

# Washington Razor Clam Management Update

Region 6 Coastal Shellfish  
Montesano, WA



The following presentation is designed to provide you with general information on the management of the recreational razor clam fishery in Washington and specific information on what to expect for the 2023-24 season.

Thanks for taking the time to view this presentation. Any specific comments or questions can be directed to : [razorclams@dfw.wa.gov](mailto:razorclams@dfw.wa.gov)

## Contents of this presentation

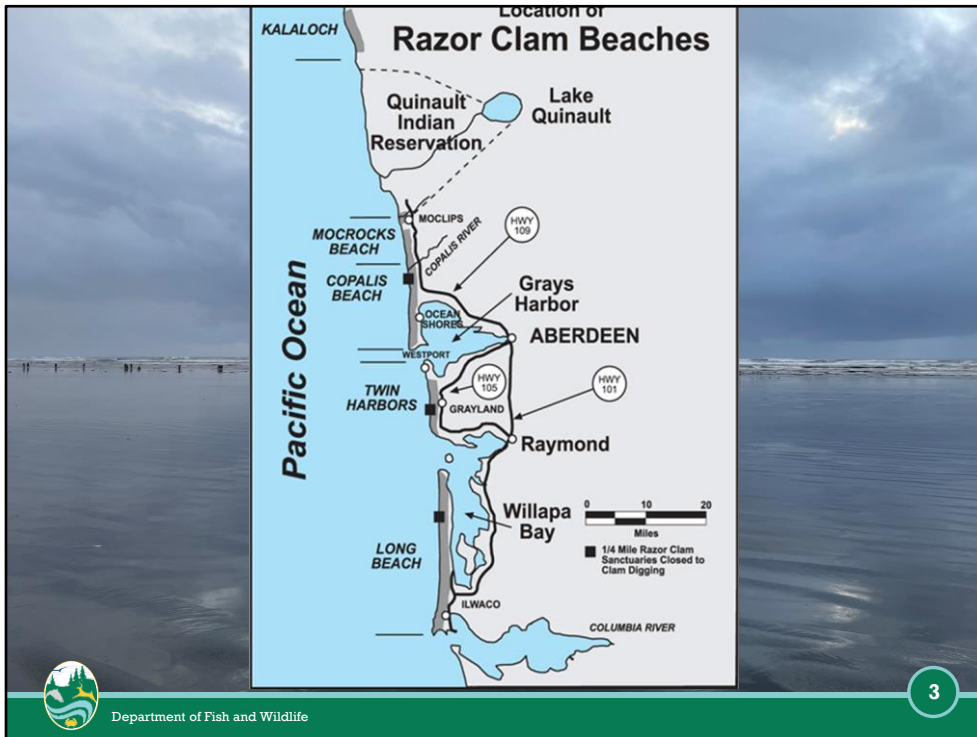
- Review of the 2022-23 Season
- Marine Toxin Update / ORHAB
- Status of Razor Clam Stocks
- Tribal Co-management
- How to Dig Razor Clams Video
- Digging with Kids
- Commonly found Parasites
- Proposed Dates for Fall 2023



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This presentation is designed to update you on the issues listed above and hopefully spur you to let us know what you think about our management of razor clams and how we can change or improve the work we do. Thanks for taking the time to read through the following information.



Washington's razor clam habitat is divided into five management beaches. From the south, they are: Long Beach (from the Columbia River North Jetty to end of Leadbetter Point); Twin Harbors (from the northern shore of Willapa Bay to the Grays Harbor South Jetty); Copalis (from the Grays Harbor North Jetty to the Copalis River); Mocrocks (from the Copalis River to the south boundary of the Quinault Indian Reservation – just south of the Moclips River); Kalaloch (from Olympic National Park South Beach Campground to Brown's Point, just south of Olympic National Park Beach Trail # 3). Within these five management beaches there are a total of 58 miles of sandy beaches and prime habitat for the Pacific Razor Clam (*Siliqua patula*).

## Razor Clam Digging in Washington



WDFW's goal is to provide a safe and enjoyable recreational experience, while still protecting the resource.



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The razor clam fishery in Washington is not only a significant source of revenue for tourism-dependent businesses such as restaurants and motels, but also an important source of community identity and basis for tribal subsistence. Razor clam harvesting, cleaning, cooking, eating, and canning have been an important focus of family relationships and local culture in Washington coastal communities for many generations.



### Washington Recreational Razor Clam Fishery Summarized by Season (October through May)

season	effort (digger trips)	harvest		total harvest days#	fishery value*
			+ wastage (clams)		
1999-20	192,359	2,531,910			\$17,464,305
2000-01	183,375	2,479,525	20		\$16,648,646
2001-02	307,314	4,321,274	39		\$27,901,088
2002-03		season long closure due to high levels of marine toxins			
2003-04	267,053	3,325,575	18		\$24,245,785
2004-05	288,516	4,126,870	25		\$26,194,415
2005-06	240,768	3,284,198	26		\$21,859,366
2006-07	259,847	3,601,239	30		\$23,591,552
2007-08	242,317	3,030,840	40		\$22,000,000
2008-09	248,728	3,216,167	27		\$22,582,056
2009-10	283,444	3,805,228	46		\$25,733,927
2010-11	244,428	3,204,311	46		\$22,191,658
2011-12	194,976	2,575,693	26		\$17,701,903
2012-13	418,999	6,078,109	78		\$38,040,988
2013-14	451,046	6,285,205	105		\$40,950,540
2014-15	399,698	5,756,496	104		\$36,288,647
2015-16	327,545	4,531,856	94		\$29,737,864
2016-17	281,374	4,271,280	46		\$25,545,991
2017-18	257,004	2,840,843	20		\$23,333,435
2018-19	272,962	3,742,861	52		\$24,782,265
2019-20	253,927	3,592,727	66		\$23,054,074
2020-21	109,781	1,738,246	23		\$16,247,581
2021-22	484,426	8,384,383	120		\$71,695,048
<b>2022-23</b>	<b>332,629</b>	<b>5,226,788</b>	<b>73</b>		<b>\$49,229,046</b>
<b>10-year average</b>	<b>317,039</b>	<b>4,637,068</b>	<b>70</b>		<b>\$33,050,615</b>
<b>20-year average</b>	<b>292,973</b>	<b>4,130,946</b>	<b>53</b>		<b>\$25,431,589</b>

\* - economic data derived from University of Washington study.  
# - variable opening occur across five management beaches. This value represents the maximum number of days offered.



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This table provides some perspective of how this fishery can vary by season. The number of digging days offered, number of diggers and total harvest are most influenced by the TAC (total allowable catch) that is developed each summer through of coast-wide razor clam stock assessment work. These numbers are also influenced by management changes over these years in the harvest rate WDFW uses to set the TAC. In addition, marine toxin closures, poor weather and surf conditions can also play a significant role each season. You will find more details about all of these topics in the slides to follow. In recent history: the 2019-20 season closed early due to COVID-19, the 2020-21 season closed early due to domoic acid, the 2021-2022 season was an incident free record year, and the 2022-23 had a domoic acid closure in the middle during the late fall and winter.



Newsroom / Razor clam dig closures on all coastal beaches continue until further notice due to rise in marine toxin levels

## Razor clam dig closures on all coastal beaches continue until further notice due to rise in marine toxin levels

News release Nov 23, 2022

Photos

Contact: [WDFW Newsroom](#)  
Media contact: [WDFW Newsroom](#)

# 2022-23 Fishery Review

Click to display full size or right-click to

OLYMPIA – The recreational razor clam season on all coastal beaches remains closed until further notice, shellfish managers with the Washington Department of Fish and Wildlife (WDFW) announced today.

Test results, released on Nov. 23 for **332,629 digger trips** at 10 beaches along the coast, show that razor clam harvest is still below the safe consumption level. WDFW continues to work with the Washington Department of Health (WDOH) to closely monitor marine toxin levels and to restrict access to razor clams.

"Unfortunately, we need to wait before we can get back to digging razor clams, but the good news is the clams are just getting bigger and fatter. We will continue to monitor the situation and announce when it is safe to dig again," said WDFW's Assistant Director for Fisheries, Matt Smith. "We will continue to work with WDOH to closely monitor marine toxin levels and to restrict access to razor clams."

Domoic acid, a natural toxin produced by certain types of marine algae, can be harmful or fatal if consumed in sufficient quantities. WDFW learned from similar algae bloom events in the past that razor clams can be very slow to have domoic acid leave their meat tissue. More information about domoic acid at coastal beaches, can be found on [WDFW's domoic acid webpage](#).

WDFW shellfish staff will continue to regularly dig test samples of razor clams to monitor the situation. WDOH requires two test samples taken 10 feet apart along the shoreline at each beach. WDFW will announce future opportunities when marine toxin tests show it is safe to do so.

For more information, go to the [WDFW's razor clam webpage](#) and the [DOH webpage](#). The 2022-23 Razor Clam Management Plan is available on the [WDFW's website](#). To be notified of in-season rule changes as they are announced, sign up for email notifications at [wdfw.wa.gov/about/lists](mailto:wdfw.wa.gov/about/lists).



Visit Long Beach

**Average of 15.4 clams per digger trip**  
**Harvest of 5.1 million clams**



## Washington Recreational Razor Clam

<i>2022-23 Season Totals</i>	<i>HARVEST</i>	<i>EFFORT</i>	<i>Average Daily Catch (clams/digger)</i>	<i>Total Digging Days</i>
<b>Long Beach</b>	1,656,655	102,568	15.7	46
<b>Twin Harbors</b>	1,465,517	91,403	15.7	52
<b>Copalis</b>	1,185,177	80,182	14.6	38
<b>Mocrocks</b>	901,411	58,476	15.4	27
<b>Kalaloch</b>	0	0	0	0
<b>TOTAL</b>	5,226,788	332,629	15.4	163



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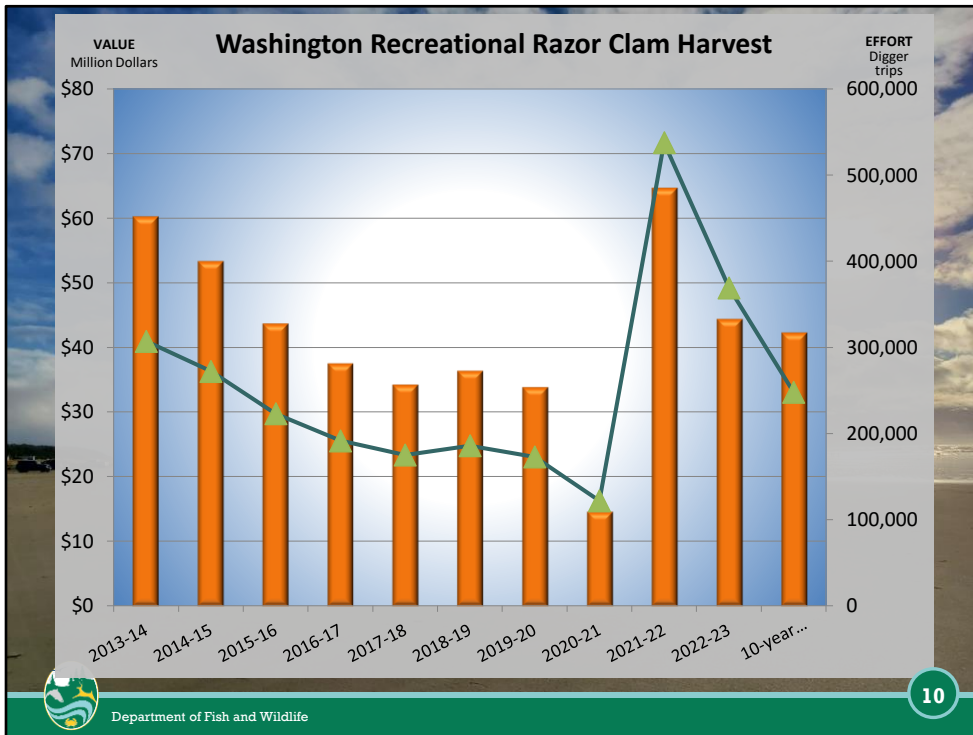
Each of the five beaches is managed separately (see page 4). The Total Allowable Catch (TAC) is determined for each beach using data collected in our annual summer razor clam stock assessment work (discussed more in the slides ahead). As a result, some beaches have more digging opportunities than others.

Note that the harvest listed here includes our estimates of wastage. The CPUE is calculated on the estimate of harvest, minus wastage.



Washington Recreational Razor Clam Fishery											
Days Open for Harvest by Season											
Beach	2022-23	2021-22	2020-21	2019-20	2018-19	2017-18	2016-17	2015-16	2014-15	2013-14	average
Long Beach	46	119	12	66	4	16	11	94	104	72	54
Twin Harbors	52	108	12	63	53	18	46	0	104	105	56
Copalis	38	60	6	31	20	12	33	18	21	24	26
Mocrocks	27	53	12	32	33	20	35	26	43	54	34
Kalaloch	0	0	0	0	6	0	2	0	0	0	1

This table and the following chart that follows, provide some additional perspective of how this fishery can vary by season. The number of digging days offered, number of diggers and total harvest are most influenced by the TAC (total allowable catch) that is developed each summer through of coast-wide razor clam stock assessment work. These numbers are also influenced by management changes over these years in the harvest rate WDFW uses to set the TAC. In addition, marine toxin closures, poor weather and surf conditions can also play a significant role each season. This season was unfortunately shortened due to a domoic acid closure occurring at the end of October.

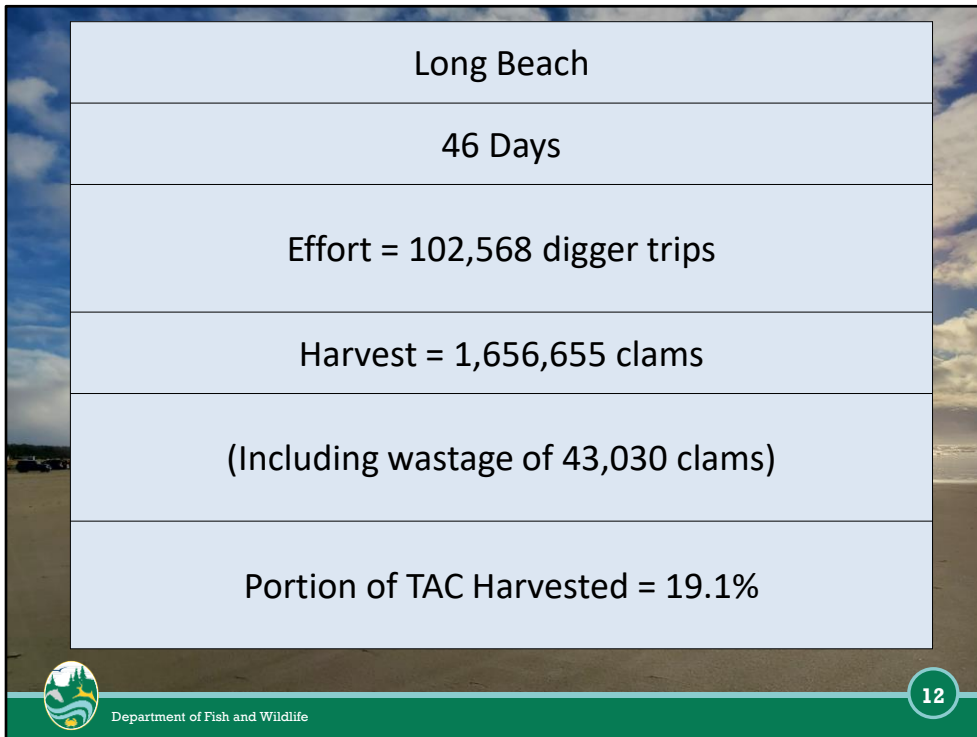


This chart and the previous table provide some additional perspective of how this fishery can vary by season. The number of digging days offered, number of diggers and total harvest are most influenced by the TAC (total allowable catch) that is developed each summer through of coast-wide razor clam stock assessment work. These numbers are also influenced by management changes over these years in the harvest rate WDFW uses to set the TAC. In addition, marine toxin closures, poor weather and surf conditions can also play a significant role each season. You will find more details about all of these topics in the slides to follow. **Note the 2019-20 season closed prematurely due to COVID-19, 2020-21 and 2023-23 seasons were partially closed due to elevated levels of domoic acid.**

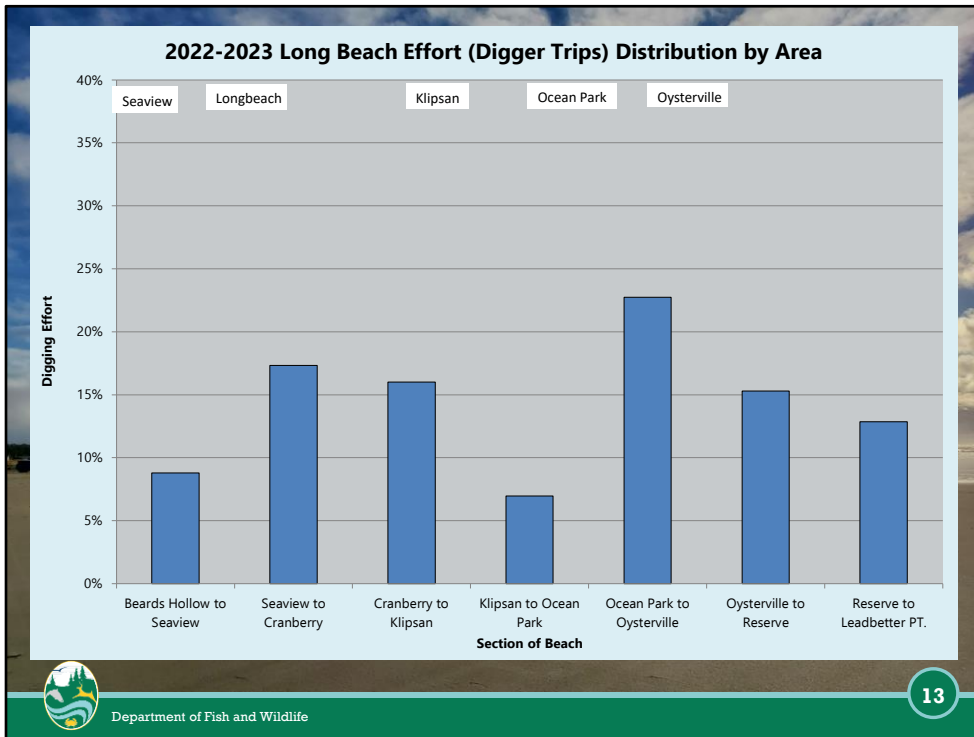
Month	Long Beach	
September 2022	3 Days	Wed – Fri
October 2022	14 Days	Sat – Fri, Mon – Sun
November 2022	0 Days	
December 2022	0 Days	
January 2023	0 Days	
February 2023	0 Days	
March 2023	4 Days	Thu – Sun
April 2023	14 Days	Thu – Wed, Wed – Tue
May 2023	11 Days	Thu – Sun
Totals:	46 Days	




Long Beach had the highest levels of domoic acid last season, which meant it was the last to reopen in the spring. Despite that, there were still 46 days of digging on that beach and we were able to get it open before the annual Long Beach Razor Clam Festival.



Despite having the highest levels of toxicity during the closure and being the last beach to reopen in the spring, Long Beach was the beach with the most digger trips and clams harvested. Despite those coastwide highs we only harvested 19.1% of our TAC, which was the smallest proportion out of all the beaches. The standout PM Tide was Saturday October 8 with an estimated effort of 5,809 diggers and 77,651 clams harvested. The AM Tide that saw the best turnout was Saturday April 22 with 8,390 diggers and 164,453 clams harvested.

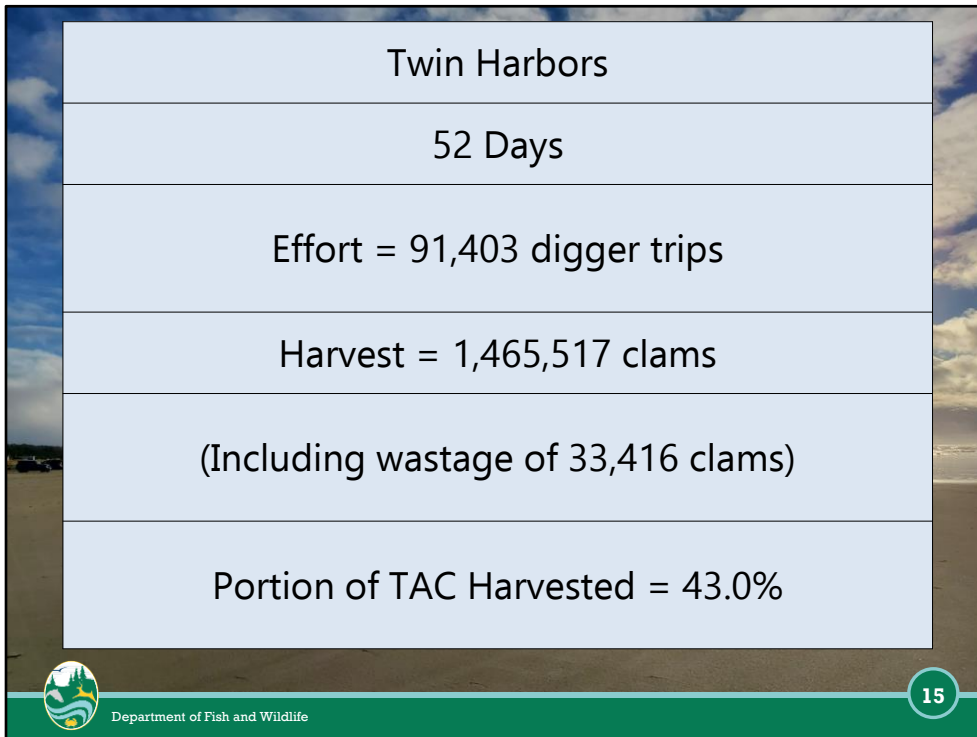


The Y-Axis is the percentage of digging effort (totaling 100). The X-Axis is the harvested beach area, moving from south to north (left to right) and broken up into 7 sections.

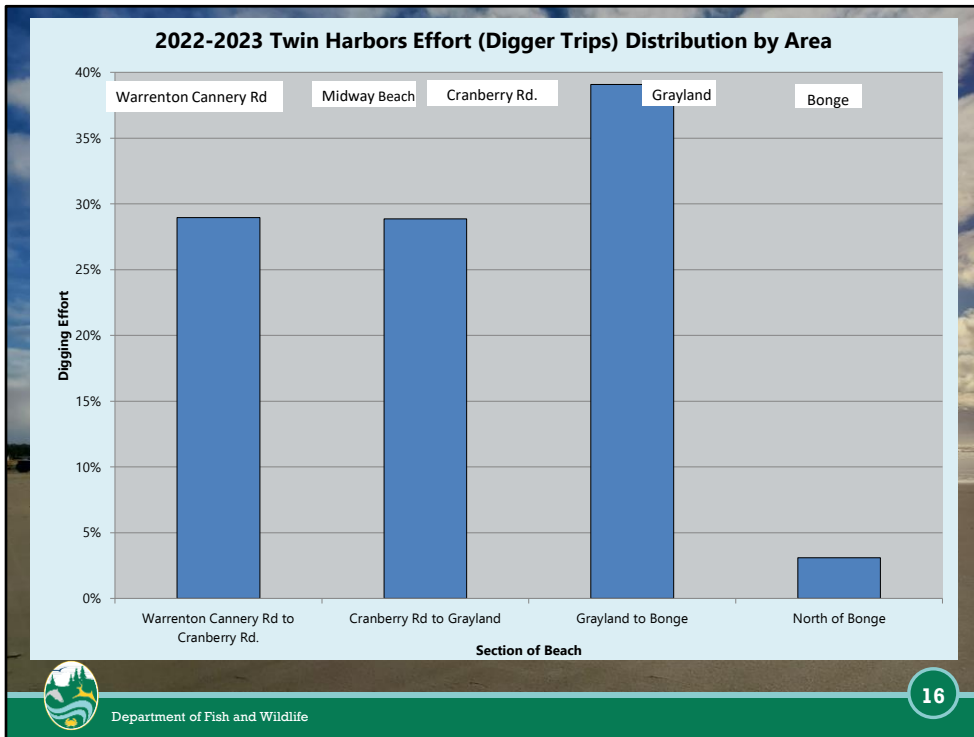
Month	Twin Harbors	
September 2022	3 Days	Wed – Fri
October 2022	14 Days	Sat – Fri, Mon – Sun
November 2022	0 Days	
December 2022	0 Days	
January 2023	0 Days	
February 2023	0 Days	
March 2023	10 Days	Fri – Sun
April 2023	14 Days	Thu – Wed, Wed – Tue
May 2023	11 Days	Thu – Sun
Totals:	52 Days	




On Twin Harbors, a strong population of harvestable sized recruit clams resulted in 52 days of digging this season, the most of any beach.





Twin Harbors was the beach with the 2<sup>nd</sup> most digger trips and clams harvested, and saw 43.0% of the TAC harvested. Standout PM Tides were Saturday October 8 with an estimated effort of 4,763 diggers and 69,058 clams harvested and Saturday March 18 with 5,890 diggers and 84,980 clams. The AM Tide with the highest harvest was Saturday April 22 with 4,703 diggers and 93,726 clams harvested.



The Y-Axis is the percentage of digging effort (totaling 100). The X-Axis is the harvested beach area, moving from south to north (left to right) and broken up into 4 sections. This year the most frequented digging area was the stretch of beach between Grayland Beach Rd. and Bonge Rd.




Month	Copalis	
September 2022	2 Days	Wed, Fri
October 2022	7 Days	Sun, Tue, Thu, Mon, Wed, Fri, Sun
November 2022	0 Days	
December 2022	0 Days	
January 2023	3 Days	Sat, Mon, Wed
February 2023	6 Days	Fri, Sun, Tue, Sat, Mon, Wed
March 2023	8 Days	Sat, Mon, Wed, Fri, Sun, Tue, Thu, Sat
April 2023	6 Days	Fri, Sun, Tue, Thu, Sat, Mon
May 2023	6 Days	Thu, Sat, Mon, Wed, Fri, Sun
Totals:	38 Days	





Copalis was the beach with the lowest toxicity levels and the first to reopen in the spring, resulting in 38 days of digging this season.

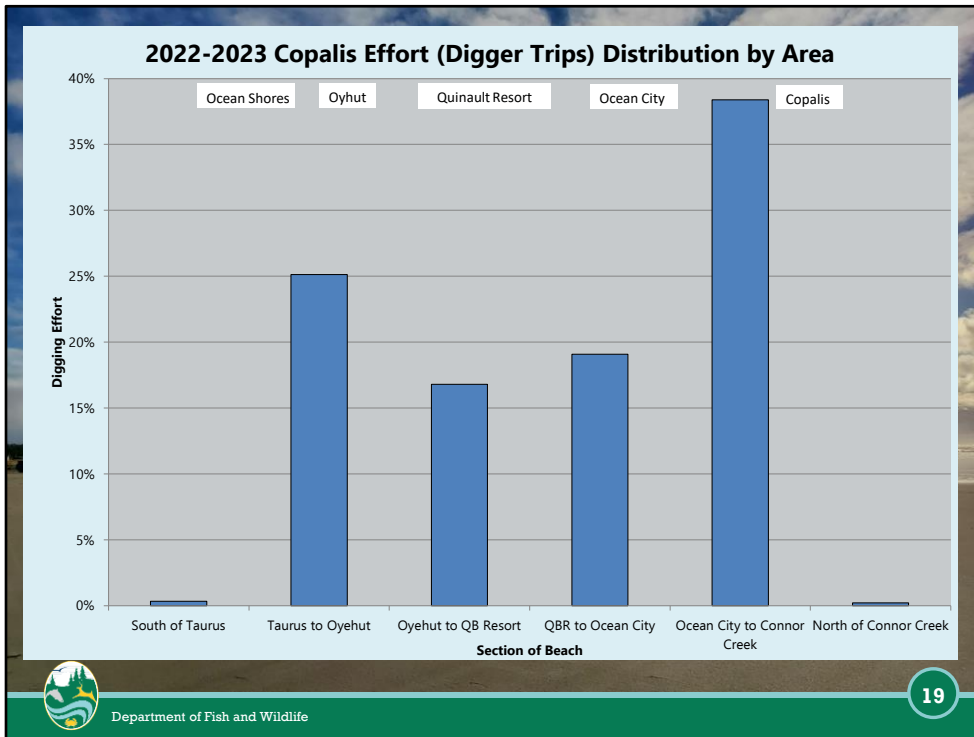
Copalis
38 Days
Effort = 80,182 digger trips
Harvest = 1,185,177 clams
(Including wastage of 16,992 clams)
Portion of TAC Harvested = 35.9%



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Copalis was the beach with the 3<sup>rd</sup> most digger trips and clams harvested, and saw 35.9% of the TAC harvested. Standout PM Tides were Saturday February 18 with an estimated effort of 5,652 diggers and 84,103 clams harvested and Sunday March 19 with 4,714 diggers and 68,622 clams. The AM Tide with the highest harvest was Saturday April 22 with 6,638 diggers and 128,901 clams harvested.



The Y-Axis is the percentage of digging effort (totaling 100). The X-Axis is the harvested beach area, moving from south to north (left to right) and broken up into 6 sections. Similar to years past, the most frequented section was between the Ocean City approach and Conner Creek.

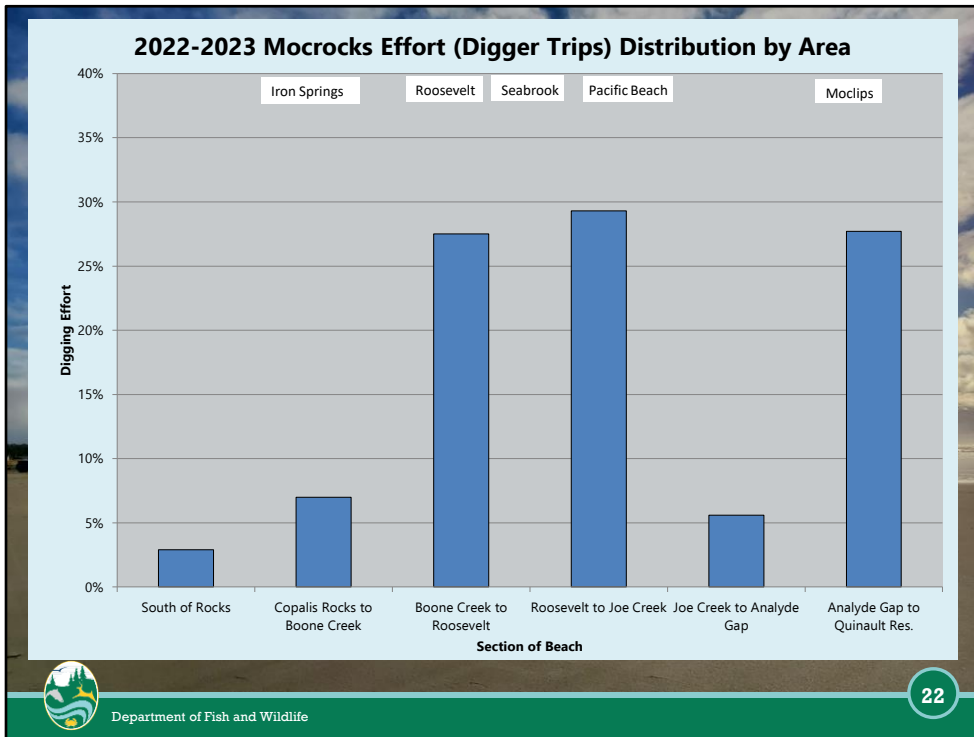
Month	Mocrocks	
September 2022	0 Days	
October 2022	0 Days	
November 2022	0 Days	
December 2022	0 Days	
January 2023	0 Days	
February 2023	6 Days	Sat, Mon, Wed, Fri, Sun, Tue
March 2023	8 Days	Fri, Sun, Tue, Sat, Mon, Wed, Fri, Sun, Tue
April 2023	8 Days	Thu, Sat, Mon, Wed, Wed, Fri, Sun, Tue,
May 2023	5 Days	Fri, Sun, Tue, Thu, Sat
Totals:	27 Days	


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Mocrocks was the beach most affected by domoic acid this season. It started the year closed with toxicity levels too high for harvest, and was unable to be reopened before another domoic acid bloom forced a closure coastwide. It was however the second beach to reopen in the spring, resulting in 27 days of digging this season.

Mocrocks
27 Days
Effort = 58,476 digger trips
Harvest = 919,439 clams
(Including wastage of 18,028 clams)
Portion of TAC Harvested = 46.7%

Mocrocks was the beach with the least digger trips and clams harvested, but still saw the highest level of TAC harvested with 46.7%. Standout PM Tides were Sunday February 19 with an estimated effort of 5,570 diggers and 73,598 clams harvested and Saturday March 18 with 7,700 diggers and 114,438 clams. The AM Tide with the highest harvest was Sunday April 23 with 5,216 diggers and 95,538 clams harvested.



The Y-Axis is the percentage of digging effort (totaling 100). The X-Axis is the harvested beach area, moving from south to north (left to right) and broken up into 6 sections. Majority of digging effort occurred near Roosevelt Beach approach.

## **No razor clam harvest occurred on Kalaloch beach during the 2022-23 season**



Kalaloch remains a puzzle. The population assessment continues to indicate a sparse population of mostly just small clams. Kalaloch razor clams continue to struggle to reach a mature age, or at least a size that are suitable for harvest. Our best guess is that there are a combination of forces working to keep Kalaloch razor clam populations at low levels.

# Marine Toxins



Marine toxins are always a huge concern for us during the digging season, and they should be on the mind of every person who harvests and consumes shellfish. Seemingly an increasing issue year over year, marine toxins have had an impact on 2 of the last 4 seasons and may become an issue for us this upcoming fall.



# Domoic Acid

## Amnesic Shellfish Poisoning (ASP)

- Produced by a diatom (*Pseudo-nitzschia sp.*)
- Domoic acid - neurotoxin
- Nausea, dizziness, memory loss
- Stroke-like symptoms that can lead to death
- No antidote
- Not destroyed by cooking/freezing
- Not easily detected



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The marine toxin domoic acid has been the most prevalent toxin affecting razor clams harvest along the Washington coast. It is produced by a naturally occurring member of the marine plankton community – a diatom – named *Pseudo-nitzschia*. Recent research has led to better understanding of where these diatoms originate and what oceanographic and weather conditions must be present to allow them to move closer to shore and affect razor clam populations. Since 1992 when domoic acid was first found in razor clam meat tissue a total of 25% of planned razor clam digging opportunities have been lost due to high marine toxin levels, with the vast majority due to domoic acid.

This slide details the dangers domoic acid – in high levels – presents.

# PSP Toxin

## Paralytic Shellfish Poisoning (PSP)

- Produced by a dinoflagellate (*Alexandrium sp.*)
- Saxitoxin - neurotoxin
- Numbness, tingling fingers/toes/lips
- Can paralyze the diaphragm and lead to death
- No antidote
- Not destroyed by cooking/freezing
- Not easily detected



The toxin that causes paralytic shellfish poisoning (PSP) is produced by another naturally occurring member of the marine plankton community. This species is the dinoflagellate named *Alexandrium*. PSP has historically been less of a problem for the razor clam fishery. However, in past seasons there have been razor clam closures due to PSP.

## Razor Clam Health Samples

WDFW is required to collect samples per strict WDOH protocol:

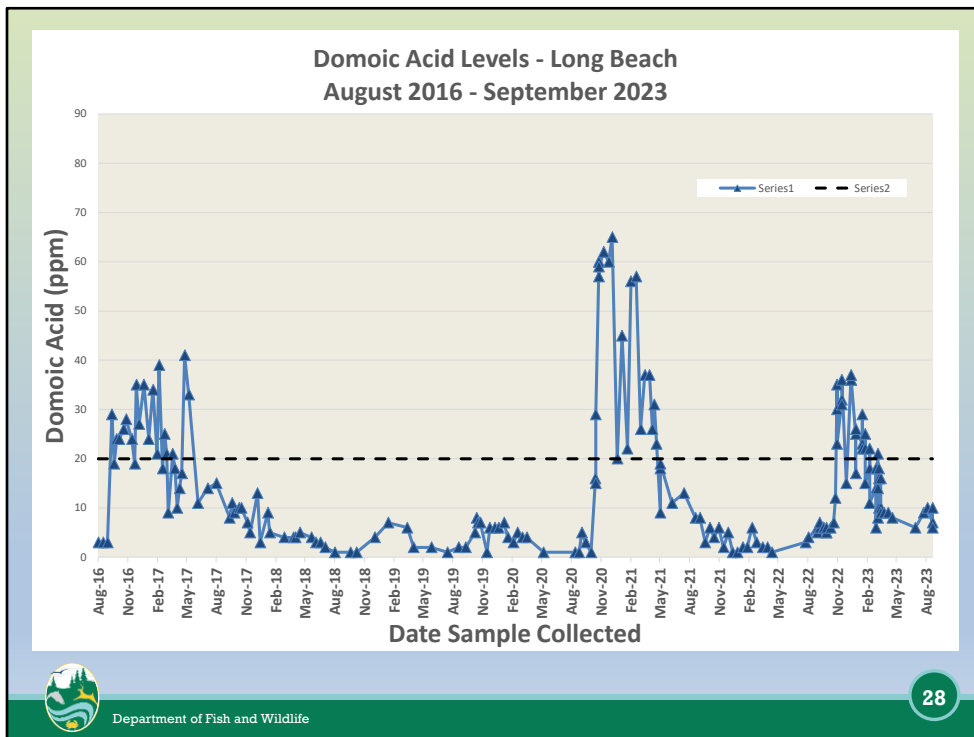
- ALL samples must test below the action level
- 12 adult clams per sample
- To open a beach, 2 collections 7-10 days apart (often means digging on poorer tides).
- Last collection as close to opening as possible
- To remain open in-season, collection as close to the start of digging as possible



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As a result of concern for the health of the many people who enjoy razor clams, WDFW works closely with staff at the Washington Department of Health (WDOH) to collect and transport clams to the WDOH lab (north of Seattle in Shoreline) for processing. These clams are collected on a strict schedule that allows for the final sample to be collected as close to the day of each period razor clamming is open. This is the reason our openers are always announced as tentative, until final marine toxin results are available.”

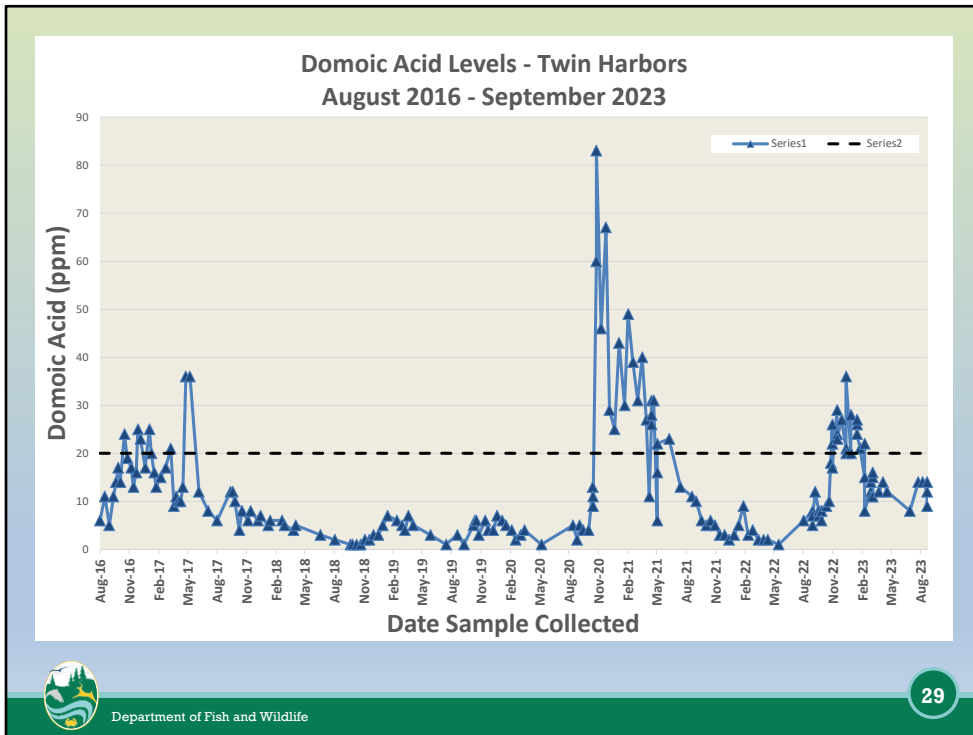


Presented here are Washington Department of Health (WDOH) test results of domoic acid levels found in razor clam meat tissue. The razor clams are collected regularly from each razor clam management beach, by WDFW staff and delivered to the WDOH Public Health Lab in Shoreline, WA. To ensure quick turn-around of the results, WDFW staff often drive the clams directly to the lab as soon as possible after collection. This can be a 4 to 6 hour round-trip depending on Puget Sound traffic conditions but is necessary to ensure the clams you are taking home are safe to eat.

Recall, before a beach can be opened for the harvest of razor clams, WDOH protocol requires that all razor clam samples collected from that beach must test under the action level (20 ppm for domoic acid; 80 µg/100g for PSP; and 16 µg/100g for DSP) on both of the two required sample collections.

The most recent levels can be found at: <https://wdfw.wa.gov/fishing/basics/domoic-acid/levels>

For more information about domoic acid, see: <https://www.doh.wa.gov/CommunityandEnvironment/Shellfish/RecreationalShellfish/Illnesses/Biotoxins/AmnesicShellfishPoisoning>

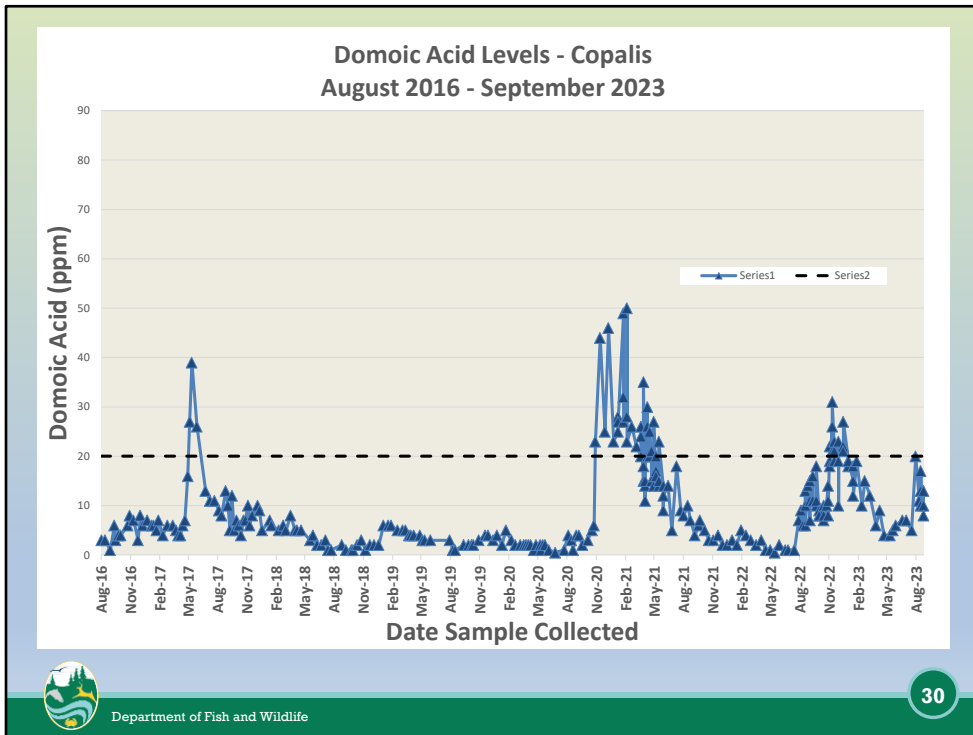


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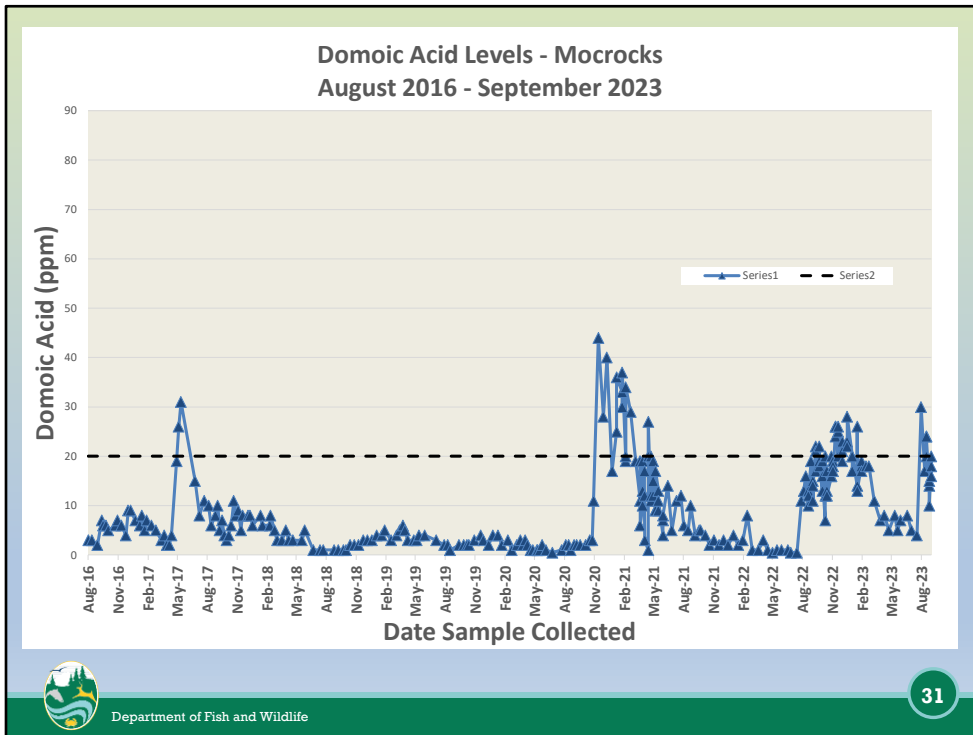


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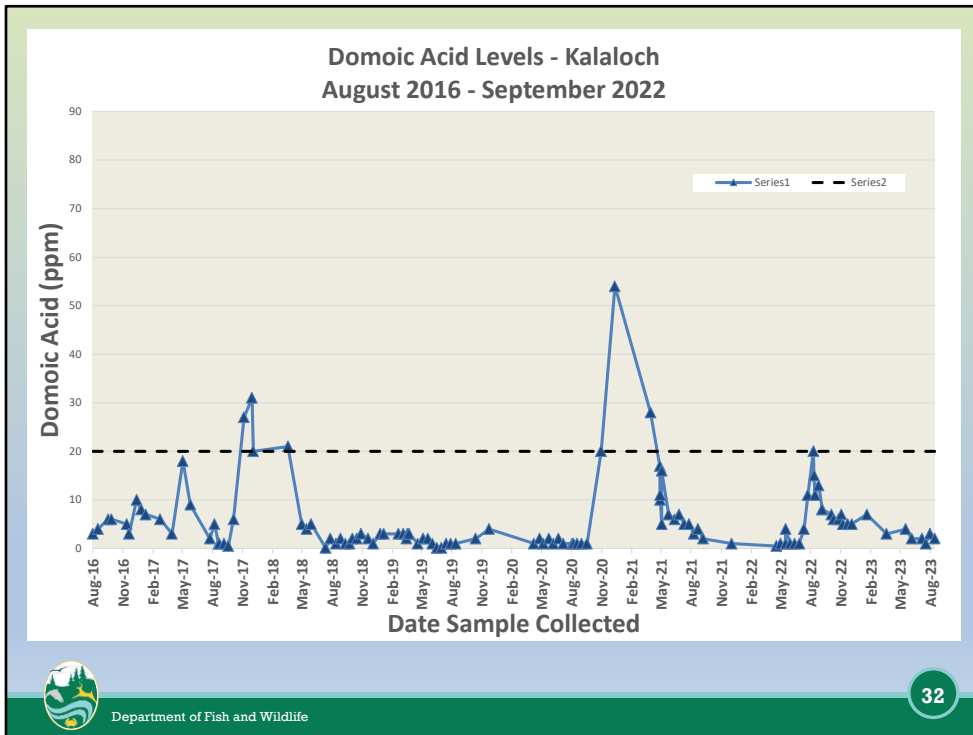


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Olympic Region Harmful Algal Blooms

# ORHAB PARTNERSHIP

Harmful algal blooms (HABs) pose a significant threat to human health and fish and wildlife including threatened and endangered marine mammals and birds. Washington state's coastal economies also depend on revenue generated by recreational and commercial fisheries which can be disrupted by HAB events.

To better understand and mitigate for the impact of HABs managers and researchers from local state, federal, academic and tribal nations partnered to form Olympic Region Harmful Algal Bloom Monitoring (ORHAB) collaboration in 1999. Initially funded through a NOAA-MERHAB grant ORHAB was successfully transitioned to state funding in 2004. The collaboration is focused on building early warning capabilities for HABs in Washington state and providing sound scientific data to contribute to the understanding of HAB events coast wide.

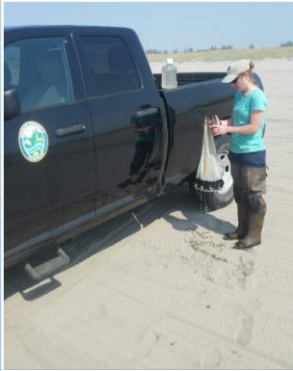



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The impacts of harmful algal blooms (HAB) on razor clam fisheries along the coast of Washington State was the impetus that brought together Seattle based NOAA HAB researchers, University of Washington oceanographers and marine algae experts, state and tribal fishery managers and human health experts to form a successful partnership - the Olympic Region Harmful Algal Bloom (ORHAB) project. Beginning in 2000 with five-years of funding from NOAA's Monitoring and Event Response for Harmful Algal Blooms (MERHAB) Program the ORHAB partnership provided for a host of activities that included the necessary scientific equipment and for the unique training of local technicians as HAB specialists. With the end of federal funding and primary reliance on state dollars generated by a surcharge on recreational shellfish licenses, the focus of the partnership is primarily on HAB event prediction and monitoring. These state funds provide for two HAB specialists, one working for WDFW and the other for the University of Washington. In addition, funding from the Quinault Indian Nation (QIN) provides a third HAB specialist who works for QIN. While employed by separate agencies these local experts work closely together to monitor for HAB events along the entire Washington coast. The ORHAB specialists regularly present and discuss their findings with staff biologists and public health experts from WDFW, QIN and the Washington Department of Health (WDOH). In addition, scientists from NOAA and the UW provide oversight and advice on a regular basis. Insight gained from the ORHAB partnership and the recently completed ECOHAB-PNW project has led to a better understanding of where HAB events originate and what environmental factors promote their growth. While much is yet to be learned, we can better manage our important shellfish fisheries because of these insights, good science, and hard work produced by well trained - and locally based - HAB specialists.

**WDFW regularly monitors surf zone plankton, toxins, and water quality...**



**...to determine the environmental conditions associated with blooms of harmful species.**



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WDFW uses standardized processing and analysis of samples to generate data on HABs and the presence of biotoxins. The data received from this monitoring program can provide managers advance notice of pending problems for potential openers as well as give razor clammers a heads up of what may be coming. In the photo is Charlotte Berry-Powell, Coastal HAB/Shellfish Technician.

Transferring sample dilutions to a microplate

Adding domoic acid control to dilution series

WDFW is now able to conduct a rapid field test using the ELISA method for the presence of domoic acid in seawater

Loading microplate reader

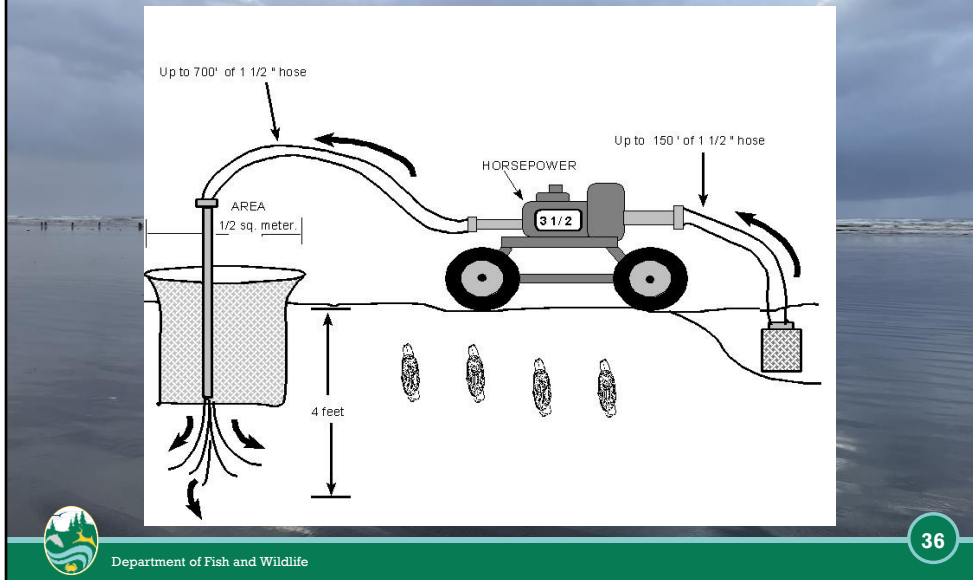


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One major goal of the ORHAB project has been to develop and implement rapid detection technologies. This technology offers the promise of allowing field staff to determine the presence of toxins in seawater samples shellfish tissue without having to wait for the current time-consuming transport of samples to a distant laboratory. This process does not replace the regulatory testing conducted by the Washington Department of Health, but it does provide managers with an early warning of potential pending HAB issues.

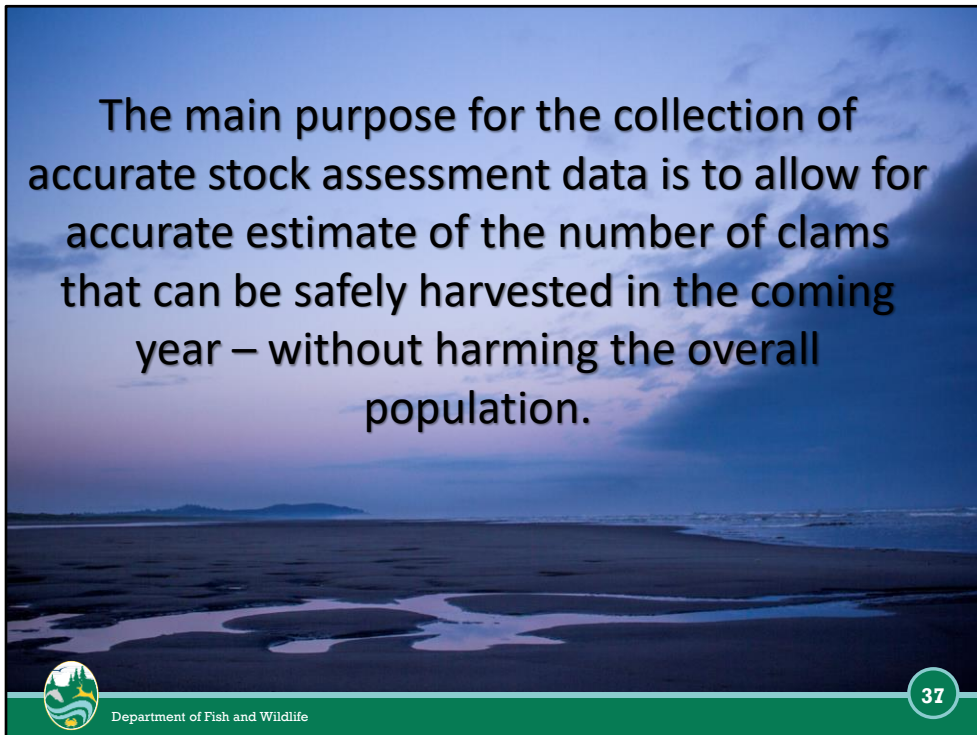
# Status of Razor Clam Stocks



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We now turn our attention to the work WDFW does to annually determine the number of razor clams available on each beach. This cartoon is a simplified version of how our razor clam stock assessment process works. You'll find more details in the following pages.



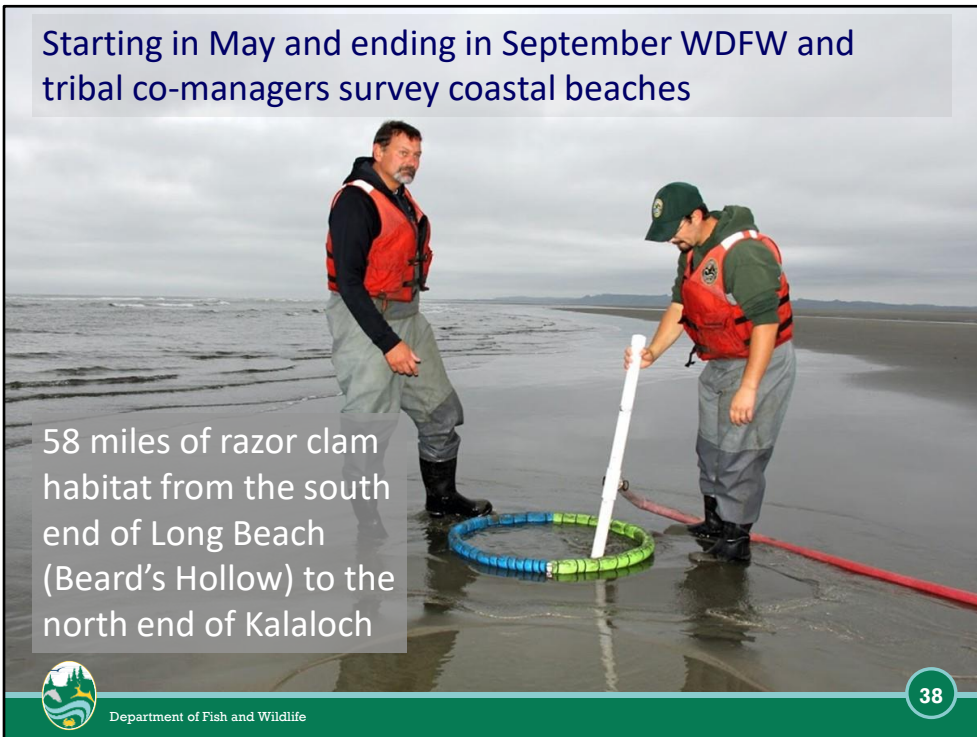
The main purpose for the collection of accurate stock assessment data is to allow for an accurate estimate of the number of clams that can be safely harvested in the coming year – without harming the overall population.

The stock assessment data provides us with estimates of the total number of clams and their average size. We are then able to determine the total number of clams that are at or over 3 inches, this size at which razor clams generally begin to make a clear “show” and are harvestable. The total allowable catch (TAC) for each beach is then calculated “variable” harvest rate applied to the total number of clams at or over 3 inches.

Know that razor clams that are 3 inches during our summer stock assessment will quickly grow and become a more suitable size as the season progresses.

Starting in May and ending in September WDFW and tribal co-managers survey coastal beaches

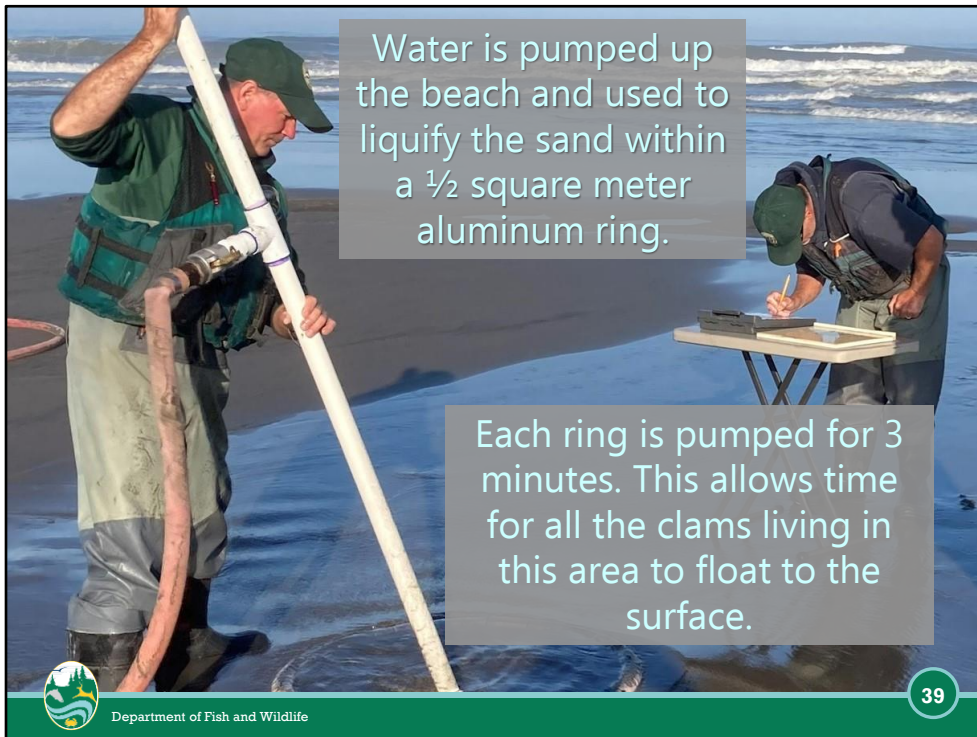
58 miles of razor clam habitat from the south end of Long Beach (Beard's Hollow) to the north end of Kalaloch



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This year's work started on May 16 and was completed on August 11. Surveying razor clams is not as easy as just digging all the clams in a known area. Razor clam digging requires the clam to "show" and not all clams "show" at the same time. As a result, it is not possible to dig every clam in a known area. The sampling method we use takes this into account and removes all the clams from a known area. WDFW uses the Pumped Area Method of sampling to provide accurate estimates of razor clam density. Read on for more information. In the photo, L to R, Travis Haring Coastal Shellfish Technician and Robert Morgan, Coastal Shellfish Biologist.

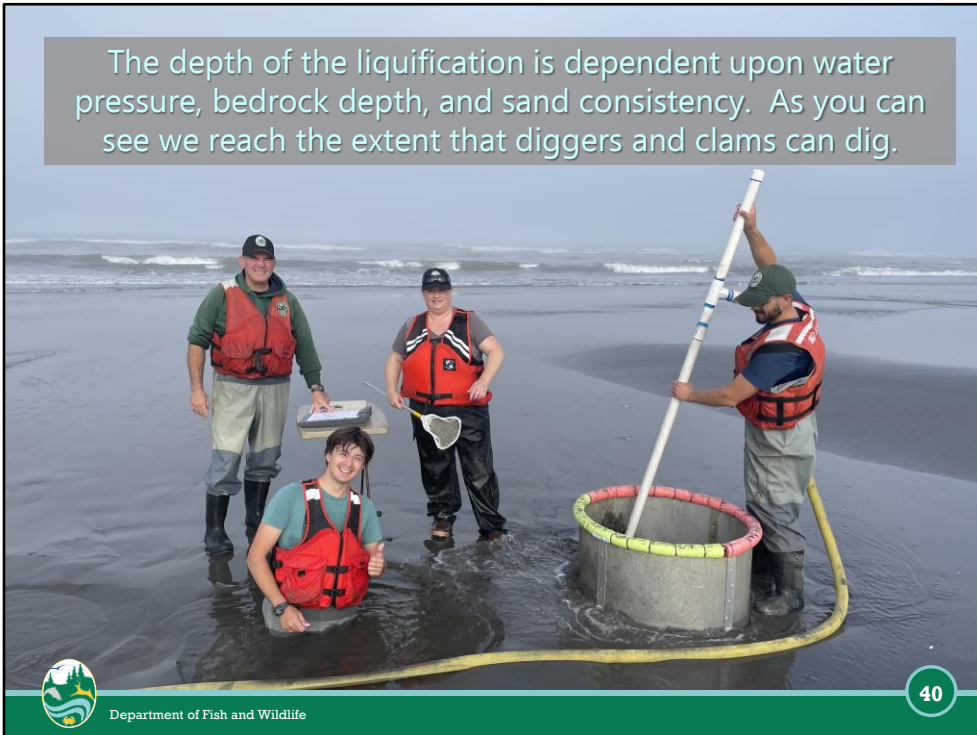


Water is pumped up the beach and used to liquify the sand within a ½ square meter aluminum ring.

Each ring is pumped for 3 minutes. This allows time for all the clams living in this area to float to the surface.

Each ring is pumped for 3 minutes allowing time for all the clams in the area of the ring to float to the surface and be counted. In the photo, L to R, Clayton Parson and Craig Lofton, Coastal Shellfish Technicians.

The depth of the liquification is dependent upon water pressure, bedrock depth, and sand consistency. As you can see we reach the extent that diggers and clams can dig.

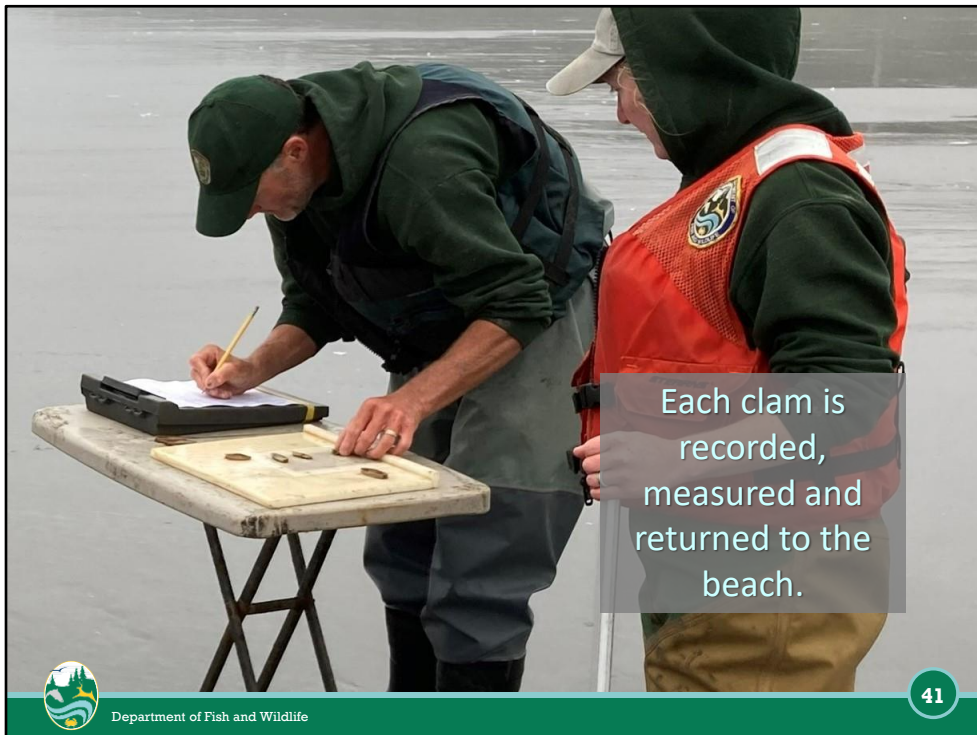


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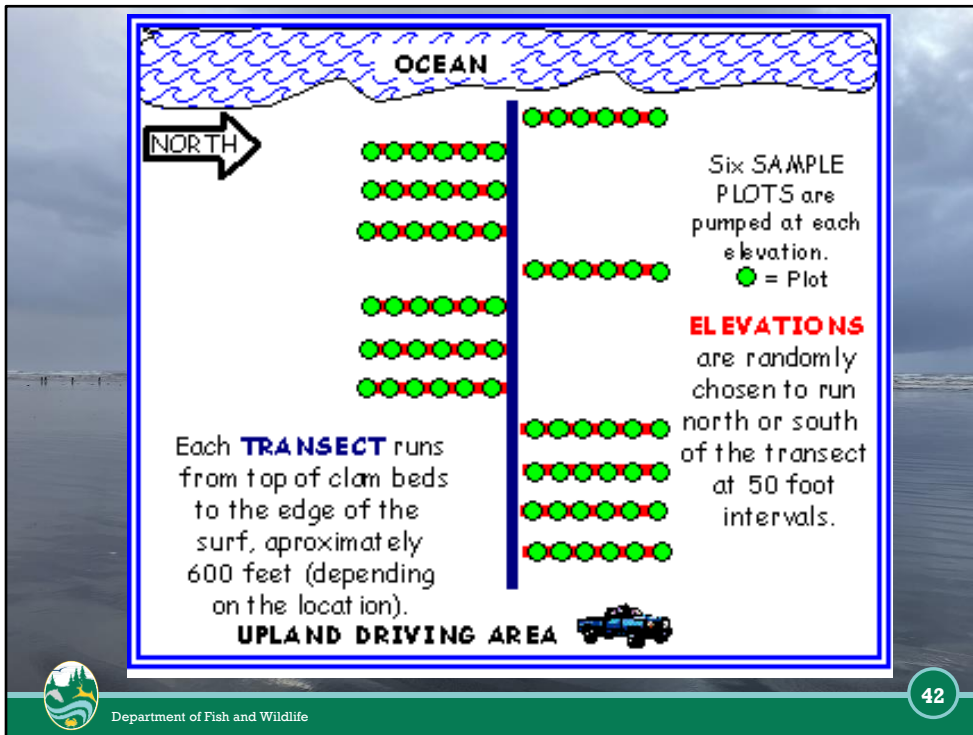
The depth of the liquification is dependent upon water pressure, bedrock depth, and sand consistency. As you can see we reach the extent that diggers and clams can dig. In the photo, L to R, Clayton Parson, Chase Falash, Jamie Fuller and Rob Morgan.





Each clam is measured and recorded and returned to the beach.

The Pumped Area Method allows biologists to obtain the full data set needed to estimate both recruit clams and pre-recruit clams. This is in contrast with previous razor clam population sampling methods that were unable to estimate pre-recruits. In the photo, L to R, Craig Loften and Charlotte Berry-Powell, Coastal Shellfish Technicians.



Each of the five management beaches is sampled with randomly selected transects chosen approximately one-mile apart. The sampling occurs during a good low tide, and begins at the top of the razor clam beds and moves out to the edge of the surf. Six plots (sample rings) are pumped at each 50 foot interval.

WDFW offers this video that discusses our razor clam stock assessment methods. Check it out at:  
[http://youtu.be/aC4fu6\\_8G8I](http://youtu.be/aC4fu6_8G8I)



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A video that demonstrates the WDFW stock assessment methods is available online. This will give you a better picture of the work we do each summer all along the Washington coast to make the best possible razor clam population estimates to be used in the management of the fishery. The video can be found at;  
[http://youtu.be/aC4fu6\\_8G8I](http://youtu.be/aC4fu6_8G8I)

In the photo L to R; Bryce Blumenthal, Robert Morgan, Craig Loften and Charlotte Berry-Powell all members of the WDFW Coastal Shellfish Unit.

## How many days can we dig?

### Stock assessment data :

1. Estimate of the number clams
2. Estimate of the average size

### TAC (total allowable catch) =

Total clams 3 inches or greater x  
**variable harvest rate.**



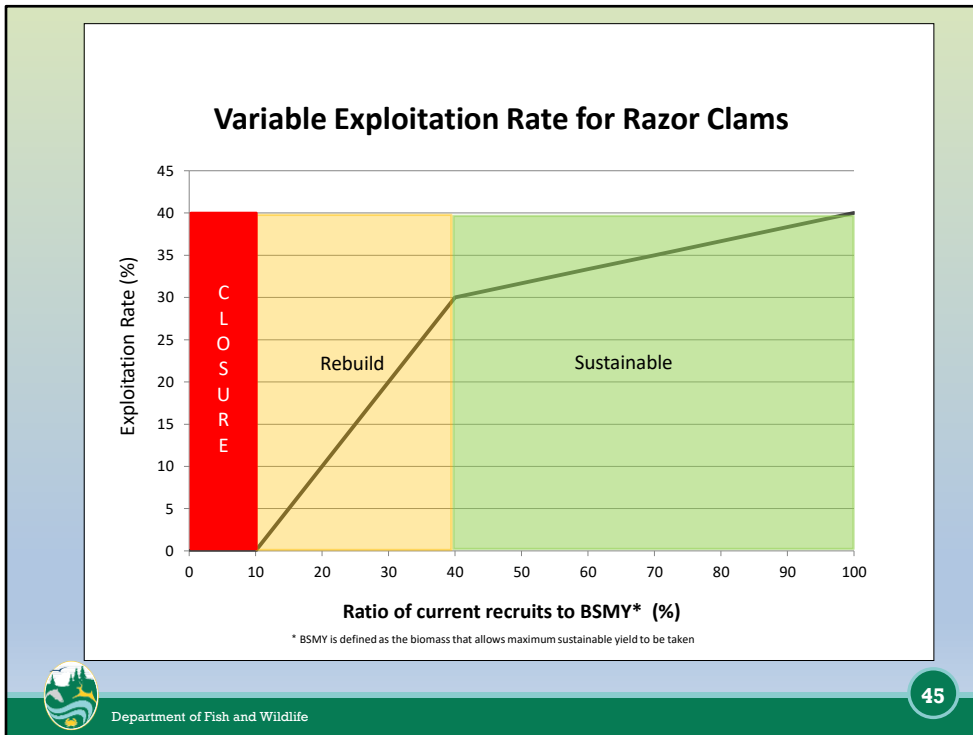
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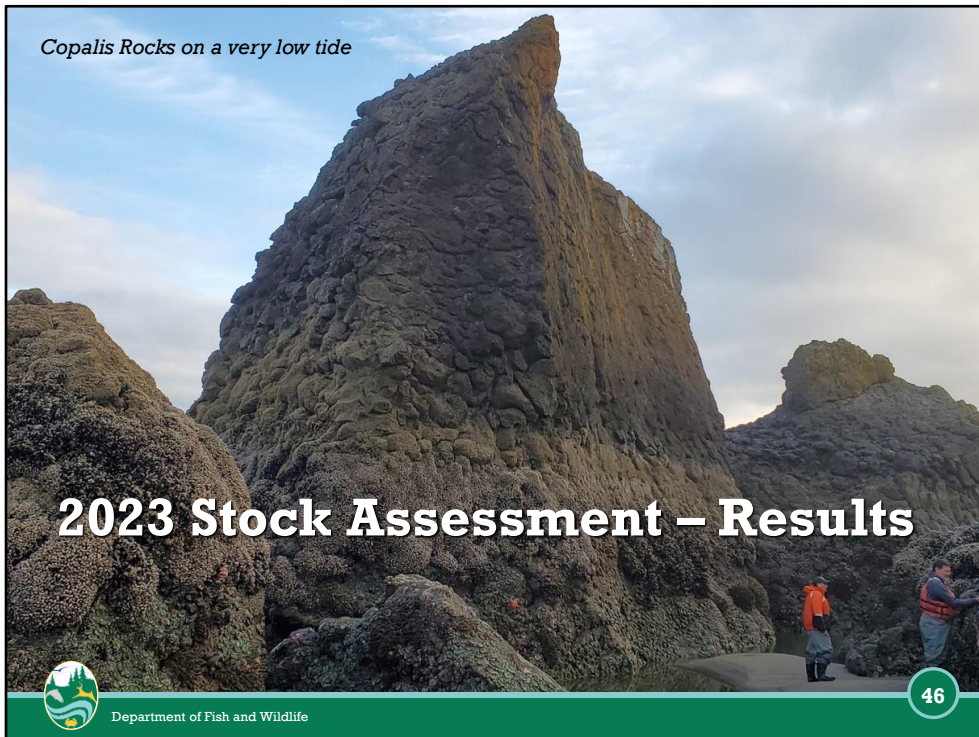
During the 2012-13 season, WDFW began using a new “variable” harvest rate on two beaches (rather than using a fixed harvest rate of 30%.)

On these beaches we determine the harvest rate based on the ratio of the **current population** of razor clams (as measured by our most recent stock assessment on each beach) and the **highest population** level measured (again on each beach). The maximum harvest rate possible (using the variable harvest rate method) is 40%.

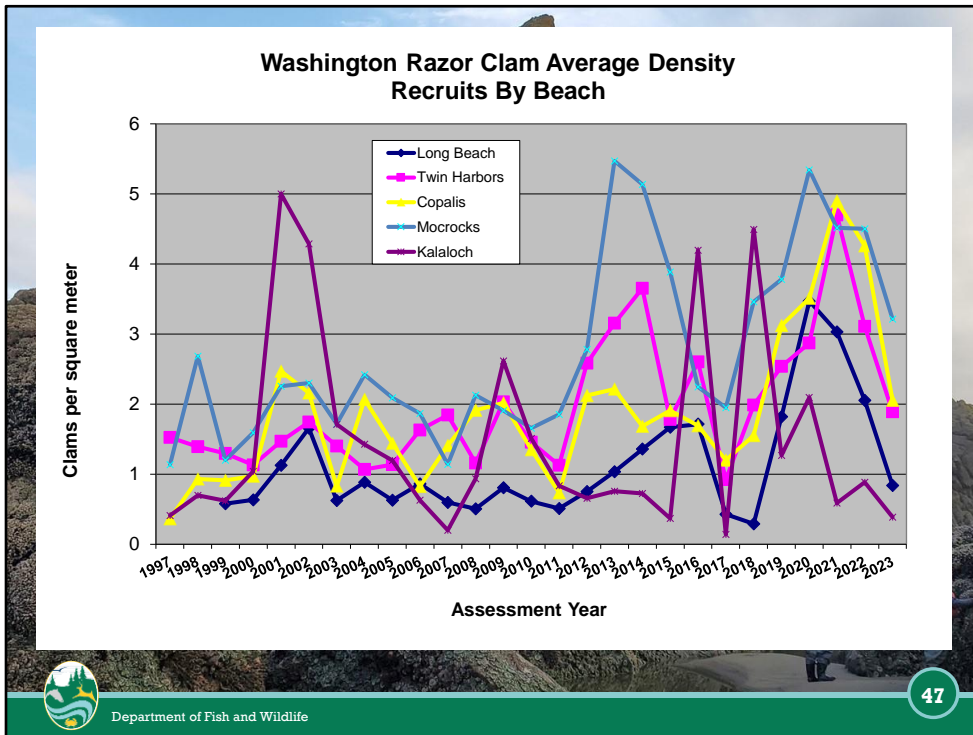
This methods allows for more harvest during times of abundant populations while still preserving the spawning capacity of the population. It also includes an automatic rebuilding strategy (with a reduced harvest rate) during times when stocks are weak. The variable harvest rate is being used to determine the TAC (total allowable catch) for Long Beach, Twin Harbors, Copalis and Mocrocks.



Starting with the 2012-13 recreational razor clam season, WDFW has used a modified management strategy. Rather than using a Static Exploitation Rate (ER) of 30%, we have adopted a Variable Exploitation Rate. As a result, the *harvest rate* used to develop the TAC will be *re-calculated* for each beach, each season. That rate will be based on the ratio of the current population of recruit sized clams (clams 3 inches or larger) compared to the entire biomass that allows the maximum sustained yield, or BSMY. The BSMY is practically defined as the highest historical density of clams for each beach. This method has two advantages. It allows the harvest of more clams (to a maximum of a 40% ER) when clam density is high (populations considered to be abundant) and it allows for a reduced harvest levels when densities are lower (smaller populations). When populations drop below 40% of BSMY an automatic rebuilding strategy is employed. Anytime a population drops below 10% of BSMY the fishery will be closed.



The 2023 assessment of razor clam populations showed a decrease from the prolific results of the past few years, but overall still a strong and healthy population. Read on for the details. In this photo stock assessment crew takes a closer look at Copalis Rocks on the southern end of Mocrocks Beach after completing a nearby transect.



The best way to compare razor clam populations between beaches is to look at the average density (on the razor clam beds over the entire length of each beach) as measured in our annual stock assessment work. This graph displays average density on each beach back over the last 25 years. It is clear from this data that razor clam populations naturally change in abundance a fair amount. This is not an unexpected pattern in a shellfish population that is so heavily dependent on favorable oceanographic and weather conditions to allow for successful spawning and setting. As with any natural population, there are also disease processes that contribute to the variability in population levels.

The 2023 average density (clams per square meter) by beach was : Long Beach = 0.84; Twin Harbors = 1.89; Copalis = 2.05; Mocrocks = 3.21; Kalaloch = 0.40

For comparison: The 2022 average densities were; Long Beach = 2.05; Twin Harbors = 3.11; Copalis = 4.26; Mocrocks = 4.50; Kalaloch = 0.90

The 2021 average densities were; Long Beach = 3.03; Twin Harbors = 4.7; Copalis = 4.9; Mocrocks = 4.51; Kalaloch = 0.60. The 2020 average densities were; Long Beach = 3.47; Twin Harbors = 2.87; Copalis = 3.51; Mocrocks = 5.34; Kalaloch = 2.10. The 2019 average densities were; Long Beach = 1.82; Twin Harbors = 2.54; Copalis = 3.12; Mocrocks = 3.78; Kalaloch = 1.30. The 2018 average densities were; Long Beach = 0.29; Twin Harbors = 1.98; Copalis = 1.55; Mocrocks = 3.46; Kalaloch = 4.50. The 2017 the average density (clams per square meter) by beach was : Long Beach = 0.43; Twin Harbors = 0.92; Copalis = 1.20; Mocrocks = 1.95; Kalaloch = 0.02. The 2016 average density (clams per square meter) by beach was: Long Beach = 1.71; Twin Harbors = 2.60; Copalis = 1.69; Mocrocks = 2.24; Kalaloch = 4.19.

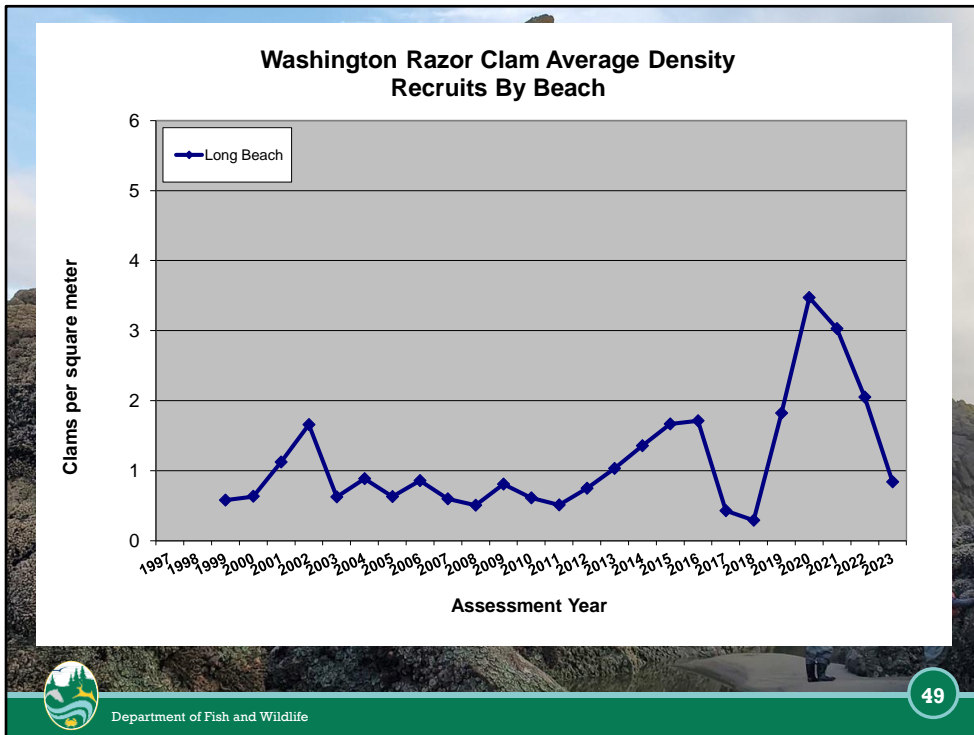


<b>LONG BEACH RAZOR CLAM POPULATION, TOTAL ALLOWABLE CATCH (TAC) AND HARVEST DATA</b>					
YEAR	POPULATION (clams)		TAC (clams)	HARVEST	% of TAC
	RECRUITS	PRE-RECRUITS	of recruits	TOTAL (clams)	harvested
2019-20	13,013,667	25,598,579	5,205,467	1,644,196	31.60%
2020-21	24,791,968	34,470,221	9,916,787	520,200	5.20%
2021-22	21,648,063	21,923,271	8,659,225	3,337,846	38.50%
2022-23	14,663,725	796,817	5,865,490	1,656,655	28.24%
2023-24	6,000,513	20,727,248	2,154,184		
AVERAGE	16,023,587	20,703,227	6,483,916	1,789,724	

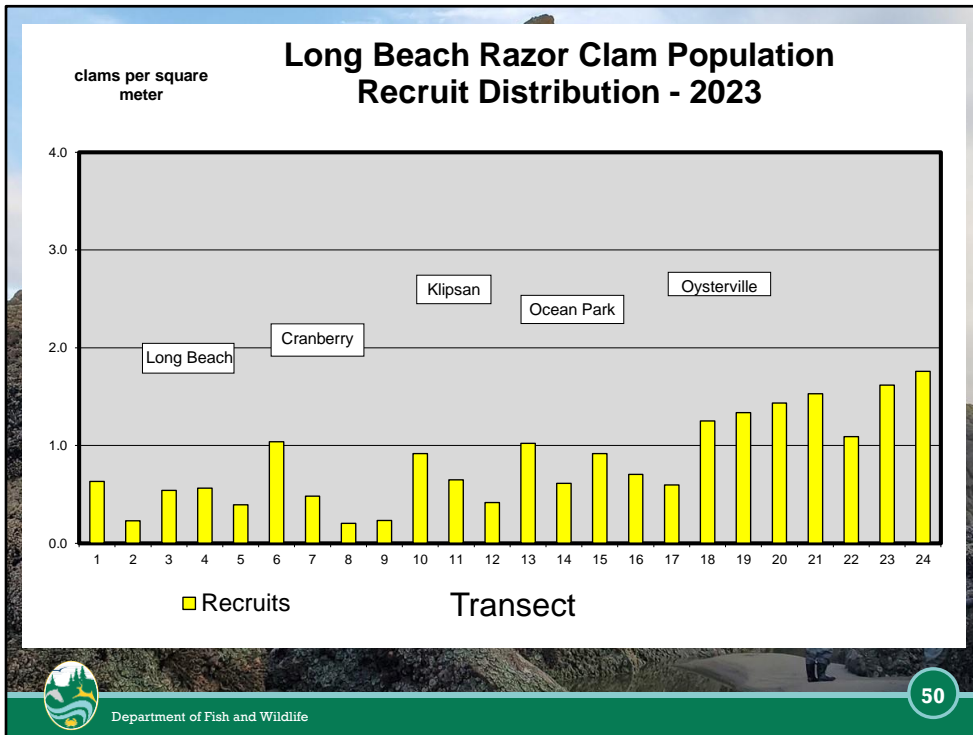
You will recall that the 2019 stock assessment results for Long Beach indicated that the number of harvestable (recruit) size clams was at a 25-year high with a strong stock of pre-recruits. The 2020 assessment on Long Beach showed a number of recruits that was nearly double 2019's high, with even stronger numbers of the smaller pre-recruit clams. The 2021 stock assessment showed decreases in both recruits and a pre-recruits compared to last year, but the resulting TAC is only slightly less. After a full season of digging, the 2022 stock assessment showed a decrease in recruit clams but is still larger than the impressive 2019 numbers. Alarmingly we saw much fewer pre-recruits this summer than any of the last 5 years, which explains the drop in recruit clam numbers in the most recent 2023 stock assessment.

Recall; recruits are defined as clams => 76 mm (3 inches); pre-recruits are < 76 mm (3 inches)."

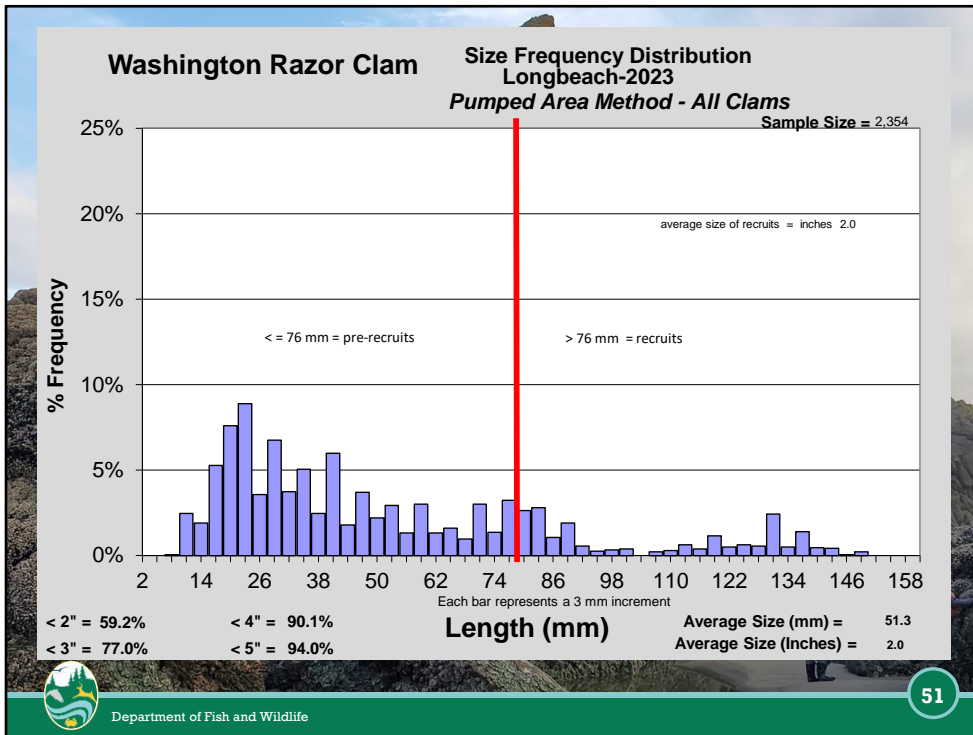




This is the same data that we presented in slide 47, although only the Long Beach historical population densities are included.



The 2023 stock assessment showed a decrease in clam densities from years past. This results in a less uniform recruit concentration, with northern areas showing densities above 1 clam per square meter and southern areas showing less. The highest density (y-axis) is near the top of the peninsula with ~2.75 clams per square meter.

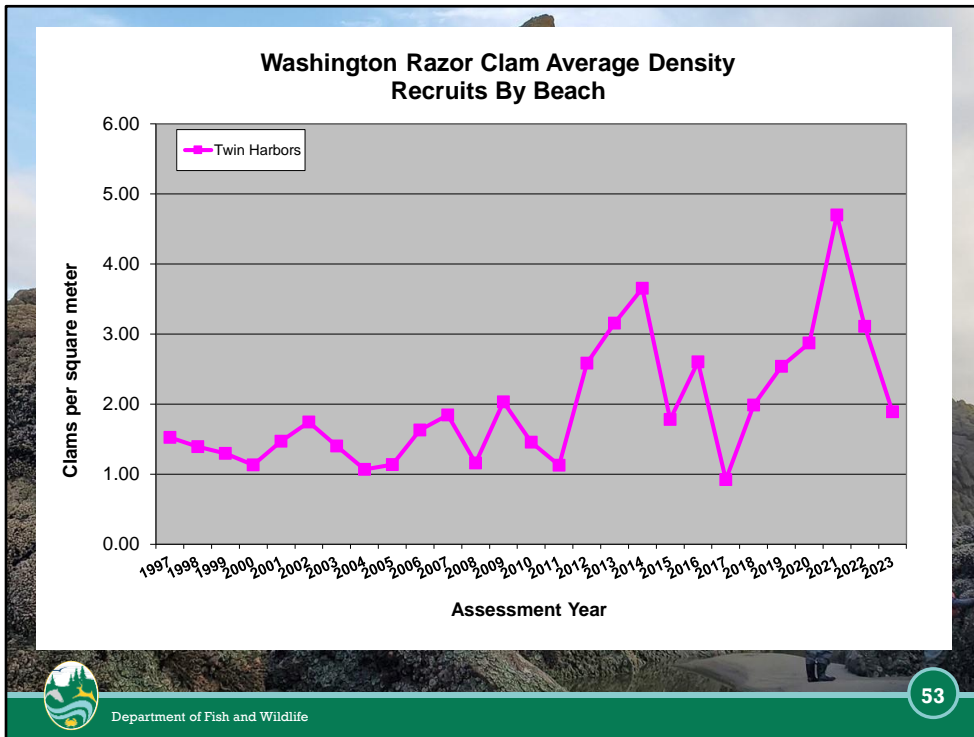


The average size of the Long Beach recruit clams found in our 2023 surveys was 2.0 inches. This compares to the average size in our 2022 survey of 4.51 inches; 2021 average was 4.35 inches; 2020 average of 4.3 inches; 2019 average of 3.68 inches; 2018 average of 4.2 inches ; 2017 average of 4.5; 2016 average of 4.3; 2015 average of 4.0 inches; and the 2014 average of 3.8 inches.

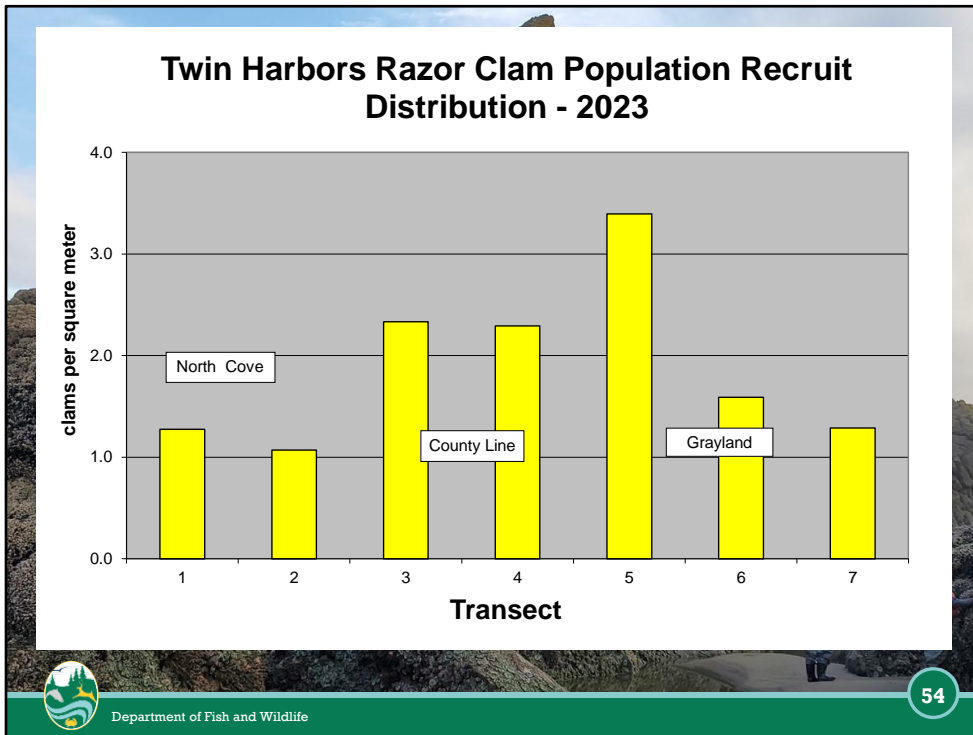
<b>TWIN HARBORS RAZOR CLAM POPULATION, TOTAL ALLOWABLE CATCH (TAC) AND HARVEST DATA</b>					
YEAR	POPULATION (clams)		TAC (clams)	HARVEST	% of TAC
	RECRUITS	PRE-RECRUITS	of recruits	TOTAL (clams)	harvested
2019-20	4,608,068	1,391,989	1,843,227	755,166	41.0%
2020-21	5,210,727	2,878,451	2,084,291	307,172	14.7%
2021-22	8,529,445	4,559,006	3,411,778	2,120,314	62.10%
2022-23	5,646,634	2,323,486	2,258,653	1,465,517	64.88%
2023-24	3,434,858	3,285,569	1,281,202		
AVERAGE	5,485,946	2,887,700	2,175,830	1,162,042	

A five year low in harvestable size razor clams on Twin Harbors, but still above long term averages and should provide lots of successful digging.

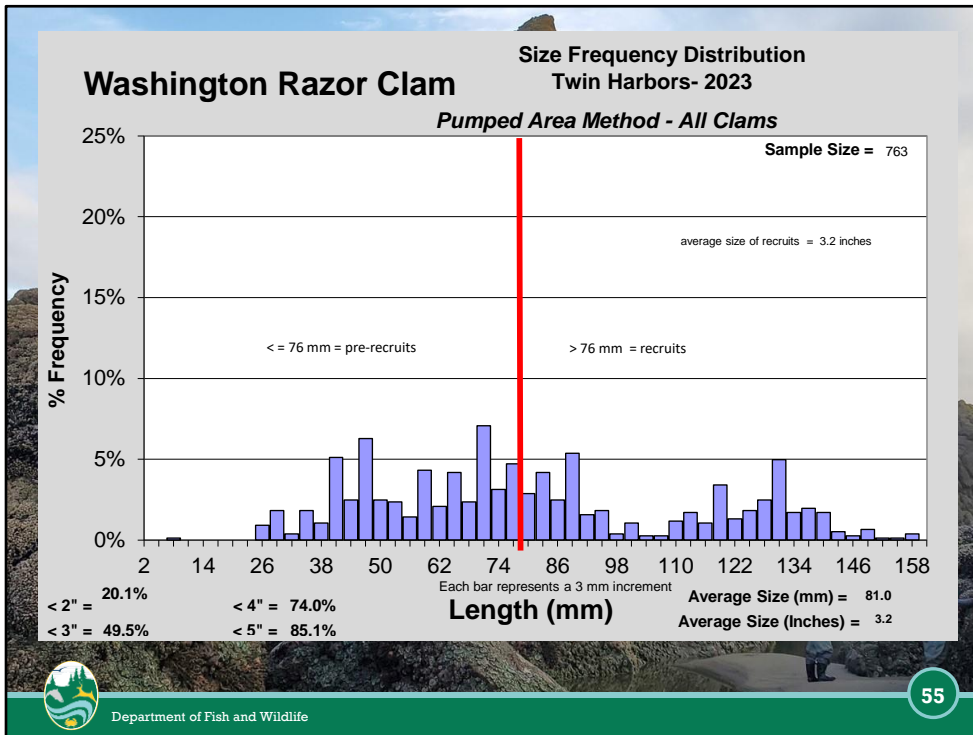
Recall; recruits are defined as clams => 76 mm (3 inches); pre-recruits are < 76 mm (3 inches).



This is the same data that we presented in slide 47, although only the Twin Harbors historical population densities are included.



Diggers will find good razor clam populations on most of the Twin Harbors beach, with mid beach digging looking to be the most concentrated.



The average size of the Twin Harbors recruit clams found in our summer 2023 surveys was 3.2 inches. This compares to 4.6 inches in 2022; 4.2 in 2021; 4.2 in 2020; 4.3 in 2019; 3.9 in 2018; 3.9 inches in 2017; and 4.4 inches in 2016.

<b>COPALIS RAZOR CLAM POPULATION, TOTAL ALLOWABLE CATCH (TAC) AND HARVEST DATA</b>						
YEAR	POPULATION		Total	State's Share	State's	% of share
	RECRUITS	PRE-RECRUITS	TAC (clams)	(50% w/	HARVEST	
			of recruits	adjustments)	(clams)	harvested
					TOTAL	
2019-20	10,536,758	6,375,231	4,214,703	2,036,079	725,451	35.6%
2020-21	11,848,503	12,560,196	4,739,401	2,369,701	245,870	10.40%
2021-22	16,519,110	15,426,336	6,607,644	3,303,822	1,657,587	50.20%
2022-23	14,369,717	8,845,252	5,747,887	2,873,943	1,185,177	41.24%
2023-24	6,922,690	9,383,846	2,734,463	1,367,231		
AVERAGE	12,039,356	10,518,172	4,808,820	2,390,155	953,521	

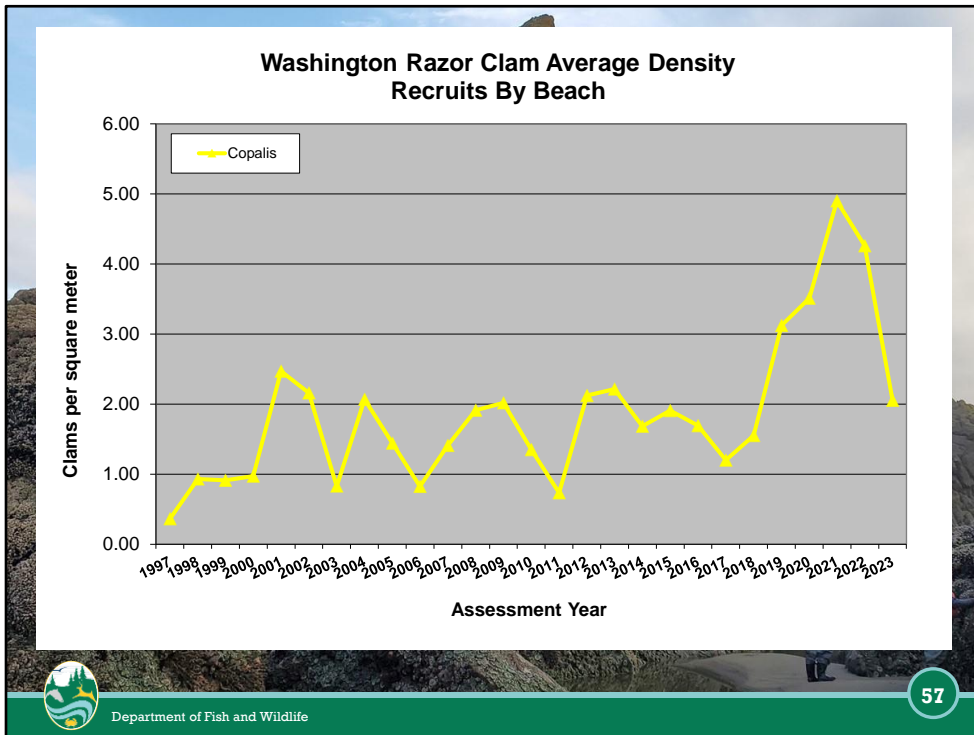


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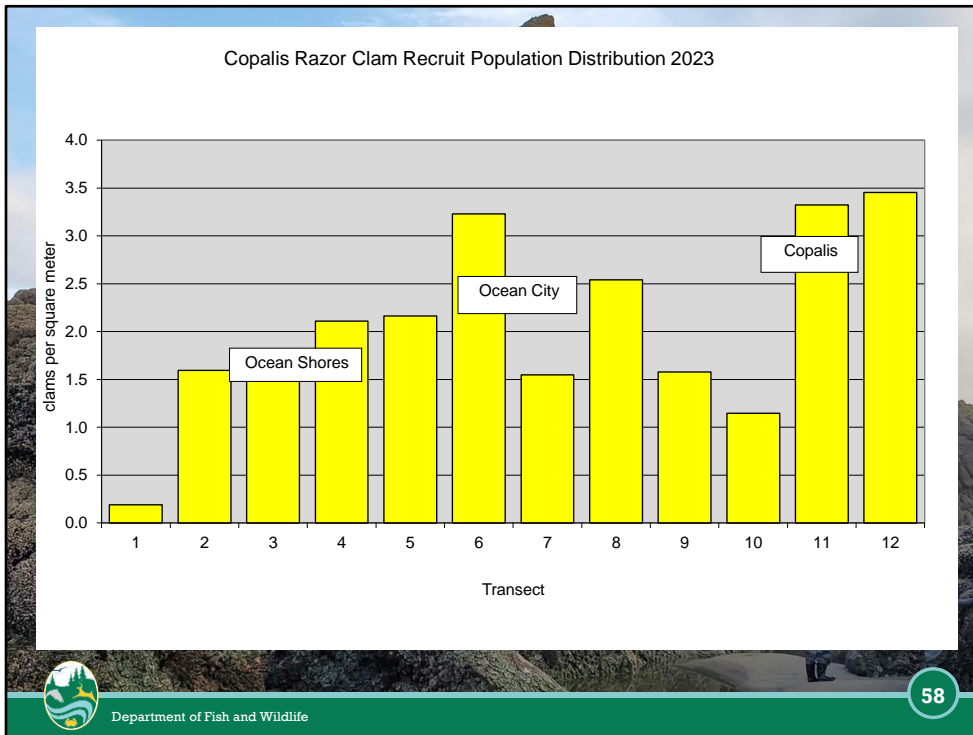
A five year low of recruit sized clams was observed on Copalis for the 2022-23 season. This results in less than half the digging potential as the year prior.

Recall; recruits are defined as clams => 76 mm (3 inches); pre-recruits are < 76 mm (3 inches).

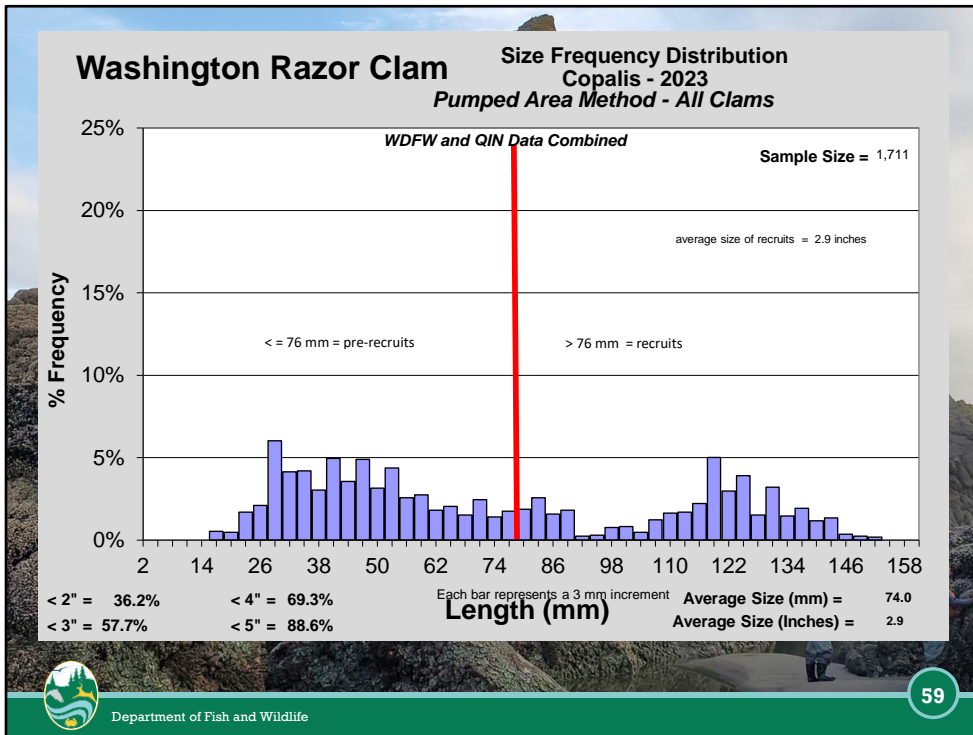




This is the same data that we presented in slide 47, although only the Copalis historical population densities are included.



Digging should be good in almost every area of Copalis beach during the 2023-24 season, with all areas but the most southerly showing clam densities above 1 clam per square meter. The most clam dense area is the north end of the beach with a high of almost 3.5

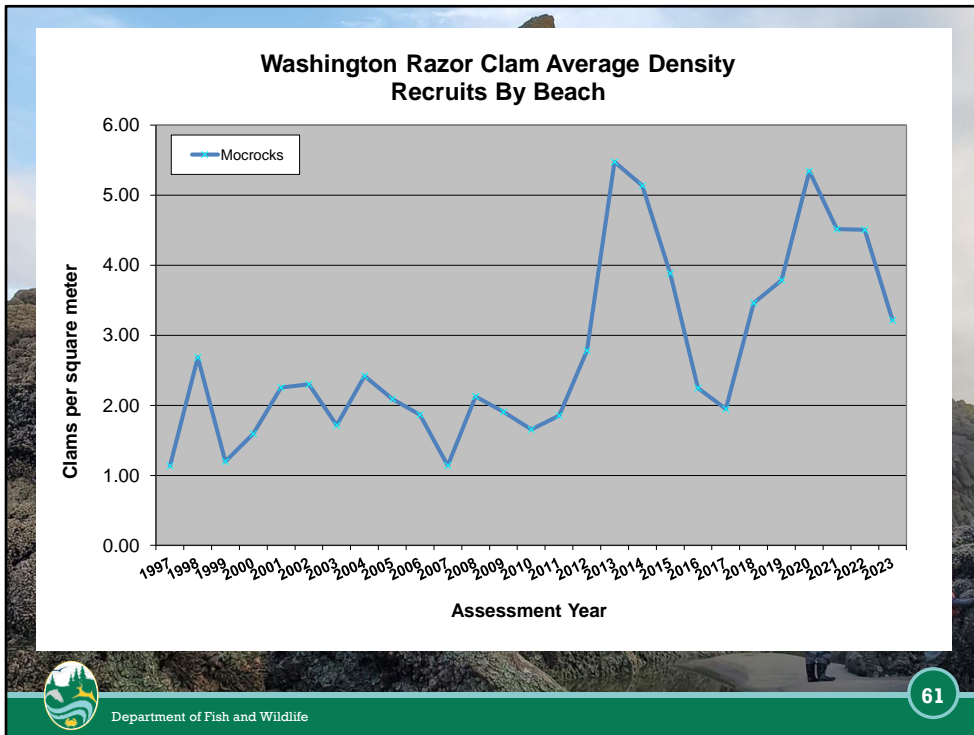


The average size of the Copalis recruit clams found in our 2023 summer surveys was 2.9 inches; compared to 4.3 in 2022; 4.5 in 2021; 4.1 in 2020; 4.2 in 2019; 3.9 inches in 2018; 4.3 inches in 2017; 4.4 inches 2016.

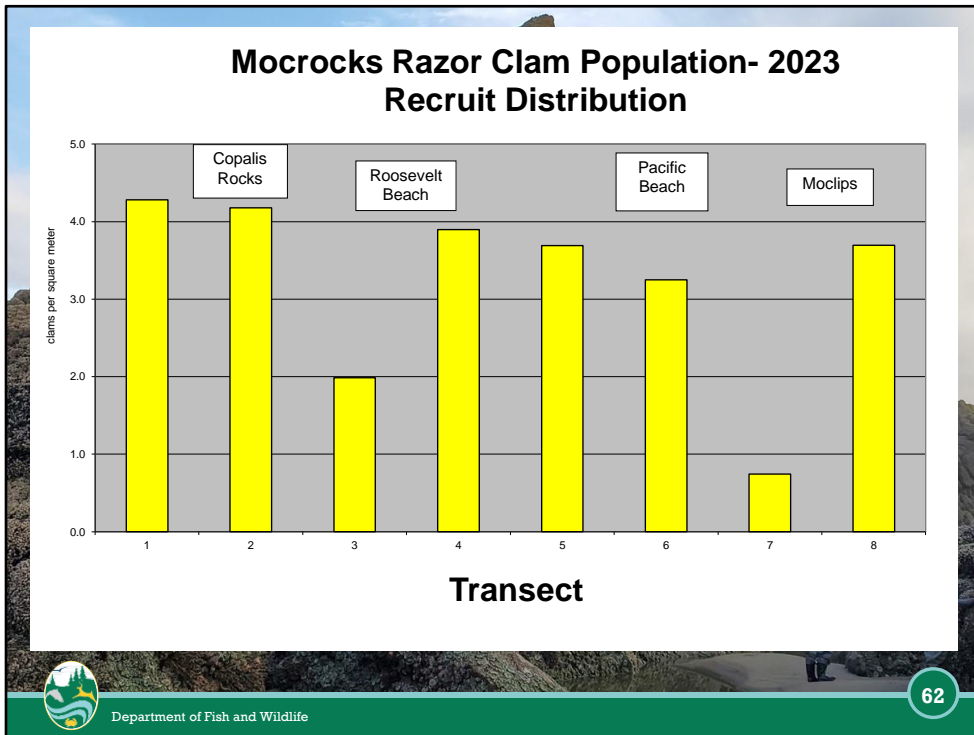
<b>MOCROCKS RAZOR CLAM POPULATION, TOTAL ALLOWABLE CATCH (TAC) AND HARVEST DATA</b>						
	POPULATION		Total	State's Share	State's	
			TAC (clams)	(50% w/	HARVEST	% of share
YEAR	RECRUITS	PRE-RECRUITS	of recruits	adjustments)	TOTAL	harvested
2019-20	8,249,452	7,500,707	3,299,781	1,649,890	467,915	28.4%
2020-21	11,653,105	7,140,413	4,661,242	2,330,621	665,004	28.50%
2021-22	9,844,546	48,183,071	3,937,819	1,968,909	1,255,299	63.80%
2022-23	9,823,659	7,704,916	3,929,463	1,964,732	919,439	46.80%
2023-24	7,009,915	9,618,587	2,803,966	1,401,983		
AVERAGE	9,316,135	16,029,539	3,726,454	1,863,227	946,581	

The 2023 stock assessment on Mocrocks showed the a slight decrease from the years prior, but not as much of a decrease as the rest of the harvestable beaches.

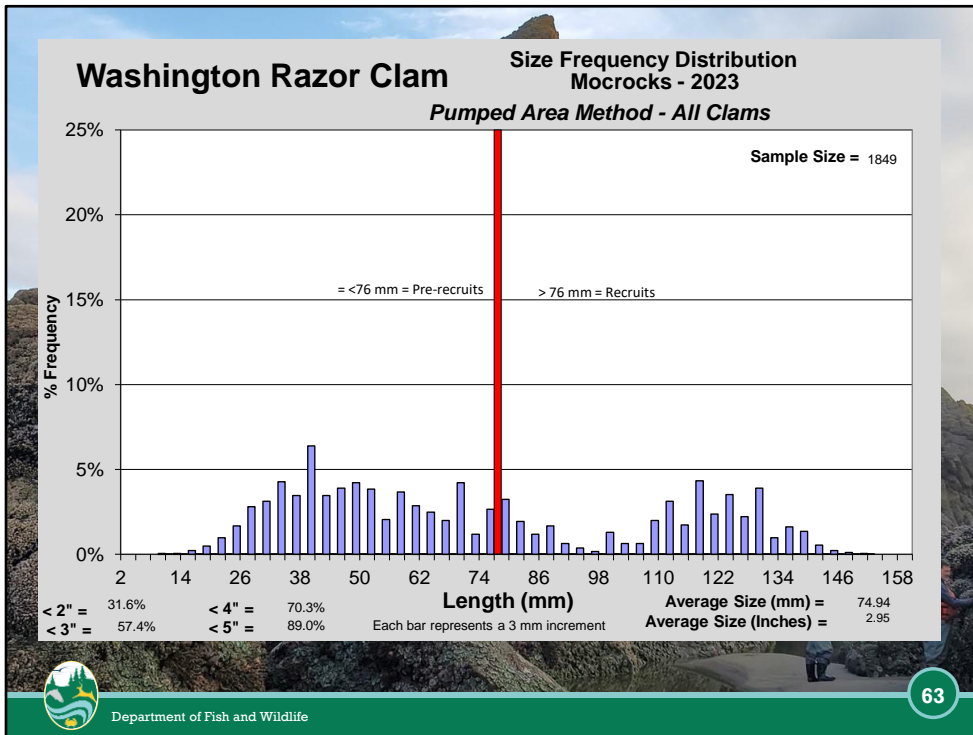




This is the same data that we presented in slide 47, although only the Mocrocks historical population densities are included.



The Mocrocks densities on recruit clams are historically more consistently strong than any other razor clam management beach. The 2023 densities again show all areas except one with abundances at or above 2 clams per square meter, and only one area below a density of 1 clam per square meter.



The average size of the Mocrocks recruit clams found in our 2023 summer survey was 2.95 inches. This compares to 4.22 inches in 2022; 4.4 in 2021; 4.07 in 2020; 4.3 in 2019; 3.7 inches in 2018; 4.2 inches in 2017; and 4.7 inches in 2016.

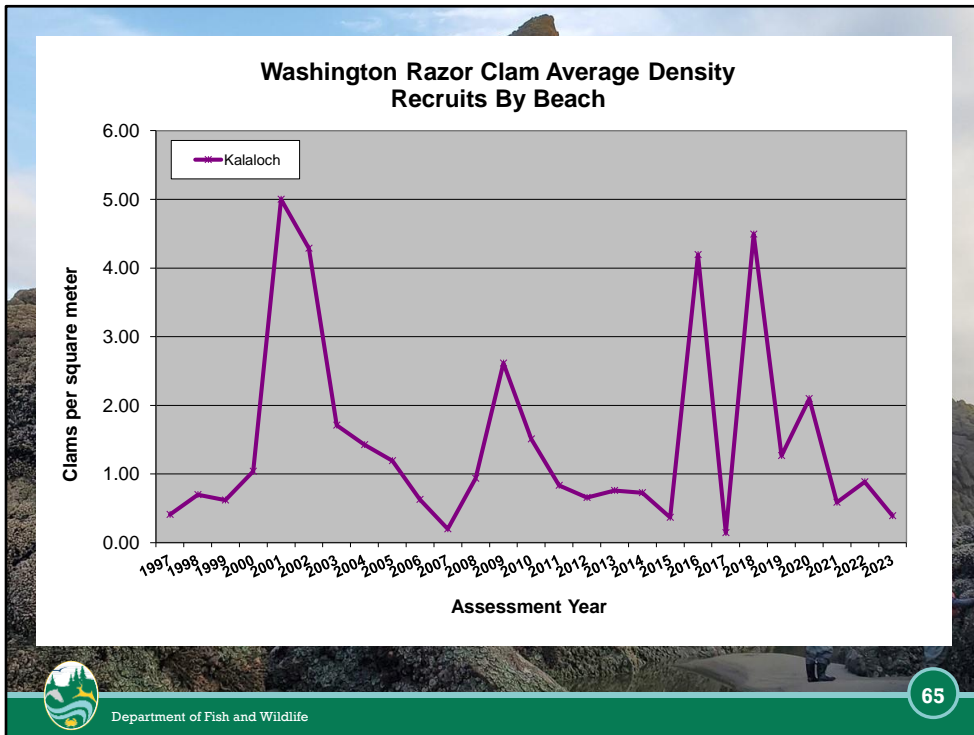
<b>KALALOCH RAZOR CLAM POPULATION, TOTAL ALLOWABLE CATCH (TAC) AND HARVEST DATA</b>					
YEAR	POPULATION		Total	State's Share	State's
	RECRUITS	PRE-RECRUITS	TAC (clams)	(50% w/	HARVEST (clams)
			of recruits	adjustments)	TOTAL
2019-20	1,728,824	10,990,139	439,121	219,561	0
2020-21	2,854,354	7,215,994	725,006	362,503	0
2021-22	800,434	97,441,944	203,310	101,655	0
2022-23	1,202,228	1,168,712	305,366	152,683	0
2023-24	528,741	4,717,808	134,300	67,150	
AVERAGE	1,422,916	24,306,919	361,421	180,710	0

Another 5 year low population for recruit clams on Kalaloch. No digging has yet been scheduled for this beach this year.

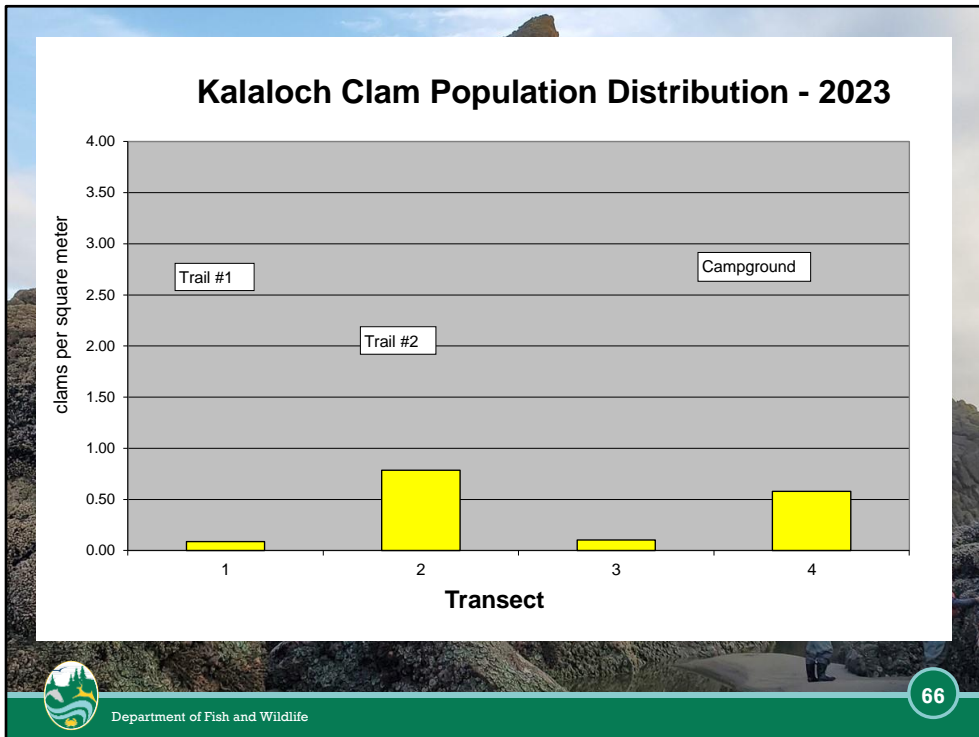
Recall; recruits are defined as clams => 76 mm (3 inches); pre-recruits are < 76 mm (3 inches).

Because Kalaloch lies within the boundaries of the Olympic National Park, their staff works closely with WDFW staff in the management of the recreational fishery here. WDFW has the lead in the population assessment work. ONP has the lead in harvest monitoring and enforcing the recreational fishery. Both groups work together to set specific dates when harvest will occur on this beach.

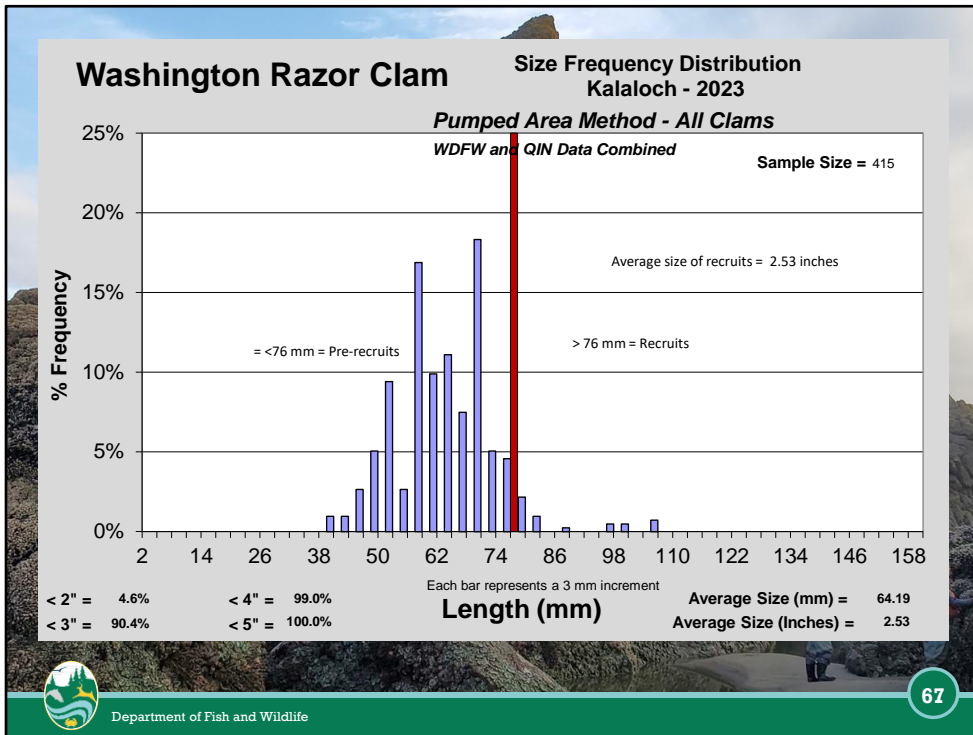




This is the same data that we presented in slide 47, although only the Kalaloch historical population densities are included.




As you can see there are no areas of Kalaloch beach with abundant densities of clams.

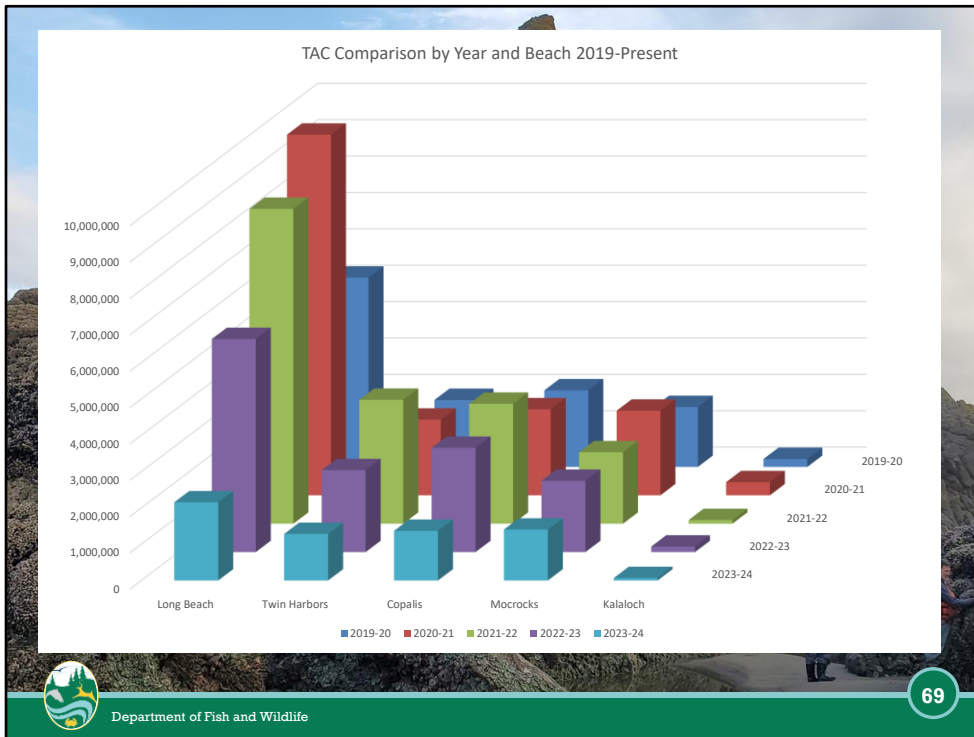


The number of recruit clams found at Kalaloch in 2023 were once again very small, smaller even than last year. Those we found in our survey transects had an average size of just 2.53 inches.

	2023-24 TAC Share (clams)	Projected average daily harvest (clams)
Long Beach	2,154,184	30,000
Twin Harbors	1,281,202	20,000
Copalis	1,367,231	27,000
Mocrocks	1,401,983	23,000
Kalaloch	67,150	

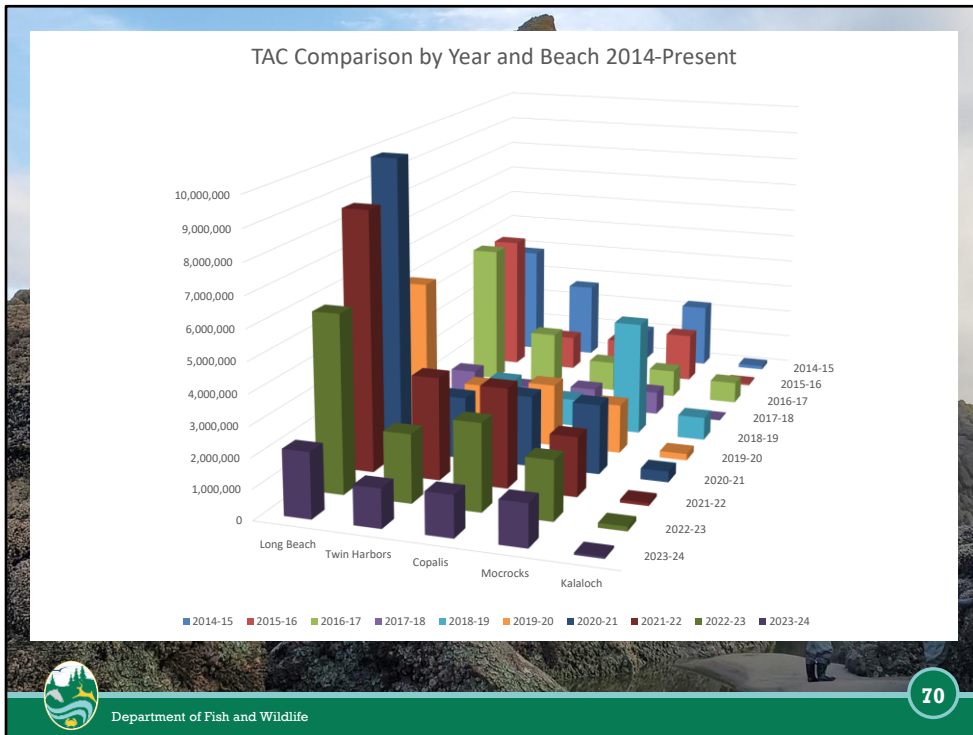

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This is a recap of the Total Allowable Catch that will guide WDFW during the 2023-24 season. We also list here our projected average daily catch, by beach. Note that the average daily catch includes days with large crowds, excellent weather and good digging success as well as days with fewer people or poorer success (usually due to bad weather). It can be tricky to project this number, and we find daily harvest goes down when we have more days to offer.



The 2023-24 TAC by beach from the past five years shows a decrease from the prolific numbers of the past few years. Still a strong and healthy population though.





The 2023-24 TAC by beach from the past ten years shows average or above average numbers depending on the beach.



## Key Takeaways for 2023-24 Season

- A strong and healthy population which should provide plenty of digging opportunity this year, but lower numbers compared to the past few years.
- A return to TACs more resembling average years.
- Resulting in digging schedules with less harvest days per tide series, only some beaches per day, and less digging days overall.
- Potential for some beaches to reach their TAC and be unable for harvest before the end of the spring season.
- Less big clams and more small clams, resulting in a lower average size on all beaches.



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Less big clams and more small clams, resulting in a lower average size on all beaches.

# Co-Management with Coastal Tribes

- Share the resource and share the work
  - ...complete joint stock assessments
  - ...determine TACs jointly
- Sign Fishery Management Plans annually
- Different seasons for different reasons
  - ...tribal ceremonial & subsistence / commercial
  - ...State recreational
- Each group monitors their own fishery
  - ...make individual harvest estimates / share data
  - ...provide enforcement

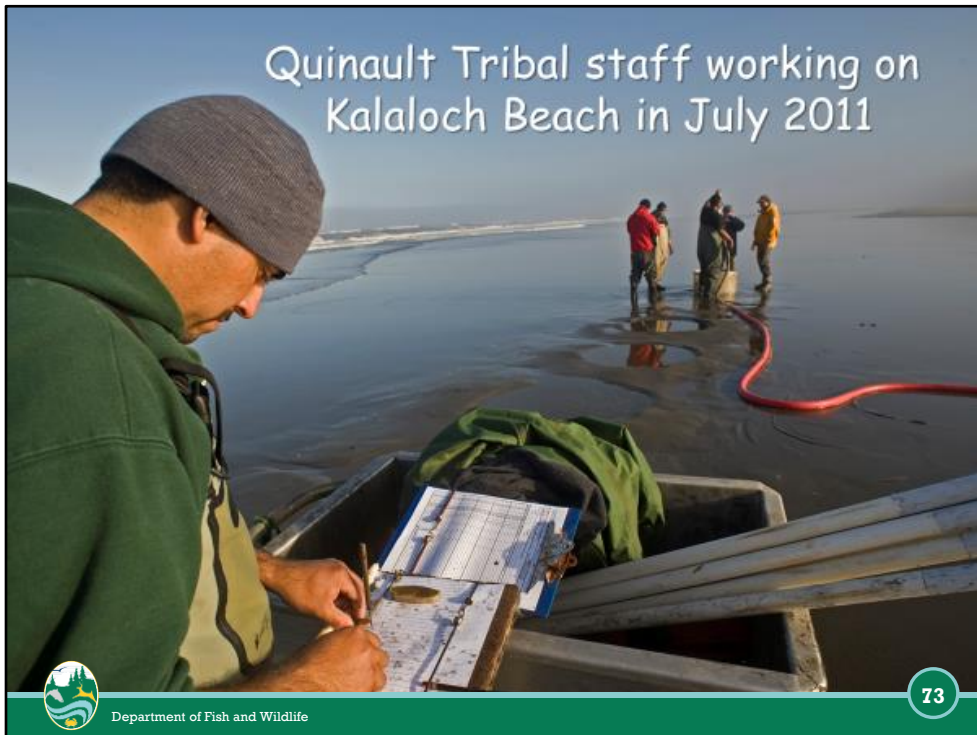


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As was mentioned earlier, WDFW works closely with two coastal tribes in the management razor clam populations.





The Quinault Indian Nation (QIN) shares the labor of the stock assessment work - with their own crews of biologists and technicians who also use the Pumped Area Method. Working side by side QIN and WDFW staff assess razor clam populations at Copalis, Mocrocks and Kalaloch. On each of these beaches half of the sample transects are completed by QIN staff and half by WDFW staff. The data is pooled and a joint population estimate is made.

At Kalaloch, the Hoh Tribe provides additional staff to assist in the assessment on that beach. Because there is no vehicle access on the Kalaloch beach – having extra people available to move the gear up and down trails to the beach is critical to the success of the work.

**2007-08 INTERIM RAZOR CLAM MANAGEMENT AGREEMENT  
FOR COPALIS AND MOCROCKS BEACHES**

**ENTERED INTO BY THE STATE OF WASHINGTON  
AND QUINAULT INDIAN NATION**

August 28, 2007

This agreement establishes principles, concepts, and procedures, which will govern the non-Indian and treaty tribal fisheries for razor clams at Copalis and Mocrocks Beaches.

**1. EFFECTIVE DATE**

This agreement is effective on August 28, 2007.

**2. TERM**

The term of this agreement is until August 27, 2008, unless superseded by another agreement.



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Each year in August WDFW and the coastal tribes sit down and discuss the population estimates and proposed total allowable catch (TAC) for the co-managed beaches; Copalis, Mocrocks and Kalaloch. The result of those discussion is a an agreed to Fishery Management Plan signed by policy representatives of each group that guides the management of the fisheries in the coming season.



For helpful instruction on how to dig, watch our video “Digging Razor Clams in Washington”

Check it out at:  
<https://youtu.be/RBM9b5r6rMQ>

Or visit our website:  
<https://wdfw.wa.gov/fishing/basics/digging-razor-clams>



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We are pleased to offer you a video that should help new diggers learn how to dig razor clams. See it at: <https://youtu.be/RBM9b5r6rMQ> Or search You Tube for “Digging Razor Clams in Washington”

If you are one of our first time diggers we want to welcome you to this fun recreational activity that anyone can easily learn to do. After you’ve watch this video, and have additional questions, feel free to contact us at the email or phone numbers listed later in this document. Another good piece of advice, if you are on the beach and struggling to successfully dig clams, look around for an experienced digger and ask for advice. Most diggers are friendly and will be more than willing to give you some on-the-spot pointers. To you “old salts” who can dig a clam without blinking – consider offering some advice to those who might be new to razor clamming and look like they could use a few pointers.


<https://wdfw.wa.gov/fishing/basics/digging-razor-clams>

## Dig with your kids, not for them . . .

Razor clamming is a fun and easy-to-learn activity that draws generations of families and friends to the Washington coast each year.

We understand that children have varying abilities when it comes to handling digging equipment. Adults may assist kids, but kids need to actively participate in the entire process of digging and gathering razor clams.

Watch our YouTube video online to see an example of how to dig razor clams with kids:  
<http://www.youtube.com/thedfw>




Also, please remember:


- Adults and youth age 15 and older need a license to dig razor clams; licenses are available at many local sporting goods retailers and online at [wdfw.wa.gov](http://wdfw.wa.gov);
- Everyone needs to dig his or her own limit, bring a separate container for his or her clams, and not dig more than the 15 clam limit;
- It is unlawful to dig for someone else or dig part of someone's limit, unless digging for a disabled harvester with a designated harvester card.
- You are required to keep the first 15 clams dug, regardless of size and condition. Wasting razor clams is against the law.

The Washington Department of Fish and Wildlife is asking for your help to ensure current and future generations continue to enjoy bountiful razor clam harvests.


For more on razor clam seasons, regulations, digging, and cooking your clams, visit WDFW's recreational razor clam website: <http://wdfw.wa.gov/fishing/shellfish/razorclams/>



We hope you and your family  
have a great time at the beach.




Still have questions  
about razor clam digging?  
Call 360-249-4628



## WDFW also has a video titled: "Digging Razor Clams with Kids in Washington"

Check it out at:  
[http://youtu.be/gl9p\\_PparVk](http://youtu.be/gl9p_PparVk)


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Razor clamming is a fun and easy-to-learn activity that draws generations of families and friends to the Washington coast each year. We understand that children have varying abilities when it comes to handling digging equipment. Adults may assist kids, but kids need to actively participate in the entire process of digging and gathering razor clams. Check out the video at: [http://youtu.be/gl9p\\_PparVk](http://youtu.be/gl9p_PparVk) Also, please remember:

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- Everyone needs to dig his or her own limit, bring a separate container, and not dig more than the current clam limit;
- It is unlawful to dig for someone else or dig part of someone's limit, unless digging for a disabled harvester with a designated harvester card.
- You are required to keep the first 15 clams dug, regardless of size and condition. Wasting razor clams is against the law. The Washington Department of Fish and Wildlife is asking for your help to ensure current and future generations continue to enjoy bountiful razor clam harvests. For more information on razor clam seasons, regulations, digging, and cooking your clams, visit WDFW's recreational razor clam website: <http://wdfw.wa.gov/fishing/shellfish/razorclams/>

When you get home and need information on what to do with your catch, WDFW recently made: “How to Clean and Cook Razor Clams”

Check it out at:

<https://youtu.be/sTaRaHkFFEw>

Recipe inspiration can be found here:

<https://wdfw.medium.com/our-favorite-razor-clam-recipes-a4d3019548c9>



We are pleased to offer you a video that should help new diggers learn how to clean and cook razor clams. See it at: <https://youtu.be/sTaRaHkFFEw> Or search YouTube for “Digging Razor Clams in Washington”

For recipe inspiration visit our blog post:

<https://wdfw.medium.com/our-favorite-razor-clam-recipes-a4d3019548c9>

## *Common razor clam parasites*

We are often contacted by razor clam diggers who have encountered a couple of relatively common razor clam parasites. The next two pages provides more details. However, anytime you find something unusual while digging or while on the beach, don't hesitate to contact us at [TeamMontesano@dfw.wa.gov](mailto:TeamMontesano@dfw.wa.gov) or [RazorClams@dfw.wa.gov](mailto:RazorClams@dfw.wa.gov)



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We are often contacted by razor clam diggers who have encountered a couple of relatively common razor clam parasites. The next two pages provides more details. However, anytime you find something unusual while digging or while on the beach, don't hesitate to contact us at [TeamMontesano@dfw.wa.gov](mailto:TeamMontesano@dfw.wa.gov) or [RazorClams@dfw.wa.gov](mailto:RazorClams@dfw.wa.gov)

## *Pinnixa* sp. (Pea Crab)

There are many species of “pea crabs” in the family *Pinnixa*. They are found in the siphon, mantle, or gill cavity of razor clams and in many other regional invertebrates (clams, mussels, oysters, sea cucumbers, etc.) It has a commensal relationship with the host, taking food from the clam’s digestive system but otherwise causing no damage. Feel free to eat the clam since it is unharmed by the crab.



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They are an uncommon, but not unusual razor clam parasite usually discovered while cleaning clams. These organisms have a commensal relationship with the host razor clam, taking food from the clam’s digestive system but otherwise not harming the clam. There are many different species of *Pinnixa* crab, and they can be found in the siphon, mantle, and gill cavity of many species of other bivalves and invertebrates.

The geographic distribution among razor clams appears to be patchy and their abundance is unpredictable. It is not unusual to find multiple clams with a pea crab inhabitant in a catch limit of razor clams. Since the crabs leave their hosts unscathed, please feel free to eat and enjoy those inhabited razor clams.

## *Malacobdella silquae*

A nemertean worm parasite found in the siphon, mantle, or gill cavity of pacific razor clams. It has a commensal relationship with the host, taking food from the clam's digestive system but otherwise causing no damage. Feel free to eat the clam since it is unharmed by the worm.



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*Malacobdella silquae*. It is an uncommon, but not unusual razor clam parasite. It is a genus of nemertean worm and is found in the mantle and/or gill cavity of many species of clams and other bivalves. *Malacobdella* have a large posterior sucker, like that of a leech. It has a commensal relationship with the host razor clam, taking food from the clam's digestive system, but otherwise not harming the clam.

The geographic distribution among razor clams appears to be very patchy. However, it is not unusual to find more than one clam, each with a *Malacobdella* from a catch of razor clams taken from the same general area



## Comments and Suggestions???

Feel free to email us and tell us what you think:

[razorclams@dfw.wa.gov](mailto:razorclams@dfw.wa.gov)



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Thank you for taking the time to review this presentation. We are interested in your opinions regarding our management of the razor clam resource and specifically any suggestions or comments you have on the way we might structure the remaining dates for 2023-24 season.

Email your comments to : [razorclams@dfw.wa.gov](mailto:razorclams@dfw.wa.gov)

*To be added to our e-mail update list, please send an email request to: [razorclams@dfw.wa.gov](mailto:razorclams@dfw.wa.gov)*

Below is an excerpt of a message sent out to this list;

On Apr 4, 2017, at 3:44 PM, Ayres, Daniel L (DFW) <[Daniel.Ayres@dfw.wa.gov](mailto:Daniel.Ayres@dfw.wa.gov)> wrote:

You are receiving this message because you have expressed interest in Washington State's recreational razor clam fishery. If you do not wish to receive future messages, please reply by return e-mail.

**SEASON UPDATE:** We are happy to be able to finally include Long Beach in a razor clam opener. Not wanting to delay any longer than needed, Long Beach joins Twin Harbors in opening tomorrow (4/12). Copalis and Mocrocks will also open as previously scheduled. See the details below.

- April 12, Wednesday, 8:08 a.m., 0.0 feet; Twin Harbors, Long Beach
- April 13, Thursday, 8:43 a.m., 0.0 feet; Twin Harbors, Copalis, Long Beach
- April 14, Friday, 9:18 a.m., 0.1 feet; Twin Harbors, Mocrocks, Long Beach
- April 15, Saturday, 9:55 a.m., 0.3 feet; Twin Harbors, Copalis, Long Beach
- April 16, Sunday, 10:36 a.m., 0.5 feet; Twin Harbors, Mocrocks, Long Beach

beach must test under the action level (20 ppm for domoic acid; 80 µg/100g for PSP; and 16 µg/100g for DSP) on both of the two required sample collections.

Note that in all of these samples; only razor clam meat tissue is tested.

The following samples collected on April 9, 2017

Long Beach Area E (north):

- domoic acid = 10 ppm
- PSP = < 38 µg/100g
- DSP = none detected

Long Beach Area OY (middle):

- domoic acid = 9 ppm
- PSP = < 38 µg/100g
- DSP = none detected



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You may be interested to know that we maintain an email distribution list for anyone specifically interested in razor clam related issues. The periodic updates sent out using this list include information on season openers, marine toxin levels and other pertinent topics. If you are interested in having your email address added to this list, please let us know by sending an email request to: [razorclams@dfw.wa.gov](mailto:razorclams@dfw.wa.gov)



**Washington 2023-24 Recreational Razor Clam  
Tentative\* Fall Harvest dates**

*\*Pending final marine toxin test results*

*NOTE: open beaches vary by day. Please pay close attention to this list of dates and beaches open.*

**PM TIDES ONLY**

Sept. 29, Friday; 7:18 p.m.; -0.4 feet; Long Beach, Twin Harbors, Mocrocks  
Sept. 30, Saturday; 8:04 p.m.; -0.9 feet; Long Beach, Twin Harbors, Copalis  
Oct. 1, Sunday, 8:49 p.m.; -1.0 feet; Long Beach, Twin Harbors, Mocrocks  
Oct. 2, Monday, 9:36 p.m.; -0.9 feet; Long Beach, Twin Harbors, Copalis

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Page 1 of 4. These dates remain tentative until final marine toxin tests have been completed, generally a few days before the opening is scheduled to occur. This is to ensure the clams you harvest are safe to eat.

Feedback WDFW has received over the last several years is that most clam diggers like the season structure we've been using that allows for a few days of digging – each month – on as many beaches as possible.

Many coastal businesses have also said that such a season structure helps them by drawing people to coastal communities during periods of the year when fewer people would normally visit.

We are always open to suggestions and would be happy to hear any ideas about what might work better for you.



Oct. 14, Saturday, 7:17 p.m.; 0.2 feet; Long Beach, Twin Harbors, Mocrocks  
Oct. 15, Sunday, 7:52 p.m.; -0.1 feet; Long Beach, Twin Harbors, Copalis  
Oct. 16, Monday, 8:28 p.m.; -0.3 feet; Long Beach, Twin Harbors, Mocrocks  
Oct. 17, Tuesday, 9:06 p.m.; -0.4 feet; Long Beach, Twin Harbors, Copalis  
Oct. 18, Wednesday, 9:49 p.m.; -0.3 feet; Mocrocks

Oct. 27, Friday, 6:18 p.m.; -0.4 feet; Long Beach, Twin Harbors, Mocrocks  
Oct. 28, Saturday, 7:03 p.m.; -1.0 feet; Long Beach, Twin Harbors, Copalis  
Oct. 29, Sunday, 7:46 p.m.; -1.3 feet; Long Beach, Twin Harbors, Mocrocks  
Oct. 30, Monday, 8:29 p.m.; -1.3 feet; Long Beach, Twin Harbors, Copalis  
Oct. 31, Tuesday, 9:12 p.m.; -1.0 feet; Mocrocks



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Page 2 of 4. These dates remain tentative until final marine toxin tests have been completed, generally a few days before the opening is scheduled to occur. This is to ensure the clams you harvest are safe to eat.

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Nov. 12, Sunday, 5:53 p.m.; -0.3 feet; Mocrocks

Nov. 13, Monday, 6:30 p.m.; -0.7 feet; Long Beach, Twin Harbors, Copalis

Nov. 14, Tuesday, 7:09 p.m.; -0.9 feet; Long Beach, Twin Harbors, Mocrocks

Nov. 15, Wednesday, 7:51 p.m.; -0.9 feet; Long Beach, Twin Harbors, Copalis

Nov. 16, Thursday, 8:37 p.m.; -0.8 feet; Long Beach, Twin Harbors, Mocrocks

Nov. 17, Friday, 9:27 p.m.; -0.5 feet; Copalis

Nov. 18, Saturday, 10:22 p.m.; -0.1 feet; Mocrocks

Nov. 24, Friday, 4:18 p.m.; 0.0 feet; Long Beach, Twin Harbors, Copalis

Nov. 25, Saturday, 5:05 p.m.; -0.7 feet; Long Beach, Twin Harbors, Mocrocks

Nov. 26, Sunday, 5:49 p.m.; -1.2 feet; Long Beach, Twin Harbors, Copalis

Nov. 27, Monday, 6:31 p.m.; -1.3 feet; Long Beach, Twin Harbors, Mocrocks

Nov. 28, Tuesday, 7:12 p.m.; -1.2 feet; Long Beach, Twin Harbors, Copalis

Nov. 29, Wednesday, 7:52 p.m.; -0.8 feet; Mocrocks

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Page 3 of 4. These dates remain tentative until final marine toxin tests have been completed, generally a few days before the opening is scheduled to occur. This is to ensure the clams you harvest are safe to eat.


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We are always open to suggestions and would be happy to hear any ideas about what might work better for you.

Dec. 13, Wednesday, 6:55 p.m.; -1.3 feet; Long Beach, Twin Harbors, Mocrocks  
Dec. 14, Thursday, 7:39 p.m.; -1.3 feet; Long Beach, Twin Harbors, Copalis  
Dec. 15, Friday, 8:25 p.m.; -1.2 feet; Long Beach, Twin Harbors, Mocrocks  
Dec. 16, Saturday, 9:12 p.m.; -0.8 feet; Long Beach, Twin Harbors, Copalis  
Dec. 17, Sunday, 10:01 p.m.; -0.3 feet; Long Beach, Twin Harbors, Mocrocks

Dec. 26, Tuesday, 6:18 p.m.; -0.9 feet; Long Beach, Twin Harbors, Copalis  
Dec. 27, Wednesday, 6:57 p.m.; -0.8 feet; Long Beach, Twin Harbors, Mocrocks  
Dec. 28, Thursday, 7:35 p.m.; -0.6 feet; Long Beach, Twin Harbors, Copalis  
Dec. 29, Friday, 8:11 p.m.; -0.3 feet; Long Beach, Twin Harbors, Mocrocks

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Page 4 of 4. These dates remain tentative until final marine toxin tests have been completed, generally a few days before the opening is scheduled to occur. This is to ensure the clams you harvest are safe to eat.

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Thank you for taking the time to review this management presentation. Hope to see you on the beach soon.

Bryce Blumenthal  
Razor Clam Manager  
Washington State Department of Fish and Wildlife  
Region Six  
48 Devonshire Road  
Montesano, WA 98563 USA  
Telephone: 360-249-4628 (ext. 232)  
RazorClams@dfw.wa.gov