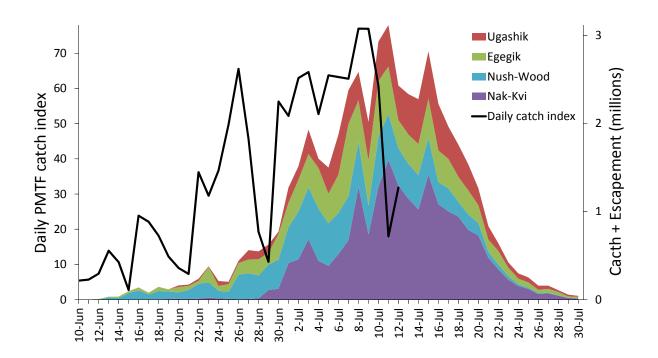
Annual Report for the 2016 Port Moller Test Fishery



Prepared for



Bristol Bay Science and Research Institute P.O. Box 1464 Dillingham, AK 99576

August 2016

Annual Report for the 2016 Port Moller Test Fishery

Prepared by

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and

Alaska Department of Fish and Game, Bristol Bay salmon processors, and the Bristol Bay Regional Seafood Development Association

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EXECUTIVE SUMMARY

In 2016, the Port Moller Test Fishery (PTMF) sampled six stations from June 12 to July 12 to provide an advance indication of the run strength and stock composition of sockeye salmon returning to Bristol Bay. Catch summaries were emailed daily to over 400 interested stakeholders and agency personnel. Interpretations of all PMTF information were distributed periodically throughout the season. Estimates of stock and age composition at PMTF were forwarded to our distribution list soon after receipt from ADF&G.

The mean fishing time (MFT) of each net deployment was shortened in 2016 to about 20–25 minutes (including net deployment and retrieval) from the historical 55-60 minutes to reduce the impact of net saturation. Following a recommendation from 2015, a single set was made at each station. Shortening fishing time allowed for adding Station 12 in 2016. The 2016 run was distributed farther offshore than usual. Sampling Station 12 improved our understanding of the run and the correlation between Port Moller catches and the inshore run.

Catch patterns in 2016 for both Port Moller and inshore catch and escapement were similar to those for 2015. In both years, the catch pattern at Port Moller were representative of the inshore run, with some departures due to inseason changes in the fish per index and travel time parameters in addition to random noise in the relationship.

This year's project demonstrated the PMTF's utility to managers and industry. District catches were much lower than expected early on, given the magnitude of the preseason forecast. Many looked to Port Moller as an indicator as to if, or when, inshore catches might increase. The sudden increase in the index on June 30, which was sustained through July 10, provided evidence that the run was as late as 2015 and likely to meet or exceed the pre-season forecast.

Fishing through July 12 gave insight into when the inshore run would taper off. Stopping earlier would have left everyone wondering about the strength of the run's tail, and limited managers' information the run remaining. The declining daily index at Port Moller on July 11–12 successfully predicted that inshore catch and escapement would subside starting around July 16.

Recommendations for 2017:

- Continue research and development of the daily projection model. Anticipated improvements include more representative district-specific indices and better interpolations for missed fishing days. Changes to the index across stations over the season may explain fluctuations in the FPI parameter.
- Continue with the 20-25 min sets and sample Station 12.
- Plan and budget for the PMTF boat to fish through July 12 if needed, but discontinue the project when it is clear that there is not a late and large tail to the run.

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INTRODUCTION

The Port Moller Test Fishery (PMTF) has been conducted since 1967 with gillnets set at stations offshore from Port Moller, Alaska (Figure 1; Randall 1977; Eggers and Fried 1984). Historically, the primary goal has been to predict run strength of sockeye salmon (Oncorhynchus nerka) traveling past Port Moller returning to natal streams in Bristol Bay approximately one week prior to their arrival in the various terminal commercial fishing districts. The PMTF now typically operates from around June 10 through July 10 each year and offers a preliminary test of preseason sockeye salmon forecasts. Results from the PMTF give Bristol Bay processors, fishermen, and the Alaska Department of Fish and Game (ADF&G) time to respond to suspected departures from these forecasts (Helton 1991). In addition, this information is used by fishermen when deciding which districts to fish. Though the data from the PMTF is not the primary decision support upon which the fishery is prosecuted, managers use it for an early indication of overall and stock-specific run strength.

This report describes the project's objectives, how the test fishery works, the results from 2016, and recommendations for the 2017 project. In the Appendices, we also compile major results and daily updates provided to processors, fishermen, managers, and the public during the 2016 season. Daily catch updates in 2016 summarized the year-to-date catches by station, mean body length, water temperature, and fishing conditions; catch interpretations were released periodically providing context for the catches and forecast models regarding fishing conditions at fishing districts (Appendix A). Also appended are reports that were issued periodically by ADF&G throughout the season summarizing stock compositions (Appendix B) and age compositions (Appendix C) of the Port Moller catches by one or more day periods, and daily run summaries of inshore catch and escapement to each fishing district (Appendix D).

OBJECTIVES

The 2016 Port Moller test fishing project was managed and staffed by the Bristol Bay Science and Research Institute (BBSRI) to achieve three main objectives:

- 1. Collect and report a variety of data useful for forecasting various descriptors of the run.
- 2. Inform stakeholder decisions by analyzing and interpreting these data to provide forecasts in a timely manner.

The five pertinent descriptors of the run are as follows: (1) magnitude, (2) timing, (3) entry pattern, (4) stock composition, and (5) age composition. Run magnitude, stock, and age compositions are self-explanatory. Run timing is defined as how many days early or late the average day of return is compared to the historical average. Entry pattern refers to the shape of the distribution of the daily inshore run (defined as the harvest plus escapement in Bristol Bay fishing districts) over time. The spatial resolution of these descriptors can be district specific or aggregated to represent the bay wide run. Furthermore, forecasts of these descriptors can be proximate (i.e., over the next several days, the range of which is determined by the travel time

estimate) or the remainder of the season (i.e., yearend). Yearend district specific forecasts are the most useful to stakeholders.

The data informing us about these descriptors vary with respect to the timing of their reliability in season. In chronological order they are as follows: (1) age composition, (2) stock composition, and (3) catch indices. Initial age and stock compositions are typically released by ADF&G after the 6th sampling trip at the PMTF (around June 21) and provide the first proximate forecasts of these descriptors. Districts differ as to when their catch indices become quasi-reliable for proximate forecasting of run magnitude. The Egegik and Nushagak-Wood Districts have the earliest run timing and begin to exhibit a more reliable relationship between PMTF catches and the inshore run around 25 June. The Naknek-Kvichak District follows a few days later (June 27-30); magnitude for the Ugashik District can begin to be forecasted around July 4. Yearend forecasts for all these descriptors, as well as run timing are not available until catches at the PMTF have peaked and then declined. The decline is necessary to know when the peak has occurred, after which the tail of the run can often be projected to forecast the remaining inshore run. However, changes in the district specific estimates of FPI after about June 30 often obfuscate yearend forecasts.

STUDY AREA AND PROJECT TIMING

The Port Moller Test Fishery samples at stations located along a transect between Port Moller and Cape Newenham, Bristol Bay, Alaska (Figure 1). Numbered stations are 5 miles apart, with Station 1 being 30 miles offshore from Port Moller and Station 12 being 85 miles offshore. Since 1987, only even numbered stations have been fished during both the outbound and inbound trips. In 2016, six stations were fished: Stations 2, 4, 6, 8, 10, and 12 (35–85 miles from Port Moller). During a routine trip, the crew would sample outbound from Port Moller beginning at Station 2 and fishing at each station until Station 12 where they would anchor for the night. The next day sampling would continue from Station 12 to Station 2, then returning to Port Moller.

Most Bristol Bay sockeye salmon reach the fishing districts between mid-to-late June and the middle of July, with the peak in the fishery typically occurring on or around July 5. Sockeye salmon travel time from Port Moller to the Bristol Bay fishery usually takes about one week, so the PMTF has generally begun on June 10 or 11.

METHODS

Net Description

The PMTF net used in 2016 was the same net that has been used since 2011, consisting of four alternating 50-fathom shackles of $5\frac{1}{8}$ in (13.0 cm) mesh and $4\frac{1}{2}$ in (11.4 cm) mesh, 60 meshes deep. This setup minimizes fish size selectivity across the four major age groups of Bristol Bay sockeye salmon (ages 1.2, 2.2, 1.3, and 2.3). Selectivity between panels and mesh sizes has been examined in past PMTF reports. Further information regarding net descriptions and historical

setup can be found in Nemeth et al. (2016).

Fish Sampling Protocol

Fish Capture

All fishing was done using the R/V *Pandalus*, a 72 ft (22 m) research vessel owned by ADF&G. At each station, a single net was deployed. Drift gillnet sets lasted for approximately 26 min, and deployment was perpendicular to the migratory path of the salmon on the north-south axis (Helton 1991). The duration of set was shorter than in the past to prevent net saturation from affecting the index (Nemeth et al. 2016). The extra time saved from switching to single, shorter sets allowed for the addition of an extra station to be sampled (Station 12). Occasionally when catches were persistently low, a second set was made at a station to increase the total number of fish caught in order to have enough genetic samples. Typically, it took two to three minutes to deploy the full length of the net. After setting the net, the vessel moved as far away as possible from the net while maintaining visual contact. To standardize effort among years, skippers, and vessels, no attempt was made to hook or run the net to increase catch.

Time was recorded when the trailing buoy was deployed, when the net was fully set, when retrieval began, and when the net was fully in. Catches were converted to catch-per-unit-effort (CPUE; fish per 200 fathom hours) to adjust for small differences in fishing times among sets (larger catches take longer to pick and cause the net to fish longer). Mean fishing time (*MFT*) in minutes for each set was:

$$MFT = SI - FO + \frac{(FO - SO) + (FI - SI)}{2}$$

Where, *SO*=time of day the gillnet first entered water, *FO*=time the gillnet was fully deployed, *SI*=time the gillnet retrieval began, and FI=time the gillnet retrieval was completed. CPUE was then catch divided by *MFT* and multiplied by 60 to provide fish per 200 fathom-hours. Fish were identified to species and enumerated. Sockeye salmon were sexed, measured for length (mid eye fork length—MEFL), and sampled for age by placing one scale per fish on a scale card.

Further information regarding net deployment protocols are in the 2015 PMTF report (Nemeth et al. 2016).

Age and Stock Composition Estimates

Fish were sampled for age and stock composition analysis on the test fishery vessel's deck immediately following each fishing event at each station.

For stock composition analysis, tissue samples were collected from sockeye salmon by clipping the axillary process of the pelvic fin. Tissues were placed into individually-coded sheets, and offloaded at the end of each sampling trip for shipment to Anchorage and genetic analysis at ADF&G's Gene Conservation Laboratory (GCL). Thus, stock composition estimates from PMTF samples are usually made three to five days after sample collection. Appendix B shows the 2016 stock composition estimates reported by ADF&G.

For age composition analysis, scales were removed from all sockeye salmon captured, whenever possible. This sampling goal was routinely achieved, but occasionally was not attainable because of weather, gear problems, or exceptionally large catches. In such cases, the catch was sub-sampled as randomly and as extensively as was consistent with crew safety and time constraints.

Sockeye salmon scales were aged according to European notation (Koo 1962). Thus, numerals preceding the decimal refer to the number of freshwater annuli and numerals following the decimal refer to the number of marine annuli. Total age from time of egg deposition is the sum of these two numbers plus one to account for incubation time. Age estimations were made by ADF&G personnel in King Salmon using acetate impressions of scales under low (10x) magnification using a microfiche reader. The 2016 age composition estimates reported by ADF&G are included in Appendix C.

The Daily Abundance Index

In 2016, missing station-date specific values were linearly interpolated between observed values by station.

Historically, two methods of calculating the daily abundance were used. Beginning in 2011, the PMTF has used the Replacement Index (hereafter referred to as "index"). The daily abundance index used in 2016 is the average CPUE (catch per 1 hour of 200 fathoms) across five stations from the entire net on a given day. The daily index reported in the catch updates and interpretations excluded Station 12 in order to provide continuity among annual reports 2011-2016; however, Station 12 was included to formulate the index used in the forecast model.

Forecasting Based on the PMTF

Forecasts of age and stock composition, as well as run timing for the inshore run, were simply assumed to be equal to estimates observed at the PMTF through the most recent date. Forecasting run magnitude was more complicated. At the end of the 2011 PMTF project, we began developing a model to forecast the total run magnitude based on inseason catches only. A daily projection model was based on an approach that differs from the historical forecasting method applied to Port Moller data in that it only uses information collected in the current season and not the historical relationship between cumulative indexes and resulting total runs from previous years. This model estimated the run abundance for the aggregate run by applying parameters for travel time (the number of days it takes for fish to travel from Port Moller to inshore; TT) and the fish-per-index (the number of fish inshore that each fish caught at the PMTF represents; FPI).

Random fluctuation in the test fishery occurs due to sampling error, independent of the abundance of fish passing the fishing transect. Exacerbating this problem is variability in travel time between Port Moller and inshore; in other words, some fish may take 5 days while others 8 days, and so on. All of this combined variability can make it difficult to line up Port Moller catch

indices with observed inshore abundance. Further complicating the matter are openings/closures in the district fisheries that cause varying numbers of fish to pass the district fisheries unnoticed until days later when they pass the counting towers. Lagging escapement by the travel time between the fishing districts and their towers can cause the inshore run pattern to vary as well. All of this suggests it is preferable to use a three day moving average to smooth catch indices, as well as the inshore run before models are parameterized to fit the latter based on the former. Research and development of catch index formulations feeding into various statistical models that forecast total run strength based on the PMTF are ongoing and will continue until an algorithm is discovered that is robust to annual variations in run entry pattern, timing, TT, as well as dynamics affecting the FPI.

Inseason Reporting of PMTF Information

Inseason, four types of information were distributed regularly using the BBSRI web site (<u>http://www.bbedc.com/?page_id=1405</u>) and to a distribution list of 415 email addresses. Catch summaries were sent each evening. Interpretations of these catches were then distributed in the coming days, depending on how quickly meaningful new information developed. Finally, BBSRI distributed ADF&G's genetic stock composition and age composition updates as they became available throughout the season. All four of these update types were consecutively numbered in sequence through the season and are provided in Appendices A–D of this report.

RESULTS AND DISCUSSION

In 2016, the PMTF operated from June 12 to July 12 and caught 3,200 sockeye salmon. Daily catch updates were sent out each evening summarizing the day's catches and environmental conditions; interpretive reports were sent out as meaningful information changed or new insights were possible (Table 1). Age composition and genetic-based stock composition estimates were forwarded to the distribution email list soon after receipt from ADF&G.

Generally, the daily index at Port Moller increases to a peak, then begins to taper several days before the test fishery ends. Protracted catches late in the season caused this peak to occur much later in 2015 and 2016 (July 8 and July 6, respectively; Figure 2). Catch patterns in 2016 for both Port Moller and inshore catch and escapement were similar to those for 2015. In both years, the catch pattern at Port Moller were representative of the inshore run, with some departures due to inseason changes in the FPI and TT parameters in addition to random noise in the relationship.

The value of this test fishery is greatest when the run deviates substantially from the historical average run timing. This year was a prime example of its utility as district catches were much lower than expected early on given the magnitude of the preseason forecast. Because of the late and large run in 2015, many stakeholders suspected the same pattern may occur in 2016 and were looking at Port Moller as an indicator as to if or when catches would increase. The sudden increase in the daily index on June 30, which was sustained through July 10, provided evidence that the run was as late as 2015 and likely to be as high as or higher than the pre-season forecast.

Furthermore, fishing through July 12 gave insight into when the run would taper inshore; stopping on July 10 as is typically done would have left everyone wondering about the strength of the run's tail. The declining daily index on July 11–12 suggested that catch and escapement would subside starting on July 16.

The stock composition estimates at Port Moller were somewhat informative with respect to the changing of each stock's strength inshore (Figure 3) relative to the others. However, the run was distributed further offshore than normal and seemed to shift (at least the outer tail) in and out of the fishing transect. Stock compositions by station (released on July 14) showed Ugashik (typically confined to Stations 2–6) was prevalent at Station 12 later in the season. The outer distributions of the Kvichak, Nushagak, and Wood stocks at Stations 10 and 12, combined with the high catch indices at these stations (Figure 4), suggest that a portion of these stocks missed the test fishery causing them to be underrepresented in some of the stock composition estimates.

FUTURE WORK AND RECOMMENDATIONS

Improve the Daily Projection Model

We will continue research and development of the Daily Projection Model. Anticipated improvements include district-specific Port Moller catch indices and better interpolations for missed fishing days due to weather. We are investigating how changes in the index across the transect might explain fluctuations in the FPI parameter.

Continue Short Sets and Fishing Station 12

The addition of Station 12 this year proved valuable to forecasting efforts. Relative to previous years, the run was distributed farther offshore. Consistently sampling Station 12 will improve our understanding of the run and the correlation between Port Moller and inshore catch and escapement.

Shift the Dates of Operation

Sustained late-season catches at Port Moller in 2014 and 2015 made it difficult to determine the date of peak passage at Port Moller and estimate the post-peak run magnitude. A similar pattern occurred in 2016, but fishing through July 12 this year facilitated these estimations. Missing fishing days at the end of the run when catches remain high is much more problematic than missing catches at the beginning of the season. Even in 2013, the earliest run on record, missing June 10–11 would not have hindered our ability to determine the peak day of passage. For late years, data from June 10–11 matter even less. The increased value of late-season data also applies to stock composition estimates. Stock composition estimates from the last week of sampling are far more valuable than the first set of estimates, which usually pool samples from June 10–15 (in order to have enough samples) obscuring the results. Thus, we recommend that the test fishery operate from June 12 to July 12 in 2017.

ACKNOWLEDGEMENTS

The 2016 PMTF project was funded by ADF&G, eleven Bristol Bay processors, BBSRI, and Bristol Bay driftnet fishermen (through the Bristol Bay Regional Seafood Development Association, or BB-RSDA). Processors were AGS/Leader Creek, Copper River Seafoods, Deep Sea Fisheries, E&E Seafoods, Ekuk Fisheries, Icicle Seafoods, North Pacific Seafoods, Ocean Beauty, Peter Pan Seafoods, Silver Bay Seafoods, and Trident Seafoods, and by shipping company APL.

Field data were collected by BBSRI technicians Amos Cernohouz, Connor Cleary, and John Hill. The R/V *Pandalus* was provided by ADF&G, and crewed by Ted Jewel (Skipper), Dave Knight (First Officer), and Charley Schollenberg (Second Officer). Fred West and Greg Buck (ADF&G) managed the scale aging operation in King Salmon and provided the age composition updates. Tyler Dann (ADF&G) and Kyle Shedd managed the laboratory analysis for genetic stock identification and provided the stock composition updates. For logistical help, we also thank Corey Litwiniak at the ADF&G office in Port Moller, and Mark Briski and George Sudar at Peter Pan Seafoods in Port Moller. This on-site help in Port Moller is essential to the project's success.

Although this project is not possible without the help of ADF&G personnel and funding, our interpretations do not represent official ADF&G assessment of the PMTF data or the 2016 Bristol Bay run.

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- Koo, T. S. Y. 1962. Age designation in salmon. Pages 37 48 in T.S.Y. Koo, editor. Studies of Alaska red salmon. University of Washington Publications in Fisheries, New Series, Volume I, Seattle, Washington.
- Randall, R. C. 1977. Offshore test fishing in Bristol Bay, 1977. Alaska Department of Fish and Game. Technical Data Report No. 63. 18 pp.

TABLES

1	Time of BBSRI	BBSRI catch	ADF&G stock	ADF&G age
Date	daily catch update	interpretation	composition estimates	composition estimates
June 12, 2016	18:10	-	*	*
June 13, 2016	17:26			
June 14, 2016	18:01			
June 15, 2016	15:42			
June 16, 2016	19:15			
June 17, 2016	17:12	#1: June 17		
June 18, 2016	16:17			
June 19, 2016	15:12			
June 20, 2016	16:51			
June 21, 2016	20:53			
June 22, 2016	17:55	#2: June 22		
June 23, 2016	22:56			
June 24, 2016	17:07			
June 25, 2016	21:06		#1: June 21–22	
June 26, 2016	20:38	#3: June 26		
June 27, 2016	18:10			#1: June 25
June 28, 2016	16:02		#2: June 23	
June 29, 2016	22:51		#3: June 25–26	
June 30, 2016	19:28		#4: June 27–28	
July 1, 2016	21:50			#2: June 30
July 2, 2016	12:32	#4: July 2	#5: June 29–30	
July 3, 2016	19:01			
July 4, 2016	15:41			#3: July 3
July 5, 2016	18:56			#4: July 4
July 6, 2016	15:29		#6: July 1–2;	
July 0, 2010	13.29		#7: July 3–4	
			#8: July 5;	
July 7, 2016	20:17		#9 June 21–July 4 by	
			station	
July 8, 2016	16:09			
July 9, 2016	18:41	#5: July 9		#5: July 8
July 10, 2016	20:56			
July 11, 2016	18:44		#10: July7–8	
July 12, 2016	18:03		#11: July 9	#6: July 11
July 13, 2016	-			
July 14, 2016	_		#12: June 21–July10	
July 1 7, 2010	-		by station	

Table 1. Sampling dates and time of corresponding update for four main types of inseasoninformation from the Port Moller Test Fishery in 2016. Updates were sent by email andposted to the project's website.

Interpretation #	Date sent	Summary of analyses and predictions	Did the prediction(s) come true?
1	17-Jun	Compared the daily index in 2016 to 2014 and 2015. Stated that odds were against the run being early and coming in at the pre-season forecast.	Yes. The run was was closest to 2015, not early and close to forecast.
2	22-Jun	Compared the daily index in 2016 to 2012, 2014 and 2015. Stated again that odds were against the run being early and coming in at the pre-season forecast.	Yes. The run was was closest to 2015, not early and close to forecast.
3	26-Jun	Forecasted C+E through July 1. Used this forecast to parse historical runs into six run magnitude bins, each plotting cumutive C+E to date versus inshore timing compared to 2016 (referred to as the CCEvRT plot).	Yes. Forecasted C+E was very close to that observed. Refinements of the CCEvRT plot proved informative in subsequent interpretations.
4	2-Jul	Stated that the daily index seemed most similar to 2012 and 2014. Forecasted C+E through July 6 and July 9 based on TT parameters of 6 and 11 days. From these forecasts and the CCEvRT plot we noted that run magnitudes of <25M or 25-35M could occur. However, we stated that if catches at Port Moller remained strong for the remainder of the season then the pre-season forecasted strength was more likely.	Observed C+E matched the TT=11 forecast through July 7, but the dip predicted on July 8-9 failed to occur. Port Moller catches did remain strong and the pre-season forecast was realized.
5	9-Jul	Used similar analyses as in Interpretations 3 and 4 to forecast the remainder of the run to be $>45M$ and possibly 50M.	Yes. These analyses correctly forecasted the remaining 58% of the run.

Table 2. Substantive comments and predictions in the daily interpretations of the 2016 Port Moller Test Fishery.

	Number of	% of those whose
	addresses	affiliation is known
Government		
ADF&G Research and Others	40	14%
ADF&G Fishery Managers	9	3%
Other State Government	4	1%
Federal Government	2	1%
Subtotal	55	19%
Industry		
Harvesting	56	19%
Processing	119	41%
Buyers	11	4%
Shippers	3	1%
Other Industry	15	5%
Subtotal	204	71%
Other		
Non-ADF&G Scientists	20	7%
Locals	2	1%
Media	8	3%
Subtotal	30	10%
Known Affiliation	289	100%
Unknown affiliation*	126	
Grand Total	415	

Table 3. Summary of the numbers of recipients in the email distribution list by known and unknown affiliation for the Port Moller Test Fishery, 2016.

* A large portion of unknowns are likely fishermen.

FIGURES

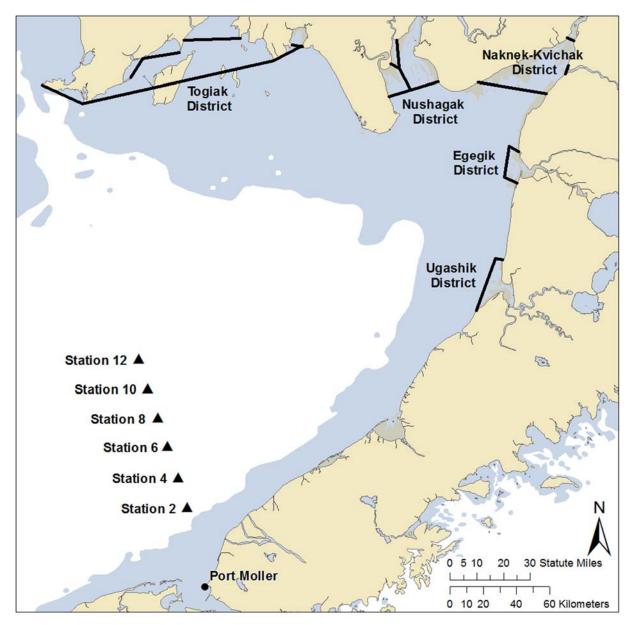


Figure 1. Map of the study area, showing the six stations fished by the Port Moller Test Fishery in 2016 and the locations of Bristol Bay fishing districts. Sockeye salmon passing the test fishery stations take approximately six to nine days to reach the Bristol Bay fishing districts in typical years.

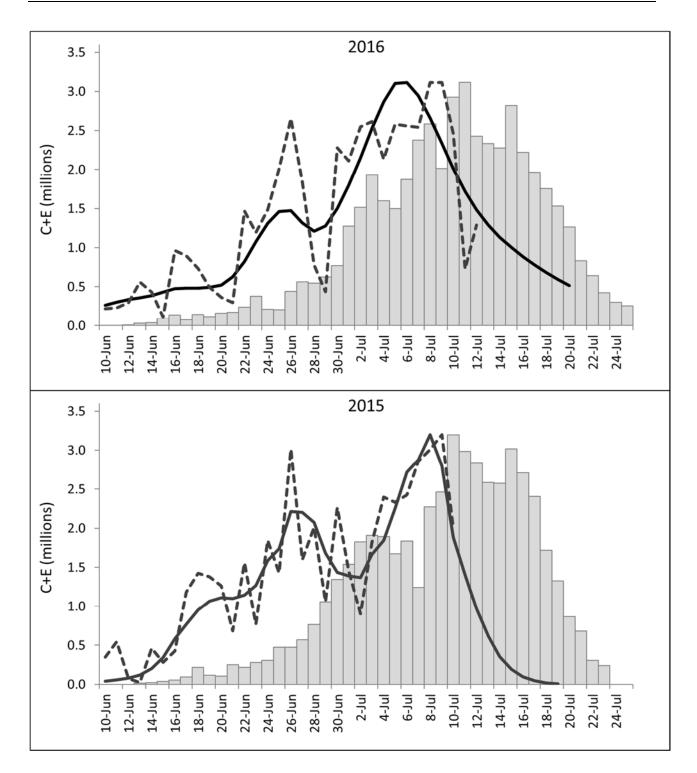


Figure 2. Inshore catch plus escapement (C+E; grey columns) and the daily Port Moller test fishery catch index scaled to C+E (dashed line=observed; solid line=smoothed) for 2015 and 2016.

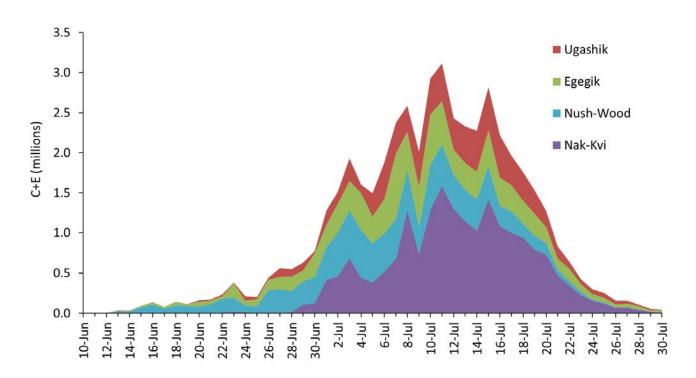


Figure 3. Inshore catch plus escapement for the four main Bristol Bay fishing districts, 2016.

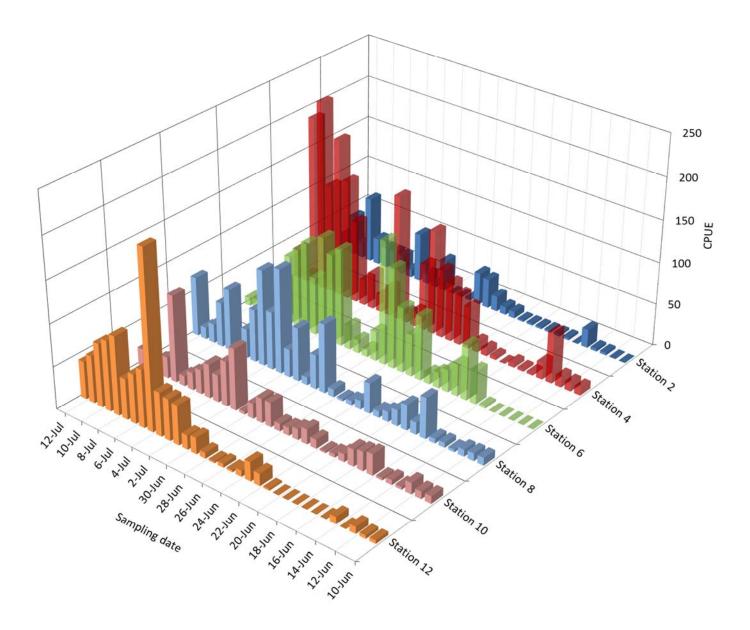


Figure 4. Daily catch indices (catch-per-unit-effort, CPUE) for the six stations fished along the Port Moller Test Fishery transect, 2016.

APPENDICES

APPENDIX A

BBSRI'S SEASON INTRODUCTION, FINAL SEASON CATCH UPDATE, AND INSEASON DAILY INTERPRETATIONS FOR THE PORT MOLLER TEST FISHERY IN 2016

From: Michael Link Sent: Wednesday, June 08, 2016 1:10 PM To: Michael Link (mlink@lgl.com) Subject: Port Moller Test Fishery, distribution list, 2016

All,

I will be working with Scott Raborn to produce the daily updates over the course of this season. I will take the primary responsibility for the daily catch updates (i.e., what Matt Nemeth did last year) and Scott will lead the periodic "interpretations".

You are receiving this email because you were on last year's distribution list. If you no longer want to be included, please email me and I will delete you.

As has been the case the last 15 seasons, the Port Moller updates are <u>free</u> and sent via email to those who subscribe. These are provided as a public service by the Dillingham-based Bristol Bay Science and Research Institute (BBSRI), and made possible by our benefactors (processors and driftnet fishermen via the RSDA).

The updates will also be posted on the web in a couple of places, as has been done in the past. I will share those links in the first update of the season.

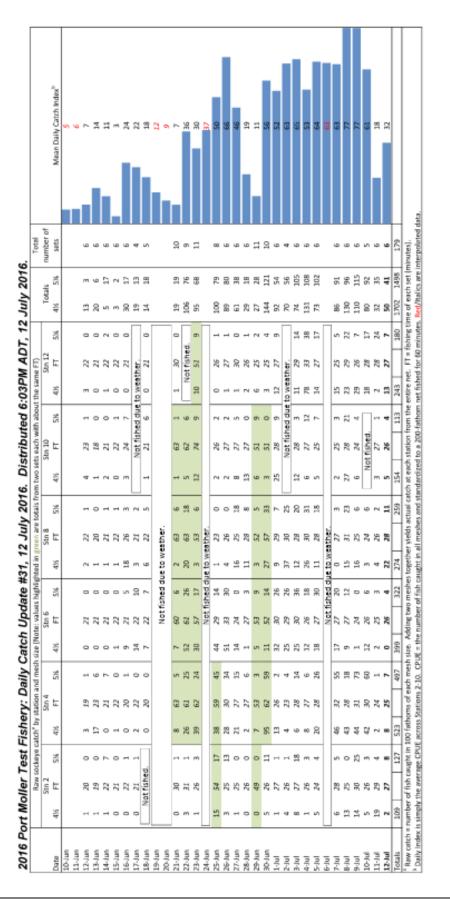
If you know of someone who would like to receive the updates at the time they are sent, please get them to email me requesting to be added to the list ("Please add me to PMTF list" is sufficient).

<u>The latest news</u>: The ADF&G research vessel the "*Pandalus*" left Homer this morning and is headed to Port Moller. The three-person BBSRI crew is here in Anchorage doing final preparations and will leave tonight for King Salmon, and then on to Port Moller for some further prep, "weather and Penair willing". <u>The most likely date the boat will start fishing is 12 June</u>; possibly the 11th. We typically start fishing on the 10th or 11th June.

Thank you all for your interest in the Port Moller test fishery, and for supporting it in various ways.

Michael Link

BBSRI



Appendix A Page A3

			-	: ageraw	sockeye	Average sockeye length' by station and mesh size	y station	and me	ch size				Weighted	pa		Mean							
	Son 2	~	Stn.4		Stn 6	9	Stn 8		Stn 10		Stn 12		mean lengths	igths		0 ₂ H notest	Cumulative		(inco	V Catch	Daily Catch Index by Station	Station	
Dute	4%	2%	415	ŝ	43	20%	402	200	4%	2%	4%	%S	402	35	Weather	Temp (°C)	Catch Index	Str2	Stri 4	Stre	Striß	Stn10	Stn12
10-Jun																	'n	•	0	0	e,	о 1	•
11-Jun																	17	H	9	0	e,	01	•
12-Jun	453		505	470			500	532	482	202	492		491	50	Winds NW 15 kts; seas 1 ft; 75% cloud cover	9.6	18	ю	13	0	80	13	#0
13-Jun	475		520	517			485		476				514	517	NW 10-15 kts; seas 1 ft; 25-50%	10.0	X	m	8	0	m	m	0
14-Jun	532	531		546			429	496	532		263	510	218	233	N 5-10 kts; seas 1 ft; 100%	10.1	57	22	20	0	φ	9	*0
15-Jun			559		517		423	487		528		-	500	8	E 5 kts; seas 0.5 ft; 50%	10.4	\$	D	m	10	s	m	0
16-Jun		546		567	496	232	509	526	471	541		-	201	238	E 15 kts; seas 1.5 ft; 100%	10.8	8	10	m	8	48	25	0
17-Jun			509		232	230	481	563					522	234	W 10 hts; seas 1.5 ft; 75%	9.7	8	ю	'n	65	14	22	0
18-Jun					201	5	6ES	531	474	521			515	IES	SE 20 hts; seas 1.5 ft; 100%	9.8	110	m	0	*	8	20	0
19-Jun																	122	~	4	92	67	0	0
20-Jun																	131	~	=	18	27	*	0
21-Jun	865 5		519	533	511	55	525	527	441	561	466		510	202	E 5 kts; seas 0.5 ft; 25-100%	10.5	138	N	12	13	*	N	2
Z2-Jun	551	532	524	555	523	585	526	528	500	518			524	282	S 10 kts; seas 1 ft; 75%	10.5	174	*	8	2	98	11	ä
23-Jun	522	85	241	535	528	IES	506	511	514	225	524 5	529	530	536	SW 25 kts; seas 2 ft; 100%	10.3	505	σı	15	8	9	18	2
24-Jun																	241	2.8	2	2	'n	11	~
25-Jun	533		517	538	527	5	548		200	234	0	546	524	5	NW 15 kts; seas 1.5 ft; 75%	10.3	250	35	g	120	10	ð,	~
26-Jun	581	_	541	543	528	55	525		514	225	581 5		534	540	NW 15 kts; seas 1.5 ft; 75%	10.4	356	党	124	147	a,	ón	4
27-Jun	518		165	546	518		522	534	508	553	516		522	145	W 5 kts; seas 0.5 ft; 100%	11.2	402	~	80	88	82	29	~
28-Jun			55	268	524	55	525	558	529		536 4	tişt.	529	222	E 5 kts; seas 0.5 ft; 50%	11.5	421	0	18	0	41	29	r
29-Jun			547	534	202	556	518	542	539	541	536 5	260	532	542	E 15 kts; seas 1 ft; 10%	12.0	432	0	Ħ	16	<i>о</i> .	81	61
30-Jun	507	556	537	5	546	534	528	550	537		532 5		535	45	SE 15 kts; seas 1 ft; 20%	12.3	488	37	149	*	63	~	5
1-Jul	486	516	88	55	525	583	530	549	550	547	521 5	543	536	545	W 20 kts; seas 1 ft; 50%	12.7	540	4	35	116	33	73	4
2-Jul	22		534	220	853	F),	527	545					531	544	W 20 kts; sees 1.5 ft; 100%	12.3	603	12	21	106	124	5	ş
3-Jul	542	559	232	5	534	222	221	555	513	5	545		536	-	W 15 kts; seas 1 ft; 80%	12.5	668	8	43	122	69	32	23
4-Jul	490		529	53	5	225	536	552	547	_			532		5W 10 kts; seas 0.5 ft; 100%	12.7	720	a	31	8	114	40	211
5-Jul	263	565	554	554	230	223	539	549	553	28 5	22	534	541	¥2	SW 10 kts; seas 0.5 ft; 100%	12.8	784	2	8	107	62	53	\$
6-Jul																	847	2	144	8	2	8	3
7-Jul	524	22	237	3	532	5		538	534				532	246	W 10 kts; seas 1.5 ft; 100%	12.5	910	*	189	82	~	7	\$
8-Jul	534		55	557	534	279	526	537	529	_	530	234	534	ž	SW 10 kts; seas 1 ft; 100%	12.4	987	51	131	4	2	103	8
9-Jul	۲ <u>۵</u>	_	531	55	539		538	548	525	528	534 5		532	544	W 20 kts; seas 1.5 ft, 100%	12.7	1054	£	226	m	ŝ	52	2
10-14	551		544	540	522	529	527	530			517 5	536	534	238	W20-30 kts; sees 6-8 ft; 100%	12.6	1125	2	204	42	53	5	ĸ
11-Jul	285	_	551	9 <u>9</u> 2	533	396	533	596	521	260		545	542	222	NW 10-15 kts; seas 3 ft; 0-25% cloud cover	12.9	1143	\$	œ	7	14	a,	33
12-Jul	553	568	222	546		260	522	536	518	220	533	551	532	546	N 20 kts; seas 3-6 ft; 50% cloud cover	13.1	1175	2	36	a	71	21	\$
Weighted	535	541	985	55	527	545	527	543	525	543	5 625	540	065	543		11.4	1175	16	55	48	34	21	31
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Acknowledgments, Port Moller Test Fishery, 2016

Another Port Moller test fishing season has wrapped up and we want to acknowledge the small army of people who set aside or work around their "day jobs" for a month to pull off this program and deliver timely information to fishery managers and the industry. The vessel made 179 sets over the last 30 days, and steamed more than 2,200 miles going out and back to station 12, most in typical Bering Sea June and July weather.

R/V Pandalus Crew, ADF&G

Ted Jewel (Skipper), Dave Knight (First Officer), and Charley Schollenberg (Second Officer) worked tirelessly and safely through what is often a grind of a project. As an added challenge this year, the crew had to unexpectedly swap out the engine for a new one in the week prior to departing Homer for Port Moller in late May and early June. In doing so, they set a speed record, and the new engine performed flawlessly this year.

Fisheries Technicians, Bristol Bay Science and Research Institute

These three picked and sampled over 3,000 fish, mended the nets, replaced the occasional shackle, and relayed data in the timeliest fashion we have yet accomplished. This picture of the crew was taken the day before they left Anchorage for Port Moller.



BBSRI Technicians, PMTF, 2016 Left to right (yrs on project): Amos Cernohouz (4th), John Hill (1st), and Conner Cleary (3rd).

Shore support, Peter Pan Seafoods, Port Moller

Mark Briski and his dock crews at the Peter Pan plant generously provided quality shore support to the *Pandalus* and its crew, among trying to serve its fleet and process fish. Without PPSF's support at PM, this project would not be possible.

Logistics Support

Corey Litwiniak and Bob Murphy, ADF&G Port Moller, sample and data shipping Fred West and Cathy Tilly, ADF&G, King Salmon, shipping, scale aging, age comp summaries. Keggie Tubbs, BBSRI, Dillingham, administration, HR, shipping, flight logistics

Program Management and Data Analysis Justin Priest, Scott Raborn, Michael Link, BBSRI

Stock Composition Estimates, Gene Conservation Laboratory, ADF&G

ADF&G's Gene Lab is home to a group of real professionals. Without a complaint, these folks dealt with the vagaries of shipping off the Peninsula, arrival of samples at all hours and sometimes unexpectedly, and completed all the sample lab work and analysis at all hours of the day and in the fastest turnaround times we have achieved since the inception of doing inseason stock comp estimates. Every one of these people from the Gene Lab contributed to the success of the 2016 program: Heather Hoyt, Zach Pechacek, Heather Liller, Erica Chenoweth, Kyle Shedd, Chase Jalbert, Eric Lardizabal, Judy Berger, Chris Habicht, and Tyler Dann

Funding

The 2016 project was funded by wide range of organizations. We received support from ADF&G (*Pandalus* and crew), Bristol Bay Salmon Processors and associated companies (funding), the Bristol Bay Regional Seafood Development Association (funding), and BBSRI (funding and staffing).

Companies that contributed to the PMTF operation include: Trident, Icicle, AGS, North Pacific, Peter Pan, Ocean Beauty, Silver Bay, Deep Sea Fisheries, E&E, Ekuk, Copper River, (all salmon processors) and APL (shipping).

6/17/2016 8:00 PM ADT PMTF Interpretation #1 for catches through June 17, 2016

Station catch indices have been highly variable and indicate dramatic shifts across the test fishing transect (see the daily catch updates). What this means for inshore catch and escapement remains to be determined, but hopefully these shifts will correlate with the estimated fish per index parameter in the coming days (FPI = how many fish inshore a fish caught at PM represents). If so, perhaps we can use this correlation to project changes in FPI for the remainder of the season and improve in-season forecasting accuracy.

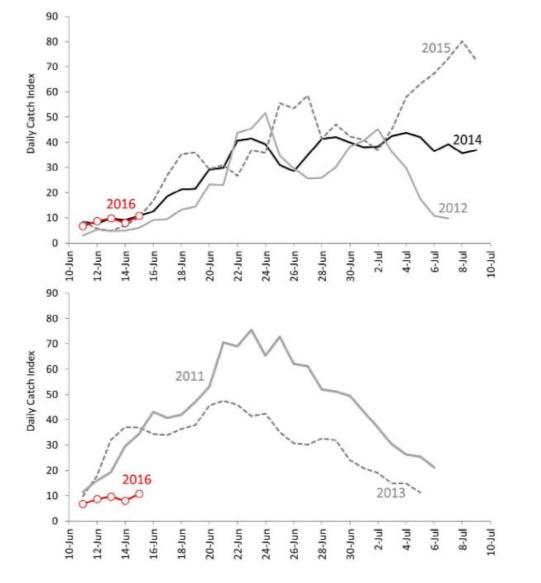
So far, the 2016 Daily Catch Index seems to be tracking 2014 and 2015 (Figure 1). Total run for 2014 was 2.3 days early and 30% lower than 2015, which was 4.2 days late (Table 1). As of now, odds are edging against the run being early AND coming in at the pre-season forecast (46.6 million). Other possibilities are that the run is on time/late or smaller than forecasted. There is no evidence to distinguish among these outcomes at this point; furthermore, strong catches at Port Moller in the coming days could shift the odds.

Ordinarily, the first genetic stock composition estimates would be reported around 21-June. However, low catches and lost fishing opportunity due to potential bad weather in the coming days may delay these estimates a bit.

Table 1. Estimated cumulative Daily Catch Index for the Port Moller test fishery 2011-1016.

Date	Y2011	Y2012	Y2013	Y2014	Y2015	Y2016	Avg	Min	Max
10-Jun	9	0	7	12	9	6	7	0	12
11-Jun	22	5	14	19	24	13	17	5	24
12-Jun	34	9	29	25	26	20	25	9	34
13-Jun	57	16	60	35	26	32	39	16	60
14-Jun	80	20	110	49	39	42	59	20	110
15-Jun	123	24	140	52	46	44	77	24	140
16-Jun	160	34	171	67	57	64	98	34	171
17-Jun	209	47	213	86	89		129	47	213
18-Jun	245	52	242	108	127		155	52	245
19-Jun	286	74	280	131	163		187	74	286
20-Jun	350	90	327	151	197		223	90	350
21-Jun	405	122	379	196	215		263	122	405
22-Jun	498	143	422	221	256		308	143	498
23-Jun	557	221	464	273	277		358	221	557
24-Jun	631	259	504	320	326		408	259	631
25-Jun	694	298	550	339	363		449	298	694
26-Jun	775	325	570	366	443		496	325	775
27-Jun	817	348	596	406	486		530	348	817
28-Jun	877	375	640	444	539		575	375	877
29-Jun	932	403	667	490	567		612	403	932
30-Jun	971	438	691	532	627		652	438	971
1-Jul	1025	489	712	564	666		691	489	1025
2-Jul	1061	525	730	604	690		722	525	1061
3-Jul	1081	574	749	647	738		758	574	1081
4-Jul	1116	598	757	691	802		793	598	1116
5-Jul	1140	614	774	735	863		825	614	1140
Total run (millions)	30.3	30.0	24.2	41.1	59.1				
ADF&G preseason forecast (millions)	38.5	32.3	25.1	26.6	52.0	46.6			
CE Run timing (days)	2.7	0.0	5.9	2.3	-4.2				
PMTF Run timing (days)	4.1	1.4	6.3	0.2	-2.4				

Page **1** of **2**



6/17/2016 8:00 PM ADT

Figure 1. The Daily Catch Index for the Port Moller test fishery 2011-2016. All values represent a 3-day moving average.

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6/22/2016 6:50 PM ADT

PMTF Interpretation #2 for catches through June 22, 2016

Following low catch indices from yesterday (June 21), today's Daily Catch Index increased markedly beyond what typically comes from random daily ups and downs (Figure 1). Furthermore, catch indices increased consistently across stations (Table 1) suggesting that the patchiness from the beginning tail of the run is giving way to the first large push of fish past Port Moller.

So far, this year seems in line with 2012, 2014, and 2015 (Figure 1). These years varied considerably in run timing (2 days early to 4 days late) and magnitude (30-59 million) (Table 2); however, the evidence to date continues to support the conclusion that the run cannot be considerably early (say similar to 2011 and 2013) AND come in at forecast. More catch and escapement is needed inshore before we can begin to tune the PMTF catch indices and make in-season forecasts of run magnitude.

Sea surface temperatures (SSTs) began unseasonably high, but have since cooled to the historical average (Figure 2). What this means for run timing or travel time between PM and inshore remains unclear (correlations are poor between SST and these variables), but this atypical pattern is worth noting.

We expect tissue samples from this last trip (June 21-22) will ship from Port Moller to Anchorage on Thursday (June 23). If all goes well with shipping and lab processing, the first stock composition estimates should be released Friday (June 24) afternoon/evening. Obviously, logistics delays will push that later.

Table 1. Station specific catch indices for 2016 taken from the Daily Catch Update.

Stn2	Stn4	Stn6	Stn8	Stn10	Stn12
			-	353	7
-	-	-	-		÷.
3	13	0	8	13	8
3	60	0	3	3	0
22	20	0	6	6	8
0	3	3	5	3	0
3	3	40	48	25	0
3	5	65	14	23	0
0	0	38	30	20	0
-	-	-	-	-	-
-	-	-	-	-	-
2	12	13	8	2	2
8	50	76	36	11	-

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6/22/2016 6:50 PM ADT

Date	Y2011	Y2012	Y2013	Y2014	Y2015	Y2016	Avg	Min	Max
10-Jun	9	0	7	12	9	6	7	0	12
11-Jun	22	5	14	19	24	13	17	5	24
12-Jun	34	9	29	25	26	20	25	9	34
13-Jun	57	16	60	35	26	34	39	16	60
14-Jun	80	20	110	49	39	45	59	20	110
15-Jun	123	24	140	52	46	47	77	24	140
16-Jun	160	34	171	67	57	71	98	34	171
17-Jun	209	47	213	86	89	93	129	47	213
18-Jun	245	52	242	108	127	111	155	52	245
19-Jun	286	74	280	131	163	125	187	74	286
20-Jun	350	90	327	151	197	136	223	90	350
21-Jun	405	122	379	196	215	143	263	122	405
22-Jun	498	143	422	221	256	179	308	143	498
23-Jun	557	221	464	273	277		358	221	557
24-Jun	631	259	504	320	326		408	259	631
25-Jun	694	298	550	339	363		449	298	694
26-Jun	775	325	570	366	443		496	325	775
27-Jun	817	348	596	406	486		530	348	817
28-Jun	877	375	640	444	539		575	375	877
29-Jun	932	403	667	490	567		612	403	932
30-Jun	971	438	691	532	627		652	438	971
1-Jul	1025	489	712	564	666		691	489	1025
2-Jul	1061	525	730	604	690		722	525	1061
3-Jul	1081	574	749	647	738		758	574	1081
4-Jul	1116	598	757	691	802		793	598	1116
5-Jul	1140	614	774	735	863		825	614	1140
Total run (millions)	30.3	30.0	24.2	41.1	59.1				
ADF&G preseason forecast (millions)	38.5	32.3	25.1	26.6	52.0	46.6			
CE Run timing (days early [-]; days late [+])	-2.9	-0.2	-6.1	-2.0	4.2				
PMTF Run timing (days)	4.1	1.4	6.3	0.2	-2.4	_			

Table 2. Estimated cumulative Catch Index for the Port Moller test fishery 2011-1016.

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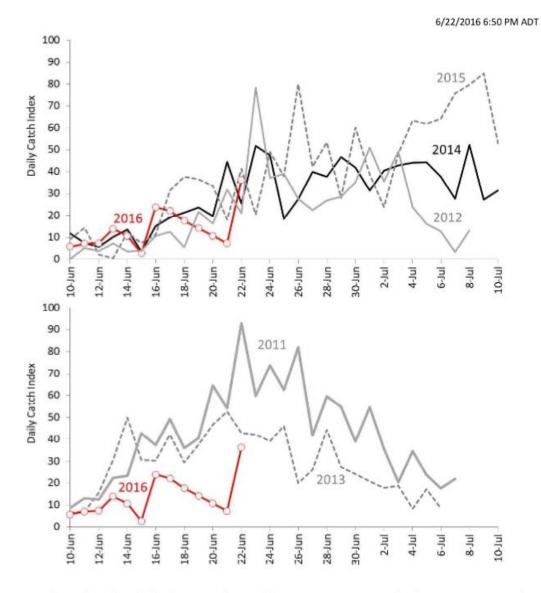


Figure 1. The Daily Catch Index for the Port Moller test fishery 2011-2016. Note: values do NOT represent a 3-day moving average as typically reported, but are instead the actual index estimates for each date.

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6/22/2016 6:50 PM ADT

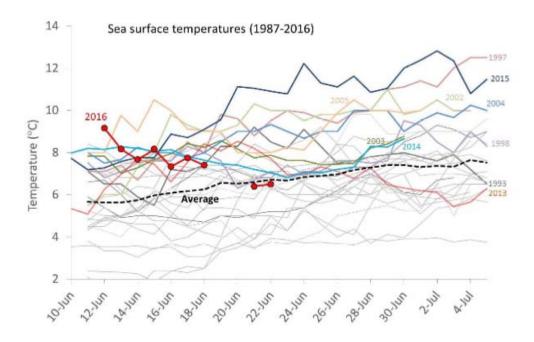


Figure 2. Mean daily sea surface temperatures across the PMTF transect (1987-2016).

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6/26/2016 6:02 PM ADT

PMTF Interpretation #3 for catches through June 26, 2016

The Daily Catch Index indicates the run has been building at Port Moller since June 21 (Figure 1). Across days, the pattern thus far is closest to that from 2015, which turned out to be 4 days late (Table 1). Station specific catches show the run is predominantly distributed closer to shore this year (see the bottom right panel of the Daily Catch Update #15), which means the fishing transect is likely intercepting a larger portion of the run compared to other years when catches were relatively greater at the outer stations. Hopefully this means the Daily Catch Index will correlate better with what shows up inshore.

Although catch + escapement (C+E) dropped off yesterday and the day before (June 24-25), we are forecasting things should pick up in the coming days (Figure 2). At this time, we are unable to forecast the year-end total run because we do not know what catches at Port Moller will look like from here on out. If today was the peak at Port Moller, then the run is likely 1-2 days early. As is evident from Figure 1, anything could happen with the Daily Catch Index from this point forward.

In Figure 3, we plot cumulative C+E through July 1 versus run timing for each year in the historical dataset grouped into run magnitude bins. The red lines in each graph show what we are forecasting 2016 cumulative C+E to be through July 1 based on Figure 2. Plotting the data this way helps to visualize the various run timing/magnitude scenarios. Assuming we know where we are on the y-axis as shown by the red line (i.e., our forecast in Figure 2 is accurate through July 1), the intersections of it and the blue lines indicate which scenarios seem most plausible. For instance, if run timing is 0-1 days late then the 20-30 million total run range is more likely than others; 3 days late makes the most likely range 40-50 million, and run timings earlier than 1 day puts the range in the low twenties at best. Again, we do not have enough information to peg 2016 run timing or magnitude, and Figure 3 must be interpreted with caution as it is based on the premise that our 5-day C+E outlook is in the ballpark.

The genetic results from June 21-22 showed a strong representation of Egegik fish as one might expect given its slightly earlier average run timing than the other stocks and forecasted strength. The proportion of North Peninsula fish was greater than previous years for this point in the season, but we caution against inferring too much from a single genetics sample. The next set of tissue samples (June 23 and June 25-26) are due to arrive at the gene lab on Monday afternoon.

The in-season stock composition estimates from Port Moller represent catches across the entire transect. We have received many inquiries regarding what the stock compositions are for each station. Unfortunately, we do not have enough fish (or budget) to provide station-specific estimates from each trip. In previous years, the gene lab has pooled samples across dates to provide station-specific estimates over broader time periods. In general, Ugashik fish passed mostly through the inner stations. While other stocks are more broadly distributed across the transect, Egegik tends to be skewed shoreward, and the west-side stocks more towards the outer stations.

6/26/2016	6:02	ΡM	ADT
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Date	Y2011	Y2012	Y2013	Y2014	Y2015	Y2016	Avg	Min	Max
10-Jun	9	0	7	12	9	6	7	0	12
11-Jun	22	5	14	19	24	13	17	5	24
12-Jun	34	9	29	25	26	20	25	9	34
13-Jun	57	16	60	35	26	34	39	16	60
14-Jun	80	20	110	49	39	45	59	20	11(
15-Jun	123	24	140	52	46	47	77	24	14(
16-Jun	160	34	171	67	57	71	98	34	17
17-Jun	209	47	213	86	89	93	129	47	213
18-Jun	245	52	242	108	127	111	155	52	24
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21-Jun	405	122	379	196	215	143	263	122	40
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23-Jun	557	221	464	273	277	209	358	221	55
24-Jun	631	259	504	320	326	247	408	259	63
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28-Jun	877	375	640	444	539		575	375	87
29-Jun	932	403	667	490	567		612	403	932
30-Jun	971	438	691	532	627		652	438	97
1-Jul	1025	489	712	564	666		691	489	102
2-Jul	1061	525	730	604	690		722	525	106
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Total run (millions)	30.3	30.0	24.2	41.1	59.1				
ADF&G preseason forecast (millions)	38.5	32.3	25.1	26.6	52.0	46.6			
CE Run timing (days early [-]; days late [+])	-2.9	-0.2	-6.1	-2.0	4.2				
PMTFRun timing (days)	4.1	1.4	6.3	0.2	-2.4				

Table 2. Estimated cumulative Catch Index for the Port Moller test fishery 2011-1016.

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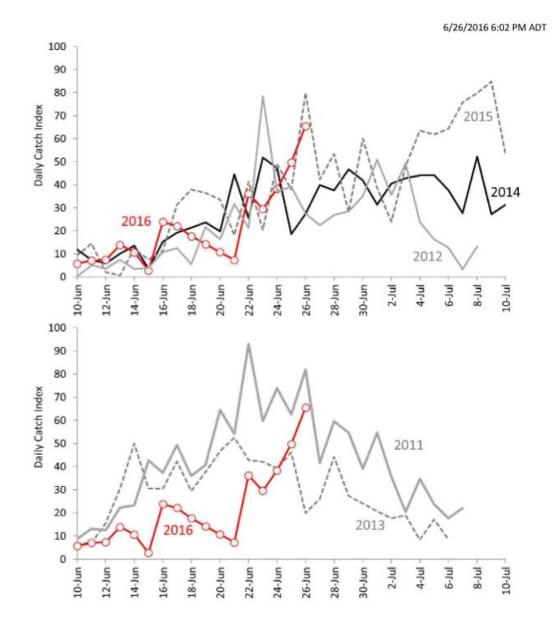


Figure 1. The Daily Catch Index for the Port Moller test fishery 2011-2016. Note: values do NOT represent a 3-day moving average as typically reported, but are instead the actual index estimates for each date.

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6/26/2016 6:02 PM ADT

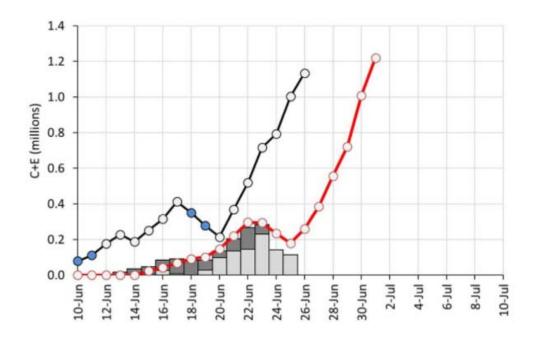


Figure 2. Forecasted and observed inshore catch + escapement (C+E). The black line represents the PMTF Daily Index used in the forecast (scale not shown; blue markers show interpolated values). The red line depicts forecasted C+E out to July 1. Dark bars are observed escapement and light bars are catch (Note: because escapement is lagged backwards for each district, it does not appear for June 24-25). The estimated travel time was 5-6 days averaged across all districts.

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6/26/2016 6:02 PM ADT

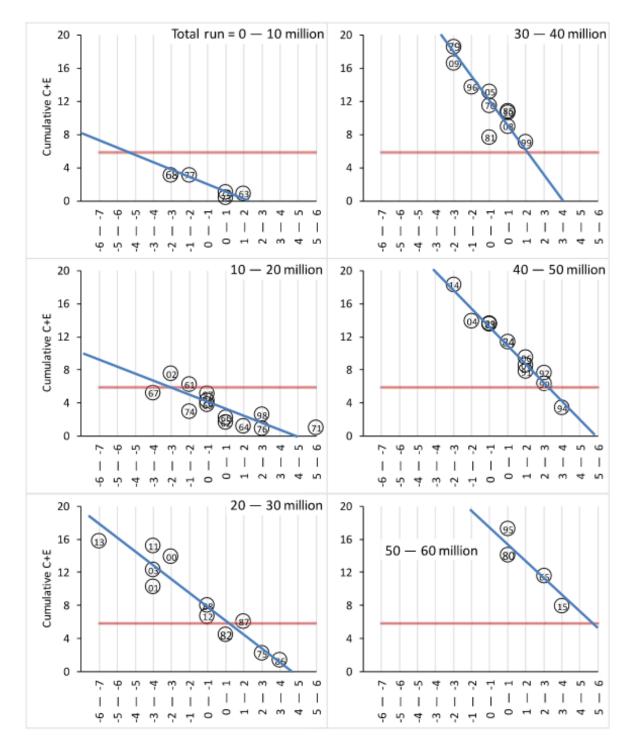


Figure 3. Cumulative catch + escapement through July 1 versus run timing in each year from the historical dataset. The red line indicates where C+E will be in 2016 if the forecast from Figure 2 is correct. Blue lines show trends for each run magnitude bin.

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PMTF Interpretation #4 for catches through July 1, 2016

The sharp decline in the Daily Catch Index from June 26 to June 29 was starting to paint a bleak picture for the 2016 run magnitude (Figure 1). The last two days of increased catches show signs of recovery. Interpreting what this means for inshore catch + escapement (C+E) in the coming days and for the year-end total run depends on the assumptions we make when modeling these eventualities based on PMTF catches observed to date and those projected for the remainder of the season (see below).

No clear conclusions regarding run timing or magnitude can be drawn from the stock composition estimates. Only, they inform us of which districts the fish caught on these dates are most likely bound. If the stock proportions were out of sync with what is expected based on the pre-season forecast and stock specific run timings then one might infer various reasons for this, but the stock composition estimates to date (through June 28) show now major departures from these expectations. Egegik has so far dominated catches at Port Moller, and in subsequent estimates we expect it to decline as the Naknek-Kvichak district increases.

Catches were greatest at Station 4 on June 30 by a large margin, then greatest at Station 6 yesterday (July 1) to a similar degree. The boat is inbound today and the crew was unable to fish Stations 12 and 10 this morning due to rough seas, but so far have been staying ahead of the weather and able to make sets at Stations 8, 6 and 4, which yielded catch indices of 124 (up substantially from 33 yesterday), 106 (down slightly from 116), and 21 (down slightly from 35). These catch patterns indicate the run is building further offshore, which is consistent with an expected increase in the Naknek-Kvichak component. Egegik fish tend to be distributed more inshore, and Naknek-Kvichak fish more offshore.

The Glass Half-empty Outlook

So far this season, observed cumulative Daily Catch Index seems most similar to 2012 and 2014; between these two, observed C+E is more similar to 2012 (Figure 2). Ignoring last year, these similarities would cause strong suspicion that the run is far less than the pre-season forecast.

Correlating the 2016 Daily Catch Index at Port Moller to observed inshore C+E yields two scenarios similar in their probability, but very different with respect to estimated travel time between the PMTF and the fishing districts causing forecasted C+E in the coming days to differ as well (Figure 3). Using these projected C+Es allows us to compare cumulative C+E to previous years through these dates (Figures 4 and 5). Given a 6-day travel time between Port Moller and the inshore districts, the most likely run magnitude bin is <25 million; an 11-day travel time makes the 25-35 million bin equally likely.

The Glass Half-full Outlook

We cannot ignore last year. While there is little correlation of run timing/magnitude between consecutive years, 2015 proved that anything is possible. Each year the Bristol Bay sockeye run seems to be unprecedented in some form or another. For instance, in 2013 the run was 6 days early—unprecedented. If we had used Figures 4 and 5 in 2015, the most likely run magnitude bins would also have been <25 million and 25-35 million; the observed 2015 run magnitude of 59 million beat the historical odds.

At this point in the season, 38% and 46% of the total catch for 2014 (TR=41 million) and 2015 (59 million) was yet to come at Port Moller; for 2012 (32 million), 24% was left to come. If the 2016 PMTF Daily Catch Index is strong for the remainder of the season, then a run magnitude close to the pre-season forecast is more likely; tapering catches at Port Moller will lower the odds considerably. So far, catches from Stations 6 and 8 today look promising.

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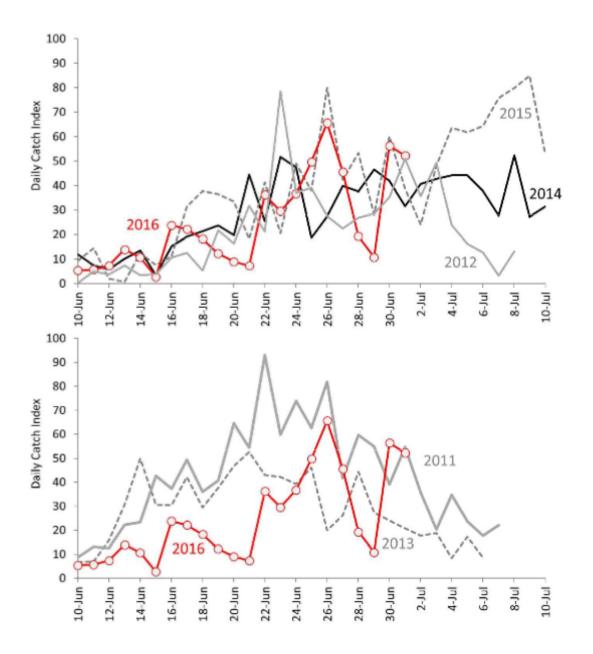


Figure 1. The Daily Catch Index for the Port Moller test fishery 2011-2016. Note: values do NOT represent a 3-day moving average as typically reported, but are instead the actual index estimates for each date.

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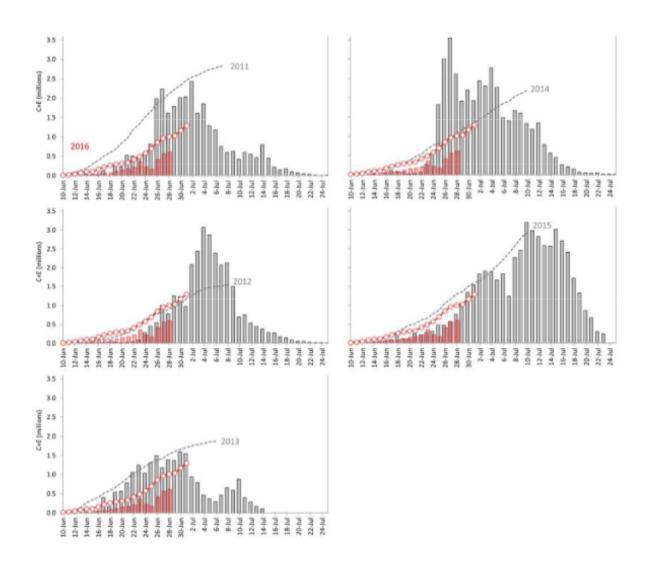


Figure 2. Observed catch + escapement and the cumulative Daily Catch Index (scale not shown) for 2016 compared to previous years. The 2016 cumulative Index tracks closest to 2012 and 2014, while 2016 C+E is more in line with 2012 and 2015.

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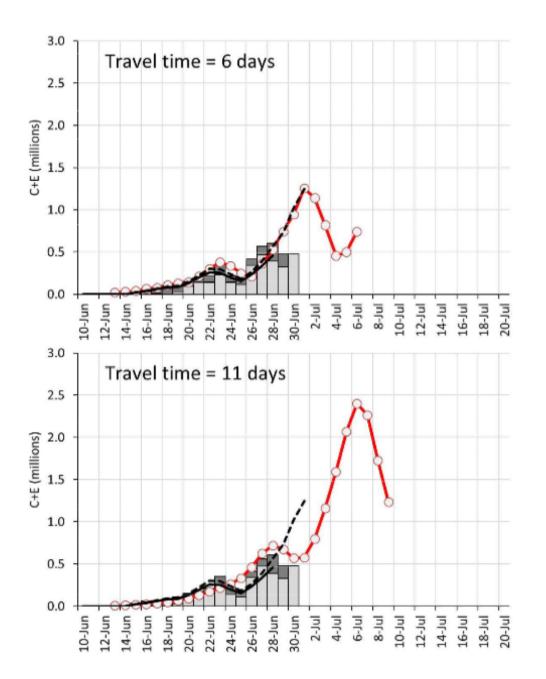


Figure 3. Forecasted and observed inshore catch + escapement (C+E). The solid black (June 24) and dashed (June 26) lines represent previous 2016 forecasts. The red line depicts forecasted C+E out to July 1. Dark bars are observed escapement and light bars are catch (Note: the height of recent days will increase with escapement yet to be reported because escapement is lagged backwards for each district). Two travel time scenarios are presented (travel time = how long it takes fish to pass from the PMTF to the inshore districts).

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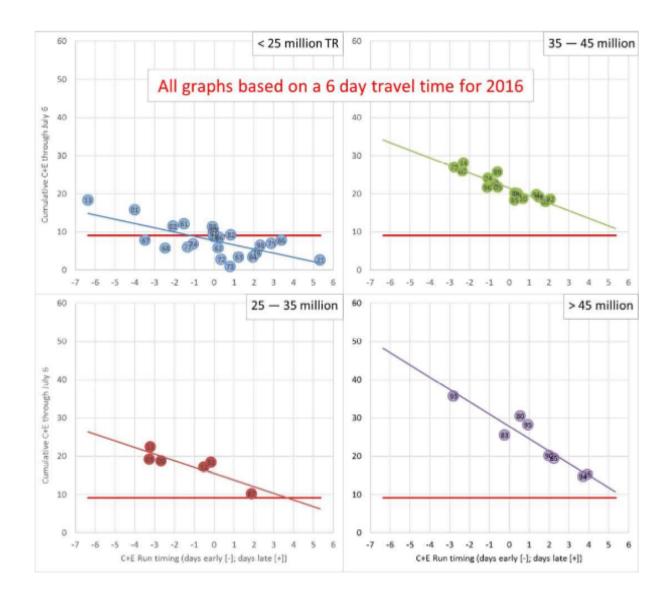


Figure 4. Cumulative catch + escapement through July 6 versus run timing in each year from the historical dataset. The red line indicates where C+E will be in 2016 if the top forecast from Figure 2 is correct (6-day travel time between Port Moller and the inshore districts). Regression lines show trends for each run magnitude bin and numbers within each marker indicate year. Based on historical patterns, the bin splitting the most points above and below the red line is more likely (Note: the bin in which 2015 falls would NOT have been the more likely outcome).

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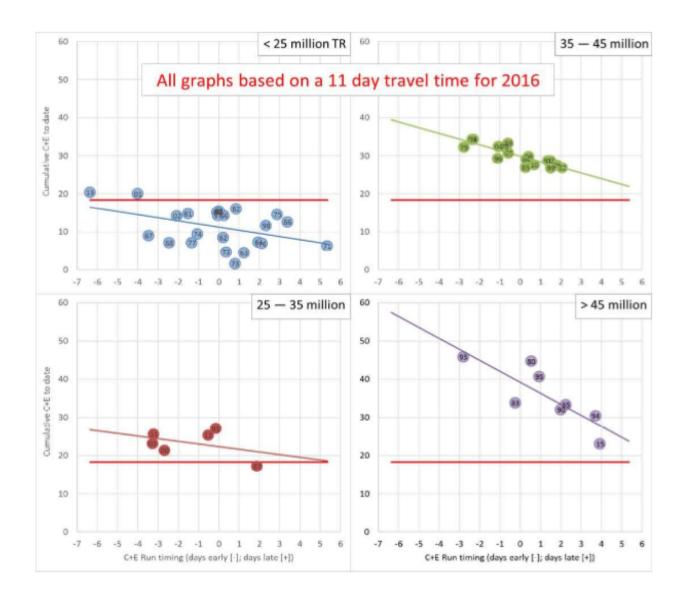


Figure 5. Cumulative catch + escapement through July 9 versus run timing in each year from the historical dataset. The red line indicates where C+E will be in 2016 if the bottom forecast from Figure 2 is correct (11-day travel time between Port Moller and the inshore districts). Regression lines show trends for each run magnitude bin and numbers within each marker indicate year. Based on historical patterns, the bin splitting the most points above and below the red line is more likely (Note: the bin in which 2015 falls would NOT have been the more likely outcome).

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PMTF Interpretation #5 for catches through July 9, 2016

Similar to 2015, the Daily Catch Index shows the run has continued to build at Port Moller thus far (Figure 1) suggesting this year's inshore run might look similar to 2015.

As was the case in 2015, station indices from paired sets have been quite consistent so far this year. This consistency suggests the high variability in catches across stations and the erratic change in station patterns from day to day (see tonight's Catch Update #28) were not simply due to sampling error. Rather, these observations are indicative of the run shifting back and forth across the test fishing transect and/or various stocks pulsing by at different stations. What this does to the fish-per-index (FPI) parameter remains unknown, but the fact that many fish passed beyond Station 12 at various times seems evident. Without consistently fishing Station 12 each day, our suspicion regarding this possibility would have been much lower.

Historically, Ugashik and Egegik fish have been more represented by the inside stations (Stations 2-6). However, the stock composition shows catches from July 3-4 to be dominated by these stocks, even though 61% of the catch came from Stations 8-12. Likewise, 41% of the catch came from these stations on July 5, and still these stocks were the most represented. Maybe the run was generally distributed further offshore during these days and simply missed some of the fish from other stocks because they were passing beyond Station 12.

We should note that all samples collected at Station 12 have been included in each genetic stock composition. Also, when using catch indices to forecast inshore catch + escapement (C+E) over the coming days, we have included Station 12 in the Daily Catch Index (see Figure 1 to gauge the extent to which adding Station 12 to the Catch Index changes the seasonal pattern).

What's Left to Come

As we mentioned in our last interpretation, strong catches at Port Moller for the remainder of the season would make realizing the pre-season forecast of C+E all the more likely. Just looking at C+E through July 6 (we are limited to this date because escapement is lagged backwards by about 2 days across all districts), the run seems late and in line with either 2012 or 2015 (Figure 2). Looking at the cumulative Catch Index from Port Moller, the run is more similar to 2015.

Simply doubling the C+E to date puts the year-end total run at about 36 million. Forecasting C+E indicates the daily C+E should reach close to 3 million (and possibly higher) by July 14 (Figure 3; top graph). Comparing this year's C+E through this date to that from previous years makes the run magnitude bin of 35-45 million most likely without knowing this year's run timing (Figure 4).

Assuming a scenario of Port Moller catches declining precipitously for the remainder of the season puts this year's run timing at Port Moller about 4.5 days late. If so, estimated run timing inshore would be 3 days late (Figure 5), making the run magnitude bin >45 million more likely in Figure 4. Forecasting C+E for the remainder of the season assuming catches drop off quickly at Port Moller in the days ahead yields a total run forecast of 50 million (Figure 3; bottom graph).

The above forecast relies on the FPI remaining consistent to what it has been in recent days. Given that station catch patterns at Port Moller indicate many fish have been missed further offshore, it seems reasonable to assume FPI has not declined.

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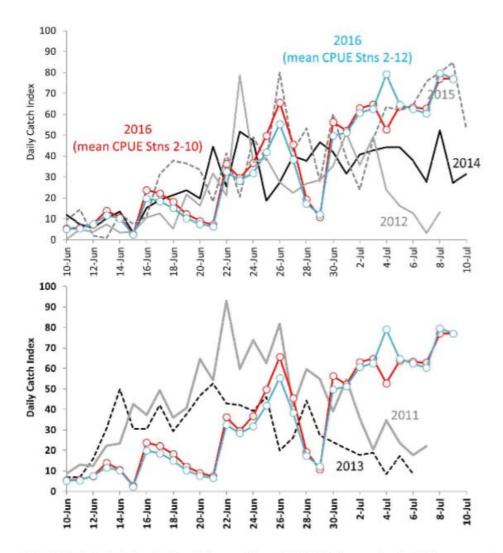


Figure 1. The Daily Catch Index for the Port Moller test fishery 2011-2016. Note: values do NOT represent a 3-day moving average as typically reported, but are instead the actual index estimates for each date.

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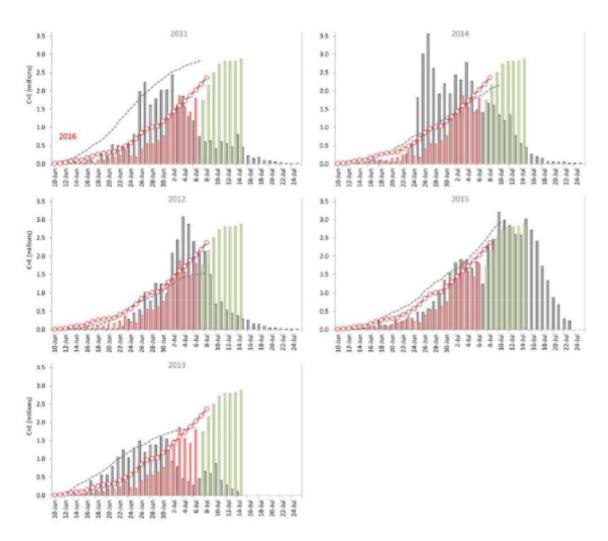


Figure 2. Observed catch + escapement (C+E) and the cumulative Daily Catch Index (scale not shown) for 2016 compared to previous years. Grey columns indicate observed C+E in past years, red columns are observed C+E in 2016, and green columns are forecasted C+E in 2016 through July 14. In all respects, the run seems to track closest to 2015.

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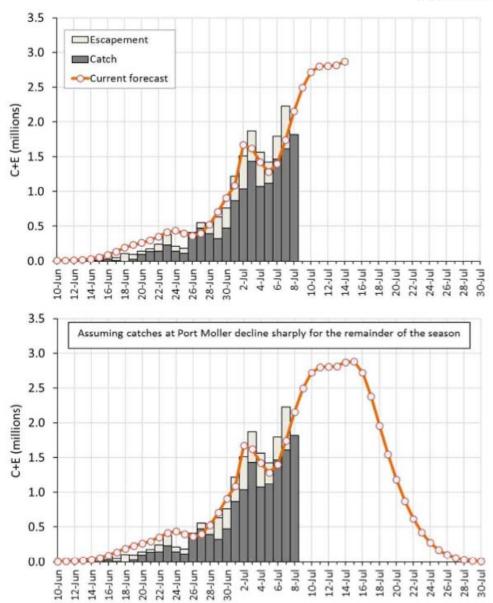


Figure 3. Forecasted and observed inshore catch + escapement (C+E). Note: C+E for recent days will increase with escapement yet to be reported because escapement is lagged backwards for each district.

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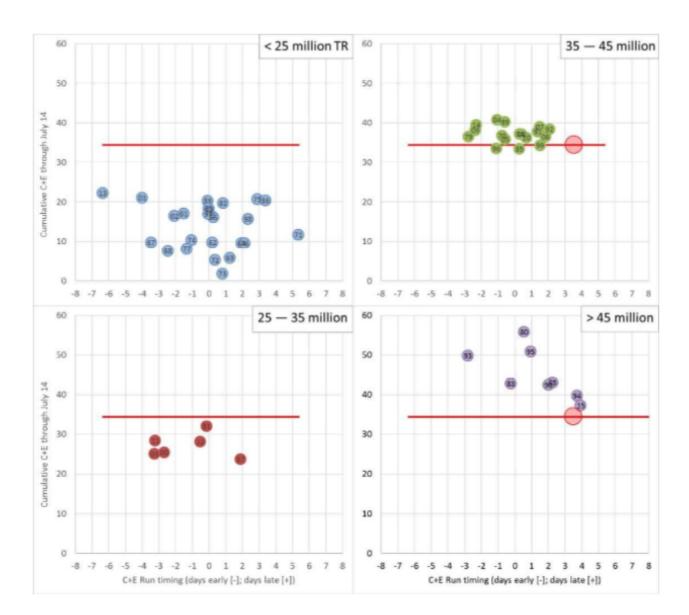


Figure 4. Cumulative catch + escapement through July 14 versus run timing in each year from the historical dataset. The red line indicates where C+E will be in 2016 if the top forecast from Figure 3 is correct (7-day travel time between Port Moller and the inshore districts). Based on historical patterns and without knowing run timing, the bin splitting the most points above and below the red line is more likely (i.e., 35-45 million). However, based on Port Moller (Figure 5) the estimated run timing is at least 3 days late (red circles), which makes the most likely bin >45 million.

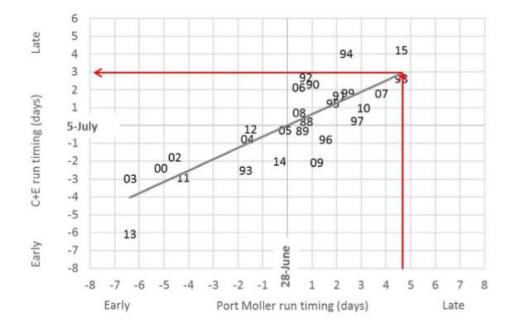


Figure 5. Comparison of run timing between C+E and Port Moller. Numbers indicate year of observation; 2016 coordinates were based on the estimated average day of return past Port Moller.

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APPENDIX B

ADF7G'S INSEASON STOCK COMPOSITION ESTIMATES FOR THE PORT MOLLER TEST FISHERY IN 2016

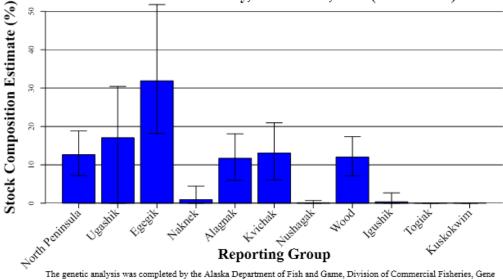
Inseason, each stock composition release contained a bar chart of historical comparisons to past years. To save space, this report reproduces only the final such historical comparison (released July 9–10, 2016). This final one captured all prior ones released throughout 2016; no information has been lost.

Port Moller Sockeye Salmon Stock Composition Summary June 21–22, 2016 – All Stations

Genetic stock composition estimates for sockeye salmon from the Port Moller Test Fishery for June 21-22, 2016. A total of 220 fish were sampled and 190 were analyzed (184 had adequate data to include in the analysis).

	Stock	90% Confidence Intervals		
	Composition			
Reporting Group	Estimate	Lower	Upper	
North Peninsula	12.7%	7.2%	18.8%	
Ugashik	17.1%	0.0%	30.4%	
Egegik	31.9%	18.1%	51.8%	
Naknek	0.9%	0.0%	4.4%	
Alagnak	11.7%	6.0%	18.1%	
Kvichak	13.1%	6.1%	20.9%	
Nushagak	0.1%	0.0%	0.7%	
Wood	12.0%	7.1%	17.4%	
Igushik	0.4%	0.0%	2.7%	
Togiak	0.0%	0.0%	0.0%	
Kuskokwim	0.1%	0.0%	0.0%	

Genetic Stock Composition Estimates for Sockeye Salmon Captured in the Port Moller Test Fishery, June 21–22, 2016 (All Stations).



Conservation Laboratory.

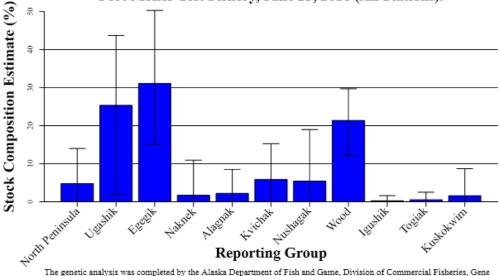
Port Moller Sockeye Salmon Stock Composition Summary

June 23, 2016 - All Stations

Genetic stock composition estimates for sockeye salmon from the Port Moller Test Fishery for June 23, 2016. A total of 163 fish were sampled and 163 were analyzed (160 had adequate data to include in the analysis). Note that these estimates are based upon 163 samples, markedly less than our goal of 190, resulting in reduced accuracy and precision that should be taken into account when interpreting these estimates.

	Stock	90%	%	
	Composition	Confidence Interva		
Reporting Group	Estimate	Lower	Upper	
North Peninsula	4.8%	0.0%	14.0%	
Ugashik	25.3%	1.9%	43.7%	
Egegik	31.1%	15.1%	50.3%	
Naknek	1.7%	0.0%	10.9%	
Alagnak	2.2%	0.0%	8.5%	
Kvichak	5.8%	0.0%	15.2%	
Nushagak	5.4%	0.0%	19.0%	
Wood	21.4%	12.1%	29.7%	
Igushik	0.3%	0.0%	1.6%	
Togiak	0.5%	0.0%	2.5%	
Kuskokwim	1.6%	0.0%	8.7%	

Genetic Stock Composition Estimates for Sockeye Salmon Captured in the Port Moller Test Fishery, June 23, 2016 (All Stations).



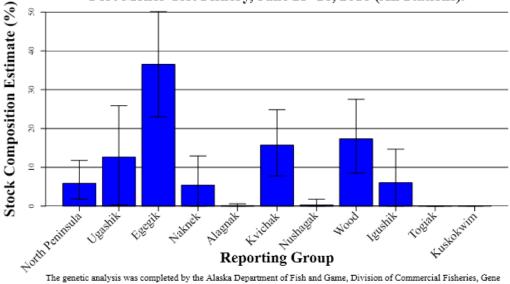
The genetic analysis was completed by the Alaska Department of Fish and Game, Division of Commercial Fisheries, Gene Conservation Laboratory.

Port Moller Sockeye Salmon Stock Composition Summary June 25-26, 2016 - All Stations

Genetic stock composition estimates for sockeye salmon from the Port Moller Test Fishery for June 25-26, 2016. A total of 348 fish were sampled and 190 were analyzed (183 had adequate data to include in the analysis).

	Stock	909	V6	
	Composition	Confidence Intervals		
Reporting Group	Estimate	Lower	Upper	
North Peninsula	5.9%	1.8%	11.8%	
Ugashik	12.6%	0.3%	25.9%	
Egegik	36.5%	23.0%	50.1%	
Naknek	5.4%	0.0%	12.9%	
Alagnak	0.1%	0.0%	0.6%	
Kvichak	15.7%	7.7%	24.8%	
Nushagak	0.3%	0.0%	1.8%	
Wood	17.3%	8.5%	27.5%	
Igushik	6.0%	0.0%	14.7%	
Togiak	0.0%	0.0%	0.0%	
Kuskokwim	0.1%	0.0%	0.1%	

Genetic Stock Composition Estimates for Sockeye Salmon Captured in the Port Moller Test Fishery, June 25-26, 2016 (All Stations).



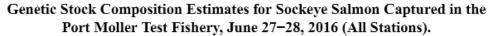
The genetic analysis was completed by the Alaska Department of Fish and Game, Division of Commercial Fisheries, Gene Conservation Laboratory.

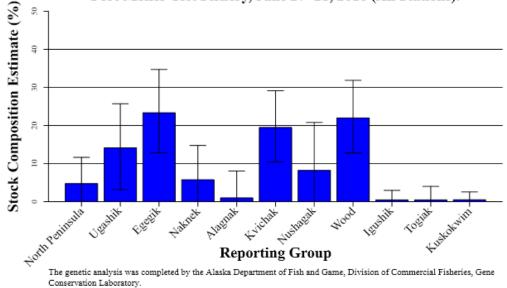
Port Moller Sockeye Salmon Stock Composition Summary

June 27-28, 2016 - All Stations

Genetic stock composition estimates for sockeye salmon from the Port Moller Test Fishery for June 27–28, 2016. A total of 146 fish were sampled and 146 were analyzed (139 had adequate data to include in the analysis). Note that these estimates are based upon 146 samples, markedly less than our goal of 190, resulting in reduced accuracy and precision that should be taken into account when interpreting these estimates.

	Stock	90%	6	
	Composition	Confidence Interval		
Reporting Group	Estimate	Lower	Upper	
North Peninsula	4.7%	0.0%	11.6%	
Ugashik	14.1%	3.1%	25.7%	
Egegik	23.4%	12.8%	34.7%	
Naknek	5.7%	0.0%	14.7%	
Alagnak	1.0%	0.0%	8.0%	
Kvichak	19.5%	10.4%	29.1%	
Nushagak	8.2%	0.0%	20.8%	
Wood	22.0%	12.8%	31.9%	
Igushik	0.4%	0.0%	2.9%	
Togiak	0.4%	0.0%	4.0%	
Kuskokwim	0.5%	0.0%	2.5%	



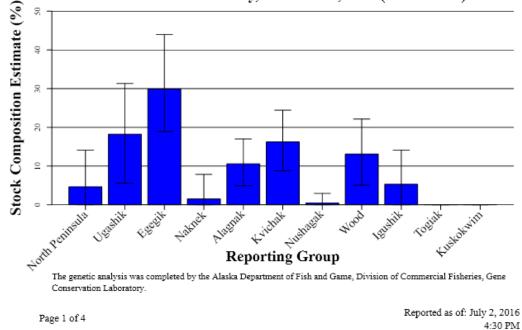


Port Moller Sockeye Salmon Stock Composition Summary June 29–30, 2016 – All Stations

Genetic stock composition estimates for sockeye salmon from the Port Moller Test Fishery for June 29-30, 2016. A total of 320 fish were sampled and 190 were analyzed (177 had adequate data to include in the analysis).

	Stock	909	V6	
	Composition	Confidence Intervals		
Reporting Group	Estimate	Lower	Upper	
North Peninsula	4.6%	0.0%	14.1%	
Ugashik	18.2%	5.6%	31.3%	
Egegik	29.9%	18.9%	44.0%	
Naknek	1.5%	0.0%	7.8%	
Alagnak	10.6%	4.9%	17.0%	
Kvichak	16.2%	8.8%	24.5%	
Nushagak	0.5%	0.0%	2.9%	
Wood	13.1%	5.0%	22.1%	
Igushik	5.3%	0.0%	14.1%	
Togiak	0.0%	0.0%	0.0%	
Kuskokwim	0.0%	0.0%	0.0%	

Genetic Stock Composition Estimates for Sockeye Salmon Captured in the Port Moller Test Fishery, June 29–30, 2016 (All Stations).

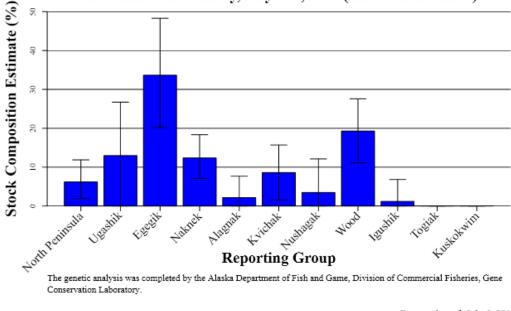


Port Moller Sockeye Salmon Stock Composition Summary July 1–2, 2016 – All Stations Fished

Genetic stock composition estimates for sockeye salmon from the Port Moller Test Fishery for July 1-2, 2016. A total of 272 fish were sampled and 190 were analyzed (183 had adequate data to include in the analysis).

	Stock	90% Confidence Intervals		
	Composition			
Reporting Group	Estimate	Lower	Upper	
North Peninsula	6.2%	1.9%	11.9%	
Ugashik	13.0%	0.0%	26.7%	
Egegik	33.7%	20.2%	48.3%	
Naknek	12.4%	7.1%	18.4%	
Alagnak	2.2%	0.0%	7.7%	
Kvichak	8.6%	1.6%	15.7%	
Nushagak	3.5%	0.0%	12.1%	
Wood	19.3%	11.1%	27.6%	
Igushik	1.2%	0.0%	6.8%	
Togiak	0.0%	0.0%	0.0%	
Kuskokwim	0.0%	0.0%	0.0%	

Genetic Stock Composition Estimates for Sockeye Salmon Captured in the Port Moller Test Fishery, July 1–2, 2016 (All Stations Fished).



Reported as of: July 6, 2016 8:00 AM

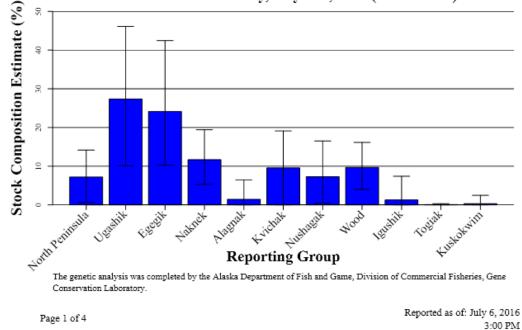
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Port Moller Sockeye Salmon Stock Composition Summary July 3–4, 2016 – All Stations

Genetic stock composition estimates for sockeye salmon from the Port Moller Test Fishery for July 3-4, 2016. A total of 418 fish were sampled and 190 were analyzed (187 had adequate data to include in the analysis).

	Stock	909	6	
	Composition	Confidence Intervals		
Reporting Group	Estimate	Lower	Upper	
North Peninsula	7.2%	0.6%	14.2%	
Ugashik	27.4%	10.1%	46.1%	
Egegik	24.1%	10.2%	42.5%	
Naknek	11.7%	5.3%	19.4%	
Alagnak	1.4%	0.0%	6.5%	
Kvichak	9.6%	0.0%	19.1%	
Nushagak	7.3%	0.5%	16.5%	
Wood	9.7%	4.0%	16.2%	
Igushik	1.3%	0.0%	7.4%	
Togiak	0.1%	0.0%	0.3%	
Kuskokwim	0.3%	0.0%	2.5%	

Genetic Stock Composition Estimates for Sockeye Salmon Captured in the Port Moller Test Fishery, July 3–4, 2016 (All Stations).

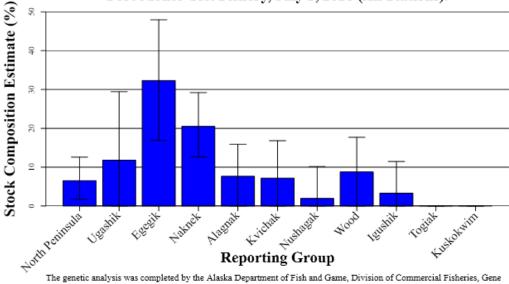


Port Moller Sockeye Salmon Stock Composition Summary July 5, 2016 - All Stations

Genetic stock composition estimates for sockeye salmon from the Port Moller Test Fishery for July 5, 2016. A total of 175 fish were sampled and analyzed (170 had adequate data to include in the analysis).

	Stock	90% Confidence Intervals		
	Composition			
Reporting Group	Estimate	Lower	Upper	
North Peninsula	6.5%	1.7%	12.6%	
Ugashik	11.8%	0.0%	29.4%	
Egegik	32.3%	16.9%	47.9%	
Naknek	20.5%	12.6%	29.2%	
Alagnak	7.7%	0.0%	15.9%	
Kvichak	7.2%	0.0%	16.8%	
Nushagak	2.0%	0.0%	10.2%	
Wood	8.8%	0.0%	17.7%	
Igushik	3.3%	0.0%	11.5%	
Togiak	0.0%	0.0%	0.0%	
Kuskokwim	0.0%	0.0%	0.0%	

Genetic Stock Composition Estimates for Sockeye Salmon Captured in the Port Moller Test Fishery, July 5, 2016 (All Stations).



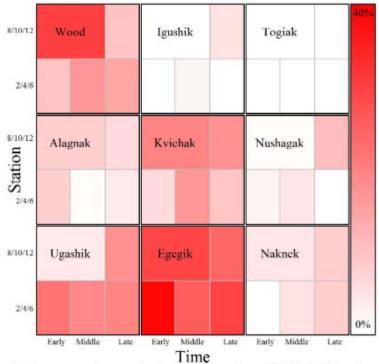
The genetic analysis was completed by the Alaska Department of Fish and Game, Division of Commercial Fisheries, Gene Conservation Laboratory.

Port Moller Sockeye Salmon Stock Composition Summary June 21–July 4, 2016 – Stations 2/4/6 and 8/10/12

This report summarizes genetic stock compositions for sockeye salmon captured at different stations of the Port Moller Test Fishery in 2016. We analyzed samples by stations to characterize the distribution of stocks across the test fishery transect.

When defining station-specific groups of samples, we balanced the goal of fine-scale temporal resolution of station catches with the requirement of adequate sample sizes and consistency of temporal periods among stations. As a result, we analyzed nearshore (2, 4, and 6) and offshore (8, 10, and 12) station-specific catches for three time periods. Catches and corresponding samples at nearshore stations allowed for three temporal strata (early, middle, and late), while sample sizes at offshore stations allowed for two temporal strata (early/middle and late).

The figure below summarizes the mean stock composition estimates for Bristol Bay groups while following pages provide details for each station group.



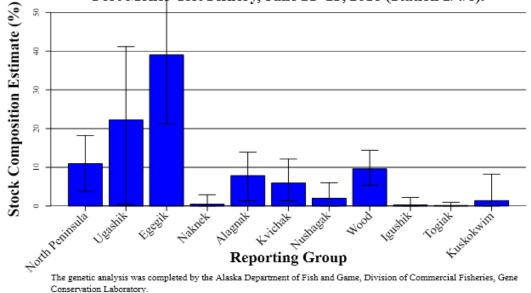
The figure above depicts mean estimates for the 9 major stocks within Bristol Bay for each spatiotemporal stratum of the Port Moller Test Fishery in 2016. Time periods are along the horizontal axis while stations are along the vertical axis. The darker the red the higher the estimate, with completely red equal to 40% and white equal to 0%. See following pages for details.

Port Moller Sockeye Salmon Stock Composition Summary June 21–23, 2016 – Station 2/4/6

Genetic stock composition estimates for sockeye salmon from the Port Moller Test Fishery for June 21-23, 2016. A total of 274 fish were sampled and 253 were analyzed (245 had adequate data to include in the analysis).

	Stock	909	V6	
	Composition	Confidence Interval		
Reporting Group	Estimate	Lower	Upper	
North Peninsula	10.9%	3.8%	18.2%	
Ugashik	22.3%	0.4%	41.2%	
Egegik	39.0%	21.3%	59.3%	
Naknek	0.5%	0.0%	2.9%	
Alagnak	7.9%	1.4%	13.9%	
Kvichak	5.9%	1.3%	12.1%	
Nushagak	2.0%	0.0%	6.0%	
Wood	9.6%	5.4%	14.4%	
Igushik	0.3%	0.0%	2.2%	
Togiak	0.2%	0.0%	1.0%	
Kuskokwim	1.4%	0.0%	8.2%	

Genetic Stock Composition Estimates for Sockeye Salmon Captured in the Port Moller Test Fishery, June 21–23, 2016 (Station 2/4/6).

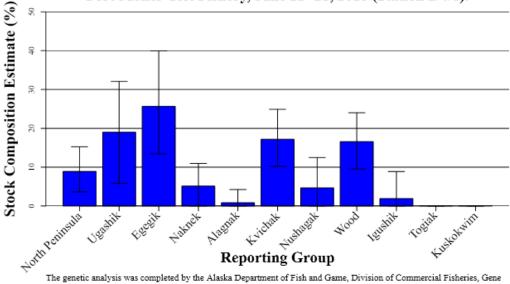


Port Moller Sockeye Salmon Stock Composition Summary June 25-28, 2016 - Station 2/4/6

Genetic stock composition estimates for sockeye salmon from the Port Moller Test Fishery for June 25-28, 2016. A total of 395 fish were sampled and 241 were analyzed (233 had adequate data to include in the analysis).

	Stock	90%	Vo	
	Composition	Confidence Intervals		
Reporting Group	Estimate	Lower	Upper	
North Peninsula	8.9%	3.7%	15.2%	
Ugashik	19.0%	5.8%	32.1%	
Egegik	25.7%	13.5%	39.9%	
Naknek	5.1%	0.0%	11.0%	
Alagnak	0.8%	0.0%	4.2%	
Kvichak	17.2%	10.2%	24.9%	
Nushagak	4.7%	0.0%	12.5%	
Wood	16.6%	9.6%	24.0%	
Igushik	1.9%	0.0%	8.9%	
Togiak	0.0%	0.0%	0.0%	
Kuskokwim	0.1%	0.0%	0.0%	

Genetic Stock Composition Estimates for Sockeye Salmon Captured in the Port Moller Test Fishery, June 25-28, 2016 (Station 2/4/6).



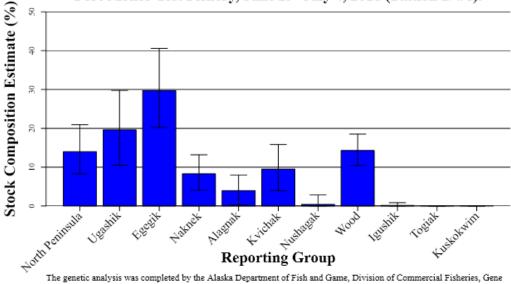
The genetic analysis was completed by the Alaska Department of Fish and Game, Division of Commercial Fisheries, Gene Conservation Laboratory.

Port Moller Sockeye Salmon Stock Composition Summary June 29–July 4, 2016 – Station 2/4/6

Genetic stock composition estimates for sockeye salmon from the Port Moller Test Fishery for June 29–July 4, 2016. A total of 513 fish were sampled and 297 were analyzed (281 had adequate data to include in the analysis).

Reporting Group	Stock Composition Estimate	90% Confidence Intervals	
		North Peninsula	14.0%
Ugashik	19.6%	10.5%	29.8%
Egegik	29.7%	20.2%	40.6%
Naknek	8.3%	4.1%	13.2%
Alagnak	4.0%	0.2%	8.0%
Kvichak	9.5%	4.0%	15.8%
Nushagak	0.4%	0.0%	2.9%
Wood	14.3%	10.4%	18.5%
Igushik	0.1%	0.0%	0.9%
Togiak	0.0%	0.0%	0.0%
Kuskokwim	0.0%	0.0%	0.0%

Genetic Stock Composition Estimates for Sockeye Salmon Captured in the Port Moller Test Fishery, June 29–July 4, 2016 (Station 2/4/6).



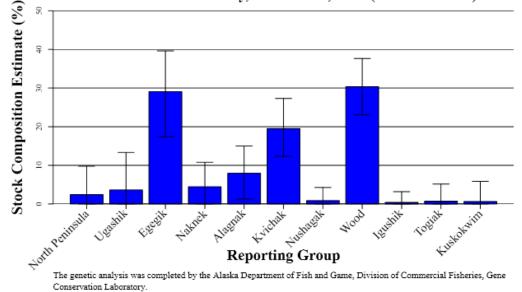
The genetic analysis was completed by the Alaska Department of Fish and Game, Division of Commercial Fisheries, Gene Conservation Laboratory.

Port Moller Sockeye Salmon Stock Composition Summary June 21–28, 2016 – Station 8/10/12

Genetic stock composition estimates for sockeye salmon from the Port Moller Test Fishery for June 21-28, 2016. A total of 208 fish were sampled and 195 were analyzed (188 had adequate data to include in the analysis).

Reporting Group	Stock Composition Estimate	90% Confidence Intervals	
		North Peninsula	2.4%
Ugashik	3.6%	0.0%	13.3%
Egegik	29.1%	17.4%	39.6%
Naknek	4.5%	0.0%	10.8%
Alagnak	8.0%	1.3%	15.0%
Kvichak	19.5%	12.4%	27.3%
Nushagak	0.8%	0.0%	4.3%
Wood	30.3%	23.0%	37.6%
Igushik	0.4%	0.0%	3.2%
Togiak	0.7%	0.0%	5.2%
Kuskokwim	0.6%	0.0%	5.9%

Genetic Stock Composition Estimates for Sockeye Salmon Captured in the Port Moller Test Fishery, June 21–28, 2016 (Station 8/10/12).

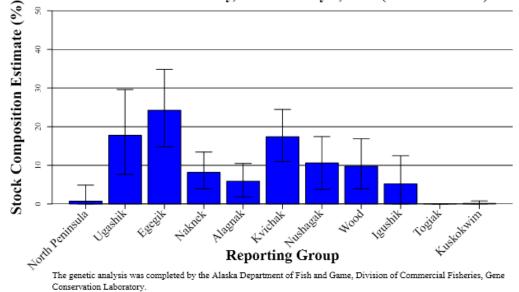


Port Moller Sockeye Salmon Stock Composition Summary June 29–July 4, 2016 – Station 8/10/12

Genetic stock composition estimates for sockeye salmon from the Port Moller Test Fishery for June 29–July 4, 2016. A total of 497 fish were sampled and 273 were analyzed (266 had adequate data to include in the analysis).

Reporting Group	Stock Composition Estimate	90% Confidence Intervals	
		North Peninsula	0.7%
Ugashik	17.8%	7.7%	29.6%
Egegik	24.3%	14.8%	34.8%
Naknek	8.2%	3.9%	13.4%
Alagnak	5.9%	1.8%	10.5%
Kvichak	17.4%	11.0%	24.5%
Nushagak	10.6%	3.7%	17.4%
Wood	9.8%	3.9%	16.9%
Igushik	5.2%	0.0%	12.5%
Togiak	0.0%	0.0%	0.0%
Kuskokwim	0.1%	0.0%	0.8%

Genetic Stock Composition Estimates for Sockeye Salmon Captured in the Port Moller Test Fishery, June 29–July 4, 2016 (Station 8/10/12).

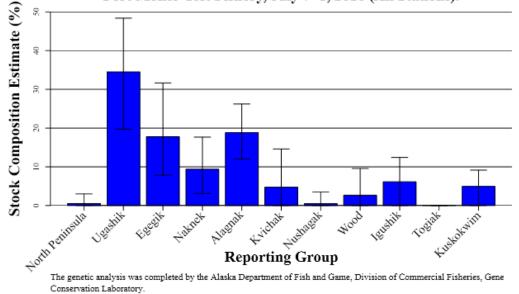


Port Moller Sockeye Salmon Stock Composition Summary July 7–8, 2016 – All Stations

Genetic stock composition estimates for sockeye salmon from the Port Moller Test Fishery for July 7-8, 2016. A total of 404 fish were sampled and 190 were analyzed (179 had adequate data to include in the analysis).

Reporting Group	Stock Composition Estimate	90% Confidence Intervals	
		North Peninsula	0.5%
Ugashik	34.5%	19.7%	48.4%
Egegik	17.8%	7.8%	31.7%
Naknek	9.4%	3.1%	17.7%
Alagnak	18.8%	12.0%	26.2%
Kvichak	4.7%	0.0%	14.6%
Nushagak	0.5%	0.0%	3.5%
Wood	2.7%	0.0%	9.5%
Igushik	6.1%	0.0%	12.4%
Togiak	0.0%	0.0%	0.0%
Kuskokwim	5.0%	0.0%	9.2%

Genetic Stock Composition Estimates for Sockeye Salmon Captured in the Port Moller Test Fishery, July 7–8, 2016 (All Stations).

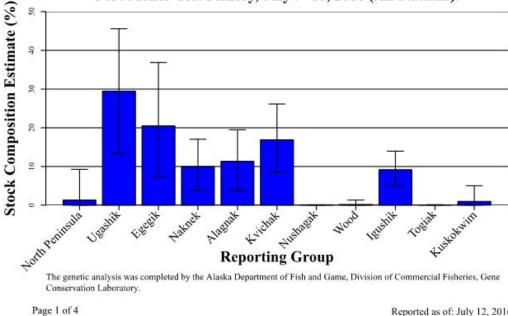


Port Moller Sockeye Salmon Stock Composition Summary July 9–10, 2016 – All Stations

Genetic stock composition estimates for sockeye salmon from the Port Moller Test Fishery for July 9–10, 2016. A total of 397 fish were sampled and 190 were analyzed (184 had adequate data to include in the analysis).

Reporting Group	Stock Composition Estimate	90% Confidence Intervals	
		North Peninsula	1.3%
Ugashik	29.5%	13.3%	45.6%
Egegik	20.5%	7.4%	36.8%
Naknek	10.0%	3.8%	17.1%
Alagnak	11.3%	3.8%	19.5%
Kvichak	16.9%	8.5%	26.1%
Nushagak	0.1%	0.0%	0.1%
Wood	0.2%	0.0%	1.3%
Igushik	9.2%	5.0%	13.9%
Togiak	0.1%	0.0%	0.1%
Kuskokwim	1.0%	0.0%	5.0%

Genetic Stock Composition Estimates for Sockeye Salmon Captured in the Port Moller Test Fishery, July 9–10, 2016 (All Stations).



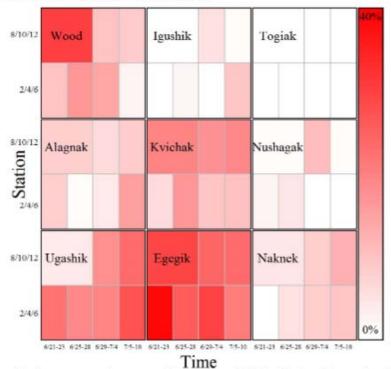
Reported as of: July 12, 2016 4:00 PM

Port Moller Sockeye Salmon Stock Composition Summary June 21–July 10, 2016 – Stations 2/4/6 and 8/10/12

This report summarizes genetic stock compositions for sockeye salmon captured at inshore and offshore stations of the Port Moller Test Fishery in 2016. We analyzed samples by stations to characterize the distribution of stocks across the test fishery transect.

When defining station-specific groups of samples, we balanced the goal of fine-scale temporal resolution of station catches with the requirement of adequate sample sizes and consistency of temporal periods among stations. As a result, we analyzed nearshore (2, 4, and 6) and offshore (8, 10, and 12) station-specific catches for up to four time periods. Catches and corresponding samples at nearshore stations allowed for four temporal strata (6/21-23, 6/25-28, 6/29-7/4, and 7/5-10), while sample sizes at offshore stations required grouping samples from the first two time periods.

The figure below summarizes the mean stock composition estimates for Bristol Bay groups while following pages provide details for each station group.



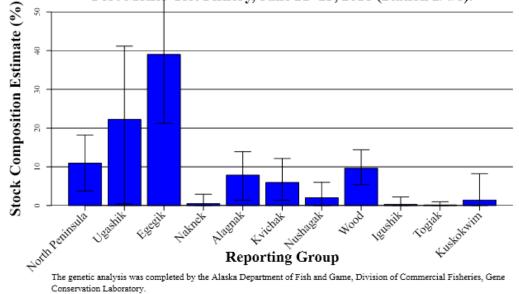
The figure above depicts mean stock composition estimate (%) for the 9 major stocks within Bristol Bay for each spatiotemporal stratum of the Port Moller Test Fishery in 2016. Time periods are along the horizontal axis while stations are along the vertical axis. The darker the red the higher the estimate, with completely red equal to 40% and white equal to 0%. See following pages for details.

Port Moller Sockeye Salmon Stock Composition Summary June 21–23, 2016 – Station 2/4/6

Genetic stock composition estimates for sockeye salmon from the Port Moller Test Fishery for June 21-23, 2016. A total of 274 fish were sampled and 253 were analyzed (245 had adequate data to include in the analysis).

	Stock	90%			
	Composition	Confidence Interval			
Reporting Group	Estimate	Lower	Upper		
North Peninsula	10.9%	3.8%	18.2%		
Ugashik	22.3%	0.4%	41.2%		
Egegik	39.0%	21.3%	59.3%		
Naknek	0.5%	0.0%	2.9%		
Alagnak	7.9%	1.4%	13.9%		
Kvichak	5.9%	1.3%	12.1%		
Nushagak	2.0%	0.0%	6.0%		
Wood	9.6%	5.4%	14.4%		
Igushik	0.3%	0.0%	2.2%		
Togiak	0.2%	0.0%	1.0%		
Kuskokwim	1.4%	0.0%	8.2%		

Genetic Stock Composition Estimates for Sockeye Salmon Captured in the Port Moller Test Fishery, June 21–23, 2016 (Station 2/4/6).

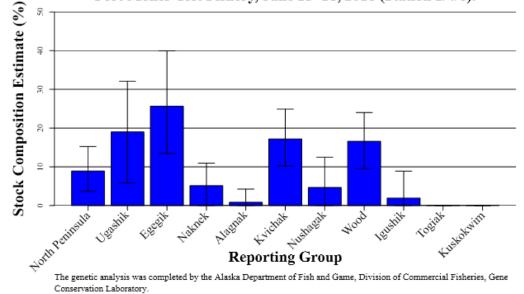


Port Moller Sockeye Salmon Stock Composition Summary June 25–28, 2016 – Station 2/4/6

Genetic stock composition estimates for sockeye salmon from the Port Moller Test Fishery for June 25-28, 2016. A total of 395 fish were sampled and 241 were analyzed (233 had adequate data to include in the analysis).

	Stock	90%			
	Composition	Confidence Interval			
Reporting Group	Estimate	Lower	Upper		
North Peninsula	8.9%	3.7%	15.2%		
Ugashik	19.0%	5.8%	32.1%		
Egegik	25.7%	13.5%	39.9%		
Naknek	5.1%	0.0%	11.0%		
Alagnak	0.8%	0.0%	4.2%		
Kvichak	17.2%	10.2%	24.9%		
Nushagak	4.7%	0.0%	12.5%		
Wood	16.6%	9.6%	24.0%		
Igushik	1.9%	0.0%	8.9%		
Togiak	0.0%	0.0%	0.0%		
Kuskokwim	0.1%	0.0%	0.0%		

Genetic Stock Composition Estimates for Sockeye Salmon Captured in the Port Moller Test Fishery, June 25–28, 2016 (Station 2/4/6).

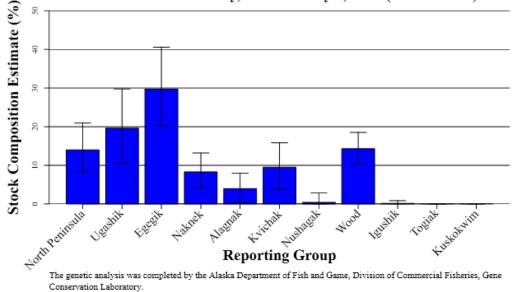


Port Moller Sockeye Salmon Stock Composition Summary June 29–July 4, 2016 – Station 2/4/6

Genetic stock composition estimates for sockeye salmon from the Port Moller Test Fishery for June 29–July 4, 2016. A total of 513 fish were sampled and 297 were analyzed (281 had adequate data to include in the analysis).

	Stock	90%			
	Composition	Confidence Interval			
Reporting Group	Estimate	Lower	Upper		
North Peninsula	14.0%	8.3%	20.9%		
Ugashik	19.6%	10.5%	29.8%		
Egegik	29.7%	20.2%	40.6%		
Naknek	8.3%	4.1%	13.2%		
Alagnak	4.0%	0.2%	8.0%		
Kvichak	9.5%	4.0%	15.8%		
Nushagak	0.4%	0.0%	2.9%		
Wood	14.3%	10.4%	18.5%		
Igushik	0.1%	0.0%	0.9%		
Togiak	0.0%	0.0%	0.0%		
Kuskokwim	0.0%	0.0%	0.0%		

Genetic Stock Composition Estimates for Sockeye Salmon Captured in the Port Moller Test Fishery, June 29–July 4, 2016 (Station 2/4/6).

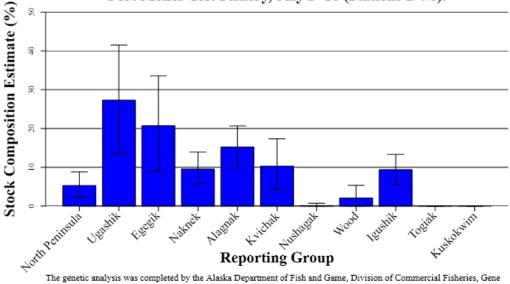


Port Moller Sockeye Salmon Stock Composition Summary July 5-10, 2016 - Stations 2/4/6

Genetic stock composition estimates for sockeye salmon from stations 2, 4 and 6 of the Port Moller Test Fishery for July 5-10. A total of 663 fish were sampled and 348 were analyzed (334 had adequate data to include in the analysis).

	Stock	90%	V6	
	Composition	Confidence Interval		
Reporting Group	Estimate	Lower	Upper	
North Peninsula	5.3%	2.4%	8.8%	
Ugashik	27.3%	13.6%	41.5%	
Egegik	20.7%	8.9%	33.6%	
Naknek	9.6%	5.7%	14.0%	
Alagnak	15.2%	10.3%	20.7%	
Kvichak	10.3%	4.2%	17.3%	
Nushagak	0.1%	0.0%	0.8%	
Wood	2.1%	0.0%	5.4%	
Igushik	9.4%	5.7%	13.3%	
Togiak	0.0%	0.0%	0.0%	
Kuskokwim	0.0%	0.0%	0.0%	

Genetic Stock Composition Estimates for Sockeye Salmon Captured in the Port Moller Test Fishery, July 5-10 (Stations 2/4/6).



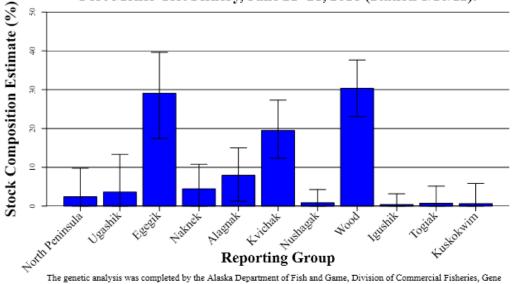
The genetic analysis was completed by the Alaska Department of Fish and Game, Division of Commercial Fisheries, Gene Conservation Laboratory.

Port Moller Sockeye Salmon Stock Composition Summary June 21–28, 2016 – Station 8/10/12

Genetic stock composition estimates for sockeye salmon from the Port Moller Test Fishery for June 21-28, 2016. A total of 208 fish were sampled and 195 were analyzed (188 had adequate data to include in the analysis).

	Stock	90%			
	Composition	Confidence Interval			
Reporting Group	Estimate	Lower	Upper		
North Peninsula	2.4%	0.0%	9.8%		
Ugashik	3.6%	0.0%	13.3%		
Egegik	29.1%	17.4%	39.6%		
Naknek	4.5%	0.0%	10.8%		
Alagnak	8.0%	1.3%	15.0%		
Kvichak	19.5%	12.4%	27.3%		
Nushagak	0.8%	0.0%	4.3%		
Wood	30.3%	23.0%	37.6%		
Igushik	0.4%	0.0%	3.2%		
Togiak	0.7%	0.0%	5.2%		
Kuskokwim	0.6%	0.0%	5.9%		

Genetic Stock Composition Estimates for Sockeye Salmon Captured in the Port Moller Test Fishery, June 21–28, 2016 (Station 8/10/12).



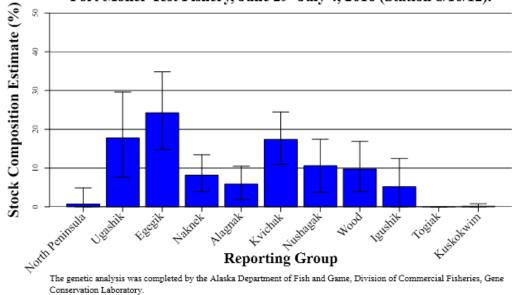
The genetic analysis was completed by the Alaska Department of Fish and Game, Division of Commercial Fisheries, Conservation Laboratory.

Port Moller Sockeye Salmon Stock Composition Summary June 29–July 4, 2016 – Station 8/10/12

Genetic stock composition estimates for sockeye salmon from the Port Moller Test Fishery for June 29–July 4, 2016. A total of 497 fish were sampled and 273 were analyzed (266 had adequate data to include in the analysis).

	Stock	90%			
	Composition	Confidence Interval			
Reporting Group	Estimate	Lower	Upper		
North Peninsula	0.7%	0.0%	4.9%		
Ugashik	17.8%	7.7%	29.6%		
Egegik	24.3%	14.8%	34.8%		
Naknek	8.2%	3.9%	13.4%		
Alagnak	5.9%	1.8%	10.5%		
Kvichak	17.4%	11.0%	24.5%		
Nushagak	10.6%	3.7%	17.4%		
Wood	9.8%	3.9%	16.9%		
Igushik	5.2%	0.0%	12.5%		
Togiak	0.0%	0.0%	0.0%		
Kuskokwim	0.1%	0.0%	0.8%		

Genetic Stock Composition Estimates for Sockeye Salmon Captured in the Port Moller Test Fishery, June 29–July 4, 2016 (Station 8/10/12).

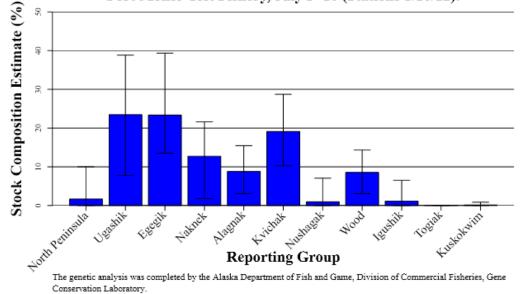


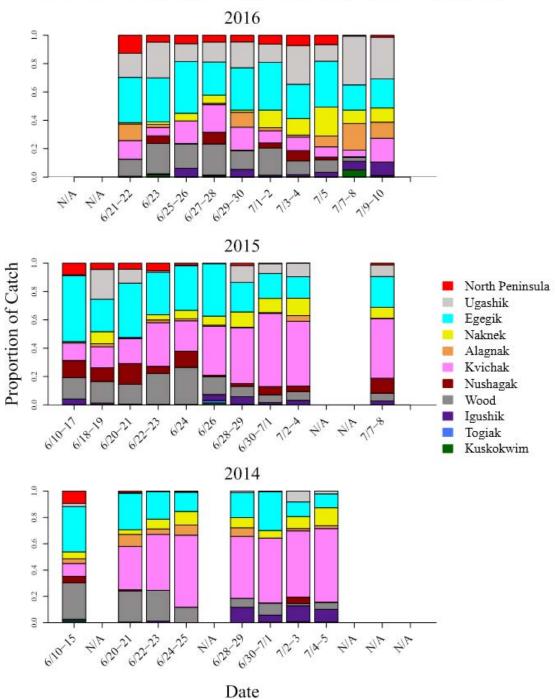
Port Moller Sockeye Salmon Stock Composition Summary July 5–10, 2016 – Stations 8/10/12

Genetic stock composition estimates for sockeye salmon from stations 8, 10 and 12 of the Port Moller Test Fishery for July 5–10. A total of 343 fish were sampled and 207 were analyzed (199 had adequate data to include in the analysis).

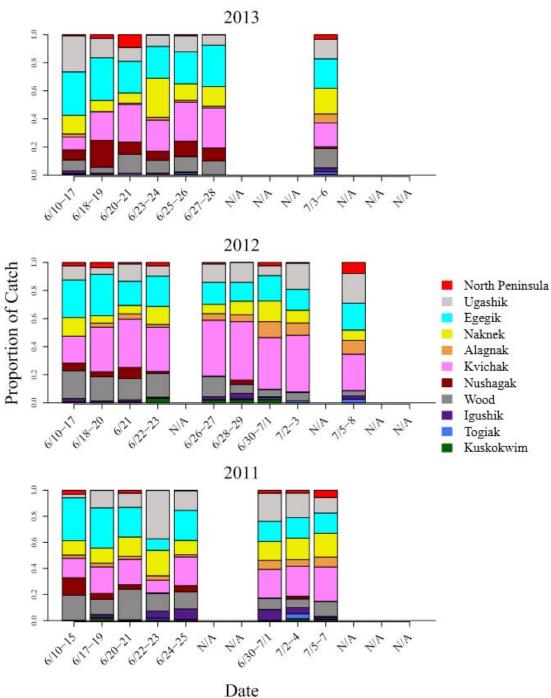
	Stock	90%			
	Composition	Confidence Interval			
Reporting Group	Estimate	Lower	Upper		
North Peninsula	1.7%	0.0%	10.0%		
Ugashik	23.5%	7.8%	38.8%		
Egegik	23.4%	13.5%	39.3%		
Naknek	12.7%	1.8%	21.6%		
Alagnak	8.8%	3.1%	15.5%		
Kvichak	19.1%	10.3%	28.7%		
Nushagak	1.0%	0.0%	7.1%		
Wood	8.6%	3.1%	14.3%		
Igushik	1.2%	0.0%	6.5%		
Togiak	0.0%	0.0%	0.1%		
Kuskokwim	0.1%	0.0%	0.9%		

Genetic Stock Composition Estimates for Sockeye Salmon Captured in the Port Moller Test Fishery, July 5–10 (Stations 8/10/12).

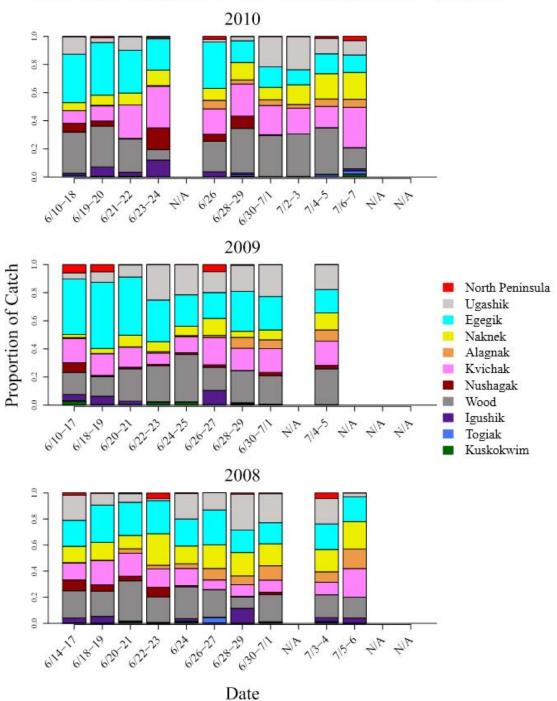




Historical Comparison of Stock Composition Estimates



Historical Comparison of Stock Composition Estimates



Historical Comparison of Stock Composition Estimates

APPENDIX C

ADF&G'S INSEASON AGE COMPOSITION ESTIMATES FOR THE PORT MOLLER TEST FISHERY IN 2016

Only the final age composition estimate (July 20, 2016) is reproduced here. This final one contains all prior estimates released throughout 2016; no information has been lost.

							Age Co	mpositio	n (Perce	at)		
Period	Start	End	Sample	Index	11	21	12	22	03	13	23	14
ckeye Salm	on											
ort Moller		- 1										
	ler Test F	-										
		06/15/2016	53	35	0.0	0.0	24.5	39.6	0.0	32.1	3.8	0
		06/18/2016	100	64	0.0	1.0	37.0	10.0	0.0	52.0	0.0	0
		06/22/2016	191	43	0.0	0.0	25.1	26.2	0.0	36.1	12.6	0
	06/23/2016	06/23/2016	128	29	0.0	0.0	30.5	16.4	0.0	38.3	14.8	0
	06/25/2016	06/26/2016	300	116	0.0	0.0	21.3	21.0	0.0	43.7	13.7	0
		06/28/2016	123	65	0.0	0.0	24.4	22.0	0.0	41.5	12.2	0
	06/29/2016	06/30/2016	256	67	0.0	0.0	18.0	18.0	0.0	50.0	14.1	0
		07/02/2016	219	115	0.0	0.0	14.6	22.8	0.0	38.4	24.2	0
		07/04/2016	250	118	0.0	0.0	10.4	18.8	0.0	50.0	19.6	1
		07/05/2016	127	64	0.0	0.0	11.8	19.7	0.0	47.2	21.3	0
		07/08/2016	300	140	0.0	0.0	30.3	11.3	0.0	47.0	11.3	0
		07/10/2016	268	138	0.4	0.0	15.7	32.5	0.0	32.1	19.0	0
13	07/11/2016	07/12/2016	99	50	0.0	0.0	11.1	41.4	0.0	27.3	20.2	0
Port Me	oller Test Fi	-	2,414	1,044	0.0	0.1	20.2	22.0	0.0	42.1	15.4	0
		Forecast					35.0	24.5	0.0	27.3	13.0	0
Jgashik Dis		oller Total	2,414	1,044	0.0	0.1	20.2	22.0	0.0	42.1	15.4	0
-	District H	acuast										
3		06/22/2016	338	60,644	0.0	0.0	26.3	26.9	0.0	29.3	16.9	0
		06/27/2016	416	143,269	0.0	0.0	31.3	23.8	0.0	36.1	8.4	0
		06/30/2016	217	143,209	0.5	0.5	25.8	34.6	0.0	24.4	14.3	0
		07/02/2016	408	265,028	0.0	0.0	23.8	27.7	0.0	30.6	14.5	0
		07/04/2016	435	315,510	0.0	0.0	24.5	29.4	0.0	35.6	12.6	0
				-								
		07/06/2016	416	635,673	0.0	0.0	19.5	24.5	0.0	33.9	21.9 17.3	0
		07/08/2016	428	571,066	0.0	0.0	25.2	22.9	0.0	34.1		0
		07/10/2016	423	615,125	0.0	0.0	14.2	41.8	0.0	23.2	20.3	0
		07/12/2016	432	668,611	0.0	0.0	24.1	38.7	0.0	24.5	12.7	0
		07/14/2016	381	775,599	0.0	0.0	40.2	20.5	0.0	33.1	6.0	0
		07/16/2016	435	925,180	0.0	0.0	43.7	19.3	0.0	29.9	7.1	0
Ugashi	k District Ha		4,329	5,128,434	0.0	0.0	28.6	27.5	0.0	30.2	13.4	0
Headel	Dinas Fra	Forecast					74.1	9.8	0.0	10.9	5.3	0
-	River Esc	-		407.052			60.1	20.4				
		07/10/2016	646	437,052	3.9	0.5	60.1	20.4	0.0	13.8	1.4	0
Ugashik I	liver Escape	ment Total Forecast	646	437,052	3.9	0.5	60.1 74.1	20.4 9.8	0.0 0.0	13.8 10.9	1.4 10.9	0 0
		rorecast					/ 4.1	9.0	0.0	10.9	10.9	0

Bristol Bay Salmon Fishery - Age Composition Summary

Alaska Department of Fish and Game, Division of Commercial Fisheries

							Age Co	ompositio	n (Perce	nt)		
Period	Start	End	Sample	Index	11	21	12	22	03	13	23	1
egik Dist	trict											
Egegik i	District Ha	rvest										
1	06/07/2016	06/22/2016	427	138,587	0.5	1.6	29.7	36.5	0.0	22.0	9.6	0.
2	06/23/2016	06/24/2016	429	151,930	0.0	0.2	12.6	49.0	0.0	8.6	28.7	0.
3	06/25/2016	06/26/2016	370	193,959	0.0	1.1	12.4	45.4	0.0	11.6	28.4	0.
4	06/27/2016	06/29/2016	415	272,125	0.2	0.5	20.2	40.2	0.0	14.0	24.6	0.
5	06/30/2016	07/01/2016	387	470,584	0.0	0.5	12.1	49.4	0.0	14.7	22.5	0.
б	07/02/2016	07/03/2016	417	656,100	0.0	0.5	13.9	44.4	0.0	14.1	26.6	0.
7	07/04/2016	07/05/2016	430	670,940	0.0	0.2	15.1	44.2	0.0	14.9	24.9	0.
8	07/06/2016	07/07/2016	427	1,044,885	0.0	0.0	10.3	39.6	0.0	16.9	32.3	0.
9	07/08/2016	07/09/2016	207	802,426	0.0	0.0	9.7	33.8	0.0	15.9	40.1	0.
10	07/10/2016	07/11/2016	430	889,564	0.0	0.2	9.8	53.0	0.0	11.4	23.7	0.
11	07/12/2016	07/13/2016	426	589,805	0.0	0.0	20.2	44.1	0.0	15.0	19.7	0.
12	07/14/2016	07/15/2016	436	729,415	0.0	0.0	22.0	38.8	0.0	15.6	22.9	0.
13	07/16/2016	07/17/2016	423	613,008	0.0	0.9	55.1	20.8	0.0	18.9	4.3	0.
Egeg	ik District Ha	uvest Total	5,224	7,223,328	0.0	0.3	17.7	41.1	0.0	15.1	25.0	0.
		Forecast					4.1	42.1	0.0	6.8	47.0	0.
Egegik	River Escaj	pement										
1	06/12/2016	06/30/2016	525	481,140	5.1	25.9	6.9	48.2	0.0	2.3	11.0	0.
2	07/01/2016	07/12/2016	694	981,204	10.2	19.3	25.4	34.1	0.0	4.9	5.8	0.
Egegik	River Escape	ment Total	1,219	1,462,344	8.6	21.5	19.3	38.8	0.0	4.0	7.5	0.
		Forecast					4.1	42.1	0.0	6.8	47.0	0.
	Egegik Di	strict Total	6,443	8,685,672	1.5	3.9	18.0	40.7	0.0	13.2	22.1	0.

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							Age Co	ompositio	n (Perce	nt)		
Period	Start	End	Sample	Index	11	21	12	22	03	13	23	1
aknek-Kv	ichak Dist	rict										
Naknek-	Kvichak L	District Ha	rvest									
1	06/13/2016	07/02/2016	360	473,035	0.0	0.0	44.2	16.1	0.0	26.9	12.8	0
2	07/03/2016	07/04/2016	422	519,756	0.0	0.0	30.3	17.8	0.0	28.0	23.5	0
5	07/05/2016	07/06/2016	370	368,522	0.0	0.3	20.3	28.6	0.0	23.0	27.3	0
6	07/07/2016	07/08/2016	853	1,004,226	0.0	0.1	33.9	19.6	0.0	27.3	19.0	0
7	07/09/2016	07/10/2016	426	1,274,896	0.0	0.0	23.5	24.4	0.0	31.2	20.4	0
8	07/11/2016	07/12/2016	425	1,668,646	0.0	0.0	40.2	20.9	0.0	25.6	13.2	0
9	07/13/2016	07/14/2016	431	1,630,055	0.0	0.0	49.0	18.3	0.0	27.4	5.3	0
10	07/15/2016	07/16/2016	409	1,814,111	0.0	0.0	52.8	11.5	0.0	33.0	2.7	0
11	07/17/2016	07/18/2016	420	1,485,520	0.0	0.0	64.3	10.5	0.0	24.3	1.0	0
aknek-Kvicha	k District He	rvest Total	4,116	10,238,767	0.0	0.0	43.6	17.5	0.0	28.0	10.8	(
		Forecast					30.3	32.8	0.0	27.5	9.4	
Kvichak	River Esc	apement										
1	06/16/2016	07/07/2016	495	877,512	0.2	0.0	75.4	12.9	0.0	7.3	4.2	(
2	07/08/2016	07/11/2016	639	1,199,532	0.0	0.0	66.5	18.6	0.0	10.5	4.4	(
3	07/12/2016	07/14/2016	310	1,034,358	0.0	0.0	73.5	13.5	0.0	11.3	1.6	(
Kvichak 1	River Escape	ment Total	1,444	3,111,402	0.1	0.0	71.3	15.3	0.0	9.8	3.4	(
		Forecast					33.9	48.0	0.0	9.8	8.3	
Kvichak	Section H	arvest - Se	t									
1	06/13/2016	07/04/2016	396	174,837	0.0	0.0	65.9	16.9	0.0	12.4	4.8	(
2	07/05/2016	07/07/2016	417	160,300	0.0	0.0	26.9	22.1	0.0	31.4	19.7	(
3	07/08/2016	07/14/2016	419	418,092	0.2	0.0	46.8	23.9	0.0	22.2	6.9	(
Kvichak Sec	tion Harvest	- Set Total	1,232	753,229	0.1	0.0	47.0	21.9	0.0	21.9	9.1	(
		Forecast					33.9	48.0	0.0	9.8	8.3	(
Naknek	River Esco	ıpement										
1	06/14/2016	07/03/2016	478	467,088	3.1	0.6	55.6	24.3	0.0	10.0	5.9	(
2	07/04/2016	07/10/2016	434	445,488	4.8	0.5	44.2	27.0	0.0	15.7	7.8	(
Naknek I	River Escape		912	912,576	4.0	0.5	50.1	25.6	0.0	12.8	6.8	(
		Forecast					19.7	30.2	0.0	29.6	20.6	6
Naknek	-Kvichak Di	strict Total	7,704	15,015,974	0.3	0.0	49.9	17.8	0.0	23.0	8.9	. (

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							Age Co	ompositio	n (Perce	nt)		
Period	Start	End	Sample	Index	11	21	12	22	03	13	23	1
Nushagak D	District											
Nushaga	ık District	Harvest										
1	06/13/2016	06/23/2016	468	298,460	0.0	0.0	20.3	0.9	0.0	77.1	0.2	1
2	06/24/2016	06/26/2016	242	248,425	0.0	0.0	49.2	2.9	0.0	46.3	0.8	0
3	06/27/2016	06/28/2016	383	422,153	0.0	0.0	38.9	1.8	0.0	59.3	0.0	0
4	06/29/2016	07/02/2016	171	945,452	0.0	0.0	31.6	0.6	0.0	66.7	0.6	0
5	07/03/2016	07/04/2016	222	763,991	0.0	0.0	16.7	3.2	0.0	78.4	1.8	0
6	07/05/2016	07/06/2016	364	666,780	0.0	0.0	38.7	4.1	0.0	54.1	2.5	0
7	07/07/2016	07/08/2016	652	765,601	0.0	0.0	34.7	2.0	0.0	62.1	0.8	0
8	07/09/2016	07/10/2016	446	621,060	0.2	0.0	46.9	5.2	0.0	47.5	0.2	0
9	07/11/2016	07/12/2016	417	721,120	0.0	0.0	30.9	2.4	0.0	65.2	1.0	0
10	07/13/2016	07/14/2016	487	563,586	0.4	0.0	37.0	0.0	0.0	62.6	0.0	0
Nushaga	k District Ha	uvest Total	3.852	6.016.628	0.1	0.0	33.6	2.3	0.0	62.8	0.9	-
		Forecast	-,	-,,			50.0	1.8	0.0	46.2	1.0	6
Igushik .	Section H	arvest -Set										
1	06/13/2016	07/03/2016	546	320,328	0.0	0.0	6.2	0.4	0.0	91.8	1.5	0
Igushik See	ction Harves	t-Set Total	546	320,328	0.0	0.0	6.2	0.4	0.0	91.8	1.5	6
		Forecast					11.7	1.8	0.0	85.3	1.3	0
Wood Ri	iver Escap	ement										
1	06/14/2016	07/05/2016	347	622,557	17.9	0.0	62.8	2.6	0.0	16.1	0.3	(
Wood 1	River Escape	ment Total	347	622,557	17.9	0.0	62.8	2.6	0.0	16.1	0.3	
	-	Forecast					65.1	2.2	0.0	31.6	1.1	6
Nushaga	ık River E	scapement										
1	06/06/2016	07/12/2016	778	597,526	0.8	0.0	34.7	0.3	0.0	63.2	0.1	0
Nushagak l	River Escape	ment Total	778	597,526	0.8	0.0	34.7	0.3	0.0	63.2	0.1	6
		Forecast					7.9	0.2	0.0	84.8	0.2	6
N	Nushagak Di	strict Total	5,523	7,557,039	1.6	0.0	34.9	2.1	0.0	60.2	0.8	0
Fogiak Dist												
Togiak S	Section Ha	rvest										
1	06/14/2016	07/02/2016	352	49,047	0.0	0.0	10.5	0.9	0.0	86.9	0.3	(
2	07/03/2016	07/09/2016	474	133,852	0.0	0.0	13.1	1.1	0.0	84.4	0.6	0
Togia	k Section He	uvest Total	826	182,899	0.0	0.0	12.4	1.0	0.0	85.1	0.5	6
		Forecast					18.8	3.6	0.0	74.4	3.2	0
	Togiak Di	strict Total	826	182,899	0.0	0.0	12.4	1.0	0.0	85.1	0.5	0
	Sockeye Sa	lmon Total	27,885	37,008,114	0.8	0.9	36.3	21.3	0.0	29.5	10.8	0

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APPENDIX D

ADF&G'S DAILY RUN SUMMARIES FOR BRISTOL BAY IN 2016

through 06/15/2016

		Catch Dally	Cumulative	Escapement Dally	Cumulative	In-River Estimate	Total Run
Bristol	Ugashik	720	2,780	0	0	0	2,780
Bay East	Ugashik River			0	0	0	
Edsi	Egeglk	2,200	21,967	1,662	10,602	0	32,569
	Egegik River			1,662	10,602	0	
	Naknek-Kvichak	830	1,029	186	330	0	1,359
	Kvichak River			0	0	0	
	Naknek River			186	330	0	
Bristol	Nushagak	3,140	6,960	14,283	24,682	0	31,642
Bay West	Igushik River			0	0	0	
west	Nushagak River			9,549	17,917	0	
	Wood River			4,734	6,765	0	
	Toglak	50	56	0	0	0	56
	Togiak River			0	0	0	
E	Bristol Bay Totals:	6,940	32,792	16,131	35,614	0	68,406

Sockeye per Drift Delivery for: June 15

	Sockeye per Delivery
Ugashik	29
Egegik	56
Naknek-Kvichak	10
Nushagak	
Togiak	

Test Fishery Port Moller

Date	Daily	Cumulative
6/12/2016	0.00	0.00
6/13/2016	0.00	0.00
6/14/2016	0.00	0.00

through 06/16/2016

		Catch Dally	Cumulative	Escapement Dally	Cumulative	In-River Estimate	Total Run
Bristol	Ugashik	1,200	3,979	0	0	0	3,979
Bay	Ugashik River			0	0	0	
East	Egegik	23,000	44,963	18,822	29,424	0	74,387
	Egegik River			18,822	29,424	0	
	Naknek-Kvlchak	1,500	2,530	1,200	1,530	0	4,060
	Kvichak River			258	258	0	
	Naknek River			942	1,272	0	
Bristol	Nushagak	0	6,962	14,169	38,851	0	45,813
Bay	Igushik River			0	0	0	
West	Nushagak River			7,431	25,348	0	
	Wood River			6,738	13,503	0	
	Toglak	180	234	0	0	0	234
	Togiak River			0	0	0	
E	Bristol Bay Totals:	25,880	58,668	34,191	69,805	0	128,473

Sockeye per Drift Delivery for: June 16

	Sockeye per Delivery		
Ugashik	55		
Egegik	209		
Naknek-Kvichak	29		
Nushagak			
Togiak			

Test Fishery Port Moller

Date	Index Daily	Cumulative
6/13/2016	12.00	32.00
6/14/2016	10.00	42.00
6/15/2016	2.00	44.00
6/16/2016	20.00	64.00

through 06/17/2016

		Catch Dally	Cumulative	Escapement Dally	Cumulative	In-River Estimate	Total Run
Bristol	Ugashik	0	3,987	0	0	0	3,987
Bay East	Ugashik River			0	0	0	
Easi	Egegik	7,000	52,261	7,920	37,344	0	89,605
	Egegik River			7,920	37,344	0	
	Naknek-Kvlchak	200	2,691	1,716	3,246	0	5,937
	Kvichak River			210	468	0	
	Naknek River			1,506	2,778	0	
Bristol	Nushagak	0	10,673	27,764	66,615	0	77,288
Bay	Igushik River			0	0	0	
West	Nushagak River			10,490	35,838	0	
	Wood River			17,274	30,777	0	
	Toglak	40	274	0	0	0	274
	Togiak River			0	0	0	
E	Bristol Bay Totals:	7,240	69,886	37,400	107,205	0	177,091

Sockeye per Drift Delivery for: June 17

110 17			
ery	Date	Index Daily	Cumulative
10000	6/14/2016	10.00	42.00
	6/15/2016	2.00	44.00
128	6/16/2016	20.00	64.00
11 128	6/15/2016	2.00	44.

Test Fishery Port Moller

	Sockeye per Dellvery
Ugashik	11
Egegik	128
Naknek-Kvichak	29
Nushagak	
Togiak	

through 06/18/2016

		Catch Dally	Cumulative	Escapement Dally	Cumulative	In-River Estimate	Total Run
Bristol	Ugashik	0	4,022	0	0	0	4,022
Bay East	Ugashik River			0	0	0	
East	Egegik	0	52,498	11,718	49,062	0	101,560
	Egegik River			11,718	49,062	0	
	Naknek-Kvlchak	0	2,683	3,720	6,966	0	9,649
	Kvichak River	_		102	570	0	
	Naknek River			3,618	6,396	0	
Bristol	Nushagak	0	14,691	45,170	111,785	0	126,476
Bay West	Igushik River			0	0	0	
west	Nushagak River			34,328	70,166	0	
	Wood River			10,842	41,619	0	
	Toglak	0	274	0	0	0	274
	Togiak River			0	0	0	
E	Bristol Bay Totals:	0	74,168	60,608	167,813	0	241,981

Sockeye per Drift Delivery for: June 18

	Sockeye per Dellvery
Ugashik	
Egegik	
Naknek-Kvichak	
Nushagak	
Togiak	

Test Fishery Port Moller

Date	Index Daily	Cumulative
6/15/2016	2.00	44.00
6/16/2016	20.00	64.00
6/17/2016	18.00	83.00
6/18/2016	15.00	97.00

through 06/19/2016

		Catch Dally	Cumulative	Escapement Dally	Cumulative	In-River Estimate	Total Run
Bristol	Ugashik	0	4,022	0	0	0	4,022
Bay East	Ugashik River			0	0	0	
Easi	Egegik	0	52,498	47,172	96,234	0	148,732
	Egegik River			47,172	96,234	0	
	Naknek-Kvlchak	0	2,683	2,382	9,348	0	12,031
	Kvichak River			78	648	0	
	Naknek River			2,304	8,700	0	
Bristol	Nushagak	29,500	47,698	29,627	141,412	0	189,110
Bay West	Igushik River			0	0	0	
west	Nushagak River			15,641	85,807	0	
	Wood River			13,986	55,605	0	
	Toglak	0	274	0	0	0	274
	Togiak River			0	0	0	
E	Bristol Bay Totals:	29,500	107,175	79,181	246,994	0	354,169

Sockeye per Drift Delivery for: June 19

	Sockeye per Delivery
Ugashik	
Egegik	
Naknek-Kvichak	
Nushagak	186
Togiak	

Test Fishery Port Moller

Date	Index Daily	Cumulative
6/16/2016	20.00	64.00
6/17/2016	18.00	83.00
6/18/2016	15.00	97.00

through 06/20/2016

		Catch Daily	Cumulative	Escapement Daily	Cumulative	In-River Estimate	Total Run
Bristol	Ugashik	18,000	22,022	0	0	0	22,022
Bay East	Ugashik River			0	0	0	
Edst	Egegik	48,000	100,498	24,582	120,816	0	221,314
	Egegik River			24,582	120,816	0	
	Naknek-Kvichak	7,200	9,883	6,528	15,876	0	25,759
	Kvichak River			162	810	0	
	Naknek River			6,366	15,066	0	
Bristol	Nushagak	25,000	73,591	55,909	197,321	0	270,912
Bay	Igushik River			0	0	0	
West	Nushagak River			22,039	107,846	0	
	Wood River			33,870	89,475	0	
	Togiak	600	874	0	0	0	874
	Togiak River			0	0	0	1
E	Bristol Bay Totals:	98,800	206,868	87,019	334,013	0	540,881

	Sockeye per Delivery
Ugashik	355
Egegik	232
Naknek-Kvichak	41
Nushagak	82
Togiak	46

Date	Index Daily	Cumulative
6/17/2016	18.00	83.00
6/18/2016	15.00	97.00

Registrations as of: June 21 09:00 AM- and - June 23 09:00 AM

District	Permits	Permits in 48 hrs.	Vessels	Vessels in 48 hrs.	DBoats	DBoats in 48 hrs.
Egegik	268	288	216	229	52	59
Naknek-Kvichak	233	243	197	207	36	36
Nushagak	343	382	267	291	76	91
Togiak	12	15	12	15		
Ugashik	100	118	75	89	25	29
Grand Total	956	1,046	767	831	189	215

through 06/21/2016

		Catch Daily	Cumulative	Escapement Daily	Cumulative	In-River Estimate	Total Run
Bristol Bay East	Ugashik	15,000	36,469	0	0	0	36,469
	Ugashik River			0	0	0	
	Egegik	38,500	138,665	13,464	134,280	0	272,945
	Egegik River			13,464	134,280	0	
	Naknek-Kvichak	3,600	13,542	2,688	18,564	0	32,106
	Kvichak River			276	1,086	0	
	Naknek River			2,412	17,478	0	
Bristol	Nushagak	78,000	151,239	37,688	235,009	0	386,248
Bay West	Igushik River			0	0	0	
west	Nushagak River			13,610	121,456	0	
	Wood River			24,078	113,553	0	
	Togiak	2,000	2,985	0	0	0	2,985
	Togiak River	5		0	0	0	
E	Bristol Bay Totals:	137,100	342,900	53,840	387,853	0	730,753

	Sockeye per Delivery
Ugashik	206
Egegik	149
Naknek-Kvichak	31
Nushagak	171
Togiak	47

Date	Index Daily	Cumulative
6/18/2016	15.00	97.00
6/19/2016	14.00	125.00
6/20/2016	11.00	136.00
6/21/2016	7.00	143.00

Registrations as of:	June 22 09:00	AM- and - June	24 09:00 AM
regionations as on	00100	And while while	

District	Permits	Permits in 48 hrs.	Vessels	Vessels in 48 hrs.	DBoats	DBoats in 48 hrs.
Egegik	306	310	243	246	63	64
Naknek-Kvichak	249	249	212	213	37	36
Nushagak	403	425	312	330	91	95
Togiak	16	16	16	16		
Ugashik	150	155	114	118	36	37
Grand Total	1,124	1,155	897	923	227	232

through 06/22/2016

		Catch Daily	Cumulative	Escapement Daily	Cumulative	In-River Estimate	Total Run
Bristol	Ugashik	25,000	61,198	0	0	0	61,198
Bay East	Ugashik River	_		0	0	0	
	Egegik	0	138,622	7,260	141,540	0	280,162
	Egegik River			7,260	141,540	0	
	Naknek-Kvichak	5,400	19,018	2,886	21,450	0	40,468
	Kvichak River			1,206	2,292	0	
	Naknek River			1,680	19,158	0	
Bristol	Nushagak	113,000	264,494	26,419	261,428	0	525,922
Bay West	Igushik River			0	0	0	
west	Nushagak River			12,247	133,703	0	
	Wood River			14,172	127,725	0	
	Togiak	2,000	4,973	0	0	0	4,973
	Togiak River	2		0	0	0	
E	Bristol Bay Totals:	145,400	488,305	36,565	424,418	0	912,723

	Sockeye per Delivery
Ugashik	218
Egegik	
Naknek-Kvichak	69
Nushagak	238
Togiak	123

Date	Index Daily	Cumulative
6/19/2016	14.00	125.00
6/20/2016	11.00	136.00
6/21/2016	7.00	143.00
6/22/2016	36.00	179.00

Registrations as of: June 23 09:00 AM- and - June 25 09:00 AM

District	Permits	Permits in 48 hrs.	Vessels	Vessels in 48 hrs.	DBoats	DBoats in 48 hrs.
Egegik	310	340	247	273	63	67
Naknek-Kvichak	253	254	215	216	38	38
Nushagak	451	461	350	359	101	102
Togiak	16	16	16	16		
Ugashik	158	167	120	127	38	40
Grand Total	1,188	1,238	948	991	240	247

through 06/23/2016

		Catch Daily	Cumulative	Escapement Daily	Cumulative	In-River Estimate	Total Run
Bristol Bay East	Ugashik	0	60,644	0	0	0	60,644
	Ugashik River			0	0	0	
East	Egegik	106,000	244,622	34,068	175,608	25,000	445,230
	Egegik River			34,068	175,608	25,000	
	Naknek-Kvichak	3,000	22,098	4,214	25,664	0	47,762
	Kvichak River			1,544	3,836	0	
	Naknek River			2,670	21,828	0	
Bristol	Nushagak	120,000	384,538	17,702	279,130	0	663,668
Bay West	Igushik River			2,040	2,040	0	
west	Nushagak River			7,538	141,241	0	
	Wood River			8,124	135,849	0	
	Togiak	0	5,169	0	0	0	5,169
	Togiak River			0	0	0	
E	Bristol Bay Totals:	229,000	717,071	55,984	480,402	25,000	1,222,473

	Sockeye per Delivery
Ugashik	
Egegik	270
Naknek-Kvichak	87
Nushagak	180
Togiak	

Date	Index Daily	Cumulative
6/20/2016	11.00	136.00
6/21/2016	7.00	143.00
6/22/2016	36.00	179.00
6/23/2016	29.00	209.00

Registrations as of: June 24 09:00 AM- and - June 26 09:00 AM

District	Permits	Permits in 48 hrs.	Vessels	Vessels in 48 hrs.	DBoats	DBoats in 48 hrs.
Egegik	361	363	286	288	77	77
Naknek-Kvichak	276	283	235	242	41	41
Nushagak	473	477	366	369	107	108
Togiak	24	24	24	24		
Ugashik	167	169	127	128	40	41
Grand Total	1,301	1,316	1,038	1,051	265	267

through 06/24/2016

		Catch Daily	Cumulative	Escapement Daily	Cumulative	In-River Estimate	Total Run
Bristol	Ugashik	42,000	104,341	0	0	0	104,341
Bay East	Ugashik River			0	0	0	
East	Egegik	46,000	290,551	68,874	244,482	15,000	550,033
	Egegik River			68,874	244,482	15,000	
	Naknek-Kvichak	0	22,272	18,714	44,358	0	66,630
	Kvichak River			2,280	6,096	0	
	Naknek River			16,434	38,262	0	
Bristol	Nushagak	55,000	439,962	40,389	319,519	0	759,481
Bay West	Igushik River			2,808	4,848	0	
west	Nushagak River			8,733	149,974	0	
	Wood River			28,848	164,697	0	
	Togiak	0	5,209	0	0	0	5,209
	Togiak River			0	0	0	
E	Bristol Bay Totals:	143,000	862,335	127,977	608,359	15,000	1,485,694

	Sockeye per Delivery
Ugashik	249
Egegik	71
Naknek-Kvichak	
Nushagak	105
Togiak	34

Date	Index Daily	Cumulative
6/21/2016	7.00	143.00
6/22/2016	36.00	179.00
6/23/2016	29.00	209.00

Registrations as of: June 25 09:00 AM- and - June 27 09:00 AM

District	Permits	Permits in 48 hrs.	Vessels	Vessels in 48 hrs.	DBoats	DBoats in 48 hrs.
Egegik	370	371	292	293	80	80
Naknek-Kvichak	287	295	244	252	43	43
Nushagak	491	494	379	380	112	114
Togiak	26	28	26	28		
Ugashik	197	202	150	154	47	48
Grand Total	1,371	1,390	1,091	1,107	282	285

through 06/25/2016

		Catch Daily	Cumulative	Escapement Daily	Cumulative	In-River Estimate	Total Run
Bristol Bay East	Ugashik	0	104,660	0	0	20,000	124,660
	Ugashik River			0	0	20,000	
East	Egegik	78,000	368,552	9,828	254,310	15,000	637,862
	Egegik River			9,828	254,310	15,000	
	Naknek-Kvichak	0	22,272	14,208	58,566	0	80,838
	Kvichak River			1,746	7,842	0	
	Naknek River			12,462	50,724	0	
Bristol	Nushagak	37,000	477,109	45,091	364,922	0	842,031
Bay	Igushik River			1,968	6,816	0	
West	Nushagak River			22,747	172,721	0	
	Wood River			20,376	185,385	0	
	Togiak	0	5,362	0	0	0	5,362
	Togiak River			0	0	0	1
E	Bristol Bay Totals:	115,000	977,955	69,127	677,798	35,000	1,690,753

	Sockeye per Delivery
Ugashik	
Egegik	228
Naknek-Kvichak	
Nushagak	76
Togiak	

Date	Index Daily	Cumulative
6/22/2016	36.00	179.00
6/23/2016	29.00	209.00
6/24/2016	38.00	247.00
6/25/2016	50.00	297.00

Registrations as of: June 26 09:00 AM- and - June 28 09:00 AM

District	Permits	Permits in 48 hrs.	Vessels	Vessels in 48 hrs.	DBoats	DBoats in 48 hrs.
Egegik	380	384	299	303	83	83
Naknek-Kvichak	299	302	256	259	43	43
Nushagak	490	497	376	381	114	116
Togiak	28	28	28	28		
Ugashik	202	210	154	161	48	49
Grand Total	1,399	1,421	1,113	1,132	288	291

through 06/26/2016

		Catch Daily	Cumulative	Escapement Daily	Cumulative	In-River Estimate	Total Run
Bristol Bay East	Ugashik	0	111,946	4,596	4,596	20,000	136,542
	Ugashik River			4,596	4,596	20,000	
East	Egegik	116,000	484,820	8,256	262,566	15,000	762,386
	Egegik River			8,256	262,566	15,000	
	Naknek-Kvichak	0	22,272	8,526	67,092	0	89,364
	Kvichak River			2,538	10,380	0	
	Naknek River			5,988	56,712	0	
Bristol	Nushagak	223,000	700,746	23,618	388,540	0	1,089,286
Bay West	Igushik River			2,346	9,162	0	
west	Nushagak River			10,226	182,947	0	
	Wood River			11,046	196,431	0	
	Togiak	0	5,410	0	0	0	5,410
	Togiak River			0	0	0	
E	Bristol Bay Totals:	339,000	1,325,194	44,996	722,794	35,000	2,082,988

	Sockeye per Delivery
Ugashik	
Egegik	244
Naknek-Kvichak	
Nushagak	525
Togiak	

Date	Index Daily	Cumulative
6/23/2016	29.00	209.00
6/24/2016	38.00	247.00
6/25/2016	50.00	297.00
6/26/2016	66.00	363.00

Registrations as of: June 27 09:00 AM- and - June 29 09:00 AM

District	Permits	Permits in 48 hrs.	Vessels	Vessels in 48 hrs.	DBoats	DBoats in 48 hrs.
Egegik	390	395	307	311	85	86
Naknek-Kvichak	308	306	265	264	43	42
Nushagak	509	509	389	389	120	120
Togiak	28	28	28	28		
Ugashik	206	214	158	164	48	50
Grand Total	1,441	1,452	1,147	1,156	296	298

through 06/27/2016

		Catch Daily	Cumulative	Escapement Daily	Cumulative	In-River Estimate	Total Run
Bristol	Ugashik	82,000	203,785	13,080	17,676	30,000	251,461
Bay East	Ugashik River			13,080	17,676	30,000	
Edst	Egegik	139,000	623,511	15,684	278,250	35,000	936,761
	Egegik River			15,684	278,250	35,000	
	Naknek-Kvichak	0	22,272	5,076	72,168	0	94,440
	Kvichak River			2,154	12,534	0	
	Naknek River			2,922	59,634	0	
Bristol	Nushagak	251,000	960,645	35,999	424,539	0	1,385,184
Bay	Igushik River			1,878	11,040	0	
West	Nushagak River			9,515	192,462	0	
	Wood River			24,606	221,037	0	
	Togiak	7,000	12,410	0	0	0	12,410
	Togiak River			0	0	0	
E	Bristol Bay Totals:	479,000	1,822,623	69,839	792,633	65,000	2,680,256

	Sockeye per Delivery
Ugashik	418
Egegik	202
Naknek-Kvichak	
Nushagak	222
Togiak	99

Date	Index Daily	Cumulative
6/24/2016	38.00	247.00
6/25/2016	50.00	297.00
6/26/2016	66.00	363.00
6/27/2016	46.00	408.00

Registrations as of: June 28 09:00 AM- and - June 30 09:00 AM

District	Permits	Permits in 48 hrs.	Vessels	Vessels in 48 hrs.	DBoats	DBoats in 48 hrs.
Egegik	397	407	312	319	87	90
Naknek-Kvichak	312	317	268	271	44	46
Nushagak	521	521	398	398	123	123
Togiak	30	30	30	30		
Ugashik	232	237	179	182	53	55
Grand Total	1,492	1,512	1,187	1,200	307	314

through 06/28/2016

		Catch Daily	Cumulative	Escapement Daily	Cumulative	In-River Estimate	Total Run
Bristol Bay East	Ugashik	72,000	275,913	18,828	36,504	50,000	362,417
	Ugashik River			18,828	36,504	50,000	
East	Egegik	111,000	734,527	16,734	294,984	30,000	1,059,511
	Egegik River			16,734	294,984	30,000	
	Naknek-Kvichak	0	22,272	6,546	78,714	0	100,986
	Kvichak River			840	13,374	0	
	Naknek River			5,706	65,340	0	
Bristol	Nushagak	210,000	1,170,920	35,221	459,760	0	1,630,680
Bay West	Igushik River			1,206	12,246	0	
vvest	Nushagak River			17,839	210,301	0	
	Wood River			16,176	237,213	0	
	Togiak	10,500	22,677	0	0	0	22,677
	Togiak River			0	0	0	
E	Bristol Bay Totals:	403,500	2,226,309	77,329	869,962	80,000	3,176,271

	Sockeye per Delivery
Ugashik	358
Egegik	359
Naknek-Kvichak	
Nushagak	221
Togiak	90

Date	Index Daily	Cumulative
6/25/2016	50.00	297.00
6/26/2016	66.00	363.00
6/27/2016	46.00	408.00
6/28/2016	19.00	427.00

Registrations as of: June 29 09:00 AM- and - July 01 09:00 AM

District	Permits	Permits in 48 hrs.	Vessels	Vessels in 48 hrs.	DBoats	DBoats in 48 hrs.
Egegik	401	411	316	323	87	90
Naknek-Kvichak	319	332	272	279	48	54
Nushagak	508	510	390	391	118	119
Togiak	34	34	34	34		
Ugashik	240	246	184	188	56	58
Grand Total	1,502	1,533	1,196	1,215	309	321

through 06/29/2016

		Catch Daily	Cumulative	Escapement Daily	Cumulative	In-River Estimate	Total Run
Bristol Bay East	Ugashik	81,000	356,486	16,206	52,710	40,000	449,196
	Ugashik River			16,206	52,710	40,000	
East	Egegik	21,000	755,849	72,648	367,632	50,000	1,173,481
	Egegik River			72,648	367,632	50,000	
	Naknek-Kvichak	0	22,272	14,274	92,988	0	115,260
	Kvichak River			534	13,908	0	
	Naknek River			13,740	79,080	0	
Bristol	Nushagak	223,000	1,400,296	32,396	492,156	0	1,892,452
Bay	Igushik River			1,530	13,776	0	
West	Nushagak River			14,252	224,553	0	
	Wood River			16,614	253,827	0	
	Togiak	11,000	33,716	0	0	0	33,716
	Togiak River			0	0	0	
E	Bristol Bay Totals:	336,000	2,568,619	135,524	1,005,486	90,000	3,664,105

	Sockeye per Delivery			
Ugashik	403			
Egegik				
Naknek-Kvichak				
Nushagak	221			
Togiak	139			

Date	Index Daily	Cumulative
6/26/2016	66.00	363.00
6/27/2016	46.00	408.00
6/28/2016	19.00	427.00
6/29/2016	11.00	438.00

Registrations as of: June 30 09:00 AM- and - July 02 09:00 AM

District	Permits	Permits in 48 hrs.	Vessels	Vessels in 48 hrs.	DBoats	DBoats in 48 hrs.
Egegik	403	403	317	318	88	87
Naknek-Kvichak	328	347	278	291	51	57
Nushagak	515	515	394	394	121	121
Togiak	34	34	34	34		
Ugashik	242	252	185	192	57	60
Grand Total	1,522	1,551	1,208	1,229	317	325

through 06/30/2016

		Catch Daily	Cumulative	Escapement Daily	Cumulative	In-River Estimate	Total Run
Bristol Bay East	Ugashik	0	356,642	24,114	76,824	40,000	473,466
	Ugashik River			24,114	76,824	40,000	
East	Egegik	220,000	976,636	113,508	481,140	70,000	1,527,776
	Egegik River			113,508	481,140	70,000	
	Naknek-Kvichak	0	22,272	108,570	201,558	150,000	373,830
	Kvichak River			684	14,592	150,000	
	Naknek River			107,886	186,966	0	
Bristol	Nushagak	255,000	1,655,785	37,636	529,792	0	2,185,577
Bay	Igushik River			1,230	15,006	0	
West	Nushagak River			17,332	241,885	0	
	Wood River			19,074	272,901	0	
	Togiak	0	33,324	0	0	0	33,324
	Togiak River			0	0	0	
E	Bristol Bay Totals:	475,000	3,044,659	283,828	1,289,314	260,000	4,593,973

	Sockeye per Delivery
Ugashik	
Egegik	296
Naknek-Kvichak	
Nushagak	260
Togiak	199

Date	Index Daily	Cumulative
6/27/2016	46.00	408.00
6/28/2016	19.00	427.00
6/29/2016	11.00	438.00
6/30/2016	56.00	494.00

Registrations as of: July 01 09:00 AM- and - July 03 09:00 AM

District	Permits	Permits in 48 hrs.	Vessels	Vessels in 48 hrs.	DBoats	DBoats in 48 hrs.
Egegik	402	401	317	317	87	86
Naknek-Kvichak	392	469	329	390	64	80
Nushagak	510	505	390	387	120	118
Togiak	34	34	34	34		
Ugashik	245	254	187	194	58	60
Grand Total	1,583	1,663	1,257	1,322	329	344

through 07/01/2016

		Catch Daily	Cumulative	Escapement Daily	Cumulative	In-River Estimate	Total Run
Bristol	Ugashik	145,000	501,642	17,022	93,846	50,000	645,488
Bay East	Ugashik River			17,022	93,846	50,000	
East	Egegik	250,000	1,226,672	69,726	550,866	30,000	1,807,538
	Egegik River			69,726	550,866	30,000	
	Naknek-Kvichak	236,000	258,272	123,384	324,942	300,000	883,214
	Kvichak River			14,280	28,872	300,000	
	Naknek River			109,104	296,070	0	
Bristol	Nushagak	238,000	1,894,522	54,224	584,016	0	2,478,538
Bay	Igushik River			1,932	16,938	0	
West	Nushagak River			25,148	267,033	0	
	Wood River			27,144	300,045	0	
	Togiak	7,700	41,935	0	0	0	41,935
	Togiak River			0	0	0	
E	Bristol Bay Totals:	876,700	3,923,043	264,356	1,553,670	380,000	5,856,713

	Sockeye per Delivery
Ugashik	671
Egegik	396
Naknek-Kvichak	498
Nushagak	322
Togiak	120

Date	Index Daily	Cumulative
6/28/2016	19.00	427.00
6/29/2016	11.00	438.00
6/30/2016	56.00	494.00
7/1/2016	52.00	540.00

Registrations as of: July 02 09:00 AM- and - July 04 09:00 AM

District	Permits	Permits in 48 hrs.	Vessels	Vessels in 48 hrs.	DBoats	DBoats in 48 hrs.
Egegik	390	388	308	307	84	83
Naknek-Kvichak	470	555	393	454	78	102
Nushagak	453	449	349	345	104	104
Togiak	35	36	35	36		
Ugashik	252	254	192	194	60	60
Grand Total	1,600	1,682	1,277	1,336	326	349

through 07/02/2016

		Catch Daily	Cumulative	Escapement Daily	Cumulative	In-River Estimate	Total Run
Bristol	Ugashik	120,000	620,980	12,312	106,158	75,000	802,138
Bay East	Ugashik River			12,312	106,158	75,000	
East	Egegik	335,000	1,562,220	27,702	578,568	30,000	2,170,788
	Egegik River			27,702	578,568	30,000	
	Naknek-Kvichak	264,000	522,532	179,370	504,312	150,000	1,176,844
	Kvichak River			105,540	134,412	150,000	
	Naknek River			73,830	369,900	0	
Bay West	Nushagak	316,000	2,216,379	55,938	639,954	0	2,856,333
	Igushik River			894	17,832	0	
	Nushagak River			19,032	286,065	0	
	Wood River			36,012	336,057	0	
	Togiak	7,700	48,990	0	0	0	48,990
	Togiak River			0	0	0	
E	Bristol Bay Totals:	1,042,700	4,971,101	275,322	1,828,992	255,000	7,055,093

	Sockeye per Delivery
Ugashik	690
Egegik	584
Naknek-Kvichak	618
Nushagak	421
Togiak	102

Date	Index Daily	Cumulative
6/29/2016	11.00	438.00
6/30/2016	56.00	494.00
7/1/2016	52.00	540.00
7/2/2016	70.00	610.00

Registrations as of: July 03 09:00	AM- and -	- July 05 09:00 AM
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District	Permits	Permits in 48 hrs.	Vessels	Vessels in 48 hrs.	DBoats	DBoats in 48 hrs.
Egegik	380	380	300	300	81	81
Naknek-Kvichak	482	581	402	476	81	106
Nushagak	428	426	327	325	101	101
Togiak	38	39	38	39		
Ugashik	251	270	192	209	59	61
Grand Total	1,579	1,696	1,259	1,349	322	349

through 07/03/2016

		Catch Daily	Cumulative	Escapement Daily	Cumulative	In-River Estimate	Total Run
Bristol	Ugashik	238,000	859,670	25,686	131,844	100,000	1,091,514
Bay East	Ugashik River			25,686	131,844	100,000	
Easi	Egegik	321,000	1,883,020	25,710	604,278	30,000	2,517,298
	Egegik River	90.		25,710	604,278	30,000	
	Naknek-Kvichak	473,000	995,522	193,488	697,800	200,000	1,893,322
	Kvichak River			96,300	230,712	200,000	
	Naknek River			97,188	467,088	0	
Bay	Nushagak	400,000	2,624,369	115,358	755,312	0	3,379,681
	Igushik River			3,234	21,066	0	
West	Nushagak River			36,800	322,865	0	
	Wood River			75,324	411,381	0	
	Togiak	0	49,047	762	762	0	49,809
	Togiak River			762	762	0	
E	Bristol Bay Totals:	1,432,000	6,411,628	361,004	2,189,996	330,000	8,931,624

	Sockeye per Delivery
Ugashik	1157
Egegik	928
Naknek-Kvichak	743
Nushagak	645
Togiak	

Date	Index Daily	Cumulative
6/30/2016	56.00	494.00
7/1/2016	52.00	540.00
7/2/2016	0.00	0.00
	63.00	603.00
7/3/2016	65.00	668.00

Registrations as of: July 04 09:00 AM- and - July 06 09:00 AM

District	Permits	Permits in 48 hrs.	Vessels	Vessels in 48 hrs.	DBoats	DBoats in 48 hrs.
Egegik	368	369	290	291	78	78
Naknek-Kvichak	560	617	458	503	103	115
Nushagak	409	407	312	311	97	96
Togiak	39	39	39	39		
Ugashik	245	265	188	206	57	59
Grand Total	1,621	1,697	1,287	1,350	335	348

through 07/04/2016

		Catch Daily	Cumulative	Escapement Daily	Cumulative	In-River Estimate	Total Run
Bristol	Ugashik	78,000	937,637	27,744	159,588	100,000	1,197,225
Bay	Ugashik River			27,744	159,588	100,000	
East	Egegik	367,000	2,250,320	55,416	659,694	60,000	2,970,014
	Egegik River			55,416	659,694	60,000	
	Naknek-Kvichak	173,000	1,168,116	211,944	909,744	250,000	2,327,860
	Kvichak River			114,594	345,306	250,000	
	Naknek River			97,350	564,438	0	
Bristol	Nushagak	460,000	3,085,223	204,138	959,450	0	4,044,673
Bay	Igushik River			12,438	33,504	0	
West	Nushagak River			79,110	401,975	0	
	Wood River			112,590	523,971	0	
	Togiak	17,000	66,047	372	1,134	0	67,181
	Togiak River			372	1,134	0	
E	Bristol Bay Totals:	1,095,000	7,507,343	499,614	2,689,610	410,000	10,606,953

	Sockeye per Delivery		
Ugashik	313		
Egegik	969		
Naknek-Kvichak	146		
Nushagak	561		
Togiak	171		

Date	Index Daily	Cumulative
7/1/2016	52.00	540.00
7/2/2016	0.00	0.00
	63.00	603.00
7/3/2016	65.00	668.00
7/4/2016	53.00	720.00

Registrations as of: July 05 09:00 AM- and - July 07 09:00 AM

District	Permits	Permits in 48 hrs.	Vessels	Vessels in 48 hrs.	DBoats	DBoats in 48 hrs.
Egegik	354	355	282	283	72	72
Naknek-Kvichak	583	640	476	516	108	125
Nushagak	402	402	308	308	94	94
Togiak	42	42	42	42		
Ugashik	261	265	202	206	59	59
Grand Total	1,642	1,704	1,310	1,355	333	350

through 07/05/2016

		Catch Daily	Cumulative	Escapement Daily	Cumulative	In-River Estimate	Total Run
Bristol	Ugashik	246,000	1,183,180	33,342	192,930	130,000	1,506,110
Bay East	Ugashik River			33,342	192,930	130,000	
East	Egegik	304,000	2,554,086	94,674	754,368	50,000	3,358,454
	Egegik River			94,674	754,368	50,000	
	Naknek-Kvichak	191,000	1,358,628	266,280	1,176,024	300,000	2,834,652
	Kvichak River			232,314	577,620	300,000	[
	Naknek River			33,966	598,404	0	
Bristol	Nushagak	382,000	3,467,750	168,279	1,127,729	0	4,595,479
Bay	Igushik River			19,662	53,166	0	
West	Nushagak River			50,031	452,006	0	
	Wood River			98,586	622,557	0	
	Togiak	25,000	90,814	534	1,668	0	92,482
	Togiak River			534	1,668	0	
E	Bristol Bay Totals:	1,148,000	8,654,458	563,109	3,252,719	480,000	12,387,177

	Sockeye per Delivery		
Ugashik	1147		
Egegik	675		
Naknek-Kvichak	173		
Nushagak	517		
Togiak	215		

Date	Index Daily	Cumulative
7/2/2016	0.00	0.00
	63.00	603.00
7/3/2016	65.00	668.00
7/4/2016	53.00	720.00
7/5/2016	64.00	784.00

Registrations as of: July 06 09:00 AM- and - July 08 09:00 AM

District	Permits	Permits in 48 hrs.	Vessels	Vessels in 48 hrs.	DBoats	DBoats in 48 hrs.
Egegik	357	357	284	284	73	73
Naknek-Kvichak	618	640	503	516	116	125
Nushagak	396	396	304	304	92	92
Togiak	42	42	42	42		
Ugashik	263	265	204	206	59	59
Grand Total	1,676	1,700	1,337	1,352	340	349

through 07/06/2016

		Catch Daily	Cumulative	Escapement Daily	Cumulative	In-River Estimate	Total Run
Bristol	Ugashik	390,000	1,573,005	40,200	233,130	120,000	1,926,135
Bay East	Ugashik River			40,200	233,130	120,000	
East	Egegik	400,000	2,954,260	31,902	786,270	30,000	3,770,530
	Egegik River			31,902	786,270	30,000	5 A.F. 368 14
	Naknek-Kvichak	302,000	1,660,804	192,708	1,368,732	200,000	3,229,536
	Kvichak River			149,868	727,488	200,000	
	Naknek River			42,840	641,244	0	
Bristol	Nushagak	370,000	3,838,169	121,841	1,249,570	0	5,087,739
Bay	Igushik River			14,676	67,842	0	
West	Nushagak River			28,457	480,463	0	
	Wood River			78,708	701,265	0	
	Togiak	32,000	122,893	570	2,238	0	125,131
	Togiak River			570	2,238	0	
E	Bristol Bay Totals:	1,494,000	10,149,131	387,221	3,639,940	350,000	14,139,071

	Sockeye per Delivery		
Ugashik	1789		
Egegik	1307		
Naknek-Kvichak	288		
Nushagak	563		
Togiak	255		

Date	Index Daily	Cumulative
7/3/2016	65.00	668.00
7/4/2016	53.00	720.00
7/5/2016	64.00	784.00

Registrations as of: July 07 09:00 AM- and - July 09 09:00 AM

District	Permits	Permits in 48 hrs.	Vessels	Vessels in 48 hrs.	DBoats	DBoats in 48 hrs.
Egegik	357	369	284	294	73	75
Naknek-Kvichak	628	635	506	511	123	125
Nushagak	388	388	298	298	90	90
Togiak	42	42	42	42		
Ugashik	265	269	206	209	59	60
Grand Total	1,680	1,703	1,336	1,354	345	350

through 07/07/2016

		Catch Daily	Cumulative	Escapement Daily	Cumulative	In-River Estimate	Total Run
Bristol	Ugashik	320,000	1,892,853	27,390	260,520	100,000	2,253,373
Bay East	Ugashik River			27,390	260,520	100,000	
East	Egegik	645,000	3,599,507	36,768	823,038	130,000	4,552,545
	Egegik River			36,768	823,038	130,000	19 10 - 20 19
	Naknek-Kvichak	234,000	1,894,757	216,396	1,585,128	550,000	4,029,885
	Kvichak River			150,024	877,512	550,000	
	Naknek River			66,372	707,616	0	
Bristol	Nushagak	413,000	4,250,886	74,558	1,324,128	0	5,575,014
Bay	Igushik River			0	67,842	0	
West	Nushagak River			25,214	505,677	0	
	Wood River			49,344	750,609	0	
	Togiak	21,000	143,898	0	2,238	0	146,136
	Togiak River			0	2,238	0	
E	Bristol Bay Totals:	1,633,000	11,781,901	355,112	3,995,052	780,000	16,556,953

	Sockeye per Delivery		
Ugashik	1515		
Egegik	1059		
Naknek-Kvichak	413		
Nushagak	740		
Togiak	212		

Date	Index Daily	Cumulative
7/4/2016	53.00	720.00
7/5/2016	64.00	784.00
7/6/2016	63.00	847.00
7/7/2016	63.00	910.00

Registrations as of: July 08 09:00 AM- and - July 10 09:00 AM

District	Permits	Permits in 48 hrs.	Vessels	Vessels in 48 hrs.	DBoats	DBoats in 48 hrs.
Egegik	356	372	283	295	73	77
Naknek-Kvichak	625	628	505	507	121	122
Nushagak	385	383	296	295	89	88
Togiak	43	43	43	43		
Ugashik	262	276	204	214	58	62
Grand Total	1,671	1,702	1,331	1,354	341	349

through 07/08/2016

		Catch Daily	Cumulative	Escapement Daily	Cumulative	In-River Estimate	Total Run
Bristol	Ugashik	232,000	2,126,271	50,886	311,406	150,000	2,587,677
Bay East	Ugashik River			50,886	311,406	150,000	
East	Egegik	360,000	3,959,145	175,344	998,382	100,000	5,057,527
	Egegik River			175,344	998,382	100,000	
	Naknek-Kvichak	803,000	2,698,299	441,438	2,026,566	700,000	5,424,865
	Kvichak River			340,548	1,218,060	700,000	
	Naknek River			100,890	808,506	0	
Bristol	Nushagak	425,000	4,675,896	80,832	1,421,148	0	6,097,044
Bay	Igushik River			15,756	99,786	0	
West	Nushagak River			20,538	526,215	0	
	Wood River			44,538	795,147	0	
	Togiak	25,000	168,828	4,092	8,484	0	177,312
	Togiak River			4,092	8,484	0	
E	Bristol Bay Totals:	1,845,000	13,628,439	752,592	4,765,986	950,000	19,344,425

	Sockeye per Delivery		
Ugashik	993		
Egegik	1001		
Naknek-Kvichak	816		
Nushagak	629		
Togiak	242		

Date	Index Daily	Cumulative
7/5/2016	64.00	784.00
7/6/2016	63.00	847.00
7/7/2016	63.00	910.00
7/8/2016	77.00	987.00

Registrations as of: July 09 09:00 AM- and - July 11 09:00 AM

District	Permits	Permits in 48 hrs.	Vessels	Vessels in 48 hrs.	DBoats	DBoats in 48 hrs.
Egegik	365	365	290	288	75	77
Naknek-Kvichak	621	648	501	521	121	128
Nushagak	365	367	282	284	83	83
Togiak	43	43	43	43		
Ugashik	269	281	209	218	60	63
Grand Total	1,663	1,704	1,325	1,354	339	351

through 07/09/2016

		Catch Daily	Cumulative	Escapement Daily	Cumulative	In-River Estimate	Total Run
Bristol	Ugashik	296,000	2,439,919	63,492	374,898	200,000	3,014,817
Bay East	Ugashik River			63,492	374,898	200,000	-
East	Egegik	443,000	4,401,141	111,756	1,110,138	40,000	5,551,279
	Egegik River			111,756	1,110,138	40,000	
	Naknek-Kvichak	424,000	3,142,903	456,126	2,482,692	350,000	5,975,595
	Kvichak River			409,956	1,628,016	350,000	
	Naknek River			46,170	854,676	0	
Bristol	Nushagak	216,000	4,891,517	79,140	1,500,288	0	6,391,805
Bay	Igushik River			25,068	124,854	0	
West	Nushagak River			13,602	539,817	0	
	Wood River			40,470	835,617	0	
	Togiak	14,000	182,753	2,196	10,680	0	193,433
	Togiak River			2,196	10,680	0	
E	Bristol Bay Totals:	1,393,000	15,058,233	712,710	5,478,696	590,000	21,126,929

	Sockeye per Delivery		
Ugashik	1358		
Egegik	779		
Naknek-Kvichak	416		
Nushagak	522		
Togiak	252		

Date	Index Daily	Cumulative
7/6/2016	63.00	847.00
7/7/2016	63.00	910.00
7/8/2016	77.00	987.00
7/9/2016	77.00	1,064.00

Registrations as of: July 10 09:00 AM- and - July 12 09:00 AM

District	Permits	Permits in 48 hrs.	Vessels	Vessels in 48 hrs.	DBoats	DBoats in 48 hrs.
Egegik	353	352	279	278	74	74
Naknek-Kvichak	627	678	506	545	122	134
Nushagak	337	342	261	265	76	77
Togiak	43	43	43	43		
Ugashik	278	297	215	230	63	67
Grand Total	1,638	1,712	1,304	1,361	335	352

through 07/10/2016

		Catch Daily	Cumulative	Escapement Daily	Cumulative	In-River Estimate	Total Run
Bristol	Ugashik	319,000	2,759,401	62,154	437,052	175,000	3,371,453
Bay East	Ugashik River			62,154	437,052	175,000	
East	Egegik	454,000	4,855,571	68,094	1,178,232	150,000	6,183,803
	Egegik River			68,094	1,178,232	150,000	la da sue M
	Naknek-Kvichak	1,006,000	4,149,475	316,362	2,799,054	450,000	7,398,529
	Kvichak River			258,462	1,886,478	450,000	
	Naknek River			57,900	912,576	0	
Bristol	Nushagak	445,000	5,337,395	78,768	1,579,056	0	6,916,451
Bay	Igushik River			17,862	142,716	0	
West	Nushagak River			13,968	553,785	0	
	Wood River			46,938	882,555	0	
	Togiak	0	182,899	3,342	14,022	0	196,921
	Togiak River			3,342	14,022	0	
E	Bristol Bay Totals:	2,224,000	17,284,741	528,720	6,007,416	775,000	24,067,157

	Sockeye per Delivery
Ugashik	1511
Egegik	841
Naknek-Kvichak	911
Nushagak	1052
Togiak	

Date	Index Daily	Cumulative
7/7/2016	63.00	910.00
7/8/2016	77.00	987.00
7/9/2016	77.00	1,064.00
7/10/2016	61.00	1,125.00

Registrations as of: July 11 09:00 AM- and - July 13 09:00 AM

District	Permits	Permits in 48 hrs.	Vessels	Vessels in 48 hrs.	DBoats	DBoats in 48 hrs.
Egegik	346	343	273	271	73	72
Naknek-Kvichak	648	689	521	555	128	135
Nushagak	337	337	260	260	77	77
Togiak	43	43	43	43		
Ugashik	281	298	218	231	63	67
Grand Total	1,655	1,710	1,315	1,360	341	351

through 07/11/2016

		Catch Daily	Cumulative	Escapement Daily	Cumulative	In-River Estimate	Total Run
Bristol	Ugashik	346,000	3,105,044	71,514	508,566	175,000	3,788,610
Bay	Ugashik River		71,514 508,566 175,000				
East	Egegik	433,000	5,290,256	178,440	1,356,672	100,000	6,746,928
	Egegik River			178,440	1,356,672	100,000	
	Naknek-Kvichak	874,000	5,023,230	274,002	3,073,056	800,000	8,896,286
	Kvichak River			190,566	2,077,044	800,000	
	Naknek River			83,436	996,012	0	
Bristol	Nushagak	438,000	5,775,597	101,146	1,680,202	0	7,455,799
Bay	Igushik River			18,768	161,484	0	
West	Nushagak River			28,600	582,385	0	
	Wood River			53,778	936,333	0	
	Togiak	25,000	207,899	4,140	18,162	0	226,061
	Togiak River			4,140	18,162	0	
E	Bristol Bay Totals:	2,116,000	19,402,026	629,242	6,636,658	1,075,000	27,113,684

	Sockeye per Delivery		
Ugashik	1265		
Egegik	643		
Naknek-Kvichak	903		
Nushagak	842		
Togiak	255		

Date	Index Daily	Cumulative
7/8/2016	77.00	987.00
7/9/2016	77.00	1,064.00
7/10/2016	61.00	1,125.00
7/11/2016	18.00	1,143.00

Registrations as of: July 12 09:00 AM- and - July 14 09:00 AM

District	Permits	Permits in 48 hrs.	Vessels	Vessels in 48 hrs.	DBoats	DBoats in 48 hrs.
Egegik	324	309	256	246	68	63
Naknek-Kvichak	677	720	544	579	134	142
Nushagak	326	326	251	251	75	75
Togiak	43	43	43	43		
Ugashik	297	300	230	232	67	68
Grand Total	1,667	1,698	1,324	1,351	344	348

through 07/12/2016

		Catch Daily	Cumulative	Escapement Daily	Cumulative	In-River Estimate	Total Run
Bristol	Ugashik	322,000	3,427,490	139,398	647,964	200,000	4,275,454
Bay East	Ugashik River			139,398	647,964	200,000	
Lasi	Egegik	327,000	5,618,135	105,672	1,462,344	50,000	7,130,479
	Egegik River			105,672	1,462,344	50,000	
	Naknek-Kvichak	927,000	5,949,945	712,398	3,785,454	900,000	10,635,399
	Kvichak River			650,634	2,727,678	900,000	
	Naknek River			61,764	1,057,776	0	
Bristol	Nushagak	348,000	6,123,981	99,499	1,779,701	0	7,903,682
Bay	Igushik River			19,566	181,050	0	
West	Nushagak River			15,151	597,536	0	
	Wood River			64,782	1,001,115	0	
	Togiak	34,000	242,046	4,476	22,638	0	264,684
	Togiak River			4,476	22,638	0	
E	Bristol Bay Totals:	1,958,000	21,361,597	1,061,443	7,698,101	1,150,000	30,209,698

	Sockeye per Delivery		
Ugashik	1279		
Egegik	594		
Naknek-Kvichak	949		
Nushagak	608		
Togiak	240		

Date	Index Daily	Cumulative
7/9/2016	77.00	1,064.00
7/10/2016	61.00	1,125.00
7/11/2016	18.00	1,143.00
7/12/2016	32.00	1,175.00

Registrations as of: July 13 09:00 AM- and - July 15 09:00 AM

District	Permits	Permits in 48 hrs.	Vessels	Vessels in 48 hrs.	DBoats	DBoats in 48 hrs.
Egegik	299	297	238	236	61	61
Naknek-Kvichak	690	769	555	615	136	155
Nushagak	304	303	236	235	68	68
Togiak	43	43	43	43		
Ugashik	294	296	227	228	67	68
Grand Total	1,630	1,708	1,299	1,357	332	352

		Catch Daily	Cumulative	Escapement Daily	Cumulative	In-River Estimate	Total Run
Bristol	Ugashik	375,000	3,802,655	129,684	777,648	175,000	4,755,303
Bay East	Ugashik River			129,684	777,648	175,000	
	Egegik	303,000	5,881,116	32,268	1,494,612	20,000	7,395,728
	Egegik River			32,268	1,494,612	20,000	
	Naknek-Kvichak	1,000,000	6,949,495	368,916	4,154,370	250,000	11,353,865
	Kvichak River			269,292	2,996,970	250,000	
	Naknek River			99,624	1,157,400	0	
Bristol	Nushagak	325,000	6,448,769	77,975	1,857,648	0	8,306,417
Bay	Igushik River			17,874	198,906	0	
West	Nushagak River	_		16,055	613,581	0	
	Wood River	·		44,046	1,045,161	0	
	Togiak	41,000	282,725	4,854	27,798	0	310,523
	Togiak River			4,854	27,798	0	
E	Bristol Bay Totals:	2,044,000	23,364,760	613,697	8,312,076	445,000	32,121,836

	Sockeye per Delivery
Ugashik	1265
Egegik	516
Naknek-Kvichak	888
Nushagak	630
Togiak	301

Date	Index Daily	Cumulative
7/10/2016	61.00	1,125.00
7/11/2016	18.00	1,143.00
7/12/2016	32.00	1,175.00

Registrations as of: July 14 09:00 AM- and - July 16 09:00 AM

District	Permits	Permits in 48 hrs.	Vessels	Vessels in 48 hrs.	DBoats	DBoats in 48 hrs.
Egegik	290	290	231	231	59	59
Naknek-Kvichak	720	787	579	629	142	159
Nushagak	300	300	233	233	67	67
Togiak	43	43	43	43		
Ugashik	294	294	226	226	68	68
Grand Total	1,647	1,714	1,312	1,362	336	353

through 07/14/2016

		Catch Daily	Cumulative	Escapement Daily	Cumulative	In-River Estimate	Total Run
Bristol	Ugashik	401,000	4,203,419	122,874	900,522	175,000	5,278,941
Bay East	Ugashik River			122,874	900,522	175,000	
	Egegik	316,000	6,196,940	28,866	1,523,478	0	7,720,418
	Egegik River			28,866	1,523,478	0	
	Naknek-Kvichak	788,000	7,692,344	190,542	4,344,912	250,000	12,287,256
	Kvichak River			114,432	3,111,402	250,000	
	Naknek River			76,110	1,233,510	0	
Bristol	Nushagak	302,000	6,749,659	64,630	1,922,278	0	8,671,937
Bay West	Igushik River			17,988	216,894	0	
west	Nushagak River			14,464	628,045	0	
	Wood River			32,178	1,077,339	0	
	Togiak	25,000	307,448	5,430	33,228	0	340,676
	Togiak River			5,430	33,228	0	
E	Bristol Bay Totals:	1,832,000	25,149,810	412,342	8,724,418	425,000	34,299,228

	Sockeye per Delivery
Ugashik	1657
Egegik	591
Naknek-Kvichak	756
Nushagak	528
Togiak	221

Date	Index Daily	Cumulative
7/11/2016	18.00	1,143.00
7/12/2016	32.00	1,175.00

Registrations as of: July 15 09:00 AM- and - July 17 09:00 AM

District	Permits	Permits in 48 hrs.	Vessels	Vessels in 48 hrs.	DBoats	DBoats in 48 hrs.
Egegik	292	292	232	232	60	60
Naknek-Kvichak	770	789	616	631	155	159
Nushagak	298	296	232	230	66	66
Togiak	43	43	43	43		
Ugashik	292	292	225	225	67	67
Grand Total	1,695	1,712	1,348	1,361	348	352

through 07/15/2016

		Catch Daily	Cumulative	Escapement Daily	Cumulative	In-River Estimate	Total Run
Bristol	Ugashik	482,000	4,685,254	70,236	970,758	100,000	5,756,012
Bay East	Ugashik River			70,236	970,758	100,000	
	Egegik	413,000	6,609,892	36,084	1,559,562	0	8,169,454
	Egegik River			36,084	1,559,562	0	
	Naknek-Kvichak	1,165,000	8,857,365	235,116	4,580,028	150,000	13,587,393
	Kvichak River			173,748	3,285,150	150,000	
	Naknek River			61,368	1,294,878	0	
Bristol	Nushagak	327,000	7,077,467	64,466	1,986,744	0	9,064,211
Bay	Igushik River			21,816	238,710	0	
West	Nushagak River			11,246	639,291	0	
	Wood River			31,404	1,108,743	0	
	Togiak	20,000	327,801	4,494	37,722	0	365,523
	Togiak River			4,494	37,722	0	
E	Bristol Bay Totals:	2,407,000	27,557,779	410,396	9,134,814	250,000	36,942,593

	Sockeye per Delivery
Ugashik	1239
Egegik	898
Naknek-Kvichak	908
Nushagak	562
Togiak	113

Test Fishery Port Moller				
Date	Index Daily	Cumulative		
7/12/2016	32.00	1,175.00		

Registrations as of:	July 16 09:00 AM- and	I - July 18 09:00 AM
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District	Permits	Permits in 48 hrs.	Vessels	Vessels in 48 hrs.	DBoats	DBoats in 48 hrs.
Egegik	281	281	225	225	56	56
Naknek-Kvichak	789	800	630	639	160	163
Nushagak	278	273	216	213	62	60
Togiak	43	43	43	43		
Ugashik	292	312	225	240	67	72
Grand Total	1,683	1,709	1,339	1,360	345	351

through 07/16/2016

		Catch Daily	Cumulative	Escapement Daily	Cumulative	In-River Estimate	Total Run
Bristol Bay East	Ugashik	443,000	5,128,109	84,078	1,054,836	140,000	6,322,945
	Ugashik River			84,078	1,054,836	140,000	
	Egegik	322,000	6,932,355	32,034	1,591,596	0	8,523,951
	Egegik River			32,034	1,591,596	0	
	Naknek-Kvichak	775,000	9,632,711	251,898	4,831,926	200,000	14,664,637
	Kvichak River			163,374	3,448,524	200,000	
	Naknek River			88,524	1,383,402	0	
Bristol	Nushagak	157,000	7,234,715	79,611	2,066,355	0	9,301,070
Bay	Igushik River			22,752	261,462	24 200,000 02 0 55 0 62 0	
West	Nushagak River			16,101	655,392	0	
	Wood River			40,758	1,149,501	0	
	Togiak	20,000	347,333	3,654	41,376	0	388,709
	Togiak River			3,654	41,376	0	
E	Bristol Bay Totals:	1,717,000	29,275,223	451,275	9,586,089	340,000	39,201,312

	Sockeye per Delivery		
Ugashik	1455		
Egegik	807		
Naknek-Kvichak	728		
Nushagak	342		
Togiak	191		

Test Fishery Port Moller No recent results found. Potentially weathered out.

Registrations as of: July 17 09:00 AM- and - July 19 09:00 AM

District	Permits	Permits in 48 hrs.	Vessels	Vessels in 48 hrs.	DBoats	DBoats in 48 hrs.
Egegik	279	275	225	222	54	53
Naknek-Kvichak	787	822	629	653	159	171
Nushagak	242	241	191	190	51	51
Togiak	43	43	43	43		
Ugashik	289	330	223	252	66	78
Grand Total	1,640	1,711	1,311	1,360	330	353

through 07/17/2016

		Catch Daily	Cumulative	Escapement Daily	Cumulative	In-River Estimate	Total Run
Bristol Bay East	Ugashik	308,000	5,436,434	108,420	1,163,256	200,000	6,799,690
	Ugashik River			108,420	1,163,256	200,000	
	Egegik	291,000	7,223,720	38,166	1,629,762	0	8,853,482
	Egegik River			38,166	1,629,762	0	
	Naknek-Kvichak	809,000	10,441,842	308,580	5,140,506	0	15,582,348
	Kvichak River			247,650	3,696,174	0	
	Naknek River			60,930	1,444,332	0	
Bristol	Nushagak	186,000	7,436,307	86,874	2,153,229	0	9,589,536
Bay	Igushik River			31,020	292,482	0	
Bristol	Nushagak River			11,718	667,110	0	
	Wood River			44,136	1,193,637	0	
	Togiak	0	347,796	4,014	45,390	0	393,186
	Togiak River			4,014	45,390	0	
E	Bristol Bay Totals:	1,594,000	30,886,099	546,054	10,132,143	200,000	41,218,242

	Sockeye per Delivery			
Ugashik	1205			
Egegik	857			
Naknek-Kvichak	821			
Nushagak	589			
Togiak				

Test Fishery Port Moller No recent results found. Potentially weathered out.

Registrations as of: July 18 09:00 AM- and - July 20 09:00 AM

District	Permits	Permits in 48 hrs.	Vessels	Vessels in 48 hrs.	DBoats	DBoats in 48 hrs.
Egegik	271	271	219	219	52	52
Naknek-Kvichak	797	833	637	661	162	174
Nushagak	241	241	190	190	51	51
Togiak	43	43	43	43		
Ugashik	309	326	238	250	71	76
Grand Total	1,661	1,714	1,327	1,363	336	353

through 07/18/2016

		Catch Daily	Cumulative	Escapement Daily	Cumulative	In-River Estimate	Total Run
Bristol	Ugashik	295,000	5,731,204	52,566	1,215,822	0	6,947,026
Bay East	Ugashik River			52,566	1,215,822	0	
East	Egegik	255,000	7,478,363	42,702	1,672,464	0	9,150,827
	Egegik River			42,702	1,672,464	0	
	Naknek-Kvichak	755,000	11,197,038	192,804	5,333,310	0	16,530,348
	Kvichak River			135,684	3,831,858	0	
	Naknek River			57,120	1,501,452	0	
Bristol	Nushagak	107,000	7,543,496	67,062	2,220,291	0	9,763,787
Bay West	Igushik River			26,796	319,278	0	
west	Nushagak River			0	667,110	0	
	Wood River			40,266	1,233,903	0	
	Togiak	16,000	363,796	3,204	48,594	0	412,390
	Togiak River			3,204	48,594	0	
E	Bristol Bay Totals:	1,428,000	32,313,897	358,338	10,490,481	0	42,804,378

Sockeye per Drift Delivery for: July 18

Sockeye per Delivery
1381
928
943
493
244

through 07/19/2016

		Catch Daily	Cumulative	Escapement Daily	Cumulative	In-River Estimate	Total Run
Bristol Bay	Ugashik	295,000	6,026,174	85,638	1,301,460	0	7,327,634
	Ugashik River			85,638	1,301,460	0	
East	Egegik	240,000	7,718,002	30,660	1,703,124	0	9,421,126
	Egegik River			30,660	1,703,124	0	
	Naknek-Kvichak	602,000	11,799,647	185,586	5,518,896	0	17,318,543
	Kvichak River			143,370	3,975,228	0	
	Naknek River			42,216	1,543,668	0	
Bristol	Nushagak	145,000	7,688,903	74,994	2,295,285	0	9,984,188
Bay	Igushik River			33,174	352,452	0	
West	Nushagak River			0	667,110	0	
	Wood River			41,820	1,275,723	0	
	Togiak	25,000	388,401	4,020	52,614	0	441,015
	Togiak River			4,020	52,614	0	
E	Bristol Bay Totals:	1,307,000	33,621,127	380,898	10,871,379	0	44,492,506

	Sockeye per Delivery			
Ugashik	1262			
Egegik	876			
Naknek-Kvichak	733			
Nushagak	795			
Togiak	185			

through 07/20/2016

		Catch Daily	Cumulative	Escapement Daily	Cumulative	In-River Estimate	Total Run
Bristol Bay East	Ugashik	192,000	6,218,092	58,986	1,360,446	0	7,578,538
	Ugashik River			58,986	1,360,446	0	
	Egegik	178,000	7,896,089	32,760	1,735,884	0	9,631,973
	Egegik River			32,760	1,735,884	0	
	Naknek-Kvichak	606,000	12,406,006	187,752	5,706,648	0	18,112,654
	Kvichak River			158,484	4,133,712	0	
	Naknek River			29,268	1,572,936	0	
Bristol	Nushagak	118,000	7,807,393	60,438	2,355,723	0	10,163,116
Bay	Igushik River			33,162	385,614	0	
West	Nushagak River			0	667,110	0	
	Wood River			27,276	1,302,999	0	
	Togiak	29,000	417,156	8,406	61,020	0	478,176
	Togiak River			8,406	61,020	0	
E	Bristol Bay Totals:	1,123,000	34,744,736	348,342	11,219,721	0	45,964,457

Sockeye per Drift Delivery for: July 20

	Sockeye per Delivery
Ugashik	873
Egegik	761
Naknek-Kvichak	785
Nushagak	651
Togiak	212

through 07/21/2016

		Catch Daily	Cumulative	Escapement Daily	Cumulative	In-River Estimate	Total Run
Bristol	Ugashik	153,000	6,371,580	68,706	1,429,152	0	7,800,732
Bay East	Ugashik River			68,706	1,429,152	0	
	Egegik	120,000	8,015,626	25,362	1,761,246	0	9,776,872
	Egegik River			25,362	1,761,246	0	
	Naknek-Kvichak	376,000	12,782,366	121,188	5,827,836	0	18,610,202
	Kvichak River			87,564	4,221,276	0	
	Naknek River			33,624	1,606,560	0	
Bristol	Nushagak	55,600	7,863,429	29,730	2,398,856	0	10,262,285
Bay	Igushik River			23,022	408,636	0	
West	Nushagak River			0	680,513	0	
	Wood River			6,708	1,309,707	0	
	Togiak	22,500	439,880	5,970	66,990	0	506,870
	Togiak River			5,970	66,990	0	
E	Bristol Bay Totals:	727,100	35,472,881	250,956	11,484,080	0	46,956,961

Sockeye per Drift Delivery for: July 21

	Sockeye per Delivery
Ugashik	975
Egegik	767
Naknek-Kvichak	640
Nushagak	360
Togiak	237

through 07/31/2016

		Catch Daily	Cumulative	Escapement Daily	Cumulative	In-River Estimate	Total Run
Bristol	Ugashik	0	6,769,293	0	1,635,270	0	8,404,563
Bay	Ugashik River			0	1,635,270	0	
East	Egegik	0	8,485,706	0	1,837,260	0	10,322,966
	Egegik River			0	1,837,260	0	
	Naknek-Kvichak	0	13,610,820	0	6,154,638	0	19,765,458
	Kvichak River			0	4,462,728	0	
	Naknek River			0	1,691,910	0	
Bristol	Nushagak	0	7,989,523	0	2,459,450	0	10,448,973
Bay	Igushik River			0	469,230	0	
West	Nushagak River			0	680,513	0	
	Wood River			0	1,309,707	0	
	Togiak	0	544,346	8,694	158,106	0	702,452
	Togiak River			8,694	158,106	0	
E	Bristol Bay Totals:	0	37,399,688	8,694	12,244,724	0	49,644,412

Sockeye per Drift Delivery for: July 31

	Sockeye per Delivery
Ugashik	540
Egegik	746
Naknek-Kvichak	366
Nushagak	11
Togiak	

321 -	Ugashik Tra	ditional otate	IVIC	anagea i lanance	
	Ugashik Drift	Ugashik Set	t		
Percentage	91.4%	8.69	6		
322	- Egegik Trad	litional State I	Ma	naged Fisheries	
	Egegik Drift	Egegik Set			
Percentage	80.2%	19.8%			
<u> </u>			tat	e Managed Fisher	ie
<u> </u>	(nek-Kvichak		_	e Managed Fisher aknek-Kvichak Drift	
<u> </u>	(nek-Kvichak	Traditional S	_	-	
324 - Nak	knek-Kvichak Kvichak Set 7.8%	Traditional S Naknek Set 7.7%	Na	aknek-Kvichak Drift	
324 - Nak	knek-Kvichak Kvichak Set 7.8% Nushagak Tra	Traditional S Naknek Set 7.7%	Na B M	aknek-Kvichak Drift 84.59	