



*Washington Department of*  
***FISH and WILDLIFE***

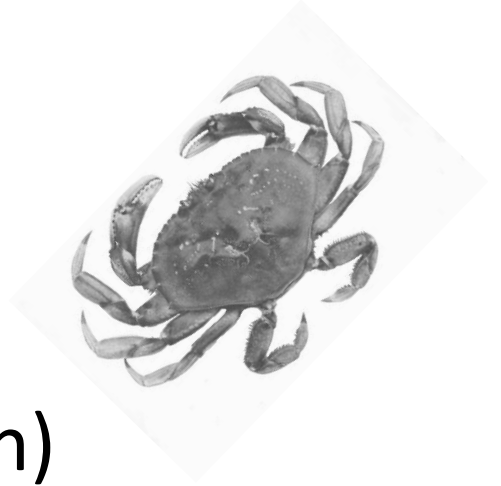
# Recreational Crab & Shrimp Advisory Committee Meeting

**March 11, 2022**

**10:00 am – 12:00 pm**

# Meeting Outline

- **Welcome/Housekeeping (5 min)**
- **Crab – 2021 Season overview (15 min)**
- **Shrimp – 2021 Season overview (15 min)**
- **Shrimp - 2022 Season (45 min)**
- **Mngmt challenges 2022 and beyond (35 min)**
- **Advisor comments and feedback (25 min)**



# 2021 Recreational Crab - Catch in pounds

Management Region	Marine Area	Regional State Share	State Summer Catch	State Summer EUC	State Summer Total	State Winter Catch	State Winter EUC	State Winter Total	Grand Total
1	7	2,425,000	454,146	45,278	499,424	55,321	5,516	60,837	560,261
2E	8-1,8-2	1,000,000	624,317	62,244	686,561	41,043	4,092	45,135	731,696
2W	9	225,000	75,675	7,545	83,220	11,591	1,156	12,747	95,967
3-1	6, N	44,581	2,282	228	2,510	379	38	417	2,927
3-2	6, SE	369,000	137,513	13,710	151,223	22,838	2,277	25,115	176,338
3-3	6, W	17,500	2,853	284	3,137	474	47	521	3,658
3-4	4, 5	7,500	5,677	566	6,243	363	36	399	6,642
4	10	55,000	29,744	2,965	32,709	5,703	569	6,272	38,981
5	12	208,000	75,830	7,560	83,390	17,724	1,767	19,491	102,881
6	11	22,500	17,856	1,780	19,636	49	5	54	19,690
7	13	0	369	37	406	0	0	0	406
<b>STATE HARVEST TOTALS</b>		<b>4,374,081</b>	<b>1,426,262</b>	<b>142,198</b>	<b>1,568,459</b>	<b>155,485</b>	<b>15,502</b>	<b>170,988</b>	<b>1,739,447</b>

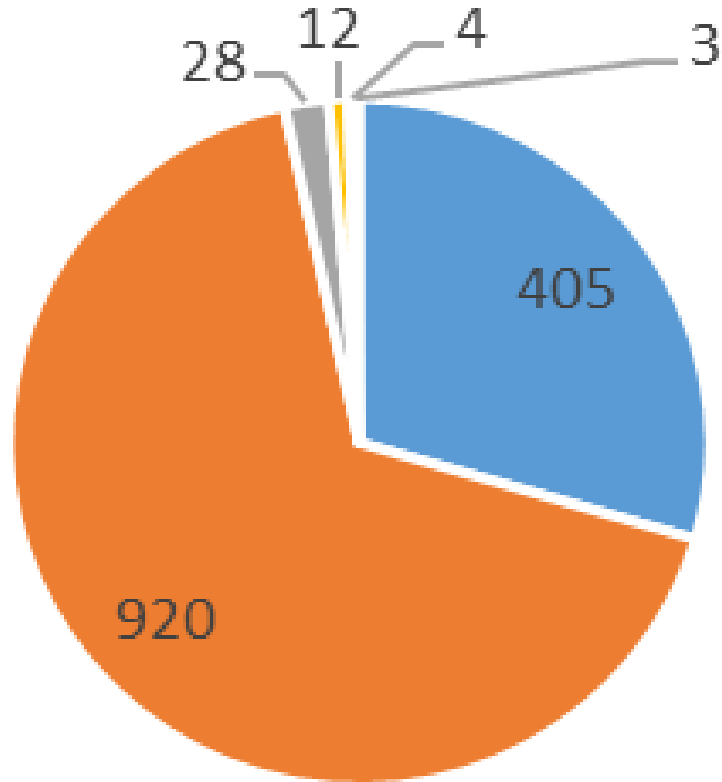
# 2021 Recreational Crab - CRC Reporting Rates Summer

<b>Summer</b>	<b>CRCs Issued</b>	<b>CRCs Reported Mail</b>	<b>CRCs Reported Online</b>	<b>CRCs Reported</b>	<b>CRCs Unreported</b>	<b>Endorsements Entire Year</b>
<b>2007</b>	<b>210,327</b>	<b>34,400 (16%)</b>	<b>32,373 (15%)</b>	<b>66,773 (32%)</b>	<b>143,554 (58%)</b>	<b>226,063</b>
<b>2008</b>	<b>210,893</b>	<b>26,037 (12%)</b>	<b>43,919 (21%)</b>	<b>69,956 (33%)</b>	<b>140,937 (67%)</b>	<b>215,643</b>
<b>2009</b>	<b>236,665</b>	<b>37,128 (16%)</b>	<b>72,172 (30%)</b>	<b>107,300 (45%)</b>	<b>129,365 (55%)</b>	<b>241,226</b>
<b>2010</b>	<b>208,462</b>	<b>29,406 (14%)</b>	<b>77,472 (37%)</b>	<b>107,418 (52%)</b>	<b>101,044 (48%)</b>	<b>213,013</b>
<b>2011</b>	<b>230,355</b>	<b>31,222 (14%)</b>	<b>89,095 (39%)</b>	<b>120,317 (52%)</b>	<b>110,038 (48%)</b>	<b>237,129</b>
<b>2012</b>	<b>200,711</b>	<b>26,504 (13%)</b>	<b>79,895 (40%)</b>	<b>106,399 (53%)</b>	<b>94,312 (47%)</b>	<b>209,957</b>
<b>2013</b>	<b>214,692</b>	<b>26,236 (12%)</b>	<b>90,379 (42%)</b>	<b>116,615 (54%)</b>	<b>98,077 (46%)</b>	<b>222,050</b>
<b>2014</b>	<b>213,741</b>	<b>25,296 (12%)</b>	<b>91,270 (43%)</b>	<b>116,566 (55%)</b>	<b>97,175 (45%)</b>	<b>223,184</b>
<b>2015</b>	<b>232,621</b>	<b>25,685 (11%)</b>	<b>94,336 (41%)</b>	<b>120,021 (52%)</b>	<b>112,600 (48%)</b>	<b>243,934</b>
<b>2016</b>	<b>216,977</b>	<b>23,734 (11%)</b>	<b>90,262 (42%)</b>	<b>113,996 (53%)</b>	<b>102,981 (47%)</b>	<b>223,443</b>
<b>2017</b>	<b>215,929</b>	<b>33,252 (15%)</b>	<b>72,601 (34%)</b>	<b>105,853 (49%)</b>	<b>110,076 (51%)</b>	<b>222,222</b>
<b>2018</b>	<b>200,962</b>	<b>31,316 (16%)</b>	<b>72,790 (36%)</b>	<b>104,106 (52%)</b>	<b>96,856 (48%)</b>	<b>207,557</b>
<b>2019</b>	<b>192,798</b>	<b>29,006 (15%)</b>	<b>69,087 (36%)</b>	<b>97,571 (51%)</b>	<b>95,227 (49%)</b>	<b>200,113</b>
<b>2020</b>	<b>213,831</b>	<b>23,716 (11%)</b>	<b>53,029 (25%)</b>	<b>76,745 (36%)</b>	<b>137,086 (64%)</b>	<b>222,181</b>
<b>2021</b>	<b>225,282</b>	<b>27,534 (12%)</b>	<b>75,254 (33%)</b>	<b>102,788 (46%)</b>	<b>122,494 (54%)</b>	<b>233,108</b>

# 2021 Recreational Crab - CRC Reporting Rates Winter

Winter	CRCs Issued	CRCs Reported Mail	CRCs Reported Online	CRCs Reported	CRCs Unreported	Endorsements Entire Year
2007	157,905	10,281 (7%)	6,388 (4%)	16,669 (11%)	141,236 (89%)	226,063
2008	207,143	10,993 (5%)	10,871 (5%)	21,864 (11%)	185,279 (89%)	215,643
2009	89,259	11,909 (13%)	27,382 (31%)	39,291 (44%)	49,968 (56%)	241,226
2010	70,763	9,633 (14%)	27,346 (39%)	36,979 (52%)	33,784 (48%)	213,013
2011	28,514	4,675 (16%)	13,899 (49%)	18,574 (65%)	9,940 (35%)	237,129
2012	27,711	4,508 (16%)	13,357 (48%)	17,865 (65%)	9,846 (35%)	209,957
2013	29,638	4,419 (15%)	15,223 (51%)	19,642 (66%)	9,996 (34%)	222,050
2014	35,371	5,040 (14%)	17,401 (49%)	22,441 (63%)	12,930 (37%)	223,184
2015	36,398	5,039 (14%)	18,284 (50%)	23,323 (64%)	13,075 (36%)	243,934
2016	26,591	5,777 (22%)	10,577 (40%)	16,534 (62%)	10,057 (38%)	223,443
2017	23,277	4,431 (19%)	9,746 (42%)	14,177 (61%)	9,100 (39%)	222,222
2018	24,620	3,906 (16%)	9,896 (40%)	13,802 (56%)	10,818 (44%)	207,557
2019	23,578	4,178 (18%)	8,520(36%)	12,698 (54%)	10,880 (46%)	200,113
2020	36,459	5,015 (14%)	13,178 (36%)	18,193 (50%)	18,266 (50%)	222,181
2021	26,843	3,894 (15%)	9,591 (36%)	13,485 (51%)	13,358 (49%)	233,108

# 2021 Derelict/Closed Season Gear Summary



- Recreational, Properly Identified
- Treaty Comm
- State Comm

- Recreational, Not Properly Identified
- Undetermined
- Unidentified Comm



## 2021 Derelict /Closed Season Gear Summary

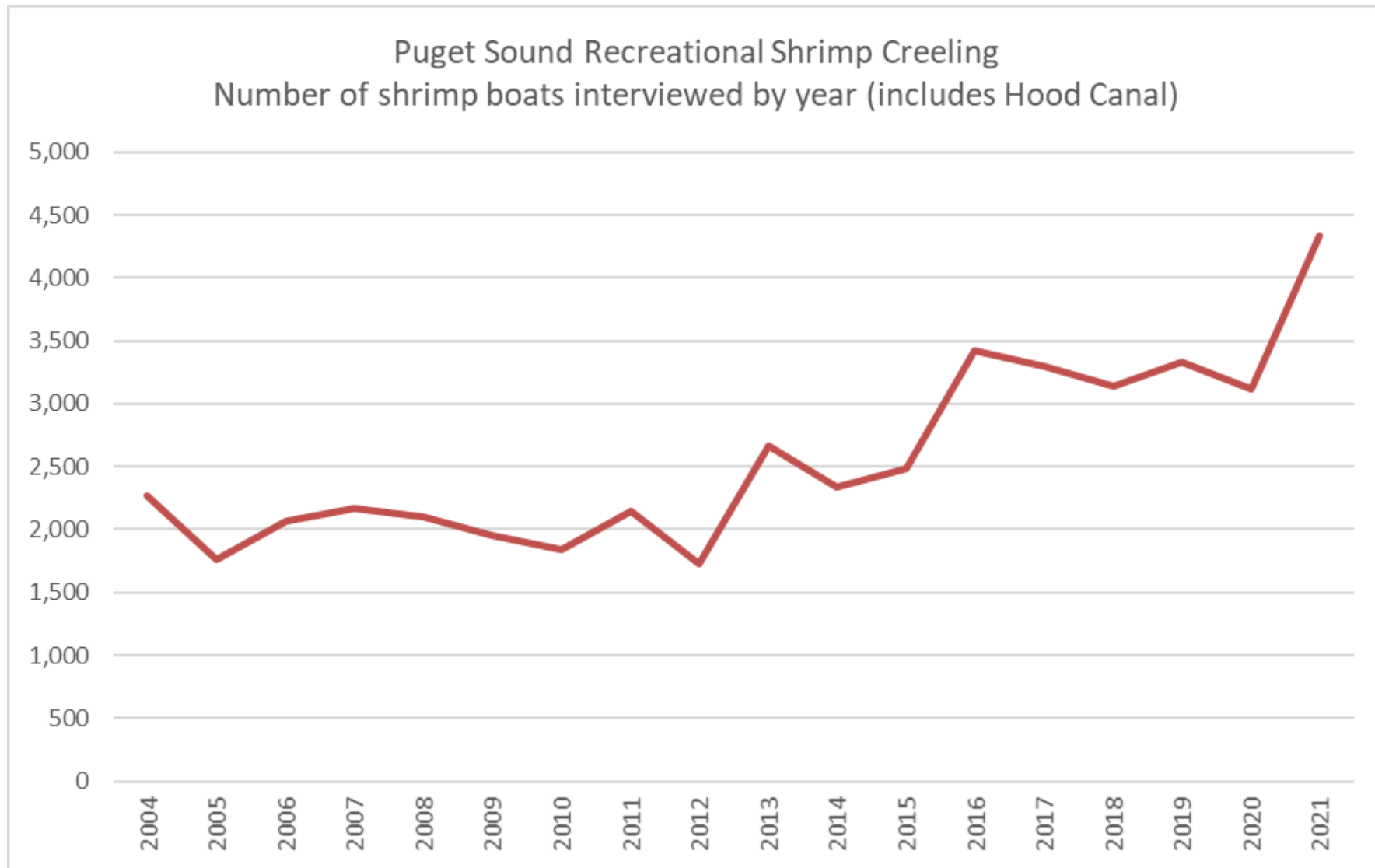
- Sweeps on Tues. and Wed. when crabbing was closed July through Sept.
- **1,372** traps were removed from the water by WDFW
- **21** Enforcement (officers & interns), **7** shellfish staff involved
- **37** vessel days devoted to this effort
- **1,805** legal size male Dungeness released from these traps
- Update on contracted pot removal work

# 2021 Spot Shrimp Harvest - State

SPOT SHRIMP MANAGEMENT REGIONS	2021 STATE HARVEST FOR THE POT FISHERY SPOT SHRIMP						2021 Percentages		Policy Allocation	
Spot Shrimp Management Regions	QUOTA	State Adj. Quota	Rec. Harvest	Comm. Harvest	Total	Remaining	Rec	Comm	Rec	Comm
1A/20B, 22A (west)*	80,000	40,000	40,738	6,383	47,121	-7,121				
1B/20B, 22A (east), 21A*	14,000	7,000	9,422	0	9,422	-2,422				
1C/20A, 21A, 21B, 22B*	6,000	3,000	1,000	2,000	3,000	0				
<b>REGION 1 TOTALS</b>	<b>100,000</b>	<b>50,000</b>	<b>51,160</b>	<b>8,383</b>	<b>59,543</b>		<b>86%</b>	<b>14%</b>	<b>80%</b>	<b>20%</b>
2E/24A-D, 26A-E (Skagit - Mukilteo)*	46,000	19,788	18,416	1,472	19,888	-100				
2W/25B-D, 26AW (Edmonds - Admiralty Inlet)	15,000	7,500	8,543	0	8,543	-1,043				
<b>REGION 2 TOTALS</b>	<b>61,000</b>	<b>27,288</b>	<b>26,959</b>	<b>1,472</b>	<b>28,431</b>		<b>95%</b>	<b>5%</b>	<b>100%</b>	<b>0%</b>
3/23A-E (S Lopez I-Iceberg Pt, etc)*	42,000	20,288	12,373	8,535	20,908	-620				
3/23A-W (S San Juan I-Salmon Bank, etc)*	40,000	19,189	2,048	18,904	20,952	-1,763				
3/23A-C, 23B (Straits-Hein, Eastern Bank, Smith I)	106,000	51,633	8,608	42,297	50,905	728				
3/23A-S, 23D (Straits-NE of P.A.)	17,000	8,500	2,000	6,538	8,538	-38				
3/23C (Straits-Seki to P.A.)	4,000	2,000	800	1,004	1,804	196				
3/25A Outside District 1 (North of Protection Is.)	42,000	21,000	12,582	9,282	21,864	-864				
3/25A,25E (Inside Disco. Bay SD)	4,000	1,425	2,486	0	2,486	-1,061				
3/29 (Straits - Neah Bay)	2,000	1,000	500	92	592	408				
<b>REGION 3 TOTALS</b>	<b>257,000</b>	<b>125,035</b>	<b>41,397</b>	<b>86,652</b>	<b>128,049</b>		<b>32%</b>	<b>68%</b>	<b>22%</b>	<b>78%</b>
4/26B-1, 26C (Seattle - Bainbridge Is.)*	11,000	5,215	5,175	336	5,511	-296				
4/26B-2 (Elliott Bay)*	11,000	3,085	7,448	0	7,448	-4,363				
<b>REGION 4 TOTALS</b>	<b>22,000</b>	<b>8,300</b>	<b>12,624</b>	<b>336</b>	<b>12,960</b>		<b>97%</b>	<b>3%</b>	<b>100%</b>	<b>0%</b>
5/27A-C (Hood Canal)*	190,000	95,000	102,493	0	102,493	-7,493				
<b>REGION 5 TOTALS</b>	<b>190,000</b>	<b>95,000</b>	<b>102,493</b>	<b>0</b>	<b>102,493</b>		<b>100%</b>	<b>0%</b>	<b>100%</b>	<b>0%</b>
6/26D (Vashon Island)	10,000	5,000	3,685	514	4,199	801				
6/28A-D (South Puget Sound)	300	150	0	0	0	150				
<b>REGION 6 TOTALS</b>	<b>10,300</b>	<b>5,150</b>	<b>3,685</b>	<b>514</b>	<b>4,199</b>		<b>88%</b>	<b>12%</b>	<b>100%</b>	<b>0%</b>
<b>ALL REGIONS GRAND TOTAL</b>	<b>640,300</b>	<b>310,773</b>	<b>238,317</b>	<b>97,357</b>	<b>335,674</b>		<b>71%</b>	<b>29%</b>	<b>70%</b>	<b>30%</b>



## 2021 Recreational Shrimp - Creel effort and statistics



## 2021 Recreational Shrimp - Creel effort and statistics

Creel Site	Boats Interviewed	Creel Site	Boats Interviewed
Bellingham Ramp	276	Pleasant Harbor Ramp	193
Camano Is State Park Ramp	75	Point Defiance Ramp	85
Cornet Bay State Park Ramp	871	Port Angeles Boat Haven	1
Saltwater Park (Cushman) Ramp	188	Port Angeles West Ramp	10
Don Armeni Ramp	90	Port Townsend Boat Haven Ramp	77
Ediz Hook Ramp	8	Port of Friday Harbor	165
Edmonds Marina	67	Redondo Ramp	28
Everett Ramp	354	Roche Harbor	1
Fort Casey Ramp	19	Salsbury Point County Park Ramp	114
Gardiner Ramp	38	Sandy Point Ramp	16
Griffin Bay Ramp	28	Shilshole Ramp	42
John Wayne Marina Ramp	635	Swinomish Channel Ramp	26
Kingston Ramp	21	Triton Cove Ramp	230
La Conner Ramp	2	Washington Park Ramp	364
Misery Point Ramp	337		
<b>TOTAL SHRIMP BOATS INTERVIEWED</b>		<b>4,361</b>	

# 2021 Recreational Shrimp - Creel effort and statistics

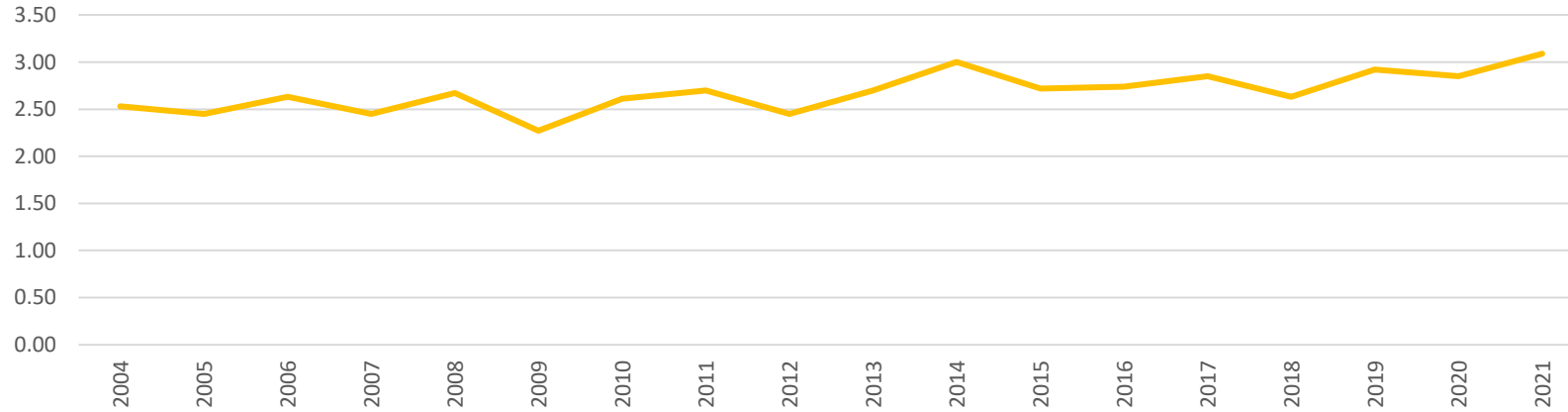
Creel Area/ <b>Quota Area</b>	Description	No. of Boats	No. of Pots Fished	No. of Shrimp Fishers	No. of Spot shrimp Retained	Pots Per Boat	Shrimpers Per Boat	Spot Shrimp Per Boat
<b>20A-1</b>	North Sound	11	33	27	1,562	3.00	2.45	142
<b>20B-1</b>	Matia, Sucia, NE Orcas	100	334	327	19,041	3.34	3.27	190
<b>20B-2</b>	N. Speiden, Waldron, NW Orcas	284	950	927	64,290	3.35	3.26	226
<b>21A-1</b>	N. Lummi	19	60	50	2,420	3.16	2.63	127
<b>21A-2</b>	S. Lummi	47	140	125	6,153	2.98	2.66	131
<b>21B-1</b>	Samish Bay	2	8	12	696	4.00	6.00	348
<b>22A-1</b>	Biz Pt., Cypress, Colville Pt.	238	764	709	36,086	3.21	2.98	152
<b>22A-2</b>	S. Speiden, Rocky Bay, Pt. Caution, Friday Hbr, Jones, Yellow	402	1,171	1,230	83,822	2.91	3.06	209
<b>22B-1</b>	Huckleberry	8	19	21	902	2.38	2.63	113
<b>23AC</b>	Eastern Bank, Hein Bank, S. McArthur Bank	98	337	290	17,820	3.44	2.96	182
<b>23AE</b>	Iceberg Pt., N. McArthur Bank	401	1,301	1,186	76,996	3.24	2.96	192
<b>23AS</b>	Central Strait	5	18	17	563	3.60	3.40	113
<b>23AW</b>	Salmon Bank, False Bay, Mineral Pt., Eagle Pt.	19	64	61	4,092	3.37	3.21	215
<b>23B-1</b>	Smith, Partridge Bank, Lawson Reef	167	534	469	27,415	3.20	2.81	164
<b>23D-1</b>	Port Angeles Harbor	14	30	26	636	2.14	1.86	45
<b>25A-1</b>	Protection, Dungeness Bank, Dallas Bank	604	1,965	1,590	95,659	3.25	2.63	158
<b>25A-2,25E-1</b>	Discovery Bay	108	367	333	20,763	3.40	3.08	192
<b>MA 8-1, MA 8-2</b>	MA 8-1, MA 8-2	361	1,064	1,092	61,644	2.95	3.02	171
<b>MA 9</b>	MA 9	153	514	546	37,181	3.36	3.57	243
<b>MA 10 outside Elliott</b>	MA 10 outside Elliott	38	117	114	6,876	3.08	3.00	181
<b>MA 10 inside Elliott</b>	MA 10 inside Elliott	110	399	410	26,206	3.63	3.73	238
<b>MA 11</b>	MA 11	97	324	292	11,069	3.34	3.01	114
<b>MA 12</b>	MA 12	1,073	3,896	3,763	260,283	3.63	3.51	243
<b>All Areas</b>		<b>4,359</b>	<b>14,409</b>	<b>13,617</b>	<b>862,175</b>	<b>3.31</b>	<b>3.12</b>	<b>198</b>

# 2021 Recreational Shrimp – Pounds per Boat and Area Fished 2002-2021

Year	Reg 1 (MA7E, MA7W)	Reg 2E (MA8)	Reg 2W (MA9)	Reg 3 23A-E&W (MA7S)	Reg 3 (MA6)	Reg 3 Disco Bay SD	Reg 4 26B-1, 26C (MA10)	Reg 4 26B-2 (MA 10)	Reg 5 Hood Canal SD	Reg 6 26D (MA11)	Reg 6 28A (MA 13)
2002	11.1	8.3	6.7	11.1		8.1	7.2	13.2	16.1	0.0	NA
2003	10.4	9.3	12.1	10.4		13.3	12.0	12.0	16.1	11.7	NA
2004	6.9	9.2	9.2	6.9		10.9	12.4	13.7	14.0	11.5	NA
2005	9.1	10.8	16.9	14.4		10.5	12.3	14.9	15.1	14.2	NA
2006	11.4	14.2	14.3	15.4		closed	14.7	14.7	15.8	10.7	NA
2007	10.6	16.3	14.3	16.2		closed	10.4	13.6	12.6	10.0	NA
2008	10.4	14.5	13.4	15.3		closed	10.7	15.8	13.3	11.2	NA
2009	11.2	16.0	16.6	15.8		closed	16.2	14.5	15.1	13.9	NA
2010	9.9	16.2	12.8	10.2	4.6	10.5	14.2	13.6	15.8	4.5	NA
2011	12.7	17.9	13.7	15.0	10.1	10.2	16.3	14.8	15.0	9.4	NA
2012	8.5	17.9	18.2	14.4	11.0	7.3	17.8	18.8	16.6	8.2	NA
2013	12.1	17.9	16.8	17.4	15.9	11.1	16.5	19.6	17.0	10.2	NA
2014	11.2	14.1	17.3	18.6	12.6	7.6	18.1	18.2	16.7	12.2	NA
2015	11.0	16.3	16.9	14.5	12.1	10.7	20.3	16.7	17.2	16.8	5.9
2016	15.3	17.6	19.8	16.3	17.9	9.6	18.7	24.1	14.5	17.4	10.0
2017	13.7	18.4	15.9	15.6	18.8	10.1	19.0	18.1	13.1	15.1	7.5
2018	12.7	15.8	16.2	15.5	16.8	10.3	19.9	21.5	12.4	13.0	1.8
2019	12.2	16.7	13.6	15.2	13.6	10.5	15.4	23.0	12.4	11.8	Closed
2020	13.3	18.9	14.9	16.6	14.0	11.1	16.0	23.7	16.7	14.0	Closed
2021	14.7	14.2	15.3	16.2	14.4	11.5	13.6	21.7	16.3	10.0	Closed <sup>12</sup>

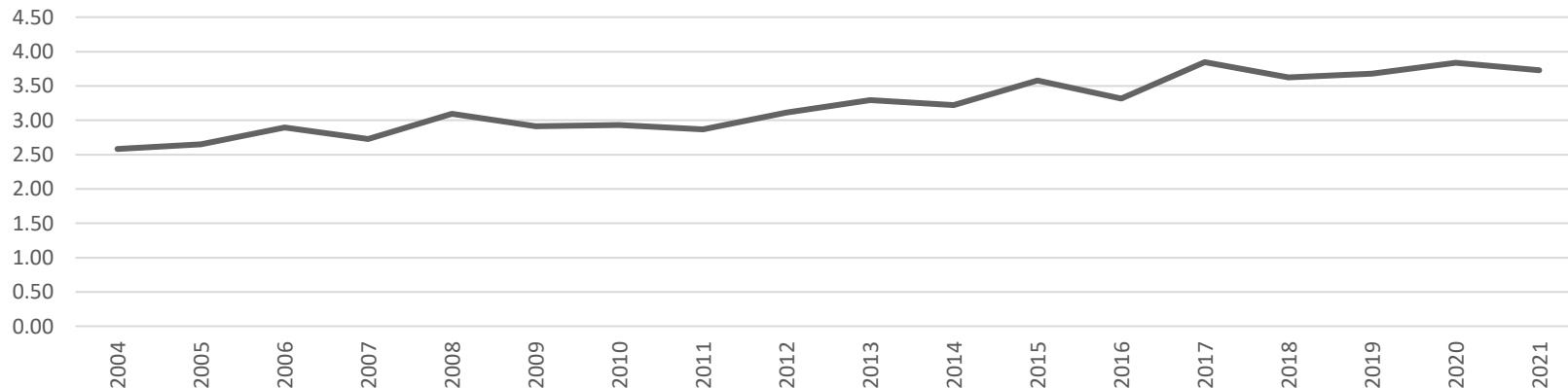
# 2021 Recreational Shrimp – Increasing shrimpers per boat

Recreational Spot Shrimp Fishery  
Number of shrimpers per boat - 7 West and 7 East



MA 7E and 7W  
Trend

Recreational Spot Shrimp Fishery  
Number of shrimpers per boat - MA 10 inside Elliott Bay



MA 10 inside Elliot Bay  
Trend

# 2022 Recreational Shrimp Season

- Considerations for season dates/times
  - Adjusted quotas including overages from 2021
  - Tides and currents
  - Creel staff coverage (shellfish and Puget Sound samplers)
  - Treaty fishery dates
  - Weekend effort vs weekday effort
  - Navy activity in Hood Canal
  - Overlaps with crab season

# 2022 Recreational Spot Shrimp Season

*- Areas with significant quota adjustments*

Marine Area	2021 initial share	2021 Harvest	2021 Overage	2022 initial share
7 East	10,000	12,422	2,422	=10,000-2,422= 7,578
7 West	40,000	47,121	7,121	=40,000-7,121= 32,879
7 South	39,477	41,860	2,383	=41,00-2,383= 38,617
9	7,500	8,543	1,043	=7,500-1,043= 6,457
10 inside Elliot Bay	3,085	7,448	4,363	=5,500-4,363= 1,137
12	95,000	102,493	7,493	=95,000-7,493= 87,507

# 2022 Recreational Shrimp Season - Current Management Tools

- Pots per boat limitation
  - Limited to 4 by permanent rule
  - Was 2 per boat in 8-1 and 8-2 for two days in 2021
- Weekday vs weekend
  - Weekend days tend to have higher effort
  - Areas with shortest seasons requiring weekdays to stay in quota
- Hours allowed
  - Many areas down to 4 hours currently
  - Reducing Elliott Bay from 4 to 3 hours had little impact in 2021
- Opening multiple areas simultaneously
  - Spreads out effort on a given date
  - Not doing so will result in overages for some short opening areas



## 2022 Recreational Shrimp Season - Other Topics

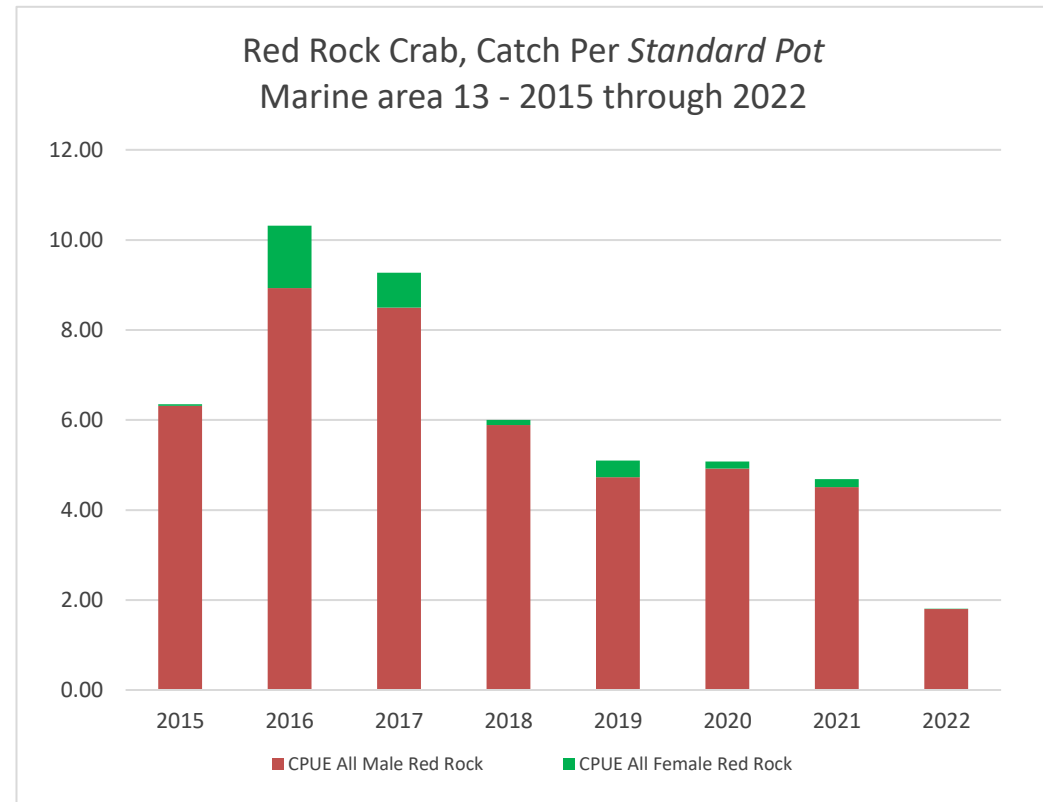
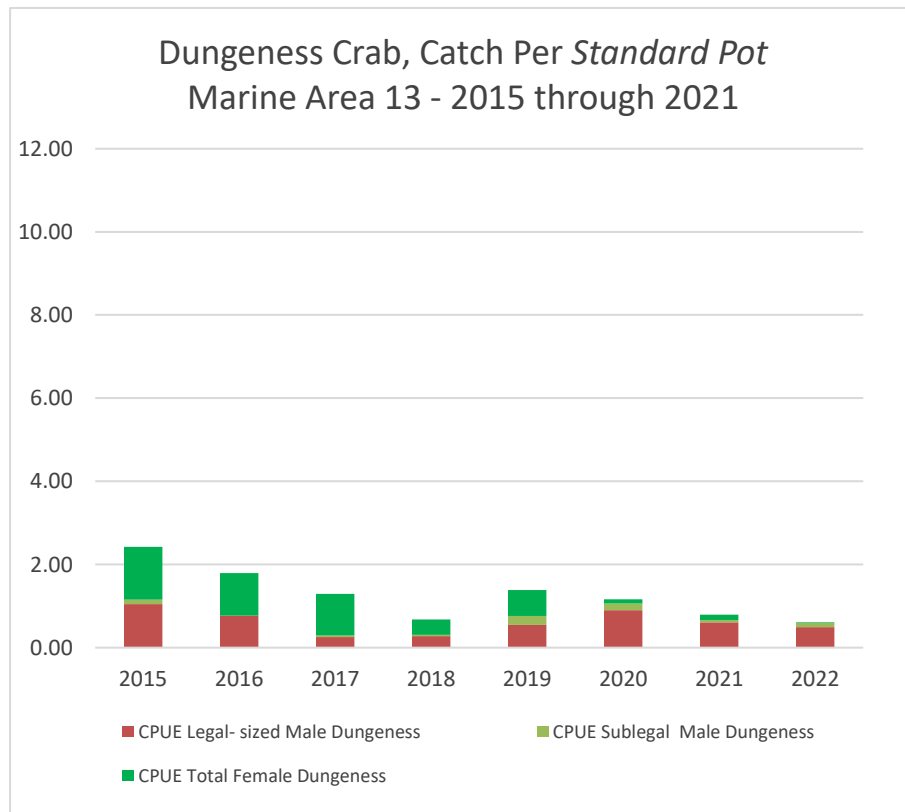
- Update on rule to allow discard of heads when only fishing spots
- Feedback on proposal to eliminate overnight soaks during spot seasons
- Plan to collect shrimp weight data in 2022
- Plans to expand creel coverage
  - Include new locations like Cape George
  - Additional focus in areas with non-spot shrimp harvest activity

# Management Challenges – 2022 and beyond

- Requests for Red Rock only fishery MA 13\*
- Depth restriction for non-spot shrimp MA 13\*
- Commercial rule change update
- Budget Update
  - Crab compliance work anticipated
- WATIX
- Education and Outreach
  - Crabber Quiz with Amy Pumputis
  - Targeted news release for areas with continuing harvest closures
- Pacific Northwest Crab Research Group (PCRG)
  - Ongoing projects including larval monitoring, crabber exchange with scientists
  - Contact is Emily Buckner at [pnwcrab@gmail.com](mailto:pnwcrab@gmail.com)

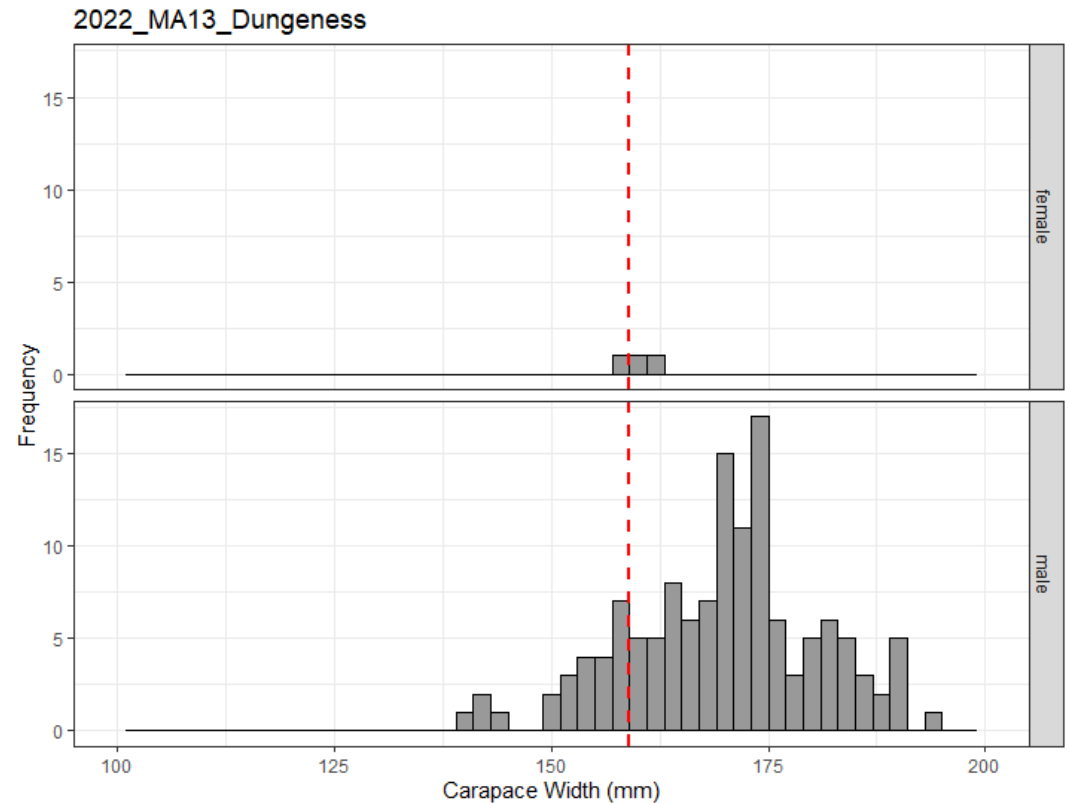
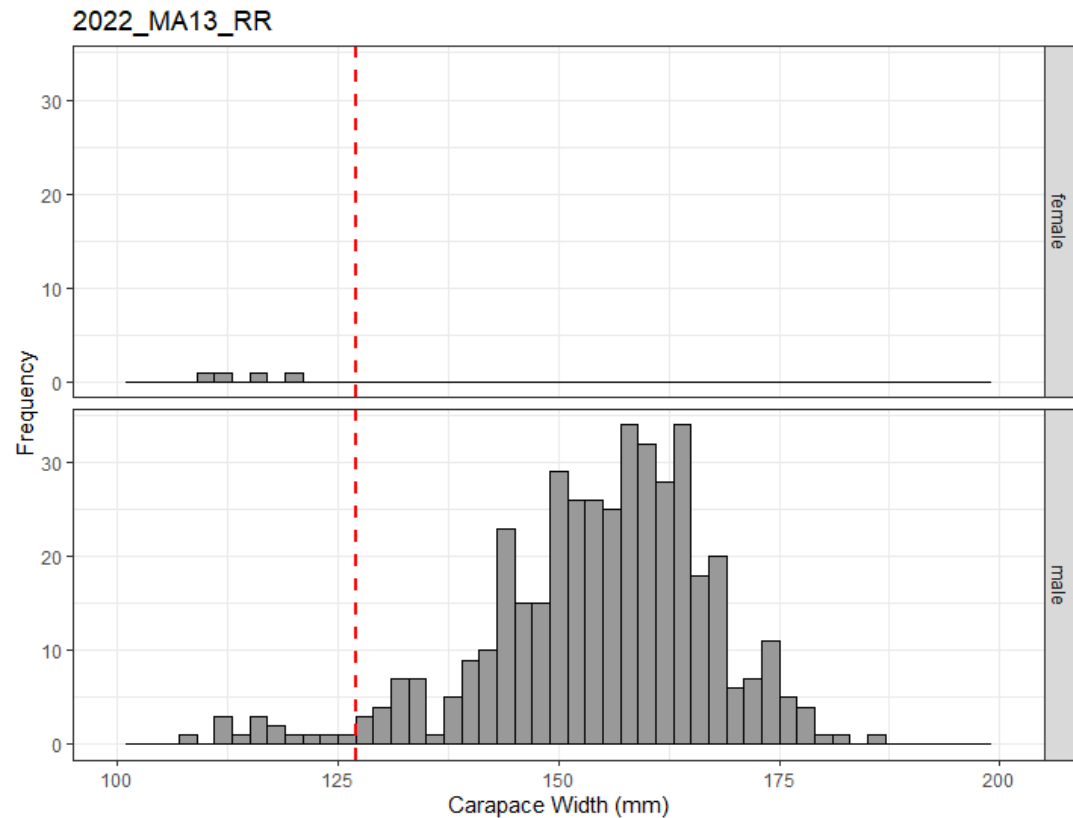
# Management Challenges – 2022 and beyond

- Requests for Red Rock only fishery MA 13\*



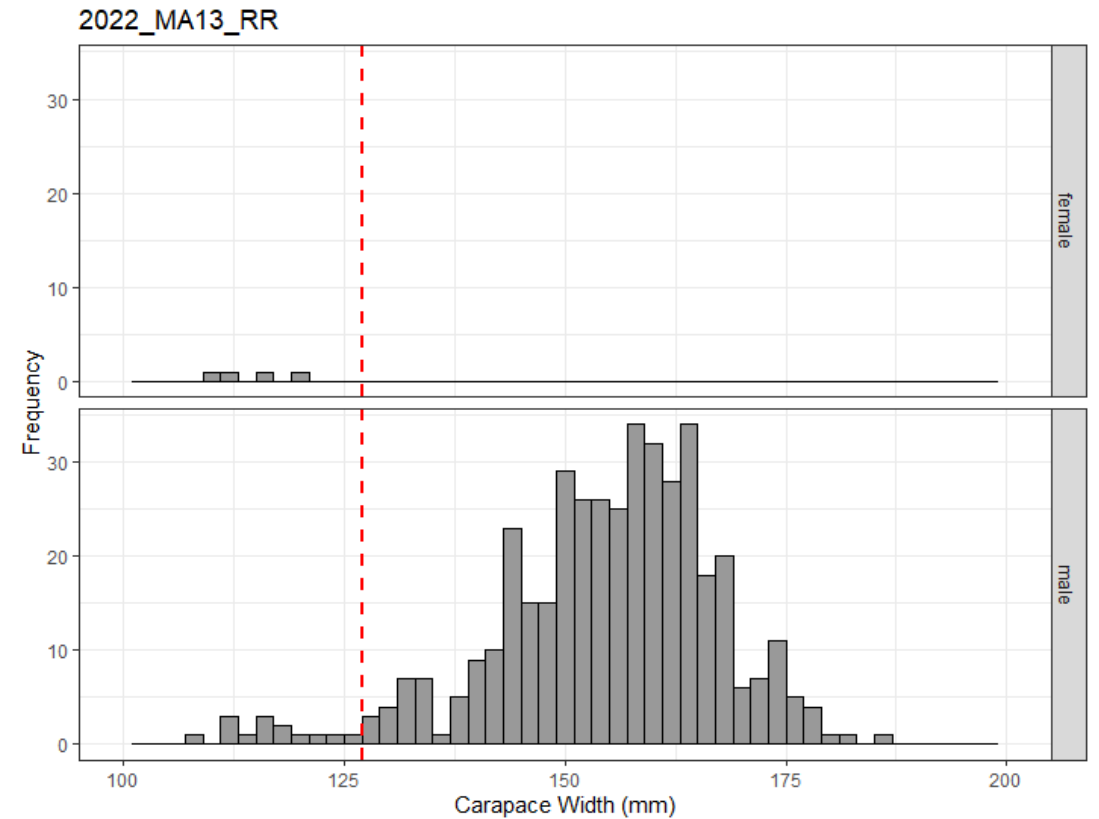
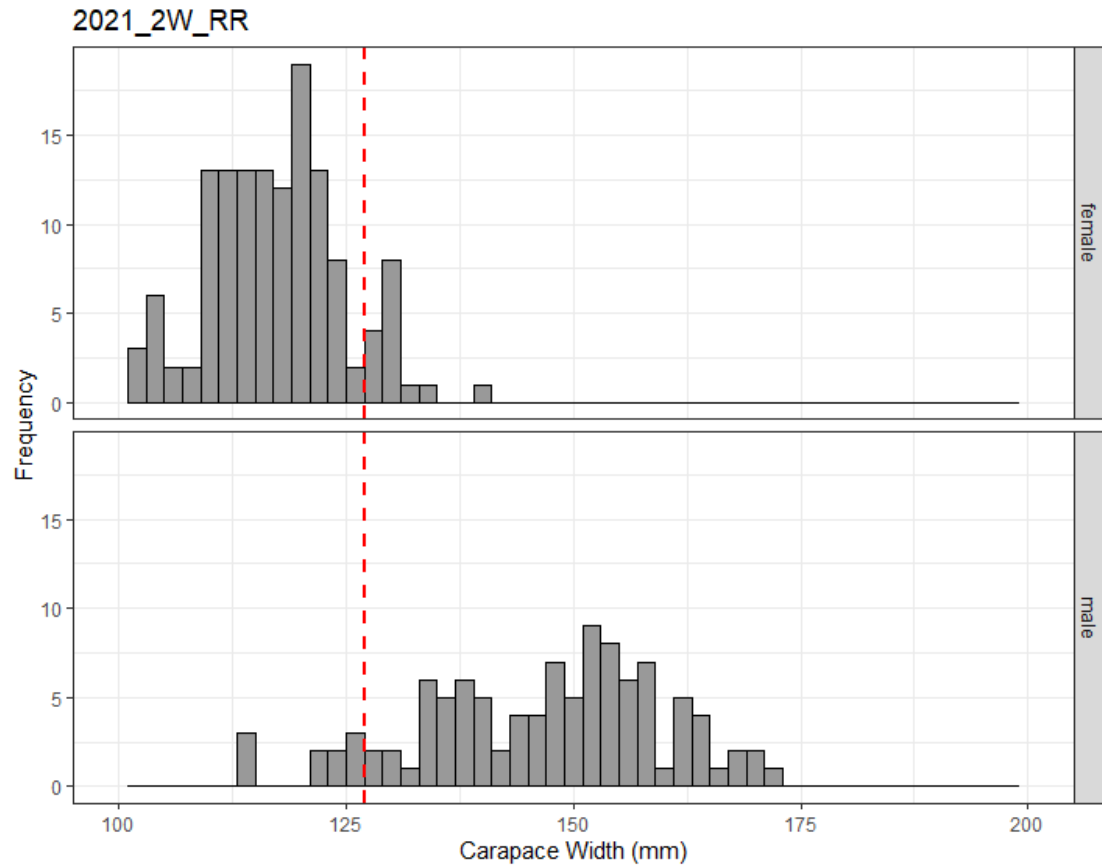
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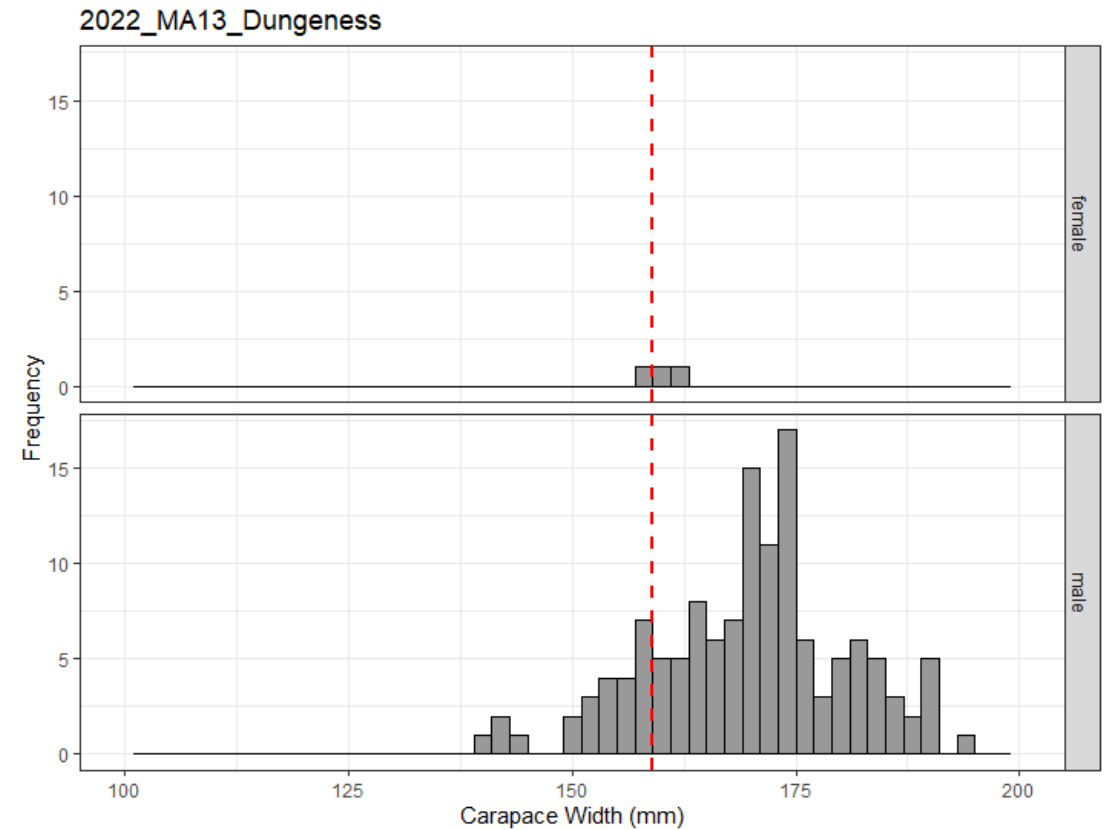
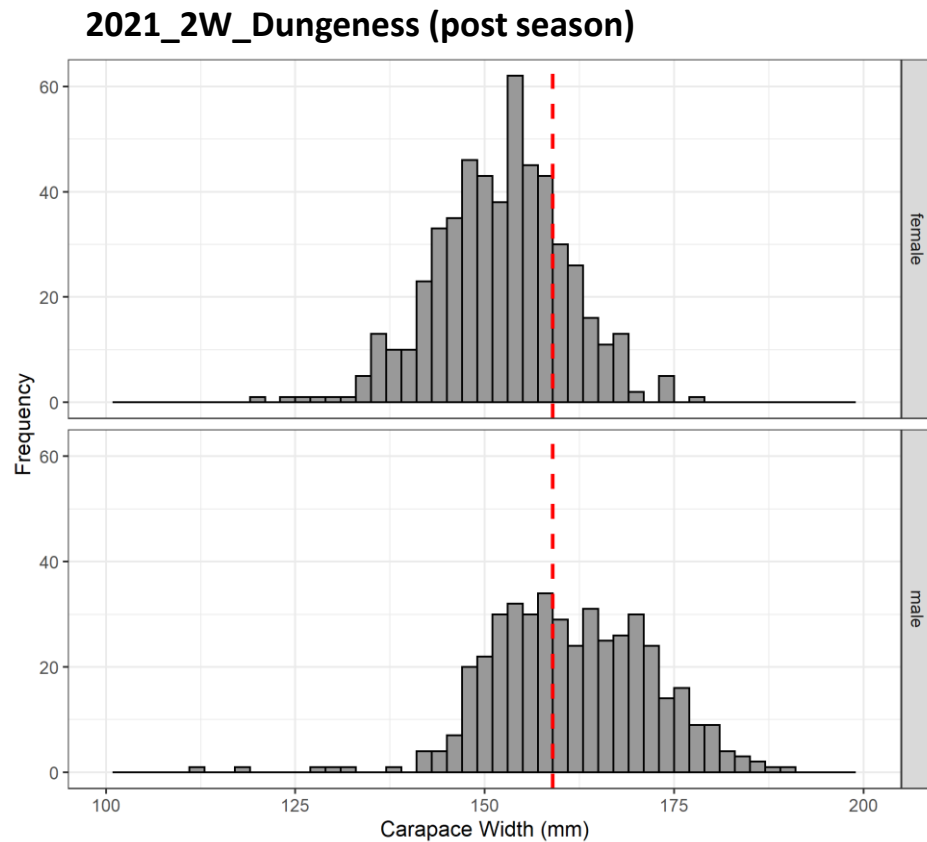
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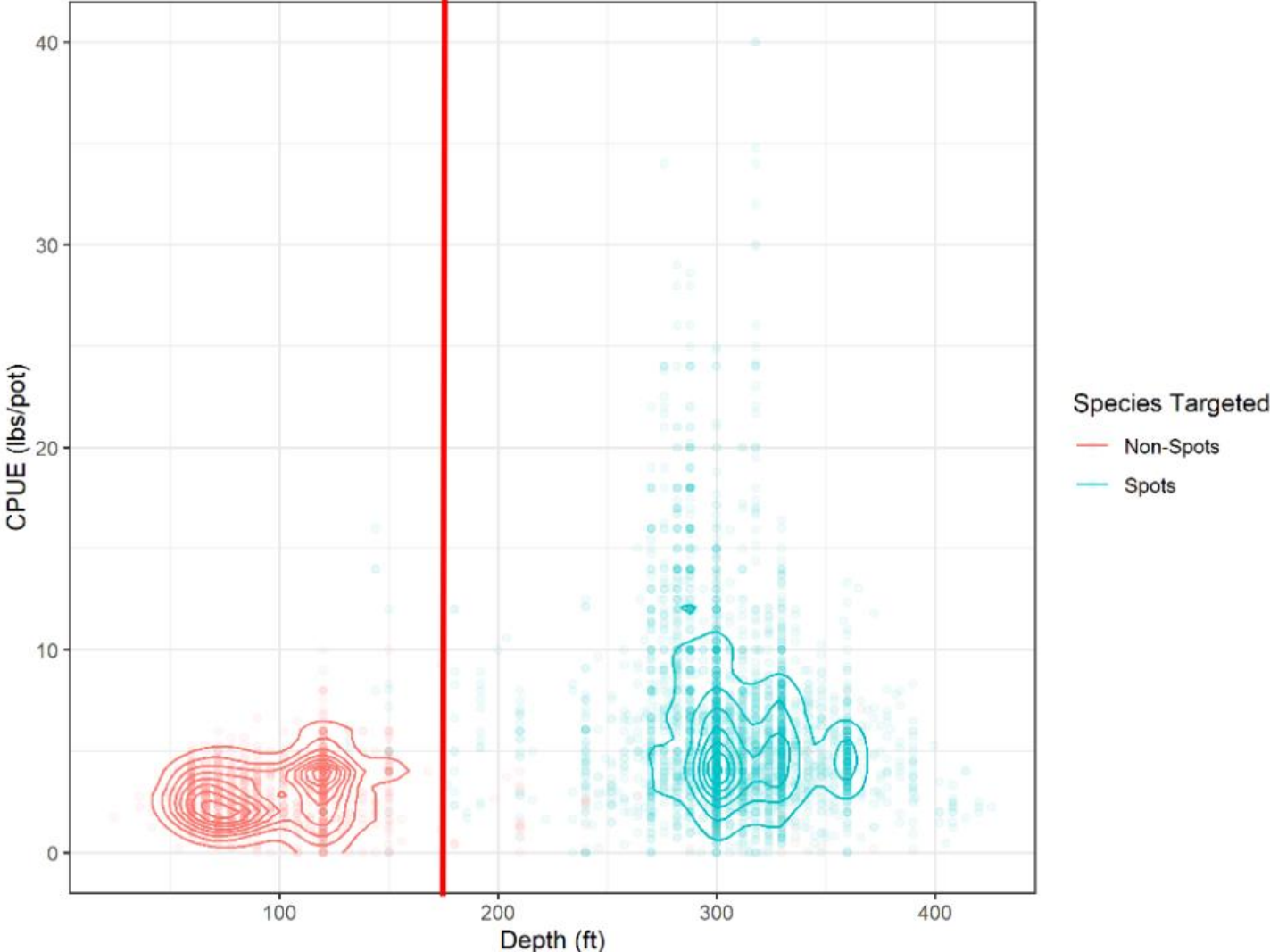


# Management Challenges – 2022 and beyond

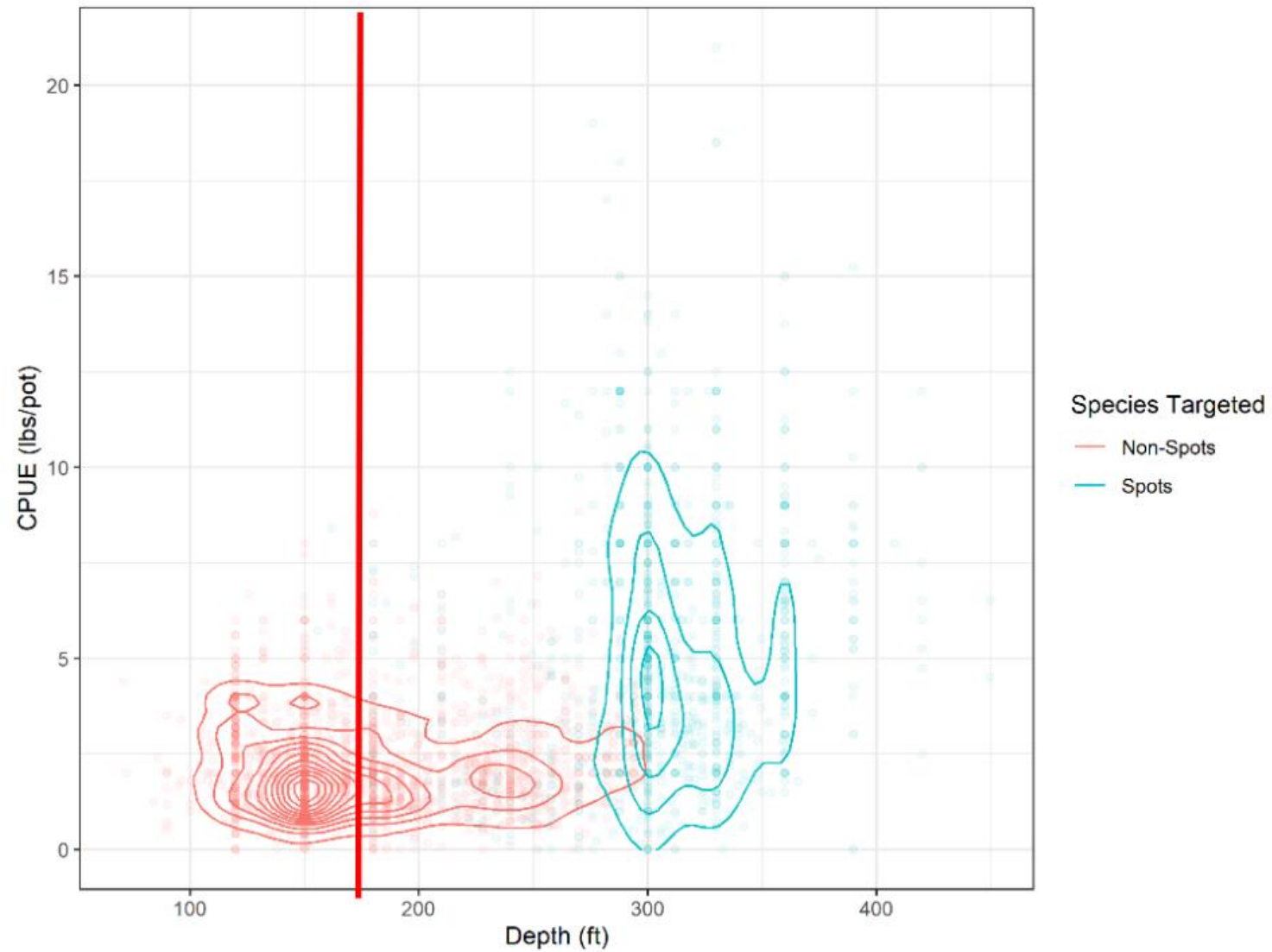
- Requests for Red Rock only fishery MA 13\*



Non-spot Catch per Unit Effort (lbs/hr) shown with an overlay with frequency contours reported for MA 6 from 2015-2020. The red line shows the 175 ft depth limit relative to CPUE.



Non-spot Catch per Unit Effort (lbs/hr) shown with an overlay with frequency contours reported for MA 7 from 2015-2020. The red line shows the 175 ft depth limit relative to CPUE.





# European Green Crab (EGC)

- Exponential increase in EGC populations in Lummi sea ponds and areas in Willapa and Grays harbor in 2021
- New funding:
  - \$3,995,000 to WDFW
  - \$4,573,000 – to external partners (Lummi Nation, Makah, WA Sea Grant)



Aerial of Lummi sea pond and trapping locations for the week of October 8th. Larger dots represent higher catch rates.

Action Area	2019 Captures	2020 Captures	2021 Captures *
Drayton Harbor	38	253	134
Lummi Bay	23	5	0**
Lummi Sea Pond	41	2,670	>70,000

\*Number captures pending final analysis; \*\* no effort

# Commercial Rules Package

- Brief the commission in February on a large commercial shellfish rule package
  - <https://wdfw.wa.gov/about/regulations/development/puget-sound-commercial-shellfish>
- Proposals affect dive fisheries (sea urchin, sea cucumber, scallop); crab; shrimp; crawfish; squid; octopus; razor clams.
- Proposals seek improved efficiency and utility for managers and enforcement, flexibility for commercial fishing, alignment with co-management agreements and conservation objectives, tools for emerging issues, and to address housekeeping needs.

# Budget Update

- PS Shellfish Team will be receiving \$1.04 million in new state general funds and \$295,000 in new CRC spending authority funding in 2023
  - Still deciding how to prioritize state general funds
- For Crusty team:
  - Minimum of 8 new scientific technicians focused on summer crab creeling
  - Recreational fishery Biologist 2
- For PS Shellfish
  - Commercial sampling technician
  - Intertidal biologist and creeling sci techs
  - Multiple staff to our disease and pest risk unit

# Adjourn Thank you!

