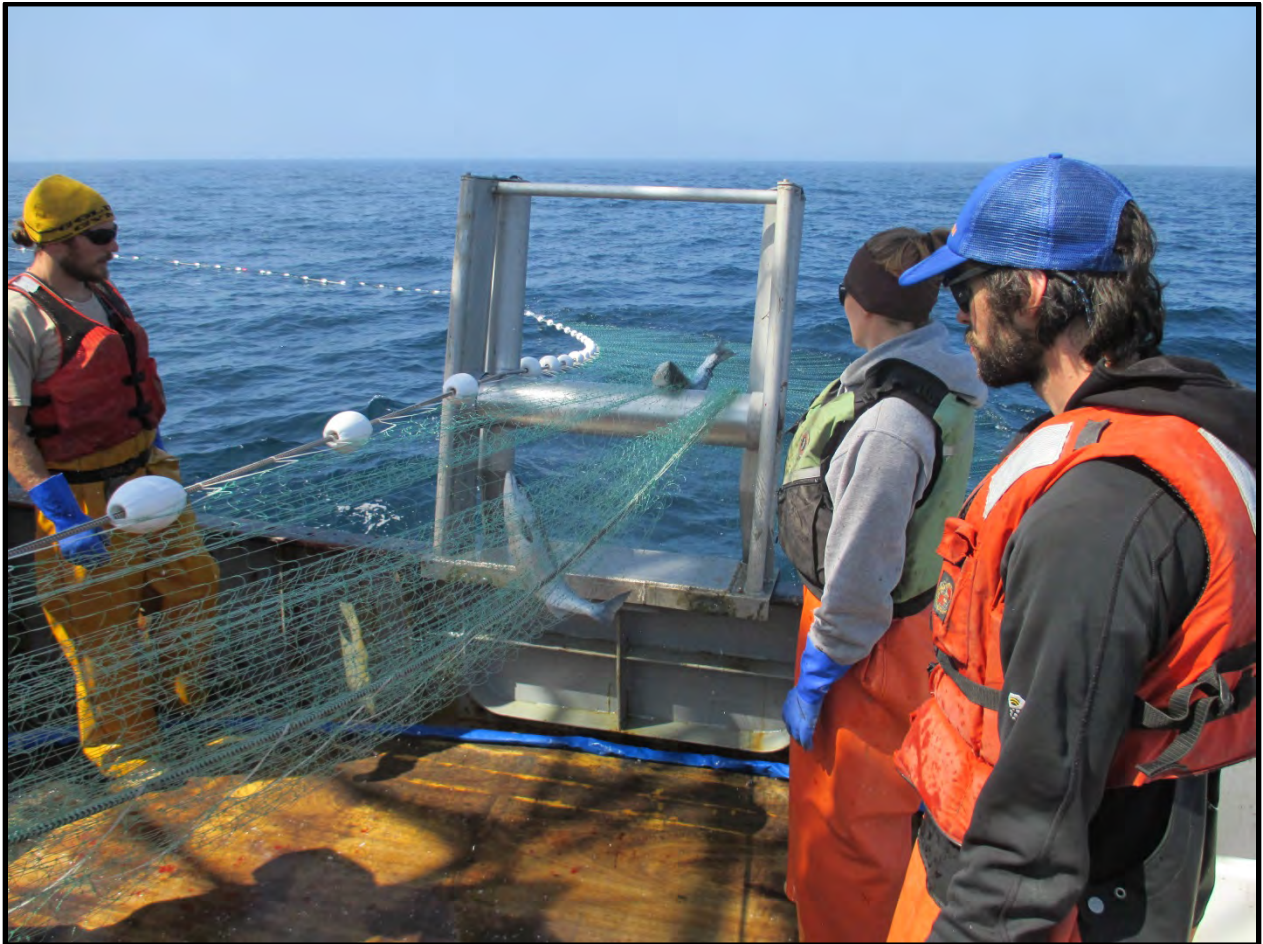


The 2015 Port Moller Test Fishery



Prepared for



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EXECUTIVE SUMMARY

- In 2015, the Port Moller Test Fishery (PTMF) operated from 10 June to 10 July to provide an advance indication of the run strength of sockeye salmon returning to Bristol Bay and its fishing districts. In season, daily catch summaries and the updated Replacement Index were distributed to interested stakeholders on the same evening as catches were reported from the sampling vessel. Interpretations of these catches were distributed throughout the season as meaning new information developed. Estimates of genetic stock composition and age composition were forwarded to the stakeholder group soon after receipt from the Alaska Department of Fish and Game.
- Net soak times were shortened in 2015, from a mean fishing time (MFT) of about 60 minutes in prior years to 25 minutes in 2015 (MFT accounts for deployment and retrieval processes). The shorter sets 2015 allowed two sets per station on many days, and allowed an additional, sixth, station to be fished on some days. Longer sets would improve precision only if catches varied substantially between double sets at a given station. The two 25-minute sets yielded remarkably similar results throughout the season. The average of the two sets was used to formulate the daily Replacement Index in 2015, but using only one set per station would have produced similar results. Moving to shorter sets reduced the potential for gillnet saturation, and afforded the potential to save sufficient time at each station to possibly sample an additional station.
- Changes in the fish-per-index (FPI) through the season at Port Moller hindered the estimation of travel time (TT) and affected forecasts of run magnitude. During the postseason analysis for 2015, we discovered that inseason changes in FPI for the aggregate run were highly correlated with a ratio of station catches— $(\text{CPUE}_{\text{Stn2}} + \text{CPUE}_{\text{Stn4}}) / \text{CPUE}_{\text{Stn6}}$. Allowing FPI to adjust with this ratio provided a convincing model fit and estimated TT to be about 9 days for all districts. If we had used this descriptor to adjust FPI inseason, our forecasts on July 3 and July 10 would have been 46 million and 49 million fish, respectively. This technique seems to work for district-specific forecasts as well. The reasons why FPI changes inseason continue to be an area of research, and we believe that catch patterns across the stations holds promise for future analyses.
- The lateness of the 2015 run hindered forecasting based on the PMTF data, especially so for Interpretation #6, which was based on information at Port Moller through July 2. At that point, Port Moller catches appeared to be declining as per usual by this date. We projected the Replacement Index for the remainder of the season, based on the incorrect interpretation that Port Moller catches had peaked around June 25, three days early. Given this scenario, we estimated the run to be one day early and forecasted the total run to be about 30 million fish; indeed, the inshore run to Bristol Bay developed about as predicted through July 10. However, in the days that followed July 2, run strength at Port Moller increased instead of declined, which made the July 2 total run forecast largely obsolete. Although we did offer a caveat in Interpretation #6 regarding our projection of remaining Replacement Index values, 2015 is a prime example of how late runs with a late mode (peak) at Port Moller can mislead interpretation. This also suggests that we should plan for the test fishery to run through July 12 and only discontinue it beforehand if the run has clearly begun to decline over several days.

- To be useful for inseason forecasting, stock compositions estimated in the PMTF must be reasonably representative of the Bristol Bay run. Compositions at the PMTF were estimated with genetic samples from the PMTF, and from the inshore run to Bristol Bay fishing districts lagged backwards to the PMTF. In 2015, stock compositions in the PMTF generally matched up with actual stock compositions observed later in the Bristol Bay fishing districts.
- Likewise, age composition in the PMTF must be reasonably representative of the Bristol Bay run to be useful for inseason forecasting. In 2015, proportions of age 1.2 and 2.3 fish in the PMTF were representative of age compositions observed in the Bristol Bay fishing districts by June 20. Ages 1.3 and 2.2, by contrast, were less representative until later in the season.
- For 2015 the historical relationship between run timing at Port Moller and the inshore Bristol Bay run deviated from the average trend line, but was within the range of observed variability. The average date-of-return estimate for Port Moller was about 2.5 days late (June 28 is the average for 1988–2015), which should have put the inshore run about 1-2 days late (July 6-7). Instead, the average return date for the inshore run to all Bristol Bay districts combined was about 4 days late (July 9).
- Better predictions of the tail of late runs will only come with running the PMTF through July 12; operational plans (and budgets) should reflect this.

Recommendations for 2016:

- The consistency between paired sets during 2015 suggest that only one set per station may be required. The extra time saved could be used to add Station 12 to the routine sampling schedule.
- If managers and industry value late-season information, plan and budget the PMTF boat through July 12 and discontinue the project when it is clear that there is not a late and large tail to the run.
- Currently, genetics samples are selected in proportion to catches across stations generally combining two consecutive days. While this reporting scheme could be continued, grouping days based on catch patterns across stations may help to stratify days to more accurately capture seasonal changes in stock composition. Assuming most of the costs occur during sample analysis, rerunning alternate combinations of the analyzed samples for new mixture estimates by station should require little if any additional funding.
- We will continue research and development of the Daily Projection Model. Anticipated improvements include more representative district-specific PMTF indices and better interpolations for missed fishing days due to weather. Changes to the index across the fishing transect throughout the season are being investigated to explain fluctuations in the FPI parameter.

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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*) returning to natal streams in Bristol Bay approximately one week prior to their arrival in the various terminal commercial fishing districts. The PMTF now operates from around June 10 through July 10 each year and is the first check on 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). Fishermen use this information when deciding which districts to fish. Though the information from the PMTF is not the primary decision support upon which the fishery is prosecuted and managed, it plays an important role as managers use it to help gauge overall and stock-specific run strength.

This report describes the project's objectives, how the test fishery works, the results from 2015, and our recommendations for 2016 research and reporting. In the Appendices, we also compile major results and daily updates provided to processors, fishermen, managers, and the public during the 2015 season. Daily catch updates and interpretations in 2015 varied with the development of the salmon run, but typically summarized catches by station, mean body length, water temperature, and fishing conditions by date (Appendix A). Also appended are reports issued periodically by ADF&G throughout the season summarizing stock compositions (Appendix B) and age compositions (Appendix C) of the Port Moller catches, as well as daily run summaries of inshore catch and escapement to each fishing district (Appendix D).

OBJECTIVES

The 2015 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.
3. Continue research that improves our ability to achieve Objectives 1 and 2. In 2015, research consisted of the following:
 - a. Consideration of new techniques to form district-specific catch indices at the PMTF.
 - b. Investigation of descriptors that explain inseason changes to the fish-per-index parameter.

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 TT 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

Most Bristol Bay sockeye salmon reach the fishing districts between the end of June and the middle of July, with the peak in the fishery 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. Drift gillnets are set at stations located along a transect from Port Moller to Cape Newenham (Figure 1). Stations are 5 miles apart, with Station 1 being 30 miles offshore from Port Moller and Station 12 being 85 miles offshore. Prior to 1987, odd stations were fished on the outgoing trip, the vessel anchored overnight, and even stations were fished on the return trip (Eggers and Fried 1984). Beginning in 1987, only even stations were fished (Stations 2–8 and occasionally Station 10) during both the outbound and inbound trips. In 1999, fishing at Station 10 was resumed in response to the belief that the bulk of the run may have been further out, and in 2000 fishing occurred as far out as Station 14 (95 miles offshore; Flynn and Hilborn 2004). Usually, a maximum of five stations are fished: either Stations 2–10 or Stations 4–12, depending on the previous day's offshore distribution.

METHODS

Net Description

Historically (1987–2010), the PMTF net consisted of four 50-fathom shackles (1,200 ft) of multistrand monofilament dyed dark green (Momoi Shade 9), 60 meshes deep (approximately 20 ft), with 13.0 cm (5 $\frac{1}{8}$ in) stretched mesh, and hung to a 2.1 to 1 ratio. This net (the “Traditional Net”) selects for ocean age-3 fish more than it does for ocean age-2 fish (hereafter, all fish ages

are assumed to be ocean ages unless otherwise stated). Age-3 fish are typically about 6 cm larger than age-2 fish, which affects their susceptibility to being caught in a given mesh size. This bias causes the test fishing index to change as a function of the relative abundances for each of the age classes comprising a given year's run. Further, it causes bias in the age composition forecasts and possibly to the stock composition estimates given that stocks differ in size structure.

Based on the results from a selectivity study (2009–2011), we developed a new, less selective net (the Replacement Net) consisting of alternating shackles of 5 $\frac{1}{8}$ in mesh and 4 $\frac{1}{2}$ in (11.4 cm) mesh. The idea was to equalize the selectivity across the four major age groups of Bristol Bay sockeye salmon (ages 1.2, 2.2, 1.3, and 2.3). Although the data collected with this net allowed for the estimation of selectivity models that can correct for residual selectivity left in the Replacement Net, we discovered that most of the selectivity across the combined raw catch was already removed. That is, 4 $\frac{1}{2}$ in mesh selected for ocean age-2 fish by the same relative degree to which the 5 $\frac{1}{8}$ in mesh selected more for ocean age-3 fish. As a result, these biases cancel each other when catches from both meshes are pooled, rendering the estimate of age composition fairly accurate of what is passing by the test fishery. Residual selectivity was found to be nominal, so our selectivity model was not used and age composition forecasts were based only on raw catches pooled across both meshes from the Replacement Net. Since the start of the 2011 season, the Replacement Net has been the only net used in the PMTF.

Fish Sampling Protocol

Fish capture

Prior to 2015, set duration was targeted at 60 min. In 2012, we recommended testing for gillnet saturation by setting for a shorter length of time (20–30 min instead of 60 min). As first mentioned in 2012's final report, we suspected gillnet saturation may inhibit the correlation between the magnitude of the PMTF catches and inshore catch and escapement. If a gillnet fished for about one hour is saturating (reducing fishing efficiency), then perhaps reducing the soak time would help correct this bias and better index larger pushes of fish. Varying soak time to deal with gillnet saturation has precedence in the literature and has allowed for corrective models (e.g., Minns and Hurley 1988; Hansen et al. 1998; Rotherham et al. 2006).

In 2013 and 2014, we tested this hypothesis by setting the net for 20 minutes at the same station immediately following the routine 60-minute set. Based on these results, set duration was targeted at 25 min during 2015. The extra time saved from switching to shorter sets allowed double sets at many of the stations on a given day. On such occasions, the boat moved 5 minutes west of the station being replicated before resetting.

Drift gillnet sets lasted for an average of 26 min, and deployment was perpendicular to the migratory path of the salmon on the north-south axis (Helton 1991). The vessel traveled on a course of 340° for out-going sets and a course of 160° on incoming sets. These bearings oriented the net roughly parallel to the transect bearing (designed to be perpendicular to the predominant migration trajectory of the sockeye salmon), which was on a line between Port Moller and the tip of Cape Newenham. Typically, two to three minutes were needed to deploy the full net. After setting the net, the vessel moved as far away as possible from the net while maintaining visual contact. This distance varied with conditions and was sometimes restricted to a few hundred meters during times of fog to 500 or more meters in good visibility and low sea states. To

standardize effort among years, skippers, and vessels, no attempt was made to hook or run the net to try and 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 calculated as:

$$MFT = SI - FO + \frac{(FO - SO) + (FI - SI)}{2} \quad (1)$$

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.

Age and stock composition

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 trays, preserved with ethanol, 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 2015 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 2015 age composition estimates reported by ADF&G are included in Appendix C.

Formulating the Replacement Index

Beginning in 1985, the daily Traditional Index (*TI_i*) was standardized to the sum of CPUE (note that Traditional Index CPUE=fish per 100 fathom hours) for Stations 2, 4, 6, and 8 (Rogers et al. 1989, Helton 1991).

$$TI_i = I_{2i} + I_{4i} + I_{6i} + I_{8i} \quad (2)$$

where, I_{2i} – I_{8i} = station and date (i) specific CPUEs (catch per 100 fathoms). Missing station points were interpolated by averaging the station specific daily indices from the two days prior to and the two days after the missing station point(s). In 1995, CPUE was highest at Station 8 causing suspicion that a substantial proportion of the run was further offshore (Flynn and Hilborn 2004). As a consequence, the Traditional Index was altered to:

$$TI_i = 0.8(I_{2i} + I_{4i} + I_{6i} + I_{8i}) \quad (3)$$

in 1996, which gives double weight to Station 8 to account for fish passage further offshore. There was concern about causing confusion among laypersons because the magnitude of the TI_i values would change from what had been released in previous years (1985–1995). To minimize this degree of change, the scalar 0.8 was used to reduce TI_i and render the output from Equation 3 more congruous with Equation 2. In 2015, missing station-date specific values were interpolated by generating normal curves (predictive models) fit across stations (one curve) and through dates (the second curve) as per Flynn and Hilborn (2004).

In 2015 we used the daily abundance index formulated in 2011 (the Replacement Index, RI_i) which was the average CPUE (catch per 200 fathom hours) across five stations from the entire Replacement Net (4½ in and 5⅛ in mesh combined) on a given day. We found this index easier to interpret and explain, while keeping the same statistical properties of the sum, which is what the Traditional Index is based on. The Replacement Index uses one more station than TI_i and does not give double weight to Station 8. This extra station, and lower sensitivity of the index to Station 8, helps reduce random fluctuation from day to day and station-to-station and allow the index to better track abundance through time. The five stations comprising the Replacement Index shift across the transect depending on the offshore distribution.

To make catch and CPUE from the net used in 2011–2015 (the Replacement Net) comparable to historical data (the Traditional Index), we had to remove the portions of the catch that came from the 4½ in mesh (because this mesh was not used in the Traditional Net). Thus, only catches from the 5⅛ in mesh shackles (two shackles) have been used in Equation 3 starting in 2011. Catches were multiplied by 2 to make the effort correspond with previous years when catches came from the Traditional Net (four shackles of 5⅛ in mesh).

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.

This 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 this season and not the historical relationship between cumulative indexes and resulting total runs from previous years. The Daily Projection Model estimated the run abundance for each district by estimating and applying the parameters of the travel time of fish from Port Moller to inshore (TT) and the fish-per-index (the number of fish inshore that each fish caught on the PMTF represents; FPI). At the end of 2013, and continuing in 2014 and 2015, we used new district

specific indices and updated the Daily Projection Model in season. Modifications will continue as our understanding of the spatiotemporal pattern of the run changes.

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 what occurs inshore. Further complicating the matter are openings/closures in the district fisheries which 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 (http://www.bbedc.com/?page_id=1405.) and a list serve of 361 parties. Daily, catch summaries were distributed the evening catches were reported from the PMTF sampling crew. Interpretations of these catches were then distributed in the next 1-2 days, depending on how quickly meaningful new information developed. Finally, BBSRI staff 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 numbered in sequence through the season (Appendices A – C).

We used the daily Replacement Index as an indicator of when peak abundance occurred at Port Moller, and to forecast peaks and drop offs in catch and escapement. The daily Replacement Index was reported in tabular format, as well as, in a figure to better illustrate the seasonal CPUE trend. Although we have warned about the unreliability of this approach in the past, many stakeholders still rely on the cumulative Traditional Index to try and place the current year's catch trends into a historical perspective. Thus, we reported the cumulative Traditional Index in tabular format along with date specific cumulative indexes and resulting total runs from previous years.

We occasionally reported graphs comparing water temperatures, and district specific daily indexes and forecasts (following the release of genetic stock composition estimates by ADF&G). Various other graphs and analyses were performed that helped gauge run strength (e.g., daily interpretations contained in Appendix A).

RESULTS AND DISCUSSION

In 2015, the PMTF operated from June 10 to July 10 and caught 4,053 sockeye salmon. Inseason daily catch updates were sent out the same evening that catches were reported from the

test boat; interpretive reports were usually sent out as meaningful information changed (Table 1). Genetic stock composition estimates were forwarded to the distribution list soon after receipt from ADF&G.

The Replacement Index

Generally, the daily Replacement Index at Port Moller increases to a peak, then begins to taper several days before the test fishery ends (Figure 2). Sometimes the run is triangular and has a single predominant mode (e.g., 2011), and other times is distinctly bimodal (2012). From 2011 to 2013, the daily Replacement Index peaked around 22 June. Protracted catches late in the season caused this peak to occur much later in 2014 and 2015 (4 July and 8 July). The index pattern in 2015 was somewhat representative of the inshore run, with some departures due to changes in the FPI parameter and to random noise in the relationship.

Shorter sets (about 25 min versus the traditional 60 min) in 2015 allowed two sets per station on many days. Comparison of these sets by station indicates remarkable consistency (Figure 3). While the average of the two sets was used to formulate the daily Replacement Index, the same general pattern in catch magnitude throughout season would have been produced using either set by itself (Figure 4).

Forecasting

The value of this test fishery is greatest when the run develops early and is either smaller or larger than the preseason forecast. However, information gathered during the 2015 PMTF was difficult to interpret. The run was very close to the preseason forecast, but one of the latest on record going back to 1956; only 1956 and 1971 were later (Figure 5).

Comparing the PMTF to the development of the inshore run across the major fishing districts after the season affords clarity of hindsight due to the availability of all possible data with which to estimate pertinent parameters such as TT and FPI that allow forecasting of run timing and magnitude. As well, it allows more time to research patterns and relationships that may not have been as forthcoming in season.

Below we assess how well Port Moller forecasted various aspects of the total run; for each aspect we provide a *Postseason Summary* that makes use of all information through the end of the season and review the *Inseason Utility* of the 2015 test fishery. The first facilitates research and understanding of how well the PMTF represented the run, and evaluating the discovery of new signals and techniques that can be used in the future. The latter is more of a report card on the actual utility of Port Moller, which combines limitations of the data available in real time as the run developed with our ability to interpret and use these data to inform stakeholders. Notable inseason interpretations are summarized in Table 2 and expounded in the sections below.

Run Magnitude

Postseason Summary.—During the postseason analysis of the 2014 season, we began to suspect the FPI parameter changes throughout the season due to shifts in the distribution across the test fishing transect. Changes in the FPI obfuscate the estimation of TT and bias forecasts of run magnitude. Much of the forecast uncertainty can be removed if a descriptor variable can be found that predicts when and by what magnitude and direction the FPI parameter will change.

During the postseason analysis for 2015, we discovered that inseason changes in FPI for the aggregate run were highly correlated with a ratio of station catches— $(\text{CPUE}_{\text{Stn2}} + \text{CPUE}_{\text{Stn4}}) / \text{CPUE}_{\text{Stn6}}$. Allowing FPI to adjust with this ratio (Figure 6) provided the postseason model fit shown in Figure 7, which estimated TT to be about 9-10 days for all districts (Figure 8). If we had used this descriptor to adjust FPI inseason, our forecasts on July 3 and July 10 would have been 46 million and 49 million, respectively (Figure 9). This technique seems to work for district specific forecasts as well (Figure 10). The reasons why FPI changes inseason continue to be an area of research, and any variable (such as the one described above) used to predict these changes must prove effective across a range of run patterns and magnitudes before they can be consistently relied upon.

Inseason Utility.— The lateness of the 2015 run hindered forecasting based on the PMTF data, especially so for Interpretation #6, which was based on information through July 2. At that point, Port Moller catches appeared to be drying up. We falsely projected the Replacement Index for the remainder of the season and presumed that Port Moller peaked on about June 25, 3 days early. Given this scenario, we estimated the run was 1 day early and forecasted the total run to be about 30 million; the inshore run increased more or less as predicted through about July 10. However, in the days that followed July 2, it became clear that the run strength at Port Moller was not tapering, but building. While we did offer a caveat in Interpretation #6 regarding our projection of remaining Replacement Index values, 2015 is a prime example of how late runs that yield bimodal catch indices at Port Moller can mislead interpretation (Table 2).

Stock Composition Forecasting

Post-season Summary.— The stock composition estimates for nine of the ten reported date periods at Port Moller were informative in 2015. Lagging the observed inshore run back to the PMTF by estimated travel times for each district allowed an assessment of how well stock composition estimates at Port Moller represented the run (Figure 11). Reasons for discrepancies throughout the season may have included (1) inaccurate TT estimates, (2) within season changes in each district's catchability, and (3) measurement error in the genetic stock composition estimates. We found that changing the TTs for each district by one to two days had little impact on how well the lagged inshore run compared to estimated stock compositions at Port Moller. Most likely, changes in catchability occurred due to varying migratory routes for stocks through time, which affected exposure to the fishing transect.

The Naknek-Kvichak District stocks were over-represented in the PMTF June 22–24. The Egegik and Ugashik districts were misaligned on June 26. However, from June 28 through July 8 estimated stock compositions at Port Moller were in line with what eventually manifested inshore.

Inseason Utility.—During the season, we used a similar technique based on the preseason forecast to provide a crude diagnostic as to how the run was playing out based on genetic stock composition estimates compared to what was expected (Interpretations #3). This exercise did not have the same advantage of estimated travel time distributions as the analysis described above, and also relied on historical average run timings (Figure 11 above was based on the observed run timing for 2015). Nevertheless, it indicated that the preseason forecast was plausible, which wound up being true.

Age Composition Forecasting

Postseason Summary.—In 2015, proportions of age 1.2 and 2.3 fish in the PMTF were representative of age compositions observed in the Bristol Bay fishing districts by June 20 (Figure 12). Ages 1.3 and 2.2, by contrast, were less representative until later in the season.

Inseason Utility.—During 2015, not much weight was given to age composition information. More attention was focused on refining the Daily Projection Model. For Interpretation #3, we noted that the percentage of ocean age-2 fish at the PMTF was in line with the preseason forecast.

Run Timing Forecasting

Postseason Summary.—The 2015 PMTF was more or less consistent with the historical relationship between run timing at Port Moller and the inshore run in that while it deviated from the average trend line, it was within the range of observed variability (Figure 13). However, in 2015 the average date-of-return estimate for Port Moller was about 2.5 days late (June 28 is the average for 1988–2015), which should have put the inshore run about 1-2 days late (July 6-7; Figure 13). The observed average date-of-return for the 2015 inshore run from all Bristol Bay districts combined was about 4 days late (July 9).

Inseason Utility.—Based on information through July 2, all indications were that Port Moller peaked around June 25 and that the run would be about 1 day early. Catches subsequent to July 2 proved that Port Moller had not peaked on June 25, and because substantive catches continued through July 10, it was difficult to determine the average day of return past the PMTF. Our best estimate from modeling the tail past July 10 is that the average day of return was June 29 or 30.

FUTURE WORK AND RECOMMENDATIONS

Improvements to the District Specific Catch Indices and 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. How the index changes across the PMTF transect throughout the season is being investigated to explain fluctuations in the FPI parameter.

Reporting of Stock Composition

Currently, genetics samples are selected in proportion to catches across stations generally combining two consecutive days. While this reporting scheme could be continued, grouping days based on catch patterns across stations may help to stratify days to more accurately capture

seasonal changes in stock composition. Assuming most of the costs occurs during sample analysis, rerunning alternate combinations of the analyzed samples for new mixture estimates by station should require little if any additional funding.

Continue with Shorter Mean Fishing Times

The consistency between paired sets during 2015 suggest that only one set per station may be all that is required. If so, the extra time saved could be used to add Station 12 to the routine sampling schedule.

ACKNOWLEDGEMENTS

The 2015 Port Moller test fishing project was managed and staffed by the Bristol Bay Science and Research Institute (BBSRI). The project was funded by ADF&G, BBSRI, ten Bristol Bay processors, and by Bristol Bay driftnet fishermen (through the Bristol Bay Regional Seafood Development Association, or BB-RSDA). Processors were Canfisco (AGS/Leader Creek), Deep Sea Fisheries, E&E Seafoods, Ekuk Fisheries, Icicle Seafoods, North Pacific Seafoods, Ocean Beauty, Peter Pan Seafoods, Silver Bay Seafoods, and Trident Seafoods.

Field data were collected by BBSRI technicians Amos Cernohauz, Connor Cleary, and Madeline Jovanovich. The R/V Pandalus was provided by ADF&G, and crewed by captain Ted Jewel, engineer David Knight, and deck hand Lean Wortman. Fred West and Chuck Brazil (ADF&G) managed the scale aging operation in King Salmon and provided the age composition updates. Tyler Dann (ADF&G) 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's staffs at Peter Pan Seafoods in Port Moller. This on-site help in Port Moller is essential to the project's success.

Although none of this is 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 2015 Bristol Bay run.

REFERENCES

- Eggers, D. M., and S. M. Fried. 1984. 1982 Bristol Bay salmon test fishing projects. Alaska Department of Fish and Game. Technical Data Report No. 117. 81 pp.
- Flynn, L., and R. Hilborn. 2004. Test fishery indices for sockeye salmon (*Oncorhynchus nerka*) as affected by age composition and environmental variables. Canadian Journal of Fisheries and Aquatic Resources 61:80-92.
- Hansen, M. J., R. G. Schorfhaar, and J. H. Selgeby. 1998. Gill-net saturation by lake trout in Michigan waters of Lake Superior. North American Journal of Fisheries Management 18:847-853.
- Helton, D. 1991. An analysis of the Port Moller offshore test fishing forecast of sockeye and

- chum salmon runs to Bristol Bay, Alaska. M.S. Thesis, University of Washington, Seattle. Thesis No. 38816.
- 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.
- Minns, C. K., and D. A. Hurley. 1988. Effects of net length and set time on fish catches in gill nets. *North American Journal of Fisheries Management* 8:216-223.
- Randall, R. C. 1977. Offshore test fishing in Bristol Bay, 1977. Alaska Department of Fish and Game. Technical Data Report No. 63. 18 pp.
- Rogers, D., B. Rogers, G. Blair, and D. Helton. 1989. Alaska Salmon Research: Annual Report 1989. University of Washington, Seattle. FRI-UW-8903.
- Rotherham, D., C. A. Gray, M. K. Broadhurst, D. D. Johnson, L. M. Barnes, and M. V. Jones. 2006. Sampling estuarine fish using multi-mesh gill nets; effects of panel length and soak and setting times. *Journal of Experimental Marine Biology and Ecology* 331:226-239.

TABLES

Table 1. Sampling dates and time of corresponding update for four main types of inseason information from the Port Moller Test Fishery in 2015. Updates were sent by email and posted to the project's web site at http://www.bbedc.com/?page_id=1405.

Date	Time of BBSRI daily catch update	BBSRI catch interpretation	ADF&G stock composition estimates	ADF&G age composition estimates
June 10, 2015	21:47			
June 11, 2015	17:13			
June 12, 2015	20:55			
June 13, 2015	17:45			
June 14, 2015	22:17			
June 15, 2015	19:32			
June 16, 2015	20:52	#1: June 10-15		
June 17, 2015	22:06			
June 18, 2015	21:22	#2: June 17		
June 19, 2015	18:06			
June 20, 2015	20:30		#1: June 10-17	
June 21, 2015	18:02			
June 22, 2015	22:51		#2: June 18-19	#1: Through June 21
June 23, 2015	(6/24) 09:10			
June 24, 2015	21:48	#3: June 22		
June 25, 2015	16:33		#3: June 20-21; #4: June 22-23	#2: Through June 23
June 26, 2015	22:29			
June 27, 2015	15:21	#4: June 26	#5: June 24	
June 28, 2015	19:49			
June 29, 2015	18:38		#6: June 26	#3: Through June 28
June 30, 2015	21:21			
July 1, 2015	17:54	#5: June 30	#7: June 10-26 (by station)	
July 2, 2015	19:30		#8: June 28-29	
July 3, 2015	20:31		#9: June 30-July 1	#4: Through July 1
July 4, 2015	18:44	#6: July 3		
July 5, 2015	12:35			#5: Through July 4
July 6, 2015	14:23			
July 7, 2015	22:22		#10: July 2-4	
July 8, 2015	18:25		#11: June 10-July 4 (by station)	#6: Through July 6
July 9, 2015	20:21			
July 10, 2015	14:41	#7: July 10	#12: July 7-8	#7: Through July 9

Table 2. Substantive comments and predictions in the daily interpretations of the 2015 Port Moller Test Fishery.

Interpretation #	Date sent	Summary of analyses and predictions	Did the prediction(s) come true?
1	16-Jun	Stated that it is too early to project the run, but that low catches thus far mean an average or late run timing if preseason forecasts hold true. Primer on PMTF information: We need to know the peak at Port Moller (PM) to predict inshore run timing; PM run midpoint is usually ~ June 28; No known correlation between PM and sea surface temperatures; Catch indices from prior years are not good predictors of the present year; Our models rely entirely on inseason information to predict the inshore run.	Yes; the run met preseason forecasts due to a large, late tail. Past years were not useful for predicting the 2015 run.
2	18-Jun	Noted catch distribution was skewed towards outer stations. More PMTF primer: Why the pre-2010 index is obsolete and no longer reported daily; How the current index is calculated.	
3	24-Jun	Noted the run has two peaks in many years; 2015 run continues to be distributed towards outer stations; Preseason run forecast is still plausible given 2015 data thus far (catches, age and stock compositions). Adjusted for annual run timing, this year's Index would be high so far.	
4	27-Jun	Noted dramatic increase in catches, especially at Stn 4 and 6. Stated that the run will be large if run timing is average, or very large if run timing is late. Noted that missed fishing dates (weather) on June 25 and 27 hinder projections.	Yes. A late run timing yielded a very large run.
5	1-Jul	To meet preseason forecasts, PMTF catches must stay strong for several more days, and the inshore run must be several days late. It does not look like PMTF catches have peaked; Current data project inshore C + E to peak July 5 & 6.	Yes and No. PMTF indeed had not peaked, and sustained catches at PMTF made for an inshore run that was several days late and very large. However, this surge meant the run pushed the run peak later than July 5 & 6.
6	4-Jul	Run needs to be several days late to meet preseason forecasts. For now, PM catches appear to have peaked June 25. This would make the run 2.5 d early, and yield a run size of 30 million fish, with a peak C + E on July 8. Projections now good through July 12.	Yes and No. As stated before, a late surge indeed yielded the preseason forecast; this same surge overrode our July 4 data and predictions.
7	11-Jul	Surge of fish at PM, with strong stock composition of Egegik and Nushagak, means our prior forecast is likely the worst case, and the run will instead be later and larger. With PM ending on July 10 while the index is still climbing, we cannot project the run past July 15. Daily C+E will still exceed 1.5 M fish through that date.	Yes. The inshore C+E was large and late, and still exceeded 3 M on July 15.

FIGURES

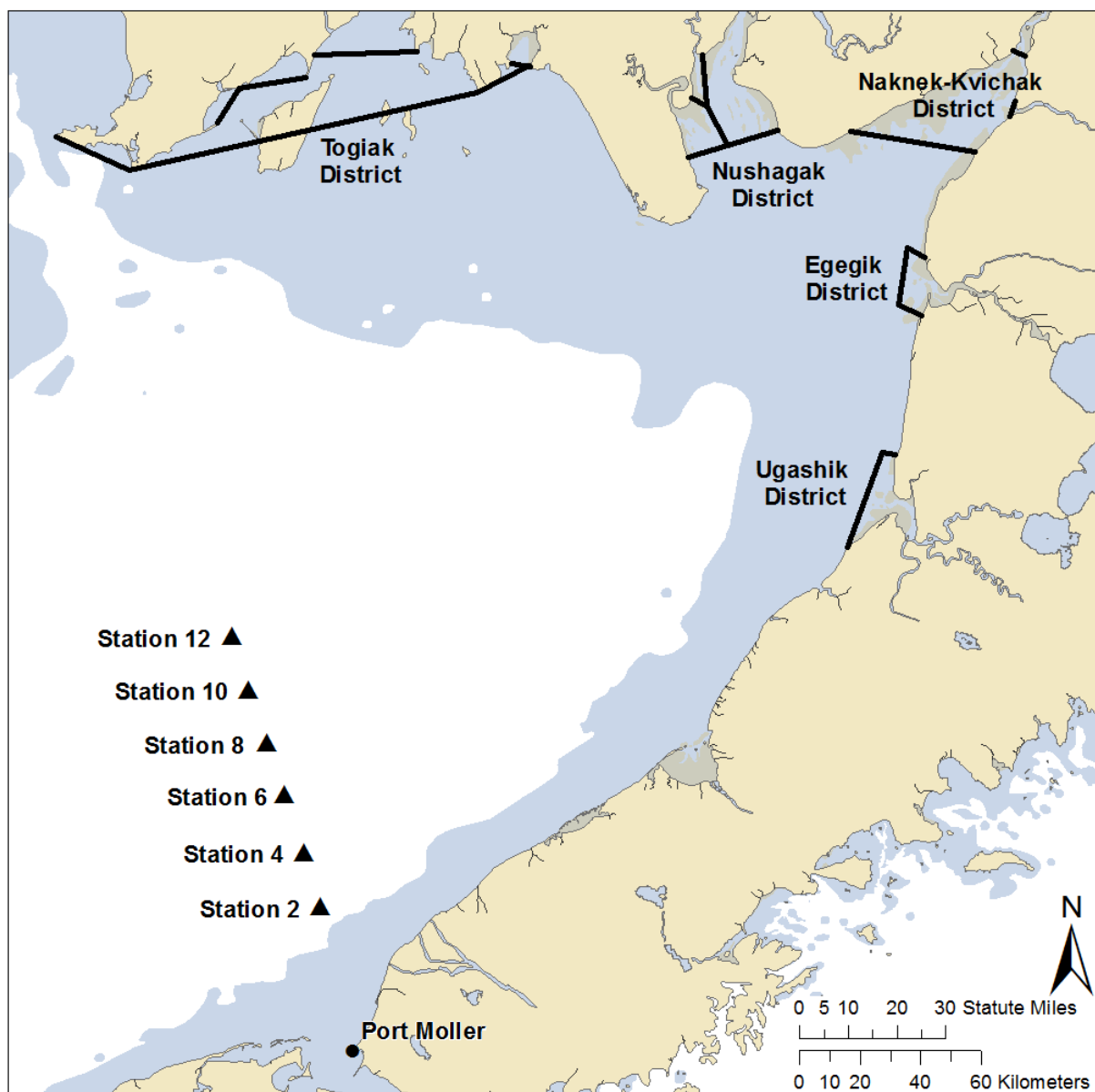


Figure 1. Map of the study area, showing the stations fished by the Port Moller Test Fishery and the locations of Bristol Bay fishing districts. Sockeye salmon passing the test fishery stations take approximately six to nine days to reach the Bristol Bay fishing districts in typical years.

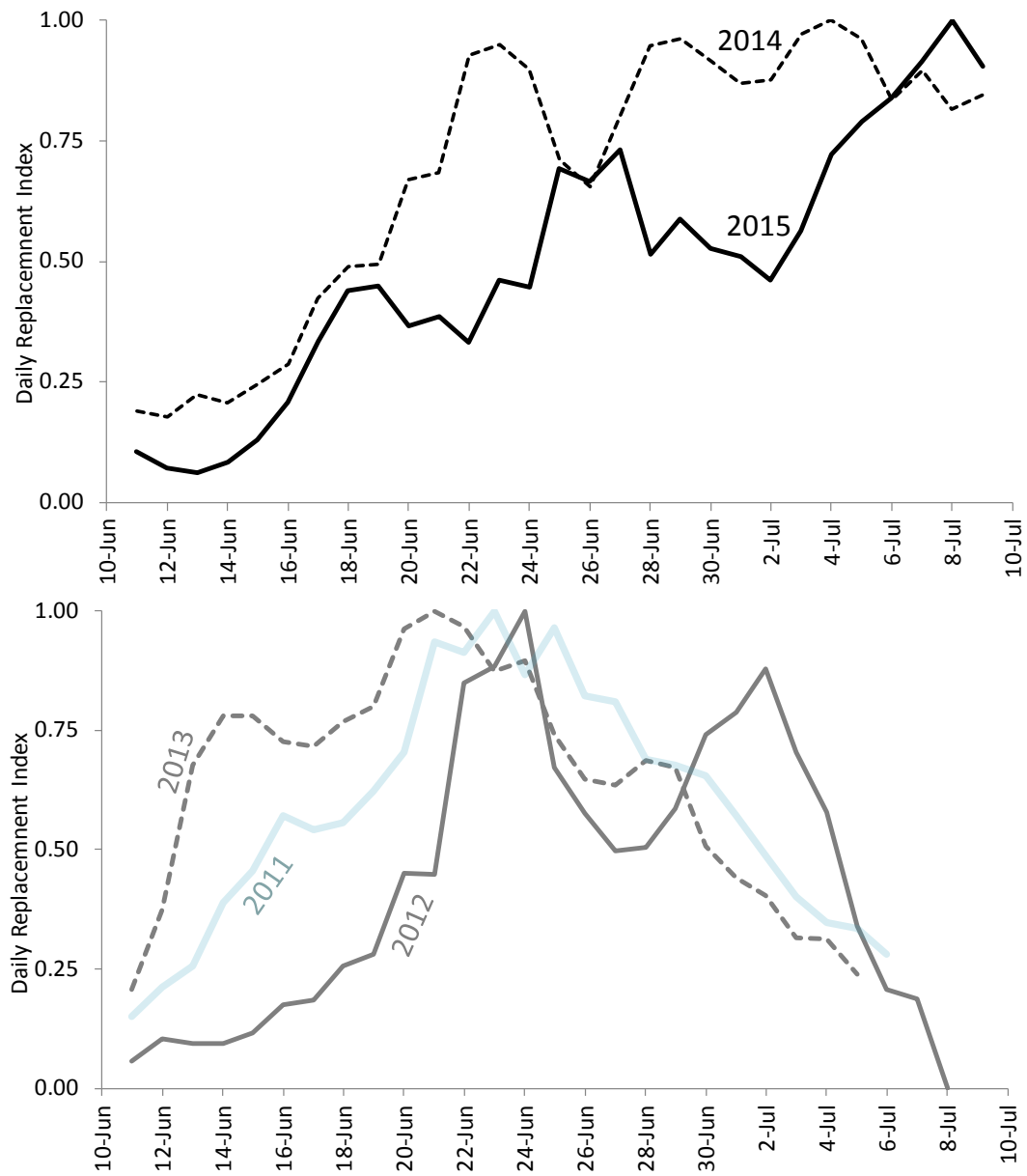


Figure 2. The daily Replacement Index from the Port Moller Test Fishery 2011–2015, with each year rescaled to a maximum value=1.

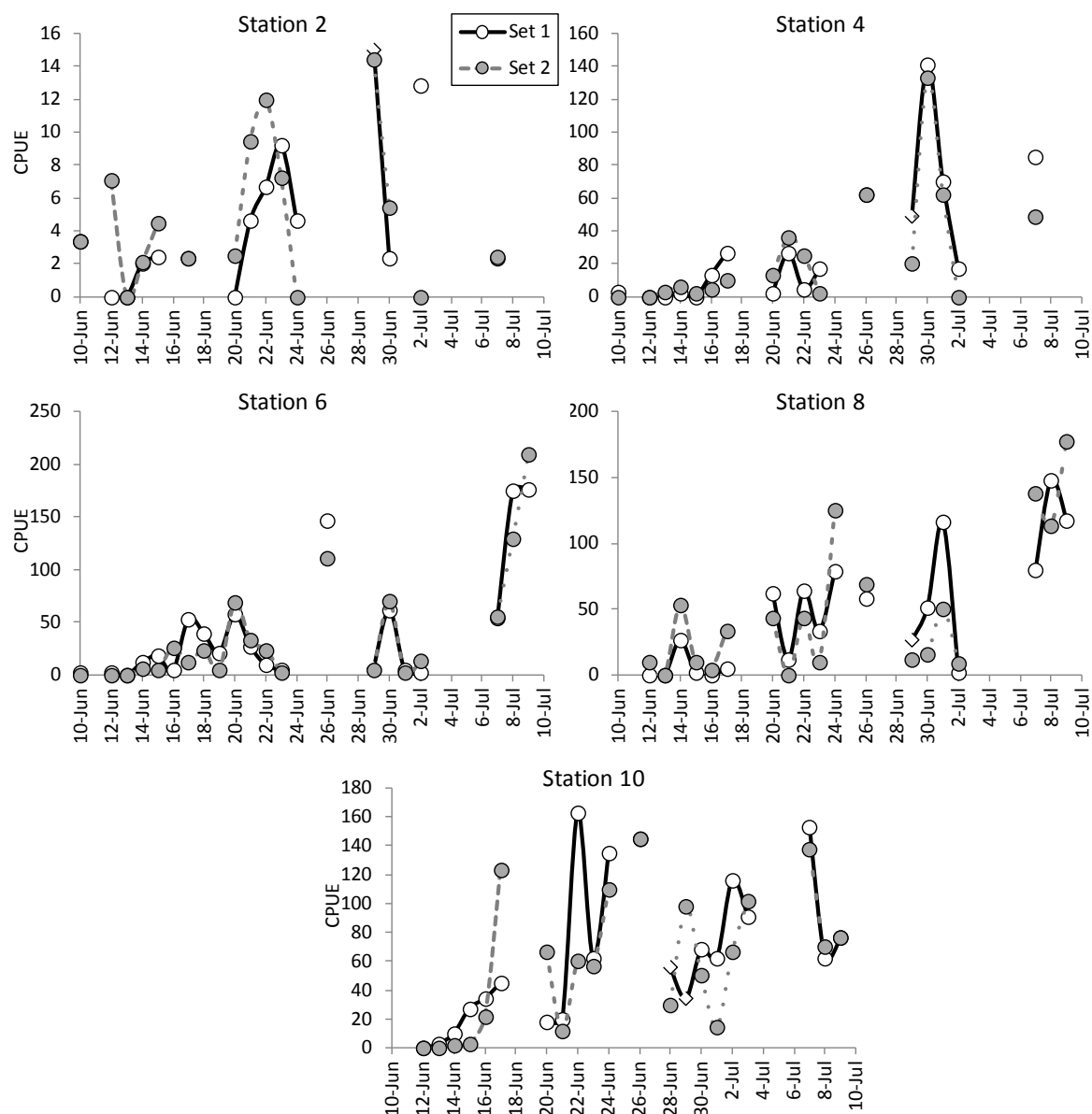


Figure 3. Comparison of catch-per-unit-effort (CPUE) between replicate sets within a station, by day in 2015. Note different Y-axis scale among stations.

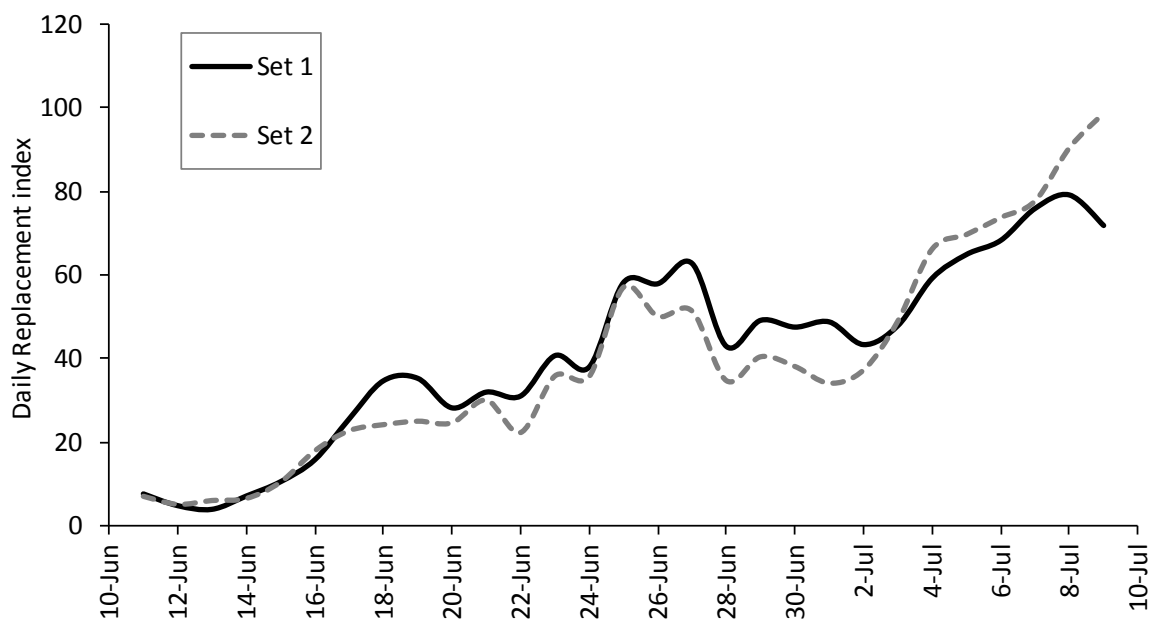


Figure 4. Comparison of daily Replacement Index when calculated independently for Set 1 and Set 2.

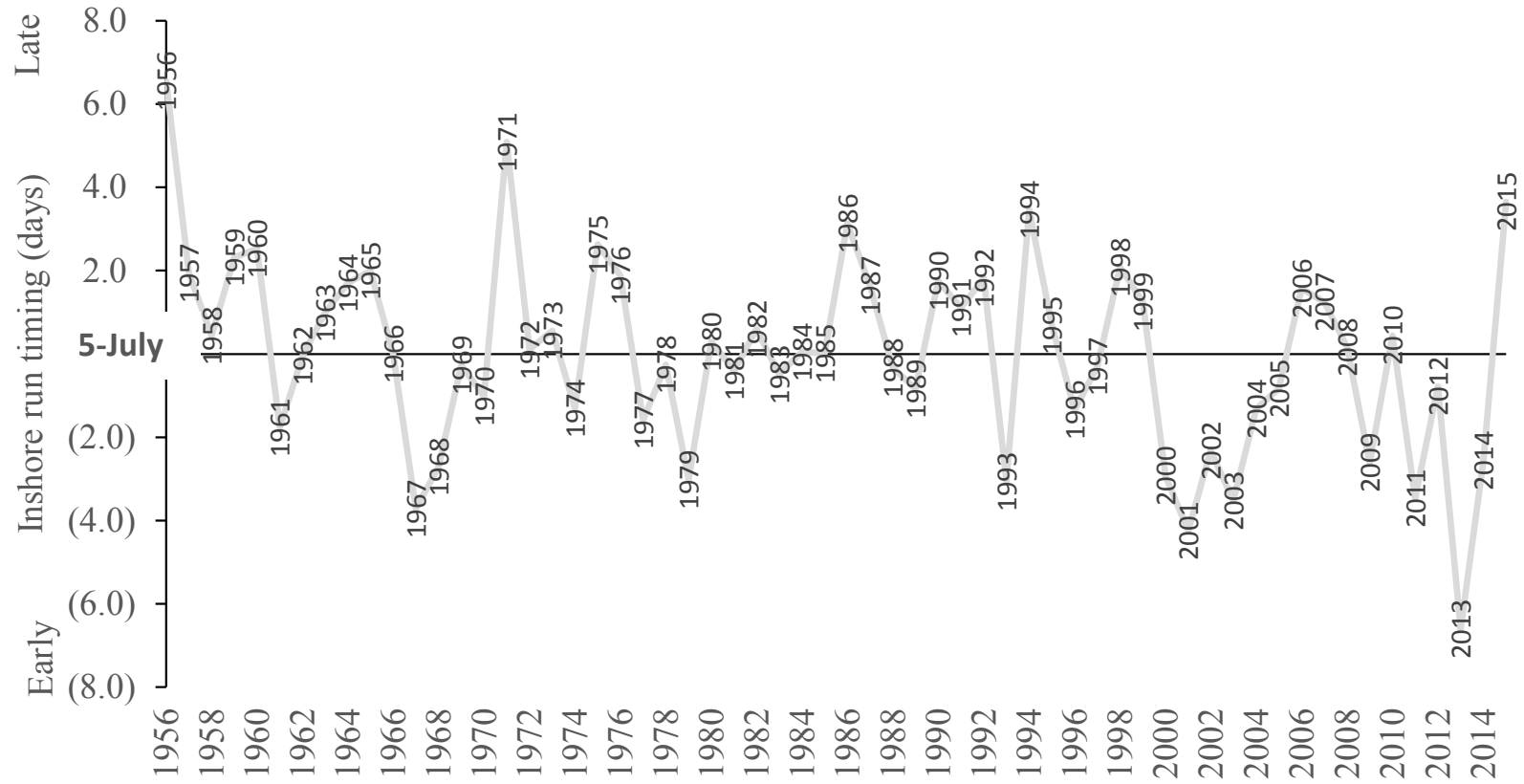


Figure 5. Annual timing of inshore run to Bristol Bay, standardized, from 1956 through 2015.

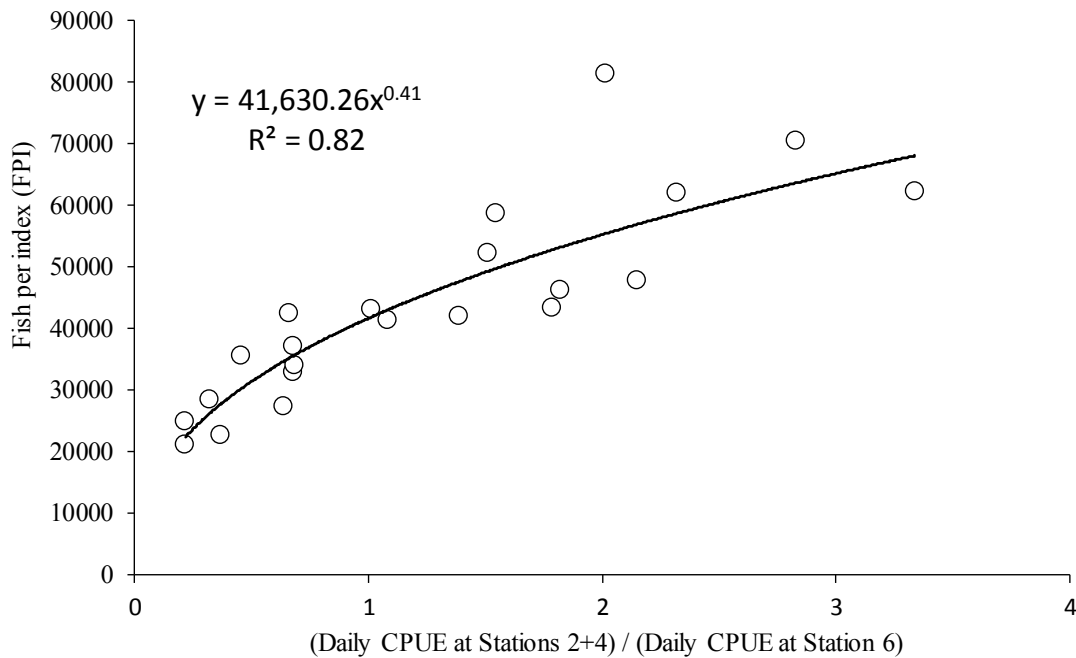


Figure 6. Relationship between fish per index (FPI) and the ratio of daily CPUE at fishing stations along the sampling transect in 2015.

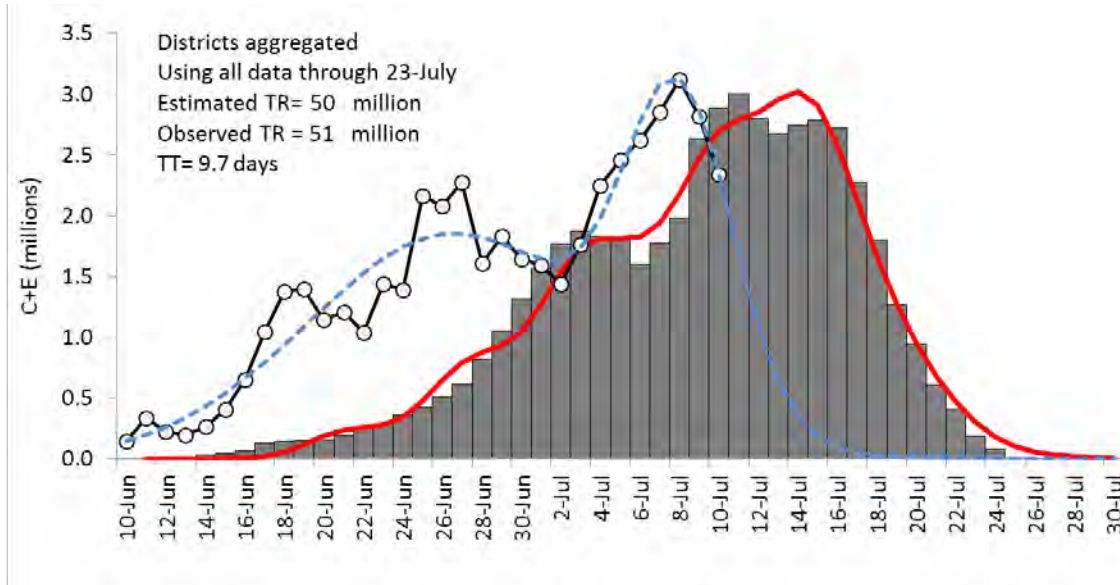


Figure 7. Final postseason prediction of inshore run magnitude (all districts combined) through July 24, using the Daily Projection Model developed from data collected at the Port Moller Test Fishery in 2015. The black line with white markers indicates the daily Replacement Index; the dashed blue line is a model fit to this index to project the tail of the test fishery past July 10 (scale not shown). The solid red line (no markers) depicts the total run projection based on Port Moller. The observed total run is represented by grey columns.

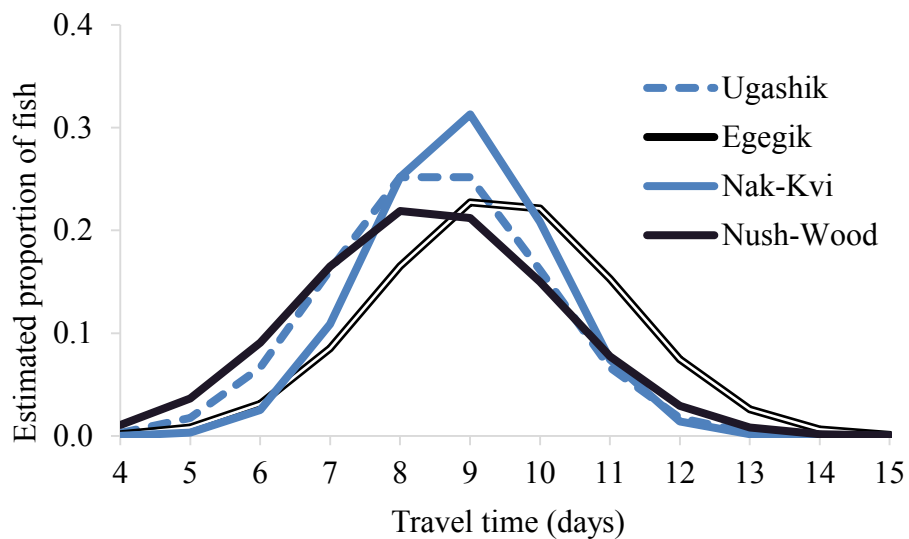


Figure 8. Estimated travel times (TTs) between the Port Moller Test Fishery and four major fishing districts in 2015. Estimates were based on the daily projection model for each district in 2015 (see Figure 10).

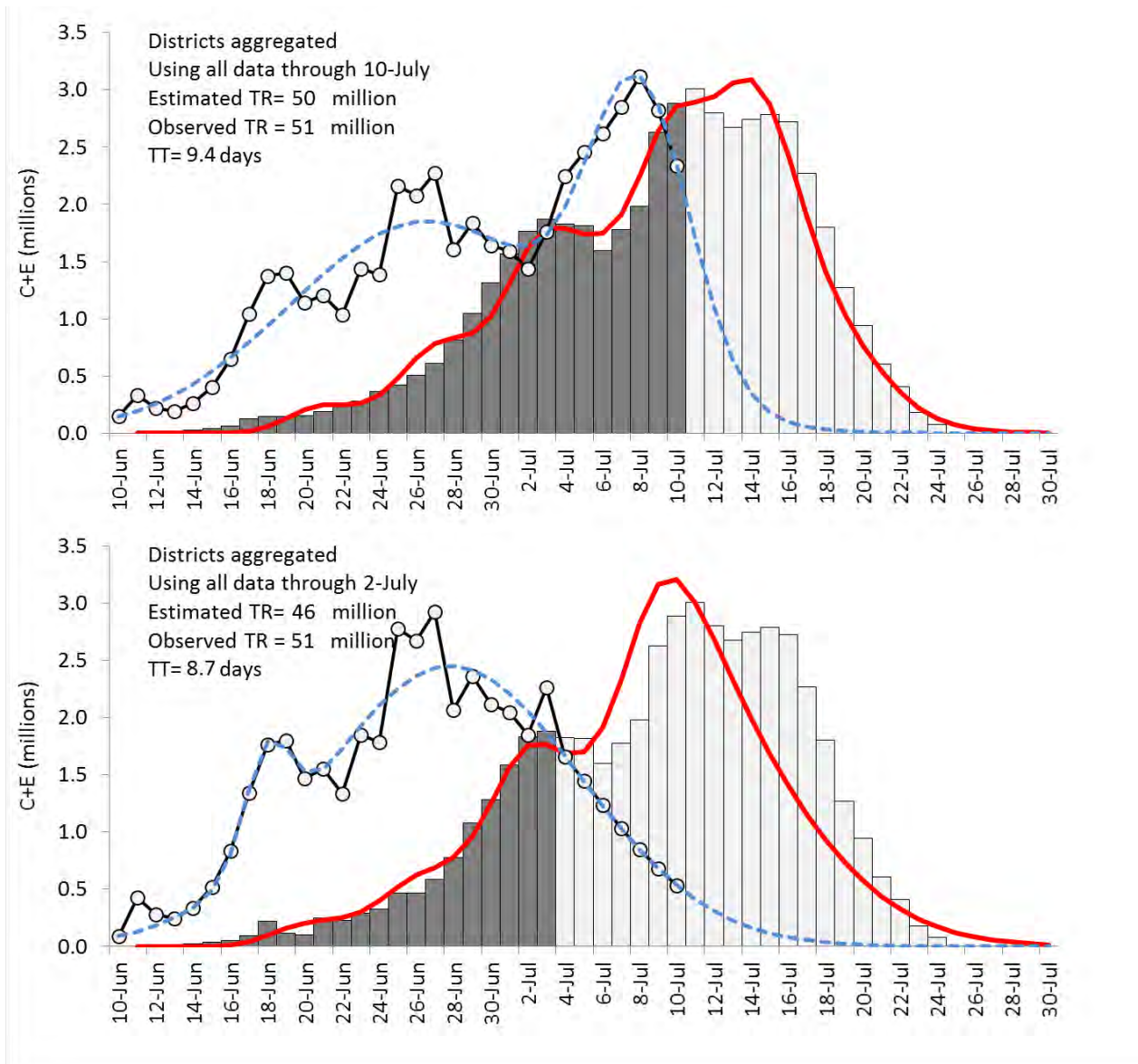


Figure 9. Forecasts of inshore run magnitude (all districts combined) based on information available through two dates inseason using the Daily Projection Model developed from data collected at the Port Moller Test Fishery in 2015. The black lines with white markers indicate the daily Replacement Index; the dashed blue lines are model fits to the index projecting the tail of the test fishery (scale not shown). The solid red line (no markers) depicts the total run projection based on Port Moller. The observed total run is represented by grey columns; white columns represent observed total run that eventuated.

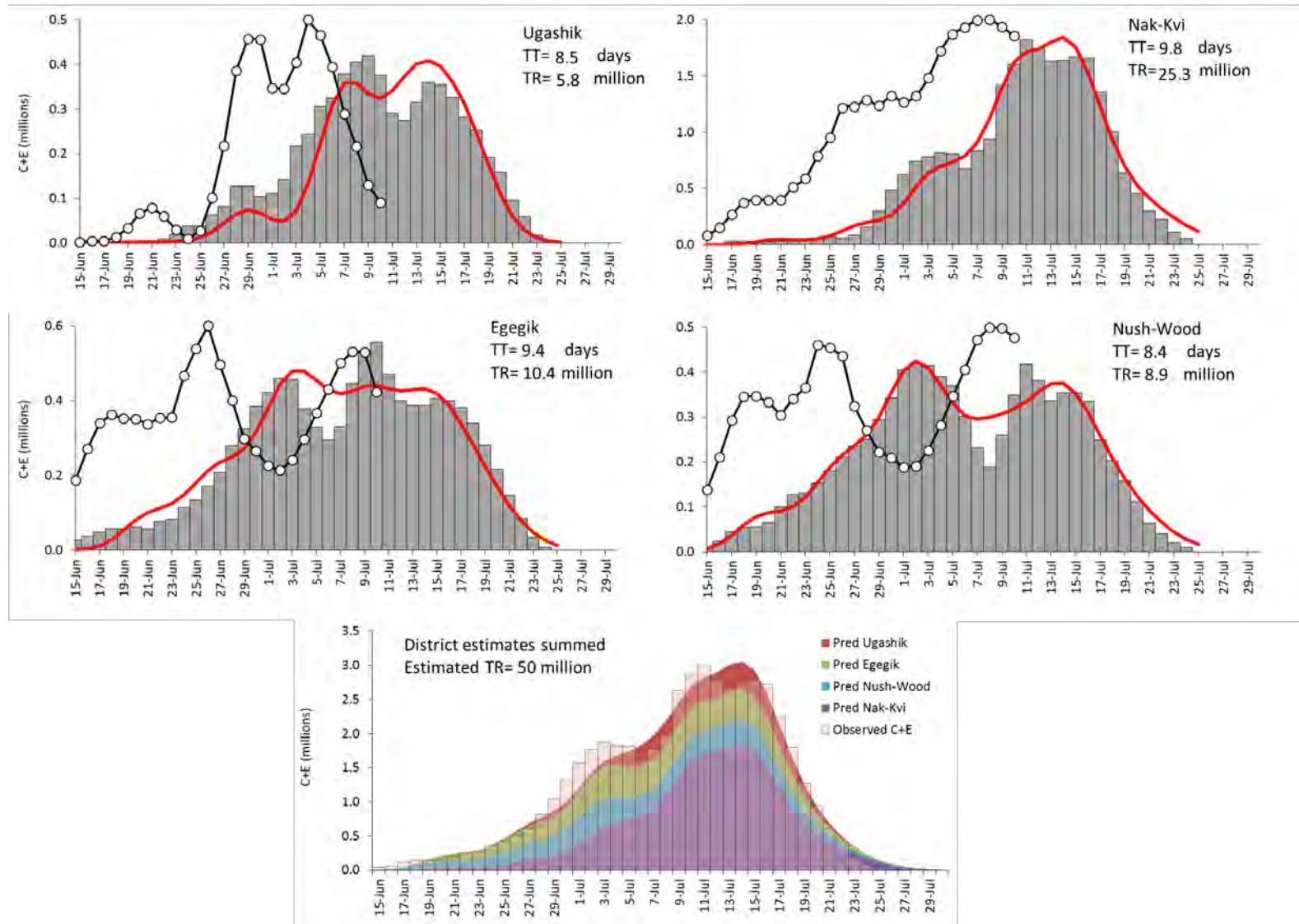


Figure 10. Final postseason prediction of inshore run magnitude, by district, using the Daily Projection Model developed from data collected at the Port Moller Test Fishery in 2015.

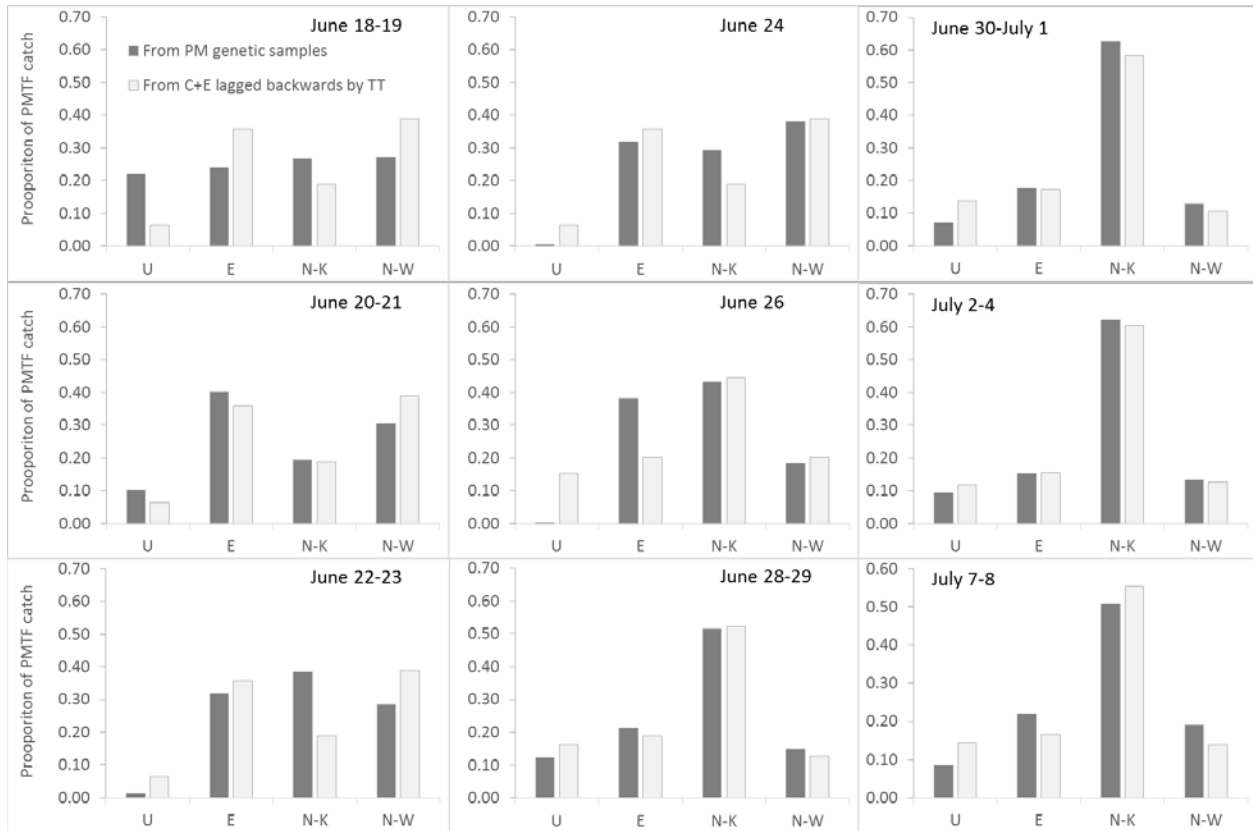


Figure 11. Stock composition by district for catches from the Port Moller Test Fishery. Dates are relative to the test fishery; U=Ugashik, E=Egegik, N-K=Naknek-Kvichak, and N-W=Nushagak-Wood. Catch + escapement (C+E) from each district were lagged backwards to the PMTF using travel time (TT) distributions estimated from daily projection models (Figure 10) and then used to estimate expected proportions.

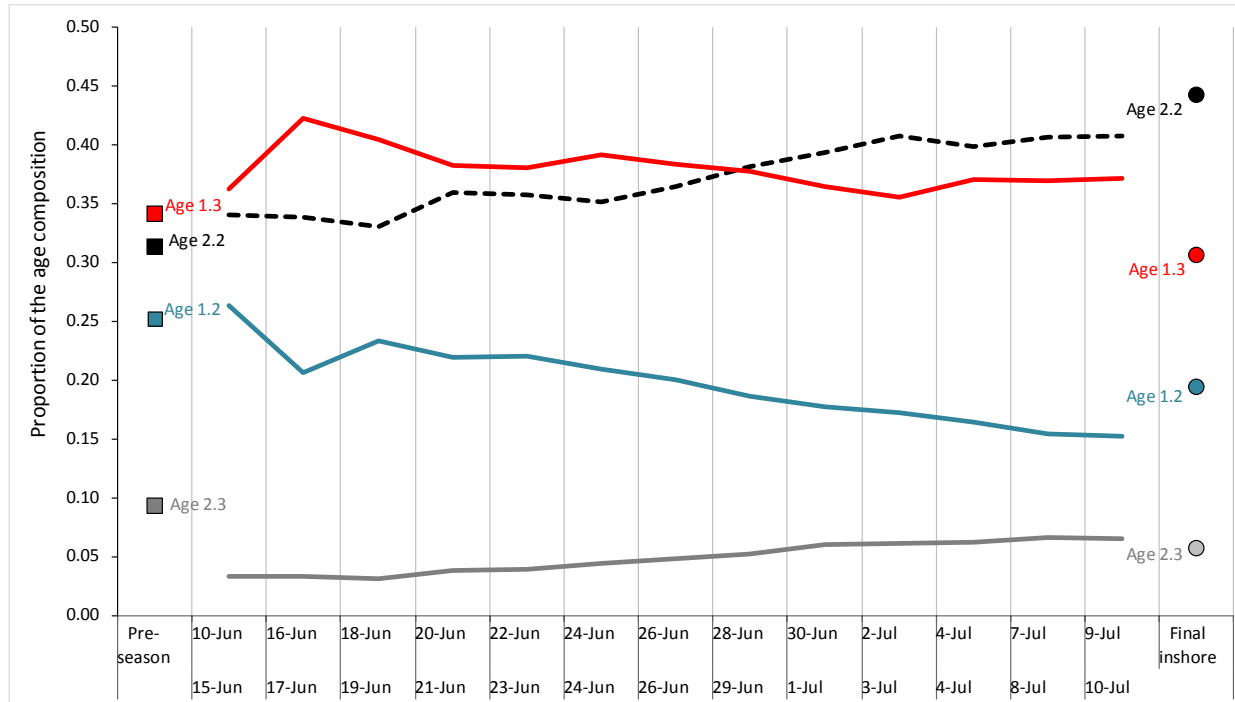


Figure 12. Age composition estimates for the 2015 sockeye salmon run to Bristol Bay. Preseason forecasts by age are indicated by colored squares at left. Corresponding lines represent estimates based on scale samples taken at the PMTF and are cumulative through each reporting date. Colored circles at right indicate final age composition observed for the inshore run to Bristol Bay, and represent what the squares and lines are forecasting.

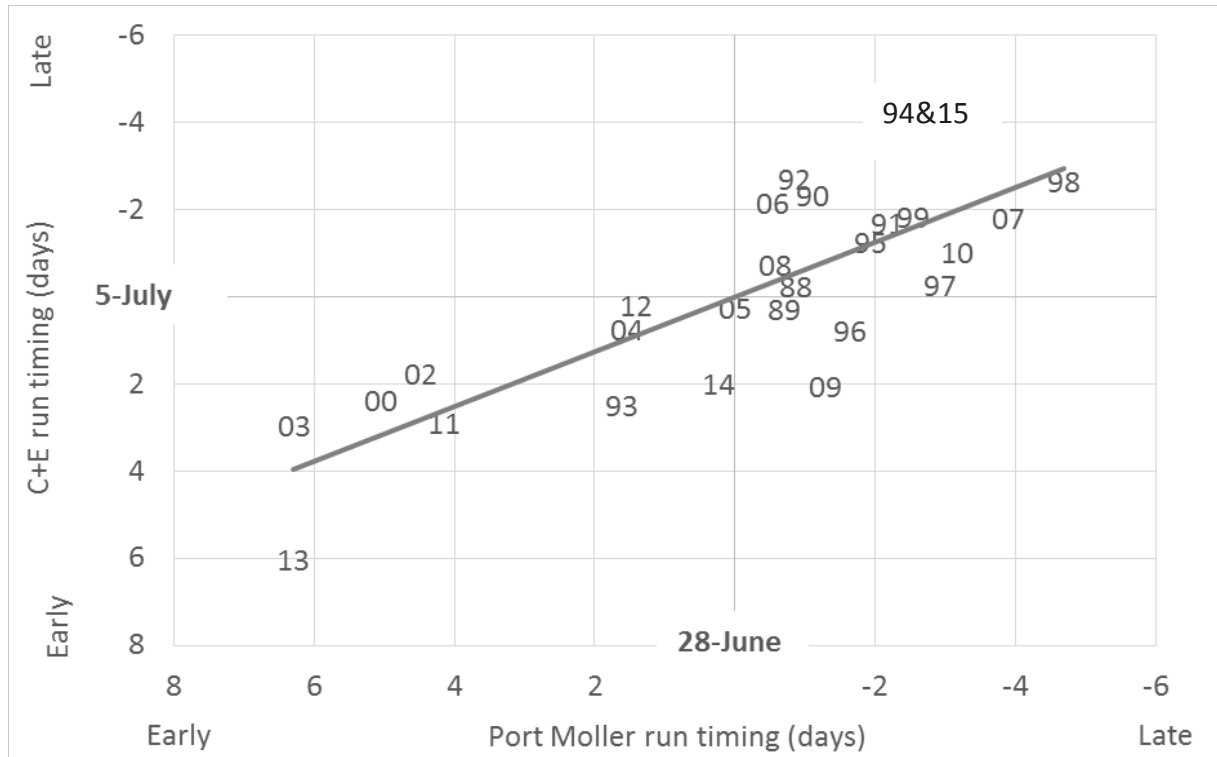


Figure 13. Timing of inshore run at Bristol Bay (all districts combined) versus timing for catches at the Port Moller Test Fishery, 1988 - 2015. Timing is calculated by subtracting the average-day-of-return for each year from the mean of these averages across years. The average-day-of-return for a given year was calculated as the average of the dates weighted by inshore run on those dates. Markers for each data point indicate year.

APPENDICES

APPENDIX A

BBSRI'S SEASON INTRODUCTION, FINAL SEASON CATCH UPDATE, AND INSEASON DAILY INTERPRETATIONS FOR THE PORT MOLLER TEST FISHERY IN 2015

Email from Matt Nemeth to the Port Moller list serve to introduce the 2015 inseason communication. Sent June 8, 2015 at 10:42 am.

Hello everyone,

It is that time of year again. The R/V Pandalus is en route to Port Moller, and will begin fishing on June 10. I will send out the first catch update from the Port Moller Test Fishery later that night.

As in 2014, there will be four main reports we will send by email and then post on our web page at http://www.bbedc.com/?page_id=195.

- Each night, I will mail out a Catch Update showing catches through that day.
- The next day, Dr. Scott Raborn will follow with a Daily Interpretation of the test fishery results.
- As they become available, we will also forward the age composition and stock composition estimates developed by the Alaska Department of Fish and Game. Note that ADF&G will also be posting the stock composition estimates on its web page (http://www.adfg.alaska.gov/index.cfm?adfg=fishinggeneconservationlab.bbaysockeye_results) and distributing them via its news release system.

One change from last year is that we will be making more, shorter sets in response to some testing done in 2013 and 2014. The Catch Update will show all of these daily catches so you can see the component data; in addition, we will roll the data up into an Index for each day so you can compare days through the run.

If you received this email, it means you are on our official mailing list. If you wish to stay on, don't do anything. If you wish to be removed, email me back. And if you know of someone who'd like to be added, they should simply email me. I'll try to respond to all emails, but may be unable at times due to high volume.

Good fishing to all,

Matt Nemeth

BBSRI

Final version of the Daily Catch table distributed inseason in 2015.

2015 Port Moller Test Fishery; Daily Catch Update

		Raw catch ^a of sockeye by station and mesh size												Totals		Daily Rep Index	Weather				
Date	Set	2			4			6			8			10				4½	5½		
		4½	FT	5½	4½	FT	5½	4½	FT	5½	4½	FT	5½	4½	FT	5½					
10-Jun	1	0	18	1	1	19	0	0	20	1				1	2		2	Winds NW 10-35; seas to 7 ft, building; 75% cloudy			
	2	0	18	1	0	17	0	0	19	0				0	1						
11-Jun	1	No fishing due to weather																2			
	2																				
12-Jun	1	0	16	0	0	16	0	1	20	0	0	19	0	0	20	0	1	0	2	Winds variable 5 kts; seas 3 ft; 100% cloud cover	
	2	1	17	1	0	16	0	0	17	0	3	18	0	0	19	0	4	1			
13-Jun	1	0	20	0	0	20	0	0	19	0	0	21	0	1	21	0	1	0	1	1	Winds SE 5 kts; seas 2ft; 100% cloud cover
	2	0	20	0	1	19	0	0	20	0	0	21	0	0	21	0	1	0			
14-Jun	1	1	30	0	0	30	1	3	30	3	18	59	8	3	29	2	25	14	12	12	Winds NW 10-15 kts; seas 3 ft; 100% cloud cover
	2	1	29	0	1	29	2	2	57	4	18	27	6	0	28	1	22	13			
15-Jun	1	0	25	1	0	25	0	2	23	5	1	25	0	9	24	2	12	8	8	8	Winds W to NW, 5-15; seas 3 ft; mixed clouds/sun
	2	1	27	1	1	27	0	2	26	0	4	24	0	1	19	0	9	1			
16-Jun	1	1	27	0	2	27	4	0	27	2	0	26	0	12	28	4	15	10	11	11	Winds W, var, 2-13; seas 1-4 ft; cloudy turning clear
	2				2	28	0	2	30	11	0	29	2	9	33	3	13	16			
17-Jun	1	0	26	1	11	25	0	18	27	6	0	26	2	10	28	11	39	20	31	31	Winds NW; seas 1-5 ft; sunny turning cloudy
	2	0	26	1	1	25	3	2	28	4	5	30	12	38	34	32	46	52			
18-Jun	1	1	26	5	5	28	2	15	29	4	17	28	3	27	30	16	65	30	38	38	Winds W-SW10; seas 1-4 ft; cldy turning sunny; 5 fish at STN 12
	2							4	28	7							4	7			
19-Jun	1	0	25	0	0	24	0	7	25	2	11	28	15	14	30	43	32	60	37	37	Winds W5; seas 1 - 4 ft; sunny; 1 fish at STN 12
	2							2	25	0							2	0			
20-Jun	1	0	23	0	0	27	1	10	26	15	19	29	11	6	26	2	35	29	34	34	Winds var, light; seas 0 - 1 ft; sunny to pc.
	2	1	24	0	4	23	1	27	27	4	11	26	8	16	28	15	59	28			
21-Jun	1	1	26	1	6	27	6	10	26	2	3	25	2	5	27	4	25	15	18	18	Winds var, 5-10; seas 1 - 3 ft; partly cloudy
	2	2	19	1	8	25	7	12	27	3	0	25	0	4	25	1	26	12			
22-Jun	1	1	27	2	0	26	2	2	25	2	12	27	17	52	31	32	67	55	41	41	S winds, 10-20; seas 1 -3 ft; overcast
	2	5	25	0	3	26	8	6	25	4	14	26	5	10	30	20	38	37			
23-Jun	1	1	26	3	5	25	2	2	24	0	10	29	6	10	27	18	28	29	20	20	NE winds 2- 15; seas 1.5 ft; pc/ps
	2	3	25	0	1	25	0	0	25	1	4	25	0	16	35	17	24	18			
24-Jun	1	1	26	1	5	27	1	1	25	1	13	29	25	39	29	26	59	54	49	49	Winds NW5; calm seas; clear to overcast
	2	0	24	0							43	32	24	18	30	37	61	61			
25-Jun	1	No fishing due to weather																66			
	2																				
26-Jun	1				17	29	13	36	31	40	13	27	13	47	31	28	113	94	82	82	Winds NW 20; seas 6 ft; overcast
	2				16	26	11	22	28	30	15	28	17	28	27	37	81	95			
27-Jun	1	No fishing due to weather																68			
	2																				
28-Jun	1	9	27	1	9	28	19	33	30	29	3	27	5	10	29	17	64	71	53	53	N winds 10-25; seas 3-4.5 ft; overcast
	2										7	26	6	7	26	6	7	6			
29-Jun	1	2	28	5	0	27	22	3	26	0	5	27	7	6	28	10	16	44	28	28	N winds 10-20; seas 1.5 ft; clear to partly cloudy
	2	2	25	4	3	27	6	0	25	2	3	25	2	31	30	18	39	32			
30-Jun	1	1	26	0	46	31	27	23	30	8	8	28	16	10	29	23	88	74	60	60	
	2	0	22	2	30	27	30	12	30	23	2	26	5	8	25	13	52	73			
1-Jul	1	1	25	0	15	30	20	2	25	0	15	31	45	6	28	23	39	88	39	39	Winds NW 2; calm seas; overcast.
	2				14	29	16	1	25	0	15	31	11	0	25	6	30	33			
2-Jul	1	3	28	3	2	25	5	1	26	0	0	25	1	28	31	32	34	41	24	24	calm seas; overcast.
	2	0	25	0	0	26	0	1	27	5	1	26	3	14	27	16	16	24			
3-Jul	1										3	25	10	26	29	18	29	28	48	48	Stn 12: 2 sets, 59 mins total, 52 fish
	2													28	29	21	28	21			
4-Jul	1	11	27	2	36	35	43	4	27	12	6	26	3				57	60	62	62	Winds E 15-25; seas 5 ft; overcast
	2																0	0			
5-Jul	1	No fishing July 5 & 6 due to weather																53			
	2																				
6-Jul	1	No fishing July 5 & 6 due to weather																62			
	2																				
7-Jul	1	1	26	0	21	31	23	4	29	22	28	30	12	24	31	55	78	112	76	76	S winds 5-15, seas 3 ft, overcast
	2	0	25	1	12	27	10	17	28	9	36	33	40	46	30	23	111	83			
8-Jul	1	5	25	0	6	27	11	44	36	61	32	32	47	14	28	15	101	134	80	80	S winds 5-10; seas 3 ft; overcast
	2							24	25	30	31	28	22	11	24	17	66	69			
9-Jul	1	0	26	0	2	25	1	52	34	48	28	25	21	13	22	15	95	85	85	85	S winds; seas 1 ft; overcast
	2							46	27	48	34	29	52	18	25	14	98	114			
10-Jul	1	1	27	0	3	22	2	1	24	0	25	27	10	46	36	55	76	67	53	53	SE winds 2-10; calm seas; overcast
	2																0	0			
Totals		57		38	289		299	456		448	509		488	721		748	2032	2021	4053	1243	

^a Raw catch = number of fish caught in 100 fathoms of each mesh size. Adding two meshes together yields actual catch at each station from the entire Replacement Net. FT = fishing time of each set (minutes).

^b Daily Replacement Index is simply the average CPUE across stations. CPUE = the number of fish caught in all meshes and standardized to a 200-fathom net fished for 60 minutes. Red/Italics are estimated data.

Final Daily Catch table distributed inseason in 2015 (continued).

Date	Average sockeye length ^b by station and mesh size										Weighted means		Cum Rep Index	Water temperature (°C) by station					Transect mean		
	2		4		6		8		10												
	4½	5%	4½	5%	4½	5%	4½	5%	4½	5%	4½	5%		2	4	6	8	10			
10-Jun	494		524		554						524	524 0	2	7.2	8.3	7.7	7.7				
11-Jun	No fishing due to weather												3								
12-Jun	437	539			477			457			457	539	5	7.1	7.1	7.4	7.5	7.3	7.3		
13-Jun			532					530		531			6	7.3	7.6	7.7	7.6	7.7	7.6		
14-Jun	504			559	510	459	519	493	511	482	519	491	514	18	7.5	7.6	7.9	7.9	7.9	7.8	
15-Jun	505	520	439			493	540	518			482	504	492	528	26	7.0	7.8	8.0	7.9	8.0	7.7
16-Jun	454			539	495	498	508	546		508	541	510	518	37	7.7	8.0	9.1	9.8	9.8	8.9	
17-Jun	528		495	531	505	534	504	527	499	535	500	533	69	7.4	9.0	9.4	8.6	9.1	8.7		
18-Jun	548	553	500	520		519	540	519	550	503	528	512	536	106	8.6	9.2	9.1	8.6	10.0	9.1	
19-Jun					507	518	506	535	505	526	506	528	143	9.4	7.9	10.2	10.0	10.3	9.6		
20-Jun	540			509	555	499	537	510	543	503	527	504	537	176	10.5	10.6	10.2	11.7	12.6	11.1	
21-Jun	549	542	510	530	500	535	530	569	506	519	508	533	195	11.3	11.1	10.8	11.0	11.0	11.0		
22-Jun	502	558	502	540	515	523	518	545	501	530	506	535	236	10.1	11.4	11.0	10.9	11.1	10.9		
23-Jun	492	512	499	588	564	499	478	538	522	542	507	541	256	10.6	10.7	10.7	10.7	11.2	10.8		
24-Jun	516	521	505	580	503	546	523	539	516	545	519	543	305	10.2	10.2	11.7	15.5	13.5	12.2		
25-Jun	No fishing due to weather												371								
26-Jun			526	542	527	540	524	539	517	528	523	536	453	10.8	11.2	11.3	11.1	11.1			
27-Jun	No fishing due to weather												521								
28-Jun	532	576	537	534	512	536	552	556	507	540	518	539	574	10.5	10.5	11.9	10.8	10.6	10.9		
29-Jun	534	558	529	531	483	496	523	530	530	542	527	537	603	11.4	10.9	11.2	10.5	11.2	11.0		
30-Jun	578	554	533	540	521	541	515	530	521	532	527	537	663	11.5	11.3	12.0	12.0	13.2	12.0		
1-Jul	467			523	545	535			525	539	495	537	521	540	701	12.7	12.1	12.5	12.1	12.5	12.4
2-Jul	564	547	558	571	530	512	482	560	519	540	523	542	725	11.8	12.2	12.7	13.6	13.8	12.8		
3-Jul							473	536	523	528	520	530	773	12.2					12.5	12.4	
4-Jul	557	553	519	539	543	560	522	551			528	544	835	11.0	10.3	11.1	10.8	10.8			
5-Jul	No fishing July 5 & 6 due to weather												888								
6-Jul													950								
7-Jul	572	550	515	540	542	550	532	537	526	536	528	539	1025	10.1	9.9	10.9	10.4	10.5	10.4		
8-Jul	510			540	531	528	545	526	531	522	543	526	539	1105	10.8	10.3	10.0	10.3	9.8	10.2	
9-Jul			528	583	523	536	523	536	531	531	524	536	1190	10.1	10.5	10.3	10.9	11.0	10.6		
10-Jul	577			542	567	597			531	539	522	535	527	537	1243	10.6	10.9	10.9	10.5	10.5	10.7
Weighted means	528	543	523	539	519	539	519	536	515	535				8.7	9.0	9.4	9.8	10.0	9.3		

^b Length is measured as mid-eye-fork-length (MEFL) in mm; to put things into perspective, mean MEFL for ocean age-2 fish is about 504 mm; 3-ocean is about 571 mm.

*Length is measured as mid-eye-fork-length (MEFL) in mm; to put things into perspective, mean MEFL for ocean age-2 fish is about 504 mm; 3-ocean is about 571 mm.

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PMTF Interpretation #1 for catches June 10-15, 2015

We are still in the early season phase of the Port Moller Test Fishery, when it is not yet possible to detangle run size (large or small) from run timing (early or late). Inshore run timing cannot be predicted from the test fishery with any degree of confidence until the peak at Port Moller has been determined. The average day of return past the test fishery is June 28, but may range from June 24 to July 2. At this time of year, we also caution readers not to place too much emphasis on sea surface temperatures (no known relationship with run timing) or past year's catch indices (again, correlations are weak at best). The strength of our current system relies on how our inseason test fishery catches correlate to inshore catch plus escapement (C+E), as well as, stock and age composition estimates at Port Moller.

That said, this first Interpretation must address catches, and the resulting Replacement Index. Catches so far have been low relative to past years (Table 1), especially in light of the pre-season forecast being larger than average. These low catches have been consistent across all stations and dates except one (Station 8 on June 14). This year seems to be tracking 2012 (Figure 1A), which had an average run timing inshore (average day of return weighted by C+E = July 5) and a total run of 30 million. If the run is as large as predicted, the 2015 data would most support an average or late run timing. After adjusting the cumulative Index in previous years to the average inshore run timing, this year's cumulative Replacement Index is more in line with what we would expect, but still a little low (Figure 1B).

Refinements to the Test Fishing Protocol for 2015

We have continued to make adjustments to the project since 2011 as part of efforts to improve our ability to predict run size and timing inseason (e.g., the Replacement Net comprising alternating panels of 4½ inch mesh and 5½ inch mesh). One improvement has been testing net set times since 2013; based on these results, we have moved to a protocol in 2015 that uses shorter set times. We believe this will give us more accurate information upon which to predict the run because (1) it reduces a saturation effect in which high catches for the first 20-30 minutes suppress new catches thereafter, (2) nets are most likely to fish inconsistently towards the end of a long set because the net has more time to fold on itself, and (3) averaging two sets at each station will help to reduce noise more than one long set. Reasons 1 and 2 will be most useful at high catch levels, such as those predicted this year. We have still been fishing some longer sets intermittently this year; as expected, we see slightly higher CPUEs in the shorter sets. Although there is noise around the relationship between paired longer and shorter sets, the overall trend suggests that nontrivial saturation begins to occur around a Replacement Index of 50-75 for the longer set (Figure 2). This finding means that in previous years, our predictions were hampered by the saturation effect during long sets. A shorter set is more prone to produce a zero catch versus 1-10 from a longer set, but this occurrence has a far less negative influence on forecasting than having saturation during a longer set cause CPUE to be 100 when it should have been 200.

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Table 1. Estimated daily and cumulative **Replacement Index** for the 2015 Port Moller test fishery.

Date	Set	Replacement CPUE ^a by station					Set Means	Replacement Index	
		Stn2	Stn4	Stn6	Stn8	Stn10		Daily ^b	Cumulative
10-Jun	1	3.3	3.2	3.0			3.2		
	2	3.3	0.0	0.0			1.1	2.2	2.2
11-Jun	1	3.4	0.8	1.5	5.0	0.0	2.1		
	2	3.4	0.8	1.5	5.0	0.0	2.1	2.1	4.3
12-Jun	1	0.0	0.0	3.0	0.0	0.0	0.6		
	2	7.1	0.0	0.0	10.0	0.0	3.4	2.0	6.3
13-Jun	1	0.0	0.0	0.0	0.0	2.9	0.6		
	2	0.0	3.2	0.0	0.0	0.0	0.6	0.6	6.9
14-Jun	1	2.0	2.0	12.0	26.4	10.3	10.6		
	2	2.1	6.2	6.3	53.3	2.1	14.0	12.3	19.2
15-Jun	1	2.4	0.0	18.3	2.4	27.5	10.1		
	2	4.4	2.2	4.6	10.0	3.2	4.9	7.5	26.7
16-Jun	1								
17-Jun	2								
18-Jun	1								
19-Jun	2								
20-Jun	1								
21-Jun	2								
22-Jun	1								
23-Jun	2								
24-Jun	1								
25-Jun	2								
Total		31.5	18.5	50.2	112.2	46.0			
Percent		12.2	7.1	19.4	43.4	17.8			

^a CPUE = the number of fish caught in all meshes and standardized to a 200 fathom net fished for 60 minutes. Multiple sets at a station are averaged.

^b Replacement daily index is simply the average CPUE across stations.

Note: red values were interpolated from other observed catches.

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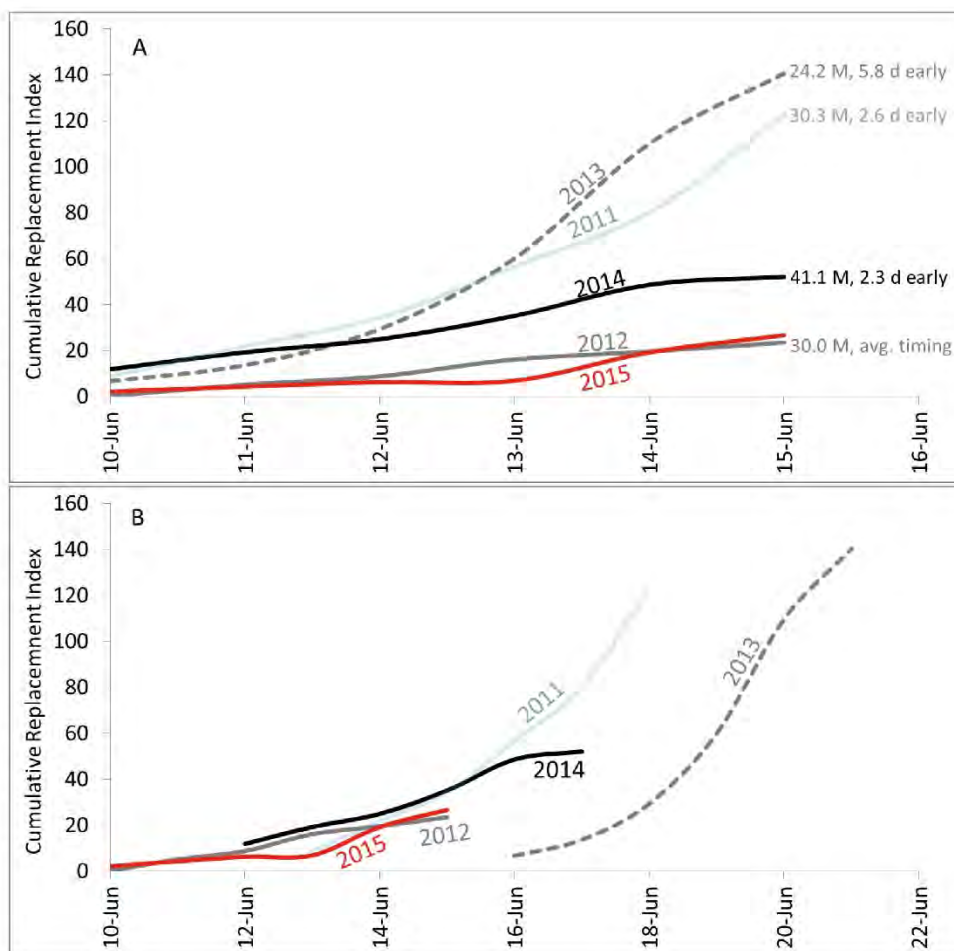


Figure 1. The cumulative Replacement Index for 2011-2015 (A) and the same index adjusted for run timing to the historical inshore average (B). Inshore total runs (M=millions) and run timings (d=days) for previous years are given in Graph A.

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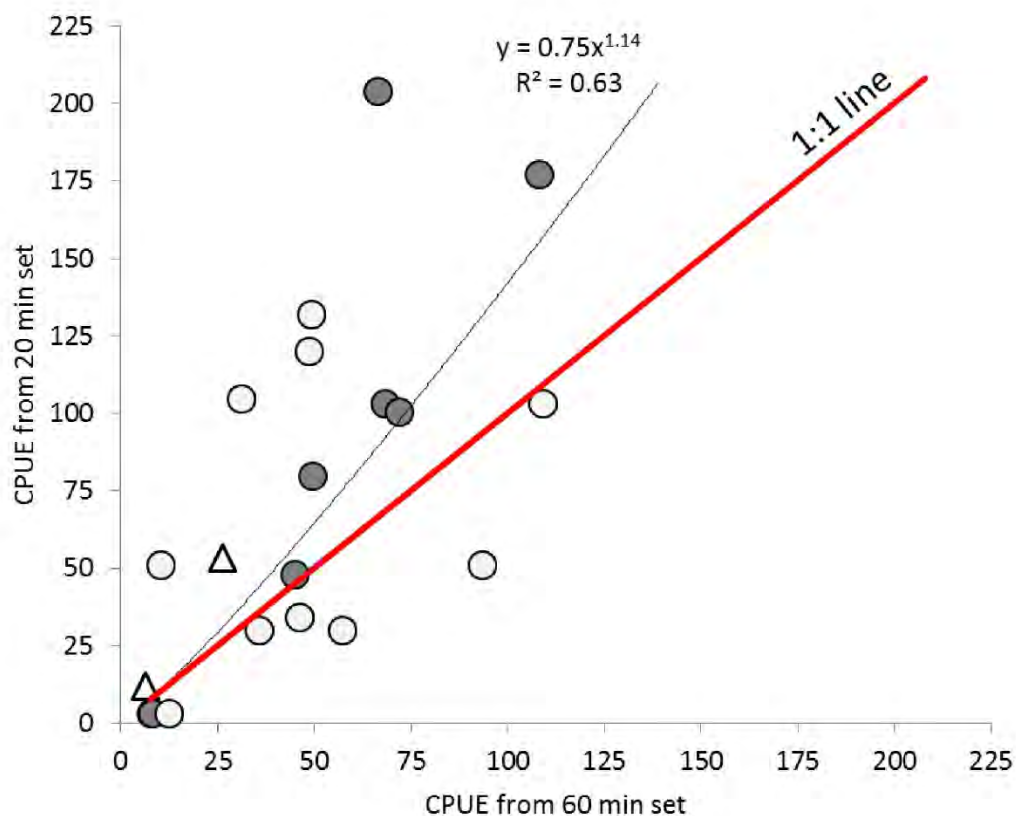


Figure 2. Comparison of catch-per-unit-effort (CPUE) from sets lasting ~20-30 min made immediately following standard sets lasting for ~ 60 min. The red line indicates how points would be centered if no saturation was occurring. The preponderance of points above the red line (especially when CPUE > 50) means the 20-min sets are yielding higher catch rates than would be expected if there was no effect of set time on catch level. Dark circles were 2013 sets, light circles 2014, and triangles 2015. The black regression line is defined by the equation given and is based on all data points.

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PMTF Interpretation #2 for catches through June 17, 2015

Catches picked up considerably across all stations on June 17 except for Station 2 (Table 1). Please note the format change for Table 1. For each station, we now include the average CPUE across sets. In addition, we convert the cumulative Replacement Index into the Traditional Index for those readers that use the latter for an historical context (see below for more detail). Catches this year have been greatest at the outer stations. Today (June 18), the crew only set once at Stations 2 and 4 and may do so at Stations 8 and 10 to gain time for fishing Station 12 if catches show an increasing trend towards offshore.

Reporting and Interpreting the Various Catch Indices

This year we had planned on moving away from reporting the Traditional Index each day because (1) it has a less intuitive interpretation, (2) it does not track inshore C+E quite as well as the daily Replacement Index, (3) it was based historically on the Traditional Net, which is no longer used, and (4) comparing it to past years does little to help us predict this year's run. It has therefore been bumped from the daily page in favor of other information that does get factored into our analyses. We will still provide it during these longer-format interpretations. We have not actually used the TI since 2010 and have been trying to be gradual about moving away from it over the four years since. A brief history of the Indexes follows.

Prior to 1996, the daily catch index was just the sum of Station 2-8 CPUEs (CPUE=catch-per-unit-effort; the number of fish that would have come from a 100 fathom net [half the actual net's length] fished for 60 min). In 1995 concern about fish passing beyond the test fishing transect spurred the change in 1996 to the Traditional Index. Station 2-8 CPUEs were added together as before, but Station 8 was counted twice to presumably account for fish missed outside. This value was then multiplied by 0.8 to scale the index back to a summation that represented four stations to be more congruent with years prior to 1996. Ignoring the Station 8 weighting scheme, the Traditional Index can essentially be interpreted as half the total catch from a 200 fathom net fished for 60 min at each of Stations 2-8. Thus, while its evolution is explainable, this formulation does not necessarily render a straightforward index.

In 1999, Station 10 was added to the daily test fishing effort, but was not used for the Traditional Index calculation (again, to keep it consistent with the historical database). The Traditional Index is of course sensitive to Station 8 catches, which does not necessarily account for fluctuations at Station 10. Instead, giving equal weight to Stations 2-10 tends to provide a better daily projection of what will manifest inshore.

Finally, the Traditional Net used through 2010 was comprised of four 50 fathom panels of 5½ inch mesh. In 2011, we switched to the Replacement Net consisting of four 50 fathom panels alternating between 4½ and 5½ inch mesh to equalize the representation of age-2 and age-3 ocean fish. The Traditional Index could still be calculated from this configuration, but fishing two panels of 5½ inch mesh is not the same as fishing four even after standardizing for effort.

Changes since 1996 spurred the formulation of the Replacement Index in 2011, which is simply the average of CPUEs (now defined as catch from the entire Replacement Net fished for 60 min) across all stations fished. Typically Stations 2-10 are fished, but occasionally Station 12 is added when the run seems distributed further offshore. This year, multiple sets at each station are averaged and then these station means are averaged to form the daily Replacement Index. We expect the magnitude of the Replacement Index to be somewhat higher this year during the peak of the run because the shorter set times should reduce the saturation effect and increase CPUEs.

Comparing the daily Replacement and Traditional Indices for the 2011-2014, we see a consistent relationship (Figure 1A). Comparing the cumulative indices (Figure 1B) causes the differences between the two in Figure 1A to cancel and reduces noise considerably. We used the equation from Figure 1B to convert 2015 cumulative Replacement Index values into Traditional Index values for those who favor the latter for comparing it to years before 2011 when the Replacement Net was not used (Table 2). However, we offer the same caveat as for the Replacement Index regarding shorter set times. All indices may be disproportionately greater during days of higher passage rates if the shorter set times are successful in preventing substantial net saturation.

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Table 1. Estimated daily and cumulative **Replacement Index** for the 2015 Port Moller test fishery. The cumulative Traditional Index was converted from the cumulative Replacement Index (CTI = 2.2*CRI + 10.4).

Date	Replacement CPUE ^a by station and set										Replacement Index		Cumulative Traditional Index conversion ^c
	Stn2		Stn4		Stn6		Stn8		Stn10				
	Set 1	Set 2	Set 1	Set 2	Set 1	Set 2	Set 1	Set 2	Set 1	Set 2	Daily ^b	Cumulative	
	Avg.		Avg.		Avg.		Avg.		Avg.				
10-Jun	3	3	3	0	3	0	—	—	—	—	2	2	14
	—	3	—	2	—	2	—	2	—	0			
11-Jun	—	3	—	1	—	2	—	3	—	0	2	3	18
	0	7	0	0	3	0	0	10	0	0			
12-Jun	0	4	0	0	0	2	0	5	0	0	2	5	23
	0	0	0	3	0	0	0	0	3	0			
13-Jun	0	0	0	2	0	0	0	0	1		1	6	24
	2	2	2	6	12	6	26	53	10	2			
14-Jun	2	2	2	4	9	9	40		6		12	18	52
	2	4	0	2	18	5	2	10	28	3			
15-Jun	2	3		1	11		6		15		8	26	68
	2		13	4	4	26	0	4	34	22			
16-Jun	2	2		9	15		2		28		11	37	94
	2	2	26	10	53	13	5	34	45	124			
17-Jun	2		18		33		19		84		31	69	164
18-Jun													
19-Jun													
20-Jun													
21-Jun													
22-Jun													
23-Jun													
24-Jun													
25-Jun													
Total	20		36		73		77		135				
Percent	6		11		21		23		40				

^a CPUE = the number of fish caught in all meshes and standardized to a 200 fathom net fished for 60 minutes. Multiple sets at a station are averaged.

^b Replacement daily index is simply the average CPUE across stations.

^c Converted based on the equation CTI = 2.3*CRI + 10.4

Note: red values were interpolated from other observed catches.

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Table 2. Historical cumulative Traditional Index by date from the PMTF, 1990-2015. Run timings for each year are based on the time series 1990-2014 and given as days early (positive values) or late (negative values). The cumulative Traditional Index for 2015 was converted from the cumulative Replacement Index (CTI = 2.2*CTI + 10.4).

Date	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Avg	Min	Max
11-Jun	7	6	18	18	4	33	22	13	6	16	21	31	24	28	8	13	12	11	0	18	17	49	14	26	53	18	19	0	53
12-Jun	19	13	37	29	7	62	43	30	11	33	89	52	51	56	22	27	12	19	7	43	17	78	21	61	69	23	36	7	89
13-Jun	32	19	56	57	12	99	67	42	16	46	147	89	93	100	49	32	17	36	19	72	29	136	42	172	96	24	63	12	172
14-Jun	43	25	76	146	21	186	120	67	27	53	191	124	116	145	57	73	35	53	34	107	54	178	49	308	119	52	96	21	308
15-Jun	61	42	122	208	38	248	159	97	50	67	256	155	220	199	107	112	57	64	74	131	69	262	55	390	120	68	135	38	390
16-Jun	84	66	176	293	55	337	257	144	85	83	306	259	304	257	144	151	91	89	81	189	83	337	61	413	151	94	180	55	413
17-Jun	100	106	182	382	66	400	315	190	128	90	352	422	374	327	200	191	124	99	151	337	95	458	78	521	197	164	235	66	521
18-Jun	143	164	296	472	101	552	391	217	150	114	421	489	445	357	222	233	168	142	273	386	154	516	90	608	250		294	90	608
19-Jun	184	245	428	562	146	689	447	299	178	181	476	649	499	422	239	277	251	149	375	441	189	589	148	702	310		363	146	702
20-Jun	225	305	540	681	183	762	552	386	224	255	543	752	562	526	251	322	329	173	541	582	277	704	171	797	362		440	171	797
21-Jun	267	404	658	824	269	878	653	441	266	352	584	871	679	597	338	343	423	219	689	727	417	811	246	950	464		535	219	950
22-Jun	313	561	783	1012	379	975	730	543	320	414	684	1046	773	694	393	430	486	287	845	812	603	1030	274	1060	513		638	274	1060
23-Jun	374	657	927	1135	531	1110	818	637	363	514	808	1125	887	764	416	509	636	343	970	943	726	1174	433	1158	628		743	343	1174
24-Jun	511	837	1068	1234	648	1214	918	730	423	704	896	1227	1018	835	498	597	739	393	1132	1030	838	1358	514	1237	746		854	393	1358
25-Jun	665	891	1178	1466	743	1356	1020	806	471	853	981	1361	1166	887	639	699	836	438	1287	1092	896	1490	601	1351	829		960	438	1490
26-Jun	771	946	1226	1624	854	1509	1152	888	523	949	1042	1470	1297	950	792	831	979	582	1435	1390	971	1674	717	1410	883		1075	523	1674
27-Jun	908	1077	1334	1783	995	1633	1261	1029	582	1022	1110	1607	1427	1007	1012	1026	1092	710	1702	1618	1046	1785	767	1494	967		1200	582	1785
28-Jun	1192	1146	1453	1973	1144	1815	1371	1183	659	1186	1199	1747	1536	1078	1179	1149	1250	837	1911	1890	1103	1924	831	1578	1029		1335	659	1973
29-Jun	1389	1241	1586	2085	1279	2033	1449	1297	776	1267	1265	1830	1663	1123	1283	1285	1417	947	2046	2171	1159	2052	904	1642	1119		1452	776	2171
30-Jun	1632	1261	1812	2372	1538	2179	1580	1421	867	1392	1333	1931	1773	1196	1380	1363	1472	1095	2287	2438	1219	2151	995	1697	1183		1583	867	2438
1-Jul	1804	1340	1981	2547	1699	2365	1684	1504	986	1516	1386	2010	1838		1427	1490	1519	1176	2525	2724	1400	2269	1144	1744	1236		1721	986	2724
2-Jul	1960	1390	2066	2789	1866	2537	1838	1637	1034	1647	1437	2105	1909		1516	1569	1650	1280	2676	2972	1512	2358	1166	1782	1326		1834	1034	2972
3-Jul	2182	1564	2228	2849	1990	2725	1955	1871	1165	1805	1494	2202	1965		1613	1617	1839	1342	2741	3220	1686	2398	1275	1819	1415		1957	1165	3220
4-Jul	2284	1629	2333	2928	2187	2874	2139	1947	1247	1933	1527	2255	2022		1663	1677	1912	1448	2863	3430	1766	2461	1332	1839	1520		2051	1247	3430
5-Jul	2345	1756	2443	3028	2330	2995	2247	2079	1377	2054	1572	2308	2122		1770	1762	1995	1582	3021	3567		2514	1367	1889	1632		2163	1367	3567
Total run (millions)	47	41	44	51	50	60	36	18	18	38	27	21	17	26	42	38	42	44	40	40	40	30	30	24	41		36	17	60
CE Run timing	-2.5	-1.9	-2.6	2.3	-4.2	-1.4	0.6	-0.4	-2.8	-2.0	2.2	3.5	1.6	2.8	0.6	0.1	-2.3	-2.0	-0.9	1.9	-1.2	2.7	0.0	5.9	2.3		0.0	-4.2	5.9
PM Run timing	-1.2	-2.2	-0.9	1.6	-2.5	-2.0	-1.7	-3.0	-4.7	-2.6	5.0		4.4	6.2	1.5	0.0	-0.6	-3.9	-0.6	-1.3	-3.2	4.1	1.4	6.3	0.2		0.0	-4.7	6.3

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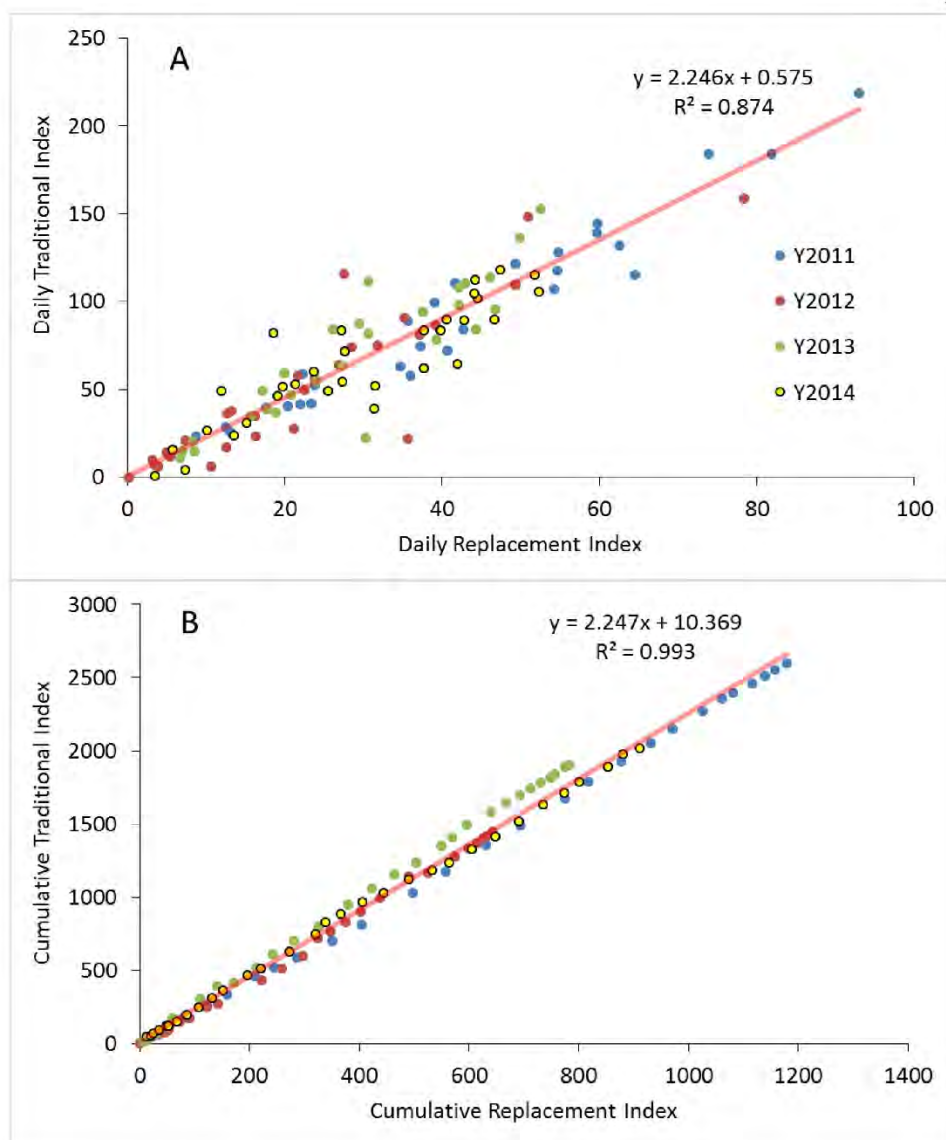


Figure 1. (A) The daily Traditional Index plotted against the cumulative Replacement Index throughout each season during years 2011-2014. (B) The same comparison for their daily cumulative values. The simple linear regression lines (red) were based on all data points pooled across years. The cumulative model will be used to convert this year's cumulative Replacement Indices to cumulative Traditional Indices.

6/24/2015 7:49 AM
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PMTF Interpretation #3 for catches through June 22, 2015

Historically, we sometimes see a lull between two catch peaks at PMTF. In Figure 1, we report the daily Replacement Index as a centered 3-day moving average, which helps remove day-to-day variation so that the general seasonal trend is more apparent. For each of the past four years, there was an initial peak in catches followed by a trough of various durations before catches increased again during the mainstay of the run. This year, we saw a dip on June 21, followed by an increase on June 22. The next couple days will indicate whether this marks the start of a second rise as the run continues to build. If we adjust each year to the average run timing past the test fishery (June 28), and assume 2015 is on time, we see that the daily Replacement Index in 2015 is indeed larger than in prior years. This finding supports the idea that the pre-season forecast run size is plausible thus far.

One thing notable about the catches to date is that they have been distributed more at the outer stations than in prior years, especially at Station 10 (Table 1). To check for evidence of fish migrating even further offshore, we sampled Station 12 on June 18 and 19. Few fish were caught (only 5 and 1 fish, respectively), and so we are back to sampling stations 2–10 as per usual. Sampling Station 12 adds about 3 hours to the work day, which means that multiple sets at each station must be reduced to a single set and/or other stations have to go unsampled. With such underwhelming results at Station 12 on June 18 and 19, we are better off not sacrificing effort along the rest of the transect.

This week's age composition estimate from Port Moller also revealed no major departures from the expected; 2-ocean fish made up 55% of the samples thus far, as compared to 56% of the preseason forecast.

Finally, stock composition estimates at Port Moller seem as expected given the pre-season forecast and an average run timing for all stocks (Figure 2). Egegik dominated the June 10-17 samples, which was unsurprising given it has the earliest historical run timing of all the stocks and its forecasted strength was substantial. The Nushagak-Wood District collectively has a historically earlier run timing than that for the Naknek-Kvichak District. Given their respective forecasted strengths, the observed stock compositions at Port Moller show no major departures from the expected. An apparent anomaly was the strong showing for Ugashik from the June 18-19 samples. However, the pattern for Ugashik C+E is often bimodal, and it is not uncommon for Ugashik to show such early representation in the run. Averaging across the historical run timings evens out this pattern and is probably not a good approximation for any single year. Likewise, using average run timings likely caused the assumed travel times (TTs) between the test fishery and the districts in Figure 2 to be misrepresented, though they do represent a typical scenario. Our point is that while it is still too early for more definitive projections, all of the data so far, though tentative, give no reason to believe the run is not on time nor substantially different from the pre-season forecast.

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Table 1. Estimated daily and cumulative **Replacement Index** for the 2015 Port Moller test fishery. The cumulative Traditional Index was converted from the cumulative Replacement Index (CTI = 2.2*CRI + 10.4). Average daily indices for each station are color formatted so that darker shades reflect greater values.

Date	Replacement CPUE ^a by station and set										Replacement Index		Cumulative Traditional Index conversion ^c	
	Stn2		Stn4		Stn6		Stn8		Stn10					
	Set 1	Set 2	Set 1	Set 2	Set 1	Set 2	Set 1	Set 2	Set 1	Set 2				
	Avg.	Avg.	Avg.	Avg.	Avg.	Avg.								
10-Jun	3	3	3	0	3	0	--	--	--	0	--	2	2	14
11-Jun	--	3	--	1	--	2	--	3	--	0	--	2	3	18
12-Jun	0	7	0	0	3	0	0	10	0	0	0	2	5	23
13-Jun	0	0	0	3	0	0	0	0	3	0	0	1	6	24
14-Jun	2	2	2	6	12	6	26	53	10	2	2	12	18	52
15-Jun	2	4	0	2	18	5	2	10	28	3	3	8	26	68
16-Jun	2		13	4	4	26	0	4	34	22	2	11	37	94
17-Jun	2	2	26	10	53	13	5	34	45	124	2	31	69	164
18-Jun	14		15		39	24	43		86		2	38	106	249
19-Jun	0		0		22	5	56		114		2	37	143	331
20-Jun	0	3	2	13	58	69	62	44	18	66	2	34	176	407
21-Jun	5	9	27	36	28	33	12	0	20	12	2	18	195	448
22-Jun	7	12	5	25	10	24	64	44	163	60	2	41	236	540
23-Jun														
24-Jun														
25-Jun														
Total	52		105		229		289		505					
Percent	4		9		19		25		43					

^a CPUE = the number of fish caught in all meshes and standardized to a 200 fathom net fished for 60 minutes. Multiple sets at a station are averaged.

^b Replacement daily index is simply the average CPUE across stations.

^c Converted based on the equation CTI = 2.3*CRI + 10.4

Note: red values were interpolated from other observed catches.

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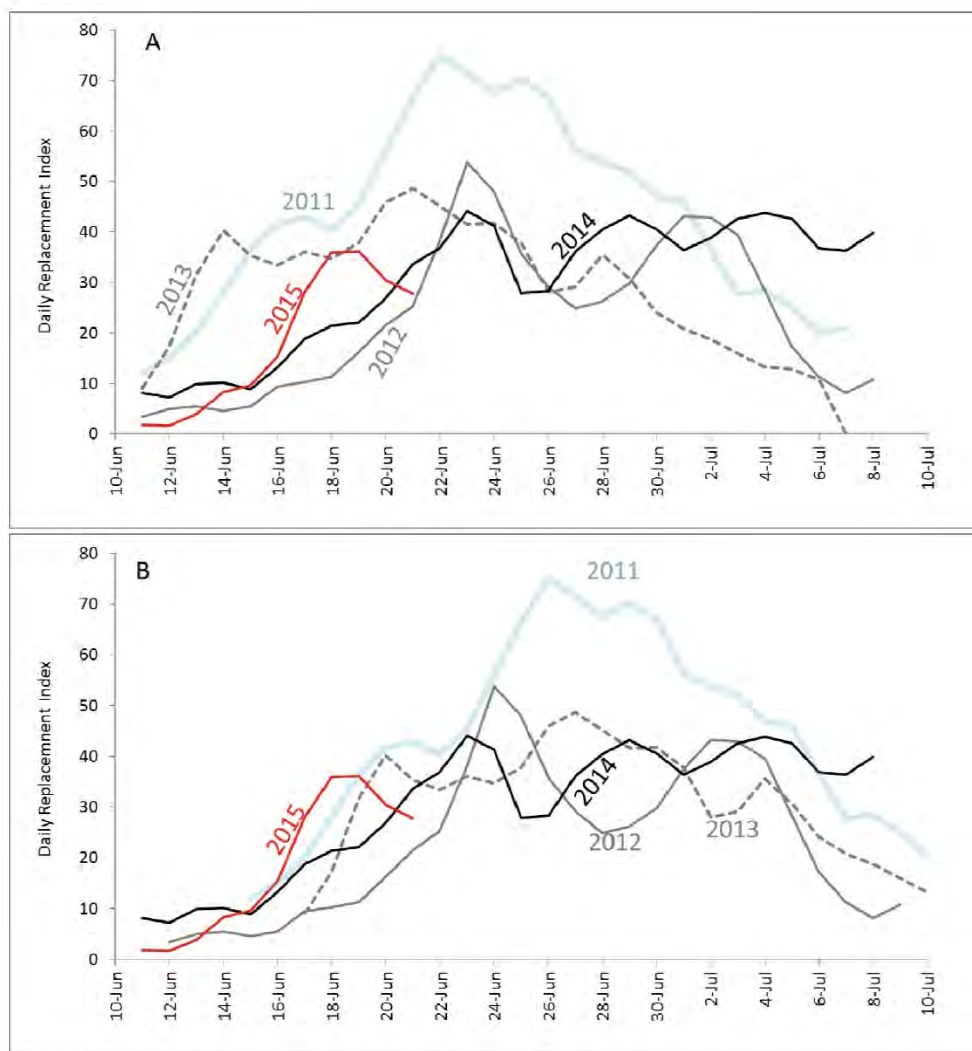


Figure 1. (A) The daily Replacement Index for 2011-2015 and (B) the same index adjusted for run timing past the PMTF (2015 was assumed to have an average run timing). Lines represent a centered 3-day moving average giving double weight to the centered date.

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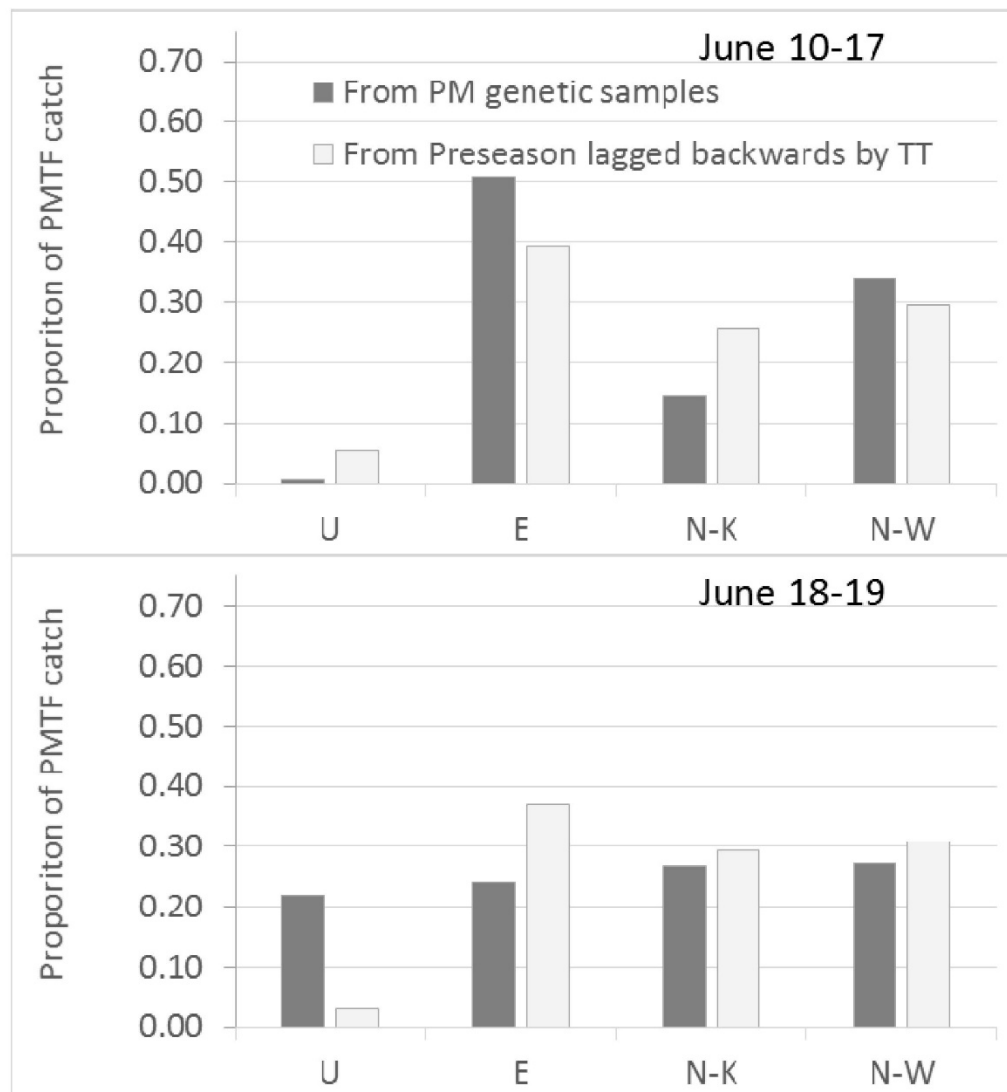


Figure 2. Stock composition estimates at the PMTF observed from genetic samples and compared to those expected from district runs with average run timings and magnitudes equal to ADF&G's pre-season forecasts. Travel times (TTs) between the test fishery and the districts were assumed as follows: Ugashik (U)=7 days, Egegik (E)=6 days, Naknek-Kvichak (N-K)=5 days, and Nushagak-Wood (N-W)=8 days. While these TTs were chosen to equalize the stock compositions, they represent a feasible scenario given historical observations.

PMTF Interpretation #4 for catches through June 26, 2015

Station indices for June 26 indicated a dramatic increase in run strength past the PMTF (Table 1). Increases at Stations 4 and 6 suggest Egegik is building considerably. Historically, Egegik's representation in the stock composition has been distributed across the entire test fishing transect, but was generally greatest at these stations. As well, the Kvichak and Nushagak stocks have a broad transect distribution, but are greatest at Stations 8 and 10. Thus, the increased index at Station 10 yesterday was likely due to these stocks gaining momentum. We expect catches to pick up considerably in all of these districts starting around June 30-July 1.

With the catches on June 24 and 26, it now seems apparent the 2015 run through Port Moller will have an average or later run timing as opposed to recent years when the timing was earlier (Figure 1). Our best guesses at this point are that (1) the run is of normal timing past Port Moller and is large (Figure 1B) or (2) the run is of late timing past Port Moller and is even larger. We will need several more days' worth of test fishery catches and C+E before we can begin to project run strength to each district. The crew was again unable to fish today due to weather. Yesterday's (June 26) catches are promising, but missing catches the day before and after limits their context. The answer to whether the catch increases that began June 24 continued through June 25 and today (June 27) will have to wait until corresponding C+E for these dates are observed. Catches for unfished dates on June 25 and June 27 will be interpolated of course, but missing such critical days substantially hinders our ability to make in-season forecasts.

We have included the historical daily Replacement Index 2011 (Figure 1a), as well as the historical cumulative Traditional Index (Table 2) for those who prefer this information. As well, several people have asked for a map of the test fishing transect (see Figure 2).

PMTF 2015 Catch Interpretation #4

6/27/2015 3:16 PM Alaska Time

Table 1. Estimated daily and cumulative **Replacement Index** for the 2015 Port Moller test fishery. The cumulative Traditional Index was converted from the cumulative Replacement Index (CTI = 2.2*CRI + 10.4). Average daily indices for each station are color formatted so that darker shades reflect greater values.

Date	Replacement CPUE ^a by station and set										Replacement Index		Cumulative Traditional Index conversion ^c
	Stn2		Stn4		Stn6		Stn8		Stn10				
	Set 1	Set 2	Set 1	Set 2	Set 1	Set 2	Set 1	Set 2	Set 1	Set 2	Daily ^b	Cumulative	
10-Jun	3	3	3	0	3	0	--	--	--	--	2	2	14
11-Jun	--	3	--	2	--	2	--	2	--	0	2	3	18
12-Jun	0	7	0	1	0	3	2	0	3	10	2	5	23
13-Jun	0	4	0	0	3	0	2	0	5	0	1	6	24
14-Jun	2	2	2	6	12	6	26	53	10	2	12	18	52
15-Jun	2	4	0	2	18	5	2	10	28	3	8	26	68
16-Jun	2	3	13	1	4	4	26	0	4	34	11	37	94
17-Jun	2	2	26	10	53	13	5	34	45	124	31	69	164
18-Jun	14	--	15	--	39	24	43	--	86	--	38	106	249
19-Jun	0	14	0	15	22	5	56	--	114	--	37	143	331
20-Jun	0	0	2	0	13	58	69	62	44	18	34	176	407
21-Jun	5	1	9	8	36	28	63	33	12	0	18	195	448
22-Jun	7	7	5	31	25	10	31	24	64	44	41	236	540
23-Jun	9	12	7	15	2	5	17	2	54	10	20	256	586
24-Jun	5	8	0	10	13	5	4	--	79	126	49	305	696
25-Jun	--	2	--	38	--	62	67	--	83	--	65	370	842
26-Jun	--	--	62	62	147	111	58	69	145	144	100	470	1066
27-Jun	--	--	--	--	--	--	--	--	--	--	--	--	--
28-Jun	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	62		215		429		456		843				
Percent	3		11		21		23		42				

^a CPUE = the number of fish caught in all meshes and standardized to a 200 fathom net fished for 60 minutes. Multiple sets at a station are averaged.

^b Replacement daily index is simply the average CPUE across stations.

^c Converted based on the equation CTI = 2.3*CRI + 10.4

Note: red values were interpolated from other observed catches.

PMTF 2015 Catch Interpretation #4

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Table 2. Historical cumulative Traditional Index by date from the PMTF, 1990-2015. Run timings for each year are based on the time series 1990-2014 and given as days early (positive values) or late (negative values). The cumulative Traditional Index for 2015 was converted from the cumulative Replacement Index (CTI = 2.2*CRI + 10.4).

Date	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Avg	Mn	Max
11-Jun	7	6	18	18	4	33	22	13	6	16	21	31	24	28	8	13	12	11	0	18	17	49	14	26	53	18	19	0	53
12-Jun	19	13	37	29	7	62	43	30	11	33	89	52	51	56	22	27	12	19	7	43	17	78	21	61	69	23	36	7	89
13-Jun	32	19	56	57	12	99	67	42	16	46	147	89	93	100	49	32	17	36	19	72	29	136	42	172	96	24	63	12	172
14-Jun	43	25	76	146	21	186	120	67	27	53	191	124	116	145	57	73	35	53	34	107	54	178	49	308	119	52	96	21	308
15-Jun	61	42	122	208	38	248	159	97	50	67	256	155	220	199	107	112	57	64	74	131	69	262	55	390	120	68	135	38	390
16-Jun	84	66	176	293	55	337	257	144	85	83	306	259	304	257	144	151	91	89	81	189	83	337	61	413	151	94	180	55	413
17-Jun	100	106	182	382	66	400	315	190	128	90	352	422	374	327	200	191	124	99	151	337	95	458	78	521	197	164	235	66	521
18-Jun	143	164	296	472	101	552	391	217	150	114	421	489	445	357	222	233	168	142	273	386	154	516	90	608	250	249	294	90	608
19-Jun	184	245	428	562	146	689	447	299	178	181	476	649	499	422	239	277	251	149	375	441	189	589	148	702	310	331	363	146	702
20-Jun	225	305	540	681	183	762	552	386	224	255	543	752	562	526	251	322	329	173	541	582	277	704	171	797	362	407	440	171	797
21-Jun	267	404	658	824	269	878	653	441	266	352	584	871	679	597	338	343	423	219	689	727	417	811	246	950	464	448	535	219	950
22-Jun	313	561	783	1012	379	975	730	543	320	414	684	1046	773	694	393	430	486	287	845	812	603	1030	274	1060	513	540	638	274	1060
23-Jun	374	657	927	1135	531	1110	818	637	363	514	808	1125	887	764	416	509	636	343	970	943	726	1174	433	1158	628	586	743	343	1174
24-Jun	511	837	1068	1234	648	1214	918	730	423	704	896	1227	1018	835	498	597	739	393	1132	1030	838	1358	514	1237	746	696	854	393	1358
25-Jun	665	891	1178	1466	743	1356	1020	806	471	853	981	1361	1166	887	639	699	836	438	1287	1092	896	1490	601	1351	829	842	960	438	1490
26-Jun	771	946	1226	1624	854	1509	1152	888	523	949	1042	1470	1297	950	792	831	979	582	1435	1390	971	1674	717	1410	883	1066	1075	523	1674
27-Jun	908	1077	1334	1783	995	1633	1261	1029	582	1022	1110	1607	1427	1007	1012	1026	1092	710	1702	1618	1046	1785	767	1494	967		1200	582	1785
28-Jun	1192	1146	1453	1973	1144	1815	1371	1183	659	1186	1199	1747	1536	1078	1179	1149	1250	837	1911	1890	1103	1924	831	1578	1029		1335	659	1973
29-Jun	1389	1241	1586	2085	1279	2033	1449	1297	776	1267	1265	1830	1663	1123	1283	1285	1417	947	2046	2171	1159	2052	904	1642	1119		1452	776	2171
30-Jun	1632	1261	1812	2372	1538	2179	1580	1421	867	1392	1333	1931	1773	1196	1380	1363	1472	1095	2287	2438	1219	2151	995	1697	1183		1583	867	2438
1-Jul	1804	1340	1981	2547	1699	2365	1684	1504	986	1516	1386	2010	1838		1427	1490	1519	1176	2525	2724	1400	2269	1144	1744	1236		1721	986	2724
2-Jul	1960	1390	2066	2789	1866	2537	1838	1637	1034	1647	1437	2105	1909		1516	1569	1650	1280	2676	2972	1512	2358	1166	1782	1326		1834	1034	2972
3-Jul	2182	1564	2228	2849	1990	2725	1955	1871	1165	1805	1494	2202	1965		1613	1617	1839	1342	2741	3220	1686	2398	1275	1819	1415		1957	1165	3220
4-Jul	2284	1629	2333	2928	2187	2874	2139	1947	1247	1933	1527	2255	2022		1663	1677	1912	1448	2863	3430	1766	2461	1332	1839	1520		2051	1247	3430
5-Jul	2345	1756	2443	3028	2330	2995	2247	2079	1377	2054	1572	2308	2122		1770	1762	1995	1582	3021	3567		2514	1367	1889	1632		2163	1367	3567
Total run (millions)	47	41	44	51	50	60	36	18	18	38	27	21	17	26	42	38	42	44	40	40	40	30	30	24	41		36	17	60
CE Run timing	-2.5	-1.9	-2.6	2.3	-4.2	-1.4	0.6	-0.4	-2.8	-2.0	2.2	3.5	1.6	2.8	0.6	0.1	-2.3	-2.0	-0.9	1.9	-1.2	2.7	0.0	5.9	2.3		0.0	-4.2	5.9
PM Run timing	-1.2	-2.2	-0.9	1.6	-2.5	-2.0	-1.7	-3.0	-4.7	-2.6	5.0		4.4	6.2	1.5	0.0	-0.6	-3.9	-0.6	-1.3	-3.2	4.1	1.4	6.3	0.2		0.0	-4.7	6.3

PMTF 2015 Catch Interpretation #4

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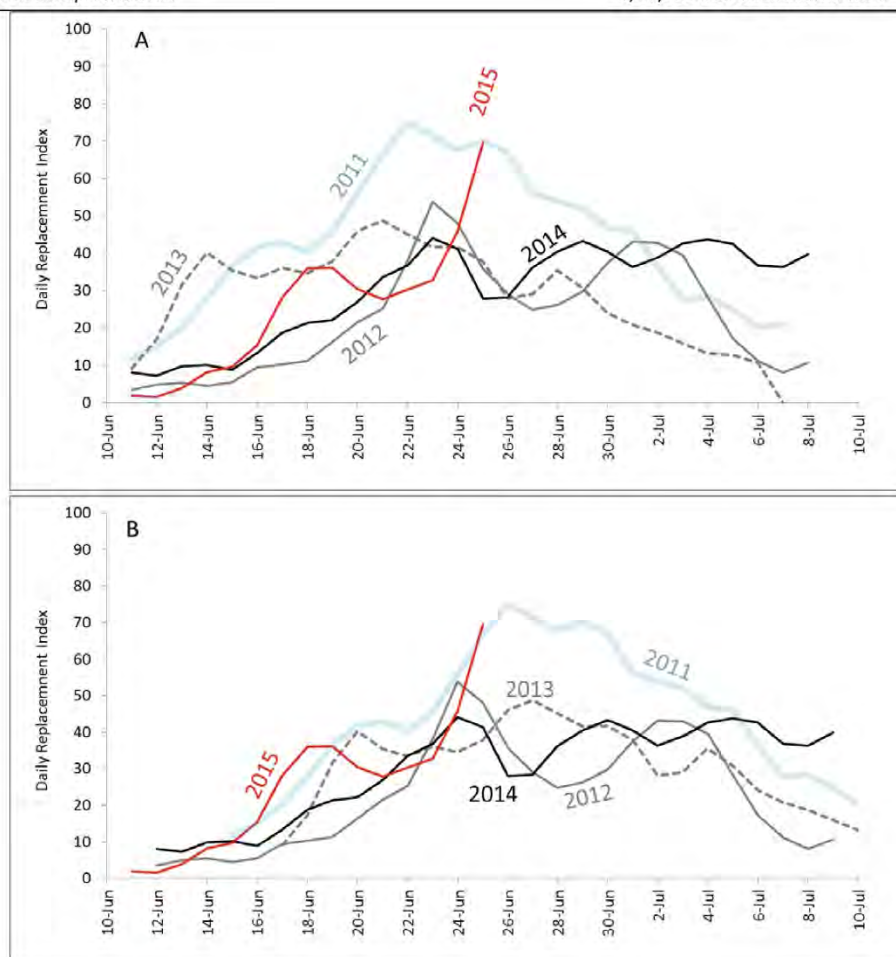


Figure 1. (A) The daily Replacement Index for 2011-2015 and (B) the same index adjusted for run timing past the PMTF (2015 was assumed to have an average run timing). Lines represent a centered 3-day moving average giving double weight to the centered date.

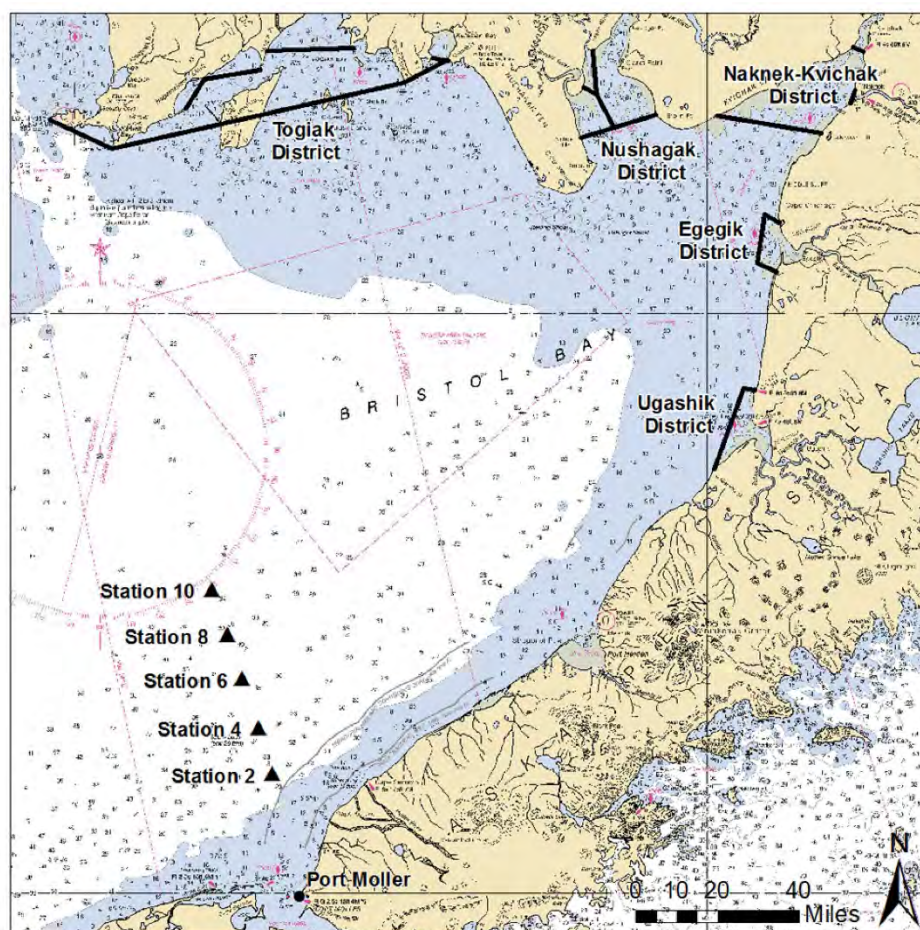


Figure 2. A map of the Port Moller test fishing transect and Bristol Bay commercial fishing districts.

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Alaska Time

PMTF Interpretation #5 for catches through June 30, 2015

The Replacement Index increased yesterday with catches distributed further inshore (Table 1). We report catches thus far today (July 1) for Stations 6-10, which show run strength continuing for the outer two stations, but dropping off considerably for Station 6.

Inseason results from the Port Moller Test Fishery (PMTF) remain unusually difficult to decipher this year. In our previous interpretations, we have been careful to note that the preseason forecasts for 2015 were plausible given the data at the time of their release. Given the low cumulative C+E inshore as of yesterday, the run seems to be late if it is to break 30 million and several days late for it to come in at the preseason forecast (Figure 1).

In order to forecast the yearend total run, we must be able to project test fishery catches through the end of the season. However, given the increased catches yesterday and the varying pattern across the transect this season, we do not feel comfortable foretelling what Port Moller will do next. For the run to have the strength expected pre-season, test fishery catches must remain strong for the next several days. If Port Moller dries up instead, we are likely looking at a much smaller run. Time always tells, and we offer the usual mantra of needing a few more days of data.

For now, we have forecasted C+E through July 7 (Figure 2). When lagged backwards by their estimated travel times (TTs), these projections seem to square with the genetic stock composition estimates at Port Moller (Figure 3). We give the most weight to the June 24 and 26 comparisons. The apparent discrepancy between observed vs. expected compositions for the Ugashik and Naknek-Kvichak districts on June 26th may be because Station 2 was not fished on this date, causing Ugashik to be under-represented in the genetic stock composition estimates. Alternately, if the June 26th observed values are accurate, our projection for Naknek-Kvichak may be a little light and Ugashik a little heavy; we consider the forecasts for these districts to be the most tenuous given their low C+Es available thus far to parameterize our models. We will update these forecasts and interpretations as soon as the data allow us to speak with greater confidence.

Historical cumulative Traditional and Replacement Indices are provided in Tables 2 and 3, respectively.

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Alaska Time

Table 1. Estimated daily and cumulative **Replacement Index** for the 2015 Port Moller test fishery. The cumulative Traditional Index was converted from the cumulative Replacement Index (CTI = 2.3*CRI + 10.4). Average daily indices for each station are color formatted so that darker shades reflect greater values.

Date	Replacement CPUE ^a by station and set										Replacement Index		Cumulative Traditional Index conversion ^c
	Stn2		Stn4		Stn6		Stn8		Stn10		Daily ^b	Cumulative	
	Set 1	Set 2	Set 1	Set 2	Set 1	Set 2	Set 1	Set 2	Set 1	Set 2			
	Avg.		Avg.		Avg.		Avg.		Avg.				
10-Jun	3	3	3	0	3	0	--	--	--	0	2	2	14
11-Jun	--	3	--	2	--	2	--	2	--	0	2	3	18
12-Jun	0	7	0	0	3	0	0	10	0	0	2	5	23
13-Jun	0	4	0	0	3	0	0	5	0	3	1	6	24
14-Jun	2	2	2	2	6	12	6	26	0	53	10	12	52
15-Jun	2	2	4	0	4	18	9	5	2	40	10	8	68
16-Jun	2	3	--	13	1	4	4	11	26	0	6	11	94
17-Jun	2	2	2	26	9	10	53	15	13	5	2	31	164
18-Jun	14	--	--	15	18	39	33	24	43	19	--	38	249
19-Jun	0	14	--	0	15	22	31	5	56	43	--	37	331
20-Jun	0	0	--	0	--	22	13	69	62	56	44	34	407
21-Jun	5	1	9	27	8	36	28	63	33	12	53	18	448
22-Jun	7	7	12	5	31	25	10	31	24	64	6	41	540
23-Jun	9	9	7	17	15	2	5	17	2	33	54	20	586
24-Jun	5	8	0	13	10	5	4	79	21	126	134	49	696
25-Jun	--	2	--	--	13	--	5	--	102	--	127	66	844
26-Jun	--	7	--	--	38	--	67	--	83	--	144	82	1029
27-Jun	--	12	--	--	62	--	147	--	63	--	145	68	1182
28-Jun	--	17	--	--	62	--	124	--	63	--	145	53	1302
29-Jun	22	22	--	60	61	--	124	--	40	--	34	28	1365
30-Jun	15	15	14	49	60	20	7	5	27	18	12	60	1500
1-Jul	2	4	5	141	34	133	62	6	70	51	19	60	
2-Jul	--	--	--	137	--	7	66	0	58	34	108	13	
3-Jul	--	--	--	--	--	4	--	--	83	--	41	--	
4-Jul	--	--	--	--	--	--	--	--	--	--	--	--	
5-Jul	--	--	--	--	--	--	--	--	--	--	--	--	
6-Jul	--	--	--	--	--	--	--	--	--	--	--	--	
7-Jul	--	--	--	--	--	--	--	--	--	--	--	--	
8-Jul	--	--	--	--	--	--	--	--	--	--	--	--	
9-Jul	--	--	--	--	--	--	--	--	--	--	--	--	
10-Jul	--	--	--	--	--	--	--	--	--	--	--	--	
Total	79		215		429		457		843				
Percent	4		11		21		23		42				

^a CPUE = the number of fish caught in all meshes and standardized to a 200 fathom net fished for 60 minutes. Multiple sets at a station are averaged.

^b Replacement daily index is simply the average CPUE across stations.

^c Converted based on the equation CTI = 2.3*CRI + 10.4

Note: red values were interpolated from other observed catches.

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Table 2. Historical cumulative Traditional Index by date from the PMTF, 1990-2015. Run timings for each year are based on the time series 1990-2014 and given as days early (positive values) or late (negative values). The cumulative Traditional Index for 2015 was converted from the cumulative Replacement Index (CTI = 2.3*CRI + 10.4).

Date	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Avg	Min	Max
11-Jun	7	6	18	18	4	33	22	13	6	16	21	31	24	28	8	13	12	11	0	18	17	49	14	26	53	18	19	0	53
12-Jun	19	13	37	29	7	62	43	30	11	33	89	52	51	56	22	27	12	19	7	43	17	78	21	61	69	23	36	7	89
13-Jun	32	19	56	57	12	99	67	42	16	46	147	89	93	100	49	32	17	36	19	72	29	136	42	172	96	24	63	12	172
14-Jun	43	25	76	146	21	186	120	67	27	53	191	124	116	145	57	73	35	53	34	107	54	178	49	308	119	52	96	21	308
15-Jun	61	42	122	208	38	248	159	97	50	67	256	155	220	199	107	112	57	64	74	131	69	262	55	390	120	68	135	38	390
16-Jun	84	66	176	293	55	337	257	144	85	83	306	259	304	257	144	151	91	89	81	189	83	337	61	413	151	94	180	55	413
17-Jun	100	106	182	382	66	400	315	190	128	90	352	422	374	327	200	191	124	99	151	337	95	458	78	521	197	164	235	66	521
18-Jun	143	164	296	472	101	552	391	217	150	114	421	489	445	357	222	233	168	142	273	386	154	516	90	608	250	249	294	90	608
19-Jun	184	245	428	562	146	689	447	299	178	181	476	649	499	422	239	277	251	149	375	441	189	589	148	702	310	331	363	146	702
20-Jun	225	305	540	681	183	762	552	386	224	255	543	752	562	526	251	322	329	173	541	582	277	704	171	797	362	407	440	171	797
21-Jun	267	404	658	824	269	878	653	441	266	352	584	871	679	597	338	343	423	219	689	727	417	811	246	950	464	448	535	219	950
22-Jun	313	561	783	1012	379	975	730	543	320	414	684	1046	773	694	399	430	486	287	845	812	603	1030	274	1060	513	540	638	274	1060
23-Jun	374	657	927	1135	531	1110	818	637	363	514	808	1125	887	764	416	509	636	343	970	943	726	1174	433	1158	628	586	743	343	1174
24-Jun	511	837	1068	1234	648	1214	918	730	423	704	896	1227	1018	835	498	597	739	393	1132	1030	838	1358	514	1237	746	696	854	393	1358
25-Jun	665	891	1178	1466	743	1356	1020	806	471	853	981	1361	1166	887	639	699	836	438	1287	1092	896	1490	601	1351	829	844	960	438	1490
26-Jun	771	946	1226	1624	854	1509	1152	888	523	949	1042	1470	1297	950	792	831	979	582	1435	1390	971	1674	717	1410	883	1029	1075	523	1674
27-Jun	908	1077	1334	1783	995	1633	1261	1029	582	1022	1110	1607	1427	1007	1012	1026	1092	710	1702	1618	1046	1785	767	1494	967	1182	1200	582	1785
28-Jun	1192	1146	1453	1973	1144	1815	1371	1183	659	1186	1199	1747	1536	1078	1179	1149	1250	837	1911	1890	1103	1924	831	1578	1029	1302	1335	659	1973
29-Jun	1389	1241	1586	2085	1279	2033	1449	1297	776	1267	1265	1830	1663	1123	1283	1285	1417	947	2046	2171	1159	2052	904	1642	1119	1365	1452	776	2171
30-Jun	1632	1261	1812	2372	1538	2179	1580	1421	867	1392	1333	1931	1773	1196	1380	1363	1472	1095	2287	2438	1219	2151	995	1697	1183	1500	1583	867	2438
1-Jul	1804	1340	1981	2547	1899	2365	1684	1504	986	1516	1386	2010	1838		1427	1490	1519	1176	2525	2724	1400	2269	1144	1744	1236		1721	986	2724
2-Jul	1960	1390	2066	2789	1866	2537	1838	1637	1034	1647	1437	2105	1909		1516	1569	1650	1280	2676	2972	1512	2358	1166	1782	1326		1834	1034	2972
3-Jul	2182	1564	2228	2849	1990	2725	1955	1871	1165	1805	1494	2202	1965		1613	1617	1839	1342	2741	3220	1686	2398	1275	1819	1415		1957	1165	3220
4-Jul	2284	1629	2333	2928	2187	2874	2139	1947	1247	1933	1527	2255	2022		1663	1677	1912	1448	2863	3430	1766	2461	1332	1839	1520		2051	1247	3430
5-Jul	2345	1756	2443	3028	2330	2995	2247	2079	1377	2054	1572	2308	2122		1770	1762	1995	1582	3021	3567		2514	1367	1889	1632		2163	1367	3567
Total run (millions)	47	41	44	51	50	60	36	18	18	38	27	21	17	26	42	38	42	44	40	40	40	30	30	24	41		36	17	60
CE Run timing	-2.5	-1.9	-2.6	2.3	-4.2	-1.4	0.6	-0.4	-2.8	-2.0	2.2	3.5	1.6	2.8	0.6	0.1	-2.3	-2.0	-0.9	1.9	-1.2	2.7	0.0	5.9	2.3		0.0	-4.2	5.9
PM Run timing	-1.2	-2.2	-0.9	1.6	-2.5	-2.0	-1.7	-3.0	-4.7	-2.6	5.0		4.4	6.2	1.5	0.0	-0.6	-3.9	-0.6	-1.3	-3.2	4.1	1.4	6.3	0.2		0.0	-4.7	6.3

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Table 3. Historical cumulative Replacement Index by date from the PMTF, 1990-2015. Run timings for each year are based on the time series 1990-2014 and given as days early (positive values) or late (negative values).

Date	2011	2012	2013	2014	2015	Avg	Min	Max
10-Jun	9	0	7	12	0	7	0	12
11-Jun	22	5	14	19	3	15	5	22
12-Jun	34	9	29	25	5	24	9	34
13-Jun	57	16	60	35	6	42	16	60
14-Jun	80	20	110	49	18	64	20	110
15-Jun	123	24	140	52	26	85	24	140
16-Jun	160	34	171	67	37	108	34	171
17-Jun	209	47	213	86	69	139	47	213
18-Jun	245	52	242	108	106	162	52	245
19-Jun	286	74	280	131	143	193	74	286
20-Jun	350	90	327	151	176	230	90	350
21-Jun	405	122	379	196	195	275	122	405
22-Jun	498	143	422	221	236	321	143	498
23-Jun	557	221	464	273	256	379	221	557
24-Jun	631	259	504	320	305	428	259	631
25-Jun	694	298	550	339	371	470	298	694
26-Jun	775	325	570	366	453	509	325	775
27-Jun	817	348	596	406	521	542	348	817
28-Jun	877	375	640	444	575	584	375	877
29-Jun	932	403	667	490	603	623	403	932
30-Jun	971	438	691	532	663	658	438	971
1-Jul	1025	489	712	564		698	489	1025
2-Jul	1061	525	730	604		730	525	1061
3-Jul	1081	574	749	647		763	574	1081
4-Jul	1116	598	757	691		791	598	1116
5-Jul	1140	614	774	735		816	614	1140
Total run (millions)	30.3	30.0	24.2	41.1				
CE Run timing	2.7	0.0	5.9	2.3				
PM Run timing	4.1	1.4	6.3	0.2				

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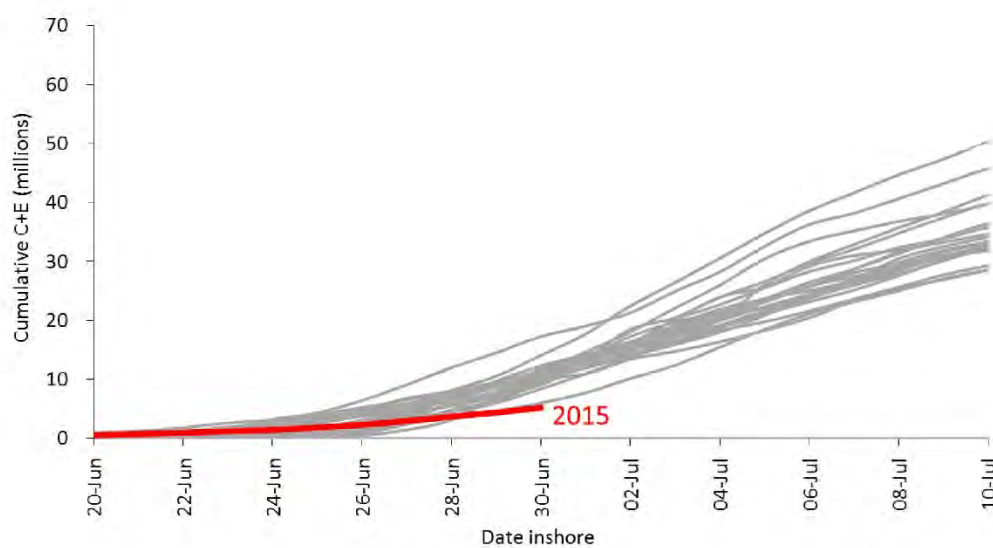


Figure 1. Cumulative C+E for total runs greater than 30 million (1980-2014; gray lines) adjusted to the average run timing. Run timing for 2015 is depicted as being on time; if the run is late this year, the red line slides to the left.

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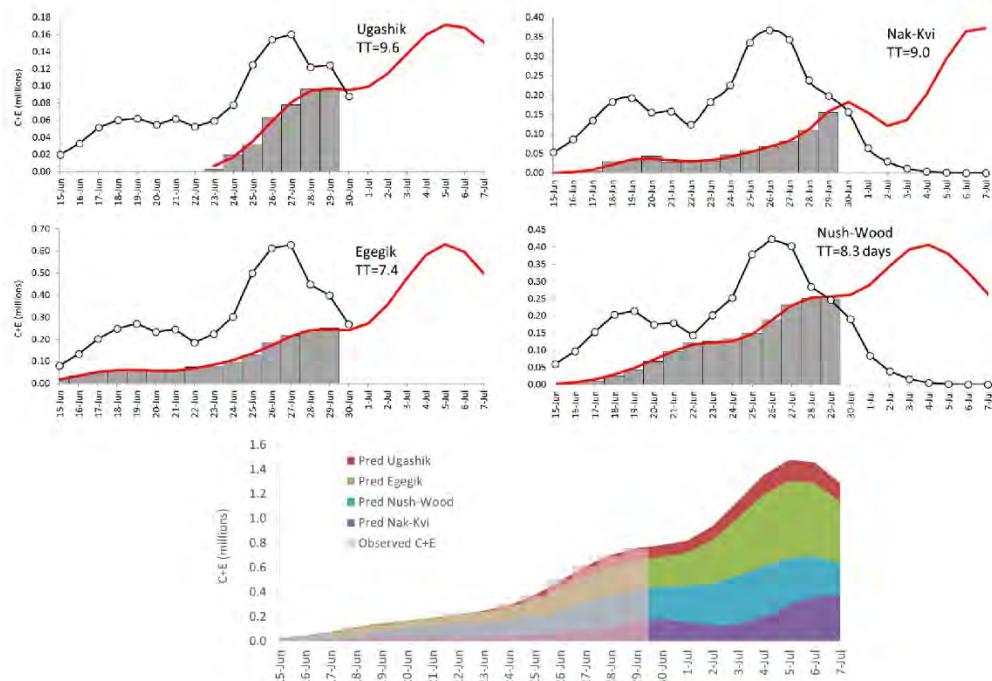


Figure 2. Projected run strength through July 7 for the four major fishing districts (top four graphs). The black line reflects the test fishery catch index (scale not shown). District specific C+Es are projected by the red lines. Gray bars show observed C+E to date. All values represent a 3-day moving average. The bottom graph combines the top four graphs to show the aggregate run.

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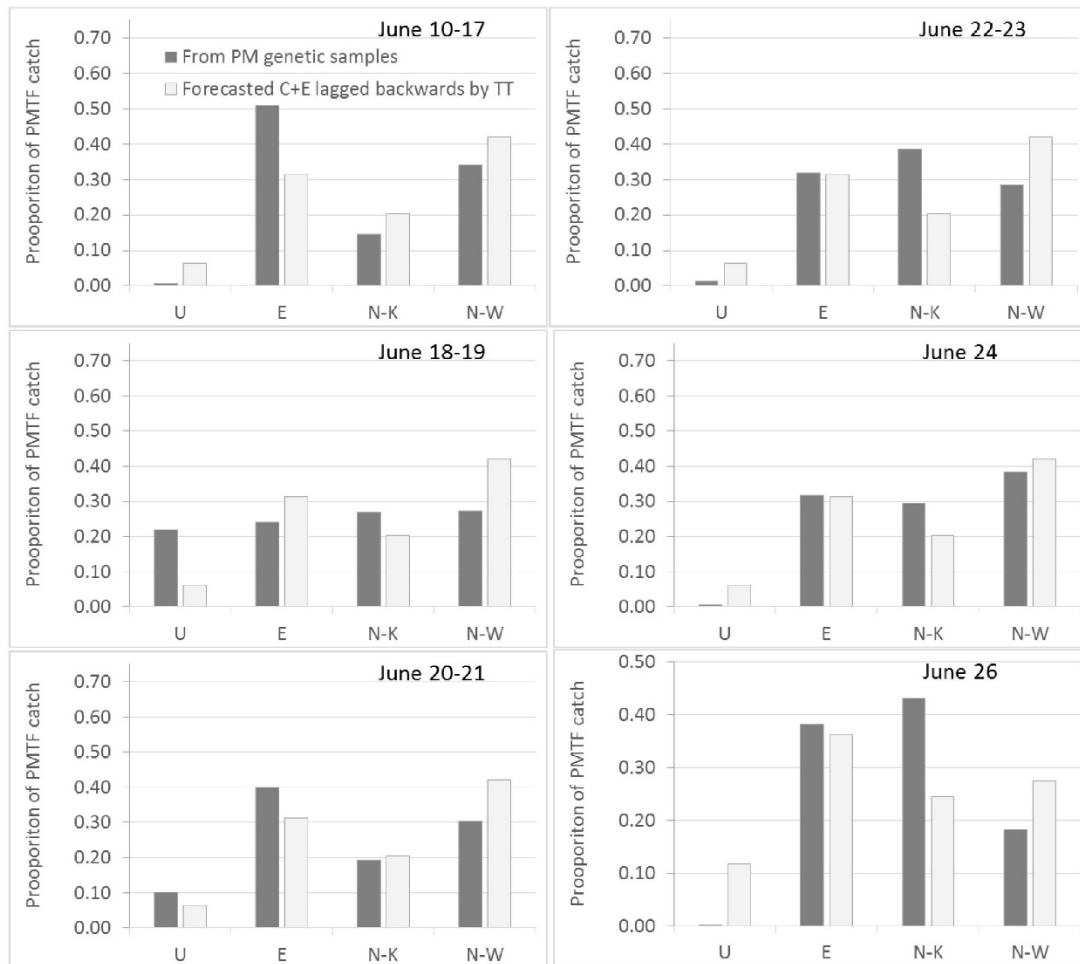


Figure 3. Stock composition estimates at the PMTF observed from genetic samples and compared to those based on projected runs to each district lagged backwards in time based on the estimated travel times (see Figure 2).

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PMTF Interpretation #6 for catches through July 3, 2015

The migration this year has been very odd. By now, the run will have to be (1) several days late to come in at the pre-season forecast and/or (2) be very compressed (Figure 1). The first possibility would mean our estimates of TT are 3-4 days longer than we thought, and/or there is considerable strength left at Port Moller. The second could occur if fish are milling outside the districts causing a pooling effect. The rate of compression would be determined by how long it takes to "drain the pool", which would be anyone's guess.

However, at this point we must consider the possibility of a smaller run. Catches picked up over the last two days at Station 10 and are likely headed for the Naknek-Kvichak district (Table 1). Increased representation of Kvichak fish in the June 30-July 1 stock composition estimates from Port Moller is a signal the other stocks are winding down. A Replacement Index of 52 (not shown) at Station 12 yesterday indicates the run has shifted across the test fishing transect, which we have noted to be a common occurrence this year. What this has done to the fish per index (FPI) remains uncertain, which confounds the estimation of travel times (TTs) between Port Moller and the districts. Nevertheless, TT seems to be about 10 days, and based on this assumption we offer our first in-season forecasts (Figure 2). All district C+Es are estimated to be below the pre-season forecasts, which if true will cause the total inshore run to be about 30 million (44% lower than the expected 53 million).

Lagging these district forecasts backward in time based on their estimated TT distributions lets us see what the stock compositions should have looked like at Port Moller and how they compare to what was observed (Figure 3). For the most part, observed and expected stock compositions seem to agree. Given a 10-11 day travel time added to the June 30-July 1 indexes, this congruency in stock composition estimates offers some assurance that our forecasts are correct through about July 12. How our forecasts perform after this depends on how well our projections of Port Moller catches hold up. Another surge of fish would give reason to hope for a sizeable tale to the run distribution.

For now, we estimate that Port Moller peaked on June 25 making it about 2.5 days early. If so, the relationship between inshore run timing and that for the test fishery would suggest the run is about one day early (Figure 4). However, because TTs are likely longer than usual, the inshore mean day of return is estimated to be one day late (July 6). Note: our forecasts show the peak day of C+E will occur on July 8 (Figure 2).

We will update our run forecast in a few days, and hopefully say something you do not already know.

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Table 1. Estimated daily and cumulative **Replacement Index** for the 2015 Port Moller test fishery. The cumulative Traditional Index was converted from the cumulative Replacement Index (CTI = 2.3*CRI + 10.4). Average daily indices for each station are color formatted so that darker shades reflect greater values.

Date	Replacement CPUE ^a by station and set										Replacement Index Daily ^b Cumulative		Cumulative Traditional Index conversion ^c
	Stn2		Stn4		Stn6		Stn8		Stn10				
	Set 1	Set 2	Set 1	Set 2	Set 1	Set 2	Set 1	Set 2	Set 1	Set 2			
10-Jun	3	3	3	0	3	0	--	2	--	0	2	2	14
11-Jun	--	3	--	1	--	2	--	3	--	0	2	3	18
12-Jun	0	4	7	0	0	3	2	0	0	5	10	0	23
13-Jun	0	0	0	0	3	0	0	0	0	5	0	3	24
14-Jun	2	0	2	2	6	12	0	6	26	0	53	10	52
15-Jun	2	2	4	4	2	9	5	2	40	6	28	3	68
16-Jun	2	3		1	4	11		6	10	15			94
17-Jun	2	2		9	10	15	13	5	2	34	28	124	164
18-Jun	2	2	26	18	53	33	24	19		45	84		249
19-Jun	14			15	39	31	24	43		86	86		331
20-Jun	0	14		0	22	13	5	56		114	114		407
21-Jun	0	0	3	2	13	58	69	62	44	18	66		448
22-Jun	5	1	9	27	36	28	33	12	53	0	42	12	540
23-Jun	7	7	12	31	25	31	24	6	44	163	16	60	586
24-Jun	7	9		15	2	17	2	33	54	62	111	57	696
25-Jun	9	8	7	17	10	4		21	10	59	110		844
26-Jun	5	2	0	13	5	79	126	134	102	122			1029
27-Jun	--	7	--	38	62	147	111	58	83	69	141	144	1182
28-Jun	--	12	--	62	62	129	63	63	63	145	145		1302
29-Jun	--	17	--	61	61	127	40	40	56	94	94		1365
30-Jun	22	22		60	20	124	18	18	18	30	30		1500
1-Jul	15	15	14	49	7	6	5	27	12	34	98		1589
2-Jul	2	4	5	141	133	62	70	51	16	68	50		1643
3-Jul	2	4	5	58	74	7	0	58	108	13	70		
4-Jul	13	6	0	17	0	4	13	2	9	116	67		
5-Jul				8	8			31	6	91	101		
6-Jul								31		96			
7-Jul													
8-Jul													
9-Jul													
10-Jul													
Total	79		215		429		457		843				
Percent	4		11		21		23		42				

^a CPUE = the number of fish caught in all meshes and standardized to a 200 fathom net fished for 60 minutes. Multiple sets at a station are averaged.

^b Replacement daily index is simply the average CPUE across stations.

^c Converted based on the equation CTI = 2.3*CRI + 10.4

Note: red values were interpolated from other observed catches.

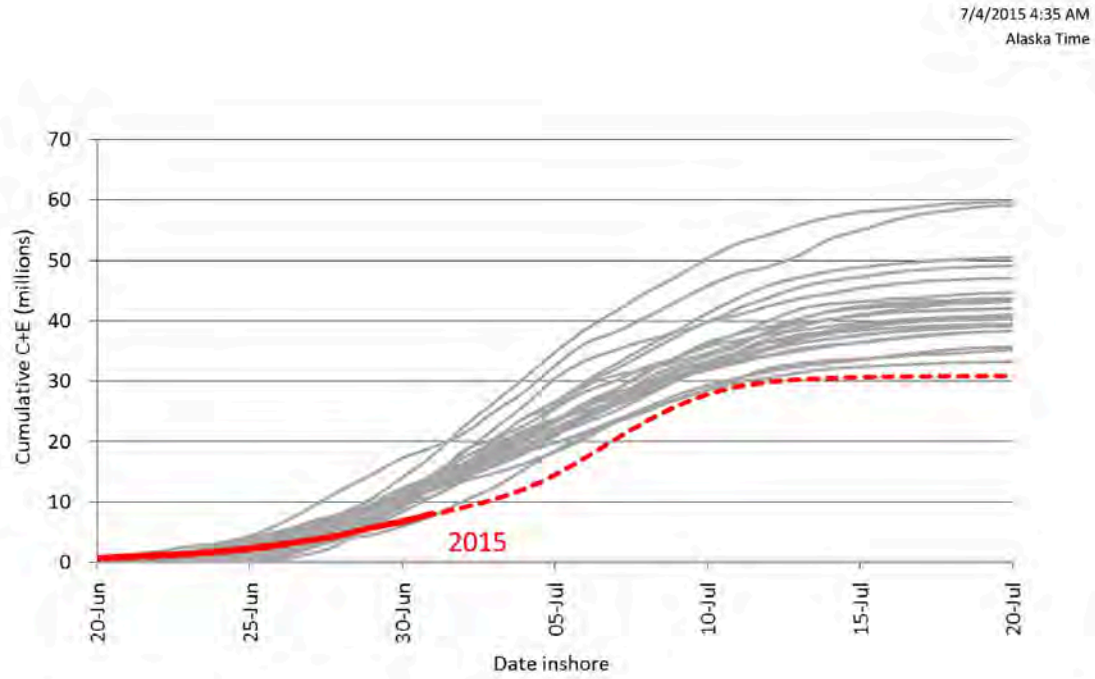


Figure 1. Cumulative C+E for total runs greater than 30 million (1980-2014; gray lines) adjusted to the average run timing (mean day of return=July 4.6). Run timing for observed C+E in 2015 (solid red line) is assumed to be one day late; the dashed red line shows what is forecasted for the remainder of the season based on projections from Figure 1 (bottom left graph).

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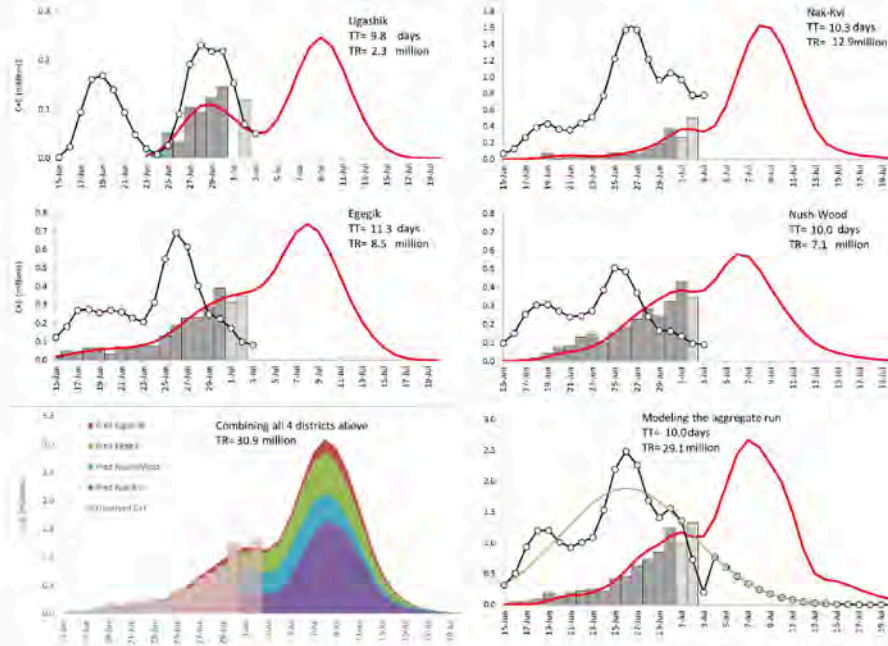


Figure 2. Forecasted run strength through July 20 for the four major fishing districts (top four graphs). The black line reflects the test fishery catch index tailored for each district (scale not shown). District specific C+Es are projected by the red lines, which is shown as a centered 3-day moving average. Dark gray bars show observed C+E to date; lighter bars on the ends are missing escapements due to lag times between the districts and the counting towers. District forecasts are added together to reflect the total run in the bottom left graph. The bottom right graph depicts the forecast as modeled from the aggregate of all districts. The green line shows the estimated daily Replacement Index at Port Moller (average day of return=June 25.6).

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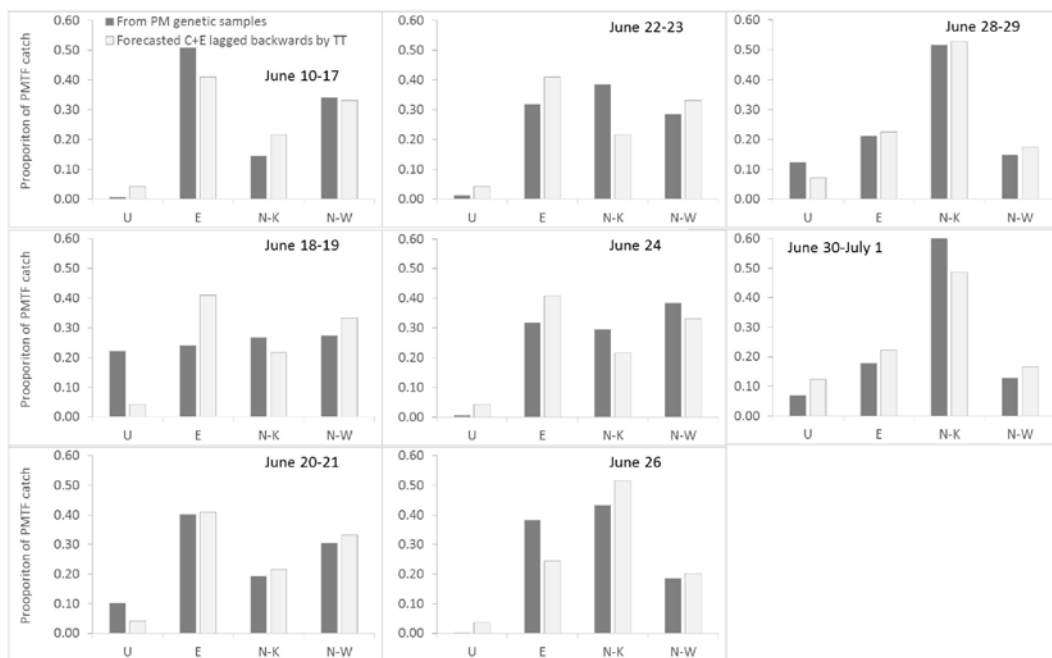


Figure 3. Stock composition estimates at the PMTF observed from genetic samples (dark bars) versus those based on forecasted runs lagged backwards based on the estimated travel times (TTs) between Port Moller and the respective districts (see Figure 1 for forecasts and TTs). Thus, the light bars are what we should have observed at Port Moller if the district forecasts are accurate.

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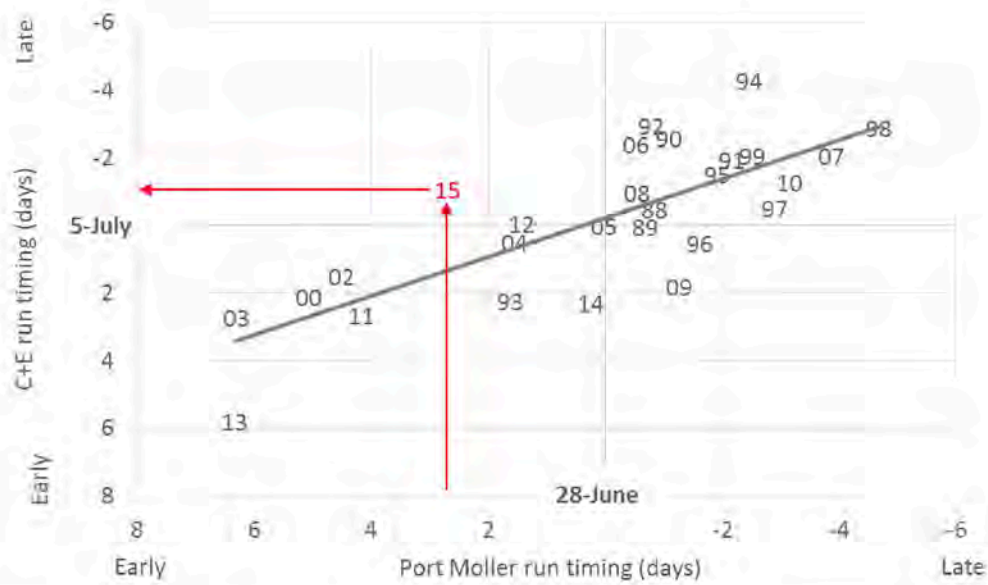


Figure 4. Comparison of run timing between C+E and Port Moller. Numbers indicate year of observation; 2015 coordinates were based on the estimated average day of return past Port Moller weighted by the Replacement Index (i.e., the green line in the bottom right graph of Figure 1) and that for the forecasted C+E (Figure 1, bottom left graph). Longer travel times (TT) between Port Moller and inshore cause the 2015 estimate to deviate from the prediction line. If Port Moller catches are greater than projected for the remainder of the season, then this estimate will shift to the right making an even later inshore run timing more plausible.

PMTF Interpretation #7 for catches through July 10, 2015

This year continues to be perplexing to the very end. Genetic results for July 7-8 showed unexpected increases for the Egegik and Nushagak Districts, and the Replacement Index (RI) increased from July 2 to July 9 (Table 1). Typically, declines in catches towards the end of the test fishery provide more definitive information about the end of the run. These results suggest that trailing C+E will be greater than projected in our Interpretation #6 released on July 4. This finding comes as a nice surprise and means our forecast of about 30 million on that date is likely a worst case scenario and more protracted than anticipated.

The PMTF is very good at detecting the absence of fish, and the consistency in CPUE from our consecutive sets at each station supports this assertion. When catches dry up towards the end of the test fishery, generally no substantial tail on the C+E distribution will occur. This year test catches remained strong through July 10, and we know more fish are coming, but the magnitude is less certain. Two pieces of information continue to be ambiguous now that the test fishery has ended: (1) how quickly test catches would have tapered and (2) how the fish per index (FPI) might change. We will never know what would have been caught at Port Moller beyond July 10, and the FPI often drops for high index points past June 30 (2014 is a prime example). As such, we refrain from making a yearend forecast at this point and limit our projection to July 15 (Figure 1).

Table 1. Estimated daily and cumulative **Replacement Index** for the 2015 Port Moller test fishery. The cumulative Traditional Index was converted from the cumulative Replacement Index (CTI = 2.3*CRI + 10.4). Average daily indices for each station are color formatted so that darker shades reflect greater values.

Date	Replacement CPUE ^a by station and set										Replacement Index		Cumulative Traditional Index conversion ^c
	Stn2		Stn4		Stn6		Stn8		Stn10				
	Set 1	Set 2	Set 1	Set 2	Set 1	Set 2	Set 1	Set 2	Set 1	Set 2	Daily ^b	Cumulative	
10-Jun	3	3	3	0	3	0	--	--	--	--	2	2	14
11-Jun	--	3	--	2	--	2	--	2	--	0	2	3	18
12-Jun	0	7	0	0	3	0	0	3	10	0	2	5	23
13-Jun	0	0	0	2	0	0	0	5	0	3	0.6	6	24
14-Jun	2	2	2	6	12	6	26	53	10	2	12	18	52
15-Jun	2	4	0	2	18	5	2	10	28	3	8	26	68
16-Jun	2	3	13	4	4	11	6	4	34	22	11	37	94
17-Jun	2	2	26	10	53	13	5	34	45	124	31	69	164
18-Jun	14	2	18	33	39	24	43	19	86	84	38	106	249
19-Jun	0	0	0	15	22	31	5	56	114	86	37	143	331
20-Jun	0	3	2	0	13	58	13	69	62	56	34	176	407
21-Jun	5	1	9	8	27	36	28	63	33	12	18	195	448
22-Jun	7	7	12	31	5	25	10	31	24	64	41	236	540
23-Jun	9	9	7	15	17	2	5	17	2	33	20	256	586
24-Jun	5	8	0	10	13	4	5	21	79	126	49	305	696
25-Jun	--	7	--	38	--	67	--	83	--	134	66	371	844
26-Jun	--	12	--	62	62	147	111	58	69	145	82	453	1029
27-Jun	--	17	--	61	--	127	--	40	--	94	68	521	1182
28-Jun	22	22	60	60	124	124	18	56	30	43	53	575	1302
29-Jun	15	15	49	34	20	7	5	27	12	34	28	603	1365
30-Jun	2	4	5	141	133	62	70	51	16	68	60	663	1500
1-Jul	2	4	5	58	137	74	7	66	0	58	40	702	1589
2-Jul	13	6	0	17	8	0	2	4	13	2	24	726	1643
3-Jul	--	18	--	72	--	22	--	31	--	96	48	774	1750
4-Jul	29	29	135	135	36	36	21	21	21	87	62	836	1888
5-Jul	--	20	--	113	--	42	--	42	--	50	53	889	2008
6-Jul	--	11	--	90	--	48	--	80	--	80	62	951	2147
7-Jul	2	2	85	67	49	54	56	80	138	153	76	1027	2317
8-Jul	12	12	38	175	38	152	130	148	114	62	80	1106	2496
9-Jul	0	0	7	176	7	209	118	178	76	77	85	1191	2687
10-Jul	2	2	14	193	3	78	78	148	168	168	53	1244	2806
Total	127	543	921	1044	1430								
Percent	3	13	23	26	35								

^a CPUE = the number of fish caught in all meshes and standardized to a 200 fathom net fished for 60 minutes. Multiple sets at a station are averaged.

^b Replacement daily index is simply the average CPUE across stations.

^c Converted based on the equation CTI = 2.3*CRI + 10.4

Note: red values were interpolated from other observed catches.

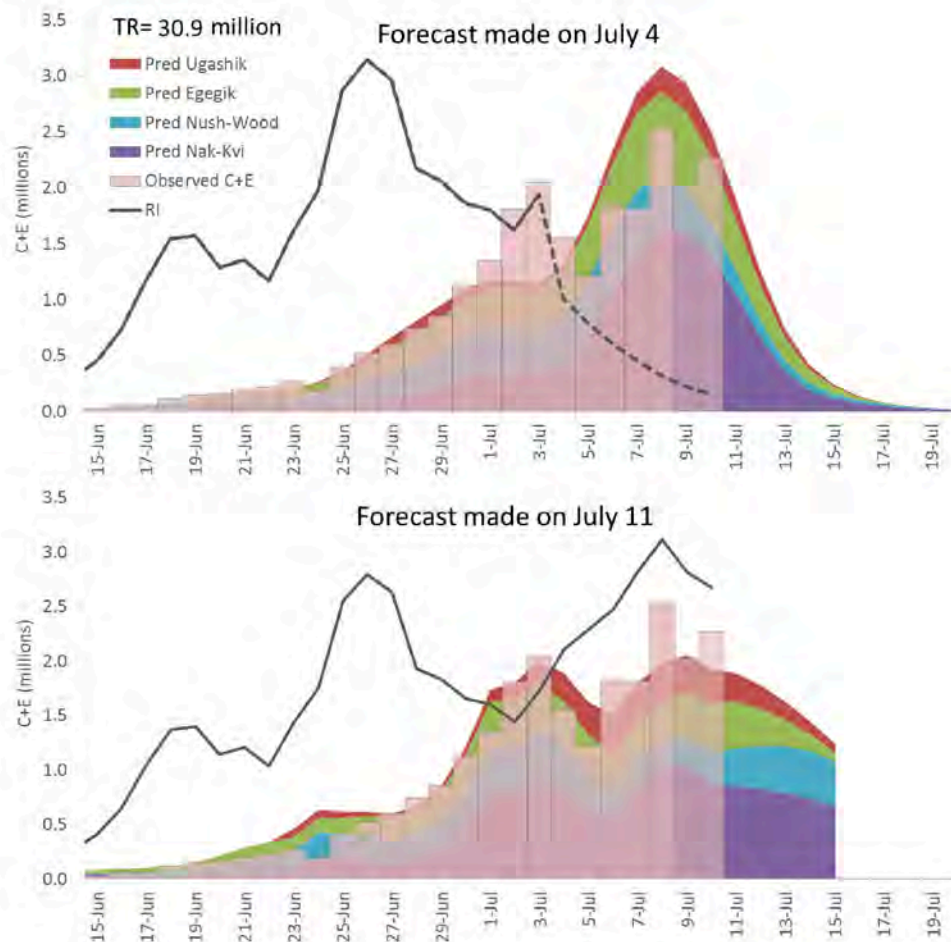


Figure 1. Forecasted run strength for the four major fishing districts added together. The black line reflects the daily Replacement Index (RI; scale not shown); the dashed section in the top graph shows what we projected the RI to be through the remainder of the test fishery, whereas, the observed RI through July 10 is reported in the bottom graph. Uncertainty in how test fishery catches would have continued beyond July 10 precluded a yearend forecast. Bars are observed C+E; July 9-10 represent catch only as escapement for those dates was lagged backwards to the districts.

APPENDIX B

ADF&G'S INSEASON STOCK COMPOSITION ESTIMATES FOR THE PORT MOLLER TEST FISHERY IN 2015

Inseason, each stock composition release contained a bar chart of historical comparisons to past year. To save space, this report reproduces only the final such historical comparison (released July 7 – 8, 2015). This final one captured all prior ones released throughout 2015; no information has been lost.

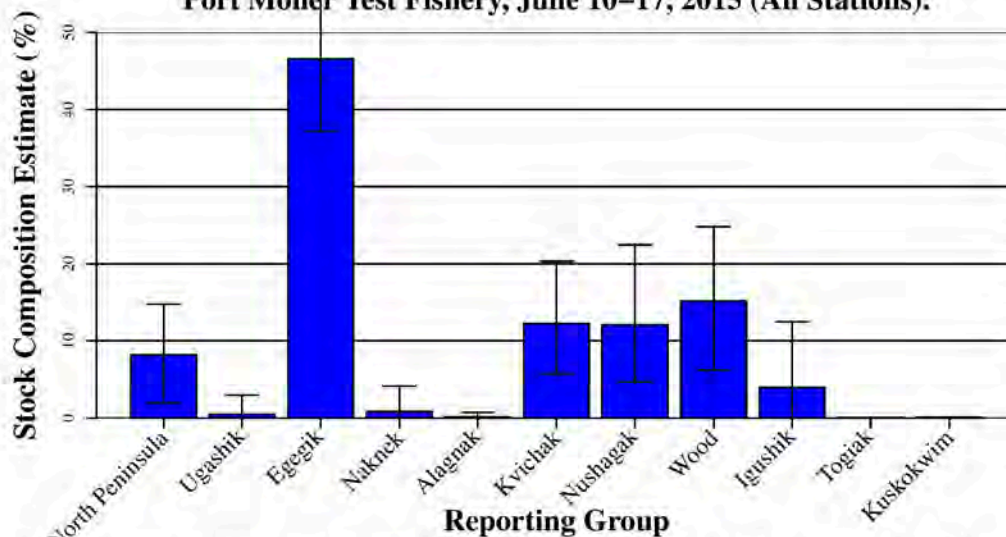
Bristol Bay Sockeye Salmon Fishery

Port Moller Sockeye Salmon Stock Composition Summary June 10–17, 2015 – All Stations

Genetic stock composition estimates for sockeye salmon from the Port Moller Test Fishery for June 10–17, 2015. A total of 329 fish were sampled and 190 were analyzed (187 had adequate data to include in the analysis).

Reporting Group	Stock Composition Estimate	90% Confidence Intervals	
		Lower	Upper
North Peninsula	8.3%	2.0%	14.8%
Ugashik	0.5%	0.0%	3.0%
Egegik	46.6%	37.2%	55.6%
Naknek	0.8%	0.0%	4.2%
Alagnak	0.2%	0.0%	0.7%
Kvichak	12.3%	5.7%	20.3%
Nushagak	12.1%	4.7%	22.4%
Wood	15.2%	6.2%	24.8%
Igushik	4.0%	0.0%	12.5%
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 10–17, 2015 (All Stations).**



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

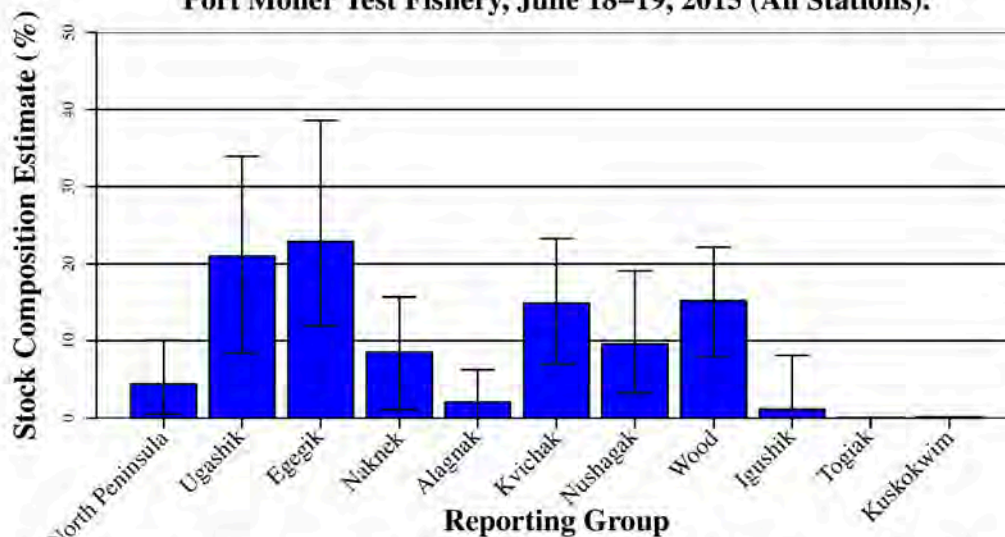
Bristol Bay Sockeye Salmon Fishery

Port Moller Sockeye Salmon Stock Composition Summary June 18–19, 2015 – All Stations

Genetic stock composition estimates for sockeye salmon from the Port Moller Test Fishery for June 18–19, 2015. A total of 207 fish were sampled and 190 were analyzed (189 had adequate data to include in the analysis).

Reporting Group	Stock Composition Estimate	90% Confidence Intervals	
		Lower	Upper
North Peninsula	4.4%	0.5%	10.2%
Ugashik	21.0%	8.4%	33.9%
Egegik	22.9%	12.0%	38.6%
Naknek	8.6%	1.1%	15.7%
Alagnak	2.1%	0.0%	6.3%
Kvichak	14.9%	7.0%	23.3%
Nushagak	9.6%	3.2%	19.1%
Wood	15.2%	7.9%	22.1%
Igushik	1.1%	0.0%	8.1%
Togiak	0.0%	0.0%	0.0%
Kuskokwim	0.2%	0.0%	0.1%

Genetic Stock Composition Estimates for Sockeye Salmon Captured in the Port Moller Test Fishery, June 18–19, 2015 (All Stations).



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

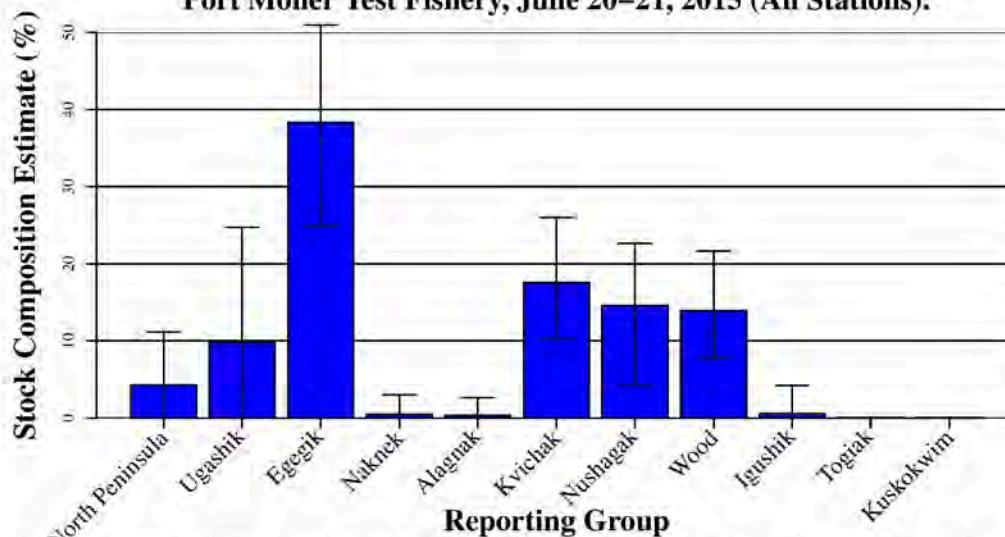
Bristol Bay Sockeye Salmon Fishery

Port Moller Sockeye Salmon Stock Composition Summary June 20–21, 2015 – All Stations

Genetic stock composition estimates for sockeye salmon from the Port Moller Test Fishery for June 20–21, 2015. A total of 229 fish were sampled and 190 were analyzed (189 had adequate data to include in the analysis).

Reporting Group	Stock Composition Estimate	90% Confidence Intervals	
		Lower	Upper
North Peninsula	4.3%	0.0%	11.1%
Ugashik	9.8%	0.0%	24.7%
Egegik	38.3%	24.9%	51.0%
Naknek	0.5%	0.0%	3.0%
Alagnak	0.3%	0.0%	2.7%
Kvichak	17.6%	10.3%	26.0%
Nushagak	14.6%	4.3%	22.6%
Wood	14.0%	7.8%	21.6%
Igushik	0.5%	0.0%	4.2%
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 20–21, 2015 (All Stations).



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

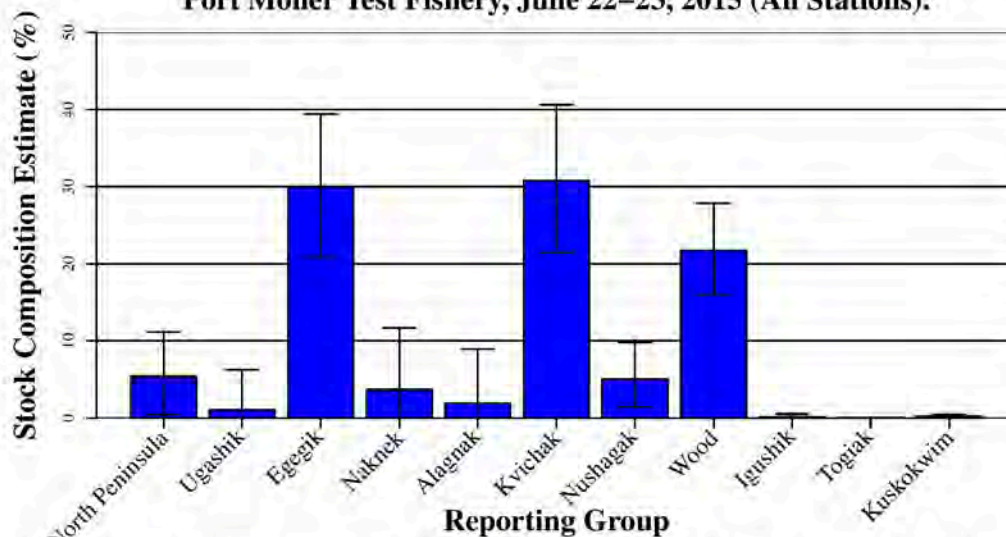
Bristol Bay Sockeye Salmon Fishery

Port Moller Sockeye Salmon Stock Composition Summary June 22–23, 2015 – All Stations

Genetic stock composition estimates for sockeye salmon from the Port Moller Test Fishery for June 22–23, 2015. A total of 296 fish were sampled and 190 were analyzed (186 had adequate data to include in the analysis).

Reporting Group	Stock Composition Estimate	90% Confidence Intervals	
		Lower	Upper
North Peninsula	5.4%	0.4%	11.2%
Ugashik	1.1%	0.0%	6.3%
Egegik	30.0%	20.8%	39.4%
Naknek	3.7%	0.0%	11.7%
Alagnak	1.9%	0.0%	8.9%
Kvichak	30.8%	21.5%	40.7%
Nushagak	5.0%	1.4%	9.9%
Wood	21.8%	16.0%	27.9%
Igushik	0.1%	0.0%	0.5%
Togiak	0.0%	0.0%	0.0%
Kuskokwim	0.2%	0.0%	0.5%

Genetic Stock Composition Estimates for Sockeye Salmon Captured in the Port Moller Test Fishery, June 22–23, 2015 (All Stations).



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

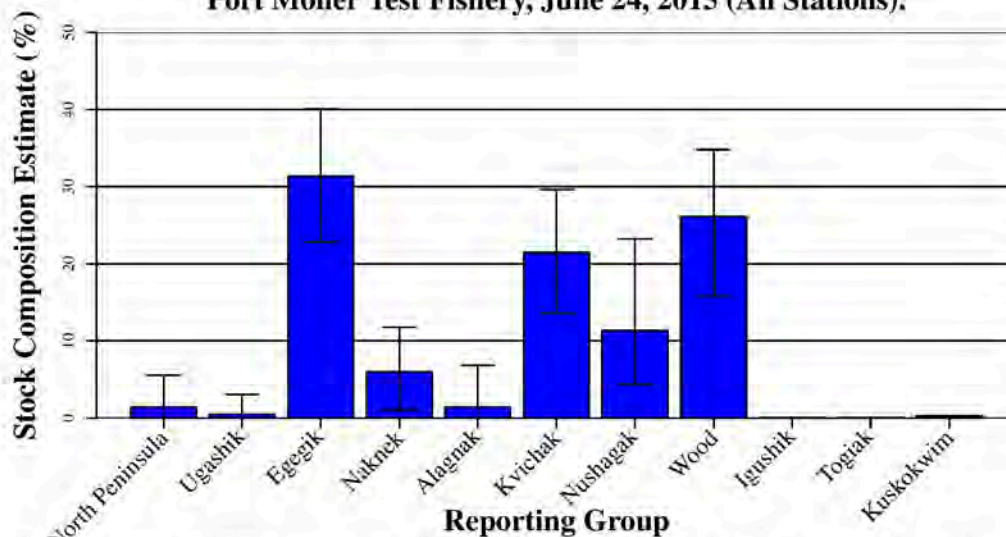
Bristol Bay Sockeye Salmon Fishery

Port Moller Sockeye Salmon Stock Composition Summary June 24, 2015 – All Stations

Genetic stock composition estimates for sockeye salmon from the Port Moller Test Fishery for June 24, 2015. A total of 235 fish were sampled and 190 were analyzed (190 had adequate data to include in the analysis).

Reporting Group	Stock Composition Estimate	90% Confidence Intervals	
		Lower	Upper
North Peninsula	1.4%	0.0%	5.6%
Ugashik	0.5%	0.0%	3.1%
Egegik	31.3%	22.8%	40.1%
Naknek	6.0%	1.0%	11.8%
Alagnak	1.4%	0.0%	6.8%
Kvichak	21.5%	13.6%	29.6%
Nushagak	11.4%	4.4%	23.2%
Wood	26.2%	15.8%	34.8%
Igushik	0.0%	0.0%	0.0%
Togiak	0.0%	0.0%	0.0%
Kuskokwim	0.3%	0.0%	0.3%

Genetic Stock Composition Estimates for Sockeye Salmon Captured in the Port Moller Test Fishery, June 24, 2015 (All Stations).



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

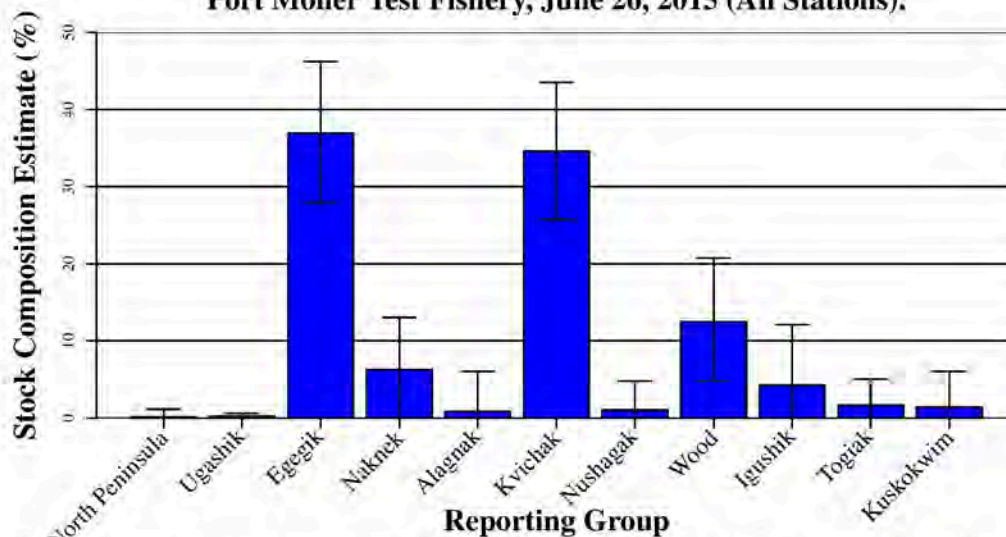
Bristol Bay Sockeye Salmon Fishery

Port Moller Sockeye Salmon Stock Composition Summary June 26, 2015 – All Stations

Genetic stock composition estimates for sockeye salmon from the Port Moller Test Fishery for June 26, 2015. A total of 383 fish were sampled and 190 were analyzed (188 had adequate data to include in the analysis).

Reporting Group	Stock Composition Estimate	90% Confidence Intervals	
		Lower	Upper
North Peninsula	0.2%	0.0%	1.2%
Ugashik	0.2%	0.0%	0.6%
Egegik	37.0%	28.0%	46.2%
Naknek	6.3%	0.0%	13.1%
Alagnak	0.9%	0.0%	6.1%
Kvichak	34.6%	25.7%	43.6%
Nushagak	1.0%	0.0%	4.8%
Wood	12.5%	4.8%	20.7%
Igushik	4.3%	0.0%	12.1%
Togiak	1.7%	0.0%	5.1%
Kuskokwim	1.4%	0.0%	6.1%

Genetic Stock Composition Estimates for Sockeye Salmon Captured in the Port Moller Test Fishery, June 26, 2015 (All Stations).



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

Bristol Bay Sockeye Salmon Fishery

Port Moller Sockeye Salmon Stock Composition Summary June 10–26, 2015, by station

This report summarizes genetic stock composition estimates for sockeye salmon captured to at different stations of the Port Moller Test Fishery through June 26, 2015. We analyzed the fish by station groups to characterize the distribution of stocks across the test fishery transect.

In defining station-specific groups, we balanced the goal of fine-scale temporal resolution of station catches with the goal of comparable temporal periods and the requirement of adequate sample sizes. As a result, we analyzed station-specific catches for the entire test fishery season to date. Samples at Stations 2 and 4 were few so these samples were grouped together to achieve adequate sample sizes.

The table below summarizes the mean stock composition estimates for all groups while the following page visualizes estimates each station group.

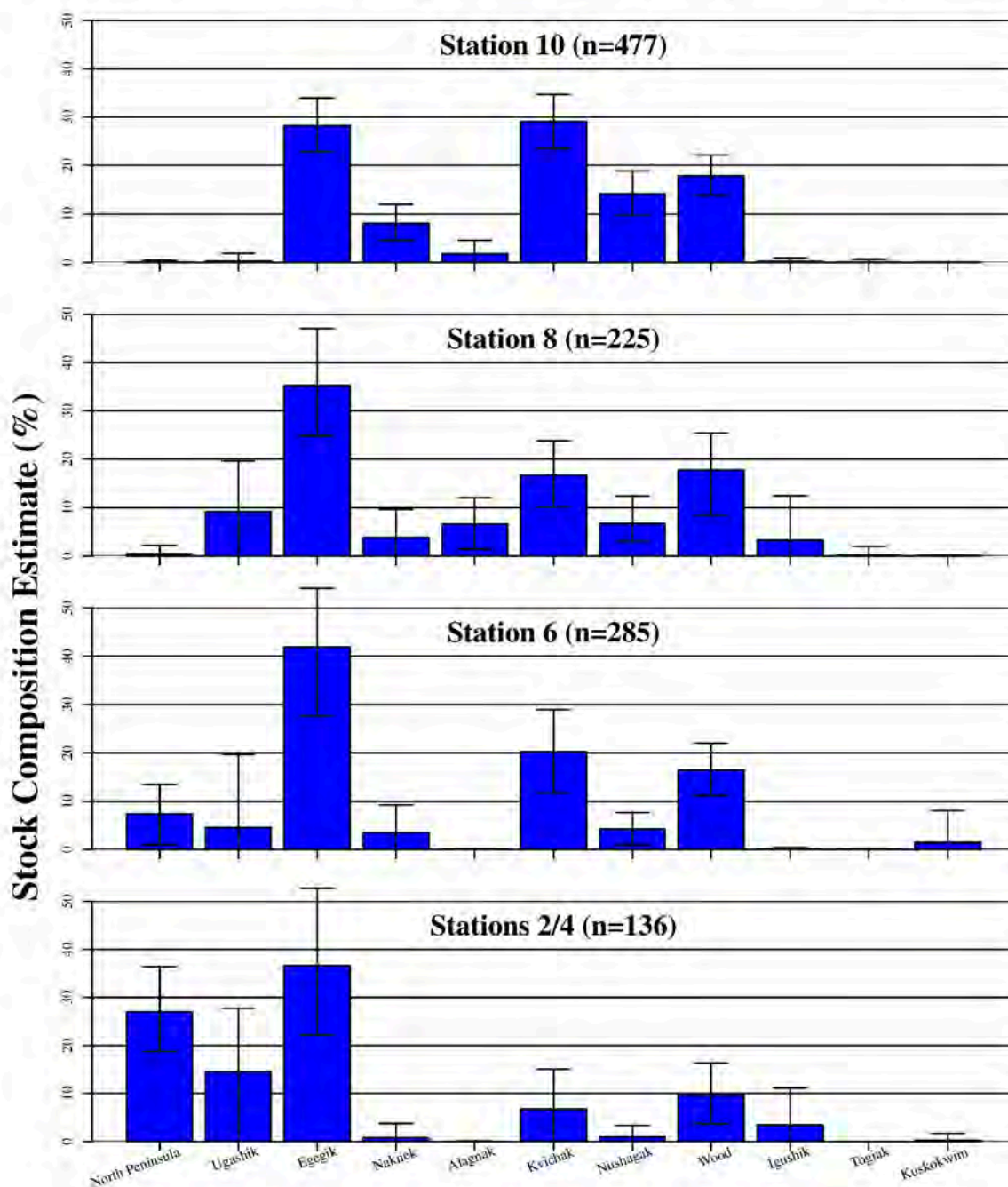
Reporting Group	Stations 2/4 n=136			Station 6 n=285			Station 8 n=225			Station 10 n=447		
	Stock Comp.			Stock Comp.			Stock Comp.			Stock Comp.		
	Est.	Lower	Upper	Est.	Lower	Upper	Est.	Lower	Upper	Est.	Lower	Upper
North Peninsula	27.1%	18.7%	36.4%	7.4%	1.0%	13.4%	0.4%	0.0%	2.2%	0.1%	0.0%	0.4%
Ugashik	14.4%	0.0%	27.8%	4.6%	0.0%	19.6%	9.2%	0.0%	19.6%	0.3%	0.0%	1.9%
Egegik	36.7%	22.2%	52.7%	41.9%	27.6%	54.0%	35.2%	24.9%	47.0%	28.2%	22.8%	33.9%
Naknek	0.8%	0.0%	3.7%	3.5%	0.0%	9.2%	3.8%	0.0%	9.6%	8.1%	4.6%	11.9%
Alagnak	0.0%	0.0%	0.1%	0.1%	0.0%	0.2%	6.5%	1.5%	12.1%	1.8%	0.0%	4.6%
Kvichak	6.7%	0.0%	15.1%	20.2%	11.8%	29.0%	16.7%	10.1%	23.8%	29.1%	23.5%	34.7%
Nushagak	1.0%	0.0%	3.4%	4.2%	1.0%	7.7%	6.7%	3.1%	12.4%	14.2%	9.8%	18.9%
Wood	9.7%	3.7%	16.4%	16.5%	11.1%	22.0%	17.8%	8.4%	25.4%	17.9%	13.8%	22.2%
Igushik	3.4%	0.0%	11.2%	0.1%	0.0%	0.4%	3.3%	0.0%	12.5%	0.2%	0.0%	0.8%
Togiak	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.2%	0.0%	2.0%	0.1%	0.0%	0.6%
Kuskokwim	0.2%	0.0%	1.7%	1.5%	0.0%	8.1%	0.2%	0.0%	0.3%	0.0%	0.0%	0.1%

The genetic analysis was completed by the Alaska Department of Fish and Game, Division of Commercial Fisheries, Gene Conservation Laboratory. These results are in-season estimates and are therefore preliminary in nature. Final quality control will be conducted post-season.

Page 1 of 2

Reported as of: July 1, 2015
3:00 PM

By-Station Stock Composition Estimates: June 10–26, 2015



Page 2 of 2

Reporting Group

Reported as of: July 1, 2015
3:00 PM

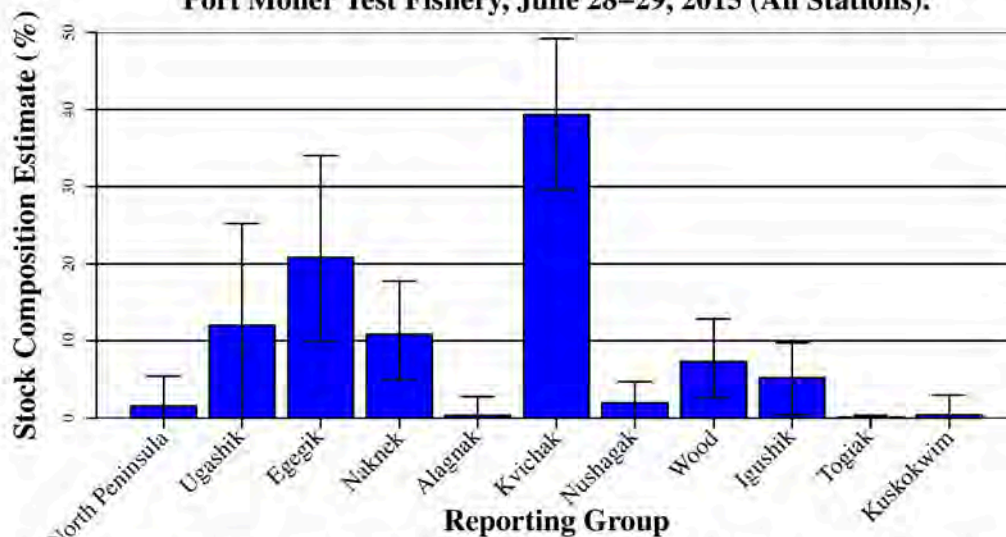
Bristol Bay Sockeye Salmon Fishery

Port Moller Sockeye Salmon Stock Composition Summary June 28–29, 2015 – All Stations

Genetic stock composition estimates for sockeye salmon from the Port Moller Test Fishery for June 28–29, 2015. A total of 279 fish were sampled and 190 were analyzed (189 had adequate data to include in the analysis).

Reporting Group	Stock Composition Estimate	90% Confidence Intervals	
		Lower	Upper
North Peninsula	1.6%	0.0%	5.4%
Ugashik	12.0%	0.0%	25.3%
Egegik	20.8%	9.9%	34.0%
Naknek	10.8%	5.0%	17.8%
Alagnak	0.4%	0.0%	2.8%
Kvichak	39.4%	29.6%	49.2%
Nushagak	2.0%	0.0%	4.8%
Wood	7.3%	2.6%	12.9%
Igushik	5.2%	0.4%	9.8%
Togiak	0.1%	0.0%	0.3%
Kuskokwim	0.4%	0.0%	2.9%

Genetic Stock Composition Estimates for Sockeye Salmon Captured in the Port Moller Test Fishery, June 28–29, 2015 (All Stations).



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

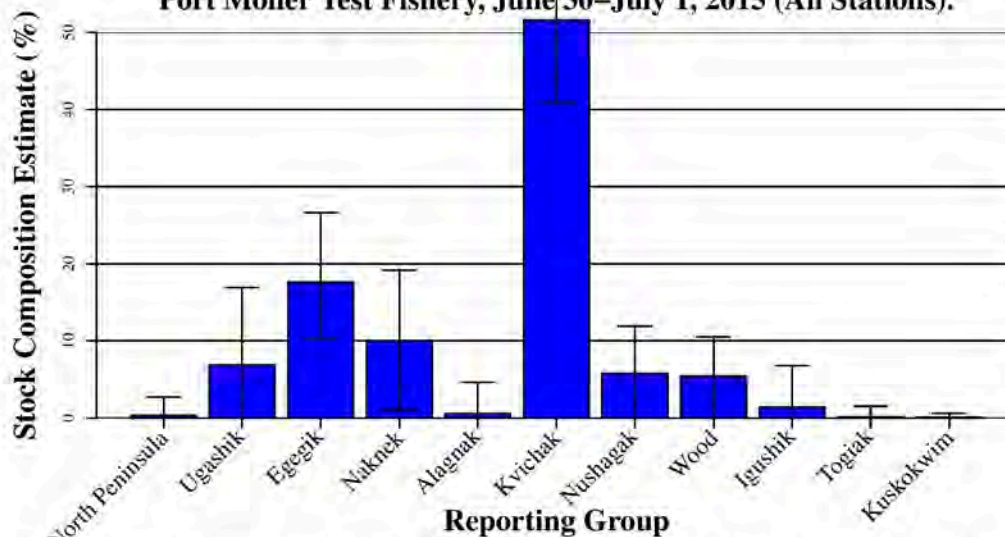
Bristol Bay Sockeye Salmon Fishery

Port Moller Sockeye Salmon Stock Composition Summary June 30–July 1, 2015 – All Stations

Genetic stock composition estimates for sockeye salmon from the Port Moller Test Fishery for June 30 and July 1, 2015. A total of 477 fish were sampled and 190 were analyzed (189 had adequate data to include in the analysis).

Reporting Group	Stock Composition Estimate	90% Confidence Intervals	
		Lower	Upper
North Peninsula	0.4%	0.0%	2.7%
Ugashik	6.9%	0.0%	16.9%
Egegik	17.6%	10.3%	26.7%
Naknek	10.0%	1.1%	19.1%
Alagnak	0.5%	0.0%	4.6%
Kvichak	51.6%	41.0%	62.3%
Nushagak	5.8%	0.0%	11.9%
Wood	5.5%	0.0%	10.5%
Igushik	1.4%	0.0%	6.8%
Togiak	0.2%	0.0%	1.5%
Kuskokwim	0.1%	0.0%	0.6%

**Genetic Stock Composition Estimates for Sockeye Salmon Captured in the
Port Moller Test Fishery, June 30–July 1, 2015 (All Stations).**



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

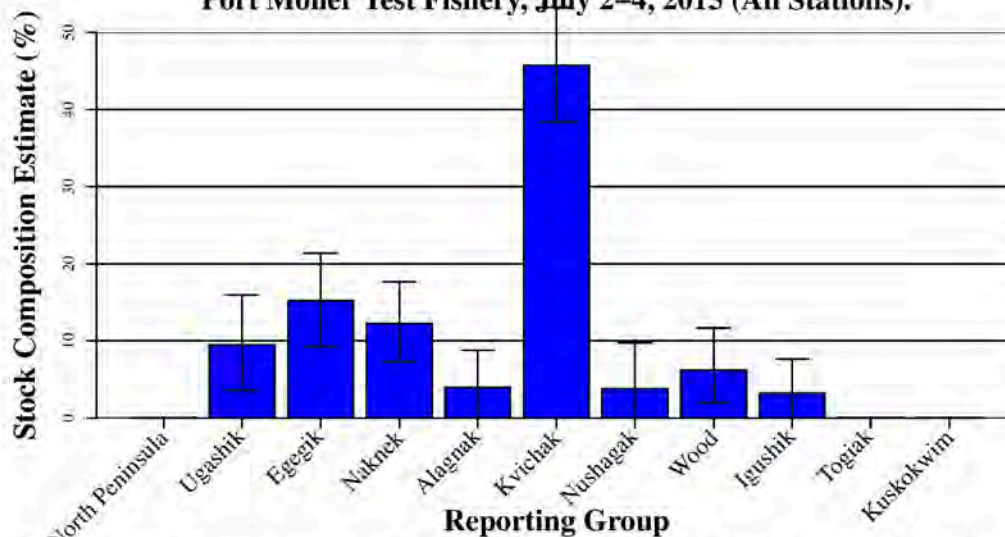
Bristol Bay Sockeye Salmon Fishery

Port Moller Sockeye Salmon Stock Composition Summary July 2–4, 2015 – All Stations

Genetic stock composition estimates for sockeye salmon from the Port Moller Test Fishery for July 2–4, 2015. A total of 389 fish were sampled and 379 were analyzed (335 had adequate data to include in the analysis).

Reporting Group	Stock Composition Estimate	90% Confidence Intervals	
		Lower	Upper
North Peninsula	0.0%	0.0%	0.0%
Ugashik	9.5%	3.5%	16.0%
Egegik	15.2%	9.2%	21.4%
Naknek	12.3%	7.3%	17.7%
Alagnak	4.0%	0.0%	8.8%
Kvichak	45.8%	38.4%	53.3%
Nushagak	3.8%	0.0%	9.7%
Wood	6.2%	2.0%	11.7%
Igushik	3.2%	0.0%	7.7%
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 2–4, 2015 (All Stations).**



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

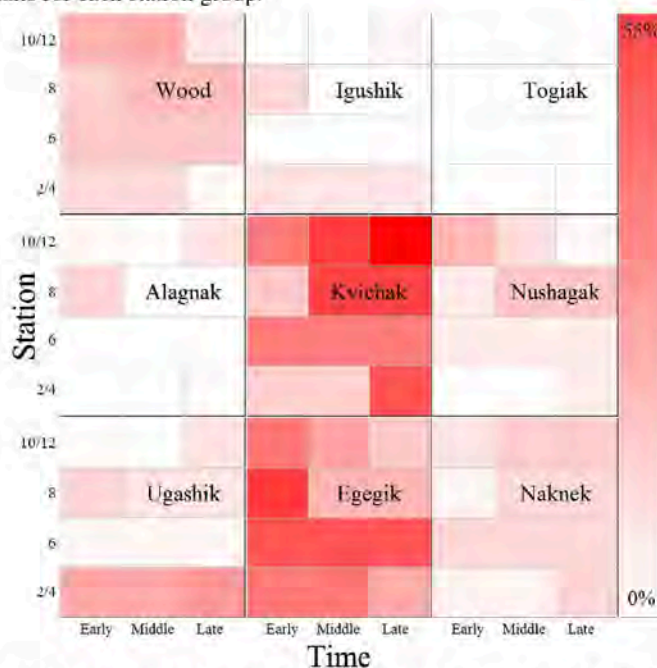
Bristol Bay Sockeye Salmon Fishery

Port Moller Sockeye Salmon Stock Composition Summary June 10–July 4, 2015 – Stations 2/4, 6, 8, and 10/12

This report summarizes genetic stock compositions for sockeye salmon captured at different stations of the Port Moller Test Fishery in 2015. We analyzed samples by stations to characterize the distribution of stocks across the test fishery transect.

When defining station-specific groups, 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 station-specific catches for three time periods. Catches and corresponding samples at stations 2 and 12 were few, so these fish were grouped with fish from adjacent stations (2 grouped with 4, 12 grouped with 10). Similarly, fewer fish were caught at stations 2–8 than 10 so we provide fewer sets of estimates for these stations: two sets for Station 2/4 (early/middle and late), one set for Station 6, two sets for Station 8 (early and middle/late) and three sets for Station 10/12 (early, middle and late).

The figure below summarizes the mean stock composition estimates for all 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 2015. 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 55% and white equal to 0%. See following pages for details.

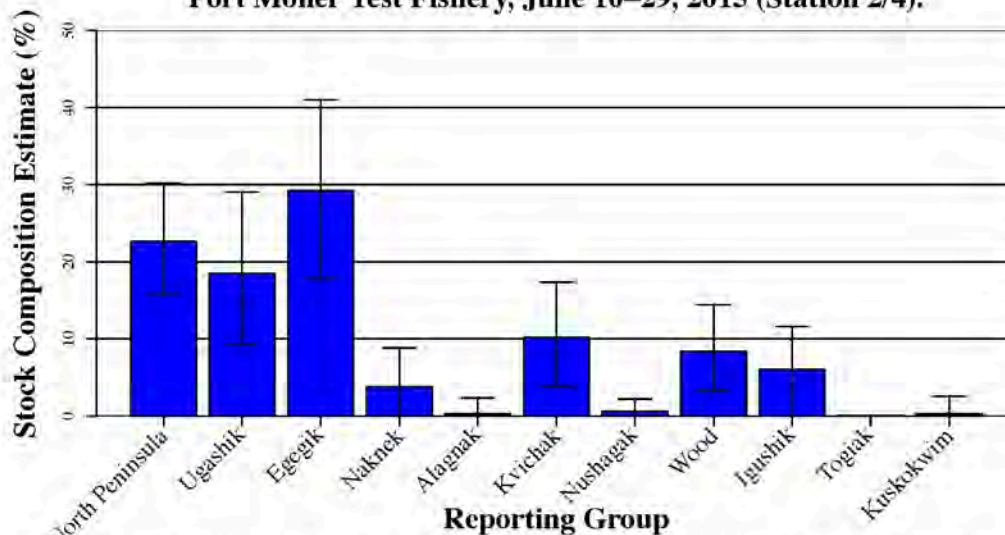
Bristol Bay Sockeye Salmon Fishery

Port Moller Sockeye Salmon Stock Composition Summary June 10–29, 2015 – Station 2/4

Genetic stock composition estimates for sockeye salmon from Station 2/4 of the Port Moller Test Fishery for June 10–29, 2015. A total of 277 fish were sampled and 195 were analyzed (191 had adequate data to include in the analysis).

Reporting Group	Stock Composition Estimate	90% Confidence Intervals	
		Lower	Upper
North Peninsula	22.6%	15.8%	30.2%
Ugashik	18.5%	9.3%	29.1%
Egegik	29.2%	17.8%	41.0%
Naknek	3.8%	0.0%	8.8%
Alagnak	0.3%	0.0%	2.4%
Kvichak	10.2%	3.8%	17.4%
Nushagak	0.6%	0.0%	2.2%
Wood	8.4%	3.4%	14.5%
Igushik	6.1%	0.0%	11.6%
Togiak	0.0%	0.0%	0.0%
Kuskokwim	0.3%	0.0%	2.6%

Genetic Stock Composition Estimates for Sockeye Salmon Captured in the Port Moller Test Fishery, June 10–29, 2015 (Station 2/4).



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

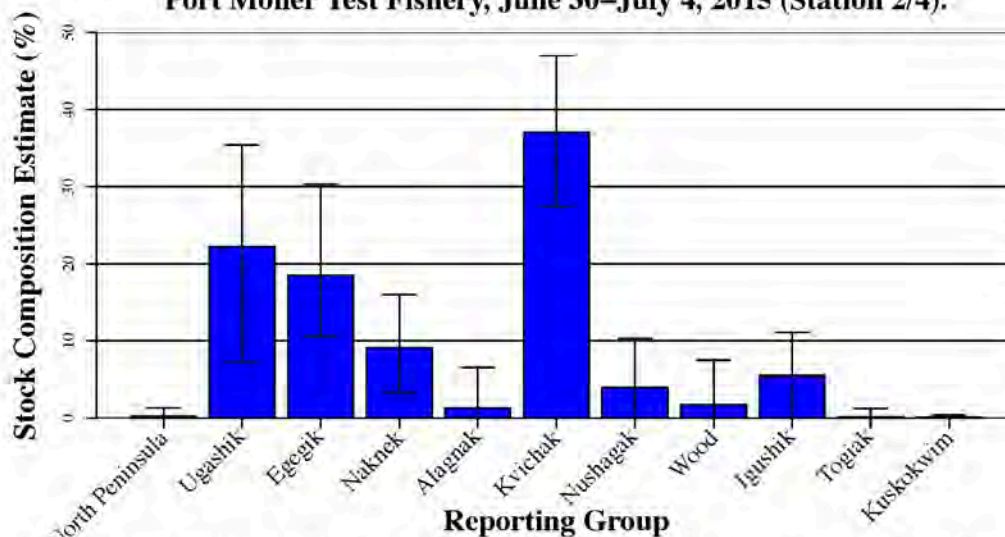
Bristol Bay Sockeye Salmon Fishery

Port Moller Sockeye Salmon Stock Composition Summary June 30–July 4, 2015 – Station 2/4

Genetic stock composition estimates for sockeye salmon from Station 2/4 of the Port Moller Test Fishery for June 30–July 4, 2015. A total of 307 fish were sampled and 177 were analyzed (161 had adequate data to include in the analysis).

Reporting Group	Stock Composition Estimate	90% Confidence Intervals	
		Lower	Upper
North Peninsula	0.2%	0.0%	1.3%
Ugashik	22.3%	7.2%	35.4%
Egegik	18.5%	10.6%	30.3%
Naknek	9.1%	3.3%	16.1%
Alagnak	1.3%	0.0%	6.6%
Kvichak	37.0%	27.4%	47.0%
Nushagak	4.0%	0.0%	10.3%
Wood	1.7%	0.0%	7.5%
Igushik	5.5%	0.0%	11.1%
Togiak	0.2%	0.0%	1.3%
Kuskokwim	0.1%	0.0%	0.4%

Genetic Stock Composition Estimates for Sockeye Salmon Captured in the Port Moller Test Fishery, June 30–July 4, 2015 (Station 2/4).



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

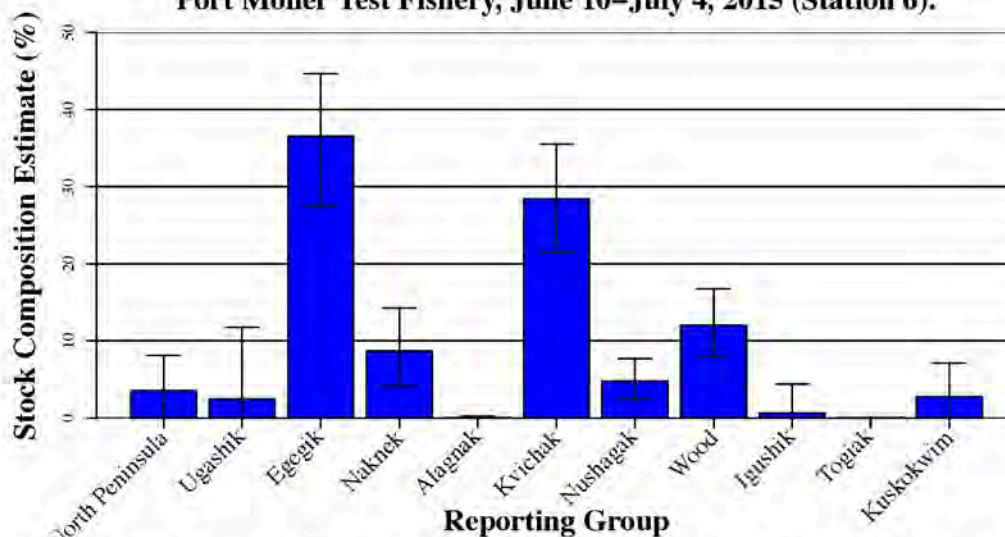
Bristol Bay Sockeye Salmon Fishery

Port Moller Sockeye Salmon Stock Composition Summary June 10–July 4, 2015 – Station 6

Genetic stock composition estimates for sockeye salmon from Station 6 of the Port Moller Test Fishery for June 10–July 4, 2015. A total of 499 fish were sampled and 319 were analyzed (318 had adequate data to include in the analysis).

Reporting Group	Stock Composition Estimate	90% Confidence Intervals	
		Lower	Upper
North Peninsula	3.5%	0.0%	8.1%
Ugashik	2.4%	0.0%	11.8%
Egegik	36.5%	27.4%	44.7%
Naknek	8.7%	4.1%	14.3%
Alagnak	0.1%	0.0%	0.3%
Kvichak	28.4%	21.4%	35.5%
Nushagak	4.8%	2.4%	7.7%
Wood	12.0%	7.9%	16.7%
Igushik	0.7%	0.0%	4.4%
Togiak	0.0%	0.0%	0.0%
Kuskokwim	2.8%	0.0%	7.1%

Genetic Stock Composition Estimates for Sockeye Salmon Captured in the Port Moller Test Fishery, June 10–July 4, 2015 (Station 6).



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

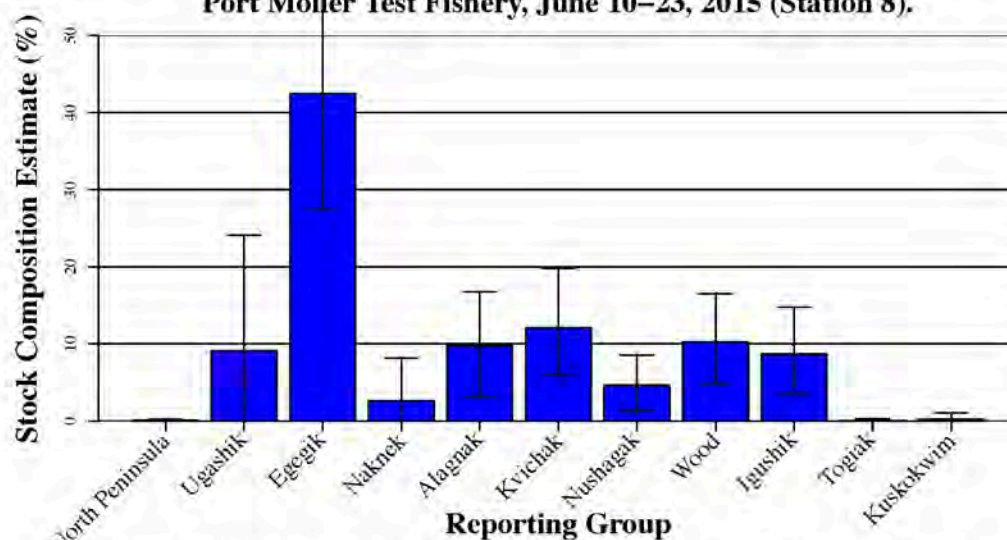
Bristol Bay Sockeye Salmon Fishery

Port Moller Sockeye Salmon Stock Composition Summary June 10–23, 2015 – Station 8

Genetic stock composition estimates for sockeye salmon from Station 8 of the Port Moller Test Fishery for June 10–23, 2015. A total of 248 fish were sampled and 174 were analyzed (173 had adequate data to include in the analysis).

Reporting Group	Stock Composition Estimate	90% Confidence Intervals	
		Lower	Upper
North Peninsula	0.1%	0.0%	0.3%
Ugashik	9.1%	0.0%	24.1%
Egegik	42.5%	27.4%	57.0%
Naknek	2.6%	0.0%	8.2%
Alagnak	9.7%	3.1%	16.8%
Kvichak	12.1%	6.0%	19.8%
Nushagak	4.7%	1.3%	8.6%
Wood	10.2%	4.8%	16.5%
Igushik	8.7%	3.5%	14.8%
Togiak	0.1%	0.0%	0.3%
Kuskokwim	0.2%	0.0%	1.1%

**Genetic Stock Composition Estimates for Sockeye Salmon Captured in the
Port Moller Test Fishery, June 10–23, 2015 (Station 8).**



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

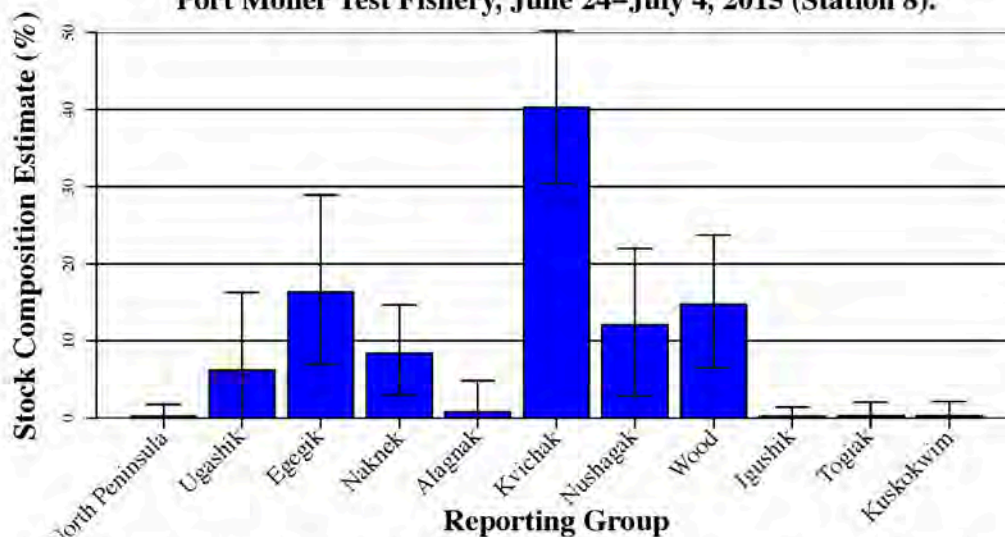
Bristol Bay Sockeye Salmon Fishery

Port Moller Sockeye Salmon Stock Composition Summary June 24–July 4, 2015 – Station 8

Genetic stock composition estimates for sockeye salmon from Station 8 of the Port Moller Test Fishery for June 24–July 4, 2015. A total of 332 fish were sampled and 204 were analyzed (195 had adequate data to include in the analysis).

Reporting Group	Stock Composition Estimate	90% Confidence Intervals	
		Lower	Upper
North Peninsula	0.2%	0.0%	1.8%
Ugashik	6.2%	0.0%	16.3%
Egegik	16.3%	7.0%	28.9%
Naknek	8.4%	3.0%	14.7%
Alagnak	0.8%	0.0%	4.8%
Kvichak	40.3%	30.4%	50.2%
Nushagak	12.1%	2.9%	22.0%
Wood	14.7%	6.5%	23.7%
Igushik	0.3%	0.0%	1.4%
Togiak	0.3%	0.0%	2.1%
Kuskokwim	0.3%	0.0%	2.1%

Genetic Stock Composition Estimates for Sockeye Salmon Captured in the Port Moller Test Fishery, June 24–July 4, 2015 (Station 8).



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

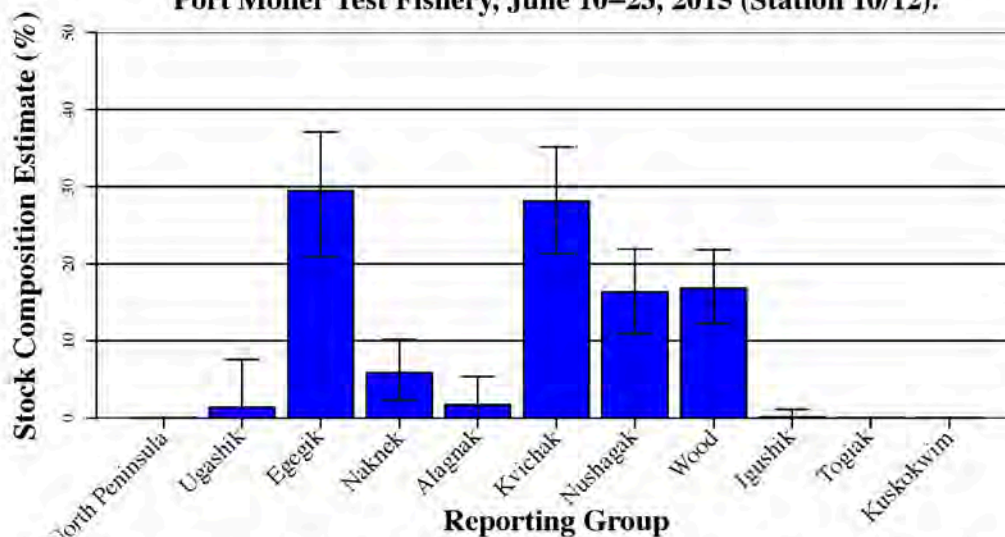
Bristol Bay Sockeye Salmon Fishery

Port Moller Sockeye Salmon Stock Composition Summary June 10–23, 2015 – Station 10/12

Genetic stock composition estimates for sockeye salmon from Station 10/12 of the Port Moller Test Fishery for June 10–23, 2015. A total of 473 fish were sampled and 321 were analyzed (316 had adequate data to include in the analysis).

Reporting Group	Stock Composition Estimate	90% Confidence Intervals	
		Lower	Upper
North Peninsula	0.0%	0.0%	0.0%
Ugashik	1.4%	0.0%	7.6%
Egegik	29.4%	20.9%	37.1%
Naknek	5.9%	2.3%	10.2%
Alagnak	1.7%	0.0%	5.4%
Kvichak	28.1%	21.3%	35.2%
Nushagak	16.4%	10.9%	21.9%
Wood	16.8%	12.3%	21.8%
Igushik	0.2%	0.0%	1.1%
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 10–23, 2015 (Station 10/12).



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

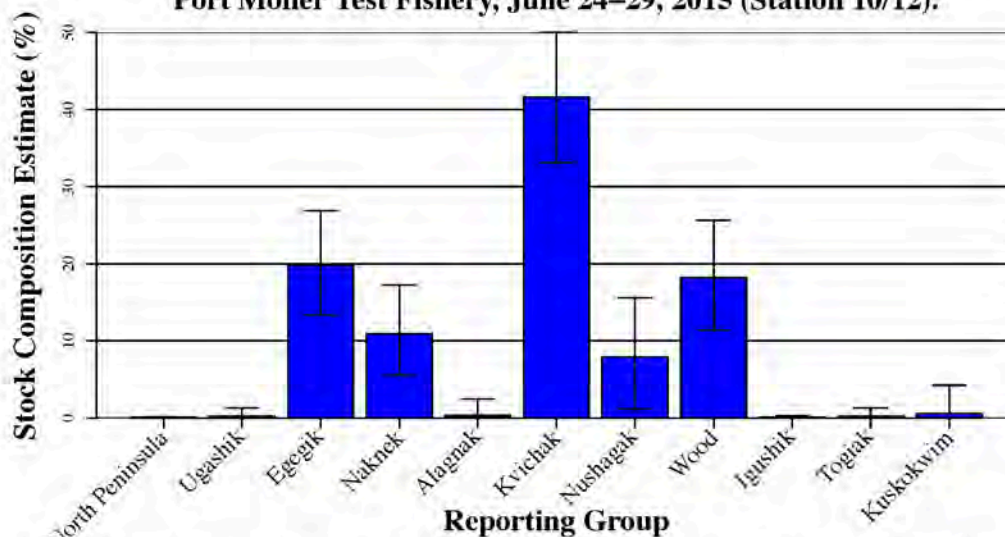
Bristol Bay Sockeye Salmon Fishery

Port Moller Sockeye Salmon Stock Composition Summary June 24–29, 2015 – Station 10/12

Genetic stock composition estimates for sockeye salmon from Station 10/12 of the Port Moller Test Fishery for June 24–29, 2015. A total of 365 fish were sampled and 239 were analyzed (239 had adequate data to include in the analysis).

Reporting Group	Stock Composition Estimate	90% Confidence Intervals	
		Lower	Upper
North Peninsula	0.1%	0.0%	0.1%
Ugashik	0.2%	0.0%	1.3%
Egegik	19.8%	13.4%	26.9%
Naknek	11.0%	5.6%	17.2%
Alagnak	0.3%	0.0%	2.4%
Kvichak	41.7%	33.1%	50.0%
Nushagak	7.9%	1.2%	15.6%
Wood	18.2%	11.4%	25.6%
Igushik	0.1%	0.0%	0.3%
Togiak	0.2%	0.0%	1.3%
Kuskokwim	0.5%	0.0%	4.3%

**Genetic Stock Composition Estimates for Sockeye Salmon Captured in the
Port Moller Test Fishery, June 24–29, 2015 (Station 10/12).**



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

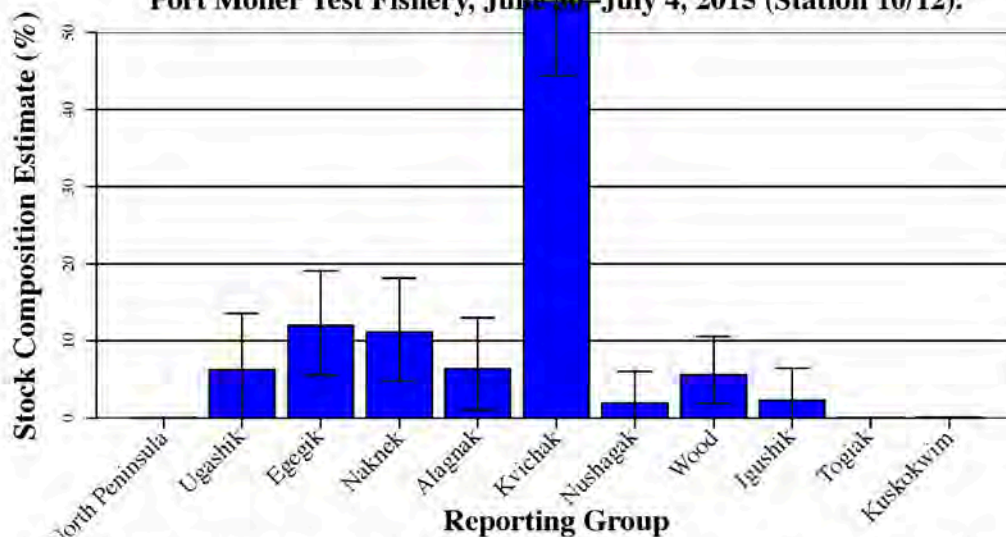
Bristol Bay Sockeye Salmon Fishery

Port Moller Sockeye Salmon Stock Composition Summary June 30–July 4, 2015 – Station 10/12

Genetic stock composition estimates for sockeye salmon from Station 10/12 of the Port Moller Test Fishery for June 30–July 4, 2015. A total of 323 fish were sampled and 270 were analyzed (249 had adequate data to include in the analysis).

Reporting Group	Stock Composition Estimate	90% Confidence Intervals	
		Lower	Upper
North Peninsula	0.1%	0.0%	0.0%
Ugashik	6.3%	0.0%	13.6%
Egegik	12.0%	5.5%	19.1%
Naknek	11.2%	4.8%	18.2%
Alagnak	6.4%	1.1%	13.0%
Kvichak	54.0%	44.4%	63.7%
Nushagak	2.0%	0.0%	6.1%
Wood	5.6%	1.9%	10.6%
Igushik	2.3%	0.0%	6.5%
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 30–July 4, 2015 (Station 10/12).



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

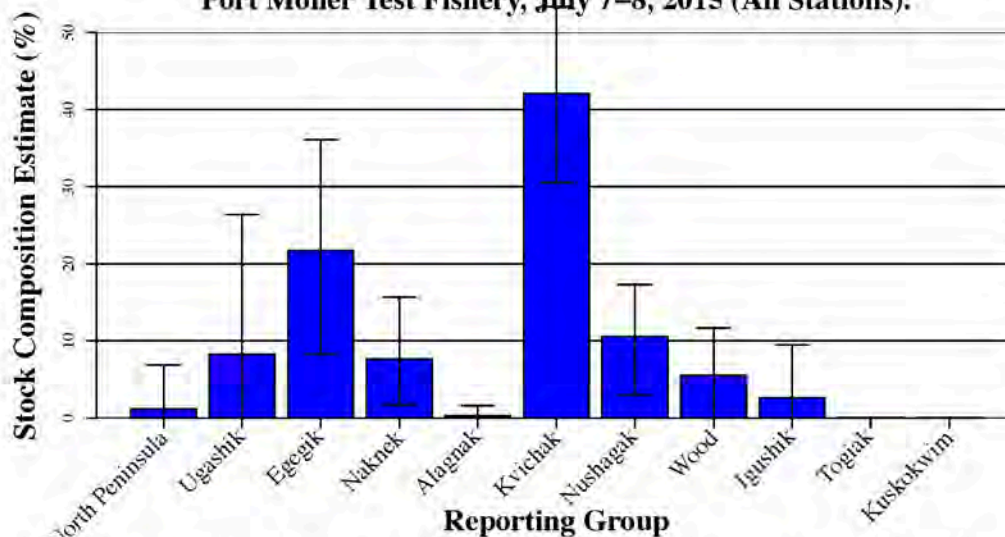
Bristol Bay Sockeye Salmon Fishery

Port Moller Sockeye Salmon Stock Composition Summary July 7–8, 2015 – All Stations

Genetic stock composition estimates for sockeye salmon from the Port Moller Test Fishery for July 7–8, 2015. A total of 722 fish were sampled and 190 were analyzed (186 had adequate data to include in the analysis).

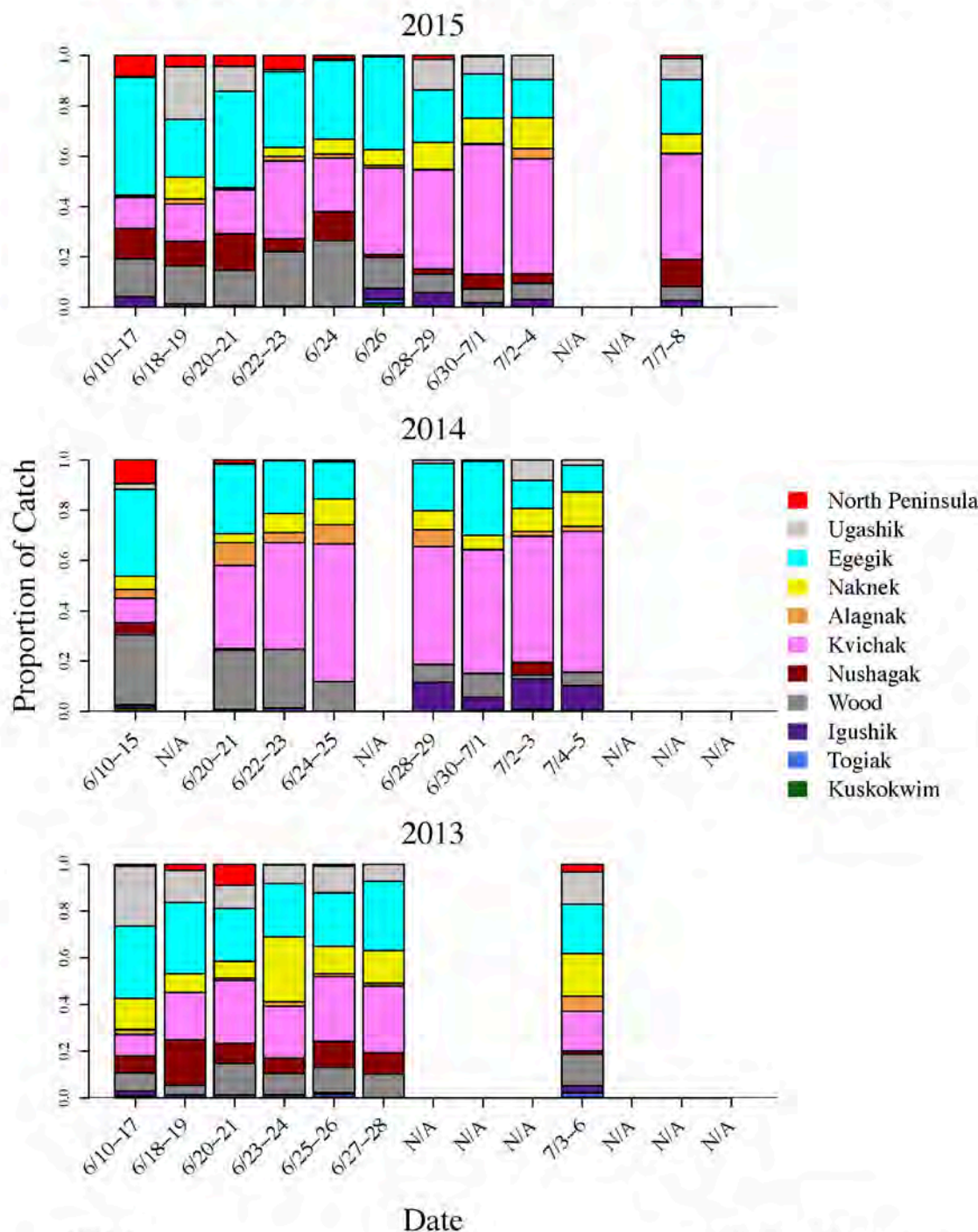
Reporting Group	Stock Composition Estimate	90% Confidence Intervals	
		Lower	Upper
North Peninsula	1.2%	0.0%	6.9%
Ugashik	8.3%	0.0%	26.4%
Egegik	21.7%	8.3%	36.1%
Naknek	7.6%	1.8%	15.7%
Alagnak	0.3%	0.0%	1.6%
Kvichak	42.1%	30.5%	53.4%
Nushagak	10.6%	3.0%	17.3%
Wood	5.5%	0.0%	11.7%
Igushik	2.6%	0.0%	9.5%
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 7–8, 2015 (All Stations).

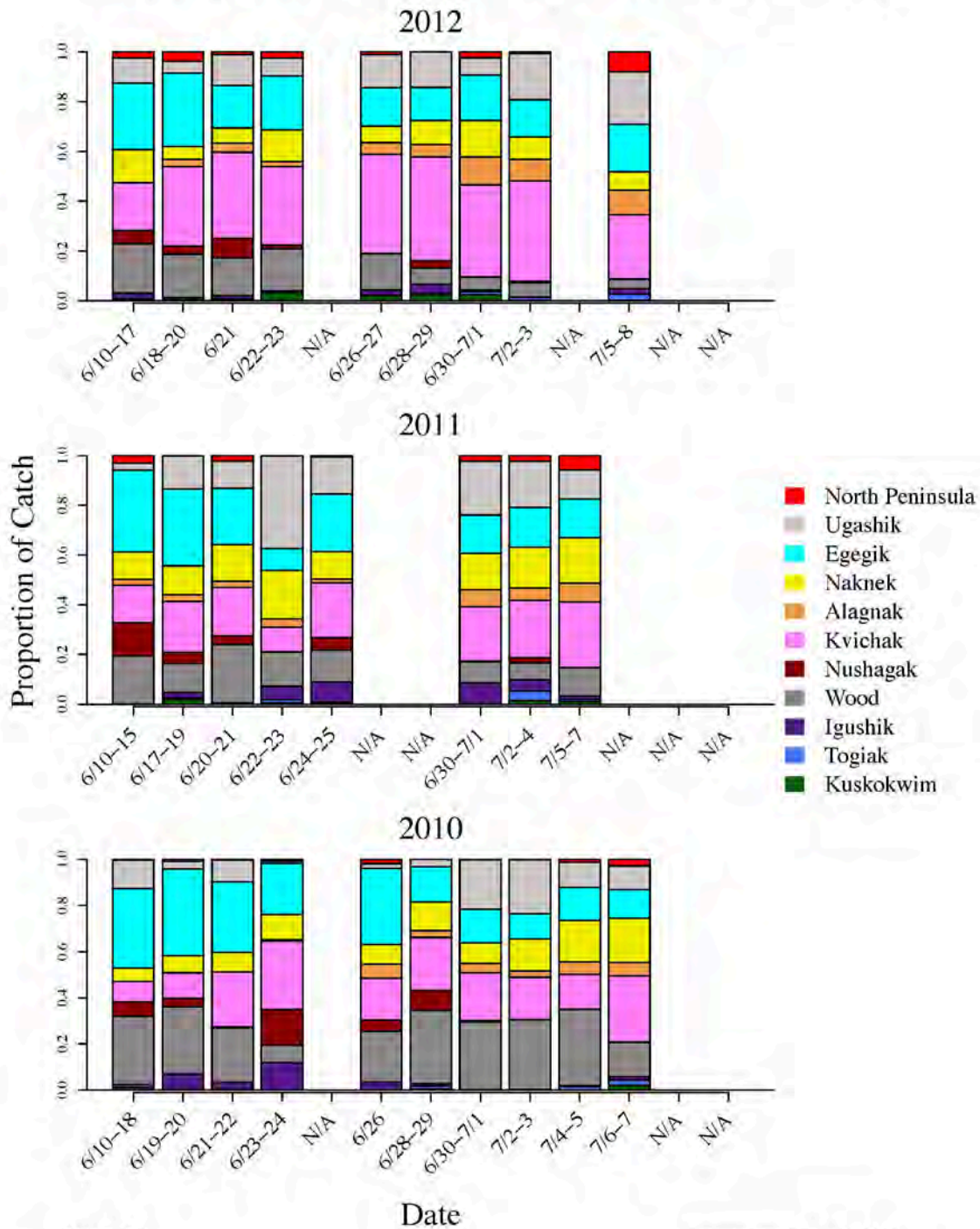


The genetic analysis was completed by the Alaska Department of Fish and Game, Division of Commercial Fisheries, Gene Conservation Laboratory.

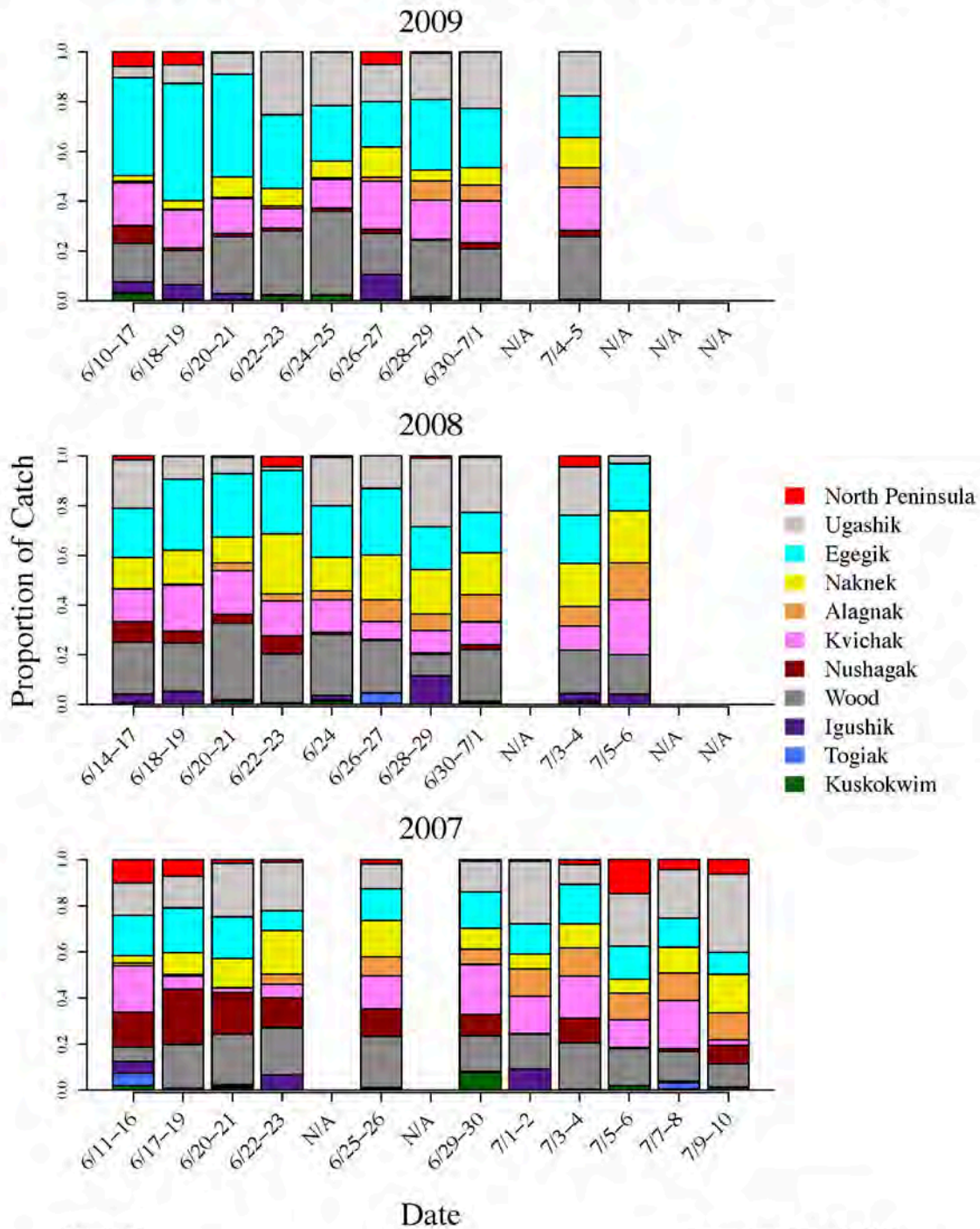
Historical Comparison of Stock Composition Estimates



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 2015

Only the final inseason age composition estimate (July 17, 2015) is reproduced here. This final one contains all prior estimates released throughout 2015; no information has been lost.

Bristol Bay Salmon Fishery - Age Composition Summary

(Preliminary age composition weighted by daily index. Daily index can be harvest, escapement or test fish indices)

Period	Start	End	Sample	Index	Age Composition (Percent)							
					11	21	12	22	03	13	23	14
Sockeye Salmon												
Port Moller												
Port Moller Test Fishery												
1	06/10/2015	06/15/2015	91	27	0.0	0.0	26.4	34.1	0.0	36.3	3.3	0.0
2	06/16/2015	06/17/2015	89	42	0.0	0.0	16.9	33.7	0.0	46.1	3.4	0.0
3	06/18/2015	06/19/2015	170	75	0.0	0.0	25.9	32.4	0.0	38.8	2.9	0.0
4	06/20/2015	06/21/2015	201	52	0.0	0.0	17.9	43.8	0.0	32.3	6.0	0.0
5	06/22/2015	06/23/2015	272	61	0.0	0.4	22.4	35.3	0.0	37.5	4.0	0.4
6	06/24/2015	06/24/2015	212	49	0.0	0.0	15.6	32.1	0.0	44.8	7.5	0.0
7	06/26/2015	06/26/2015	347	82	0.0	0.0	16.7	41.2	0.0	35.4	6.3	0.3
8	06/28/2015	06/29/2015	260	81	0.0	0.0	11.5	46.2	0.0	34.6	7.3	0.4
9	06/30/2015	07/01/2015	423	99	0.0	0.0	13.5	45.4	0.0	30.7	9.9	0.5
10	07/02/2015	07/03/2015	251	72	0.0	0.0	13.5	51.8	0.0	27.9	6.8	0.0
11	07/04/2015	07/04/2015	103	55	0.0	0.0	7.8	29.1	0.0	55.3	6.8	1.0
12	07/07/2015	07/08/2015	670	156	0.0	0.0	10.6	44.3	0.0	36.3	8.5	0.1
14	07/09/2015	07/10/2015	432	138	0.0	0.0	14.4	41.0	0.0	38.4	6.3	0.0
Port Moller Test Fishery Total			3,521	989	0.0	0.0	15.3	40.7	0.0	37.2	6.6	0.2
Forecast							25.2	31.3	0.0	34.0	9.3	0.0
Port Moller Total			3,521	989	0.0	0.0	15.3	40.7	0.0	37.2	6.6	0.2
Ugashik District												
Ugashik District Harvest												
1	06/10/2015	06/27/2015	339	121,780	0.0	0.0	9.4	41.6	0.0	31.0	18.0	0.0
2	06/28/2015	06/30/2015	386	271,053	0.0	0.5	21.2	43.0	0.0	22.5	12.2	0.0
3	07/01/2015	07/05/2015	620	725,448	0.0	0.2	15.3	36.1	0.0	32.6	15.6	0.2
4	07/06/2015	07/08/2015	389	950,982	0.0	0.0	11.1	41.4	0.0	29.8	17.5	0.0
5	07/09/2015	07/10/2015	426	784,367	0.0	0.2	20.7	40.6	0.0	27.0	11.5	0.0
6	07/11/2015	07/12/2015	673	417,029	0.0	0.1	19.6	40.6	0.0	28.4	11.3	0.0
7	07/13/2015	07/14/2015	408	617,336	0.0	0.0	16.7	38.5	0.0	31.9	13.0	0.0
8	07/15/2015	07/16/2015	208	489,648	0.0	0.0	19.2	30.3	0.0	39.4	11.1	0.0
Ugashik District Harvest Total			3,449	4,377,643	0.0	0.1	16.6	38.8	0.0	30.6	13.9	0.0
Forecast							55.5	14.0	0.0	26.3	4.2	0.0
Ugashik River Escapement												
1	06/26/2015	07/10/2015	586	585,930	3.8	3.6	73.7	14.8	0.0	3.9	0.2	0.0
Ugashik River Escapement Total			586	585,930	3.8	3.6	73.7	14.8	0.0	3.9	0.2	0.0
Forecast							55.5	14.0	0.0	26.3	4.2	0.0
Ugashik District Total			4,035	4,963,573	0.4	0.5	23.3	35.9	0.0	27.4	12.2	0.0

Period	Start	End	Sample	Index	Age Composition (Percent)							
					11	21	12	22	03	13	23	14
Egegik District												
Egegik District Harvest												
1	06/02/2015	06/19/2015	526	145,518	0.2	1.1	13.1	74.1	0.0	6.5	4.8	0.0
2	06/20/2015	06/21/2015	415	60,960	0.0	3.1	8.4	75.2	0.0	8.9	4.1	0.0
3	06/22/2015	06/24/2015	590	135,783	0.0	0.8	5.1	83.2	0.0	7.1	3.7	0.0
4	06/25/2015	06/26/2015	360	193,338	0.0	0.6	6.1	73.9	0.0	11.7	7.8	0.0
5	06/27/2015	06/30/2015	415	904,291	0.0	1.0	5.1	67.2	0.0	15.4	10.8	0.0
6	07/01/2015	07/05/2015	571	1,631,335	0.0	0.9	6.5	63.0	0.0	21.4	8.1	0.0
7	07/06/2015	07/08/2015	325	903,477	0.0	0.0	9.8	65.2	0.0	18.5	6.5	0.0
8	07/09/2015	07/10/2015	402	1,086,331	0.0	0.2	4.0	63.4	0.0	23.4	8.5	0.2
9	07/11/2015	07/12/2015	214	715,480	0.0	0.0	3.3	75.7	0.0	11.7	8.9	0.0
10	07/13/2015	07/15/2015	428	944,089	0.0	2.6	9.8	71.3	0.0	12.9	3.0	0.2
Egegik District Harvest Total			4,246	6,720,602	0.0	0.8	6.6	67.5	0.0	17.3	7.5	0.1
<i>Forecast</i>							<i>21.0</i>	<i>40.9</i>	<i>0.0</i>	<i>12.9</i>	<i>25.1</i>	<i>0.0</i>
Egegik River Escapement												
1	06/15/2015	06/28/2015	536	386,670	1.1	22.9	7.5	65.9	0.0	0.6	1.1	0.0
2	06/29/2015	07/04/2015	312	434,466	2.6	24.7	3.2	65.7	0.0	0.6	1.0	0.0
3	07/05/2015	07/10/2015	360	347,040	1.1	28.3	1.4	65.8	0.0	0.8	0.8	0.0
Egegik River Escapement Total			1,208	1,168,176	1.7	25.2	4.1	65.8	0.0	0.7	1.0	0.0
<i>Forecast</i>							<i>21.0</i>	<i>40.9</i>	<i>0.0</i>	<i>12.9</i>	<i>25.1</i>	<i>0.0</i>
Egegik District Total			5,454	7,888,778	0.2	4.4	6.2	67.3	0.0	14.8	6.5	0.1
Naknek-Kvichak District												
Naknek-Kvichak District Harvest												
1	06/10/2015	06/29/2015	429	186,774	0.2	0.2	11.0	45.5	0.0	34.3	8.4	0.0
4	06/30/2015	07/02/2015	406	821,337	0.2	0.0	8.4	51.7	0.0	30.0	9.4	0.2
5	07/03/2015	07/04/2015	435	673,597	0.0	0.2	7.4	48.3	0.0	36.8	7.1	0.2
6	07/05/2015	07/08/2015	406	1,254,612	0.0	0.2	17.7	53.7	0.0	24.6	3.7	0.0
7	07/09/2015	07/10/2015	369	1,747,756	0.0	0.0	10.3	53.7	0.0	30.1	6.0	0.0
8	07/11/2015	07/12/2015	425	2,473,731	0.0	0.0	15.5	43.1	0.0	32.5	8.9	0.0
9	07/13/2015	07/14/2015	415	2,100,587	0.0	0.0	11.3	53.5	0.0	30.4	4.8	0.0
10	07/15/2015	07/16/2015	421	2,201,500	0.0	0.0	29.0	43.2	0.0	26.4	1.2	0.0
Naknek-Kvichak District Harvest Total			3,306	11,459,894	0.0	0.0	15.7	48.8	0.0	29.8	5.6	0.0
<i>Forecast</i>							<i>22.9</i>	<i>38.2</i>	<i>0.0</i>	<i>33.3</i>	<i>5.5</i>	<i>0.0</i>
Kvichak River Escapement												
1	06/15/2015	07/03/2015	517	904,578	0.2	0.8	16.6	59.8	0.0	18.4	4.3	0.0
3	07/06/2015	07/10/2015	720	2,112,870	0.0	0.1	16.3	61.9	0.0	18.9	2.8	0.0
Kvichak River Escapement Total			1,237	3,017,448	0.1	0.3	16.4	61.3	0.0	18.7	3.2	0.0
<i>Forecast</i>							<i>20.5</i>	<i>63.2</i>	<i>0.0</i>	<i>10.9</i>	<i>5.4</i>	<i>0.0</i>
Kvichak Section Harvest - Set												
1	06/15/2015	07/07/2015	643	337,871	0.0	0.0	10.1	56.9	0.0	28.1	4.5	0.3
Kvichak Section Harvest - Set Total			643	337,871	0.0	0.0	10.1	56.9	0.0	28.1	4.5	0.3
<i>Forecast</i>							<i>20.5</i>	<i>63.2</i>	<i>0.0</i>	<i>10.9</i>	<i>5.4</i>	<i>0.0</i>
Naknek River Escapement												
1	06/15/2015	06/30/2015	361	239,082	0.0	2.5	39.9	39.9	0.0	16.1	1.7	0.0
2	07/01/2015	07/06/2015	411	503,988	0.2	2.7	45.5	27.7	0.0	21.2	2.7	0.0
3	07/07/2015	07/14/2015	699	761,790	0.9	2.0	48.8	25.2	0.0	22.0	1.1	0.0
Naknek River Escapement Total			1,471	1,504,860	0.5	2.3	46.3	28.4	0.0	20.8	1.7	0.0
<i>Forecast</i>							<i>24.4</i>	<i>10.4</i>	<i>0.0</i>	<i>60.1</i>	<i>5.2</i>	<i>0.0</i>
Naknek-Kvichak District Total			6,657	16,320,073	0.1	0.3	18.5	49.4	0.0	26.9	4.8	0.0

Period	Start	End	Sample	Index	Age Composition (Percent)							
					11	21	12	22	03	13	23	14
<u>Nushagak District</u>												
<i>Nushagak District Harvest</i>												
1	06/21/2015	06/23/2015	364	183,037	0.0	0.0	32.1	1.6	0.0	64.6	1.4	0.0
2	06/24/2015	06/25/2015	405	118,432	0.0	0.0	26.2	1.7	0.0	70.1	0.7	0.2
3	06/26/2015	06/27/2015	308	202,062	0.0	0.0	35.4	4.2	0.0	57.8	1.6	1.0
4	06/28/2015	06/29/2015	418	300,282	0.0	0.0	33.7	3.1	0.0	61.0	1.0	0.0
5	06/30/2015	07/01/2015	497	513,787	0.0	0.0	22.3	4.2	0.0	69.6	2.8	0.6
6	07/02/2015	07/04/2015	607	834,886	0.0	0.0	17.1	4.9	0.0	75.8	1.0	0.3
7	07/05/2015	07/07/2015	492	589,923	0.2	0.0	19.3	8.5	0.0	67.9	2.6	1.0
8	07/08/2015	07/09/2015	599	158,190	0.0	0.0	19.4	6.2	0.0	72.3	1.7	0.5
9	07/10/2015	07/11/2015	198	498,706	0.0	0.0	57.1	6.1	0.0	35.4	1.5	0.0
10	07/12/2015	07/13/2015	132	456,158	0.0	0.0	28.0	2.3	0.0	69.7	0.0	0.0
11	07/14/2015	07/15/2015	117	397,688	0.0	0.0	23.9	1.7	0.0	74.4	0.0	0.0
<i>Nushagak District Harvest Total</i>			4,137	4,253,151	0.0	0.0	27.6	4.5	0.0	65.7	1.4	0.4
<i>Forecast</i>							26.3	2.4	0.0	68.6	1.3	0.0
<i>Igushik River Escapement</i>												
1	06/18/2015	07/04/2015	367	121,234	0.0	0.0	25.9	0.0	0.0	73.6	0.3	0.0
2	07/05/2015	07/07/2015	211	42,240	0.0	0.0	31.8	0.5	0.0	66.4	1.4	0.0
<i>Igushik River Escapement Total</i>			578	163,474	0.0	0.0	27.4	0.1	0.0	71.7	0.6	0.0
<i>Forecast</i>							15.3	0.0	0.0	80.3	2.2	0.0
<i>Igushik Section Harvest -Set</i>												
1	06/16/2015	06/23/2015	403	33,449	0.0	0.0	11.2	0.0	0.0	88.8	0.0	0.0
<i>Igushik Section Harvest -Set Total</i>			403	33,449	0.0	0.0	11.2	0.0	0.0	88.8	0.0	0.0
<i>Forecast</i>							15.3	0.0	0.0	80.3	0.0	0.0
<i>Wood River Escapement</i>												
1	06/13/2015	07/02/2015	360	584,130	1.1	0.0	70.6	5.0	0.0	21.9	1.4	0.0
2	07/03/2015	07/09/2015	439	498,690	5.0	0.2	72.9	3.6	0.0	18.0	0.2	0.0
<i>Wood River Escapement Total</i>			799	1,082,820	2.9	0.1	71.6	4.4	0.0	20.1	0.9	0.0
<i>Forecast</i>							34.7	3.1	0.0	60.6	1.6	0.0
<i>Nushagak River Escapement</i>												
1	06/05/2015	06/30/2015	600	322,761	0.0	0.0	15.8	0.0	0.0	82.7	0.0	0.8
2	07/01/2015	07/13/2015	327	301,607	0.0	0.0	13.8	0.3	0.0	83.2	0.0	1.8
<i>Nushagak River Escapement Total</i>			927	624,368	0.0	0.0	14.8	0.1	0.0	82.9	0.0	1.3
<i>Forecast</i>							6.6	0.0	0.0	86.3	0.0	5.6
Nushagak District Total			6,844	6,157,262	0.5	0.0	33.9	3.9	0.0	59.7	1.1	0.4
<u>Togiak District</u>												
<i>Togiak Section Harvest</i>												
1	06/15/2015	07/03/2015	227	28,751	0.0	0.0	15.4	1.3	0.0	83.3	0.0	0.0
2	07/04/2015	07/09/2015	358	36,805	0.0	0.0	19.8	0.8	0.0	78.2	0.8	0.0
<i>Togiak Section Harvest Total</i>			585	65,556	0.0	0.0	17.9	1.1	0.0	80.4	0.5	0.0
<i>Forecast</i>							20.5	4.1	0.0	71.0	0.0	0.0
Togiak District Total			585	65,556	0.0	0.0	17.9	1.1	0.0	80.4	0.5	0.0
Sockeye Salmon Total			27,096	35,396,231	0.2	1.2	19.1	43.5	0.0	30.1	5.6	0.1

APPENDIX D

ADF&G'S DAILY RUN SUMMARIES FOR BRISTOL BAY IN 2015

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Alaska Dept. of Fish and Game - Division of Commercial Fisheries
- Bristol Bay Daily Run Summary -

Run Date
06/16/2015

		Catch Daily	Cumulative	Escapement Daily	Cumulative	In-River Estimate	Total Run
Bristol Bay East	Ugashik	0	0	0	0	0	0
	Ugashik River			0	0	0	
	Egegik	17,000	37,129	6,504	25,218	0	62,347
	Egegik River			6,504	25,218	0	
	Naknek-Kvichak	1,000	1,396	150	426	0	1,822
	Kvichak River			90	90	0	
Bristol Bay West	Naknek River			60	336	0	
	Nushagak	0	0	4,852	18,166	0	18,166
	Igushik River			0	0	0	
	Nushagak River			3,760	14,080	0	
	Wood River			1,092	4,086	0	
	Togiak	124	215	0	0	0	215
	Togiak River			0	0	0	
Bristol Bay Totals:		18,124	38,740	11,506	43,810	0	82,550

Sockeye per Drift Delivery for: June 16

	Sockeye per Drift Delivery
Ugashik	
Egegik	
Naknek-Kvichak	7
Nushagak	
Togiak	

Test Fishery Port Moller

Date	Daily	Cumulative
6/13/2015	1.00	7.00
6/14/2015	12.00	19.00
6/15/2015	8.00	27.00
6/16/2015	12.00	39.00

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- Bristol Bay Daily Run Summary -

Run Date
06/17/2015

		Catch Daily	Cumulative	Escapement Daily	Cumulative	In-River Estimate	Total Run
Bristol Bay East	Ugashik	0	0	0	0	0	0
	Ugashik River			0	0	0	
	Egegik	20,000	57,153	14,838	40,056	0	97,209
	Egegik River			14,838	40,056	0	
	Naknek-Kvichak	1,900	3,339	210	636	0	3,975
	Kvichak River			186	276	0	
Bristol Bay West	Naknek River			24	360	0	
	Nushagak	0	0	5,946	24,112	0	24,112
	Igushik River			0	0	0	
	Nushagak River			3,768	17,848	0	
	Wood River			2,178	6,264	0	
	Togiak	233	448	0	0	0	448
	Togiak River			0	0	0	
Bristol Bay Totals:		22,133	60,940	20,994	64,804	0	125,744

Sockeye per Drift Delivery for: June 17

	Sockeye per Drift Delivery
Ugashik	
Egegik	
Naknek-Kvichak	16
Nushagak	
Togiak	41

Test Fishery Port Moller

Date	Daily	Cumulative
6/14/2015	12.00	19.00
6/15/2015	8.00	27.00
6/16/2015	12.00	39.00
6/17/2015	31.00	70.00

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Run Date
06/18/2015

		Catch Daily	Cumulative	Escapement Daily	Cumulative	In-River Estimate	Total Run
Bristol Bay East	Ugashik	0	0	0	0	0	0
	Ugashik River			0	0	0	
	Egegik	42,000	99,350	30,252	70,308	0	169,658
	Egegik River			30,252	70,308	0	
	Naknek-Kvichak	6,300	9,722	186	822	0	10,544
	Kvichak River			60	336	0	
Bristol Bay West	Naknek River			126	486	0	
	Nushagak	0	0	10,024	34,136	0	34,136
	Igushik River			282	282	0	
	Nushagak River			4,210	22,058	0	
	Wood River			5,532	11,796	0	
	Togiak	18	452	0	0	0	452
	Togiak River			0	0	0	
Bristol Bay Totals:		48,318	109,524	40,462	105,266	0	214,790

Sockeye per Drift Delivery for: June 18

	Sockeye per Drift Delivery
Ugashik	
Egegik	80
Naknek-Kvichak	35
Nushagak	
Togiak	

Test Fishery Port Moller

Date	Daily	Cumulative
6/15/2015	8.00	27.00
6/16/2015	12.00	39.00
6/17/2015	31.00	70.00
6/18/2015	38.00	106.00

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Run Date
06/19/2015

		Catch Daily	Cumulative	Escapement Daily	Cumulative	In-River Estimate	Total Run
Bristol Bay East	Ugashik	0	0	0	0	0	0
	Ugashik River			0	0	0	
	Egegik	46,000	145,823	19,854	90,162	0	235,985
	Egegik River			19,854	90,162	0	
	Naknek-Kvichak	2,700	12,455	654	1,476	0	13,931
	Kvichak River			120	456	0	
Bristol Bay West	Naknek River			534	1,020	0	
	Nushagak	0	0	16,822	50,958	0	50,958
	Igushik River			186	468	0	
	Nushagak River			8,374	30,432	0	
	Wood River			8,262	20,058	0	
	Togiak	0	470	0	0	0	470
	Togiak River			0	0	0	
Bristol Bay Totals:		48,700	158,748	37,330	142,596	0	301,344

Sockeye per Drift Delivery for: June 19

	Sockeye per Drift Delivery
Ugashik	
Egegik	73
Naknek-Kvichak	31
Nushagak	
Togiak	

Test Fishery Port Moller

Date	Daily	Cumulative
6/16/2015	12.00	39.00
6/17/2015	31.00	70.00
6/18/2015	38.00	106.00
6/19/2015	37.00	143.00

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Run Date
06/20/2015

		Catch Daily	Cumulative	Escapement Daily	Cumulative	In-River Estimate	Total Run
Bristol Bay East	Ugashik	0	0	0	0	0	0
	Ugashik River			0	0	0	
	Egegik	18,000	163,548	24,834	114,996	0	278,544
	Egegik River			24,834	114,996	0	
	Naknek-Kvichak	0	12,888	5,478	6,954	0	19,842
	Kvichak River			168	624	0	
Bristol Bay West	Naknek River			5,310	6,330	0	
	Nushagak	0	0	43,368	94,326	0	94,326
	Igushik River			516	984	0	
	Nushagak River			22,092	52,524	0	
	Wood River			20,760	40,818	0	
	Togiak	0	470	0	0	0	470
	Togiak River			0	0	0	
Bristol Bay Totals:		18,000	176,906	73,680	216,276	0	393,182

Sockeye per Drift Delivery for: June 20

	Sockeye per Drift Delivery
Ugashik	
Egegik	
Naknek-Kvichak	
Nushagak	
Togiak	

Test Fishery Port Moller

Date	Daily	Cumulative
6/17/2015	31.00	70.00
6/18/2015	38.00	106.00
6/19/2015	37.00	143.00
6/20/2015	34.00	176.00

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Run Date
06/21/2015

		Catch Daily	Cumulative	Escapement Daily	Cumulative	In-River Estimate	Total Run
Bristol Bay East	Ugashik	0	0	0	0	0	0
	Ugashik River			0	0	0	
	Egegik	43,000	206,344	22,830	137,826	25,000	369,170
	Egegik River			22,830	137,826	25,000	
	Naknek-Kvichak	0	12,888	4,404	11,358	0	24,246
	Kvichak River			126	750	0	
Bristol Bay West	Naknek River			4,278	10,608	0	
	Nushagak	35,000	49,820	73,970	168,296	0	218,116
	Igushik River			2,088	3,072	0	
	Nushagak River			47,906	100,430	0	
	Wood River			23,976	64,794	0	
	Togiak	0	470	0	0	0	470
	Togiak River			0	0	0	
Bristol Bay Totals:		78,000	269,522	101,204	317,480	25,000	612,002

Sockeye per Drift Delivery for: June 21

	Sockeye per Drift Delivery
Ugashik	
Egegik	68
Naknek-Kvichak	
Nushagak	
Togiak	

Test Fishery Port Moller

Date	Daily	Cumulative
6/18/2015	38.00	106.00
6/19/2015	37.00	143.00
6/20/2015	34.00	176.00
6/21/2015	18.00	195.00

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Run Date
06/22/2015

		Catch Daily	Cumulative	Escapement Daily	Cumulative	In-River Estimate	Total Run
Bristol Bay East	Ugashik	0	0	0	0	0	0
	Ugashik River			0	0	0	
	Egegik	24,000	230,508	14,544	152,370	25,000	407,878
	Egegik River			14,544	152,370	25,000	
	Naknek-Kvichak	0	12,888	5,574	16,932	0	29,820
	Kvichak River			408	1,158	0	
Bristol Bay West	Naknek River			5,166	15,774	0	
	Nushagak	84,000	133,467	47,890	216,186	0	349,653
	Igushik River			3,162	6,234	0	
	Nushagak River			21,730	122,160	0	
	Wood River			22,998	87,792	0	
	Togiak	731	1,215	0	0	0	1,215
	Togiak River			0	0	0	
Bristol Bay Totals:		108,731	378,078	68,008	385,488	25,000	788,566

Sockeye per Drift Delivery for: June 22

	Sockeye per Drift Delivery
Ugashik	
Egegik	
Naknek-Kvichak	
Nushagak	234
Togiak	19

Test Fishery Port Moller

Date	Daily	Cumulative
6/19/2015	37.00	143.00
6/20/2015	34.00	176.00
6/21/2015	18.00	195.00
6/22/2015	41.00	236.00

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Run Date
06/23/2015

		Catch Daily	Cumulative	Escapement Daily	Cumulative	In-River Estimate	Total Run
Bristol Bay East	Ugashik	0	0	0	0	0	0
	Ugashik River			0	0	0	
	Egegik	70,000	300,462	29,994	182,364	15,000	497,826
	Egegik River			29,994	182,364	15,000	
	Naknek-Kvichak	0	12,888	8,742	25,674	0	38,562
	Kvichak River			264	1,422	0	
Bristol Bay West	Naknek River			8,478	24,252	0	
	Nushagak	82,000	216,013	46,224	262,410	0	478,423
	Igushik River			3,630	9,864	0	
	Nushagak River			22,482	144,642	0	
	Wood River			20,112	107,904	0	
	Togiak	1,466	2,681	0	0	0	2,681
	Togiak River			0	0	0	
Bristol Bay Totals:		153,466	532,044	84,960	470,448	15,000	1,017,492

Sockeye per Drift Delivery for: June 23

	Sockeye per Drift Delivery
Ugashik	
Egegik	113
Naknek-Kvichak	
Nushagak	225
Togiak	24

Test Fishery Port Moller

Date	Daily	Cumulative
6/20/2015	34.00	176.00
6/21/2015	18.00	195.00
6/22/2015	41.00	236.00
6/23/2015	20.00	256.00

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Run Date
06/24/2015

		Catch Daily	Cumulative	Escapement Daily	Cumulative	In-River Estimate	Total Run
Bristol Bay East	Ugashik	0	0	0	0	0	0
	Ugashik River			0	0	0	
	Egegik	42,000	342,169	39,438	221,802	10,000	573,971
	Egegik River			39,438	221,802	10,000	
	Naknek-Kvichak	0	12,888	31,392	57,066	0	69,954
	Kvichak River			150	1,572	0	
Bristol Bay West				31,242	55,494	0	
	Nushagak	31,000	247,486	65,041	327,451	0	574,937
	Igushik River			3,684	13,548	0	
	Nushagak River			26,275	170,917	0	
	Wood River			35,082	142,986	0	
	Togiak	1,278	4,357	0	0	0	4,357
	Togiak River			0	0	0	
Bristol Bay Totals:		74,278	606,900	135,871	606,319	10,000	1,223,219

Sockeye per Drift Delivery for: June 24

	Sockeye per Drift Delivery
Ugashik	
Egegik	62
Naknek-Kvichak	
Nushagak	187
Togiak	16

Test Fishery Port Moller

Date	Daily	Cumulative
6/21/2015	18.00	195.00
6/22/2015	41.00	236.00
6/23/2015	20.00	256.00
6/24/2015	49.00	305.00

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Run Date
06/25/2015

		Catch Daily	Cumulative	Escapement Daily	Cumulative	In-River Estimate	Total Run
Bristol Bay East	Ugashik	34,000	45,942	0	0	0	45,942
	Ugashik River			0	0	0	
	Egegik	70,000	412,291	17,160	238,962	15,000	666,253
	Egegik River			17,160	238,962	15,000	
	Naknek-Kvichak	0	12,888	23,082	80,148	0	93,036
	Kvichak River			2,160	3,732	0	
Bristol Bay West				20,922	76,416	0	
	Nushagak	107,000	354,560	69,478	396,929	0	751,489
	Igushik River			3,708	17,256	0	
	Nushagak River			32,224	203,141	0	
	Wood River			33,546	176,532	0	
	Togiak	44	4,401	0	0	0	4,401
	Togiak River			0	0	0	
Bristol Bay Totals:		211,044	830,082	109,720	716,039	15,000	1,561,121

Sockeye per Drift Delivery for: June 25

	Sockeye per Drift Delivery
Ugashik	436
Egegik	194
Naknek-Kvichak	
Nushagak	168
Togiak	6

Test Fishery Port Moller

Date	Daily	Cumulative
6/22/2015	41.00	236.00
6/23/2015	20.00	256.00
6/24/2015	49.00	305.00
6/25/2015	0.00	0.00
	65.00	370.00

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Run Date
06/26/2015

		Catch Daily	Cumulative	Escapement Daily	Cumulative	In-River Estimate	Total Run
Bristol Bay East	Ugashik	0	45,836	7,182	7,182	40,000	93,018
	Ugashik River			7,182	7,182	40,000	
	Egegik	122,000	534,771	35,322	274,284	50,000	859,055
	Egegik River			35,322	274,284	50,000	
	Naknek-Kvichak	0	12,888	36,700	118,848	0	131,736
	Kvichak River			23,958	27,720	0	
	Naknek River			14,712	91,128	0	
Bristol Bay West	Nushagak	109,000	463,721	47,910	444,839	0	908,560
	Igushik River			7,344	24,600	0	
	Nushagak River			13,164	216,305	0	
	Wood River			27,402	203,934	0	
	Togiak	66	4,772	0	0	0	4,772
	Togiak River			0	0	0	
Bristol Bay Totals:		231,066	1,061,988	129,114	845,153	90,000	1,997,141

Sockeye per Drift Delivery for: June 26

	Sockeye per Drift Delivery
Ugashik	
Egegik	288
Naknek-Kvichak	
Nushagak	117
Togiak	40

Test Fishery Port Moller

Date	Daily	Cumulative
6/23/2015	20.00	256.00
6/24/2015	49.00	305.00
6/25/2015	0.00	0.00
	65.00	370.00
6/26/2015	100.00	470.00

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Run Date
06/27/2015

		Catch Daily	Cumulative	Escapement Daily	Cumulative	In-River Estimate	Total Run
Bristol Bay East	Ugashik	76,000	121,836	18,276	25,458	50,000	197,294
	Ugashik River			18,276	25,458	50,000	
	Egegik	186,000	721,629	59,610	333,894	70,000	1,125,523
	Egegik River			59,610	333,894	70,000	
	Naknek-Kvichak	0	12,888	79,488	198,336	0	211,224
	Kvichak River			11,196	38,916	0	
	Naknek River			68,292	159,420	0	
Bristol Bay West	Nushagak	116,000	579,490	78,362	523,201	0	1,102,691
	Igushik River			5,646	30,246	0	
	Nushagak River			18,896	235,201	0	
	Wood River			53,820	257,754	0	
	Togiak	124	4,896	0	0	0	4,896
	Togiak River			0	0	0	
Bristol Bay Totals:		378,124	1,440,739	235,736	1,080,889	120,000	2,641,628

Sockeye per Drift Delivery for: June 27

	Sockeye per Drift Delivery
Ugashik	790
Egegik	409
Naknek-Kvichak	
Nushagak	161
Togiak	33

Test Fishery Port Moller

Date	Daily	Cumulative
6/24/2015	49.00	305.00
6/25/2015	0.00	0.00
	65.00	370.00
6/26/2015	100.00	470.00
6/27/2015	69.00	539.00

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Run Date
06/28/2015

		Catch Daily	Cumulative	Escapement Daily	Cumulative	In-River Estimate	Total Run
Bristol Bay East	Ugashik	76,000	197,780	33,456	58,914	70,000	326,694
	Ugashik River			33,456	58,914	70,000	
	Egegik	203,000	925,097	65,910	399,804	70,000	1,394,901
	Egegik River			65,910	399,804	70,000	
	Naknek-Kvichak	70,000	82,888	52,644	250,980	100,000	433,868
	Kvichak River			8,172	47,088	100,000	
	Naknek River			44,472	203,892	0	
Bristol Bay West	Nushagak	182,000	761,077	111,445	634,646	0	1,395,723
	Igushik River			6,232	36,478	0	
	Nushagak River			37,701	272,902	0	
	Wood River			67,512	325,266	0	
	Togiak	0	4,896	0	0	0	4,896
	Togiak River			0	0	0	
	Bristol Bay Totals:	531,000	1,971,738	263,455	1,344,344	240,000	3,556,082

Sockeye per Drift Delivery for: June 28

	Sockeye per Drift Delivery
Ugashik	767
Egegik	217
Naknek-Kvichak	123
Nushagak	244
Togiak	

Test Fishery Port Moller

Date	Daily	Cumulative
6/25/2015	0.00	0.00
	65.00	370.00
6/26/2015	100.00	470.00
6/27/2015	69.00	539.00
6/28/2015	53.00	592.00

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Run Date
06/29/2015

		Catch Daily	Cumulative	Escapement Daily	Cumulative	In-River Estimate	Total Run
Bristol Bay East	Ugashik	90,000	287,838	27,966	86,880	35,000	409,718
	Ugashik River			27,966	86,880	35,000	
	Egegik	253,000	1,177,600	42,594	442,398	40,000	1,659,998
	Egegik River			42,594	442,398	40,000	
	Naknek-Kvichak	130,000	213,414	72,438	323,418	100,000	636,832
	Kvichak River			61,098	108,186	100,000	
	Naknek River			11,340	215,232	0	
Bristol Bay West	Nushagak	153,000	914,287	101,064	735,710	0	1,649,997
	Igushik River			11,214	47,692	0	
	Nushagak River			27,336	300,238	0	
	Wood River			62,514	387,780	0	
	Togiak	2,881	7,777	0	0	0	7,777
	Togiak River			0	0	0	
	Bristol Bay Totals:	628,881	2,600,916	244,062	1,588,406	175,000	4,364,322

Sockeye per Drift Delivery for: June 29

	Sockeye per Drift Delivery
Ugashik	901
Egegik	318
Naknek-Kvichak	262
Nushagak	191
Togiak	34

Test Fishery Port Moller

Date	Daily	Cumulative
6/26/2015	100.00	470.00
6/27/2015	69.00	539.00
6/28/2015	53.00	592.00
6/29/2015	28.00	603.00

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Run Date
06/30/2015

		Catch Daily	Cumulative	Escapement Daily	Cumulative	In-River Estimate	Total Run
Bristol Bay East	Ugashik	104,000	393,233	19,290	106,170	35,000	534,403
	Ugashik River			19,290	106,170	35,000	
	Egegik	262,000	1,439,728	28,368	470,766	70,000	1,980,494
	Egegik River			28,368	470,766	70,000	
	Naknek-Kvichak	214,000	427,620	53,520	376,938	30,000	634,558
	Kvichak River			29,412	137,598	30,000	
	Naknek River			24,108	239,340	0	
Bristol Bay West	Nushagak	218,000	1,132,306	90,791	826,501	0	1,958,807
	Igushik River			12,498	60,190	0	
	Nushagak River			22,523	322,761	0	
	Wood River			55,770	443,550	0	
	Togiak	5,278	13,055	0	0	0	13,055
	Togiak River			0	0	0	
	Bristol Bay Totals:	803,278	3,405,942	191,969	1,780,375	135,000	5,321,317

Sockeye per Drift Delivery for: June 30

	Sockeye per Drift Delivery
Ugashik	1022
Egegik	616
Naknek-Kvichak	338
Nushagak	305
Togiak	51

Test Fishery Port Moller

Date	Daily	Cumulative
6/27/2015	69.00	539.00
6/28/2015	53.00	592.00
6/29/2015	28.00	603.00
6/30/2015	60.00	663.00

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Run Date
07/01/2015

		Catch Daily	Cumulative	Escapement Daily	Cumulative	In-River Estimate	Total Run
Bristol Bay East	Ugashik	0	392,833	33,420	139,590	70,000	602,423
	Ugashik River			33,420	139,590	70,000	
	Egegik	315,000	1,754,920	38,190	508,956	100,000	2,363,876
	Egegik River			38,190	508,956	100,000	
	Naknek-Kvichak	267,000	694,314	58,320	435,258	150,000	1,279,572
	Kvichak River			7,320	144,918	150,000	
	Naknek River			51,000	290,340	0	
Bristol Bay West	Nushagak	330,000	1,462,727	105,562	932,063	0	2,394,790
	Igushik River			15,312	75,502	0	
	Nushagak River			21,598	344,359	0	
	Wood River			68,652	512,202	0	
	Togiak	7,000	20,055	0	0	0	20,055
	Togiak River			0	0	0	
	Bristol Bay Totals:	919,000	4,324,849	235,492	2,015,867	320,000	6,660,716

Sockeye per Drift Delivery for: July 1

	Sockeye per Drift Delivery
Ugashik	
Egegik	771
Naknek-Kvichak	282
Nushagak	401
Togiak	65

Test Fishery Port Moller

Date	Daily	Cumulative
6/28/2015	53.00	592.00
6/29/2015	28.00	603.00
6/30/2015	60.00	663.00
7/1/2015	39.00	701.00

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Run Date
07/02/2015

		Catch Daily	Cumulative	Escapement Daily	Cumulative	In-River Estimate	Total Run
Bristol Bay East	Ugashik	119,000	511,833	42,522	182,112	100,000	793,945
	Ugashik River			42,522	182,112	100,000	
	Egegik	350,000	2,104,999	129,594	638,550	120,000	2,863,549
	Egegik River			129,594	638,550	120,000	
	Naknek-Kvichak	504,000	1,198,719	158,856	594,114	350,000	2,142,833
	Kvichak River			35,268	180,186	350,000	
Bristol Bay West	Naknek River			123,588	413,928	0	
	Nushagak	342,000	1,804,777	102,893	1,034,956	0	2,839,733
	Igushik River			17,394	92,896	0	
	Nushagak River			13,571	357,930	0	
	Wood River			71,928	584,130	0	
	Togiak	4,000	24,008	0	0	0	24,008
	Togiak River			0	0	0	
Bristol Bay Totals:		1,319,000	5,644,336	433,865	2,449,732	570,000	8,664,068

Sockeye per Drift Delivery for: **July 2**

	Sockeye per Drift Delivery
Ugashik	1120
Egegik	817
Naknek-Kvichak	727
Nushagak	376
Togiak	50

Test Fishery Port Moller

Date	Daily	Cumulative
6/29/2015	28.00	603.00
6/30/2015	60.00	663.00
7/1/2015	39.00	701.00
7/2/2015	24.00	725.00

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Run Date
07/03/2015

		Catch Daily	Cumulative	Escapement Daily	Cumulative	In-River Estimate	Total Run
Bristol Bay East	Ugashik	437	5,347,703	0	1,564,638	0	6,912,341
	Ugashik River			0	1,564,638	0	
	Egegik	570	8,325,187	0	2,160,792	0	10,485,979
	Egegik River			0	2,160,792	0	
	Naknek-Kvichak	1,493	16,411,598	0	9,262,566	0	25,674,164
	Kvichak River			0	7,341,612	0	
Bristol Bay West	Naknek River			0	1,920,954	0	
	Nushagak	0	5,416,907	0	3,389,330	0	8,806,237
	Igushik River			0	651,172	0	
	Nushagak River			0	796,684	0	
	Wood River			0	1,941,474	0	
	Togiak	7,677	292,130	5,808	205,248	0	497,378
	Togiak River			5,808	205,248	0	
Bristol Bay Totals:		10,177	35,793,525	5,808	16,582,574	0	52,376,099

Sockeye per Drift Delivery for: **July 3**

	Sockeye per Drift Delivery
Ugashik	437
Egegik	
Naknek-Kvichak	83
Nushagak	
Togiak	94

Test Fishery Port Moller

Date	Daily	Cumulative
6/30/2015	60.00	663.00
7/1/2015	39.00	701.00
7/2/2015	24.00	725.00
7/3/2015	27.00	752.00

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Run Date
07/04/2015

		Catch Daily	Cumulative	Escapement Daily	Cumulative	In-River Estimate	Total Run
Bristol Bay East	Ugashik	237,000	929,520	5,502	250,146	80,000	1,259,666
	Ugashik River			5,502	250,146	80,000	
	Egegik	340,000	2,826,951	108,786	834,270	100,000	3,761,221
	Egegik River			108,786	834,270	100,000	
	Naknek-Kvichak	218,000	1,936,556	412,488	1,277,460	500,000	3,714,016
	Kvichak River			372,612	743,640	500,000	
Bristol Bay West	Naknek River			39,876	533,820	0	
	Nushagak	295,000	2,359,474	100,675	1,259,388	0	3,618,862
	Igushik River			13,896	121,234	0	
	Nushagak River			16,741	391,058	0	
	Wood River			70,038	747,096	0	
	Togiak	4,500	34,565	0	258	0	34,823
	Togiak River			0	258	0	
Bristol Bay Totals:		1,094,500	8,087,066	627,451	3,621,522	680,000	12,388,588

Sockeye per Drift Delivery for: **July 4**

	Sockeye per Drift Delivery
Ugashik	1832
Egegik	477
Naknek-Kvichak	325
Nushagak	646
Togiak	79

Test Fishery Port Moller

Date	Daily	Cumulative
7/1/2015	39.00	701.00
7/2/2015	24.00	725.00
7/3/2015	27.00	752.00
7/4/2015	55.00	828.00

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Run Date
07/05/2015

		Catch Daily	Cumulative	Escapement Daily	Cumulative	In-River Estimate	Total Run
Bristol Bay East	Ugashik	187,000	1,116,751	50,400	341,202	70,000	1,527,953
	Ugashik River			50,400	341,202	70,000	
	Egegik	243,000	3,070,343	144,756	979,026	100,000	4,149,369
	Egegik River			144,756	979,026	100,000	
	Naknek-Kvichak	0	1,937,921	213,930	1,491,390	600,000	4,029,311
	Kvichak River			164,538	908,178	600,000	
Bristol Bay West	Naknek River			49,392	583,212	0	
	Nushagak	250,000	2,609,978	98,136	1,357,524	0	3,967,502
	Igushik River			10,956	132,190	0	
	Nushagak River			13,308	404,366	0	
	Wood River			73,872	820,968	0	
	Togiak	0	33,531	48	306	0	33,837
	Togiak River			48	306	0	
Bristol Bay Totals:		680,000	8,768,524	507,270	4,169,448	770,000	13,707,972

Sockeye per Drift Delivery for: **July 5**

	Sockeye per Drift Delivery
Ugashik	1945
Egegik	350
Naknek-Kvichak	
Nushagak	626
Togiak	

Test Fishery Port Moller

Date	Daily	Cumulative
7/2/2015	24.00	725.00
7/3/2015	27.00	752.00
7/4/2015	55.00	828.00

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Run Date
07/06/2015

		Catch Daily	Cumulative	Escapement Daily	Cumulative	In-River Estimate	Total Run
Bristol Bay East	Ugashik	326,000	1,444,281	53,034	394,236	70,000	1,908,517
	Ugashik River			53,034	394,236	70,000	
	Egegik	304,000	3,375,255	80,244	1,059,270	100,000	4,534,525
	Egegik River			80,244	1,059,270	100,000	
	Naknek-Kvichak	216,000	2,153,921	310,512	1,798,302	600,000	4,552,223
	Kvichak River			150,396	1,054,974	600,000	
Bristol Bay West				160,116	743,328	0	
	Nushagak	240,000	2,648,537	122,366	1,479,890	0	4,328,427
	Igushik River			13,848	146,038	0	
	Nushagak River			25,064	429,430	0	
	Wood River			83,454	904,422	0	
	Togiak	4,700	39,289	210	516	0	39,805
	Togiak River			210	516	0	
Bristol Bay Totals:		1,090,700	9,861,283	566,366	4,732,214	770,000	15,363,497

Sockeye per Drift Delivery for: **July 6**

	Sockeye per Drift Delivery
Ugashik	2482
Egegik	414
Naknek-Kvichak	295
Nushagak	535
Togiak	56

Test Fishery Port Moller

Date	Daily	Cumulative
7/3/2015	27.00	752.00
7/4/2015	55.00	828.00

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Run Date
07/07/2015

		Catch Daily	Cumulative	Escapement Daily	Cumulative	In-River Estimate	Total Run
Bristol Bay East	Ugashik	251,000	1,695,163	23,454	417,690	100,000	2,212,853
	Ugashik River			23,454	417,690	100,000	
	Egegik	292,000	3,667,680	77,886	1,137,156	50,000	4,854,836
	Egegik River			77,886	1,137,156	50,000	
	Naknek-Kvichak	163,000	2,316,999	576,474	2,374,776	700,000	5,391,775
	Kvichak River			493,008	1,547,982	700,000	
Bristol Bay West				83,466	826,794	0	
	Nushagak	142,000	2,991,363	123,958	1,603,848	0	4,595,211
	Igushik River			17,436	163,474	0	
	Nushagak River			30,592	460,022	0	
	Wood River			75,930	980,352	0	
	Togiak	8,300	47,609	234	768	0	48,377
	Togiak River			234	768	0	
Bristol Bay Totals:		856,300	10,718,814	802,006	5,534,238	850,000	17,103,052

Sockeye per Drift Delivery for: **July 7**

	Sockeye per Drift Delivery
Ugashik	1806
Egegik	427
Naknek-Kvichak	210
Nushagak	224
Togiak	62

Test Fishery Port Moller

Date	Daily	Cumulative
7/4/2015	55.00	828.00
7/7/2015	76.00	1,027.00

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Run Date
07/08/2015

		Catch Daily	Cumulative	Escapement Daily	Cumulative	In-River Estimate	Total Run
Bristol Bay East	Ugashik	374,000	2,069,651	39,312	457,002	200,000	2,726,653
	Ugashik River			39,312	457,002	200,000	
	Egegik	308,000	3,974,873	17,352	1,154,508	20,000	5,149,381
	Egegik River			17,352	1,154,508	20,000	
	Naknek-Kvichak	1,000,000	3,317,524	816,654	3,191,430	400,000	6,908,954
	Kvichak River			755,736	2,303,718	400,000	
Bristol Bay West				60,918	887,712	0	
	Nushagak	94,000	3,085,296	119,162	1,723,010	0	4,808,306
	Igushik River			16,962	180,436	0	
	Nushagak River			44,738	504,760	0	
	Wood River			57,462	1,037,814	0	
	Togiak	10,000	57,576	0	768	0	58,344
	Togiak River			0	768	0	
	Bristol Bay Totals:	1,786,000	12,504,920	992,480	6,526,718	620,000	19,651,638

Sockeye per Drift Delivery for: **July 8**

	Sockeye per Drift Delivery
Ugashik	1104
Egegik	501
Naknek-Kvichak	861
Nushagak	166
Togiak	83

Test Fishery Port Moller

Date	Daily	Cumulative
7/7/2015	76.00	1,027.00
7/8/2015	80.00	1,106.00

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Run Date
07/09/2015

		Catch Daily	Cumulative	Escapement Daily	Cumulative	In-River Estimate	Total Run
Bristol Bay East	Ugashik	444,000	2,513,263	59,892	516,894	200,000	3,230,157
	Ugashik River			59,892	516,894	200,000	
	Egegik	562,000	4,536,732	7,026	1,161,534	20,000	5,718,266
	Egegik River			7,026	1,161,534	20,000	
	Naknek-Kvichak	700,000	4,023,050	600,834	3,792,264	150,000	7,965,314
	Kvichak River			535,890	2,839,608	150,000	
Bristol Bay West				64,944	952,656	0	
	Nushagak	84,000	3,169,597	83,680	1,806,846	0	4,976,443
	Igushik River			15,480	196,072	0	
	Nushagak River			23,194	527,954	0	
	Wood River			45,006	1,082,820	0	
	Togiak	9,000	66,749	1,662	2,898	0	69,647
	Togiak River			1,662	2,898	0	
	Bristol Bay Totals:	1,799,000	14,309,391	753,094	7,280,436	370,000	21,959,827

Sockeye per Drift Delivery for: **July 9**

	Sockeye per Drift Delivery
Ugashik	1670
Egegik	927
Naknek-Kvichak	761
Nushagak	231
Togiak	64

Test Fishery Port Moller

Date	Daily	Cumulative
7/7/2015	76.00	1,027.00
7/8/2015	80.00	1,106.00
7/9/2015	85.00	1,191.00

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Run Date
07/10/2015

		Catch Daily	Cumulative	Escapement Daily	Cumulative	In-River Estimate	Total Run
Bristol Bay East	Ugashik	340,000	2,853,517	69,036	585,930	200,000	3,639,447
	Ugashik River			69,036	585,930	200,000	
	Egegik	524,000	5,061,000	19,776	1,181,310	25,000	6,267,310
	Egegik River			19,776	1,181,310	25,000	
	Naknek-Kvichak	1,146,000	5,171,444	234,816	4,027,080	250,000	9,448,524
	Kvichak River			177,840	3,017,448	250,000	
Bristol Bay West				56,976	1,009,632	0	
	Nushagak	262,000	3,431,409	70,133	1,876,979	0	5,308,388
	Igushik River			12,114	208,186	0	
	Nushagak River			22,223	550,177	0	
	Wood River			35,796	1,118,616	0	
	Togiak	5,000	71,870	1,164	4,062	0	75,932
	Togiak River			1,164	4,062	0	
	Bristol Bay Totals:	2,277,000	16,589,240	394,925	7,675,361	475,000	24,739,601

Sockeye per Drift Delivery for: July 10

	Sockeye per Drift Delivery
Ugashik	934
Egegik	826
Naknek-Kvichak	998
Nushagak	684
Togiak	49

Test Fishery Port Moller

Date	Daily	Cumulative
7/7/2015	76.00	1,027.00
7/8/2015	80.00	1,106.00
7/9/2015	85.00	1,191.00
7/10/2015	53.00	1,244.00

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Run Date
07/11/2015

		Catch Daily	Cumulative	Escapement Daily	Cumulative	In-River Estimate	Total Run
Bristol Bay East	Ugashik	231,000	3,084,630	82,770	668,700	200,000	3,953,330
	Ugashik River			82,770	668,700	200,000	
	Egegik	400,000	5,461,063	59,220	1,240,530	120,000	6,821,593
	Egegik River			59,220	1,240,530	120,000	
	Naknek-Kvichak	1,300,000	6,471,859	291,162	4,318,242	500,000	11,290,101
	Kvichak River			140,694	3,158,142	500,000	
Bristol Bay West				150,468	1,160,100	0	
	Nushagak	259,000	3,690,656	63,457	1,940,436	0	5,631,092
	Igushik River			10,140	218,326	0	
	Nushagak River			12,127	582,304	0	
	Wood River			41,190	1,159,806	0	
	Togiak	400	72,458	1,608	5,670	0	78,128
	Togiak River			1,608	5,670	0	
	Bristol Bay Totals:	2,190,400	18,780,666	498,217	8,173,578	820,000	27,774,244

Sockeye per Drift Delivery for: July 11

	Sockeye per Drift Delivery
Ugashik	699
Egegik	478
Naknek-Kvichak	918
Nushagak	911
Togiak	75

Test Fishery Port Moller

Date	Daily	Cumulative
7/8/2015	80.00	1,106.00
7/9/2015	85.00	1,191.00
7/10/2015	53.00	1,244.00

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Run Date
07/12/2015

		Catch Daily	Cumulative	Escapement Daily	Cumulative	In-River Estimate	Total Run
Bristol Bay East	Ugashik	186,000	3,270,576	34,326	703,026	100,000	4,073,602
	Ugashik River			34,326	703,026	100,000	
	Egegik	315,000	5,776,740	96,822	1,337,352	0	7,114,092
	Egegik River			96,822	1,337,352	0	
	Naknek-Kvichak	1,350,000	7,831,649	428,754	4,760,460	1,000,000	13,592,109
	Kvichak River			321,498	3,479,640	1,000,000	
Bristol Bay West				107,256	1,280,820	0	
	Nushagak	290,000	3,980,200	112,070	2,052,506	0	6,032,706
	Igushik River			7,182	225,508	0	
	Nushagak River			26,708	589,012	0	
	Wood River			78,180	1,237,986	0	
	Togiak	0	72,494	1,308	6,978	0	79,472
	Togiak River			1,308	6,978	0	
Bristol Bay Totals:		2,141,000	20,931,659	673,280	8,860,322	1,100,000	30,891,981

Sockeye per Drift Delivery for: July 12

	Sockeye per Drift Delivery
Ugashik	811
Egegik	542
Naknek-Kvichak	731
Nushagak	679
Togiak	

Test Fishery Port Moller

Date	Daily	Cumulative
7/9/2015	85.00	1,191.00
7/10/2015	53.00	1,244.00

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Run Date
07/13/2015

		Catch Daily	Cumulative	Escapement Daily	Cumulative	In-River Estimate	Total Run
Bristol Bay East	Ugashik	291,000	3,561,659	29,460	732,486	100,000	4,394,145
	Ugashik River			29,460	732,486	100,000	
	Egegik	288,000	6,064,543	51,756	1,389,108	0	7,453,651
	Egegik River			51,756	1,389,108	0	
	Naknek-Kvichak	1,100,000	8,931,749	681,468	5,441,928	1,000,000	15,373,677
	Kvichak River			571,242	4,050,882	1,000,000	
Bristol Bay West				110,226	1,391,046	0	
	Nushagak	206,000	4,186,225	164,566	2,217,072	0	6,403,297
	Igushik River			7,242	232,750	0	
	Nushagak River			35,356	624,368	0	
	Wood River			121,968	1,359,954	0	
	Togiak	10,000	82,494	2,316	9,294	0	91,788
	Togiak River			2,316	9,294	0	
Bristol Bay Totals:		1,895,000	22,826,670	929,566	9,789,888	1,100,000	33,716,558

Sockeye per Drift Delivery for: July 13

	Sockeye per Drift Delivery
Ugashik	1281
Egegik	617
Naknek-Kvichak	877
Nushagak	504
Togiak	87

Test Fishery Port Moller

Date	Daily	Cumulative
7/10/2015	53.00	1,244.00

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Run Date
07/14/2015

		Catch Daily	Cumulative	Escapement Daily	Cumulative	In-River Estimate	Total Run
Bristol Bay East	Ugashik	326,000	3,888,121	35,850	768,336	150,000	4,806,457
	Ugashik River			35,850	768,336	150,000	
	Egegik	321,000	6,392,432	33,432	1,422,540	0	7,814,972
	Egegik River			33,432	1,422,540	0	
	Naknek-Kvichak	1,200,000	10,133,488	558,066	5,999,994	800,000	16,933,482
	Kvichak River			443,994	4,494,876	800,000	
Bristol Bay West				114,072	1,505,118	0	
	Nushagak	151,000	4,343,100	164,872	2,381,944	0	6,725,044
	Igushik River			16,110	248,860	0	
	Nushagak River			45,238	669,606	0	
	Wood River			103,524	1,463,478	0	
	Togiak	9,000	91,707	3,156	12,450	0	104,157
	Togiak River			3,156	12,450	0	
Bristol Bay Totals:		2,007,000	24,848,848	795,376	10,585,264	950,000	36,384,112

Sockeye per Drift Delivery for: **July 14**

	Sockeye per Drift Delivery
Ugashik	1538
Egegik	698
Naknek-Kvichak	752
Nushagak	363
Togiak	81

Test Fishery Port Moller

No recent results found. Potentially weathered out.

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Run Date
07/15/2015

		Catch Daily	Cumulative	Escapement Daily	Cumulative	In-River Estimate	Total Run
Bristol Bay East	Ugashik	268,000	4,155,995	45,288	813,624	150,000	5,119,619
	Ugashik River			45,288	813,624	150,000	
	Egegik	329,000	6,720,969	86,232	1,508,772	0	8,229,741
	Egegik River			86,232	1,508,772	0	
	Naknek-Kvichak	1,415,000	11,542,478	445,866	6,445,860	600,000	18,588,338
	Kvichak River			374,616	4,869,492	600,000	
Bristol Bay West				71,250	1,576,368	0	
	Nushagak	297,000	4,640,490	113,534	2,495,478	0	7,135,968
	Igushik River			20,778	269,638	0	
	Nushagak River			29,726	699,332	0	
	Wood River			63,030	1,526,508	0	
	Togiak	2,000	94,184	3,252	15,702	0	109,886
	Togiak River			3,252	15,702	0	
Bristol Bay Totals:		2,311,000	27,154,116	694,172	11,279,436	750,000	39,183,552

Sockeye per Drift Delivery for: **July 15**

	Sockeye per Drift Delivery
Ugashik	1310
Egegik	782
Naknek-Kvichak	869
Nushagak	755
Togiak	93

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Run Date
07/16/2015

		Catch Daily	Cumulative	Escapement Daily	Cumulative	In-River Estimate	Total Run
Bristol Bay East	Ugashik	221,000	4,377,382	32,964	846,588	150,000	5,373,970
	Ugashik River			32,964	846,588	150,000	
	Egegik	255,000	6,975,632	74,952	1,583,724	0	8,559,356
	Egegik River			74,952	1,583,724	0	
	Naknek-Kvichak	942,000	12,483,424	480,660	6,926,520	600,000	20,009,944
	Kvichak River			386,886	5,256,378	600,000	
Bristol Bay West				93,774	1,670,142	0	
	Nushagak	163,000	4,803,244	112,070	2,607,548	0	7,410,792
	Igushik River			30,558	300,196	0	
	Nushagak River			21,794	721,126	0	
	Wood River			59,718	1,586,226	0	
	Togiak	9,000	102,893	5,682	21,384	0	124,277
	Togiak River			5,682	21,384	0	
Bristol Bay Totals:		1,590,000	28,742,575	706,328	11,985,764	750,000	41,478,339

Sockeye per Drift Delivery for: **July 16**

	Sockeye per Drift Delivery
Ugashik	1278
Egegik	798
Naknek-Kvichak	743
Nushagak	791
Togiak	77

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Run Date
07/17/2015

		Catch Daily	Cumulative	Escapement Daily	Cumulative	In-River Estimate	Total Run
Bristol Bay East	Ugashik	208,000	4,585,643	37,440	884,028	0	5,469,671
	Ugashik River			37,440	884,028	0	
	Egegik	302,000	7,277,897	78,516	1,662,240	0	8,940,137
	Egegik River			78,516	1,662,240	0	
	Naknek-Kvichak	1,050,000	13,533,855	324,018	7,250,538	0	20,784,393
	Kvichak River			276,498	5,532,876	0	
Bristol Bay West				47,520	1,717,662	0	
	Nushagak	90,000	4,893,117	136,678	2,744,226	0	7,637,343
	Igushik River			33,798	333,994	0	
	Nushagak River			31,192	752,318	0	
	Wood River			71,688	1,657,914	0	
	Togiak	11,000	113,984	3,990	25,374	0	139,358
	Togiak River			3,990	25,374	0	
Bristol Bay Totals:		1,661,000	30,404,496	580,642	12,566,406	0	42,970,902

Sockeye per Drift Delivery for: **July 17**

	Sockeye per Drift Delivery
Ugashik	1144
Egegik	798
Naknek-Kvichak	1213
Nushagak	561
Togiak	106

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Run Date
07/18/2015

		Catch Daily	Cumulative	Escapement Daily	Cumulative	In-River Estimate	Total Run
Bristol Bay East	Ugashik	170,000	4,741,124	72,300	956,328	0	5,697,452
	Ugashik River			72,300	956,328	0	
	Egegik	292,000	7,528,609	70,098	1,732,338	0	9,260,947
	Egegik River			70,098	1,732,338	0	
	Naknek-Kvichak	715,000	14,284,246	406,800	7,657,338	0	21,941,584
	Kvichak River			295,080	5,827,956	0	
Bristol Bay West				111,720	1,829,382	0	
	Nushagak	111,000	5,004,229	157,610	2,901,836	0	7,906,065
	Igushik River			40,566	374,560	0	
	Nushagak River			44,366	796,684	0	
	Wood River			72,678	1,730,592	0	
	Togiak	0	114,163	2,772	28,146	0	142,309
	Togiak River			2,772	28,146	0	
Bristol Bay Totals:		1,288,000	31,672,371	709,580	13,275,986	0	44,948,357

Sockeye per Drift Delivery for: **July 18**

	Sockeye per Drift Delivery
Ugashik	1010
Egegik	1044
Naknek-Kvichak	749
Nushagak	444
Togiak	

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Run Date
07/19/2015

		Catch Daily	Cumulative	Escapement Daily	Cumulative	In-River Estimate	Total Run
Bristol Bay East	Ugashik	188,000	4,929,408	85,908	1,042,236	0	5,971,644
	Ugashik River			85,908	1,042,236	0	
	Egegik	264,000	7,792,279	161,970	1,894,308	0	9,686,587
	Egegik River			161,970	1,894,308	0	
	Naknek-Kvichak	535,000	14,826,829	727,674	8,385,012	0	23,211,841
	Kvichak River			680,190	6,508,146	0	
Bristol Bay West				47,484	1,876,866	0	
	Nushagak	108,000	5,112,448	155,046	3,056,882	0	8,169,330
	Igushik River			83,574	458,134	0	
	Nushagak River			0	796,684	0	
	Wood River			71,472	1,802,064	0	
	Togiak	0	114,313	5,274	33,510	0	147,823
	Togiak River			5,274	33,510	0	
Bristol Bay Totals:		1,095,000	32,775,277	1,135,872	14,411,948	0	47,187,225

Sockeye per Drift Delivery for: **July 19**

	Sockeye per Drift Delivery
Ugashik	1009
Egegik	929
Naknek-Kvichak	665
Nushagak	422
Togiak	

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Run Date
07/20/2015

		Catch Daily	Cumulative	Escapement Daily	Cumulative	In-River Estimate	Total Run
Bristol Bay East	Ugashik	128,000	5,057,619	92,784	1,135,020	0	6,192,639
	Ugashik River			92,784	1,135,020	0	
	Egegik	178,000	8,011,284	83,358	1,977,666	0	9,988,950
	Egegik River			83,358	1,977,666	0	
	Naknek-Kvichak	342,000	15,168,307	441,966	8,826,978	0	23,995,285
	Kvichak River			420,198	6,928,344	0	
Bristol Bay West	Naknek River			21,768	1,898,634	0	
	Nushagak	84,000	5,196,807	141,423	3,198,305	0	8,395,112
	Igushik River			87,834	545,968	0	
	Nushagak River			0	796,684	0	
	Wood River			53,589	1,855,653	0	
	Togiak	19,000	133,313	6,858	40,368	0	173,681
	Togiak River			6,858	40,368	0	
	Bristol Bay Totals:	751,000	33,567,330	766,389	15,178,337	0	48,745,667

Sockeye per Drift Delivery for: **July 20**

	Sockeye per Drift Delivery
Ugashik	838
Egegik	772
Naknek-Kvichak	515
Nushagak	388
Togiak	206

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Run Date
07/21/2015

		Catch Daily	Cumulative	Escapement Daily	Cumulative	In-River Estimate	Total Run
Bristol Bay East	Ugashik	122,000	5,179,224	103,662	1,238,682	0	6,417,906
	Ugashik River			103,662	1,238,682	0	
	Egegik	153,000	8,163,901	52,536	2,030,202	0	10,194,103
	Egegik River			52,536	2,030,202	0	
	Naknek-Kvichak	348,000	15,520,030	187,962	9,014,940	0	24,534,970
	Kvichak River			175,020	7,103,364	0	
Bristol Bay West	Naknek River			12,942	1,911,576	0	
	Nushagak	61,000	5,257,840	87,570	3,285,875	0	8,543,715
	Igushik River			58,788	604,756	0	
	Nushagak River			0	796,684	0	
	Wood River			28,782	1,884,435	0	
	Togiak	14,000	147,768	6,300	47,088	0	194,856
	Togiak River			6,300	47,088	0	
	Bristol Bay Totals:	698,000	34,268,763	438,030	15,616,787	0	49,885,550

Sockeye per Drift Delivery for: **July 21**

	Sockeye per Drift Delivery
Ugashik	963
Egegik	834
Naknek-Kvichak	710
Nushagak	323
Togiak	131

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Run Date
07/22/2015

		Catch Daily	Cumulative	Escapement Daily	Cumulative	In-River Estimate	Total Run
Bristol Bay East	Ugashik	39,000	5,217,497	50,820	1,289,502	0	6,506,999
	Ugashik River			50,820	1,289,502	0	
	Egegik	81,000	8,244,815	25,500	2,055,702	0	10,300,517
	Egegik River			25,500	2,055,702	0	
	Naknek-Kvichak	154,000	15,673,382	85,740	9,096,180	0	24,769,562
	Kvichak River			76,362	7,175,226	0	
Bristol Bay West	Naknek River			9,378	1,920,954	0	
	Nushagak	30,000	5,287,869	68,370	3,354,245	0	8,642,114
	Igushik River			46,416	651,172	0	
	Nushagak River			0	796,684	0	
	Wood River			21,954	1,906,389	0	
	Togiak	4,000	151,543	8,748	55,908	0	207,451
	Togiak River			8,748	55,908	0	
Bristol Bay Totals:		308,000	34,575,106	239,178	15,851,537	0	50,426,643

Sockeye per Drift Delivery for: **July 22**

	Sockeye per Drift Delivery
Ugashik	554
Egegik	663
Naknek-Kvichak	418
Nushagak	356
Togiak	93

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Run Date
07/23/2015

		Catch Daily	Cumulative	Escapement Daily	Cumulative	In-River Estimate	Total Run
Bristol Bay East	Ugashik	16,000	5,234,700	39,246	1,328,748	0	6,563,448
	Ugashik River			39,246	1,328,748	0	
	Egegik	24,000	8,268,498	29,994	2,085,696	0	10,354,194
	Egegik River			29,994	2,085,696	0	
	Naknek-Kvichak	173,000	15,834,211	49,746	9,145,926	0	24,980,137
	Kvichak River			49,746	7,224,972	0	
Bristol Bay West	Naknek River			0	1,920,954	0	
	Nushagak	27,000	5,314,680	15,330	3,369,575	0	8,684,255
	Igushik River			0	651,172	0	
	Nushagak River			0	796,684	0	
	Wood River			15,330	1,921,719	0	
	Togiak	14,000	165,558	9,726	65,634	0	231,192
	Togiak River			9,726	65,634	0	
Bristol Bay Totals:		254,000	34,817,647	144,042	15,995,579	0	50,813,226

Sockeye per Drift Delivery for: **July 23**

	Sockeye per Drift Delivery
Ugashik	711
Egegik	424
Naknek-Kvichak	1023
Nushagak	713
Togiak	132

Test Fishery Port Moller

No recent results found. Potentially weathered out.