



Summary Report of the 2012 Commercial Fishery for Razor Clams (*Siliqua patula*)

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January 2013

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**WASHINGTON DEPARTMENT OF FISH AND WILDLIFE (WDFW)
SUMMARY OF THE 2012 COMMERCIAL FISHERY
FOR RAZOR CLAMS (*Siliqua patula*)**

Fishery Objectives and Preseason Planning

A public meeting was held in mid April 2012 for commercial diggers and razor clam buyers at Raymond High School. The major discussion topic was when to schedule the 2012 fishery and the duration of the season.

At the meeting WDFW announced changes designed to stabilize the opening date of the fishery and season length. In past years, three factors largely determined the start date of the commercial razor clam fishery: the end of the recreational razor clam season, biotoxin levels, and tides. By practice, the commercial fishery opened only after the end of the recreational fishery. WDFW believed that by separating the two fisheries it would make it more difficult for sport diggers to illegally dig, possess or sell commercial quantities of clams, and it also simplifies recovering clams in the event of a Washington Department of Health (WDOH) product recall. In addition, because the Willapa Spits are legally open to sport harvest when Long Beach is open, keeping the fisheries separate prevents a potential influx of sport harvesters on the spits while a commercial fishery is underway.

In the past few years the recreational razor clam seasons have been extended well into May due to lower than expected effort/catch levels. This lower catch is not due to a lack of clams but due to poor weather conditions during scheduled recreational digs. As a result the commercial season opener has varied from year to year to accommodate the later recreational digs and the fishery itself has been closed in-season to digging when recreational harvest occurs. The constantly shifting opening date and in-season closures has resulted in much uncertainty for processors and harvesters alike. WDFW was often able to give a general time frame on when the season could open but in practice the official notice to participants was often only a few days from the actual opener.

In order to create a stable and orderly commercial fishery WDFW has determined that beginning in 2012 the commercial fishery will open for eight weeks on May 1 of each year regardless of the status of the recreational fishery. May 1 is a compromise date as some diggers want to begin in mid-April when clam condition is excellent and some diggers wanted a later start in mid-May when the weather is generally better. The processors generally supported a May 1 start. To avoid any conflicts between the two fisheries WDFW has removed the detached spits from the definition of Razor Clam Area 1 (Long Beach) and given it its own separate area, Razor Clam Area 2. (See: <http://apps.leg.wa.gov/wac/default.aspx?cite=220-56-360>.) This will prohibit any recreational harvest on the detached spits during commercial openers and will allow both fisheries to run concurrently.

Two other major changes occurred in the 2012 fishery. The first was a \$105 administrative fee increase in the WDFW commercial razor clam license which raised the license cost from \$130 to \$235 for residents. The last time the license fee was raised was 18 years ago in 1994 when it went from \$50 to \$105. The second change was the implementation by the Washington Department of Natural Resources (DNR) of an individual digger Right of Entry Agreement (ROE). In previous years WDFW was required to obtain an Aquatic Lands ROE from DNR to conduct the commercial fishery at the Willapa spits, which are state-owned aquatic lands. As

the proprietor of these state-owned tidelands, DNR manages the uses that take place on these lands. To fulfill this role, DNR must consider the potential long-term impacts of activities, authorize access, and seek compensation for use of the public's natural resources, especially when used for commercial purposes. Beginning this year, DNR is requiring a right of entry for individual harvesters to ensure that best management practices (BMPs) are applied at the site. These practices help harvesters protect critical habitat for other species, such as the western snowy plover. Rights of entry for the 2012 season were issued at no cost to harvesters.

Regulations for the commercial razor clam fishery allow digging only on "detached" (i.e. islands) spits. In recent years, shifting sand has filled in a channel of water that had separated the spits from the north end of Leadbetter Point. At low tide the southernmost spit and the northern end of Leadbetter Point essentially became continuous, and could be easily crossed. For the last five seasons boundary poles have been installed at the north end of Leadbetter Point to provide a clear delineation between it and the spits. Boundary posts were installed again in 2012 to eliminate any uncertainty.

Biotoxin Sampling

Before the fishery opens the Washington Department of Health (WDOH) protocols require two sets of razor clam samples be collected and test below the action levels. These sets of samples must be collected seven to ten days before the planned opener. Each sample collected must test below 20 parts per million (ppm) for domoic acid and below 80 micrograms per 100 grams of meat tested ($\mu\text{g}/100\text{g}$) for paralytic shellfish poisoning (PSP). Razor clams for pre-season biotoxin testing were collected from one site on the spits in mid April and early May and tested under the action level (Table 1). Monitoring of biotoxin levels continues once the fishery is underway with fishery samples collected from dealers every seven to ten days. Domoic acid and PSP levels were low throughout the season and were not an issue.

Table 1. 2012 Commercial Razor Clam Fishery Biotoxin Results.

Collection Date	Sample Type	PSP Result ($\mu\text{g}/100\text{g}$)	Domoic Result (ppm)
4/13/12	Pre-Season	<38	<1
4/24/12	Pre-Season	NTD	NTD
5/01/12	Fishery Sample	44	NTD
5/07/12	Fishery Sample	NTD	<1
5/14/12	Fishery Sample	NTD	<1
5/22/12	Fishery Sample	NTD	<1
5/28/12	Fishery Sample	<38	<1
6/04/12	Fishery Sample	NTD	NTD
6/11/12	Fishery Sample	<38	<1
6/18/12	Fishery Sample	<38	NTD
6/25/12	Fishery Sample	<38	<1
7/02/12	Fishery Sample	<38	<1

Fishing Season

The 2012 season opened on May 1st and was scheduled to last eight weeks, ending on June 25th. Clam abundance was generally good throughout the season although as in the past few years, poor weather in May and early June made digging conditions difficult and likely impacted landings and catch per unit of effort (CPUE). In poor weather some of the harvesters with larger boats can participate in the fishery but many that utilize small skiffs to access the spits cannot.

In late June an extension to the season was requested by the harvesters. In order to extend the season there must be indications of stable clam abundance, interest by diggers, and a willing buyer. During the eight week regular season 106,540 lbs of razor clams were landed. While historically this is a very good number it was only half of that landed only two years ago. Therefore, interest by buyers in obtaining additional clams during an extension was very good with six buyers indicating their willingness to purchase razor clams harvested during the extension.

WDFW considered the industry request for an extension. Based on three factors; 1) digging opportunity lost to poor weather, 2) the stable CPUE during the season, and 3) willing buyers, WDFW allowed for a thirteen day extension, ending the fishery on July 8th.

Licenses

In 2012 105 licenses were sold and of these, 104 were actively fished. These numbers are the lowest since 2004. License sales were relatively stable from 2004 thru 2008 and increased in 2009 and 2010 before falling in 2011 and 2012 (Table 2, Figure 2). We attributed the increased participation in this fishery to the poor economic conditions brought on by the Great Recession and high local unemployment. We speculate the recent declines in license sales are likely due to 1) an improved economy which has allowed past participants to pursue other job opportunities 2) an increase in the WDFW license fee from \$130 to \$235 which may of priced some diggers out of the fishery and 3) implementation of the DNR individual harvester right of entry permit which may of discouraged some diggers from participating. As in past years, diggers were predominantly residents of Pacific (65%) and Grays Harbor (26%) counties (Figure 1).

Figure 1. Residence of 2012 Commercial Razor Clam Diggers by County.

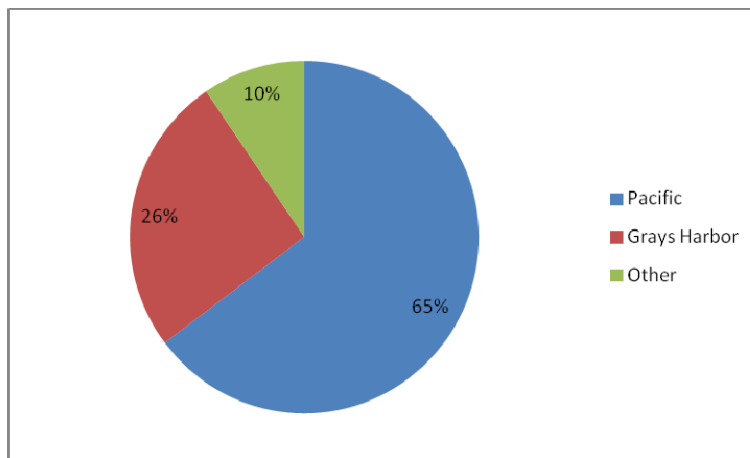
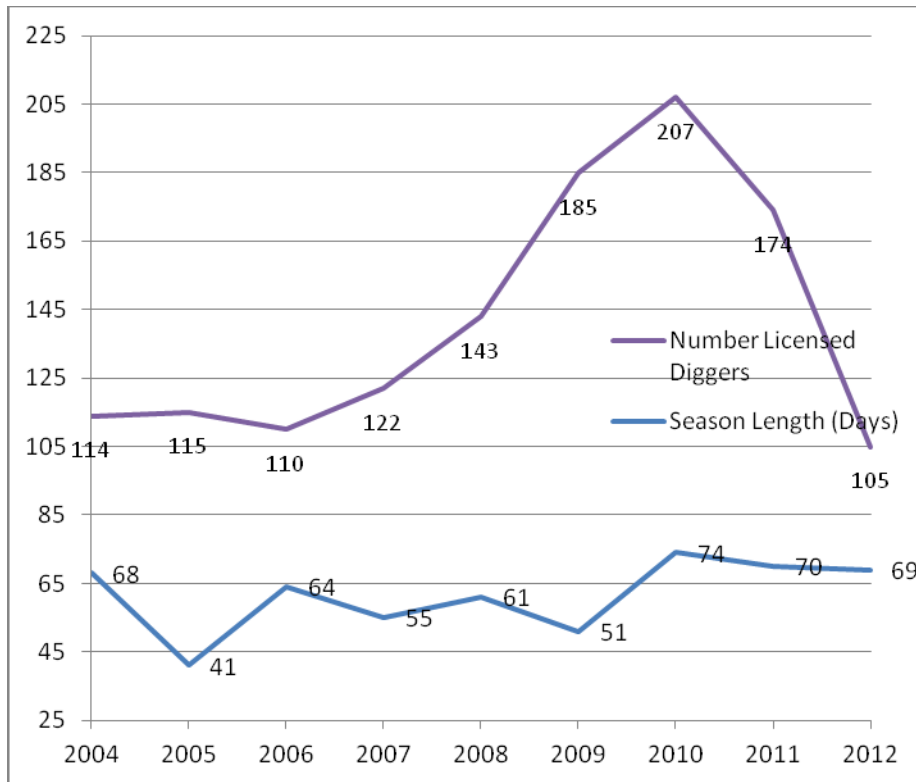


Figure 2. 2004-2012 Number of Licensed Diggers and Season Length



Fishery Landings

In total, the fishery landed 133,444 pounds of razor clams during the 69-day season (Tables 2, 3). The total direct value to diggers (ex-vessel value) was \$262,611. Depending upon the buyer the price paid for most razor clams started out at \$1.75 to \$1.85 per pound which soon went to \$2.00 for the majority of the season. Overall prices paid during the 2012 season ranged from \$1.50 to \$2.25 per pound. Clams were landed on 68 days of the 69 day season; on average 25 diggers each day landed about 78 pounds of clams per day (Figure 3). There were 315 personal use take home limits, which comprised 18.4% of the 1,709 landings. In the 2010 and 2011 seasons take home limits were 8.5% and 13.4% of the landings respectively. Discounting other factors such as weather or surf conditions, generally any tide less than +1.0 foot offers comparably good digging opportunity (Figure 4). Catch per unit of effort (CPUE: in this case the total pounds of clams dug in one day divided by the number of diggers) was generally highest on tides that were between -1.2 feet and +0.5 feet. CPUE has been relatively stable but trending downward over the past eight years as indicated by the negative slope regression line fitted to the CPUE data (Figure 3).

Figure 3. 2004 – 2012 Average Number of Diggers Per day and Catch Per Unit Effort

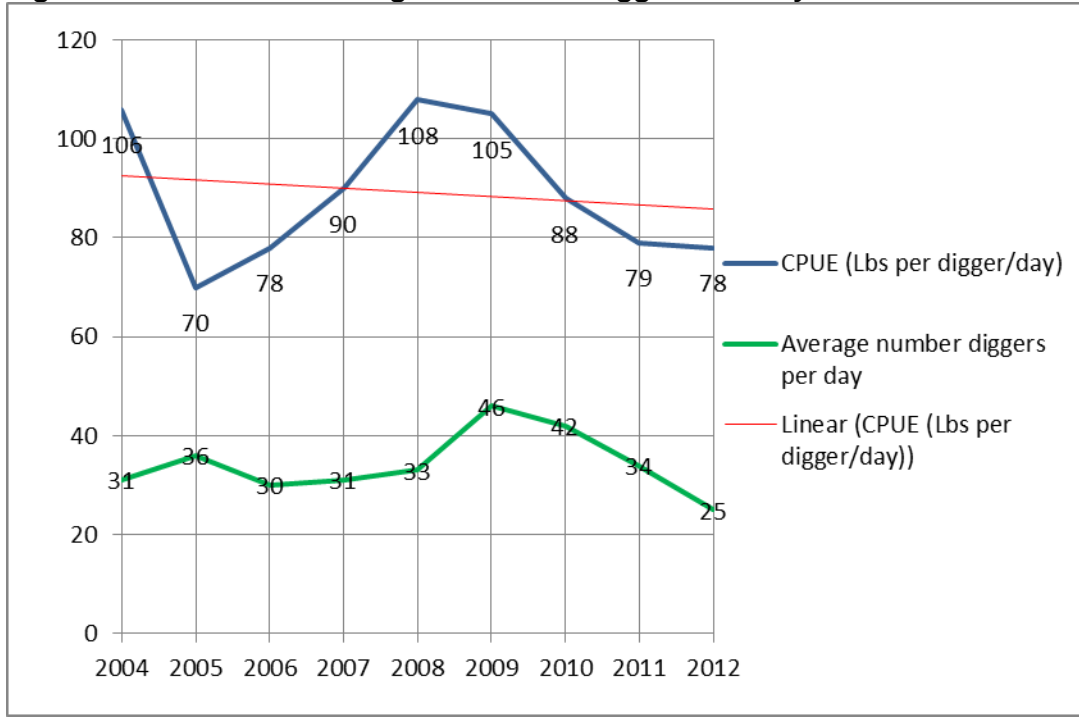


Figure 4. 2012 Daily Pounds of Clams Dug per Person (CPUE) and Tide Elevation

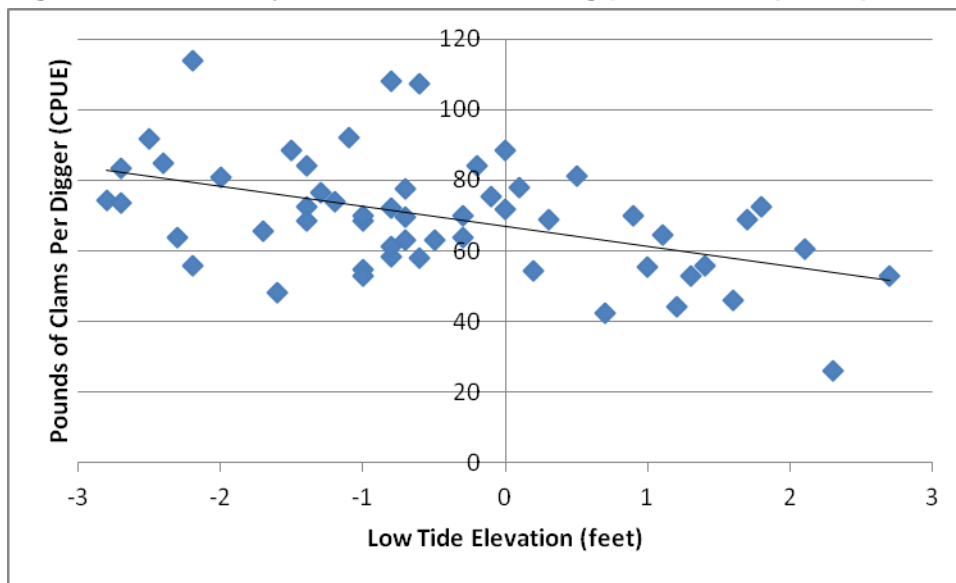


Table 2. Commercial Razor Clam: Harvest Totals, Value, Season Length and Licenses.

Washington Non-Treaty Commercial Razor Clam Fishery

Year	Pounds Landed	Ex-Vessel Value	Number			Non-Resident Licenses	License Revenue	License Fees	
			Days	Diggers	Licenses			Resident	Non-Resident
76	14,047	\$10,512		-	187		\$935	\$5	\$5
77	5,797	\$6,150		-	365		\$1,825	\$5	\$5
78	25,386	\$20,355		-	191		\$4,595	\$5	\$5
79	10,750	\$10,976		-	1,695		\$8,475	\$5	\$5
80	18,390	\$18,781	80	-	1,518		\$7,590	\$5	\$5
81	2,891	\$3,842	39	-	1,411		\$7,055	\$5	\$5
82	6,672	\$9,432	91	-	1,322		\$6,610	\$5	\$5
83	6,732	\$8,678	69	-	1,366		\$6,830	\$5	\$5
84	Nix Closure								
85	Nix Closure								
86	58,814	\$73,114	64	-	378	13	\$19,500	\$50	\$100
87	103	\$194	4	-	115	7	\$6,100	\$50	\$100
88	Closed due to low population levels								
89	20,140	\$35,161	28	-	205	2	\$10,350	\$50	\$100
90	26,553	\$48,073	36	-	290	6	\$14,800	\$50	\$100
91	26,630	\$44,106	42	-	267	8	\$13,750	\$50	\$100
92	Domoic Acid Closure								
93	Domoic Acid Closure								
94	46,854	\$59,487	40	-	95	3	\$12,500	\$130	\$180
95	88,290	\$109,364	38	-	127	0	\$16,510	\$130	\$180
96	25,188	\$29,295	37	-	110	1	\$14,350	\$130	\$180
97	2,849	\$3,579	21	-	28	3	\$3,790	\$130	\$180
98	4,485	\$6,558	24	-	40	0	\$5,200	\$130	\$180
99	Domoic Acid Closure								
00	69,595	\$84,106	51	-	79	0	\$10,270	\$130	\$180
01	75,744	\$77,439	47	62	97	0	\$12,610	\$130	\$180
02	119,777	\$118,349	46	97	105	0	\$13,650	\$130	\$180
03	17,474	\$21,169	18	40	44	0	\$5,720	\$130	\$180
04	183,327	\$269,139	68	112	114	0	\$14,820	\$130	\$180
05	102,939	\$154,746	41	112	115	3	\$15,490	\$130	\$180
06	134,661	\$199,469	64	103	110	0	\$14,300	\$130	\$180
07	140,616	\$211,118	55	119	122	1	\$16,040	\$130	\$180
08	205,634	\$355,705	61	108	143	0	\$18,590	\$130	\$180
09	249,910	\$407,130	51	164	185	4	\$24,250	\$130	\$180
10	266,834	\$431,519	74	184	207	2	\$27,010	\$130	\$180
11	186,856	\$327,022	70	155	174	3	\$22,770	\$130	\$180
12	133,444	\$262,611	69	104	105	2	\$24,785	\$235	\$290

Table 3. 2012 Commercial Razor Clam: Daily Landings, Effort and Take Home Limits

Date	Day	Tide (ft)	Time	Number Landings	Daily Total Landings (lbs)	CPUE (lbs per digger/day)	Take Home Limits
01-May	Tuesday	+1.1	15:47	11	710	65	3
02-May	Wednesday	+1.2	16:43	12	530	44	1
03-May	Thursday	+0.3	5:36	-	-	-	-
04-May	Friday	-0.8	6:27	16	1,153	72	6
05-May	Saturday	-1.7	7:15	44	2,879	65	9
06-May	Sunday	-2.3	8:03	53	3,389	64	6
07-May	Monday	-2.5	8:51	37	3,397	92	7
08-May	Tuesday	-2.4	9:40	45	3,824	85	10
09-May	Wednesday	-2.0	10:29	52	4,201	81	14
10-May	Thursday	-1.4	11:21	49	3,560	73	11
11-May	Friday	-0.7	12:15	38	2,398	63	11
12-May	Saturday	+0.1	13:11	24	1,866	78	5
13-May	Sunday	+0.7	14:09	8	340	43	4
14-May	Monday	+1.3	15:08	5	265	53	1
15-May	Tuesday	+1.7	16:03	5	344	69	2
16-May	Wednesday	+2.1	16:54	9	546	61	3
17-May	Thursday	+0.3	5:56	23	1,583	69	4
18-May	Friday	-0.2	6:37	46	3,876	84	8
19-May	Saturday	-0.6	7:14	42	4,505	107	13
20-May	Sunday	-0.8	7:50	38	4,104	108	5
21-May	Monday	-1.0	8:24	15	821	55	0
22-May	Tuesday	-1.0	8:59	18	950	53	2
23-May	Wednesday	-1.0	9:34	33	2,258	68	5
24-May	Thursday	-0.8	10:10	30	1,745	58	2
25-May	Friday	-0.6	10:49	44	2,547	58	10
26-May	Saturday	-0.3	11:30	36	2,523	70	8
27-May	Sunday	0.0	12:15	24	2,121	88	5
28-May	Monday	+0.5	13:04	28	2,273	81	6
29-May	Tuesday	+1.0	13:59	25	1,383	55	4
30-May	Wednesday	+1.4	14:58	16	891	56	2
31-May	Thursday	+1.8	15:59	2	145	73	0
01-Jun	Friday	-0.5	5:15	12	756	63	2
02-Jun	Saturday	-1.5	6:09	38	3,363	89	6
03-Jun	Sunday	-2.2	7:00	46	5,241	114	5
04-Jun	Monday	-2.7	7:49	56	4,679	84	9
05-Jun	Tuesday	-2.8	8:37	20	1,483	74	0
06-Jun	Wednesday	-2.7	9:24	51	3,743	73	4

Table 3. 2012 Commercial Razor Clam: Daily Landings, Effort and Take Home Limits (cont.)

Date	Day	Tide (ft)	Time	Number Landings	Daily Total Landings (lbs)	CPUE (lbs per digger/day)	Take Home Limits
07-Jun	Thursday	-2.2	10:11	6	334	56	0
08-Jun	Friday	-1.6	10:57	20	960	48	5
09-Jun	Saturday	-0.8	11:44	22	1,350	61	4
10-Jun	Sunday	0.0	12:31	25	1,794	72	2
11-Jun	Monday	+0.9	13:21	18	1,258	70	5
12-Jun	Tuesday	+1.6	14:13	12	550	46	0
13-Jun	Wednesday	+2.3	15:07	1	26	26	0
14-Jun	Thursday	+2.7	16:03	3	159	53	0
15-Jun	Friday	+0.2	5:26	15	816	54	1
16-Jun	Saturday	-0.3	6:10	34	2,164	64	4
17-Jun	Sunday	-0.7	6:50	21	1,632	78	8
18-Jun	Monday	-1.0	7:28	5	350	70	0
19-Jun	Tuesday	-1.2	8:04	26	1,924	74	3
20-Jun	Wednesday	-1.4	8:39	35	2,400	69	8
21-Jun	Thursday	-1.4	9:14	34	2,854	84	6
22-Jun	Friday	-1.3	9:49	31	2,372	77	7
23-Jun	Saturday	-1.1	10:25	19	1,753	92	3
24-Jun	Sunday	-0.7	11:02	28	1,947	70	3
25-Jun	Monday	-0.1	11:43	20	1,505	75	1
Regular Season Totals				1,426	106,540	75	253

26-Jun	Tuesday	+0.5	12:28	16	1,175	73	2
27-Jun	Wednesday	+1.2	13:19	9	700	78	3
28-Jun	Thursday	+1.9	14:19	1	28	28	0
29-Jun	Friday	+2.4	15:25	2	46	23	0
30-Jun	Saturday	-0.8	4:56	16	1,114	70	2
01-Jul	Sunday	-1.6	5:54	30	2,772	92	7
02-Jul	Monday	-2.2	6:46	38	4,784	126	5
03-Jul	Tuesday	-2.5	7:35	19	2,228	117	1
04-Jul	Wednesday	-2.6	8:32	40	4,626	116	9
05-Jul	Thursday	-2.4	9:06	30	2,824	94	6
06-Jul	Friday	-2.0	9:48	28	2,707	97	11
07-Jul	Saturday	-1.3	10:29	31	2,774	89	10
08-Jul	Sunday	-0.5	11:09	23	1,126	49	6
Extended Season Totals				283	26,904	95	62

Grand Totals				1,709	133,444	78	315
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Commercial Sales and Trends

Commercial buyers must be certified by the Washington Department of Health to purchase razor clams; the certification is specific to razor clams and renewed annually. Buyers must also have a WDFW wholesale dealer license. Typically, five to six companies register to buy razor clams each year. Most dealers are established wholesale seafood businesses in Pacific and Grays Harbor counties that operate year-round in various fisheries. These companies purchase the majority of clams. However, some dealers are simply individuals that have obtained the required licenses and certification to purchase razor clams only. Typically, these dealers are commercial Dungeness crab fishers buying razor clams for bait.

Dungeness crab fishers favor razor clams as bait because they are a natural food source of crabs and keep well in crab pot bait cans. While the majority of the harvested clams are still sold as crab bait, this percentage has varied over the past few years. In 2008 two wholesale dealers estimated that 60% percent of the clams purchased were sold for human consumption in local markets, in British Columbia and overseas. In 2010 about 14% of the total harvest went to the fresh market while in 2012 it was only about 9%. While the overall market for fresh clams was strong in 2012 (due to lower landings in Alaska and Canada) the lower percentage was attributed to clam size and condition which resulted in lower recoveries in meat opening making it economically unfeasible for some processors. Wholesalers point out the market for fresh razor clams are limited by their narrow 2-3 day shelf life and because profitability to the wholesaler is held in check by other razor clams entering the market. These other sources include the Quinault Indian Nation and clams coming from both Canada and Alaska sources. For some buyers the main benefit in purchasing razor clams comes from keeping their work crews employed during a typically slow time of year and providing superior quality bait to the commercial crabbers who fish in the winter months.

Management Conclusions

In recent years, dealers have tried take advantage of stable seasons and strong production to develop retail markets locally and overseas. Success has been mixed due to competition of razor clams from other sources and a limited shelf life. Key factors to maintaining and increasing market development are a spring/summer season and a generally consistent season start. These factors have directed season development and are balanced with tides, weather and the needs of the recreational fishery. In addition to the direct benefits related to the harvest of clams, the timing of the fishery provides an important economic bridge between crab and salmon seasons for both dealers and diggers. Within the constraints posed by population abundance and biotoxin levels, management of the fishery will continue to promote season predictability to support marketing opportunities for human consumption and to provide a reliable source of bait for the Dungeness crab fishery.