

ODFW Shellfish Program



LEGISLATIVE REPORT December 19, 2023

Summary and Purpose of ODFW Final Report

In 2019, Senate Bill 1025 directed the Oregon Department of Fish and Wildlife to convene the Tillamook Bay Clam Advisory Committee (TBCAC) to consider issues pertaining to management of recreational and commercial bay clam fisheries in Tillamook Bay. ODFW solicited applications and appointed eight members to TBCAC that represent commercial, recreational, and conservation interests in bay clam resources. TBCAC met as a committee 14 times over 2020-2023 (in compliance with SB-1025 and HB-2560), and discussions among committee members were open, wide-ranging, and productive. The committee addressed numerous topics and issues related to assessment of wild stocks of bay clams and management of recreational and commercial clam fisheries. Many issues were specifically identified by SB-1025 as priorities for TBCAC attention, and committee members raised additional topics for discussion.

The purpose of this ODFW Legislative Report is to provide a recap regarding TBCAC activities and present a summary of their final recommendations as required by Senate Bill 1025. The TBCAC delivered their final report of recommendations to ODFW on November 20, 2023.

ODFW Shellfish Program

The mission of the Oregon Department of Fish and Wildlife (ODFW) Shellfish Program is to: *assess, monitor, and manage shellfish resources, marine invertebrate communities, and their habitats to provide sustained ecological, commercial, social, and recreational benefits for current and future generations of Oregonians.* Activities undertaken by the ODFW Shellfish Program generate critical data and information needed to assess the status of shellfish populations, ensure sustainability of recreational and commercial fisheries, and evaluate the characteristics of shellfish habitats. Financial support for ODFW Shellfish Program activities is provided primarily through a combination of Recreational Shellfish License fees, Commercial Fish Funds, and grants to pay for special projects.

Harvest of Bay Clams in Oregon Bays and Estuaries

Several species of bay clams are targets for recreational and commercial harvesters in Tillamook Bay, including butter clams (*Saxidomus giganteus*), cockles (*Clinocardium nuttallii*), gaper clams (*Tresus capax*), and littleneck clams (*Leukoma staminea*). Although the diversity of bay clams in Oregon estuaries exceeds twenty species, these four large abundant species account for most of the bay clams harvested from the intertidal and subtidal zones of Tillamook Bay.



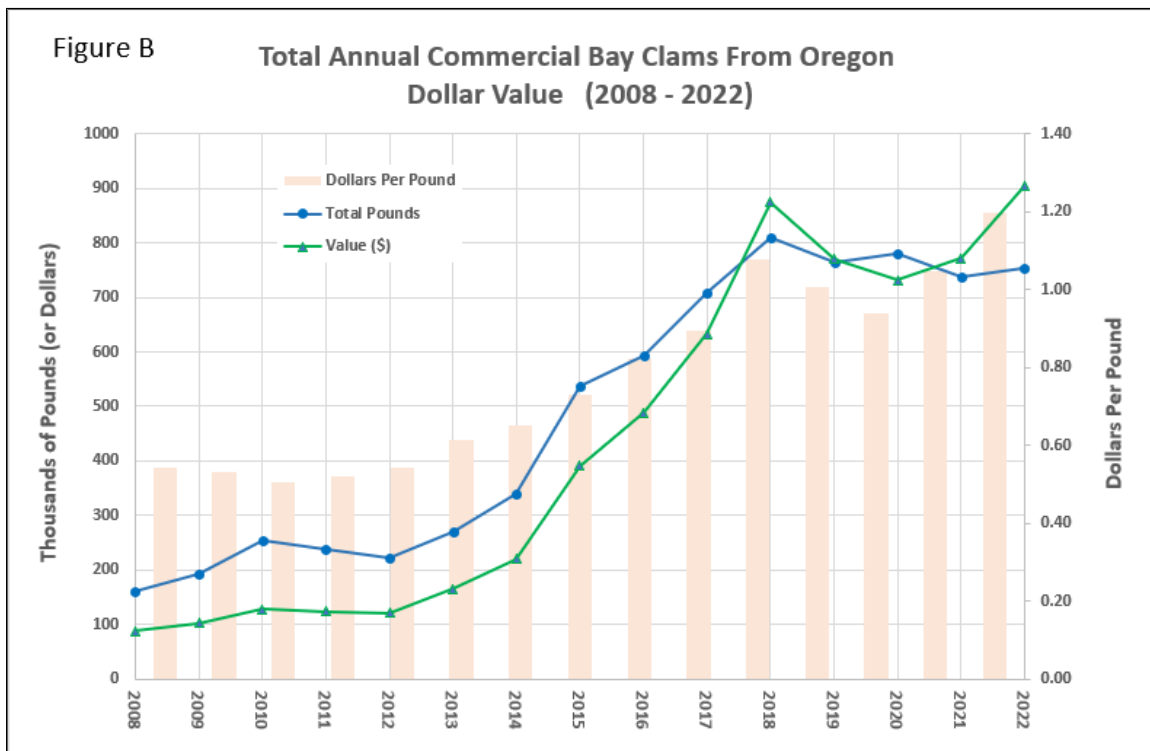
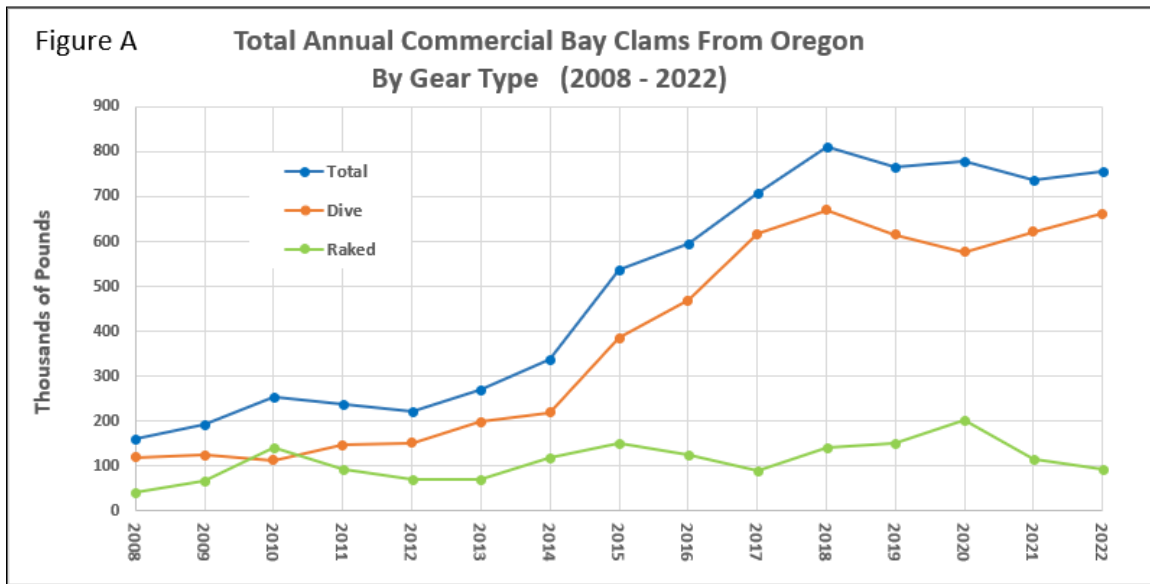
Cockles are a popular target for sport and commercial clam diggers in Tillamook Bay.

Recreational Harvest: Recreational harvest of bay clams varies substantially from year to year in Tillamook Bay, and the average overall take is about 177,000 clams per season (about 58,000 lbs; April – September). Recreational diggers typically harvest the greatest number of cockles, followed by butter clams, gaper clams, and littleneck clams. Garibaldi Flat is the most popular site for recreational clambers, and commercial harvest of bay clams is prohibited from this area to reduce conflict. It is estimated that recreational clambers engage in a collective total of about 10,000 – 12,000 trips each year to the tide flats of Tillamook Bay.

Commercial Harvest: Two distinct fisheries exist for the commercial harvest of bay clams from Tillamook Bay, including: (1) Bay Clam Intertidal Fisheries (collection of bay clams from the intertidal zone or “rake fishery”); and (2) Bay Clam Dive Fishery (collection of bay clams from the subtidal zone or “dive fishery”). Both commercial fisheries primarily harvest the same species of bay clams (*i.e.*, cockles, gaper clams, butter clams) but differ in the requirements for licensing, permitting, harvest methods, and other aspects of the fishery. Tillamook Bay currently supports 88% of the state’s commercial bay clam harvest, and raking or digging for clams in intertidal areas has been a commercial activity since at least 1891. Most of the bay clams taken by commercial harvesters are sold as bait for the commercial crab fishery, and only a small percentage are harvested for human consumption.

Harvest of bay clams from the subtidal zone was developed into a limited-entry commercial fishery by ODFW in 2006, and annual landing limits were first established in 2016. The commercial bay clam dive fishery in Oregon has undergone four distinct phases: (1) Early Phase: commercial landings of bay clams from sub-tidal areas varied between 70,000 - 150,000 lbs each year from 1978 to 2007; (2) Slow Growth Phase: commercial landings increased slowly from 2008 to 2014 (105,000 - 210,000 lbs harvested each year); (3) Rapid Growth Phase: commercial landings increased markedly from 2015 to 2018 until they reached a plateau at 675,000 lbs per year; and (4) Recent Phase: steady total harvest between 615,000 and 660,000 lbs per year from 2019 to 2023 as harvesters approach the annual landing limits allowed by ODFW (*i.e.*, Tillamook Bay: 185,000 lbs for cockles, 235,000 lbs for gaper clams, and 225,000 lbs for butter clams; Yaquina Bay: 20,000 lbs for gaper clams; see Figure A). These four phases of the commercial bay clam dive fishery represent a statewide 580% increase in annual landings over the past four decades.

Bay clam market value averaged about \$0.50 per pound in Oregon from 2008 to 2012, followed by a period of 6 years when prices increased steadily until the value of bay clams first exceeded \$1.00 per pound (2018). More recently, the market value for bay clams has stabilized between \$0.95 and \$1.20 per pound (Figure B). The increase in monetary value of bay clams contributes directly to the continued high level of commercial interest, elevated harvest effort, and to the total annual take of bay clam resources in Tillamook Bay and other Oregon estuaries.



Bay Clam Stock Assessments to Support Management Actions

The ODFW Shellfish Program periodically assesses the status of shellfish populations through fishery-independent surveys conducted in Oregon's major estuaries. The Shellfish and Estuarine Assessment of Coastal Oregon (SEACOR) conducted an initial comprehensive survey of bay clam resources in Tillamook Bay (2010-2012) and Netarts Bay (2013-2014). SEACOR returned to conduct further surveys of bay clams and their habitats in the intertidal zone of Tillamook Bay in 2022-2024, and new subtidal surveys were completed in 2023. Datasets generated by ODFW / SEACOR provide quantitative estimates of the standing stock biomass of bay clams in different regions of Tillamook Bay. In addition, ODFW also uses these data to produce detailed maps and informational aids for recreational clammers to illustrate the spatial distribution and abundance of bay clams. The current SEACOR assessment (2022-2024) encompasses the marine-dominated region of Tillamook Bay and focuses specifically on areas that are important to recreational and commercial clammers. Technical information, maps, and datasets generated by ODFW are also shared with coastal tribes and federal, state, and county resource agencies to support management decisions in Tillamook Bay and Oregon's other estuaries.



ODFW SEACOR stock survey



The ODFW / SEACOR team conducts quantitative surveys of bay clam populations and their habitats throughout Oregon's major bays and estuaries. Shellfish biologists use a gas-powered pump system to extract bay clams from mud, sand, and gravel habitats. All clams are retained in mesh nets, and they are identified, measured, and weighed to generate estimates of bay clam biomass.

Tillamook Bay Clam Advisory Committee

Stakeholders expressed concern in 2018-2019 about the increasing level of commercial harvest of bay clams from Tillamook Bay. Passage of SB-1025 established TBCAC as a forum to discuss issues related to management of bay clam resources, and the legislation specified several topics for TBCAC to address. These topics include potential restrictions to commercial harvest in

subtidal and intertidal habitats, vessel conflicts between anglers and commercial clam divers near the Ghost Hole area of Tillamook Bay, and increasing the frequency of ODFW bay clam stock assessment surveys. SB-1025 directed TBCAC to develop recommendations that focus on improved management actions to ensure long-term sustainability of recreational and commercial harvest of bay clams in Tillamook Bay.

The purpose of TBCAC is to develop recommendations to:

- Balance commercial and recreational take of bay clams;
- Identify possible ways to reduce conflicts among stakeholders;
- Explore the need for potential rules related to harvest of bay clams from Tillamook Bay; and
- Ensure sustainability of bay clam harvests, and improve stock assessments, monitoring, and management of bay clam fisheries.



Tillamook Bay Clam Advisory Committee & ODFW Shellfish Program: L-R; *Mitch Vance, Shane Riley, Tony D'Andrea, Clair Thomas, Kristi Foster (Chair), Brent Collier, Craig Andes, Steve Rumrill (missing: Barbara Trout, Steve Williams (Vice-chair), Brett Senff, Summer Henricksen)*

TBCAC Activities over 2020-2023

- ODFW solicited applications in 2020 and appointed eight members to TBCAC that represent commercial, recreational, and conservation interests in bay clam resources (see TBCAC Final Report; Appendix B; TBCAC Membership and Meetings);
- TBCAC met as a committee 14 times over 2020-2023 (see TBCAC Final Report; Appendix B; and online meeting records; <https://tinyurl.com/TBCACMeetings>);
- To date (Dec 2023), TBCAC addressed numerous topics and over 20 distinct issues related to assessment of wild stocks of bay clams and management of the recreational and commercial fisheries (see TBCAC Final Report; Appendix A; list of TBCAC issues);

- TBCAC generated an Interim Summary of Recommendations (August 2022) to address priority issues identified by SB-1025 and additional topics identified by TBCAC; and
- TBCAC generated their Final Report (*TBCAC Summary of Recommendations*) including 31 specific recommendations and delivered their Final Report to ODFW (November 20, 2023).

Final TBCAC Recommendations

The 31 final recommendations generated by TBCAC address a wide diversity of topics and issues related to management of bay clams and the commercial and recreational bay clam fisheries. These recommendations are summarized below and presented in greater detail within the TBCAC Final Report (2023).

Topic	TBCAC Recommendations
Safety of Commercial Clam Divers and Conflict Reduction in the Ghost Hole	<ol style="list-style-type: none"> 1. Establish seasonal Ghost Hole restrictions to reduce conflicts between clambers and salmon anglers (<u>note</u>: ODFW adopted a permanent rule in 2021 to seasonally prohibit commercial harvest of bay clams from the subtidal zone in the Ghost Hole area, from the floating toilet to Hobsonville Point, from midnight to noon (annually; Sep 1 to Nov 15)). 2. If the salmon season closes before November 15 in any year, ODFW should lift commercial subtidal clamming restrictions around the Ghost Hole (<u>note</u>: rarely expect closure of salmon season before Nov 15). 3. Identify alternate areas for subtidal harvest of bay clams during the period when commercial clamming is prohibited in the Ghost Hole area (Sep 1 to Nov 1). 4. Open an additional area in Tillamook Bay (<i>i.e.</i> Sow and Pigs; north of the main channel) to commercial harvest of bay clams to offset the impact from restrictions in the Ghost Hole area. In addition, request Oregon Department of Agriculture expand water quality sampling to potentially allow commercial harvest of bay clams in alternative harvest areas (as needed), and shift location of water quality monitoring sites and boundary lines for approved commercial harvest areas so that they better align with ODFW maps of clamming areas. 5. ODFW and the Oregon State Marine Board should place informational signage about diver safety for boaters (<i>i.e.</i>, boat launches, docks, other venues) and implement education/outreach efforts (<i>i.e.</i>, radio, social media, print materials, personal communications) every year, especially during the fall Chinook salmon season. 6. Recommend the Oregon State Marine Board establish an appropriate safety buffer in the vicinity of diving operations in the Ghost Hole and every other area based on safe boating guidelines for confined waters such as rivers, inlets, and navigational channels. 7. Request Oregon Department of Agriculture to limit commercial oyster plat leases in and around the Ghost Hole to avoid user conflict with recreational clambers.
ODFW SEACOR Stock Assessment Surveys for Bay Clams	<ol style="list-style-type: none"> 8. Provide additional permanent funding to support ODFW stock assessment surveys of bay clams in Tillamook Bay on a two-year cycle (or no less than 5-year cycle; instead of the current 10-year cycle), and support intertidal and subtidal surveys in alternate years so the surveys are continuously ongoing, rapidly responsive to changing conditions, and so results can inform adaptive management strategies. 9. <u>Option</u>: ODFW continues to conduct stock assessment surveys in Tillamook Bay every 10-years, and should outsource more frequent surveys through a competitive bidding process to universities, non-profit groups, scientific diving organizations, and other qualified candidates. 10. <u>Option</u>: ODFW and commercial clambers identify logbook data that can be used to assist stock assessment surveys (at no cost). 11. Expand the current area for stock assessment surveys to include other areas with clams, and support at least 15-20 days of underwater surveys to re-sample the Main Channel, Garibaldi subtidal zone,

	<p>Hobsonville Channel, side channels, and other locations to improve understanding of dynamic clam populations in Tillamook Bay.</p> <ol style="list-style-type: none"> 12. If possible, conduct stock assessment surveys earlier in the calendar year (Jan-Feb) before commercial harvesting efforts begin (or incorporate commercial harvest data into survey data to develop more complete biomass estimates; <i>e.g.</i>, the biomass of clams commercially harvested before the stock assessment surveys should be included in the calculation of total bay clam biomass). 13. Provide funding to monitor bay clam populations pre- and post-construction of the Tillamook Bay jetties, and pre- and post- dredging of the navigational channel in Tillamook Bay (when applicable). 14. Annually set quota(s) for commercial intertidal and subtidal harvests in Tillamook Bay based on stock estimates (95% lower confidence interval for estimated available biomass) to be no less than 15% of the stock estimate (rounding upward) and not to exceed 20% of the stock estimate), and quotas should be announced as early as possible in January of each year.
<p>Designated Areas for Recreational Clamming</p>	<ol style="list-style-type: none"> 15. No special management areas are needed at this time around Bay Ocean North and Middle Flat. Conflict between recreational and commercial clambers has been minimal over the past 2-3 years; continue to monitor bay clam harvest activities and reports of conflicts. 16. Continue to promote Garibaldi Flats as an existing special management area that only allows recreational harvesters (additional education/outreach efforts may be beneficial to increase awareness).
<p>Monitoring Commercial and Recreational Harvest of Bay Clams</p>	<ol style="list-style-type: none"> 17. Provide funds to support ODFW staff based in Tillamook Bay, preferably at least 1 full-time NRS-1 position to monitor commercial and recreational clamming activities and ensure sustainable bay clam fisheries (if funding is not available, transfer existing ODFW staff from Newport to Tillamook). 18. Provide funds to support ODFW staff (1 seasonal clam creel sampler position) to monitor recreational and commercial clamming activities, and additional seasonal clam creel samplers should be located at Garibaldi Flats and other boat ramps around Tillamook Bay to sample harvests and provide outreach. 19. Modify the permanent rule to require submission of electronic fish tickets to ODFW within one working day to allow for extensions due to extenuating circumstances (<i>e.g.</i>, health emergencies, internet outages). 20. Provide funds to develop a digital application for the commercial bay clam fishery fleet to submit information from logbooks, and make the digital application available to recreational clambers to report their catch.
<p>Improved Management of Commercial Intertidal and Subtidal Bay Clam Fisheries</p>	<p><u>Intertidal Fisheries:</u></p> <ol style="list-style-type: none"> 21. Annually set quotas for commercial intertidal harvest of bay clams from Tillamook Bay based on stock estimates, and give consideration to past and current levels of harvest (identify annual landing limits early in year using existing ODFW SEACOR stock estimates). 22. Switch the commercial intertidal bay clam fishery from open-access permit (current system) to a transferrable limited-entry permit, with consideration to years of participation and annual landings as criteria for eligibility. 23. Develop and maintain a website to show daily harvests of bay clams (if the commercial fishery remains as an unlimited open-access derby-style fishery). <p><u>Subtidal Fisheries:</u></p> <ol style="list-style-type: none"> 24. Annually set quotas for commercial subtidal harvest of bay clams from Tillamook Bay based on stock estimates, and give consideration to past and current levels of harvest (identify annual landing limits using existing ODFW SEACOR stock estimates). 25. Establish commercial harvest quotas in January of each year to help harvesters plan out their harvest and sales strategies. 26. Modify requirements for Transferability of Dive Bay Clam Permits (OAR 635-055-0340) to: (2d) allow permits to be fully transferable to another vessel, to the purchaser of the vessel, or to an individual; (3a) annual minimum renewal requirement of either 5 landings of at least 100 lbs or a total of at least 2,500 lbs regardless of number of landings; and (3b) allow only 1 permit per individual or vessel. 27. The current lottery system should be temporarily paused to reduce number of active Coastwide dive

	<p>permits from 10 to 8 (by attrition).</p> <p>28. Modify OAR 635-055-0310 (1d) to allow up to six people on board any vessel while harvesting, possessing, or transporting bay clams (for safety).</p>
Funding and Support	<p>29. It is estimated that a total of \$526,000 is needed annually (\$1,052,000 per biennium) for ODFW to support sustainable clamming in Tillamook Bay.</p> <p>30. ODFW should explore administrative action or legislation (as required) to increase the cost for recreational shellfish permits (by \$3.00 – \$5.00 per permit) to provide funds for more frequent stock assessment surveys and additional ODFW staff (1.0 FTE NRS-1, up to 3-0.5 FTE seasonal BSA shellfish samplers).</p>
Continuation of TBCAC as a Standing Committee	<p>31. Establish TBCAC as a standing committee or long-running forum for continued discussions about topics that were not addressed during 2020-2023, and to allow members to work together on new topics and ideas.</p>



Next Steps

- ODFW is currently working to identify the operational, administrative, regulatory, temporal, and fiscal aspects for each of the 31 recommendations developed by TBCAC. The priority recommendations will be discussed with managers of the ODFW Marine Resources Program and presented to ODFW Leadership regarding potential changes to management of recreational and commercial bay clam fisheries in Tillamook Bay.
- During the period that recommendations generated by TBCAC are under consideration, the ODFW Shellfish Program will continue to manage the recreational and commercial bay clam fisheries in Tillamook Bay and other locations along the Oregon coast. It is likely that actions taken by ODFW during ongoing management and oversight of the Oregon shellfish fisheries may include some of the TBCAC recommendations and may also extend beyond the scope of recommendations generated by TBCAC.
- Surveys of bay clam populations were completed in the summer of 2023 for the subtidal zones of Tillamook Bay. Efforts are underway to revise and update stock estimates for

the bay clams targeted by the commercial bay clam dive fishery during early 2024. Remaining ODFW / SEACOR stock assessment surveys will be completed in the summer of 2024 to generate new estimates of the biomass of bay clams in the intertidal zone of Tillamook Bay.

- ODFW will continue to post information about previous TBCAC meetings, including backgrounders, presentation materials, recordings, and the TBCAC final report (<https://www.dfw.state.or.us/mrp/tbcac/>).



Garibaldi Flat is the most popular site for recreational clamming in Tillamook Bay, and clambers can easily access the productive clam beds by foot. Most experienced and novice clambers typically harvest the daily catch limit of 20 bay clams per trip, and cockles are the most commonly harvested species.

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<https://www.dfw.state.or.us/mrp/tbcac/>