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Subject: PMTF Catch Update #5, June 14, 2022
Date: Tuesday, June 14, 2022 10:26:00 PM
Attachments: [PMTF Catch Update #5 June 14 2022.pdf](#)
[PMTF RawData - June 14 2022.pdf](#)
[FinalCatchUpdateTables_2018-2021.pdf](#)

Hi Everyone,

Attached is tonight's catch update along with the raw data file. Note: when you subscribe to the texting service via *inReach*, your name or other information is automatically added to the "pmtf" or "unstop" message that you tried to send. As such, the system fails to add you and these have to be entered manually, which I am currently behind on. I apologize and will update that distribution list tomorrow.

There certainly seems to be a band of fish building around the center of the transect. To put this into context, we have also attached the final catch update tables for the four most recent years to facilitate comparison with this year's catch rates. Below each table we provide information that could be pertinent to the magnitude of catch indices on a given date-station-year combination. For instance, the indices at Station 12 seem substantially larger during recent days than in 2018 and 2019 for the same time period. While these two years were large runs (>55 million), they were both four days late. The preseason forecast of 75 million combined with an earlier run timing could be one explanation for the larger catches this year.

However, during 2018 and 2019 we were still using a test net that was 6 m deep. Beginning in 2020 (and continuing this year), we switched to a deeper net (11 m) while keeping everything else about the net the same. The deeper net sweeping more of the vertical water column would seem a plausible alternative explanation as to why catch indices are higher this year. However, we have found that most salmon are caught in the top half of the net during smaller catches. As catch rates increase, a greater proportion gets caught in the bottom half. The passage below is from our 2021 final report (Raborn and Link 2022):

"For the 2021 season, we categorized sets with total raw catches into bins of <50 (171 sets), 50-100 (23 sets), and >100 (14 sets); the percent of fish caught in the top half of the net were 75%, 71%, and 61%, respectively. Reasons why fish may pass deeper at times at the PMTF was tested and reviewed by Helton (1991). He postulated that increased passage rate may cause a greater portion of fish to swim deeper either due fish spreading more uniformly throughout the water column or due to initial fish caught in the top portion of the net spooking subsequent fish causing them to pass deeper and deeper as the net fills."

Regardless of the mechanism, the take home message is that at low passage rates the shallower nets used in 2018 and 2019 and the deeper nets used in 2020, 2021, and 2022 probably have the same efficiency and produce similar indices. The extent to which the deeper net's catch indices are greater than those from the shallower net should increase when passage rates are higher. Given a larger/earlier run this year compared to 2018 and 2019 one would expect higher indices for

comparable dates. The deeper net used this year should increase our chances of detecting such an occurrence. The 2020 run was 58 million and 5 days late; although the deeper net was used, indices were smaller by comparison to what has been observed thus far this season. The 2021 run was closer to 70 million and 2 days late (albeit 2-3 days earlier than 2018-2020) and produced catch indices similar to the current year. To summarize, the observed patterns across the previous four seasons compared to this year are consistent with the narrative that nothing indicates a substantial departure from the preseason forecast.

Citations

Helton, D. 1991. An analysis of the Port Moller offshore test fishing forecast of sockeye and chum salmon runs to Bristol Bay, Alaska. M.S. Thesis, University of Washington. Thesis No. 38816.

Raborn, S.W., and M.R. Link. 2022. Annual Report for the 2021 Port Moller Test Fishery. Report prepared for the Bristol Bay Science and Research Institute, the Bristol Bay Fisheries Collaborative, and the Bristol Bay Regional Seafood Development Association. 38 pp. + appendices.

PMTF Stock Composition Status: The decision to run the first set of fish for genetics is made in consultation with the Department's gene lab, area staff, and is based on more than just reaching a cumulative catch of 190 fish. The first stock composition estimates will be released when an adequate sample size representing the first push of fish into the Bay have been caught. We hope these criteria are met tomorrow (6/15) making the earliest stock composition available a day or two later. However, these decisions are still being made and nothing is finalized.

Index by Station

S4: 0
S6: 2
S8: 52
S9: 54
S10: 70
S11: 62
S12: 134
S13: 31
S14: 38
S16: 0
S18: 0
S20: 0

Scott and Michael

To receive a *brief* summary of daily indexes by text message, text just the four letters "**PMTF**" to **833-612-1053**. Be sure to spell PMTF correctly or it won't work. These

shorter text updates go out about the time of, or shortly after the email updates go out.

NOTE: If you subscribed for PMTF text summaries last season but are not receiving them, type **"unstop"** to the same number. That will restart your messages if you used **"stop"** last season. Unless you do this, texting **"PMTF"** as described above will not work.

Port Moller Test Fishery: Catch Update #5, 14 June 2022.

All updates sent by email are also posted online at www.bbsri.org

Date	Daily Catch Index by Station (Est. catch from the 200 fathom net if it had fished for 1 hr)											Mean Daily Catch Index		Raw catches		Mean Length (mm)			
	S2	S4	S6	S8	S10	S12	S14	S16	S18	S20	S22	Best for comparison w/ prev years (Stns 2-10)	Best for assessing entry pattern this year (Stns 2-22)	4½" mesh	5½" mesh	4½" mesh	5½" mesh		
10-Jun	-	-	-	-	-	2	32	0	2	0	0					14	5	498	562
11-Jun	-	-	-	0	0	79	2	4	0	2	-					1	53	501	527
12-Jun	0	2	8	7	0	16	2	0	4	2	0					8	14	529	528
13-Jun	-	0	87	19	2	44	0	7	2	0	8		3	4		58	91	514	531
14-Jun	-	0	2	52	70	134	38	0	0	0	-		27	17		73	94	514	524
15-Jun	-	-	-	-	-	-	-	-	-	-	-		31	33					
16-Jun	-	-	-	-	-	-	-	-	-	-	-								
17-Jun	-	-	-	-	-	-	-	-	-	-	-								
18-Jun	-	-	-	-	-	-	-	-	-	-	-								
19-Jun	-	-	-	-	-	-	-	-	-	-	-								
20-Jun	-	-	-	-	-	-	-	-	-	-	-								
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15-Jul	-	-	-	-	-	-	-	-	-	-	-								
Mean Stn Index	0	1	32	19	18	55	15	2	2	1	3				Total =	154 (37%)	257 (63%)	513	528

Red index values were estimated with a statistical model built upon the observed pattern across catch indices to date; thus, these values are subject to change as the season progresses.