditional
TOB71	Chapman C.	Area 49	Oakland Bay	Mason	8256-04	WA-46-SP	10,15,16-20N-3W	conditional
TOB72	Chapman C.	Area 50	Oakland Bay	Mason	8256-04	WA-46-SP	10,15,16-20N-3W	conditional
TOB73	Chapman C.	Area 51	Oakland Bay	Mason	8256-04	WA-46-SP	10,15,16-20N-3W	conditional
TOB74	Chapman C.	Area 52	Oakland Bay	Mason	8256-04	WA-46-SP	10,15,16-20N-3W	conditional
TOB75	Chapman C.	Area 53	Oakland Bay	Mason	8256-04	WA-46-SP	10,15,16-20N-3W	conditional
TOB76	Chapman C.	Area 54	Oakland Bay	Mason	8256-04	WA-46-SP	10,15,16-20N-3W	conditional

Appendix B  
Sensitive Information

Taylor Resources Chapmans Cove

General Information			Cultivation Activities																
Bed ID #	Specific Location	Bed Name	Predator Cont.							Bed			Farming Activities						
			oyster drills	moon snails	starfish	diving ducks	tresspassers	diking	dike draining	seeding	cutting (shell mixed w/ gravel)	transplanting	"wind row" dug to enhance settlement	managed harvest, immature clams left	record keeping - seeding, harvest	water quality efforts			
TOB22	Chapman C	Dike 1	x			x	x	x	x	x	x	x	x	x	x	x	x	x	
TOB23	Chapman C	Dike 2	x			x	x	x	x	x	x	x	x	x	x	x	x	x	
TOB24	Chapman C	Dike 3	x			x	x	x	x	x	x	x	x	x	x	x	x	x	
TOB25	Chapman C	Dike 4	x			x	x	x	x	x	x	x	x	x	x	x	x	x	
TOB26	Chapman C	Dike 5	x			x	x	x	x	x	x	x	x	x	x	x	x	x	
TOB27	Chapman C	Dike 6	x			x	x	x	x	x	x	x	x	x	x	x	x	x	
TOB28	Chapman C	Dike 7	x			x	x	x	x	x	x	x	x	x	x	x	x	x	
TOB29	Chapman C	Dike 8	x			x	x	x	x	x	x	x	x	x	x	x	x	x	
TOB30	Chapman C	Dike 9	x			x	x	x	x	x	x	x	x	x	x	x	x	x	
TOB31	Chapman C	Dike 10	x			x	x	x	x	x	x	x	x	x	x	x	x	x	
TOB32	Chapman C	Dike 11	x			x	x	x	x	x	x	x	x	x	x	x	x	x	
TOB33	Chapman C	Dike 12	x			x	x	x	x	x	x	x	x	x	x	x	x	x	
TOB34	Chapman C	Dike 13	x			x	x	x	x	x	x	x	x	x	x	x	x	x	
TOB35	Chapman C	Dike 14	x			x	x	x	x	x	x	x	x	x	x	x	x	x	
TOB36	Chapman C	Dike 15	x			x	x	x	x	x	x	x	x	x	x	x	x	x	
TOB37	Chapman C	Dike 16	x			x	x	x	x	x	x	x	x	x	x	x	x	x	
TOB38	Chapman C	Dike 17	x			x	x	x	x	x	x	x	x	x	x	x	x	x	
TOB39	Chapman C	Dike 18	x			x	x	x	x	x	x	x	x	x	x	x	x	x	
TOB40	Chapman C	Dike 19	x			x	x	x	x	x	x	x	x	x	x	x	x	x	

# Taylor Resources Chapmans Cove

General Information			Cultivation Activities														
Bed ID #	Specific Location	Bed Name	Predator Cont.						Bed			Farming Activities					
			oyster drills	moon snails	starfish	diving ducks	trespassers	diking	dike draining	seeding	cutting (shell mixed w/ gravel)	transplanting	"wind row" dug to enhance settlement	managed harvest, immature clams left	record keeping - seeding, harvest	water quality efforts	
TOB41	Chapman C	Area 20	x			x									x	x	x
TOB42	Chapman C	Area 21	x			x									x	x	x
TOB43	Chapman C	Area 22	x			x									x	x	x
TOB44	Chapman C	Area 23	x			x									x	x	x
TOB45	Chapman C	Area 24	x			x									x	x	x
TOB46	Chapman C	Area 25	x			x									x	x	x
TOB47	Chapman C	Area 26	x			x									x	x	x
TOB48	Chapman C	Area 27	x			x									x	x	x
TOB49	Chapman C	Area 28	x			x									x	x	x
TOB50	Chapman C	Area 29	x			x									x	x	x
TOB51	Chapman C	Area 30	x			x									x	x	x
TOB52	Chapman C	Area 31	x			x									x	x	x
TOB53	Chapman C	Area 32	x			x									x	x	x
TOB55	Chapman C	Area 35	x			x									x	x	x
TOB56	Chapman C	Area 34	x			x									x	x	x
TOB57	Chapman C	Area 35	x			x									x	x	x
TOB58	Chapman C	Area 36	x			x									x	x	x
TOB59	Chapman C	Area 37	x			x									x	x	x
TOB60	Chapman C	Area 38	x			x									x	x	x

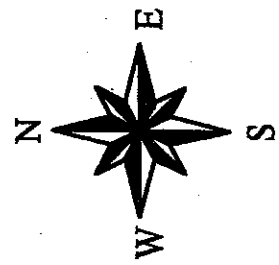
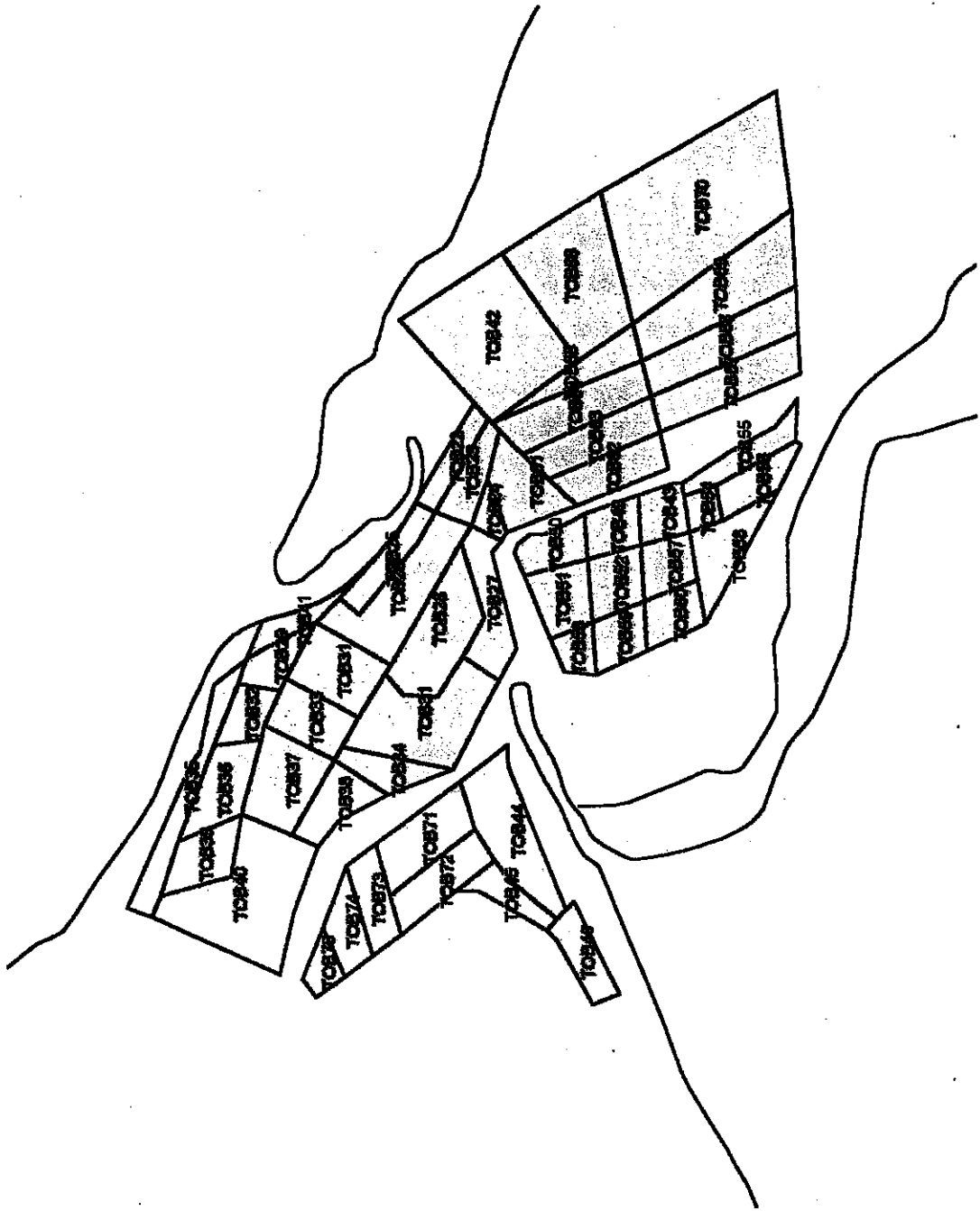
Appendix B  
Sensitive Information

Taylor Resources Chapmans Cove

General Information		Cultivation Activities															
Bed ID #	Specific Location	Bed Name	Predator Cont.						Farming Activities								
			oyster drills	moon snails	starfish	diving ducks	tresspassers	diking	dike draining	seeding	cultching (shell mixed w/ gravel)	transplanting	"wind row" dug to enhance settlement	managed harvest, immature clams left	record keeping - seeding, harvest	water quality efforts	
TOB61	Chapman C	Area 39	x			x										x	x
TOB62	Chapman C	Area 40	x			x										x	x
TOB63	Chapman C	Area 41	x			x										x	x
TOB64	Chapman C	Area 42	x			x										x	x
TOB65	Chapman C	Area 43	x			x										x	x
TOB66	Chapman C	Area 44	x			x										x	x
TOB67	Chapman C	Area 45	x			x										x	x
TOB68	Chapman C	Area 46	x			x										x	x
TOB69	Chapman C	Area 47	x			x										x	x
TOB70	Chapman C	Area 48	x			x										x	x
TOB71	Chapman C	Area 49	x			x										x	x
TOB72	Chapman C	Area 50	x			x										x	x
TOB73	Chapman C	Area 51	x			x										x	x
TOB74	Chapman C	Area 52	x			x										x	x
TOB75	Chapman C	Area 53	x			x										x	x
TOB76	Chapman C	Area 54	x			x										x	x



# Chapmans Cove



## Oyster Culture

**Introduction.** The culture of oysters has taken place for many decades on tidelands owned and/or managed by Taylor Shellfish Farms. Many of the practices have improved and are now more efficient, productive and environmentally beneficial. Productive oyster ground is dependent on a number of variables including salinity, temperature, substrate, water quality, and types of predators. Oyster ground can be classified as seed ground, growout ground, fattening ground, or transplant area or by growout method such as longline or bag area.

There are different approaches that can be taken to oyster growout depending on the market, the beach, and the environment.

For oysters destined to supply the half shell market, the growout method can be bag or bottom culture. Although there are a number of other methods, Taylor Shellfish Farms primarily uses bags for growing small single oysters. For the shucked meat market, the method will be determined primarily by environmental conditions such as substrate and predators.

Taylor Shellfish Farms successfully cultures several species of oyster including the Pacific oyster (*Crassostrea gigas*), Olympia oyster (*Ostrea lurida*), Kumamoto oyster (*Crassostrea sikamea*), Eastern oyster (*Crassostrea virginica*) the European flat oyster (*Ostrea edulis*).

**Bottom Culture.** Ground that is sufficiently hard or prepared can support bottom culture. Seed oysters attached to cultch shell are sprayed from the deck of barges onto marked beds at an even rate to achieve approximately ten oysters per square foot. Oysters are left on beds until harvest.

**Bed Preparation.** Prior to planting a new crop of oysters, an oyster bed may be cleaned with the use of a dredge bag and cleaned of drills and other pests. Oysters remaining on the bed after a harvest as well as debris and mud build-up are removed during this process.

In areas suitable for bottom culture, substrate enhancement may be done to improve the substrate and prepare the ground for the spreading of a new crop. Some areas may have appropriate substrate to spread oysters directly onto ground without enhancement efforts. Substrate enhancement is done by spraying crushed shell and/or washed gravel from the deck of a barge using a pump and hose. Several runs are made over marked ground to ensure an even spread of material.

**Harvesting.** Bottom culture oysters are harvested either by hand or in some areas, such as Willapa Bay, oysters are harvested by using a mechanical dredge. In those areas, the mechanical dredge is lowered to the bottom at high tide by a boom or hydraulic winch and dragged along the bottom scooping up oysters. For hand harvesting, workers fork or hand

## Manila Clam Culture

**Introduction.** Taylor Shellfish Farms cultivates Manila clams on several properties located throughout Washington State. The primary method of clam cultivation is bottom culture where clams are grown in the intertidal zone in natural or enhanced substrate.

**Bed Preparation.** Prior to planting clam seed on the tidelands, the tideland beds are prepared in a number of ways depending on the location. This bed preparation increases the chances of seed survival and allows for full use of available land. The types of preparatory work include raking debris, including old oyster shells, gravelling to enhance the substrate, burying geotech fabric, cleaning the beds of algae, mussel mats and other growths, and conducting environment assessments of conditions such as salinity and water quality. In addition to these types of activities, other preparations are done including laying predator netting, fencing, and boundary setting. In some areas, the netting is removed within a couple days after the clams have burrowed sufficiently into the substrate.

**Seeding.** Most of the clam seed used comes from Taylor Shellfish Farms hatchery and nursery facilities. Spring and early summer is the normal season for planting clams. The clams range in variable sizes depending on the site-specific environmental conditions.

There are several methods used for broadcasting clam seed onto the tidelands. Some of which include hand spreading seed on an incoming tide when water depth is approximately 4 inches, hand spreading seed on an outgoing tide when water depth is approximately 2 to 3 feet deep, or spreading seed from a boat at high tide.

The method of clam seeding is dependent on site-specific factors including types of predators and weather conditions.

In some areas a natural setting of Manila clams will occur, particularly in the Hood Canal. To prepare an area for capturing the natural set, substrate covers, or predator nets, are removed and the substrate cleaned of debris. These occurrences are unpredictable and are therefore not often exploited.

**Bed Assessment and Maintenance.** After each growing season, surveys and samplings are conducted to assess seed survival and spreading adequacy. One square foot of substrate is sampled using four screen sizes. Depending on the location, seed handling techniques, and bed preparation, the survival rate is expected to yield at least 20-25 clams per square foot at maturity.

Beds are maintained by removing debris, keeping nets in check, and monitoring clam growth and mortalities.



**HELTON**  
COUNTY SEAT

**OAKLAND BAY**

**Hammersley Inlet Church**

**Agate**

**Bayshore (Siding)**

**Bayshore**

**PORT OF SHELTON**

**Munson Point**

29

28

27

26

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