

PRE-SEASON RUN SIZE FORECASTS FOR FRASER RIVER SOCKEYE SALMON (*ONCORHYNCHUS NERKA*) IN 2026

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2026

**Canadian Technical Report of
Fisheries and Aquatic Sciences 3795**



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Cat. No. Fs97-6/3795E-PDF ISBN 978-0-662-43742-0 ISSN 1488-5379

<https://doi.org/10.60825/zj4j-jx04>

Correct citation for this publication:

Dionne, K., Lilly, J. 2026. Pre-season Run Size Forecasts for Fraser River Sockeye Salmon (*Oncorhynchus nerka*) in 2026. Can. Tech. Rep. Fish. Aquat. Sci. 3795: v + 260 p.
<https://doi.org/10.60825/zj4j-jx04>

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ABSTRACT

Dionne, K., Lilly, J. 2026. Pre-season Run Size Forecasts for Fraser River Sockeye Salmon (*Oncorhynchus nerka*) in 2026. Can. Tech. Rep. Fish. Aquat. Sci. 3795: v + 260 p.
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Forecasts for the 2026 Fraser River Sockeye salmon returns were prepared with Bayesian statistical models and presented as cumulative probability distributions. The total Fraser River Sockeye return for 2026 has a median estimate of 7,743,000 (80% PI: 1,953,000 to 30,600,000) expected mainly from the Chilko, Quesnel, and Late Shuswap River stocks in the Summer and Late run timing group. Forecasts for eight stocks included environmental covariates, while sibling models were used to calculate the age-5 forecast for 12 stocks. Nearshore sea surface temperature suggest warmer Sea Surface Temperatures (SST) and thus the potential for reduced salmon productivity, while the Pacific Decadal Oscillation (PDO) suggests that sea surface temperatures offshore are more favorable. Fraser River Sockeye are forecast to return in 2026 in numbers similar to the long-term all cycle average of 7.0 million, but below the cycle specific average of 12.9 million. The 2026 forecast represents the lowest forecast on record for the dominant cycle line.

RÉSUMÉ

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Les prévisions concernant les remontes de saumon rouge du fleuve Fraser en 2026 ont été préparées à l'aide de modèles statistiques bayésiens et présentées sous forme de distributions de probabilités cumulées. L'estimation médiane des remontes totales de saumon rouge du fleuve Fraser pour 2026 est de 7 743 000 individus (intervalle de précision à 80 % : de 1 953 000 à 30 600 000 individus), provenant principalement des stocks des rivières Chilko et Quesnel, et de la rivière Shuswap pour la remonte tardive, dans le groupe de montaison estivale et tardive. Les prévisions pour 8 stocks comprenaient des covariables environnementales, et on a utilisé des modèles de classes d'âge jumelles pour calculer les prévisions pour les poissons d'âge 5 de 12 stocks. La température de la surface de la mer près du rivage indique des températures de surface de la mer (TSM) plus chaude et, par conséquent, un risque de baisse de la productivité du saumon, tandis que l'oscillation décennale du Pacifique (ODP) indique que les températures de la surface de la mer au large sont plus favorables. Les remontes du saumon rouge du fleuve Fraser devraient avoir lieu en 2026 en nombres semblables à la moyenne à long terme de tous les cycles, soit 7,0 millions, mais inférieurs à la moyenne propre au cycle, soit 12,9 millions. Les prévisions de 2026 sont les plus faibles jamais enregistrées pour la lignée dominante du cycle.

1. BACKGROUND

1.1 FRASER SOCKEYE SALMON

The Fraser River is the largest watershed in British Columbia and home to all species of Pacific Salmon found in the Eastern Pacific Ocean. Fraser River Sockeye salmon (*Oncorhynchus nerka*) typically demonstrate a four or sometimes five year, lake-type life cycle where juveniles rear in a lake for one full year prior to migrating to the marine environment. There they spend two or three years before returning to spawn in their natal streams. The exception to this life history strategy are the river-type Harrison and Widgeon Sockeye populations that migrate to the Strait of Georgia shortly after egg emergence and return as 3- and 4-year-old adults. Several stocks also display cyclic dominance with one return year being more abundant than the remaining three cycle lines (Grant et al. 2020).

Fraser River Sockeye salmon have historically supported large commercial, recreational, and First Nations harvests (Gilhousen 1992). However, recent productivity trends have become more variable, resulting in both the largest (2010) and lowest (2020) Fraser Sockeye returns in recorded history (Figure 1; Pacific Salmon Commission 2021). In 2017, a Wild Salmon Policy (WSP) status evaluation, and a Committee on the Status of Endangered Wildlife in Canada (COSEWIC) status report both identified persistent patterns of decline in many of the Conservation Units (CUs) or Designatable Units (DUs), which are the discrete and evolutionarily distinct constituent populations of the Fraser River Sockeye aggregate. The WSP process identified seven of the 19 forecasted CUs as being in a state of significant conservation concern, while the COSEWIC status report recommends that these same seven stocks be listed as endangered (Grant et al. 2020, COSEWIC 2017).

The increased variability of returns of Fraser River Sockeye beginning in the 1990s has resulted in reduced predictability by forecast models. Since the 1990s, returns have generally been lower, on average, than forecasts based on long-term average survival (with the exception of several years of larger than expected returns). Several studies have linked ocean warming and environmental volatility associated with climate change to low survival of Fraser Sockeye (Mueter et al. 2002; Connors et al. 2020; MacDonald et al. 2020). Environmental covariates are included in the forecasting process and show mixed signals for the 2026 return. Nearshore sea surface temperature (SST) measured at Entrance Island and Pine Island in the winter and spring preceding smolt entry and during the spring of 2024 (at the time of early marine entry for the 2026 return) show warmer than average conditions which are considered to have a negative impact on sockeye salmon productivity (Figure 3). In contrast, the Pacific Decadal Oscillation (PDO) was cooler than average in 2024 (Figure 3), indicating offshore SST have been more favourable for salmon production. Additionally, a summary of ocean ecosystem indicators used to characterize juvenile marine salmon survival in the Northern California Current put 2024 in the middle of all the years with respect to overall condition ranks (1998-2024) (Figure 9).

Escapement data is collected by DFO staff using a variety of methods. In general, more accurate and precise methods (hydroacoustic and mark-recapture assessments and complete counts at weirs) are used to enumerate larger populations compared to those used to assess smaller populations (ground- or aerial-based visual counts of spawners or carcasses, with an expansion factor applied to the peak or cumulative count (Arbeider et al 2026). Escapement

estimates and ancillary information are provided annually for the forecasting process by DFO Stock Assessment and are the primary driver of the forecasts (Macdonald and Grant 2012).

1.2 FORECASTING

Forecasting salmon returns has been an area of study for generations of fisheries scientists (see Haeseker et al. 2008 for an overview of salmon forecasting methods). Although forecast methods have not changed dramatically over time, there have been innovations both in the modeling frameworks applied and the sophistication of computation (e.g. Cass et al 2006, MacDonald and Grant 2012; Akenhead et al. 2016). The recent low, yet highly variable productivity for most Fraser Sockeye stocks has added additional challenges to forecasting returns, with many years falling at the low end of the forecast distributions. In 2022, the retrospective analysis was updated using a one-step-ahead approach to replace the previous jackknife retrospective analysis that was conducted in 2012 (MacDonald and Grant 2012; Liu and Xu, 2024; Xu et al., 2024). For the 2026 forecast cycle, the retrospective analysis was updated to evaluate model performance over the time period of 2011-2024 to ensure model performance is being measured with the most recent and relevant data.

The Fraser River Sockeye salmon preseason forecast is required to inform pre-season planning of First Nations, recreational, and commercial fisheries and stock assessment programs, and provides informative priors for the in-season run-size assessment programs. It also supports planning decisions of the bilateral Fraser River Panel and provides advice to DFO fisheries managers regarding in-season harvest management of Sockeye salmon (Pacific Salmon Treaty 1985).

2. DATA AND METHODS

2.1 DATA

2.1.1 Sockeye Data

Fraser Sockeye data used in the forecast process includes the following:

Spawners

- Effective Female Spawners (EFS) data are included up to the 2022 brood year for all stocks, except Harrison (2023 brood year), following previous forecasts (DFO 2021; 2022; Appendix D).

Juveniles

- Fry data (age-0+) are available for the Nadina and Weaver artificial spawning channels. The available brood-year time series span 1973 – 2022 for Nadina and 1965 – 2022 for Weaver. Similar fry abundance data are available for the Gates Creek spawning channel for brood years 1968 – 2018. The Gates Creek spawning channel ceased operation in 2019 and is not currently expected to resume operation. Each of these channels also has an unknown proportion of fry production occurring in adjacent natural habitat. Gaps in fry data in the historic time series were infilled using the average historical fry/EFS ratios by stream multiplied by the relevant brood year EFS. This infilling approach is consistent with previous forecasts (Grant et al. 2010; MacDonald and Grant 2012).

- Smolt data (age-1+ and 2+) are available for Cultus (1951 – 2022) and Chilko (1952 – 2022).

Recruitment

- The most recent brood years with complete adult information available for the 2026 forecasts are 2021 for age five recruits, 2022 for age-four recruits, and 2023 for age three recruits from Harrison River, respectively. However, these values are still considered to be preliminary. There were changes in recruitment data between current and previous forecasts due to the run-size adjustment process (return years 2021 and 2022), and recalculation of age composition (return years 2019 and 2020).
- The time series (by brood year) of EFS, juveniles, and recruitment data used to run the models are from 1948-2022 for all stocks except for Nadina (1973-2022), Gates (1968-2018), Scotch (1980-2022), Fennell (1967-2022), Weaver (1965-2022), Portage (1953-2022) and Chilliwack (1998-2022).

2.1.2 Environmental Data

The following environmental data were collected and incorporated in several biological models (used in 2006-2022; See Cass et al. 2006 and MacDonald and Grant 2012 for further details; DFO 2021):

- Pacific Decadal Oscillation (PDO) in the winter preceding outmigration (November to March), with a negative (colder ocean) condition for 2024 (Zhang et al. 1997, Mantua et al. 1997; data available online; Figure 3).

- The average spring monthly sea surface temperature (SST) was calculated for Entrance Island lighthouse (Ei; Strait of Georgia near Nanaimo, B.C.) using data from April to June, and for Pine Island (Pi; northeast corner of Vancouver Island) using data from April to July, for the year of outmigration (data available online; Sébastien Donnet, DFO, Sidney, B.C., pers. comm.; Figure 3). The spring SST variables in 2024 show warmer than average conditions at the Entrance Island and the Pine Island locations. In addition, winter SST indices at Entrance Island (EiW) and Pine Island (PiW), calculated as the mean of December 2023 through January-February of the smolt entry year (2024), were also above average.
- Peak Fraser Discharge (FrD-peak) and average Fraser Discharge (FrD-average) from April to June of the outmigration year were measured at Hope, BC, with 2024 experiencing the lowest peak and average spring freshet discharge levels on record (David Patterson, DFO, Vancouver, BC, pers. comm.; Figure 4).

2.2 METHODS

The 2026 Fraser Sockeye forecasts follows recent forecasting methods that utilize a Bayesian statistical approach to estimate parameters from biological models, and MCMC (Markov Chain Monte Carlo) to assess the uncertainties (Cass et al. 2006; MacDonald and Grant 2012; DFO 2013; DFO 2014; DFO 2015; DFO 2016; DFO 2017; DFO 2018; Hawkshaw et al. 2020a; Hawkshaw et al. 2020b; DFO 2021; Xu and Liu 2023; Dionne and Liu 2024; Dionne and Gao 2025; Dionne, Gao, and Lilly 2025). Visualization tools, including Taylor diagrams and an R Markdown HTML Viewer, originally developed during the 2022 forecast season and updated for the 2026 forecast to incorporate data from 2011–2024, were presented during the 2026 forecast meetings.

Model selection for the 19 major stocks is completed through consensus by expert opinion, where a shortlist of top-ranked models from the retrospective analysis are considered. Model performance and ranking for Fraser Sockeye salmon are visualized using Taylor diagrams and ranking tables based on the one-step-ahead retrospective analyses developed in the 2022 forecast season (Liu and Xu, 2024, Xu et al., 2024). The updated analysis hindcasts run size for the last three generations (2011–2024) for all 27 stocks (19 major, 8 miscellaneous), and is more reflective of recent population dynamics, current productivities, and environmental conditions than analyses incorporating the entire time series. The total and age-specific forecast results from the top-ranked models, including their implied productivities, are presented and compared to the historical time-series of observed recruits and productivity. Preference was given to models that captured the dynamics of recent productivity. Detailed descriptions of all models are provided in Table 4. For miscellaneous stocks with no recruitment data available, forecasts are generally based on brood year escapements and ‘recent’ observed survival rates from proxy stocks (See Appendix A).

Since 2019, a sibling model has been used to forecast productivity for five-year old recruits (4-year-old recruits in the case of Harrison Sockeye), using return data from their brood-year mates that returned the previous year. Descriptions of the original sibling model and recently updated selection criteria for the model can be found in the 2019 and 2020 forecast documents, respectively (Hawkshaw et al. 2020a, 2020b). In the context of 2026, the goal of using a sibling

model is to forecast returns of older age classes by using data from the 2025 return to align the forecast of age-5 fish to the above average productivity trend observed for many stocks in 2025.

3. RESULTS

3.1 SOCKEYE

The 2026 total p50 Fraser River Sockeye return is estimated to be 7,743,000 (80 %PI: 1,953,000 - 30,600,000). This return is forecasted to be lower than the cycle line average return (13.0 million) and similar to the all-years average return (7.0 million; Table 1B). In the last several cycle lines both freshwater and marine survival have shown an increasing trend (Figure 2), and environmental conditions in the marine environment are near average for salmon production (Figure 3).

The 2026 forecast for Early Stuart management unit (MU) is 63,000 (17,000 to 228,000), and was generated using a Ricker model with winter sea surface temperature at Pine Island as a covariate (Ricker EiW) for the 4-year old return and a sibling model for the 5-year-old return. The forecasted proportion of age-4 returns is 48% (Table 3). Three naïve biological models (RS4yr, RS2, RS8yr) ranked highest overall. Among the biological models, Ricker(PiW; Pine Island Winter) ranked highest, followed closely by Ricker(PDO). The RS2 naïve model produced implied productivity values well below those observed in recent years, likely reflecting influence from the 2020 brood year and 2024 return associated with the Big Bar Landslide, and was assumed to not be representative of current productivity conditions. The Ricker(PiW) model was therefore selected based on the strong retrospective performance and implied productivity consistent with recent Early Stuart survival. For 5-year-olds, the sibling model performed well in both the Taylor diagram and retrospective ranking analysis and was selected for the forecast. The sibling model forecast predicts that the Early Stuart return will predominantly be age-5 sockeye in 2026, based on the exceptionally strong return of 4-year-olds in 2025 from the same 2021 brood year.

The total forecasted return for the Early Summer MU, including miscellaneous stocks, is 1,164,000 (318,000 to 3,211,000), or 965,000 (299,000 to 2,849,000) if miscellaneous stocks are excluded. The primary contributing stocks at the p50 forecast are Nadina (620,000, 53% of the total), Early Shuswap (Misc; 177,000) and Scotch (170,000). Nadina was forecasted using a Ricker Cyclic model for the 4-year-old return, which is expected to dominate the returns (99%). Based on the Taylor diagram, the sibling model performed well for forecasting 5-year old returns and was selected. It was also the highest ranked in the retrospective ranking table. It should be noted that there is considerable uncertainty in the forecast for Nadina (205,000 to 1,690,000), as a result of the record-high brood escapement for 4-year-olds in 2022 being well outside the range of observations included in the forecast model. Despite challenging conditions on the spawning grounds in 2022, including elevated temperatures, pre-spawn mortality, and an *Ichthyophthirius multifiliis* ("ich") outbreak, the fry abundance estimate for Nadina spawning channel was the largest on record, indicating strong egg-to-fry survival. For age-4 returns, the RickerCyc model was selected as the top-ranked biological model in the retrospective analysis, outperforming alternative Ricker and naïve models, and producing implied productivity consistent with recent Nadina cycle-line performance.

The Early Shuswap miscellaneous group was forecasted using a Recruitment-per-Spawner model, and spawner recruit data for Scotch and Seymour as a proxy due to lack of stock-specific data, and is expected to be dominated by age-4 returns (99%; Table 3). Scotch was forecasted using a LarkinBasic model, and is also expected to be dominated by age-4 returns (98%). The LarkinBasic model which was selected for Scotch based on its strong retrospective performance and favorable Taylor diagram metrics. The model produced an implied productivity consistent with recent cycle-line behavior and successfully captured recent returns, including the 2022 return, which was close to the median forecast. Compared to alternative models, LarkinBasic provided a more stable estimate without producing unrealistically large forecasts.

The Summer run timing group is expected to be the largest contributor to the 2026 forecast with a forecasted p50 return of 4,305,000 (1,264,000 to 16,475,000). Chilko is predicted to be the largest contributing stock with a forecast of 1,741,000 (604,000 to 4,953,000). Chilko was forecasted using a Larkin model for the 4-year-old return and a sibling model for the 5-year-old return. Although the LarkinBasicCycAge model slightly outranked the sibling model in the retrospective analysis for predicting age-5 returns, the strong age-4 return in 2025 supported selecting the sibling model for age-5, given its strong performance across evaluation metrics and consistency with observed age-class dynamics. Although juvenile-based models were commonly selected for Chilko historically, they have consistently ranked lower than adult-based stock-recruit models in recent years, suggesting that marine survival is currently having a greater impact on Chilko returns than freshwater productivity. For age-4, the LarkinBasic model was selected as the top-ranked biological model, based on lower error metrics than alternatives and implied productivity consistent with recent cycle-line performance. Quesnel is expected to be the second most abundant stock in 2026 with a p50 forecast of 1,592,000 (414,000 to 6,554,000). This forecast was generated using a Ricker model with a Pine Island winter SST covariate. The sibling model performed poorly for age-5 in the Taylor diagram and was excluded from further consideration. Due to limited separation in age-specific model performance, selection focused on total return forecasts. In the retrospective analysis, temperature-based Ricker models consistently ranked highest, with the Ricker(PiW) model showing the strongest overall performance and capturing recent productivity patterns associated with the dominant cycle line. Alternative models, ranked lower or produced unrealistically large forecasts; projections exceeding 4 million were therefore excluded. Late Stuart is expected to be the third most abundant stock within the Summer MU in 2026, with a p50 forecast of 465,000 (63,000 to 3,318,000), which was generated using a recruitment-per-spawner model (RS1) to estimate age-4 returns and a Ricker(Pi) model to estimate age-5 returns. The RS1 model assumes constant survival and estimates returns as the product of brood year effective female spawner (EFS) abundance and the average recruitment-per-spawner observed four years prior to the forecast year. The Ricker(Pi) model was selected as the top-ranked model for the age-5 forecast in the retrospective analysis, and had the strongest performance across error metrics and stable, as well as biologically plausible estimates consistent with recent productivity. Sibling models were not considered due to unresolved genetic stock identification (GSI) issues between Late Stuart and Stellako in the 2025 preliminary return data required for the sibling approach. For age-4 recruits, the RS1 model was selected based on its top retrospective ranking and its ability to capture recent high returns and variability while remaining consistent with recent cycle-line productivity.

The aggregate forecasted return for the Late run timing group is 2,212,000 (354,000 to 10,686,000), with the vast majority expected to be Late Shuswap and Birkenhead Sockeye

(Table 1A). The Late Shuswap forecast was generated using the RickerBasic model for the 4-year-old return and a sibling model for the 5-year-old return. The sibling model had a strong retrospective ranking and performance in the Taylor diagram. Although several alternate Ricker models with environmental covariates ranked highly in the updated retrospective analysis for the 4-year-old return, no single covariate was clearly supported. The abundance of EFS on the 2022 brood year was the lowest on record for the dominant cycle line, followed by drought. The 2022 Late Shuswap brood experienced elevated water temperatures in the spawning and approach areas, delayed spawning, and an early freeze. Subsequent lake surveys indicated reduced fry abundance, with no compensatory increases in fry size or lipid content. This contributed to a decision to select the RickerBasic model, which produced estimates consistent with recent observations, over alternate Ricker models that implied higher productivity. However, it should be noted that the 80% probability interval provided by the RickerBasic and sibling models still included median forecast values for the alternate models. Birkenhead is expected to be the second most abundant Late MU in 2026, with a p50 forecast of 591,000 (164,000 to 2,159,000). Birkenhead was forecasted using a Like-Last-Year (LLY) model for the age-4 returns, where returns are assumed to be equal to those observed in the previous year, and a sibling model for age-5 returns. The sibling model was selected for the age-5 forecast based on its top retrospective ranking, strong Taylor diagram performance, and consistency with the strong age-4 return observed in 2025. For age-4 recruits, naïve models ranked highly in the retrospective analysis and were considered appropriate given recent rebuilding and increasing productivity. Environmental covariate models had implied productivities below recent observations and produced more conservative forecasts, whereas the LLY model produced implied productivities that were better aligned with recent trends. Weaver and Portage are forecasted to contribute 95,000 and 86,000 Sockeye, respectively, to the aggregate return for Lates at the p50 level. The 2026 forecast for Cultus Sockeye is 1,000 (400 to 46,000).

For further details on model selection rationale at the stock level, see Appendix B.

3.2 SUMMARY OF UPDATED RETROSPECTIVE ANALYSIS

The retrospective analysis used to evaluate forecast model performance was updated to include more recent data following the methods outlined in Xu et al., 2024 and Liu and Xu 2024. Using a retrospective analysis to hindcast 2011-2024 Sockeye run sizes revealed that p50 forecasts for this period did not perform well for three out of 19 forecasted stocks (i.e., $r < 0.3$ between observations and estimates). Correlations were at acceptable levels for the remaining 16 major stocks, ranging from 0.4 to 0.99). For 11 major stocks (Appendix C -Taylor diagram), the Sibling model is the best model for forecasting age-5 returns retrospectively, based on the Taylor diagram. For seven stocks, the Sibling model was also top-ranked on at least one age-5 ranking table (all-year, cyclical and other). This model was consequently selected for estimating age-5 run-size for 12 stocks, and combined with either a naïve or biological model for age-4 Sockeye, to estimate total run size for each stock. Models incorporating Chilko juvenile length, Chilko juvenile abundance and their interaction (length*abundance) that were evaluated for forecasting Chilko age-4 returns showed moderate performance on the Taylor diagram, with the top model among these (RickerChilkoLength) ranking only 15th among all models, suggesting these covariates may have limited utility for forecasting at present

Analysis of the newly implemented environmental covariates yielded mixed results. The RickerBasic and PowerBasicJuvenile models incorporating winter SST covariates from

Entrance Island (EiW) and Pine Island (PiW) ranked moderately on the Taylor diagrams for six stocks, and showed performance comparable to the top-performing candidate models for six other stocks. These models also ranked in the top 10 of more than 40 candidate models on the all ages and/or age-4 ranking tables for seven stocks, and achieved median to high rankings for eight and five additional stocks on the all ages and age-4 ranking tables, respectively.

4. DISCUSSION

Fraser River Sockeye are forecasted to return in 2026 at a value similar to the long-term all-cycle average of 7.0 million, but below the long term average for this cycle line 12.9M (Table 1B). However, there are some caveats to consider. Migrating and spawning Sockeye in 2022 may have been adversely affected by record-high Fraser River temperatures during migration and spawning. In addition, nearshore marine temperatures were above average at Pine Island and Entrance Island stations in the winter proceeding smolt outmigration and during the spring smolt outmigration period in 2024. Conversely, the PDO index was below average in 2024, and negative PDO indices have been associated with increased Sockeye prey abundances in the Northeast Pacific and increased Fraser Sockeye productivity (Grant et al. 2019, Peterman et al. 2010). A stoplight chart of ocean indicators generated by the National Oceanic and Atmospheric Administration (NOAA) suggests that overall marine conditions in 2024 were slightly below average for salmon production (Figure 9).

The expected proportion of age-4 fish in the aggregate 2026 Fraser Sockeye return is 86%, which is lower than 2025 and below the long term average of 91% (Table 3). This reflects the productive return in 2025 which is anticipated to spillover to the age-5 component of the 2026 return.

The 2022 Fraser River Sockeye forecast was the first year that the updated retrospective analysis was used for model selection. From 2015 to 2021, forecast performance was exceptionally poor with post-season returns closer to the p10 forecast or lower for all years except 2018 (p50) and 2021 (p75). Forecast performance improved in 2022 and 2023 relative to the previous 10 years, with 2023 being the most accurate forecast on record. However, while the 2023 total return was very close to the pre-season p50 forecast, there was still considerable variability at the MU. Future retrospective work will look to improve MU and stock-level forecasts. The total Fraser River Sockeye return in 2025 was exceptional, representing only the second year on record (the other being 2010) which returns exceeded the p75 forecast level at both the Fraser aggregate level and for nearly all individual stocks. Notably, none of the forecast models successfully predicted the observed productivity in 2025, highlighting limitations in the current forecasting framework. For the 2026 forecast, the retrospective analysis was updated to the most recent time period of 2011-2024, which should help to ensure the forecasting models are capturing recent relationships between adult returns and environmental and biological covariates, as opposed to historical correlations that are no longer relevant in the current environment. The improved performance of the forecast since 2022 can likely be attributed both to the implementation of these updated methods, and to recent environmental conditions, particularly marine conditions, that were closer to long-term averages compared to those during the preceding 10 years.

The retrospective results suggest that models emphasizing short-term dynamics are increasingly favoured, highlighting the limitations of approaches that assume stable historical relationships in an increasingly unstable environment. The inability of existing models to anticipate the magnitude of the 2025 returns indicates that important productivity processes are not currently represented in the forecasting framework. To address this, forecast performance may be improved through flexible modelling frameworks that allow productivity to vary through time, including state-space and biological models with time varying parameters. Planned future work includes the development of Multivariate Autoregressive State-Space Models (MARSS), the incorporation of time-varying productivity within Larkin, Power, and Ricker formulations, and exploration of alternative approaches such as Empirical Dynamic Models (EDM) and Generalized Additive Mixed Effects Models (GAMMs). Continued annual retrospective updating will remain essential to ensure that stock-specific forecasts rely on the most appropriate and informative models available.

Beginning in 2020, the development of sibling models has resulted in improved forecasts of the age-5 component of the Fraser Sockeye return. These models should continue to be used when they are highly ranked and implied productivity aligns with recent observations.

The updated retrospective analysis showed an increased ranking of naïve models, accompanied by declines in many previously high-performing biological models that included environmental covariates (Appendix D). Additional covariates were evaluated as to whether they improved retrospective performance, including winter SST preceding outmigration, Chilko smolt abundance, Chilko smolt length, and their interaction. Among these, overwinter SST (particularly at Pine Island) outperformed spring SST, consistent with the hypothesis that winter conditions more directly influence prey availability during early marine residence and thus cohort survival. In contrast, Chilko smolt metrics did not improve model performance for forecasting Chilko returns. Although some covariates showed apparent promise, their application requires a clear biological rationale to avoid spurious relationships. For example, inclusion of Fraser River discharge improved model rankings for Nadina and Late Shuswap stocks; however, the estimated effects were inconsistent in direction. Discharge was associated with increased productivity relative to the base Ricker model for Nadina but decreased productivity for Late Shuswap. If discharge were mechanistically relevant, a consistent directional effect would be expected across stocks. Instead, opposing responses likely reflect underlying temporal trends (increasing returns for Nadina and declining returns for Late Shuswap during a period of below-average discharge), highlighting a limitation of retrospective analyses. A similar issue was observed for the previous retrospective analysis which identified North Pacific salmon abundance (particularly pink salmon) as a strong covariate (Liu and Xu, 2024; Xu et al. 2024). In this case, model evaluation coincided with a period of consistently elevated pink salmon abundance. However, beginning in 2023, pink abundance became more variable, with alternating high and low years. Selection of these covariates in 2025 would have resulted in lower forecasts and reduced predictive performance. Collectively, these findings underscore the limited robustness of environmental covariates in stock–recruit models when not supported by well-established biological mechanisms, and reinforce the need for expert evaluation of model behavior within and across stocks.

5. CONCLUSIONS

The 2026 Fraser Sockeye forecast of 7,743,000 (1,953,000 to 30,600,000) is among the top 30% of observed returns for the available time series, due in large part to the relatively large brood escapement in 2022 on the dominant cycle line(Figure 1). However, if realized, the 2026 return would be among the lowest returns on the dominant cycle line. Additionally, the 2026 forecast is unusual in that the Summer MU is projected to contribute more than the Late MU, with returns for the Chilko and Quesnel stocks both predicted to exceed that for the highly cyclical Late Shuswap stock, which normally dominates this cycle line.

Forecast performance in the decade prior to 2022 was generally poor, as it failed to capture a trend of reduced productivity. Recent updates and refinements to the retrospective analysis have better captured current productivity and population dynamics, which has led to improvements in forecast accuracy. Moving forward, updates to the retrospective analysis will occur annually in order to best capture shifts in model ranking that are reflective of productivity trends and evolving population dynamics.

6. Tables

Table 1A. The 2026 Fraser River Sockeye forecast. Forecasts are presented from their 10% to 90% probability levels (probability that returns will be at or below the specified run size). At the median of the forecast distribution (50% probability level), there is a one in two chance the return will fall above or below the specified forecast value for each stock, based on the historical data. Results above 1,000 have been rounded to the nearest 1,000; between 100 and 1,000 to the nearest 100; and between 10 and 100 to the nearest 10.

Run timing group Stocks	Forecast Model	Probability that Return will be at/or Below Specified Run Size				
		10%	25%	50%	75%	90%
Early Stuart	<i>Ricker(PiW)4Sibling5</i>	17,000	31,000	63,000	122,000	228,000
Early Summer Total		318,000	607,000	1,164,000	2,049,000	3,211,000
Total excluding misc. stocks		299,000	524,000	965,000	1,727,000	2,849,000
Bowron	<i>Ricker(PiW)</i>	3,000	6,000	10,000	20,000	35,000
Upper Barriere (Fennell)	<i>Ricker(PiW)Sibling5</i>	2,000	5,000	10,000	20,000	39,000
Gates	<i>LarkinBasic4Sibling5</i>	5,000	9,000	17,000	33,000	58,000
Nadina	<i>RickerCyc4Sibling5</i>	205,000	348,000	620,000	1,083,000	1,690,000
Pitt	<i>PowerBasicCycAge4Sibling5</i>	15,000	26,000	44,000	76,000	127,000
Scotch	<i>LarkinBasic</i>	42,000	81,000	170,000	325,000	606,000
Seymour	<i>Ricker(Pi)4Sibling5</i>	27,000	50,000	94,000	170,000	294,000
Misc (EShu)	<i>R/S</i>	16,000	76,000	177,000	279,000	289,000
Misc (Taseko)	<i>R/S</i>	500	1,000	4,000	5,000	5,000
Misc (Chilliwack)	<i>R/S</i>	700	2,000	7,000	15,000	26,000
Misc (Nahatlatch)	<i>R/S</i>	1,000	3,000	11,000	24,000	42,000
Summer Total		1,264,000	2,260,000	4,305,000	8,685,000	16,475,000
Total excluding misc. stocks		1,263,000	2,258,000	4,300,000	8,674,000	16,454,000
Chilko	<i>LarkinBasic4Sibling5</i>	604,000	999,000	1,741,000	2,943,000	4,953,000
Late Stuart	<i>RS14Ricker(Pi)5</i>	63,000	163,000	465,000	1,298,000	3,318,000
Quesnel	<i>Ricker(PiW)</i>	414,000	811,000	1,592,000	3,517,000	6,554,000
Stellako	<i>Ricker(EiW)</i>	144,000	208,000	339,000	560,000	884,000
Harrison	<i>LLY3Sibling4</i>	25,000	51,000	118,000	272,000	599,000
Raft	<i>LLY4Sibling5</i>	14,000	25,000	45,000	84,000	147,000
Misc (N. Thomp. Tribes)	<i>R/S</i>	100	200	400	1,000	2,000
Misc (N. Thomp River)	<i>R/S</i>	900	2,000	3,000	9,000	17,000
Misc (Widgeon)	<i>R/S</i>	10	40	900	1,000	2,000
Late Total		354,000	870,000	2,212,000	5,471,000	10,686,000
Total excluding misc. stocks		354,000	868,000	2,188,000	5,435,000	10,641,000
Cultus	<i>PowerJuv(PiW)</i>	400	700	1,000	3,000	4,000
Late Shuswap	<i>RickerBasic4Sibling5</i>	140,000	469,000	1,415,000	3,890,000	7,748,000
Portage	<i>RickerCyc</i>	31,000	53,000	86,000	149,000	242,000
Weaver	<i>PowerJuv(PiW)4Sibling5</i>	18,000	43,000	95,000	229,000	487,000
Birkenhead	<i>LLY4Sibling5</i>	164,000	302,000	591,000	1,165,000	2,159,000
Misc Harrison/Lillooet	<i>R/S</i>	400	1,000	24,000	36,000	46,000
TOTAL SOCKEYE SALMON		1,953,000	3,767,000	7,743,000	16,328,000	30,600,000
Total Sockeye excluding misc. stocks		1,933,000	3,681,000	7,517,000	15,958,000	30,171,000

Table 1B. Fraser Sockeye brood-year effective female spawners (EFS, except smolts for Cultus) for the four- and age-5 recruits returning in 2026 (2022 and 2021 brood years). Brood year EFS are colour-coded by comparing to the cycle-line average from the historical time series (start years vary; “Mean EFS, Cyc. Years” column). Fraser Sockeye average run sizes are presented across all years and for the 2026 cycle-line for each stock. Median 2026 forecast returns for non-miscellaneous stocks are compared to cycle averages for colour-coding (“Mean Run Size, Cyc. Years” column). Red, yellow, and green shading represents below, near, and above average, respectively. With the near-average range defined as average +/- 0.5 standard deviation of historical time series. *For Harrison, 2023 EFS are presented in the 2021 EFS column.

Run Timing Group Stocks	2022 EFS	2021 EFS	Mean EFS		2025 FC Return	Mean Run Size	
			All Years	Cyc. Years		Stocks	Cyc. Years
Early Stuart	5,000	26,000	38,000	18,000	63,000	Early Stuart	131,000
Early Summer (excl. misc.)	163,000	46,000	63,000	113,000	965,000	Early Summer (excl. misc.)	910,000
Bowron	2,000	2,000	4,000	3,000	10,000	Bowron	24,000
Upper Barriere	3,000	500	3,000	3,000	10,000	Upper Barriere	18,000
Gates	1,000	16,000	4,000	3,000	10,000	Gates	17,000
Nadina	106,000	7,000	11,000	12,000	620,000	Nadina	108,000
Pitt	15,000	9,000	14,000	13,000	44,000	Pitt	57,000
Scotch	23,000	8,000	9,000	32,000	170,000	Scotch	346,000
Seymour	14,000	5,000	18,000	48,000	94,000	Seymour	341,000
Misc(EShu)	34,000	3,000	9,000	28,000	177,000	Misc(EShu)	NA
Misc(Taseko)	1,000	700	1,000	700	4,000	Misc(Taseko)	NA
Misc(Chilliwack)					7,000	Misc(Chilliwack)	NA
Misc(Nahatlatch)					11,000	Misc(Nahatlatch)	NA
Summer (excl. misc.)	1,018,000	868,000	527,000	584,000	4,300,000	Summer (excl. misc.)	3,662,000
Chilko	484,000	540,000	226,000	273,000	1,742,000	Chilko	1,558,000
Late Stuart	42,000	191,000	66,000	27,000	465,000	Late Stuart	240,000
Quesnel	415,000	55,000	147,000	164,000	1,592,000	Quesnel	1,217,000
Stellako	57,000	62,000	54,000	76,000	339,000	Stellako	578,000
Harrison*	18,000	19,000	30,000	42,000	118,000	Harrison	47,000
Raft	2,000	2,000	4,000	3,000	45,000	Raft	22,000
Misc(N. Thomp. Tribs)					400	Misc(N. Thomp. Tribs)	NA
Misc(N. Thomp. River)					3,000	Misc(N. Thomp. River)	NA
Misc (Widgeon)					900	Misc (Widgeon)	NA
Late (excl. misc.)	468,000	82,000	380,000	1,227,000	2,188,000	Late (excl. misc.)	8,236,000
Cultus	300	70	800	600	1,000	Cultus	29,000
Late Shuswap	377,000	20,000	319,000	1,135,000	1,415,000	Late Shuswap	7,244,000
Portage	11,000	2,000	3,000	9,000	86,000	Portage	75,000
Weaver	21,000	36,000	17,000	26,000	95,000	Weaver	482,000
Birkenhead	60,000	24,000	39,000	57,000	591,000	Birkenhead	405,000
Misc(Non-Shuswap)	NA	NA	NA	NA	24,000	Misc(Non-Shuswap)	NA
Total Sockeye	1,654,000	1,022,000	1,007,000	1,0943,000	7,516,000	Total Sockeye	12,939,000

Table 2. Geometric average age-4 recruits-per-EFS for each of the forecast Fraser Sockeye stocks presented for the following: the entire time series of brood years: 1948-2021, peak generational (4-year) geometric average, the most recent three generations (2010-2021). Cultus is presented as age-4 recruits-per-smolt. Forecast age-4 recruits-per-EFS associated with the various probability levels of the 2026 forecast are presented for comparison. Red (< average), yellow (average) and green (>average), with the average range defined as average $\pm$ 0.5 standard deviation of historical time series.

Run-timing Group, Stock	Geo. Average R ₄ /EFS	Peak Geo. Ave. R ₄ /EFS	Min. Geo. Ave. R ₄ /EFS	Recent Gen. R ₄ /EFS (2010- 2021)	2026 Forecast R ₄ /EFS by Probability Level				
					10%	25%	50%	75%	90%
Early Stuart	6.08	24.47	1.42	5.35	1.26	2.03	3.84	6.47	10.78
Early Summer									
Bowron	6.19	20.42	0.66	5.82	0.8	1.67	3.88	8.36	17.36
Upper Barriere	5.39	53.49	0.46	3.14	0.68	1.30	2.91	6.04	11.64
Gates	7.84	41.01	1.06	5.18	2.53	4.57	8.24	15.98	27.01
Nadina	5.42	13.47	1.35	4.39	1.92	3.26	5.79	10.10	15.73
Pitt ^a	2.97	10.38	0.46	1.97	0.23	0.45	0.86	1.51	2.66
Scotch	5.58	21.5	1.16	3.69	1.65	3.34	7.18	13.70	26.32
Seymour	6.49	29.24	1.08	3.01	1.92	3.61	6.76	12.04	20.76
Misc (Early Shuswap) ^b					0.5	2.2	5.2	8.1	8.4
Misc (Taseko) ^b					0.5	1	3.8	4.9	5.2
Misc (Chilliwack) ^b					0.3	1.1	3.4	6.8	12.2
Misc (Nahatlatch) ^b					0.3	1.1	3.4	6.8	12.2
Summer									
Chilko	5.87	25.28	0.71	2.88	1.1	1.8	3.12	5.20	8.72
Late Stuart	7.87	57.25	2.08	4.16	1.34	3.29	8.95	24.34	59.89
Quesnel	7.25	31.38	0.57	2.97	0.71	1.58	3.37	7.8	15.6
Stellako	5.83	16.32	0.72	2.98	1.11	2.03	3.59	6.9	12.07
Harrison ^c	5.63	33.76	0.45	2.34	0.49	0.94	1.92	3.95	7.54
Raft	5.17	14.31	0.43	4.15	6.48	10.99	19.76	35.54	60.27
Misc (N. Thomp. Tribs) ^b					0.5	1.1	3.3	6.3	23.4
Misc (N. Thomp River) ^b					0.5	1.1	3.3	6.3	23.4
Misc (Widgeon) ^b					0.1	0.4	8.7	13.1	16.5
Late									
Cultus ^d	0.03	0.06	0.001	0.02	1.08	2.24	4.27	9.17	16.54
Late Shuswap	5.02	21.23	0.22	2.90	0.37	1.24	3.75	10.27	20.35
Portage	9.91	69.07	1.26	3.51	2.88	4.91	8.02	13.94	22.86
Weaver	9.50	41.81	0.82	6.75	0.62	1.55	3.53	8.76	18.79
Birkenhead	4.59	21.53	0.23	4.03	1.53	2.94	6.06	12.49	23.94
Misc Lillooet-Harrison ^b					0.1	0.4	7.8	11.7	14.7

a. Pitt displayed as Age-5 survival, therefore recent generation is 2008-2019.

b. Naïve (non-biological) models do not have recruitment time series; so averages could not be compiled

c. Harrison is presented as total survival;

d. Cultus survivals are presented as marine survival; recruits-per-juvenile.

Table 3. Four- and age-5 and total 2026 Fraser Sockeye median (50% probability) forecasts for each stock. The four- and age-5 proportions of the total median forecast are presented in the final two columns. Values below 1,000 were rounded to the nearest 100, and values below 100 were rounded to the nearest 10, rather than the nearest 1,000, in order to demonstrate age distributions. Harrison three-year-old returns are presented in the age-5 column.

Sockeye stock/timing group	2026 Fraser Sockeye Forecasts				
	Age-4 Return	Age-5 Return	Total Return	Age-4 Proportion	Age-5 Proportion
	50%	50%	50%		
Early Stuart	20,321	42,346	62,667	48%	68%
Early Summer					
Bowron	5,922	4,521	10,443	57%	43%
Upper Barriere (Fennell)	7,343	2,454	9,797	75%	25%
Gates	10,680	6,040	16,720	64%	36%
Nadina	612,446	7,611	620,057	99%	1%
Pitt	13,057	31,402	44,459	29%	71%
Scotch	164,528	4,998	169,526	97%	3%
Seymour	91,595	2,791	94,386	97%	3%
Misc (EShu)	175,395	1,265	176,660	99%	1%
Misc (Taseko)	3,641	259	3,900	93%	7%
Misc (Chilliwack)	5,830	916	6,746	86%	14%
Misc (Nahatlatch)	8,572	2,411	10,983	78%	22%
Summer					
Chilko	1,510,829	230,919	1,741,748	87%	13%
Late Stuart	372,122	92,754	464,876	80%	20%
Quesnel	1,399,496	192,381	1,591,877	88%	12%
Stellako	204,959	134,024	338,983	60%	40%
Harrison	60,854	35,071	95,925	63%	37%
Raft	35,192	10,043	45,235	78%	22%
Misc (N. Thomp. Tribs)	260	129	389	66%	34%
Misc (N. Thomp River)	2,063	1,063	3,126	66%	34%
Misc (Widgeon)	577	340	917	63%	37%
Late					
Cultus	1,135	129	1,264	90%	10%
Late Shuswap	1,410,175	4,915	1,415,090	100%	0%
Portage	84,844	1,096	85,940	99%	1%
Weaver	73,294	21,754	95,048	77%	23%
Birkenhead	364,395	226,219	590,614	62%	38%
Misc(Non-Shuswap)	12,843	11,460	24,303	53%	47%
Total	6,652,368	1,069,311	7,721,679	86%	14%

Table 4. List of candidate models acronyms, organized by their two broad categories (non-parametric/naïve and biological) with descriptions. Models are described in detail in Appendices 1 to 3 of Grant et al. (2010). Where applicable, models use effective female spawner data (EFS) as a predictor variable unless otherwise indicated by '(juv)' or '(smolt)' next to the model (Tables 1A), where fry or smolt data are used instead.

MODEL CATEGORY	DESCRIPTION
A. Non-Parametric (Naïve) Models	
LLY	Return from the previous year
R1C	Return from 4 years before to forecast year
R2C	Average return from 4 and 8 years before the forecast year
RAC	Average return on the forecast cycle line for all years
TSA	Average return across all years
RS1 (or RJ1)	Product of average survival from 4 years before the forecast year and the forecast brood year EFS (or juv/smolt)
RS2 (or RJ2)	Product of average survival from 4 and 8 years before the forecast year and the forecast brood year EFS (or juv/smolt)
RS4yr (or RJ4yr)	Product of average survival from the last 4 consecutive years and the forecast brood year EFS (or juv/smolt)
RS8yr (or RJ8yr)	Product of average survival from the last consecutive 8 years and the forecast brood year EFS (or juv/smolt)
MRS (or MRJ)	Product of average survival for all years and the forecast brood year EFS (or juv/smolt)
RSC (or RJC)	Product of average cycle-line survival (entire time series) and the forecast brood year EFS (or juv/smolt)
R/S (used for miscellaneous stocks)	Product of average survival on time series for specified stocks and the forecast brood year EFS
B. Biological Models	
Power	Bayesian power model, see Appendix 2 of Grant et al. 2010
Power-cyc	Same as above, using cycle line data only
Ricker	Bayesian Ricker model, see Appendix 2 of Grant et al. 2010
Ricker-cyc	Same as above, using cycle line data only
Larkin	Bayesian Larkin model, see Appendix 2 of Grant et al. 2010
Sibling	Bayesian sibling model, see 2.2.1 of Hawkshaw et al. 2020a
C. Biological Models Covariates	(e.g. Power (FrD-mean))
FrD-mean, AprFrD, MayFrD, JunFrD	Mean Fraser discharge (April - June), Mean April flow, May flow, June flow
FrD-peak	Peak Fraser Discharge
Ei, AprEi, MayEi, JunEi, JulEi, EiW	Mean Entrance Island spring-summer sea-surface temperature (SST) (April-July), Mean April SST, May SST, June SST, July SST, Mean winter SST (Dec-Feb)
Pi, MayPi, JunPi, JulPi, PiW	Mean Pine Island spring-summer SST (May-July), Mean May SST, June SST, July SST, Mean winter SST (Dec – Feb)
PDO	Pacific Decadal Oscillation

Table 5. Total Fraser Sockeye forecasts for 1998 to 2025 from the 10% to 90% p-levels, where available. The forecast value (or values) that corresponded most closely to the actual return is highlighted. For returns that fell above the 50% p-level, the cells are highlighted green. For returns that fell at the 50% p-level, cells are highlighted yellow. Returns falling below the 50% p-level are highlighted orange, and below the 25% p-level are highlighted red. *Returns for 2025 are preliminary based on in-season estimates only at the time of this publication.

Return Year	Forecast Probability Level						Actual Returns
	<10%	10%	25%	50%	75%	90%	
1998	NA	4,391,000	6,040,000	6,822,000	11,218,000	18,801,000	10,870,000
1999	NA	3,067,000	4,267,000	4,843,000	8,248,000	14,587,000	3,640,000
2000	NA	1,487,000	2,449,000	4,304,000	7,752,000	NA	5,200,000
2001	NA	3,869,000	6,797,000	12,864,000	24,660,000	NA	7,190,000
2002	NA	4,859,000	7,694,400	12,915,900	22,308,500	NA	15,130,000
2003	NA	1,908,000	2,742,000	3,141,000	5,502,000	9,744,000	4,890,000
2004	NA	1,858,000	2,615,000	2,980,000	5,139,000	9,107,000	4,180,000
2005	NA	5,149,000	8,734,000	16,160,000	30,085,000	53,191,000	7,020,000
2006	NA	5,683,000	9,530,000	17,357,000	31,902,000	56,546,000	12,980,000
2007	NA	2,242,500	3,602,000	6,247,000	11,257,000	19,706,000	1,510,000
2008	NA	1,258,000	1,854,000	2,899,000	4,480,000	7,057,000	1,740,000
2009	NA	3,556,000	6,039,000	10,578,000	19,451,000	37,617,000	1,590,000
2010	NA	5,360,000	8,351,000	13,989,000	23,541,000	40,924,000	28,250,000
2011	NA	1,700,000	2,693,000	4,627,000	9,074,000	15,086,000	5,110,000
2012	NA	743,000	1,203,000	2,119,000	3,763,000	6,634,000	2,050,000
2013	NA	1,554,000	2,655,000	4,765,000	8,595,000	15,608,000	4,130,000
2014	NA	7,237,000	12,788,000	22,854,000	41,121,000	72,014,000	20,000,000
2015	NA	2,364,000	3,824,000	6,778,000	12,635,000	23,580,000	2,120,000
2016	NA	814,000	1,296,000	2,271,000	4,227,000	8,181,000	853,000
2017	NA	1,315,000 ^R	2,338,000	4,432,000	8,873,000	17,633,000	1,641,000
2018	NA	5,265,000	8,423,000	13,981,000	22,937,000	36,893,000	10,675,000
2019	NA	1,832,000	2,979,000	5,056,000	9,133,000	15,313,000	564,000
2020	NA	275,000	486,000	924,000	1,834,000	3,573,000	288,000
2021	NA	313,000	624,000	1,330,000	2,775,000	5,496,000	2,549,000
2022	NA	2,374,000	4,662,000	9,775,000	20,395,000	41,707,000	6,886,000
2023	NA	453,000	800,000	1,564,000	3,185,000	5,952,000	1,653,000
2024	NA	167,000	299,000	567,000	1,121,000	2,173,000	889,000
2025	NA	736,000	1,404,000	2,947,000	6,392,000	13,140,000	8,875,000*

Table 6. Stock composition of 2020-2022 Brood Years and 2026 median forecast (excluding misc. stocks). The five largest stocks in each column are highlighted in bold font, and the largest stock marked in red.

Stock	2020 EFS	2021 EFS	2022 EFS	2026 Median Forecast Return
Early Stuart	0%	2%	0%	1%
Early Summer				
Bowron	0%	0%	0%	0%
Upper Barriere (Fennell)	1%	0%	0%	0%
Gates	3%	2%	0%	0%
Nadina	12%	1%	6%	8%
Pitt	3%	1%	1%	0%
Scotch	0%	1%	1%	1%
Seymour	0%	0%	1%	1%
Summer				
Chilko	21%	51%	29%	22%
Late Stuart	2%	19%	3%	6%
Quesnel	0%	5%	25%	21%
Stellako	17%	6%	3%	4%
Harrison	39%	4%	1%	2%
Raft	2%	0%	0%	1%
Late				
Cultus	0%	0%	0%	0%
Late Shuswap	0%	2%	23%	18%
Portage	0%	0%	1%	1%
Weaver	0%	3%	1%	1%
Birkenhead	1%	2%	4%	8%
Total Number	132,000	1,059,000	1,655,000	7,743,000

Table 7. Overview of model selections for return-years 2022, 2025 and 2026 forecast. Models that changed from 2025 to 2026 are bolded. See Appendix 3 for stock-specific model choice rationales.

Year/Model	2022	2025	2026
Early Stuart	<i>Ricker(Ei)</i>	<i>Ricker(Ei)</i>	<i>Ricker(PiW)4Sibling5</i>
Early Summer			
Bowron	<i>Ricker(Ei)</i>	<i>R1C4/Sibling5</i>	<i>Ricker(PiW)</i>
Upper Barriere	<i>Ricker(Pi)4/Sibling5</i>	<i>LLY</i>	<i>Ricker(PiW)4Sibling5</i>
Gates	<i>LLY4/Sibling5</i>	<i>R2C</i>	<i>LarkinBasic4Sibling5</i>
Nadina	<i>RickerFrDpeak4/Sibling5</i>	<i>RickerCyc4/Sibling5</i>	<i>RickerCyc4Sibling5</i>
Pitt	<i>LLY4/Sibling5</i>	<i>Larkin4/Sibling5</i>	<i>PowerBasicCycAge4Sibli</i>
Scotch	<i>Larkin4/Sibling5</i>	<i>Larkin4/Sibling5</i>	<i>LarkinBasic</i>
Seymour	<i>Ricker(Ei)4/Sibling5</i>	<i>Ricker(Pi)</i>	<i>Ricker(Pi)4Sibling5</i>
Misc (EShu)	<i>R/S</i>	<i>R/S</i>	<i>R/S</i>
Misc (Taseko)	<i>R/S</i>	<i>R/S</i>	<i>R/S</i>
Misc (Chilliwack)	<i>Power4/Sibling5</i>	<i>R/S</i>	<i>R/S</i>
Misc (Nahatlatch)	<i>R/S</i>	<i>R/S</i>	<i>R/S</i>
Summer			
Chilko	<i>Ricker(Ei)4/Sibling5</i>	<i>RickerCyc4/Sibling5</i>	<i>LarkinBasic4/Sibling5</i>
Late Stuart	<i>RickerFRDMn4/Sibling5</i>	<i>RS14/Sibling5</i>	<i>RS14/Ricker(Pi)5</i>
Quesnel	<i>Ricker(Ei)</i>	<i>Ricker(Ei)</i>	<i>Ricker(PiW)</i>
Stellako	<i>Larkin4/Sibling5</i>	<i>Larkin4/Sibling5</i>	<i>Ricker(EiW)</i>
Harrison	<i>Ricker(Ei)Even3/Sibling4</i>	<i>LLY3/Sibling4</i>	<i>LLY3/Sibling4</i>
Raft	<i>LLY4/Sibling5</i>	<i>LLY4/Sibling5</i>	<i>LLY4/Sibling5</i>
Misc (N. Thomp. Tribs)	<i>R/S</i>	<i>R/S</i>	<i>R/S</i>
Misc (N. Thomp River)	<i>R/S</i>	<i>R/S</i>	<i>R/S</i>
Misc (Widgeon)	<i>R/S</i>	<i>R/S</i>	<i>R/S</i>
Late			
Cultus	<i>PowerJuv (Pi)</i>	<i>PowerJuv(Pi)</i>	<i>PowerJuv(PiW)</i>
Late Shuswap	<i>Ricker(Ei)</i>	<i>Ricker(Pi)4/Sibling5</i>	<i>RickerBasic4Sibling5</i>
Portage	<i>RickerCyc</i>	<i>Ricker(Ei)</i>	<i>RickerCyc</i>
Weaver	<i>PowerJuv(Pi)4/Sibling5</i>	<i>RickerCyc4/Sibling5</i>	<i>PowerJuv(PiW)4/Sibling5</i>
Birkenhead	<i>Ricker(Ei)</i>	<i>Ricker(Pi)/Sibling5</i>	<i>LLY4/Sibling5</i>
Misc(Non-Shuswap)	<i>R/S</i>	<i>R/S</i>	<i>R/S</i>

7. FIGURES

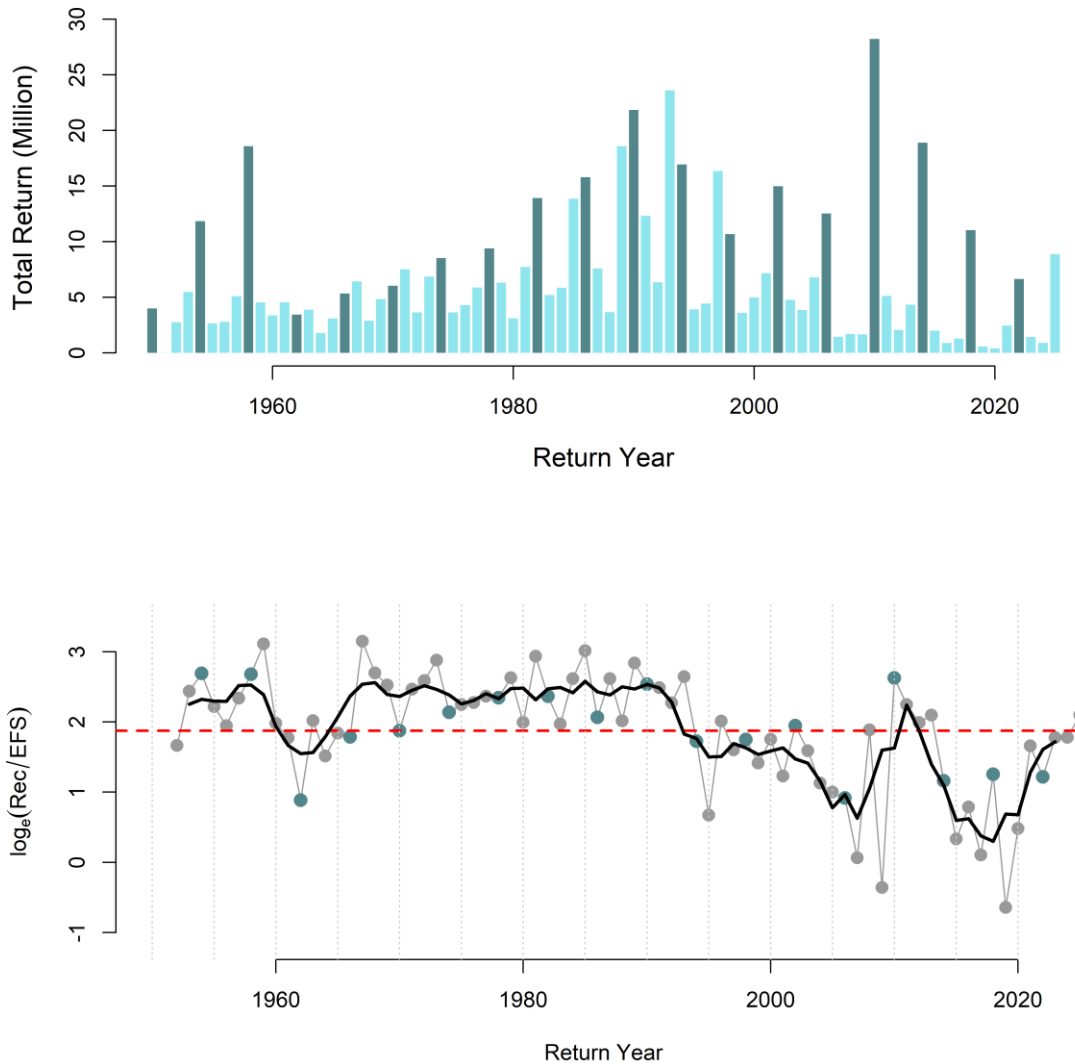


Figure 1. Total returns and overall productivity of Fraser Sockeye: Top panel shows total adult annual returns (note that adult returns in 2025 are preliminary); Bottom panel shows overall Fraser Sockeye productivity ($\log_e(\text{recruits} / \text{effective female spawners})$) up to the 2025 return year for the 19 stocks with long time series of spawner and recruit estimates. Points represent annual productivity and the black line represents the smoothed four-year running average. The dashed horizontal red line is the time-series average. In both panels, dark blue represents the 2026 cycle line.

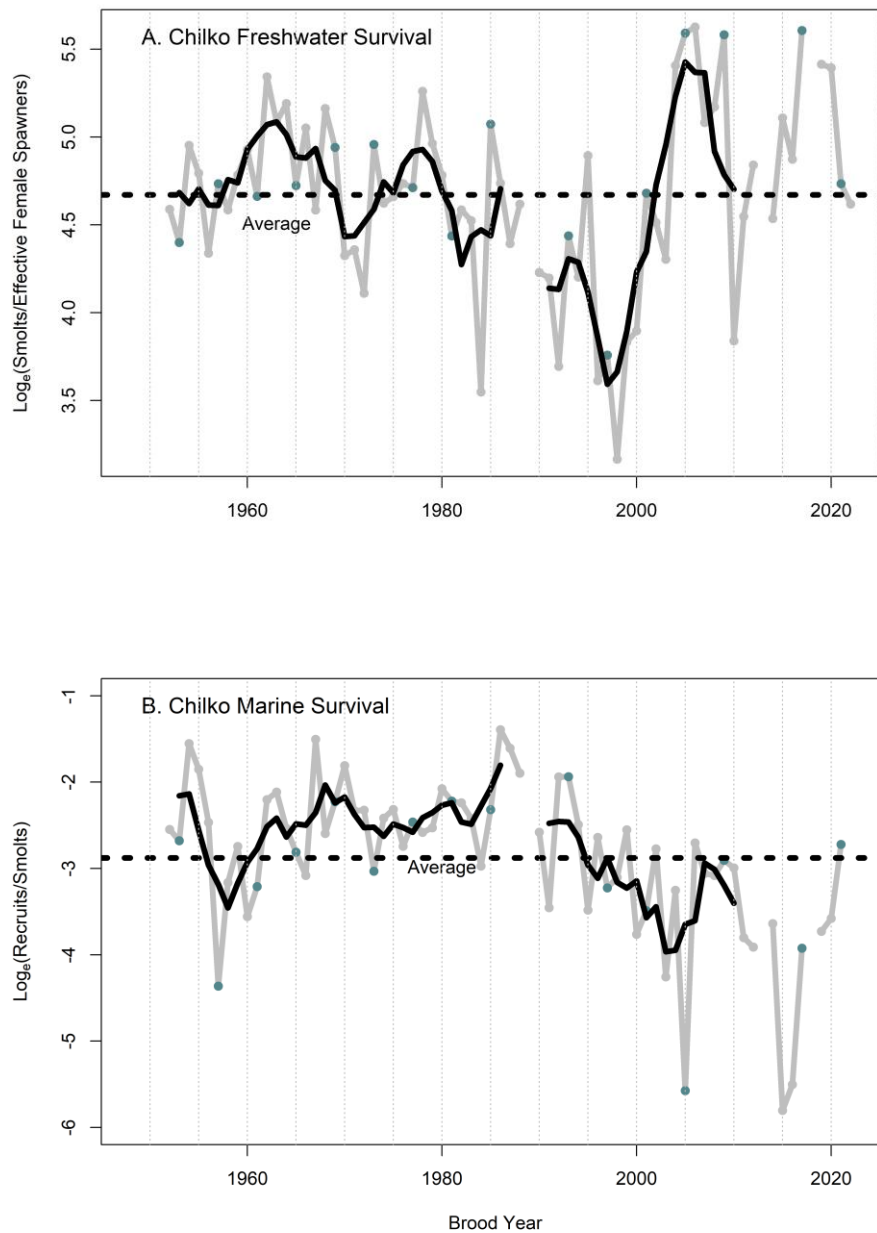


Figure 2. A. Annual freshwater survival (log_e smolts/effective female spawners; filled grey dots and lines); dark blue circle represents the 2026 cycle line. The black line represents the smoothed four-year running average survival and the black dashed lines indicate average survival. Note that no smolt assessment was conducted in the 2013 and 2018 brood year representing a gap. B. Annual 'marine' (log_e recruits/smolt) survival (filled grey circles and lines). Marine survival includes the period of time smolts spend migrating from the outlet of Chilko Lake (where they are enumerated) to when they return as adults and includes their downstream migration in the Fraser River as smolts.

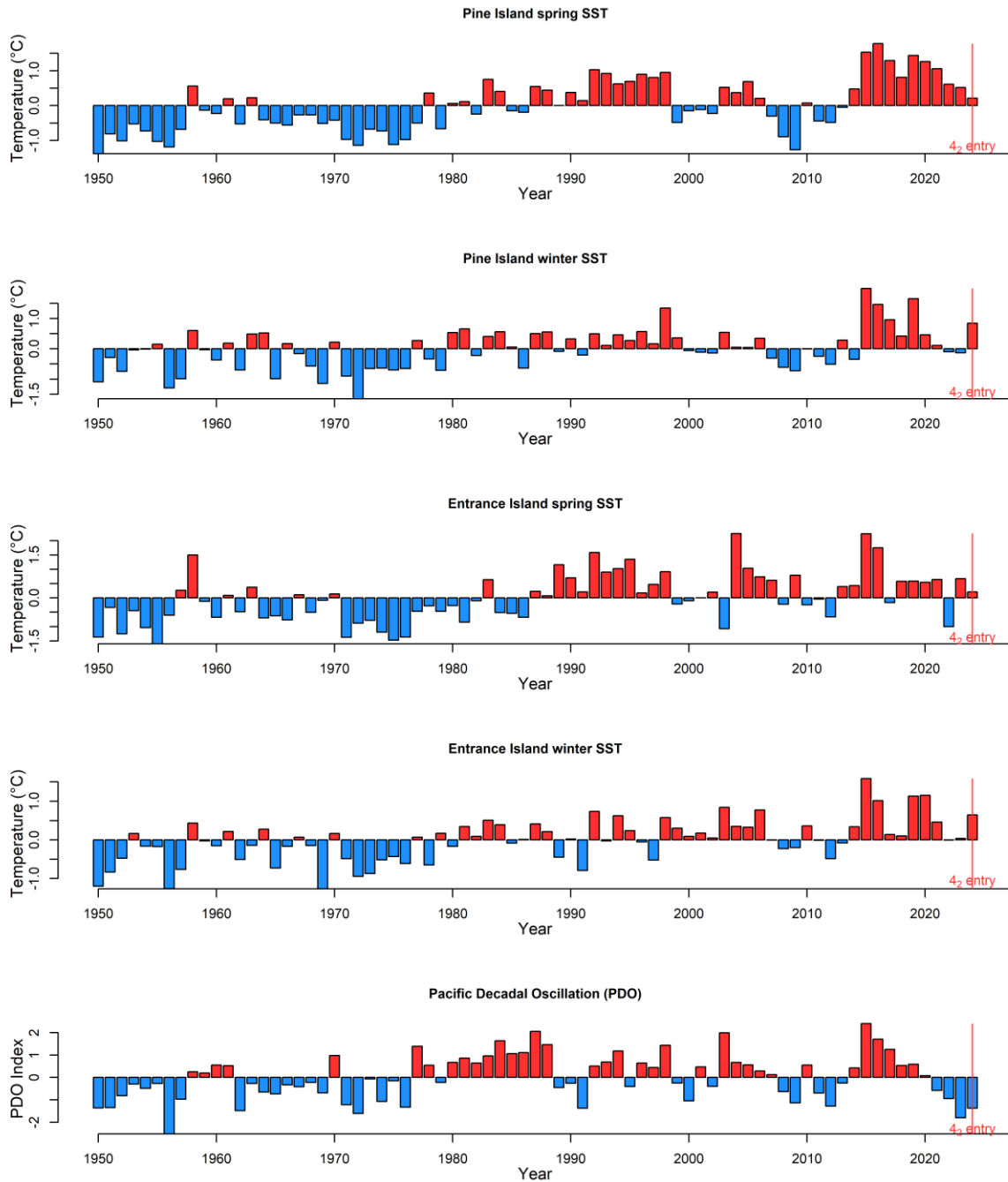


Figure 3. Spring sea surface temperature (SST) measured at Entrance Island (Strait of Georgia; April–June mean) and Pine Island (Queen Charlotte Strait; April–July mean), winter SST measured at Entrance Island and Pine Island (December (2023) - February (2024) mean), and the standardized winter Pacific Decadal Oscillation (PDO) index (November–March). Temperatures are presented as raw deviations from time-series averages (1950-2024). The 2024 ocean entry year, highlighted with a red vertical line, marks the temperature anomalies that most Fraser Sockeye from the 2022 brood year entered into upon outmigration as smolts (i.e. a 4₂ life cycle). Red bars (positive values) indicate warm temperature anomalies (above average) and blue bars (negative values) indicate cool temperature anomalies (below average).

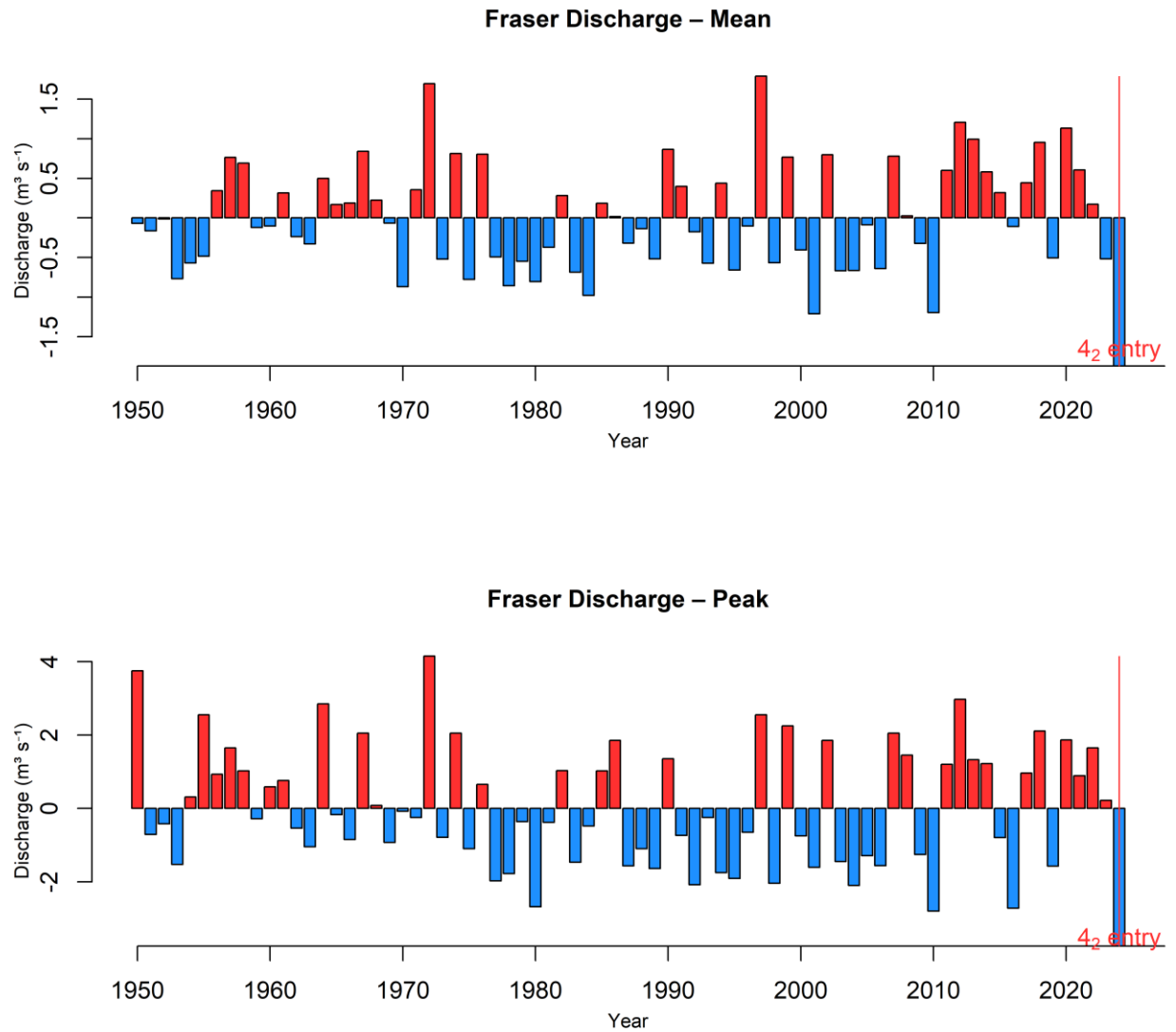


Figure 4. Fraser River discharge shown as mean conditions over April-June and peak discharge. Values are presented as raw deviations from time-series averages (1950-2024). The 2024 ocean entry year, highlighted with a red vertical line, marks the temperature anomalies that most Fraser Sockeye from the 2021 brood year entered into upon outmigration as smolts (i.e. a 4₂ life cycle). Red bars (positive values) indicate increased discharge anomalies (above average) and blue bars (negative values) indicate decreased discharge anomalies (below average).

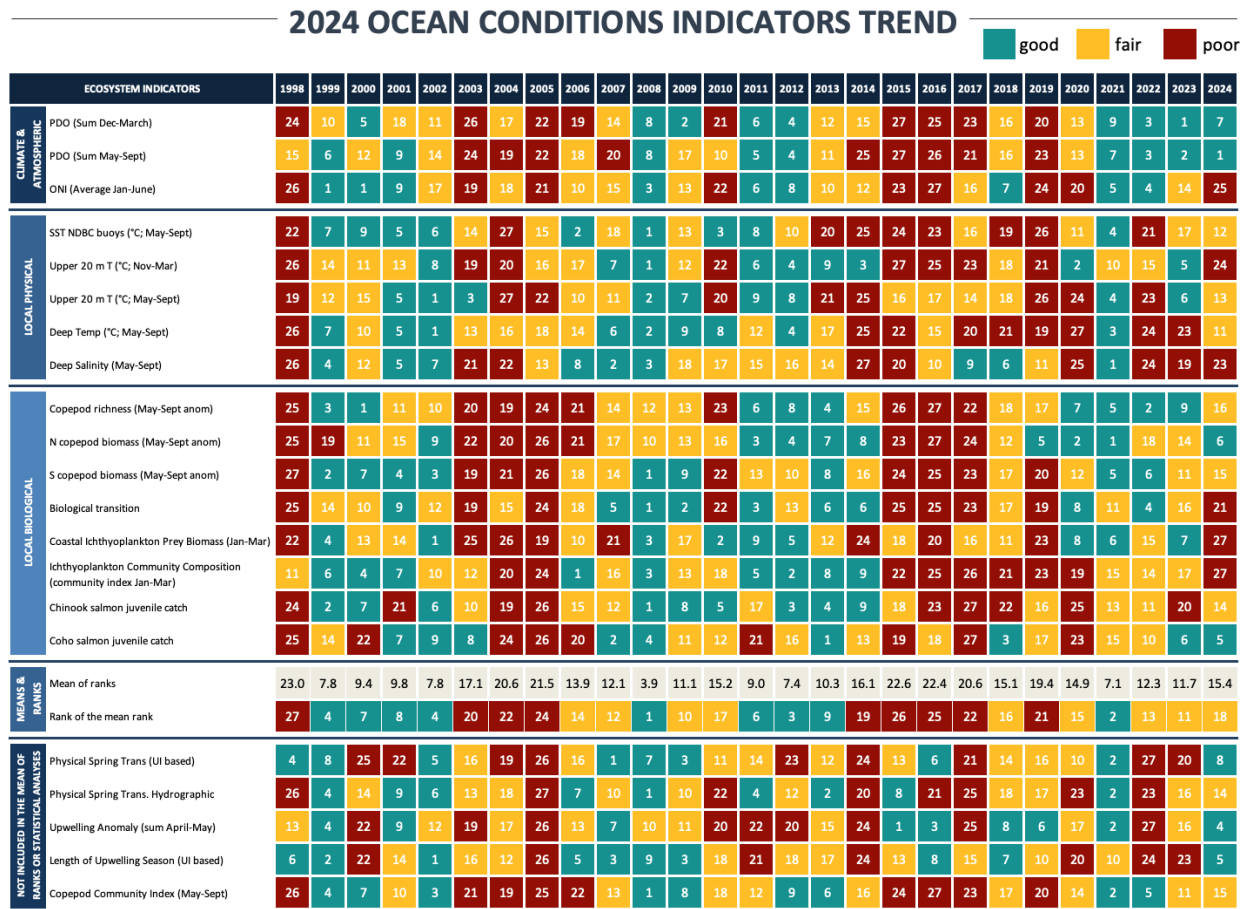


Figure 9. Stoplight chart of ocean indicators favourable for the production of juvenile salmon in the California Current. Source: NOAA 2021 (<https://www.fisheries.noaa.gov/west-coast/science-data/ocean-conditions-indicators-trends>)

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Appendix A. Stock group data summaries

Early Stuart (Takla-Trembleur-Early Stuart CU)

Run Timing Group	Escapement				2019 Stock Contributions
Early Stuart	Avg.	Cyc. Avg	BY(2022)	BY Trend ^a	Early Stuart
All stocks ^b	37,300	17,700	5,300	DOWN	100%

a. Trend refers to change from previous brood year (2015)

b. Escapement and cycle year average 1952-2019

Early summer

Run Timing Group	Escapement				2019 Stock Contributions										
Early Summer	Avg.	Cyc. Avg.	BY(2022)	BY Trend ^a	Bowron	Seymour	Fennell	Scotch	Gates	Nadina	Pitt	South Thom	Taseko	Chilli-wack	Naha-tlatch
Primary stocks ^b	63,200	118,300	162,700	DOWN	1%	8%	2%	14%	1%	65%	9%	NA	NA	NA	NA
Total (including misc.) ^c	137,000	337,200	162,700	DOWN	1%	5%	1%	8%	0%	36%	5%	44%	0%	0%	0%

a. Trend refers to change from previous brood year (2018)

b. Escapement and cycle year average 1952-2022

c. Escapement and cycle year average 2004-2022

Summer

Run Timing Group	Escapement				2019 Stock Contributions								
Summer	Avg.	Cyc. Avg.	BY (2022)	BY Trend ^a	Late Stuart	Stellako	Raft	Quesnel	Chilko	Harrison	North Thom. Trib	North Thom. Riv	Widgeon
Primary stocks ^b	566,700	664,600	1,018,300	UP	4%	6%	0%	41%	48%	2%	NA	NA	NA
Total (including misc.) ^c	665,100	1,194,300	1,018,300	DOWN	4%	6%	0%	41%	47%	2%	0%	0%	0%

a. Trend refers to change from previous brood year (2018)

b. Escapement and cycle year average 1952-2022

c. Escapement and cycle year average 2003-2022

Late

Run Timing Group	Escapement				2019 Stock Contributions					
Late	Avg.	Cyc. Avg.	BY (2022)	BY Trend ^a	Late Shuswap	Birkenhead	Portage	Weaver	NonShu Harrison	Cultus ^d
Primary stocks ^b	397,400	1,262,800	468,000	DOWN	80%	13%	2%	4%	NA	--
Total (including misc.) ^c	409,100	1,390,300	468,000	DOWN	80%	13%	2%	4%	0%	--

a. Trend refers to change from previous brood year (2017)

b. Escapement and cycle year average 1952-2022

c. Escapement and cycle year average 2004-2022

d. Cultus is not included because only juvenile data are used for this stock

Miscellaneous Stocks – All Management Units

Forecast Unit	Populations*
<i>Early Summer</i>	
EShu	Adams Channel, Adams River (upper and lower), Anstey River, Blueberry Creek, Burton Creek, Cayenne Creek, Cellista Creek, Craigellachie Creek, Crazy Creek, Eagle River, Four Mile Creek, Hiuhill Creek, Hunakwa Creek, Loftus Creek, Momoch River(upper and lower), Nikwikwaia Creek, Onyx Creek, Perry River, Ross Creek, Salmon River, Sinmax Creek, Yard Creek
Taseko	Taseko Lake, Taseko River(upper), Yoheta (upper and lower), Lastman Creek
Chilliwack	Chilliwack Lake, Chilliwack River, Chilliwack River(upper)
Nahatlatch	Nahatlatch River, Nahatlatch Lake
<i>Summer</i>	
North Thompson Tributaries	Barriere River, Clearwater River, Dunn Creek, Finn Creek, Grouse Creek, Hemp Creek, Lemieux Creek, Lion Creek, Mann Creek
North Thompson River	North Thompson River
Widgeon	Widgeon Creek, Widgeon Slough
<i>Late</i>	
Non-Shuswap	Big Silver Creek, Cogburn Creek, Crazy Creek, Douglas Creek, Green River, Joffre Creek, Miller Creek, North Creek, Pemberton Creek, Railroad Creek, Sampson Creek, Sloquet Creek, Tipella Creek, Ure Creek

Forecast total return of miscellaneous stocks and the proxy used for long term productivity

	Effective Females		Proxy for long-term Prod.	Forecast total Return				
	2021	2022		10%	25%	50%	75%	90%
Early Summer								
Misc(EShu)	2,596	34,031	Scotch/Seymour	16,000	76,000	177,000	279,000	289,000
Misc(Taseko)	664	957	Chilko	500	1,000	4,000	5,000	5,000
Misc(Chilliwack)	883	1,899	All ES Stocks	700	2,000	7,000	15,000	26,000
Misc(Nahatlatch)	3,053	2,516	All ES Stocks	1,000	3,000	11,000	24,000	42,000
Summer								
Misc(N. Thomp. Tribs)	542	80	Raft/Fennell	100	200	400	1,000	2,000
Misc (N. Thomp. River)	249	2,127	Raft/Fennell	900	2,000	3,000	9,000	17,000
Misc (Widgeon)	62	66	Birkenhead	10	40	900	1,000	2,000
Late								
Misc (Non-Shuswap)	2,093	1,468	Birkenhead	400	1,000	24,000	36,000	46,000

Appendix B. Model Selection Criteria and Rationale

The Fraser River Sockeye forecast model selection process is an expert-driven process, which took place over a two day meeting in December 2025. Previously, forecast model selection was based on methods and results (model ranking from retrospective analysis) summarized in MacDonald and Grant (2012) in conjunction with the recent productivity trend. Recognition of relatively inaccurate forecast results from recent years (2015-2020) led to the update and revision of the retrospective analysis used for the model selection process in 2021 and the addition of a new tool: Taylor Diagrams.

For the 2026 forecast cycle, the retrospective analysis window of performance of evaluation was updated to the most recent time period of 2011-2024. This revised retrospective analysis formed the basis for evaluating model performance and guiding model selection in 2026 (Appendix C). Additionally, a set of new environmental covariates were incorporated into the existing biological models for assessment. This included the addition of a winter Sea Surface Temperature (SST) covariate at both Pine Island and Entrance Island for the winter preceding smolt entry. For the Chilko Sockeye population, newly added freshwater covariates included fry length, abundance, and their interaction.

Generally the model selection process follows the steps outlined below but deviations at the stock level can occur.

1. Taylor diagram	2. Ranking table	3. Historical performance	4. Forecast and implied productivity
•Age4 model •Age5 model •Total model	•Overall ranking •Age4 ranking •Age5 ranking •Age4-cyclic •Age5-cyclic •Age4-other •Age5-other •Old ranking	•Used model •Overall performance •Age-specific performance	•Forecast Numbers •Implied productivity and trend •Brood year effective female spawners •Mean Run size

1. **Step 1: Taylor diagram:** For each stock, models are compared graphically on the Taylor diagram as it comparatively demonstrates the differences between model and observation and among models in regard to three statistics: the Pearson correlation coefficient, the root-mean-square error (RMSE), and the standard deviation (SD). All the candidate models for the forecast are presented on a Taylor diagram among age 4, age 5 and total population (age 4 and 5 combined). Generally, a model is desired and considered for further selection process when it shows a relatively high correlation coefficient, low RMSE, and a SD similar to the observation.

2. **Step 2: Ranking table:** Models are then ranked according to their relative performance on each of four performance measures: mean raw error (RME), mean absolute error (MAE), mean percent error (MPE) and RMSE (see Cass et al. 2006 for details). Ranks across the four performance measures are then averaged to generate an overall score and rank for each model evaluated. The previous retrospective analysis was based on returns from 1997-2004 (see Table 5 in MacDonald and Grant 2012). To update the model performance, the current analysis was conducted to produce new model ranking tables based on the returns from the past three generations (2011-2024). The ranking tables are divided into all-year, cyclical year and other (non-cyclical year) categories in an age-specific manner. For cyclical stocks, rankings based on the cycle-line years are preferred.
3. **Step 3: Historical performance:** Performance of previously used forecast models in 2009-2020 is presented for each stock by comparing the estimates with actual returns in number and percentage for both age classes (age 4 & 5) and total population. The yearly deviation and overall correlation between the past forecast number and observation are reviewed. Performance of the historically top-ranked models is considered in addition to the tendency to over or under estimate returns in recent years which may result in the selection of alternate models.
4. **Step 4: Forecast and implied productivity:** The total and age-specific forecasts resulted from top-ranked models and their corresponding implied productivities are presented; they are compared with historical time-series of observed productivity (both raw and log scale). Since many stocks have shown lower-than-average productivities in recent generations, efforts are made to choose models that might capture the dynamics of these recent declines in productivity (i.e. using environmental covariates). In addition, models with new covariates are proposed but they are mainly used as reference for comparison.

Model choice rationales for individual stock

Early Stuart: Ricker(PiW)4/Sibling5

The sibling model performed well in both the Taylor Diagram and the retrospective ranking table and is therefore selected for the age-5 Early Stuart forecast. The strong return of age-4 Sockeye in 2025 further supports this choice, as the sibling model uses the age-4 signal to predict age-5 returns and aligns with the recent increase in productivity. In the updated retrospective ranking tables, three naïve biological models (RS4yr, RS2, RS8yr) ranked highest overall; however, after excluding salmon-abundance models, Ricker(PiW; Pine Island Winter) ranked the highest among the biological models, followed closely by Ricker(PDO). The RS2 naïve model produced implied productivity values well below those observed in recent years and was likely influenced by the 2020 brood year and 2024 return; both affected by Big Bar Landslide and not representative of current productivity conditions. Therefore, Ricker(PiW) was selected because it demonstrated strong retrospective performance and produced implied productivity values consistent with recent Early Stuart survival.

Bowron: Ricker(PiW)

For Bowron, the sibling model ranked poorly for the age-5 component, so model selection focused on total return forecasts. In the retrospective analysis, Ricker models incorporating Pine Island temperature covariates ranked highest, with Ricker(Pi) and Ricker(PiW) emerging as the top biological models. The Ricker(PiW) model was selected because it produced an implied productivity more consistent with recent Bowron returns. Given recent variability and uncertainty in Bowron productivity, Ricker(PiW) offered a more stable forecast while remaining aligned with observed escapement levels and historical performance.

Nadina: RickerCyc4/Sibling5

The sibling model was selected for the age-5 forecast for Nadina because it ranked highest in the retrospective analysis and performed best on the Taylor Diagram. The 2022 brood year for the age-4 forecast was the highest adult escapement on record and well outside of recorded observations. Despite challenging freshwater conditions in 2022, including high water temperatures, a significant pre-spawn mortality event, and an Ichthyophthirius multifiliis (“ich”) outbreak; Nadina still produced the largest expanded fry estimate on record suggesting that egg to fry survival was still strong regardless of environmental challenges. For age-4 returns, the RickerCyc model was selected because it was the top ranked biological model in the age-4 retrospective analysis and outperformed alternative Ricker forms and naïve models. The model produced an implied productivity that falls within the range observed for the Nadina cycle line in recent years, even at high escapement levels.

Upper Pitt: PowerBasicCycAge4/Sibling5

The sibling model was selected for the Upper Pitt age-5 returns because it ranked highest in the retrospective analysis and showed the most stable performance across evaluation metrics. The model appropriately incorporates the age-4 signal while accounting for potential impacts on the 2021 brood year, which likely experienced reduced spawning success due to fall flooding. For age-4 recruits, the PowerBasicCycAge model was chosen as it was the top-ranked biological model and reflects the low productivity observed in recent years.

Scotch: LarkinBasic

For Scotch, age-4 and age-5 forecasts were not separated because the retrospective analysis showed little distinction in model performance between the two age classes. Both ages exhibited similar error patterns and productivity behavior, and separating them resulted in unstable and less defensible age-specific estimates given Scotch's high interannual variability and small age-class sample sizes. Instead, a combined forecast approach was adopted. The LarkinBasic model was selected for both age-4 and age-5 components because it ranked highly in the retrospective analysis, performed well on the Taylor diagram, and produced implied productivities consistent with recent cycle-line performance. The LarkinBasic model captured recent dynamics well, including the 2022 return, which was close to the median forecast. Compared to alternative models (e.g., Ricker-based covariate models), LarkinBasic provided a more stable estimate without producing unrealistically large forecasts.

Seymour: Ricker(Pi)4/Sibling5

The sibling model performs well for the age-5 forecast for Seymour sockeye based on the Taylor Diagram and retrospective ranking tables. Seymour exhibited above-expected age-4 returns in 2025, and the sibling model directly incorporates this strong age-4 signal into the age-5 predictions. Although the implied productivity is low (<1), this is consistent with the historically low age-5 productivity observed for Seymour, and the model appropriately reflects recent performance. For age-4 returns, the Ricker(Pi) model was chosen. In the retrospective analysis, Ricker(Pi) performed substantially better than the winter variant (PiW) and was among the most competitive biological models. It provides a mid-range forecast that avoids the low estimates of other Ricker models and the inflated values of the higher-ranked Larkin models, with an uncertainty range that remains realistic and avoids overly high p90 forecasts. The Ricker(Pi) model is also consistent with the historical use of Ricker-type models for Seymour and its implied productivity lies within the observed range for this cycle line and is biologically defensible given recent lake and freshwater conditions.

Chilko: LarkinBasic4/Sibling5

Although LarkinBasicCycAge slightly outranked the sibling model in the retrospective table, the strong age-4 return in 2025 supported selecting the sibling model for age-5, as it performed well across evaluation metrics and produced a forecast consistent with observed age-class dynamics. Historically, juvenile-based models were often selected for Chilko; however, in recent years they have ranked lower than stock-recruit models incorporating adult data. For the age-4 component, the LarkinBasic model was chosen because it was the top-ranked biological model, showed lower error metrics than alternatives, and generated an implied productivity aligned with recent cycle-line performance.

Late Stuart: RS14/RickerPi5

The Ricker(Pi) model was selected for the Late Stuart age-5 forecast because it ranked first overall in the retrospective analysis and demonstrated the strongest performance across all major error metrics, indicating both high accuracy and minimal bias in predicting historical age-5 returns. Compared to other Ricker forms, power models, and the sibling model, Ricker(Pi) produced more stable and biologically plausible estimates that align with recent Late Stuart productivity levels. Sibling models were not considered for forecasting age-5 Late Stuart due to unresolved GSI issues between Late Stuart and Stellako in the preliminary results for 2025 samples. For Late Stuart age-4 recruits, the RS1 model was selected because it ranked first overall and produced forecasts that were both statistically strong and biologically reasonable (i.e., estimates reflected the wide variability characteristic of Late Stuart, including large observed in recent years, but remained centered on a productivity level consistent with recent cycle-line performance).

Quesnel: Ricker(PiW)

For Quesnel, the sibling model ranked poorly on the age-5 Taylor diagram and was not considered further. Model selection therefore focused on total return forecasts due limited separation in age-specific performance. Brood year returns (2022) were slightly below the

median forecast, with fry abundance and lipid content within historical ranges, although increased variability and lower lipid profiles were observed. In the retrospective analysis, Ricker models incorporating temperature covariates consistently ranked highest, with the Ricker(PiW) model showing the strongest overall performance. This model captured recent productivity patterns associated with the dominant cycle line. Alternative models, including Larkin formulations, ranked lower or produced unrealistically high forecasts. To avoid overestimation, forecasts projecting returns above ~4 million were excluded. Based on retrospective performance and consistency with historical returns, the Ricker(PiW) model was selected.

Stellako: RickerEiW

The sibling model ranked highly in both the Taylor Diagrams and the retrospective ranking table, and the productivity implied by its forecast aligns well with recent observations. However, the age-4 return which is used to generate the age-5 forecast for the sibling model is likely underestimated as the return estimate for Stellako is below the escapement estimate. This is common for Stellako as GSI between Stellako and Late Stuart is difficult to differentiate in season. Therefore, a model that forecasts the total was determined to be most appropriate. For the age-4 forecast, the Ricker(EiW) model was chosen due to its high retrospective ranking and biological rationale. Although naïve models highlighted short term dynamics, the Ricker(EiW) model provided a more defensible, mechanism-informed estimate.

Harrison: LLY3/Sibling4

The extreme variability in the Harrison time series has produced a stock-recruit dataset that does not fit well with biological models. Sibling models perform best for the age-4 component, and the productivity implied by the sibling forecast aligns closely with recent observations, supporting its selection. For age-3, the Time Series Average (TSA) is the top-ranked naïve model, followed by the RAC and Like-Last-Year (LLY) models. However, unlike the RAC model, the LLY approach does not incorporate the years of exceptionally high abundance and produces an implied productivity that better reflects recent age-3 performance. Given the low water levels observed in 2022 and similarly constrained conditions in 2023, a more conservative approach was warranted, and the LLY model was selected.

Raft: LLY4/Sibling5

The sibling model ranks well on the age-5 Taylor diagram and is the top ranked model in the retrospective ranking table. The implied productivity aligns well with recent observations and is selected for the age-5 component. For age-4 recruits, the LLY model was selected because it ranked highest and has historically performed well for Raft. Although its implied productivity is relatively high, recent observations support this increase. In contrast, alternative closely ranked biological models (e.g., Ricker(Pi), Ricker(PiW)) produced much lower forecasts, with implied productivities that were inconsistent with the strong returns observed in recent years.

Cultus: PowerJuv(PiW)

The sibling model does not rank well on the age-5 Taylor diagram and was therefore not selected for forecasting age-5 Cultus sockeye. Power juvenile (PowerJuv) models have been historically selected for Cultus and remain the most biologically appropriate choice, as they explicitly account for hatchery-released juveniles and tend to perform relatively well at the very low abundances that consistently characterize this stock. Among these, the PowerJuv(PiW) model was selected because it showed strong retrospective performance and lower error metrics relative to alternative juvenile models. Adult-based Ricker models, although highly ranked, do not account for juvenile releases and were therefore not considered appropriate for Cultus.

Late Shuswap: RickerBasic4/Sibling5

The sibling model was selected for the age-5 forecast because it ranked highly in the retrospective analysis and performed well on the Taylor diagram. For age-4 returns, the RickerBasic model was selected as the most defensible biological option. The updated retrospective analysis demonstrated several Ricker models with different environmental covariates and the Ricker Basic as being highly ranked, however it was determined that in the lack of a clear choice of which environmental covariate to consider, that we select the RickerBasic. The brood year escapement in 2022 was associated with the lowest EFS value on record for the dominant cycle line. Additionally, spawning occurred after a prolonged summer drought, elevated river temperatures, and a delayed onset of spawning due to these high river temperatures. This was subsequently followed by a sudden and early freeze that may have affected survival. Independent lake survey data showed substantially reduced fry abundance in 2023 relative to recent dominant cycle lines, with lipid content and growth rates indicating that despite lower fry densities there was no increase in size or fat content. Models such as Larkin and RickerCyc implied higher productivities that exceed recent observations for this stock. The RickerBasic model produced implied productivity values consistent with recent observations and was therefore selected for the age-4 component, with forecasts applied cautiously given the cumulative environmental stressors affecting this stock.

Portage: RickerCyc

The sibling model did not rank well based on the age-5 Taylor diagram and was therefore not considered for Portage. Among all candidate models, RickerCyc ranked highest overall and demonstrated consistently strong performance across both total and age-4 retrospective evaluations. Although environmental covariate models (e.g., Ricker(EiW), Ricker(Pi)) produced lower forecasts by pulling productivity downward, their performance metrics were very similar and did not outperform RickerCyc, supporting its selection as the most defensible model for Portage.

Weaver: PowerJuvPiW4/Sibling5

The sibling model ranks well on the age-5 Taylor diagram and is the top ranked model in the retrospective ranking table. The implied productivity aligns well with historical observations and is selected for the age-5 component. For the age-4 forecast, the PowerJuv(PiW) was selected

despite ranking slightly below several alternative models in the retrospective table. While models such as RS1 and RickerCyc ranked higher overall, they produced substantially higher median and upper-tail forecasts (p50–p90) that were inconsistent with recent Weaver productivity and known freshwater constraints. In contrast, the PowerJuvPiW generated a more conservative and biologically plausible forecast, avoiding extreme upper tail inflation while remaining within the range of recent observed returns. Given the documented 2022 drought conditions, delayed channel loading, and associated pre-spawn mortality in the Weaver Channel, juvenile abundance provides a more reliable signal of cohort strength than spawner-based models for returns in 2026.

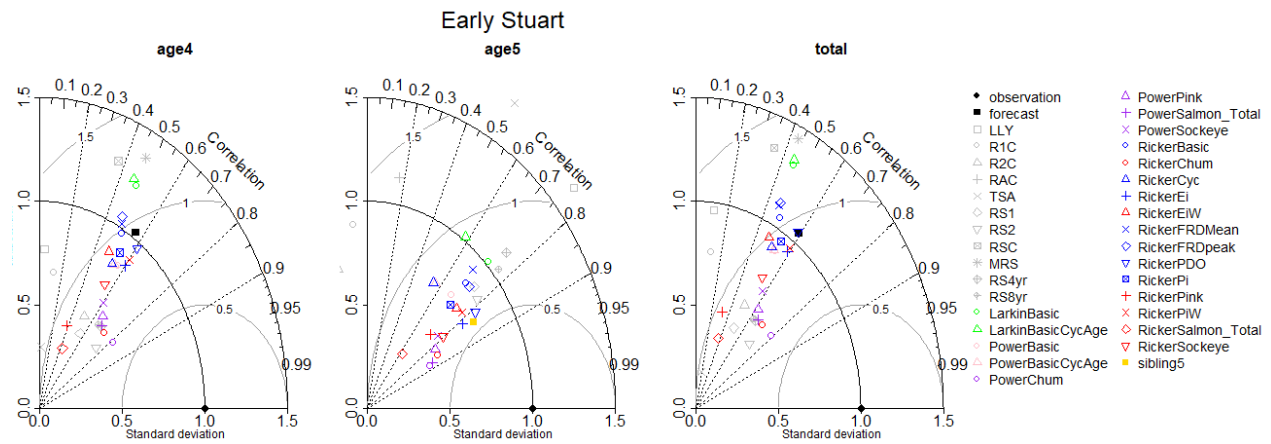
Birkenhead: LLY4/Sibling5

The sibling model was selected for age-5 sockeye as it was ranked highest in the retrospective analysis and performed well on the Taylor diagram. In addition, the sibling forecast aligns with the strong age-4 return observed in 2025. For age-4 recruits, naïve models, including the LLY model, ranked highly in the retrospective analysis and were considered appropriate given evidence of rebuilding and increasing productivity in recent years. Although biological models with environmental covariates (e.g., Ricker(Pi), Ricker(PiW)) produced more conservative forecasts, their implied productivities were well below levels observed over the last several years. The LLY model produced an implied productivity that was consistent with recent trends and was therefore selected for the age-4 forecast.

Appendix C. Summary of Retrospective Analysis

Individual Stock Retro Results

Early Stuart Retrospective: Taylor



Ranking (Total)- Alllys

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RS4yr	-0.021	0.040	0.227	0.063	17.0	3.0	8	3.0	7.750	1
RS8yr	-0.023	0.038	0.169	0.064	18.5	2.0	6	5.0	7.875	2
RickerChum	-0.028	0.041	0.037	0.063	24.0	4.0	1	3.0	8.000	3
RickerEi	-0.007	0.046	0.345	0.069	4.0	8.0	11	10.0	8.250	4
RS2	-0.027	0.042	0.140	0.063	22.0	5.0	5	3.0	8.750	5
PowerChum	-0.025	0.037	0.438	0.057	20.0	1.0	13	1.0	8.750	6
RickerPiW	-0.011	0.046	0.229	0.070	9.0	8.0	9	11.5	9.375	7
RickerPi	-0.015	0.048	0.094	0.075	12.0	11.5	3	18.0	11.125	8
RickerPDO	-0.006	0.048	0.625	0.073	2.0	11.5	17	15.0	11.375	9
PowerSalmon_Total	-0.027	0.044	0.418	0.065	22.0	6.0	12	6.0	11.500	10
PowerSockeye	-0.018	0.046	0.463	0.067	15.0	8.0	14	9.0	11.500	11
RickerSockeye	-0.018	0.049	0.171	0.070	15.0	13.5	7	11.5	11.750	12
R2C	-0.001	0.049	19.074	0.066	1.0	13.5	28	7.5	12.500	13

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
PowerPink	-0.023	0.047	0.586	0.066	18.5	10.0	16	7.5	13.000	14
RS1	-0.027	0.050	0.127	0.072	22.0	15.0	4	13.0	13.500	15
RickerEiW	-0.013	0.051	0.241	0.079	10.5	16.5	10	19.0	14.000	16
RickerCyc	0.007	0.051	0.936	0.074	4.0	16.5	19	17.0	14.125	17
PowerBasic	0.010	0.052	1.307	0.073	8.0	18.0	22	15.0	15.750	18
PowerBasicCycAge	0.009	0.053	1.344	0.073	6.5	19.0	23	15.0	15.875	19
RickerBasic	0.013	0.054	0.921	0.081	10.5	20.0	18	20.0	17.125	20
RickerPink	-0.040	0.058	-0.066	0.085	28.0	22.0	2	21.0	18.250	21
RickerFRDpeak	0.016	0.059	1.036	0.088	13.0	23.0	20	22.5	19.625	22
RickerFRDMean	0.018	0.060	1.053	0.088	15.0	24.0	21	22.5	20.625	23
R1C	-0.009	0.064	20.428	0.091	6.5	25.0	29	24.5	21.250	24
LLY	0.007	0.075	26.459	0.101	4.0	30.0	30	26.0	22.500	25
RickerSalmon_Total	-0.055	0.057	-0.474	0.091	30.0	21.0	15	24.5	22.625	26
LarkinBasic	0.037	0.066	1.502	0.104	26.0	26.5	25	27.0	26.125	27
LarkinBasicCycAge	0.036	0.067	1.498	0.105	25.0	28.0	24	28.0	26.250	28
RSC	0.038	0.066	1.721	0.112	27.0	26.5	26	29.0	27.125	29
MRS	0.052	0.072	1.828	0.116	29.0	29.0	27	30.0	28.750	30
RAC	0.189	0.217	110.983	0.320	31.0	31.0	31	32.0	31.250	31
TSA	0.218	0.218	266.168	0.231	32.0	32.0	32	31.0	31.750	32

(Age4)- Allyrs

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RS4yr	-0.021	0.038	0.418	0.062	17.5	2.0	9	2.5	7.750	1
RS2	-0.025	0.040	0.230	0.062	21.5	4.5	3	2.5	7.875	2
RS8yr	-0.022	0.039	0.305	0.064	19.0	3.0	6	5.5	8.375	3
PowerChum	-0.023	0.037	0.673	0.057	20.0	1.0	13	1.0	8.750	4
RickerChum	-0.026	0.040	0.253	0.063	23.5	4.5	4	4.0	9.000	5
RickerPiW	-0.011	0.046	0.348	0.069	10.0	11.5	7	11.0	9.875	6
RickerPDO	0.003	0.044	0.821	0.070	2.5	8.0	17	13.0	10.125	7
RickerEi	-0.008	0.046	0.706	0.068	7.0	11.5	14.5	10.0	10.750	8
PowerSalmon_Total	-0.025	0.043	0.594	0.064	21.5	6.0	12	5.5	11.250	9
PowerSockeye	-0.017	0.044	0.706	0.066	15.5	8.0	14.5	8.0	11.500	10
PowerPink	-0.021	0.044	0.774	0.065	17.5	8.0	16	7.0	12.125	11
RickerPi	-0.014	0.047	0.223	0.074	14.0	14.5	2	18.0	12.125	12
RickerCyc	0.003	0.046	1.229	0.072	2.5	11.5	18	17.0	12.250	13

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerSockeye	-0.017	0.047	0.399	0.070	15.5	14.5	8	13.0	12.750	14
RS1	-0.026	0.046	0.297	0.071	23.5	11.5	5	15.5	13.875	15
R2C	0.001	0.050	21.317	0.067	1.0	19.0	28	9.0	14.250	16
PowerBasic	0.007	0.048	1.754	0.070	6.0	16.0	23	13.0	14.500	17
PowerBasicCycAge	0.006	0.049	1.717	0.071	5.0	17.0	22	15.5	14.875	18
RickerEiW	-0.013	0.050	0.549	0.077	12.0	19.0	11	19.0	15.250	19
RickerBasic	0.010	0.050	1.256	0.078	9.0	19.0	19	20.0	16.750	20
RickerPink	-0.039	0.054	0.056	0.084	28.5	22.0	1	22.0	18.375	21
RickerFRDMean	0.013	0.055	1.377	0.083	12.0	23.5	20	21.0	19.125	22
RickerFRDpeak	0.013	0.055	1.421	0.085	12.0	23.5	21	23.0	19.875	23
RickerSalmon_Total	-0.051	0.053	-0.440	0.089	30.0	21.0	10	24.5	21.375	24
LLY	0.004	0.072	60.133	0.097	4.0	30.0	30	26.5	22.625	25
R1C	-0.009	0.064	22.508	0.089	8.0	29.0	29	24.5	22.625	26
LarkinBasic	0.030	0.059	1.880	0.097	26.5	25.5	24	26.5	25.625	27
RSC	0.029	0.059	2.383	0.106	25.0	25.5	27	29.0	26.625	28
LarkinBasicCycAge	0.030	0.061	1.893	0.100	26.5	27.0	25	28.0	26.625	29
MRS	0.039	0.062	2.228	0.107	28.5	28.0	26	30.0	28.125	30
RAC	0.173	0.207	124.358	0.302	31.0	32.0	31	32.0	31.500	31
TSA	0.188	0.191	284.586	0.205	32.0	31.0	32	31.0	31.500	32

(Age5)- Allyrs

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RS8yr	0.000	0.005	0.667	0.007	3.0	12.0	6	6.0	6.750	1
RickerPDO	-0.001	0.004	1.426	0.006	9.0	3.5	18	1.5	8.000	2
RS2	-0.002	0.004	1.034	0.007	14.5	3.5	11	6.0	8.750	3
sibling5	-0.002	0.004	1.359	0.006	14.5	3.5	16	1.5	8.875	4
RickerEi	-0.003	0.004	0.978	0.007	19.0	3.5	10	6.0	9.625	5
RS4yr	0.000	0.005	0.942	0.008	3.0	12.0	9	15.5	9.875	6
RickerFRDpeak	0.000	0.005	1.948	0.007	3.0	12.0	21	6.0	10.500	7
RickerPiW	-0.003	0.004	1.267	0.007	19.0	3.5	14	6.0	10.625	8
RickerBasic	-0.001	0.005	1.513	0.007	9.0	12.0	19	6.0	11.500	9
RS1	-0.002	0.005	1.389	0.007	14.5	12.0	17	6.0	12.375	10
RickerFRDMean	0.000	0.005	1.568	0.008	3.0	12.0	20	15.5	12.625	11
LarkinBasic	0.002	0.004	2.250	0.008	14.5	3.5	22	15.5	13.875	12
RickerSockeye	-0.004	0.005	0.671	0.008	23.0	12.0	7	15.5	14.375	13
RickerPi	-0.003	0.005	1.037	0.008	19.0	12.0	12	15.5	14.625	14
PowerBasic	-0.001	0.005	2.391	0.008	9.0	12.0	24	15.5	15.125	15
RickerEiW	-0.003	0.005	1.323	0.008	19.0	12.0	15	15.5	15.375	16

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
PowerPink	-0.004	0.006	0.427	0.008	23.0	21.0	4	15.5	15.875	17
RickerChum	-0.005	0.006	0.319	0.008	26.5	21.0	2	15.5	16.250	18
PowerSalmon_Total	-0.005	0.006	0.408	0.008	26.5	21.0	3	15.5	16.500	19
LarkinBasicCycAge	0.001	0.005	2.448	0.010	9.0	12.0	25	25.0	17.750	20
PowerChum	-0.005	0.006	0.762	0.008	26.5	21.0	8	15.5	17.750	21
PowerSockeye	-0.004	0.006	1.166	0.008	23.0	21.0	13	15.5	18.125	22
RickerCyc	-0.001	0.006	2.368	0.009	9.0	21.0	23	23.0	19.000	23
RickerPink	-0.005	0.007	-0.273	0.009	26.5	25.5	1	23.0	19.000	24
PowerBasicCycAge	-0.001	0.006	2.767	0.009	9.0	21.0	27	23.0	20.000	25
RickerSalmon_Total	-0.007	0.008	-0.468	0.011	29.0	27.0	5	26.5	21.875	26
R2C	0.000	0.012	10.413	0.013	3.0	29.5	31	28.0	22.875	27
LLY	0.003	0.007	2.477	0.011	19.0	25.5	26	26.5	24.250	28
R1C	-0.001	0.012	9.638	0.014	9.0	29.5	30	29.0	24.375	29
RSC	0.010	0.011	3.008	0.023	30.0	28.0	29	31.5	29.625	30
MRS	0.013	0.013	2.842	0.023	31.0	31.0	28	31.5	30.375	31
RAC	0.016	0.017	30.720	0.021	32.0	32.0	32	30.0	31.500	32
TSA	0.030	0.030	33.087	0.033	33.0	33.0	33	33.0	33.000	33

(Total) – Cycle

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
MRS	0.001	0.027	0.994	0.034	2.0	2.0	19	1.0	6.000	1
LarkinBasic	-0.004	0.028	0.974	0.037	3.0	4.0	18	3.0	7.000	2
RickerEi	-0.016	0.025	0.507	0.041	12.0	1.0	9	6.0	7.000	3
RSC	0.000	0.028	1.034	0.036	1.0	4.0	22	2.0	7.250	4
LarkinBasicCycAge	-0.006	0.028	1.011	0.038	4.0	4.0	21	4.0	8.250	5
RS2	-0.014	0.029	0.523	0.045	9.0	6.5	10	8.0	8.375	6
RickerCyc	-0.007	0.030	1.003	0.040	5.0	9.0	20	5.0	9.750	7
RickerPi	-0.023	0.029	0.079	0.049	18.0	6.5	4	12.0	10.125	8
RickerBasic	-0.015	0.030	0.536	0.047	10.5	9.0	12	10.0	10.375	9
RickerPDO	-0.017	0.030	0.656	0.048	14.0	9.0	14	11.0	12.000	10
PowerBasic	-0.009	0.031	2.038	0.044	7.0	11.0	26	7.0	12.750	11
RickerPiW	-0.017	0.032	0.532	0.051	14.0	12.5	11	13.5	12.750	12
RickerFRDMean	-0.015	0.033	0.669	0.051	10.5	15.5	15	13.5	13.625	13
RickerEiW	-0.023	0.033	0.347	0.056	18.0	15.5	7	15.5	14.000	14
PowerBasicCycAge	-0.011	0.032	2.203	0.046	8.0	12.5	27	9.0	14.125	15
RS8yr	-0.032	0.033	-0.014	0.064	25.5	15.5	1	21.5	15.875	16
RickerFRDpeak	-0.017	0.036	0.684	0.056	14.0	20.5	16	15.5	16.500	17
PowerSockeye	-0.026	0.033	0.880	0.058	21.0	15.5	17	17.0	17.625	18
RickerChum	-0.035	0.035	-0.067	0.065	28.0	19.0	2	23.0	18.000	19
RickerSockeye	-0.032	0.036	-0.104	0.064	25.5	20.5	5	21.5	18.125	20

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RS4yr	-0.034	0.037	0.077	0.071	27.0	22.0	3	25.0	19.250	21
RS1	-0.021	0.046	0.549	0.069	16.0	27.0	13	24.0	20.000	22
PowerChum	-0.029	0.034	1.264	0.062	23.5	18.0	24	19.5	21.250	23
RickerPink	-0.037	0.042	-0.148	0.072	29.0	25.0	6	26.0	21.500	24
PowerPink	-0.024	0.038	1.545	0.059	20.0	23.5	25	18.0	21.625	25
PowerSalmon_Total	-0.027	0.038	1.230	0.062	22.0	23.5	23	19.5	22.000	26
RickerSalmon_Total	-0.043	0.043	-0.456	0.075	30.0	26.0	8	27.0	22.750	27
R1C	0.008	0.085	70.279	0.112	6.0	30.0	29	31.0	24.000	28
R2C	0.023	0.072	65.794	0.079	18.0	29.0	28	28.0	25.750	29
LLY	-0.029	0.050	88.646	0.081	23.5	28.0	30	29.0	27.625	30
RAC	0.062	0.094	372.475	0.096	31.0	31.0	31	30.0	30.750	31
TSA	0.238	0.238	916.536	0.246	32.0	32.0	32	32.0	32.000	32

(Age4) – Cycle

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerEi	-0.017	0.026	0.287	0.042	13.0	1.0	6	5.0	6.250	1
MRS	-0.001	0.027	0.814	0.035	1.5	2.5	23	1.0	7.000	2
LarkinBasic	-0.006	0.027	0.643	0.038	4.0	2.5	21	3.0	7.625	3
LarkinBasicCycAge	-0.008	0.028	0.527	0.040	5.0	4.5	17	4.0	7.625	4
RSC	-0.002	0.028	0.810	0.037	3.0	4.5	22	2.0	7.875	5
RickerBasic	-0.016	0.029	0.295	0.047	11.5	6.0	8	9.0	8.625	6
RickerCyc	-0.009	0.030	0.569	0.043	6.0	8.5	20	6.0	10.125	7
RickerPi	-0.024	0.030	-0.080	0.051	19.0	8.5	1	12.0	10.125	8
RS2	-0.014	0.030	0.417	0.045	9.0	8.5	16	7.5	10.250	9
RickerPDO	-0.018	0.030	0.368	0.049	15.0	8.5	12	10.5	11.500	10
RickerPiW	-0.018	0.033	0.326	0.052	15.0	14.0	9	13.5	12.875	11
RickerFRDMean	-0.016	0.033	0.393	0.052	11.5	14.0	13	13.5	13.000	12
PowerBasic	-0.011	0.031	1.282	0.045	7.0	11.0	27	7.5	13.125	13
RickerEiW	-0.024	0.033	0.141	0.058	19.0	14.0	4	16.0	13.250	14
PowerBasicCycAge	-0.014	0.032	1.088	0.049	9.0	12.0	25	10.5	14.125	15
PowerSockeye	-0.027	0.034	0.329	0.060	21.0	16.5	10	18.0	16.375	16
RickerFRDpeak	-0.018	0.036	0.415	0.056	15.0	20.5	15	15.0	16.375	17
RS8yr	-0.033	0.034	-0.139	0.065	25.5	16.5	3	22.0	16.750	18
RickerSockeye	-0.033	0.036	-0.291	0.065	25.5	20.5	7	22.0	18.750	19
RS4yr	-0.034	0.037	-0.083	0.072	27.0	22.0	2	25.5	19.125	20
PowerChum	-0.030	0.035	0.554	0.063	23.0	18.5	18	20.0	19.875	21
RickerChum	-0.035	0.035	-0.330	0.065	28.0	18.5	11	22.0	19.875	22
RS1	-0.021	0.046	0.399	0.070	17.0	27.0	14	24.0	20.500	23
RickerPink	-0.037	0.042	-0.265	0.072	29.0	25.0	5	25.5	21.125	24
PowerPink	-0.024	0.038	1.275	0.059	19.0	23.5	26	17.0	21.375	25

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
PowerSalmon_Total	-0.028	0.038	0.902	0.062	22.0	23.5	24	19.0	22.125	26
R1C	0.001	0.080	62.445	0.106	1.5	30.0	29	31.0	22.875	27
R2C	0.014	0.068	58.517	0.076	9.0	29.0	28	28.0	23.500	28
RickerSalmon_Total	-0.043	0.043	-0.560	0.075	30.0	26.0	19	27.0	25.500	29
LLY	-0.032	0.049	78.792	0.082	24.0	28.0	30	29.0	27.750	30
RAC	0.049	0.088	331.427	0.089	31.0	31.0	31	30.0	30.750	31
TSA	0.204	0.204	815.692	0.214	32.0	32.0	32	32.0	32.000	32

(Age5) – Cycle

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerChum	0.000	0.000	0.073	0.000	6.0	5.0	1	2.5	3.625	1
PowerPink	0.000	0.000	0.206	0.000	6.0	5.0	2	2.5	3.875	2
PowerSalmon_Total	0.000	0.000	0.257	0.000	6.0	5.0	3	2.5	4.125	3
RS2	0.000	0.000	0.418	0.000	6.0	5.0	4	2.5	4.375	4
RickerPink	0.000	0.000	-0.564	0.001	6.0	5.0	5	14.0	7.500	5
RickerSalmon_Total	0.000	0.000	-0.630	0.001	6.0	5.0	7	14.0	8.000	6
PowerChum	0.000	0.000	0.660	0.001	6.0	5.0	9	14.0	8.500	7
RS8yr	0.000	0.000	0.721	0.001	6.0	5.0	10	14.0	8.750	8
RickerSockeye	0.000	0.000	0.735	0.001	6.0	5.0	11	14.0	9.000	9
RS1	0.000	0.001	0.591	0.001	6.0	17.5	6	14.0	10.875	10
sibling5	0.000	0.001	1.188	0.001	6.0	17.5	16	14.0	13.375	11
RickerEi	0.001	0.001	0.648	0.001	18.5	17.5	8	14.0	14.500	12
RickerFRDpeak	0.001	0.001	0.906	0.001	18.5	17.5	12	14.0	15.500	13
RickerFRDMean	0.001	0.001	1.005	0.001	18.5	17.5	13	14.0	15.750	14
RS4yr	0.001	0.001	1.060	0.001	18.5	17.5	14	14.0	16.000	15
RickerBasic	0.001	0.001	1.139	0.001	18.5	17.5	15	14.0	16.250	16
RickerEiW	0.001	0.001	1.297	0.001	18.5	17.5	17	14.0	16.750	17
RickerPDO	0.001	0.001	1.348	0.001	18.5	17.5	18	14.0	17.000	18
RickerPiW	0.001	0.001	1.385	0.001	18.5	17.5	19	14.0	17.250	19
LarkinBasic	0.001	0.001	1.543	0.001	18.5	17.5	20	14.0	17.500	20
RickerPi	0.001	0.001	1.709	0.001	18.5	17.5	21	14.0	17.750	21
PowerSockeye	0.001	0.001	1.713	0.001	18.5	17.5	22	14.0	18.000	22
PowerBasic	0.001	0.001	2.347	0.001	18.5	17.5	23	14.0	18.250	23
LarkinBasicCycAge	0.001	0.001	2.522	0.002	18.5	17.5	24	25.5	21.375	24
RickerCyc	0.001	0.001	2.549	0.002	18.5	17.5	25	25.5	21.625	25
MRS	0.002	0.002	3.301	0.002	27.0	27.0	26	25.5	26.375	26
PowerBasicCycAge	0.002	0.002	3.828	0.002	27.0	27.0	27	25.5	26.625	27
RSC	0.002	0.002	4.270	0.003	27.0	27.0	28	28.5	27.625	28
LLY	0.003	0.003	8.059	0.003	29.0	29.0	29	28.5	28.875	29
R1C	0.009	0.009	38.078	0.013	30.0	30.0	31	31.0	30.500	30

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
R2C	0.011	0.011	32.198	0.011	31.0	31.0	30	30.0	30.500	31
RAC	0.014	0.014	39.302	0.014	32.0	32.0	32	32.0	32.000	32
TSA	0.036	0.036	100.271	0.036	33.0	33.0	33	33.0	33.000	33

(Total) – Other

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerEi	-0.008	0.027	0.402	0.038	3.0	2.0	11	1.0	4.250	1
RickerPi	-0.012	0.027	0.119	0.041	10.5	2.0	3	3.0	4.625	2
RickerPiW	-0.012	0.027	0.262	0.040	10.5	2.0	7	2.0	5.375	3
RickerPDO	-0.001	0.030	0.691	0.048	1.0	4.0	16	5.0	6.500	4
RickerEiW	-0.013	0.031	0.275	0.045	12.0	5.0	9	4.0	7.500	5
RS2	-0.017	0.035	0.261	0.052	17.5	6.0	6	6.0	8.875	6
RS8yr	-0.016	0.036	0.265	0.058	15.0	7.5	8	11.5	10.500	7
RickerChum	-0.022	0.037	0.105	0.056	22.0	9.5	2	9.0	10.625	8
PowerSockeye	-0.014	0.037	0.607	0.054	13.0	9.5	14	7.5	11.000	9
RS1	-0.018	0.038	0.222	0.057	19.0	11.5	5	10.0	11.375	10
RickerSockeye	-0.017	0.039	0.209	0.058	17.5	13.0	4	11.5	11.500	11
PowerChum	-0.020	0.036	0.629	0.054	20.0	7.5	15	7.5	12.500	12
RS4yr	-0.016	0.038	0.337	0.062	15.0	11.5	10	14.5	12.750	13
RickerBasic	0.009	0.040	1.045	0.072	4.5	15.0	18	20.5	14.500	14
RickerCyc	0.010	0.040	1.157	0.067	6.5	15.0	19	19.0	14.875	15
PowerBasic	0.010	0.040	1.603	0.064	6.5	15.0	22	17.0	15.125	16
PowerBasicCycAge	0.009	0.041	1.656	0.065	4.5	17.0	23	18.0	15.625	17
PowerSalmon_Total	-0.024	0.043	0.583	0.062	23.0	20.0	13	14.5	17.625	18
RickerFRDMean	0.011	0.043	1.204	0.076	8.5	20.0	21	22.5	18.000	19
RickerFRDpeak	0.011	0.043	1.199	0.077	8.5	20.0	20	24.0	18.125	20
R2C	0.016	0.042	24.341	0.059	15.0	18.0	28	13.0	18.500	21
RickerPink	-0.032	0.049	-0.016	0.072	27.0	25.5	1	20.5	18.500	22
PowerPink	-0.021	0.045	0.779	0.063	21.0	22.0	17	16.0	19.000	23
R1C	0.002	0.061	26.041	0.090	2.0	29.0	29	25.0	21.250	24
RickerSalmon_Total	-0.045	0.047	-0.493	0.076	30.0	23.0	12	22.5	21.875	25
LarkinBasic	0.029	0.048	1.736	0.095	26.0	24.0	25	26.0	25.250	26
LarkinBasicCycAge	0.028	0.049	1.726	0.096	25.0	25.5	24	27.5	25.500	27
LLY	0.027	0.067	33.769	0.096	24.0	30.0	30	27.5	27.875	28
RSC	0.041	0.053	2.057	0.111	28.0	27.5	26	30.0	27.875	29
MRS	0.042	0.053	2.070	0.106	29.0	27.5	27	29.0	28.125	30
TSA	0.241	0.241	338.429	0.247	31.0	31.0	32	31.0	31.250	31
RAC	0.250	0.262	141.269	0.358	32.0	32.0	31	32.0	31.750	32

(Age 4) – Other

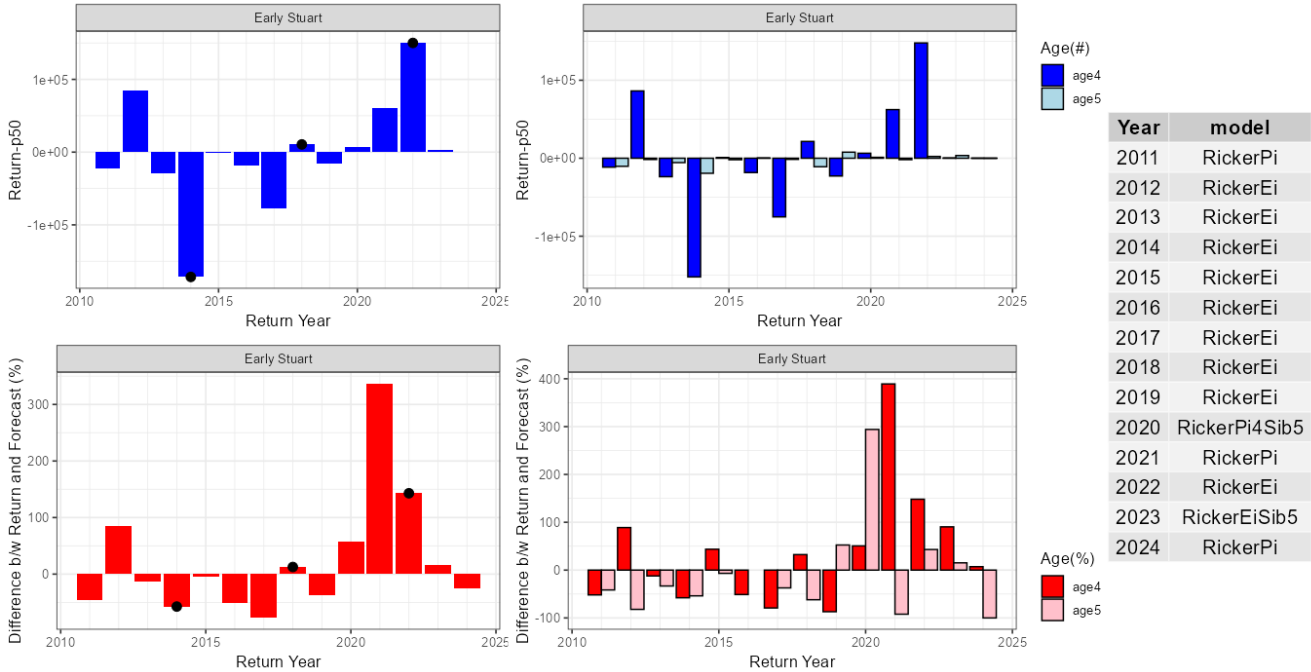
model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerPi	-0.009	0.025	0.290	0.041	5.5	1.0	2	2.5	2.750	1
RickerEi	-0.008	0.028	0.873	0.040	3.0	3.0	13	1.0	5.000	2
RickerPiW	-0.011	0.027	0.415	0.041	11.0	2.0	5	2.5	5.125	3
RickerPDO	-0.001	0.029	0.961	0.048	1.0	4.0	16	5.0	6.500	4
RS2	-0.014	0.033	0.390	0.051	15.5	6.0	3	6.0	7.625	5
RickerEiW	-0.012	0.030	0.677	0.046	13.0	5.0	11	4.0	8.250	6
RS1	-0.015	0.034	0.448	0.055	18.0	7.5	7	9.5	10.500	7
RS8yr	-0.014	0.034	0.461	0.058	15.5	7.5	8	13.0	11.000	8
RickerChum	-0.018	0.035	0.400	0.055	20.5	10.0	4	9.5	11.000	9
PowerSockeye	-0.011	0.036	0.939	0.054	11.0	12.0	14	7.5	11.125	10
RickerSockeye	-0.014	0.037	0.511	0.057	15.5	13.0	9	11.5	12.250	11
RS4yr	-0.014	0.035	0.602	0.060	15.5	10.0	10	14.0	12.375	12
PowerChum	-0.016	0.035	0.948	0.054	19.0	10.0	15	7.5	12.875	13
RickerBasic	0.009	0.038	1.502	0.072	5.5	15.0	18	20.5	14.750	14
PowerBasic	0.009	0.038	2.216	0.063	5.5	15.0	23	17.0	15.125	15
RickerCyc	0.010	0.038	1.579	0.066	8.5	15.0	19	19.0	15.375	16
PowerBasicCycAge	0.009	0.039	2.171	0.064	5.5	17.0	22	18.0	15.625	17
PowerSalmon_Total	-0.021	0.041	0.819	0.061	23.0	18.5	12	15.0	17.125	18
RickerFRDMean	0.011	0.041	1.663	0.075	11.0	18.5	20	23.0	18.125	19
RickerFRDpeak	0.010	0.042	1.728	0.076	8.5	20.5	21	24.0	18.500	20
RickerPink	-0.029	0.046	0.166	0.072	27.0	25.5	1	20.5	18.500	21
PowerPink	-0.018	0.043	1.029	0.062	20.5	22.0	17	16.0	18.875	22
RickerSalmon_Total	-0.040	0.042	-0.438	0.074	30.0	20.5	6	22.0	19.625	23
R2C	0.019	0.044	27.222	0.057	22.0	23.0	28	11.5	21.125	24
R1C	0.006	0.062	28.719	0.086	2.0	29.0	29	25.0	21.250	25
LarkinBasic	0.027	0.045	2.267	0.092	25.5	24.0	24	26.5	25.000	26
LarkinBasicCycAge	0.027	0.046	2.279	0.094	25.5	25.5	25	28.0	26.000	27
MRS	0.036	0.049	2.649	0.104	28.0	27.0	26	29.0	27.500	28
LLY	0.025	0.066	76.646	0.092	24.0	30.0	30	26.5	27.625	29
RSC	0.039	0.053	2.987	0.111	29.0	28.0	27	30.0	28.500	30
TSA	0.216	0.216	361.947	0.223	31.0	31.0	32	31.0	31.250	31
RAC	0.234	0.248	158.324	0.338	32.0	32.0	31	32.0	31.750	32

(Age 5) – Other

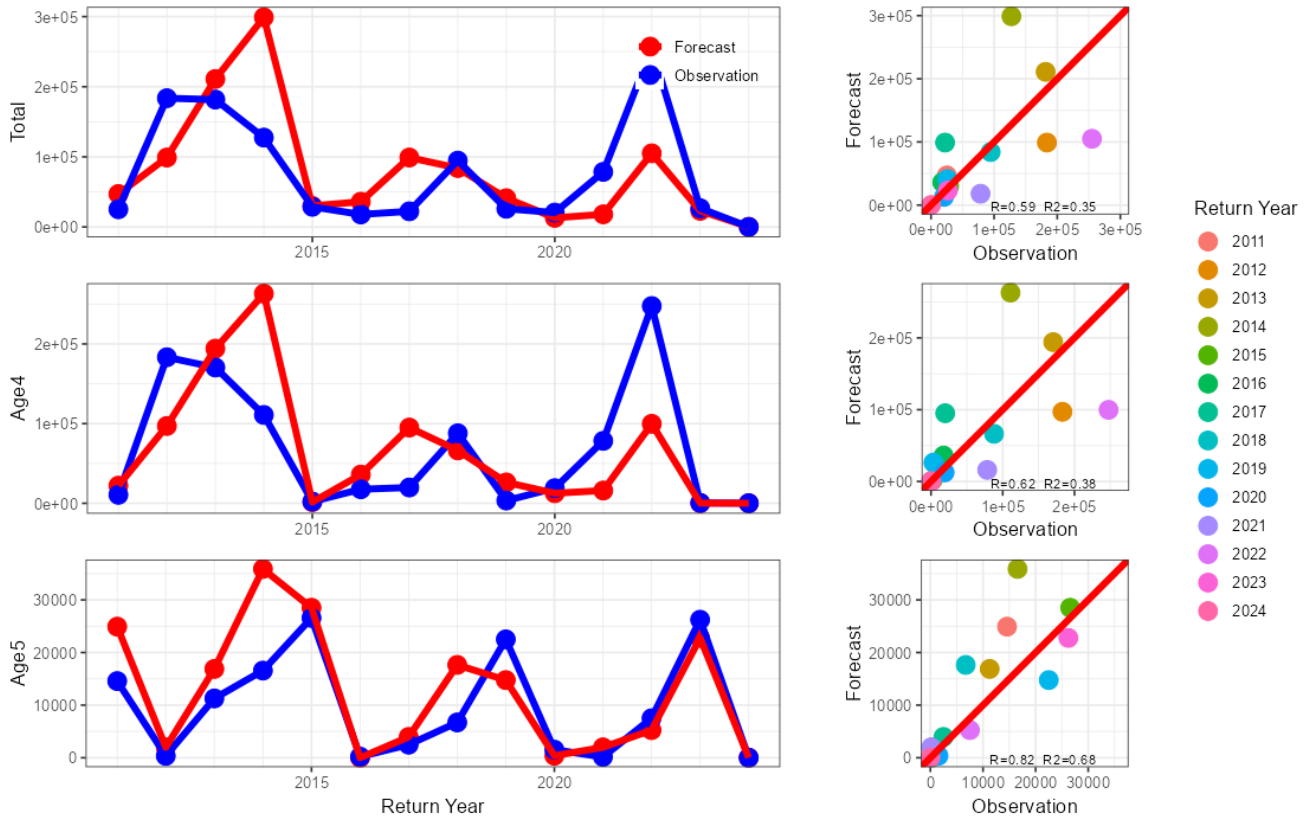
model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
LarkinBasic	-0.001	0.002	2.608	0.004	1.0	1.0	24	1.5	6.875	1
RickerFRDMean	-0.002	0.003	1.783	0.005	5.5	2.0	17	4.0	7.125	2
RS8yr	-0.003	0.004	0.559	0.005	14.5	7.0	4	4.0	7.375	3

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RSC	0.002	0.004	2.532	0.004	5.5	7.0	23	1.5	9.250	4
RS4yr	-0.002	0.005	0.904	0.006	5.5	16.0	8	8.0	9.375	5
RickerFRDpeak	-0.002	0.004	2.355	0.005	5.5	7.0	21	4.0	9.375	6
RickerPDO	-0.002	0.004	1.807	0.006	5.5	7.0	18	8.0	9.625	7
RS2	-0.003	0.004	1.202	0.006	14.5	7.0	10	8.0	9.875	8
sibling5	-0.002	0.004	1.811	0.007	5.5	7.0	19	12.0	10.875	9
RickerBasic	-0.003	0.004	1.727	0.006	14.5	7.0	15	8.0	11.125	10
RickerEi	-0.003	0.004	1.320	0.007	14.5	7.0	11	12.0	11.125	11
LarkinBasicCycAge	-0.002	0.004	2.818	0.006	5.5	7.0	25	8.0	11.375	12
PowerPink	-0.004	0.005	0.621	0.008	21.0	16.0	5	18.5	15.125	13
RickerChum	-0.005	0.005	0.461	0.008	25.5	16.0	2	18.5	15.500	14
RS1	-0.003	0.005	1.671	0.008	14.5	16.0	14	18.5	15.750	15
RickerPiW	-0.003	0.005	1.770	0.008	14.5	16.0	16	18.5	16.250	16
RickerSockeye	-0.005	0.005	0.870	0.008	25.5	16.0	7	18.5	16.750	17
PowerBasic	-0.003	0.005	2.955	0.007	14.5	16.0	27	12.0	17.375	18
PowerSalmon_Total	-0.005	0.006	0.628	0.008	25.5	24.0	6	18.5	18.500	19
RickerPi	-0.004	0.005	1.404	0.009	21.0	16.0	12	25.0	18.500	20
RickerEiW	-0.004	0.005	1.821	0.008	21.0	16.0	20	18.5	18.875	21
RickerPink	-0.006	0.006	-0.282	0.009	29.5	24.0	1	25.0	19.875	22
PowerSockeye	-0.005	0.006	1.521	0.008	25.5	24.0	13	18.5	20.250	23
RickerCyc	-0.003	0.006	2.901	0.008	14.5	24.0	26	18.5	20.750	24
PowerChum	-0.005	0.006	1.054	0.009	25.5	24.0	9	25.0	20.875	25
LLY	0.002	0.006	3.020	0.011	5.5	24.0	28	27.5	21.250	26
PowerBasicCycAge	-0.003	0.006	3.427	0.008	14.5	24.0	29	18.5	21.500	27
RickerSalmon_Total	-0.008	0.008	-0.477	0.012	31.0	29.0	3	29.0	23.000	28
R2C	-0.003	0.012	13.098	0.014	14.5	30.5	31	30.5	26.625	29
MRS	0.006	0.007	2.398	0.011	29.5	28.0	22	27.5	26.750	30
R1C	-0.005	0.012	12.067	0.014	25.5	30.5	30	30.5	29.125	31
RAC	0.016	0.017	39.377	0.023	32.0	32.0	32	32.0	32.000	32
TSA	0.024	0.024	41.305	0.027	33.0	33.0	33	33.0	33.000	33

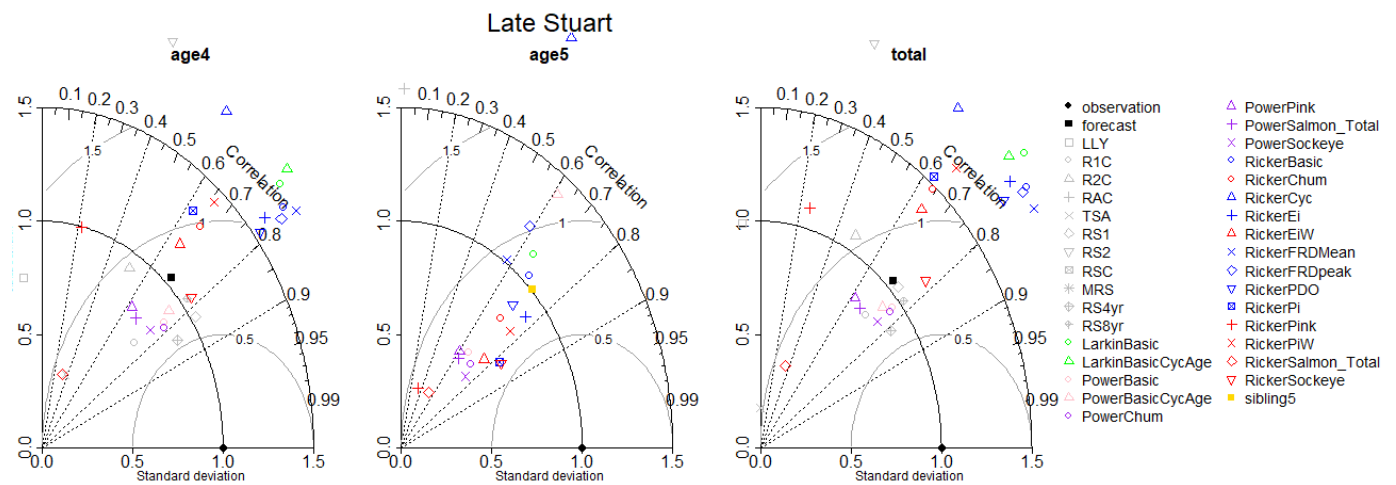
Diff



FC-TS



Late Stuart Retrospective: Taylor



Ranking (Total)-Alllys

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RS4yr	-0.004	0.065	0.805	0.082	2.0	1.0	9	1.0	3.250	1
R1C	-0.017	0.075	0.455	0.102	7.0	2.0	3	5.0	4.250	2
PowerSalmon_Total	0.003	0.081	0.648	0.106	1.0	5.0	4	7.5	4.375	3
PowerSockeye	0.016	0.077	0.769	0.093	6.0	3.0	7	2.0	4.500	4
PowerPink	0.006	0.085	0.708	0.113	3.5	8.0	5	9.5	6.500	5
RS1	0.010	0.080	0.898	0.105	5.0	4.0	12	6.0	6.750	6
PowerChum	0.027	0.082	0.862	0.096	9.0	6.0	10	3.0	7.000	7
RS8yr	0.032	0.083	0.881	0.100	10.0	7.0	11	4.0	8.000	8
RickerSockeye	0.051	0.095	0.760	0.114	13.0	10.0	6	11.0	10.000	9
RickerPink	-0.045	0.128	0.039	0.183	11.0	15.0	1	16.0	10.750	10
PowerBasic	0.049	0.091	1.313	0.106	12.0	9.0	16	7.5	11.125	11
RickerChum	0.053	0.101	0.794	0.167	14.0	12.0	8	14.0	12.000	12
R2C	0.023	0.110	1.438	0.148	8.0	13.0	17	12.0	12.500	13
RickerSalmon_Total	-0.107	0.112	-0.340	0.168	19.0	14.0	2	15.0	12.500	14
PowerBasicCycAge	0.058	0.100	1.598	0.113	15.5	11.0	18	9.5	13.500	15
RickerEiW	0.074	0.131	1.202	0.164	17.0	16.0	15	13.0	15.250	16

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerPi	0.092	0.145	1.085	0.189	18.0	17.0	13	17.0	16.250	17
LLY	0.006	0.164	3.210	0.206	3.5	19.0	28	18.0	17.125	18
RS2	0.058	0.158	1.149	0.260	15.5	18.0	14	25.0	18.125	19
RickerPiW	0.140	0.171	1.610	0.221	20.0	20.0	19	19.0	19.500	20
RickerPDO	0.156	0.174	1.645	0.223	21.0	21.0	21	20.0	20.750	21
RickerFRDMean	0.163	0.175	1.619	0.230	22.0	22.0	20	21.0	21.250	22
RickerEi	0.174	0.184	1.849	0.243	23.0	23.0	23	22.0	22.750	23
RickerFRDpeak	0.177	0.188	1.831	0.244	24.5	25.0	22	23.0	23.625	24
RickerBasic	0.177	0.187	2.216	0.248	24.5	24.0	25	24.0	24.375	25
RickerCyc	0.180	0.193	2.527	0.275	26.0	26.0	26	26.0	26.000	26
LarkinBasic	0.202	0.212	2.120	0.278	27.0	27.0	24	27.0	26.250	27
LarkinBasicCycAge	0.214	0.225	2.550	0.283	28.0	28.0	27	28.0	27.750	28
RAC	0.302	0.328	3.236	0.595	29.0	29.0	29	30.0	29.250	29
TSA	0.373	0.373	12.473	0.399	30.0	30.0	32	29.0	30.250	30
RSC	0.515	0.515	8.322	0.859	31.0	31.0	31	31.0	31.000	31
MRS	0.742	0.748	8.149	0.921	32.0	32.0	30	32.0	31.500	32

(Age4)-Allyrs

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RS1	-0.011	0.058	0.275	0.084	7.0	2.0	2	2.0	3.250	1
RS4yr	-0.021	0.054	0.626	0.078	9.0	1.0	5	1.0	4.000	2
RS8yr	0.010	0.067	0.650	0.097	5.0	3.0	6	6.0	5.000	3
PowerSockeye	0.000	0.072	1.131	0.091	1.0	5.5	13	4.0	5.875	4
PowerChum	0.007	0.072	1.228	0.088	2.5	5.5	14	3.0	6.250	5
R1C	-0.025	0.068	0.798	0.098	11.5	4.0	9	7.0	7.875	6
PowerSalmon_Total	-0.010	0.075	0.831	0.105	5.0	7.0	10	10.0	8.000	7
PowerPink	-0.007	0.081	0.871	0.111	2.5	10.0	11	11.0	8.625	8
RickerSockeye	0.026	0.080	0.788	0.099	13.0	9.0	7	8.5	9.375	9
PowerBasic	0.024	0.077	1.753	0.093	10.0	8.0	21	5.0	11.000	10
RickerChum	0.025	0.089	0.789	0.139	11.5	12.0	8	14.0	11.375	11
PowerBasicCycAge	0.032	0.082	1.680	0.099	14.0	11.0	18	8.5	12.875	12
R2C	0.010	0.099	1.945	0.132	5.0	13.0	23	12.0	13.250	13
RickerPink	-0.055	0.130	-0.026	0.182	17.0	17.0	1	19.0	13.500	14
RickerSalmon_Total	-0.111	0.115	-0.388	0.172	20.5	15.0	3	16.0	13.625	15
RickerEiW	0.040	0.105	1.295	0.135	16.0	14.0	15	13.0	14.500	16
RickerPi	0.058	0.120	1.108	0.158	18.0	16.0	12	15.0	15.250	17
RS2	0.037	0.143	0.602	0.256	15.0	22.0	4	28.0	17.250	18
RickerPiW	0.097	0.141	1.564	0.180	19.0	21.0	17	18.0	18.750	19
RickerPDO	0.111	0.140	1.699	0.175	20.5	20.0	19	17.0	19.125	20
RickerFRDMean	0.118	0.139	1.545	0.196	22.0	18.5	16	23.0	19.875	21

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
LLY	-0.016	0.149	9.431	0.187	8.0	25.0	31	20.0	21.000	22
RickerFRDpeak	0.124	0.139	1.734	0.193	24.0	18.5	20	22.0	21.125	23
RickerEi	0.123	0.147	1.867	0.190	23.0	24.0	22	21.0	22.500	24
RickerCyc	0.125	0.146	2.089	0.241	25.0	23.0	25	27.0	25.000	25
LarkinBasic	0.145	0.164	2.069	0.222	27.0	27.0	24	25.0	25.750	26
RickerBasic	0.131	0.153	2.328	0.203	26.0	26.0	27	24.0	25.750	27
LarkinBasicCycAge	0.159	0.174	2.140	0.239	28.0	28.0	26	26.0	27.000	28
RAC	0.277	0.314	4.831	0.567	29.0	30.0	28	30.0	29.250	29
TSA	0.299	0.299	23.988	0.326	30.0	29.0	32	29.0	30.000	30
RSC	0.439	0.441	8.688	0.835	31.0	31.0	30	32.0	31.000	31
MRS	0.588	0.595	7.002	0.817	32.0	32.0	29	31.0	31.000	32

(Age 5)-Alllys

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerPi	-0.003	0.006	0.077	0.008	7.0	3.0	4	1.5	3.875	1
RickerPiW	0.000	0.006	0.321	0.009	1.5	3.0	9	4.0	4.375	2
RickerSockeye	-0.004	0.005	-0.088	0.008	11.0	1.0	6	1.5	4.875	3
RickerEi	0.001	0.007	0.410	0.009	3.5	7.5	12	4.0	6.750	4
RickerPDO	0.000	0.007	0.363	0.010	1.5	7.5	11	7.0	6.750	5
RickerChum	-0.004	0.006	-0.183	0.010	11.0	3.0	8	7.0	7.250	6
RickerEiW	-0.004	0.007	0.090	0.009	11.0	7.5	7	4.0	7.375	7
PowerChum	-0.005	0.007	0.003	0.011	14.0	7.5	1	10.5	8.250	8
PowerBasic	-0.004	0.007	0.332	0.011	11.0	7.5	10	10.5	9.750	9
PowerSockeye	-0.006	0.007	0.087	0.011	16.5	7.5	5	10.5	9.875	10
RickerBasic	0.002	0.008	0.481	0.011	5.0	12.5	14	10.5	10.500	11
PowerPink	-0.006	0.008	0.009	0.012	16.5	12.5	2	14.0	11.250	12
PowerSalmon_Total	-0.006	0.008	-0.066	0.012	16.5	12.5	3	14.0	11.500	13
RickerFRDMean	0.001	0.010	0.424	0.012	3.5	16.0	13	14.0	11.625	14
sibling5	0.003	0.008	0.731	0.010	7.0	12.5	20	7.0	11.625	15
RickerFRDpeak	0.003	0.010	0.564	0.014	7.0	16.0	15	17.0	13.750	16
LarkinBasic	0.004	0.010	0.682	0.013	11.0	16.0	19	16.0	15.500	17
PowerBasicCycAge	0.006	0.012	0.663	0.016	16.5	20.0	18	19.0	18.375	18
RickerPink	-0.011	0.011	-0.604	0.016	20.5	18.5	16	19.0	18.500	19
RickerSalmon_Total	-0.011	0.011	-0.648	0.016	20.5	18.5	17	19.0	18.750	20
R1C	0.008	0.019	6.946	0.026	19.0	21.0	28	21.0	22.250	21
RS4yr	0.019	0.020	1.367	0.032	24.0	22.5	22	25.0	23.375	22
RickerCyc	0.016	0.020	1.727	0.029	23.0	22.5	26	22.0	23.375	23
R2C	0.013	0.022	9.662	0.031	22.0	24.5	30	23.5	25.000	24
LarkinBasicCycAge	0.020	0.022	1.592	0.034	25.0	24.5	25	26.5	25.250	25
RS1	0.022	0.025	1.264	0.043	26.5	27.5	21	29.0	26.000	26

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RS8yr	0.024	0.025	1.493	0.034	30.0	27.5	24	26.5	27.000	27
LLY	0.023	0.024	2.749	0.036	28.5	26.0	27	28.0	27.375	28
RAC	0.022	0.026	10.318	0.031	26.5	29.5	31	23.5	27.625	29
RS2	0.023	0.026	1.445	0.047	28.5	29.5	23	30.0	27.750	30
RSC	0.081	0.081	7.711	0.104	32.0	32.0	29	32.0	31.250	31
TSA	0.078	0.078	28.692	0.084	31.0	31.0	33	31.0	31.500	32
MRS	0.166	0.166	10.973	0.233	33.0	33.0	32	33.0	32.750	33

(Total)-Cycle

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerSalmon_Total	-0.019	0.030	-0.029	0.045	3.0	1.0	1	1.0	1.500	1
RS4yr	-0.005	0.051	0.583	0.061	1.0	2.0	4	2.0	2.250	2
RS1	0.009	0.057	0.768	0.077	2.0	3.0	5	3.0	3.250	3
RickerPink	0.030	0.070	0.389	0.088	4.0	5.0	3	4.5	4.125	4
LLY	-0.057	0.062	-0.288	0.095	13.0	4.0	2	8.0	6.750	5
PowerSalmon_Total	0.047	0.080	1.333	0.093	7.0	7.0	9	7.0	7.500	6
PowerSockeye	0.044	0.081	1.449	0.089	6.0	8.0	10	6.0	7.500	7
PowerChum	0.049	0.079	1.493	0.088	8.0	6.0	12	4.5	7.625	8
RickerChum	0.051	0.087	1.292	0.099	9.5	11.0	7	9.0	9.125	9
R1C	0.042	0.086	1.535	0.100	5.0	9.5	13	10.0	9.375	10
RS8yr	0.051	0.095	0.769	0.120	9.5	12.0	6	15.0	10.625	11
PowerPink	0.054	0.086	1.453	0.102	11.5	9.5	11	11.0	10.750	12
RickerSockeye	0.054	0.098	1.300	0.112	11.5	13.5	8	13.0	11.500	13
PowerBasic	0.071	0.101	2.365	0.111	14.0	15.0	17	12.0	14.500	14
PowerBasicCycAge	0.078	0.108	2.422	0.121	15.0	16.0	18	16.0	16.250	15
RickerEiW	0.101	0.137	2.290	0.164	17.0	17.0	16	17.0	16.750	16
RickerPi	0.125	0.164	2.191	0.210	18.0	19.0	15	19.0	17.750	17
RAC	0.093	0.098	4.657	0.117	16.0	13.5	28	14.0	17.875	18
RickerPDO	0.126	0.157	2.623	0.195	19.0	18.0	20	18.0	18.750	19
RickerPiW	0.137	0.174	2.802	0.216	20.0	20.0	21	21.0	20.500	20
RickerEi	0.141	0.175	3.055	0.215	21.0	21.0	23	20.0	21.250	21
RickerBasic	0.147	0.183	3.166	0.225	22.0	22.0	24	22.5	22.625	22
RickerFRDpeak	0.149	0.185	2.870	0.234	23.0	23.0	22	24.0	23.000	23
RickerFRDMean	0.154	0.190	2.564	0.253	25.0	24.5	19	25.0	23.375	24
R2C	0.151	0.190	3.888	0.225	24.0	24.5	27	22.5	24.500	25
RS2	0.214	0.261	1.771	0.427	28.0	28.0	14	29.0	24.750	26
LarkinBasic	0.173	0.207	3.424	0.264	26.0	26.0	25	26.0	25.750	27
LarkinBasicCycAge	0.186	0.221	3.579	0.285	27.0	27.0	26	27.0	26.750	28
RickerCyc	0.271	0.299	4.968	0.401	29.0	29.0	29	28.0	28.750	29
TSA	0.443	0.443	15.554	0.447	30.0	30.0	31	30.0	30.250	30

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
MRS	0.510	0.529	9.235	0.725	31.0	31.0	30	31.0	30.750	31
RSC	1.079	1.079	18.874	1.516	32.0	32.0	32	32.0	32.000	32

(Age4)-Cycle

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerSalmon_Total	- 0.018	0.028	-0.106	0.043	3.0	1.0	1	1.0	1.500	1
RS4yr	- 0.005	0.050	0.555	0.060	1.0	2.0	4	2.0	2.250	2
RS1	0.010	0.057	0.768	0.076	2.0	3.0	6	3.0	3.500	3
RickerPink	0.030	0.071	0.324	0.089	5.0	5.5	2	7.0	4.875	4
R1C	0.028	0.071	1.269	0.084	4.0	5.5	10	4.0	5.875	5
LLY	- 0.058	0.059	-0.354	0.093	13.0	4.0	3	8.5	7.125	6
PowerChum	0.044	0.078	1.354	0.087	7.0	7.0	12	5.0	7.750	7
PowerSockeye	0.041	0.079	1.294	0.088	6.0	8.5	11	6.0	7.875	8
PowerSalmon_Total	0.045	0.079	1.217	0.093	8.0	8.5	9	8.5	8.500	9
RickerChum	0.050	0.087	1.196	0.100	9.0	11.5	8	10.5	9.750	10
RS8yr	0.051	0.094	0.756	0.120	10.5	13.0	5	15.0	10.875	11
RickerSockeye	0.051	0.095	1.170	0.110	10.5	14.0	7	14.0	11.375	12
PowerPink	0.053	0.084	1.356	0.101	12.0	10.0	13	12.0	11.750	13
PowerBasic	0.063	0.096	2.145	0.107	14.0	15.0	17	13.0	14.750	14
RAC	0.073	0.087	4.200	0.100	15.0	11.5	28	10.5	16.250	15
PowerBasicCycAge	0.076	0.109	2.420	0.122	16.0	16.0	18	16.0	16.500	16
RickerEiW	0.094	0.131	2.108	0.157	17.0	17.0	15	17.0	16.500	17
RickerPi	0.121	0.161	2.111	0.207	18.0	20.0	16	20.0	18.500	18
RickerPDO	0.122	0.156	2.463	0.195	19.5	18.0	20	19.0	19.125	19
R2C	0.122	0.160	3.439	0.186	19.5	19.0	26	18.0	20.625	20
RickerEi	0.134	0.170	2.864	0.211	22.0	21.0	23	21.0	21.750	21
RickerPiW	0.133	0.171	2.672	0.213	21.0	22.0	22	22.0	21.750	22
RickerFRDpeak	0.142	0.180	2.659	0.229	23.0	23.0	21	24.0	22.750	23
RickerBasic	0.143	0.181	2.990	0.225	24.0	24.0	24	23.0	23.750	24
RickerFRDMean	0.151	0.189	2.439	0.253	25.0	25.0	19	26.0	23.750	25
RS2	0.215	0.261	1.823	0.428	28.0	28.0	14	30.0	25.000	26
LarkinBasic	0.162	0.197	3.176	0.252	26.0	26.0	25	25.0	25.500	27
LarkinBasicCycAge	0.186	0.221	3.573	0.287	27.0	27.0	27	27.0	27.000	28
RickerCyc	0.268	0.298	4.845	0.403	29.0	29.0	29	29.0	29.000	29
TSA	0.376	0.376	14.219	0.381	30.0	30.0	31	28.0	29.750	30
MRS	0.502	0.524	9.168	0.720	31.0	31.0	30	31.0	30.750	31
RSC	1.071	1.071	19.087	1.510	32.0	32.0	32	32.0	32.000	32

(Age 5)-Cycle

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RS4yr	0.000	0.001	0.498	0.001	1.5	2.0	17	1.5	5.500	1
RS8yr	0.000	0.001	0.636	0.001	1.5	2.0	20	1.5	6.250	2
RS2	-0.001	0.001	-0.241	0.002	9.5	2.0	15	5.0	7.875	3
RickerPDO	-0.001	0.002	0.137	0.002	9.5	12.5	7	5.0	8.500	4
RS1	-0.001	0.002	-0.215	0.002	9.5	12.5	11.5	5.0	9.625	5
RickerFRDMean	-0.001	0.002	0.035	0.003	9.5	12.5	4	15.0	10.250	6
RickerPiW	-0.001	0.002	-0.043	0.003	9.5	12.5	5	15.0	10.500	7
RickerEi	-0.001	0.002	0.132	0.003	9.5	12.5	6	15.0	10.750	8
LarkinBasic	-0.001	0.002	0.153	0.003	9.5	12.5	8	15.0	11.250	9
RickerBasic	-0.001	0.002	0.155	0.003	9.5	12.5	9	15.0	11.500	10
RickerFRDpeak	-0.001	0.002	0.209	0.003	9.5	12.5	10	15.0	11.750	11
PowerPink	-0.002	0.002	0.001	0.003	19.5	12.5	1	15.0	12.000	12
RickerPi	-0.002	0.002	-0.215	0.002	19.5	12.5	11.5	5.0	12.125	13
PowerSalmon_Total	-0.002	0.002	-0.003	0.003	19.5	12.5	2	15.0	12.250	14
sibling5	-0.001	0.002	0.710	0.002	9.5	12.5	22	5.0	12.250	15
PowerChum	-0.001	0.002	0.234	0.003	9.5	12.5	13	15.0	12.500	16
RickerEiW	-0.002	0.002	-0.018	0.003	19.5	12.5	3	15.0	12.500	17
PowerSockeye	-0.001	0.002	0.513	0.003	9.5	12.5	18	15.0	13.750	18
PowerBasic	-0.001	0.002	0.730	0.003	9.5	12.5	23	15.0	15.000	19
RickerSockeye	-0.002	0.002	-0.238	0.003	19.5	12.5	14	15.0	15.250	20
RickerChum	-0.002	0.002	-0.260	0.003	19.5	12.5	16	15.0	15.750	21
LLY	0.001	0.003	3.895	0.003	9.5	24.5	27	15.0	19.000	22
RickerSalmon_Total	-0.003	0.003	-0.606	0.004	25.0	24.5	19	25.0	23.375	23
PowerBasicCycAge	-0.003	0.003	-0.699	0.004	25.0	24.5	21	25.0	23.875	24
RickerPink	-0.003	0.003	-0.747	0.004	25.0	24.5	24	25.0	24.625	25
LarkinBasicCycAge	-0.003	0.003	-0.794	0.004	25.0	24.5	25	25.0	24.875	26
RickerCyc	-0.003	0.003	-0.825	0.004	25.0	24.5	26	25.0	25.125	27
MRS	0.008	0.008	6.437	0.009	28.5	28.5	28	28.5	28.375	28
RSC	0.008	0.008	6.535	0.009	28.5	28.5	29	28.5	28.625	29
R1C	0.014	0.016	21.547	0.020	30.0	30.0	30	30.0	30.000	30
RAC	0.020	0.020	26.589	0.021	31.0	31.0	31	31.0	31.000	31
R2C	0.029	0.030	30.111	0.041	32.0	32.0	32	32.0	32.000	32
TSA	0.066	0.066	79.431	0.067	33.0	33.0	33	33.0	33.000	33

(Total)-Other

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RS4yr	0.009	0.044	1.047	0.052	4.0	1.0	9	1.0	3.750	1
RS1	-0.001	0.067	1.066	0.084	1.0	3.0	10	4.0	4.500	2
RickerChum	0.037	0.056	0.851	0.071	9.0	2.0	5	2.0	4.500	3
PowerSalmon_Total	0.007	0.072	0.828	0.101	3.0	5.5	4	9.0	5.375	4

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
R1C	-0.018	0.072	0.574	0.102	6.0	5.5	3	10.0	6.125	5
PowerChum	0.034	0.069	1.086	0.078	8.0	4.0	11	3.0	6.500	6
PowerSockeye	0.024	0.077	0.996	0.094	7.0	8.5	8	6.0	7.375	7
PowerPink	0.010	0.077	0.901	0.110	5.0	8.5	7	11.0	7.875	8
RS8yr	0.041	0.075	1.103	0.092	11.0	7.0	12	5.0	8.750	9
RickerSockeye	0.047	0.082	0.894	0.100	12.0	10.0	6	7.5	8.875	10
RickerPink	-0.048	0.093	0.036	0.156	13.0	13.0	1	15.0	10.500	11
RickerSalmon_Total	-0.078	0.085	-0.228	0.152	18.0	11.0	2	14.0	11.250	12
PowerBasic	0.052	0.088	1.643	0.100	14.0	12.0	16	7.5	12.375	13
R2C	0.038	0.112	1.843	0.158	10.0	16.0	18	16.0	15.000	14
RickerEiW	0.070	0.111	1.453	0.149	17.0	15.0	15	13.0	15.000	15
PowerBasicCycAge	0.066	0.101	2.022	0.111	16.0	14.0	21	12.0	15.750	16
RickerPi	0.091	0.131	1.292	0.187	19.0	17.0	13	17.0	16.500	17
LLY	0.002	0.168	4.034	0.216	2.0	21.0	28	20.0	17.750	18
RickerPiW	0.119	0.149	1.833	0.198	20.0	18.0	17	19.0	18.500	19
RS2	0.063	0.153	1.382	0.272	15.0	20.0	14	26.0	18.750	20
RickerPDO	0.138	0.151	1.868	0.197	21.0	19.0	19	18.0	19.250	21
RickerBasic	0.156	0.169	2.532	0.224	22.0	22.0	25	21.0	22.500	22
RickerEi	0.158	0.172	2.119	0.225	23.0	23.0	22	22.0	22.500	23
RickerFRDMean	0.165	0.181	1.911	0.238	24.0	24.0	20	23.0	22.750	24
RickerFRDpeak	0.168	0.183	2.127	0.242	25.0	25.0	23	24.0	24.250	25
LarkinBasic	0.187	0.200	2.447	0.271	26.0	26.0	24	25.0	25.250	26
LarkinBasicCycAge	0.208	0.222	3.027	0.284	27.0	27.5	26	27.0	26.875	27
RickerCyc	0.211	0.222	3.181	0.306	28.0	27.5	27	28.0	27.625	28
RAC	0.397	0.399	4.157	0.671	29.0	29.0	29	30.0	29.250	29
TSA	0.408	0.408	15.626	0.431	30.0	30.0	32	29.0	30.250	30
RSC	0.560	0.560	10.199	0.944	31.0	31.0	31	32.0	31.250	31
MRS	0.664	0.671	9.279	0.868	32.0	32.0	30	31.0	31.250	32

(Age4)-Other

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RS4yr	-0.002	0.032	0.871	0.044	1.5	1.0	6	1.0	2.375	1
RS1	-0.021	0.048	0.296	0.074	8.0	3.0	3	4.0	4.500	2
RickerChum	0.022	0.046	0.917	0.066	9.0	2.0	7	2.0	5.000	3
RS8yr	0.026	0.060	0.861	0.087	10.0	5.0	5	6.0	6.500	4
PowerChum	0.019	0.056	1.604	0.070	6.5	4.0	14	3.0	6.875	5
PowerSalmon_Total	-0.004	0.065	1.088	0.099	3.0	7.0	10	11.0	7.750	6
R1C	-0.019	0.062	1.052	0.098	6.5	6.0	9	10.0	7.875	7
PowerSockeye	0.013	0.068	1.504	0.088	4.0	8.5	13	7.0	8.125	8
RickerSockeye	0.032	0.068	0.986	0.086	12.0	8.5	8	5.0	8.375	9

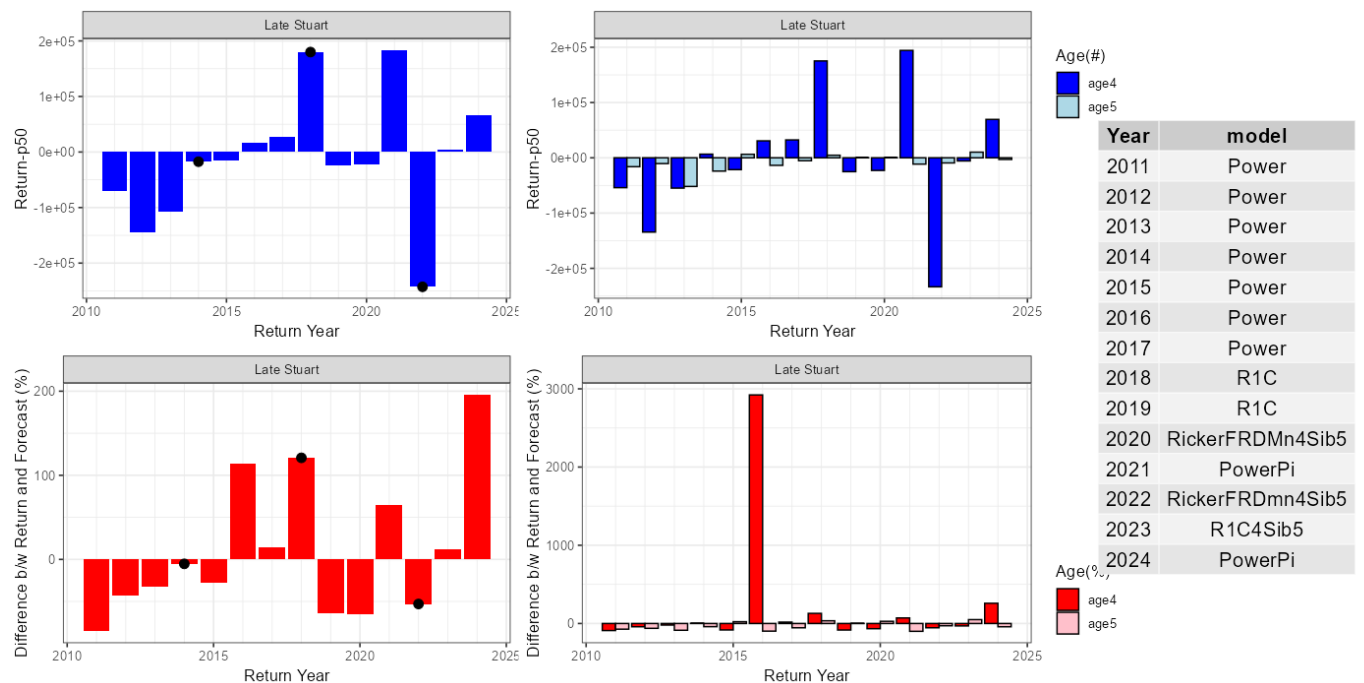
model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
PowerPink	-0.002	0.071	1.129	0.108	1.5	10.0	11	12.0	8.625	10
RickerSalmon_Total	-0.082	0.087	-0.266	0.158	19.0	13.0	2	16.0	12.500	11
RickerPink	-0.055	0.098	-0.027	0.161	17.0	15.0	1	18.0	12.750	12
PowerBasic	0.034	0.074	2.264	0.089	13.0	11.0	22	8.0	13.500	13
PowerBasicCycAge	0.040	0.079	2.152	0.096	15.0	12.0	20	9.0	14.000	14
RickerEiW	0.043	0.089	1.634	0.123	16.0	14.0	15	13.0	14.500	15
RickerPi	0.068	0.109	1.385	0.157	18.0	17.0	12	15.0	15.500	16
R2C	0.030	0.099	2.526	0.139	11.0	16.0	24	14.0	16.250	17
RS2	0.039	0.137	0.690	0.271	14.0	20.0	4	28.0	16.500	18
RickerPDO	0.107	0.120	2.022	0.159	21.0	18.0	18	17.0	18.500	19
RickerPiW	0.090	0.123	1.847	0.167	20.0	19.0	16	19.0	18.500	20
LLY	-0.014	0.151	11.997	0.198	5.0	23.0	31	22.0	20.250	21
RickerEi	0.124	0.139	2.244	0.184	22.0	21.0	21	20.0	21.000	22
RickerFRDpeak	0.137	0.152	2.135	0.208	24.0	24.0	19	23.0	22.500	23
RickerFRDMean	0.138	0.153	1.922	0.214	25.0	25.0	17	24.0	22.750	24
RickerBasic	0.127	0.141	2.764	0.193	23.0	22.0	27	21.0	23.250	25
LarkinBasic	0.149	0.163	2.495	0.228	26.0	27.0	23	25.0	25.250	26
RickerCyc	0.151	0.162	2.644	0.269	27.0	26.0	26	27.0	26.500	27
LarkinBasicCycAge	0.159	0.173	2.554	0.244	28.0	28.0	25	26.0	26.750	28
RAC	0.374	0.379	6.222	0.638	30.0	30.0	28	30.0	29.500	29
TSA	0.340	0.340	30.358	0.359	29.0	29.0	32	29.0	29.750	30
RSC	0.496	0.496	10.754	0.928	31.0	31.0	30	32.0	31.000	31
MRS	0.566	0.574	8.101	0.833	32.0	32.0	29	31.0	31.000	32

(Age5)-Other

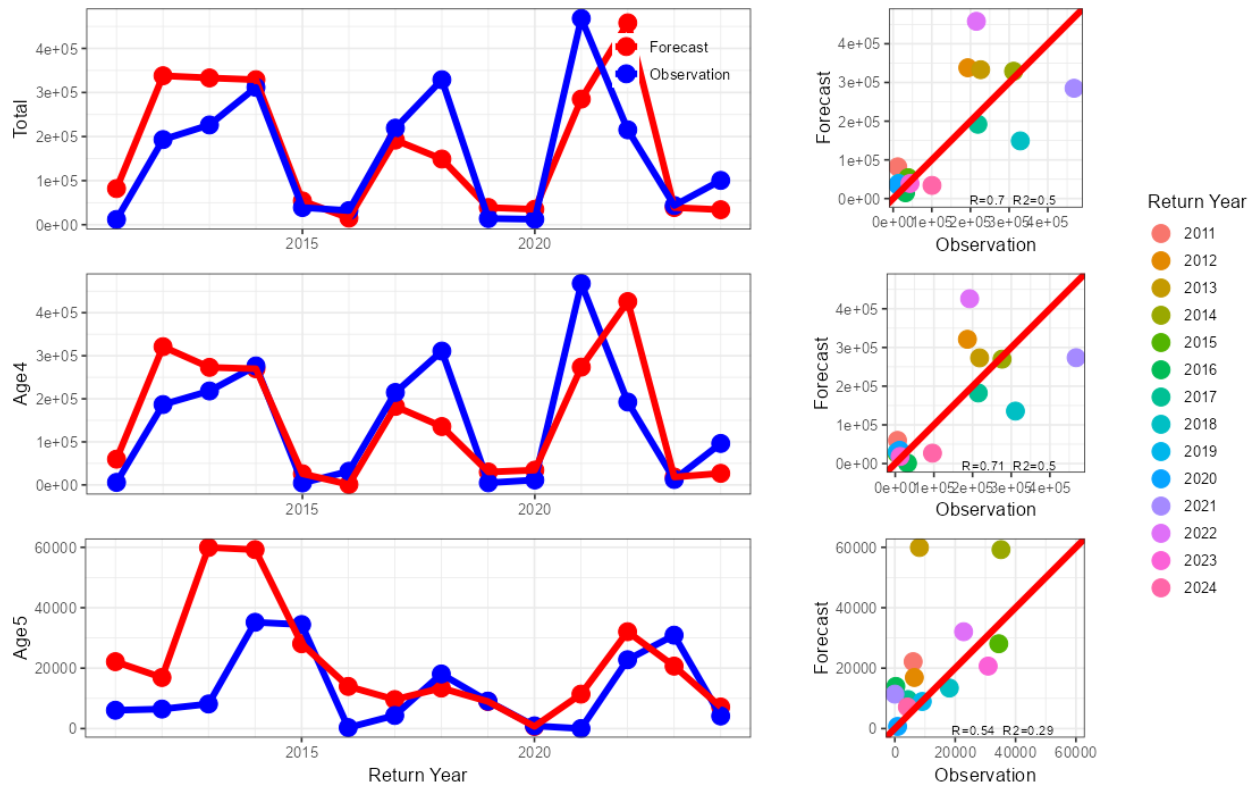
model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerSockeye	-0.003	0.004	-0.058	0.007	13.0	1.5	1	1.0	4.125	1
RickerPDO	0.001	0.005	0.473	0.008	5.0	3.5	11	5.0	6.125	2
RickerPi	-0.002	0.006	0.146	0.008	9.0	8.5	4	5.0	6.625	3
RickerPiW	0.001	0.006	0.469	0.008	5.0	8.5	10	5.0	7.125	4
RickerChum	-0.004	0.004	-0.193	0.008	17.0	1.5	6	5.0	7.375	5
RickerEi	0.001	0.006	0.504	0.008	5.0	8.5	12	5.0	7.625	6
RickerEiW	-0.002	0.006	0.240	0.008	9.0	8.5	8	5.0	7.625	7
RickerBasic	0.001	0.006	0.517	0.008	5.0	8.5	14	5.0	8.125	8
PowerChum	-0.004	0.005	0.128	0.009	17.0	3.5	3	12.0	8.875	9
PowerSalmon_Total	-0.003	0.006	0.078	0.009	13.0	8.5	2	12.0	8.875	10
RickerFRDMean	0.000	0.007	0.446	0.009	1.5	15.0	9	12.0	9.375	11
PowerPink	-0.003	0.006	0.173	0.009	13.0	8.5	5	12.0	9.625	12
PowerSockeye	-0.004	0.006	0.233	0.009	17.0	8.5	7	12.0	11.125	13
RickerFRDpeak	0.001	0.007	0.572	0.009	5.0	15.0	15	12.0	11.750	14

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
PowerBasic	-0.002	0.007	0.512	0.009	9.0	15.0	13	12.0	12.250	15
LarkinBasic	0.003	0.007	0.758	0.010	13.0	15.0	18	16.5	15.625	16
sibling5	0.003	0.007	0.883	0.010	13.0	15.0	19	16.5	15.875	17
R1C	0.000	0.013	8.498	0.018	1.5	21.0	29	20.5	18.000	18
RickerPink	-0.008	0.008	-0.577	0.014	20.0	18.5	16	19.0	18.375	19
RickerSalmon_Total	-0.008	0.008	-0.595	0.012	20.0	18.5	17	18.0	18.375	20
PowerBasicCycAge	0.009	0.013	0.892	0.018	22.0	21.0	20	20.5	20.875	21
RS4yr	0.013	0.013	1.187	0.023	23.0	21.0	21	22.0	21.750	22
RS8yr	0.016	0.017	1.310	0.027	24.0	23.0	22	23.0	23.000	23
R2C	0.008	0.019	12.110	0.029	20.0	24.5	31	24.0	24.875	24
LLY	0.017	0.019	2.992	0.030	25.0	24.5	27	25.0	25.375	25
RickerCyc	0.020	0.022	2.181	0.032	26.5	26.0	26	26.5	26.250	26
RS1	0.022	0.023	1.336	0.042	28.0	27.0	23	29.0	26.750	27
LarkinBasicCycAge	0.023	0.025	1.901	0.038	29.0	28.5	25	28.0	27.625	28
RAC	0.020	0.025	13.025	0.032	26.5	28.5	32	26.5	28.375	29
RS2	0.027	0.028	1.704	0.052	30.0	30.0	24	30.0	28.500	30
RSC	0.069	0.069	8.391	0.097	31.0	31.0	28	32.0	30.500	31
TSA	0.073	0.073	36.069	0.081	32.0	32.0	33	31.0	32.000	32
MRS	0.107	0.107	9.429	0.173	33.0	33.0	30	33.0	32.250	33

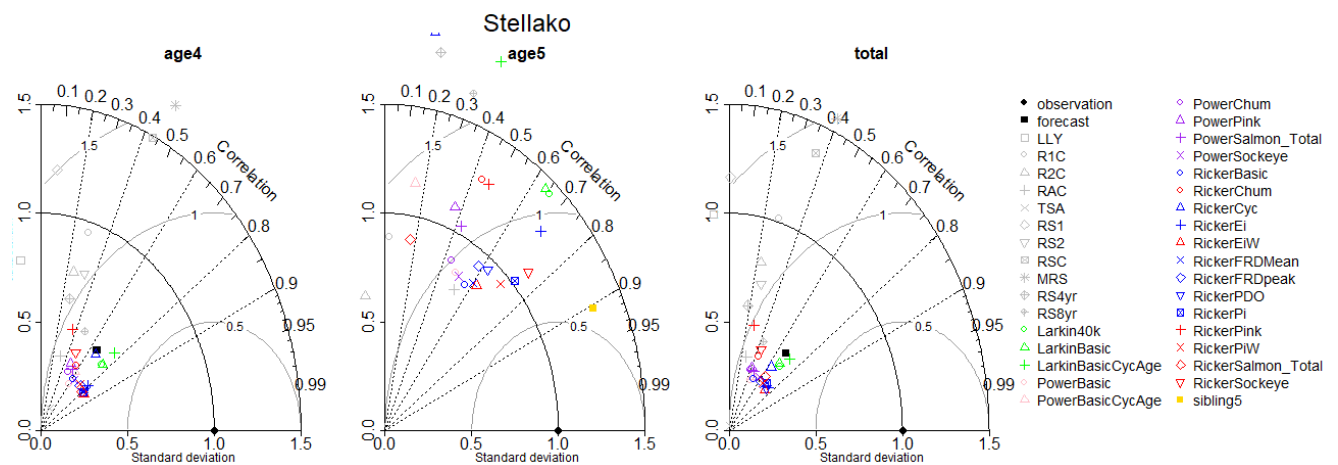
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FC-TS



Stellako Retrospective: Taylor



Ranking (Total)-Alllys

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RS8yr	0.018	0.178	0.637	0.332	4.0	3.0	4	10.0	5.250	1
PowerSalmon_Total	-0.004	0.175	0.793	0.343	2.0	2.0	8	14.0	6.500	2
PowerPink	0.001	0.185	0.854	0.349	1.0	4.0	10	18.0	8.250	3
RickerPi	0.038	0.198	1.091	0.313	10.0	5.0	14	4.0	8.250	4
RickerChum	0.019	0.203	0.826	0.345	5.0	6.0	9	15.0	8.750	5
RickerSalmon_Total	-0.116	0.171	-0.029	0.337	25.5	1.0	1	12.0	9.875	6
RickerPink	-0.022	0.214	0.622	0.376	6.5	9.5	3	23.0	10.500	7
RickerEiW	0.055	0.207	1.321	0.316	14.0	7.0	17	5.0	10.750	8
Larkin40k	0.078	0.214	1.428	0.303	17.0	9.5	18	2.0	11.625	9
RS4yr	0.027	0.216	0.720	0.391	8.0	11.5	5	24.0	12.125	10
PowerChum	0.029	0.208	0.994	0.355	9.0	8.0	12	20.0	12.250	11
LarkinBasic	0.079	0.216	1.454	0.306	18.0	11.5	20	3.0	13.125	12
R1C	0.008	0.238	0.425	0.446	3.0	20.0	2	29.0	13.500	13
LarkinBasicCycAge	0.095	0.217	1.522	0.295	20.0	13.0	22	1.0	14.000	14
PowerSockeye	0.057	0.219	1.229	0.333	15.0	14.0	16	11.0	14.000	15
RickerSockeye	0.052	0.221	1.024	0.346	13.0	15.0	13	16.0	14.250	16
RS2	0.045	0.224	0.767	0.392	12.0	16.0	7	25.0	15.000	17
RickerPiW	0.077	0.229	1.438	0.328	16.0	17.0	19	8.0	15.000	18
R2C	0.039	0.234	0.726	0.416	11.0	18.0	6	28.0	15.750	19
RickerEi	0.087	0.235	1.483	0.318	19.0	19.0	21	6.0	16.250	20
RickerCyc	0.099	0.241	1.551	0.325	21.0	21.0	23	7.0	18.000	21
LLY	0.022	0.306	0.977	0.542	6.5	28.0	11	30.0	18.875	22
RickerPDO	0.116	0.258	1.653	0.329	25.5	22.0	24	9.0	20.125	23
RickerFRDMean	0.126	0.268	1.808	0.340	27.0	23.0	28	13.0	22.750	24
PowerBasic	0.110	0.275	1.716	0.365	23.0	25.5	26	22.0	24.125	25
PowerBasicCycAge	0.114	0.276	1.712	0.361	24.0	27.0	25	21.0	24.250	26
RickerBasic	0.128	0.273	1.767	0.353	28.0	24.0	27	19.0	24.500	27
RS1	0.108	0.360	1.202	0.573	22.0	31.0	15	31.0	24.750	28
RickerFRDpeak	0.130	0.275	1.849	0.348	29.0	25.5	29	17.0	25.125	29
RAC	0.196	0.339	2.359	0.405	31.0	29.0	30	26.0	29.000	30
TSA	0.192	0.347	2.482	0.413	30.0	30.0	31	27.0	29.500	31
RSC	0.452	0.523	3.391	0.677	32.0	32.0	32	32.0	32.000	32
MRS	0.485	0.533	3.420	0.729	33.0	33.0	33	33.0	33.000	33

(Age4)-Alllys

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RS8yr	-0.008	0.160	0.542	0.319	5.0	7.0	3	14.0	7.250	1
RickerEiW	-0.010	0.153	1.189	0.291	6.5	2.5	16	6.5	7.875	2
RickerPi	-0.026	0.146	0.942	0.292	14.0	1.0	13	8.0	9.000	3
PowerSockeye	-0.010	0.159	1.056	0.317	6.5	5.5	15	13.0	10.000	4

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
Larkin40k	0.014	0.163	1.258	0.272	11.0	9.0	19	3.0	10.500	5
RickerPiW	0.001	0.170	1.247	0.302	2.0	13.5	17	10.0	10.625	6
RickerEi	0.012	0.169	1.252	0.284	9.5	12.0	18	4.0	10.875	7
LarkinBasic	0.015	0.164	1.282	0.268	12.0	10.0	20	2.0	11.000	8
RickerChum	-0.034	0.159	0.574	0.322	19.5	5.5	4.5	16.0	11.375	9
RickerSalmon_Total	-0.132	0.158	-0.263	0.323	29.0	4.0	1	17.0	12.750	10
LarkinBasicCycAge	0.030	0.170	1.373	0.257	16.0	13.5	21	1.0	12.875	11
PowerChum	-0.023	0.162	0.794	0.336	13.0	8.0	10	22.0	13.250	12
PowerSalmon_Total	-0.045	0.153	0.610	0.329	26.0	2.5	6	18.5	13.250	13
RickerSockeye	-0.011	0.178	0.856	0.330	8.0	15.0	11	20.0	13.500	14
RS4yr	0.003	0.198	0.618	0.374	3.0	24.0	7	24.0	14.500	15
RickerCyc	0.032	0.185	1.434	0.291	17.5	17.0	22	6.5	15.750	16
RickerPDO	0.034	0.185	1.493	0.289	19.5	17.0	23	5.0	16.125	17
PowerPink	-0.040	0.165	0.677	0.334	24.0	11.0	9	21.0	16.250	18
RS2	0.012	0.206	0.574	0.378	9.5	25.0	4.5	26.5	16.375	19
R1C	0.007	0.226	0.661	0.424	4.0	26.0	8	29.0	16.750	20
RickerPink	-0.058	0.192	0.397	0.357	27.0	21.0	2	23.0	18.250	21
RickerFRDMean	0.038	0.185	1.638	0.293	22.0	17.0	27	9.0	18.750	22
PowerBasic	0.027	0.195	1.521	0.329	15.0	22.0	24	18.5	19.875	23
RickerBasic	0.040	0.191	1.561	0.312	24.0	19.5	26	12.0	20.375	24
RickerFRDpeak	0.040	0.191	1.664	0.304	24.0	19.5	28	11.0	20.625	25
PowerBasicCycAge	0.035	0.197	1.542	0.321	21.0	23.0	25	15.0	21.000	26
R2C	0.032	0.227	0.958	0.398	17.5	27.0	14	28.0	21.625	27
LLY	0.000	0.277	2.570	0.496	1.0	28.0	29	30.0	22.000	28
RS1	0.066	0.328	0.923	0.550	28.0	31.0	12	31.0	25.500	29
TSA	0.140	0.294	3.108	0.375	30.0	29.0	30	25.0	28.500	30
RAC	0.152	0.295	3.218	0.378	31.0	30.0	32	26.5	29.875	31
RSC	0.338	0.409	3.251	0.608	32.0	32.0	33	32.0	32.250	32
MRS	0.364	0.411	3.168	0.659	33.0	33.0	31	33.0	32.500	33

(Age5)-Allyrs

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
sibling5	0.019	0.019	1.005	0.027	7.0	1.0	4	1.0	3.250	1
RickerPink	0.008	0.025	0.773	0.039	3.0	2.0	2	8.0	3.750	2
RickerSalmon_Total	-0.012	0.026	-0.201	0.040	4.0	3.0	1	9.5	4.375	3
PowerSalmon_Total	0.016	0.028	1.369	0.038	5.0	5.5	7	6.5	6.000	4
R1C	0.000	0.032	1.139	0.044	1.0	11.0	5	13.5	7.625	5
RickerSockeye	0.025	0.028	1.643	0.034	12.5	5.5	11	2.5	7.875	6
PowerChum	0.020	0.031	1.594	0.037	8.5	9.0	10	5.0	8.125	7
PowerPink	0.017	0.030	1.480	0.041	6.0	7.5	9	11.0	8.375	8

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerPi	0.025	0.027	1.969	0.034	12.5	4.0	15	2.5	8.500	9
R2C	0.007	0.035	1.463	0.043	2.0	14.0	8	12.0	9.000	10
RickerChum	0.020	0.032	1.296	0.044	8.5	11.0	6	13.5	9.750	11
RickerEiW	0.026	0.030	2.213	0.036	14.5	7.5	17	4.0	10.750	12
LLY	0.022	0.037	1.002	0.062	10.0	15.5	3	26.0	13.625	13
PowerSockeye	0.027	0.034	2.084	0.040	16.0	13.0	16	9.5	13.625	14
RickerPiW	0.030	0.032	2.371	0.038	17.0	11.0	20	6.5	13.625	15
RickerEi	0.034	0.037	2.341	0.045	21.0	15.5	18	15.5	17.500	16
RS8yr	0.026	0.041	1.888	0.060	14.5	21.5	13	25.0	18.500	17
RS4yr	0.024	0.046	1.759	0.067	11.0	26.5	12	28.0	19.375	18
Larkin40k	0.033	0.038	2.514	0.047	19.5	17.0	22	19.5	19.500	19
LarkinBasic	0.033	0.039	2.493	0.048	19.5	18.5	21	21.5	20.125	20
RickerPDO	0.036	0.039	2.712	0.045	23.0	18.5	24	15.5	20.250	21
RickerBasic	0.035	0.041	2.537	0.046	22.0	21.5	23	17.5	21.000	22
PowerBasic	0.037	0.041	2.748	0.047	24.0	21.5	25	19.5	22.500	23
RickerFRDMean	0.038	0.041	2.793	0.046	25.5	21.5	26	17.5	22.625	24
RS2	0.032	0.050	1.950	0.076	18.0	30.0	14	30.5	23.125	25
RickerFRDpeak	0.040	0.042	2.896	0.048	28.5	24.0	27	21.5	25.250	26
RAC	0.043	0.045	3.476	0.053	30.5	25.0	28	23.0	26.625	27
PowerBasicCycAge	0.039	0.046	3.702	0.059	27.0	26.5	30	24.0	26.875	28
LarkinBasicCycAge	0.038	0.047	3.556	0.066	25.5	28.0	29	27.0	27.375	29
RS1	0.043	0.072	2.343	0.117	30.5	32.0	19	32.0	28.375	30
RickerCyc	0.040	0.049	3.791	0.073	28.5	29.0	31	29.0	29.375	31
TSA	0.051	0.058	5.473	0.076	32.0	31.0	32	30.5	31.375	32
RSC	0.115	0.120	6.919	0.184	33.0	33.0	34	33.0	33.250	33
MRS	0.121	0.126	6.695	0.196	34.0	34.0	33	34.0	33.750	34

(Total)-Cycle

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RS2	0.028	0.051	0.613	0.070	4.0	1.5	2	2.0	2.375	1
RS4yr	0.051	0.051	0.704	0.058	8.0	1.5	4	1.0	3.625	2
RickerSalmon_Total	-0.019	0.079	0.151	0.085	2.0	7.0	1	6.0	4.000	3
RS1	0.017	0.078	0.635	0.089	1.0	6.0	3	7.0	4.250	4
LLY	0.027	0.072	0.708	0.080	3.0	5.0	5	4.5	4.375	5
RickerChum	0.042	0.070	0.824	0.073	7.0	4.0	7	3.0	5.250	6
RS8yr	0.067	0.067	0.792	0.080	9.0	3.0	6	4.5	5.625	7
R1C	0.031	0.085	0.885	0.122	5.0	8.0	8	11.0	8.000	8
RickerPink	0.037	0.086	0.998	0.127	6.0	9.0	9	12.0	9.000	9
RickerSockeye	0.087	0.092	1.222	0.116	10.0	11.0	10	9.0	10.000	10
PowerChum	0.093	0.093	1.395	0.106	12.0	12.0	11	8.0	10.750	11

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
PowerSalmon_Total	0.088	0.088	1.407	0.119	11.0	10.0	12	10.0	10.750	12
PowerPink	0.103	0.103	1.578	0.135	13.0	13.0	14	13.0	13.250	13
R2C	0.108	0.132	1.446	0.145	14.0	14.5	13	14.0	13.875	14
PowerSockeye	0.132	0.132	1.906	0.156	15.0	14.5	15	15.0	14.875	15
RickerPi	0.149	0.149	1.927	0.176	16.0	16.0	16	16.0	16.000	16
RickerEiW	0.168	0.168	2.370	0.188	17.0	17.0	17	17.0	17.000	17
RickerEi	0.186	0.186	2.413	0.194	22.0	22.0	18	18.0	20.000	18
PowerBasicCycAge	0.184	0.184	2.573	0.197	21.0	21.0	20	19.0	20.250	19
Larkin40k	0.171	0.171	2.694	0.233	19.0	19.0	23	26.0	21.750	20
PowerBasic	0.188	0.188	2.644	0.200	23.0	23.0	22	20.0	22.000	21
RickerPDO	0.190	0.190	2.506	0.202	24.0	24.0	19	21.0	22.000	22
LarkinBasic	0.169	0.169	2.752	0.241	18.0	18.0	26	27.0	22.250	23
RickerFRDMean	0.191	0.191	2.696	0.212	25.0	25.0	24	22.0	24.000	24
LarkinBasicCycAge	0.173	0.173	2.812	0.251	20.0	20.0	28	28.5	24.125	25
RickerPiW	0.199	0.199	2.595	0.221	27.0	27.0	21	24.0	24.750	26
RickerFRDpeak	0.193	0.193	2.750	0.214	26.0	26.0	25	23.0	25.000	27
RickerBasic	0.209	0.209	2.810	0.225	28.0	28.0	27	25.0	27.000	28
RickerCyc	0.226	0.226	2.818	0.251	29.0	29.0	29	28.5	28.875	29
RAC	0.314	0.314	4.334	0.325	30.0	30.0	32	30.0	30.500	30
TSA	0.329	0.329	4.516	0.340	31.0	31.0	33	31.0	31.500	31
MRS	0.336	0.336	3.822	0.380	32.0	32.0	30	32.0	31.500	32
RSC	0.373	0.373	4.228	0.423	33.0	33.0	31	33.0	32.500	33

(Age4)-Cycle

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerChum	0.011	0.040	0.535	0.052	1.0	1.0	2	1.5	1.375	1
RS4yr	0.045	0.045	0.786	0.052	8.0	2.0	4	1.5	3.875	2
RS2	0.028	0.052	0.807	0.073	6.5	4.0	5	4.0	4.875	3
RS1	0.016	0.069	0.782	0.088	2.0	8.0	3	9.0	5.500	4
LLY	0.021	0.070	0.874	0.076	3.0	9.0	6	5.0	5.750	5
RickerSalmon_Total	-0.028	0.074	0.026	0.078	6.5	10.0	1	6.5	6.000	6
PowerChum	0.050	0.050	1.103	0.070	10.0	3.0	11	3.0	6.750	7
RickerSockeye	0.048	0.068	0.918	0.084	9.0	7.0	7.5	8.0	7.875	8
RS8yr	0.062	0.062	0.918	0.078	12.0	6.0	7.5	6.5	8.000	9
PowerSalmon_Total	0.060	0.060	1.274	0.095	11.0	5.0	12	10.0	9.500	10
R1C	0.025	0.081	1.070	0.110	4.5	13.0	10	12.0	9.875	11
RickerPink	0.025	0.084	1.039	0.119	4.5	14.0	9	14.0	10.375	12
PowerSockeye	0.074	0.079	1.538	0.103	13.0	11.0	14	11.0	12.250	13
PowerPink	0.080	0.080	1.536	0.113	14.0	12.0	13	13.0	13.000	14
RickerPi	0.093	0.093	1.624	0.120	16.0	15.0	15	15.0	15.250	15

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
R2C	0.091	0.114	1.762	0.123	15.0	18.0	16	16.0	16.250	16
RickerEiW	0.105	0.105	1.949	0.128	17.0	16.0	17	17.0	16.750	17
PowerBasic	0.113	0.113	2.230	0.130	18.0	17.0	20	18.0	18.250	18
RickerEi	0.123	0.123	1.965	0.137	22.0	20.5	18	19.0	19.875	19
RickerFRDMean	0.119	0.119	2.256	0.147	21.0	19.0	21	22.0	20.750	20
RickerPDO	0.124	0.124	2.174	0.142	23.5	22.5	19	21.0	21.500	21
PowerBasicCycAge	0.124	0.124	2.361	0.138	23.5	22.5	24	20.0	22.500	22
Larkin40k	0.118	0.123	2.675	0.197	20.0	20.5	26	26.0	23.125	23
RickerFRDpeak	0.125	0.125	2.362	0.151	25.0	24.0	25	23.0	24.250	24
RickerBasic	0.132	0.132	2.326	0.154	27.0	25.0	23	24.0	24.750	25
LarkinBasic	0.117	0.134	2.725	0.205	19.0	26.5	28	28.0	25.375	26
RickerPiW	0.134	0.134	2.307	0.162	28.0	26.5	22	25.0	25.375	27
LarkinBasicCycAge	0.130	0.145	2.977	0.221	26.0	28.0	29	29.0	28.000	28
RickerCyc	0.174	0.174	2.707	0.204	29.0	29.0	27	27.0	28.000	29
RAC	0.266	0.266	5.055	0.279	30.0	30.0	32	30.0	30.500	30
TSA	0.279	0.279	5.268	0.291	31.0	31.0	33	31.0	31.500	31
MRS	0.301	0.301	4.250	0.357	32.0	32.0	30	32.0	31.500	32
RSC	0.334	0.334	4.700	0.396	33.0	33.0	31	33.0	32.500	33

(Age5)-Cycle

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RS2	0.000	0.007	-0.009	0.008	1.0	2.5	1	2.0	1.625	1
RickerPink	-0.004	0.007	-0.195	0.008	3.0	2.5	3	2.0	2.625	2
RS8yr	0.005	0.006	0.418	0.008	4.0	1.0	4	2.0	2.750	3
PowerPink	0.007	0.009	0.478	0.011	8.0	4.0	5	5.5	5.625	4
RS1	0.001	0.013	-0.058	0.016	2.0	9.0	2	10.0	5.750	5
LLY	0.006	0.010	0.534	0.010	6.0	6.0	8	4.0	6.000	6
RS4yr	0.006	0.011	0.513	0.013	6.0	8.0	6	7.5	6.875	7
RickerSalmon_Total	-0.010	0.010	-0.595	0.011	10.0	6.0	9	5.5	7.625	8
PowerSalmon_Total	0.009	0.010	0.631	0.013	9.0	6.0	10	7.5	8.125	9
R1C	0.006	0.014	0.530	0.016	6.0	10.5	7	10.0	8.375	10
sibling5	0.014	0.014	0.969	0.016	12.0	10.5	12	10.0	11.125	11
RickerChum	0.013	0.017	0.928	0.020	11.0	13.5	11	14.0	12.375	12
RickerSockeye	0.016	0.016	1.061	0.017	13.0	12.0	14	12.0	12.750	13
LarkinBasicCycAge	0.017	0.017	1.270	0.018	14.5	13.5	15	13.0	14.000	14
R2C	0.017	0.019	1.038	0.024	14.5	15.0	13	17.5	15.000	15
RickerCyc	0.020	0.020	1.306	0.022	16.5	16.5	16	15.5	16.125	16
PowerChum	0.020	0.020	1.439	0.022	16.5	16.5	17	15.5	16.375	17
RickerPi	0.023	0.023	1.594	0.024	18.0	18.0	18	17.5	17.875	18

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
LarkinBasic	0.025	0.025	1.836	0.026	19.5	19.5	20	19.0	19.500	19
Larkin40k	0.025	0.025	1.914	0.028	19.5	19.5	22	20.5	20.375	20
PowerBasicCycAge	0.027	0.027	1.832	0.028	21.0	21.0	19	20.5	20.375	21
PowerSockeye	0.028	0.028	1.923	0.029	22.0	22.0	23	22.5	22.375	22
RickerEi	0.029	0.029	1.862	0.034	24.0	24.0	21	26.0	23.750	23
RickerPiW	0.029	0.029	2.009	0.029	24.0	24.0	25	22.5	23.875	24
RickerEiW	0.029	0.029	1.960	0.031	24.0	24.0	24	24.0	24.000	25
RickerPDO	0.031	0.031	2.209	0.032	26.0	26.0	26	25.0	25.750	26
RickerBasic	0.033	0.033	2.249	0.035	27.0	27.0	27	27.5	27.125	27
RickerFRDMean	0.034	0.034	2.263	0.036	28.5	28.5	28	29.5	28.625	28
RickerFRDpeak	0.034	0.034	2.266	0.036	28.5	28.5	29	29.5	28.875	29
PowerBasic	0.035	0.035	2.401	0.035	30.5	30.5	31	27.5	29.875	30
MRS	0.035	0.035	2.307	0.039	30.5	30.5	30	31.0	30.500	31
RSC	0.039	0.039	2.553	0.043	32.0	32.0	32	32.0	32.000	32
RAC	0.048	0.048	3.317	0.048	33.0	33.0	33	33.0	33.000	33
TSA	0.050	0.050	3.469	0.050	34.0	34.0	34	34.0	34.000	34

(Total)-Other

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
R1C	-0.007	0.078	0.277	0.100	1.0	4.0	2	3.0	2.500	1
R2C	0.037	0.068	0.564	0.094	4.0	1.5	3	2.0	2.625	2
RS8yr	0.068	0.068	0.676	0.089	7.0	1.5	6	1.0	3.875	3
RS2	0.055	0.075	0.656	0.107	5.0	3.0	4	4.0	4.000	4
RickerSalmon_Total	-0.028	0.098	0.051	0.115	2.0	8.0	1	7.0	4.500	5
RS4yr	0.064	0.080	0.674	0.112	6.0	5.0	5	5.0	5.250	6
RickerPink	0.036	0.100	0.708	0.135	3.0	9.0	7	11.0	7.500	7
PowerSalmon_Total	0.079	0.081	0.989	0.114	9.0	6.0	10	6.0	7.750	8
PowerPink	0.085	0.089	1.064	0.124	10.0	7.0	11	8.0	9.000	9
RickerChum	0.089	0.105	0.966	0.133	11.0	10.0	9	9.0	9.750	10
PowerChum	0.113	0.113	1.204	0.134	12.0	11.0	12	10.0	11.250	11
RS1	0.076	0.141	0.943	0.197	8.0	13.0	8	16.5	11.375	12
RickerSockeye	0.121	0.123	1.215	0.147	13.0	12.0	13	12.0	12.500	13
RickerPi	0.145	0.145	1.460	0.167	14.0	14.0	15	13.5	14.125	14
PowerSockeye	0.147	0.147	1.556	0.167	15.0	15.0	16	13.5	14.875	15
RickerEiW	0.163	0.163	1.752	0.184	19.0	17.5	17	15.0	17.125	16
Larkin40k	0.154	0.162	1.786	0.203	16.0	16.0	18	19.0	17.250	17
LarkinBasic	0.155	0.163	1.822	0.209	17.0	17.5	19	20.0	18.375	18
RickerPiW	0.179	0.179	1.846	0.197	20.0	20.0	20	16.5	19.125	19
LarkinBasicCycAge	0.161	0.169	1.880	0.217	18.0	19.0	21	22.5	20.125	20

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerEi	0.185	0.185	1.891	0.199	21.0	21.0	22	18.0	20.500	21
RickerCyc	0.191	0.191	1.946	0.216	23.0	22.0	23	21.0	22.250	22
LLY	0.188	0.229	1.425	0.437	22.0	29.0	14	31.0	24.000	23
RickerPDO	0.207	0.207	2.059	0.217	26.0	25.0	24	22.5	24.375	24
PowerBasic	0.206	0.206	2.146	0.219	24.5	23.5	26	24.0	24.500	25
PowerBasicCycAge	0.206	0.206	2.134	0.220	24.5	23.5	25	25.0	24.500	26
RickerBasic	0.218	0.218	2.168	0.237	27.0	26.0	27	26.0	26.500	27
RickerFRDMean	0.221	0.221	2.272	0.240	28.0	27.0	28	27.0	27.500	28
RickerFRDpeak	0.224	0.224	2.314	0.244	29.0	28.0	29	28.0	28.500	29
RAC	0.288	0.288	2.865	0.317	30.0	30.0	30	29.0	29.750	30
TSA	0.317	0.317	3.119	0.322	31.0	31.0	31	30.0	30.750	31
MRS	0.380	0.380	3.565	0.438	32.0	32.0	32	32.0	32.000	32
RSC	0.384	0.384	3.626	0.440	33.0	33.0	33	33.0	33.000	33

(Age4)-Other

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RS2	0.008	0.053	0.352	0.068	2.5	2.0	2	2.0	2.125	1
RS8yr	0.028	0.046	0.520	0.062	6.0	1.0	6	1.0	3.500	2
RS4yr	0.027	0.059	0.496	0.070	5.0	4.0	4	3.0	4.000	3
PowerSalmon_Total	0.029	0.058	0.759	0.076	7.0	3.0	9	6.0	6.250	4
RickerChum	0.031	0.061	0.669	0.072	8.0	5.0	8	4.0	6.250	5
R1C	0.000	0.073	0.569	0.091	1.0	9.0	7	11.0	7.000	6
RickerPink	-0.008	0.080	0.415	0.102	2.5	13.0	3	14.0	8.125	7
PowerPink	0.034	0.070	0.838	0.087	9.0	7.5	10	8.0	8.625	8
RickerSalmon_Total	-0.048	0.082	-0.234	0.089	11.0	14.0	1	9.0	8.750	9
R2C	0.036	0.070	0.843	0.085	10.0	7.5	11	7.0	8.875	10
PowerChum	0.054	0.063	0.966	0.073	13.0	6.0	12	5.0	9.000	11
RS1	0.017	0.103	0.507	0.131	4.0	18.0	5	19.0	11.500	12
RickerSockeye	0.053	0.077	1.022	0.090	12.0	11.5	13	10.0	11.625	13
RickerPi	0.073	0.076	1.300	0.100	15.5	10.0	14	13.0	13.125	14
PowerSockeye	0.075	0.077	1.366	0.098	18.0	11.5	15	12.0	14.125	15
RickerEiW	0.087	0.092	1.611	0.118	19.0	15.0	18	15.0	16.750	16
Larkin40k	0.072	0.098	1.556	0.141	14.0	16.5	16	22.0	17.125	17
RickerPiW	0.095	0.098	1.638	0.124	20.0	16.5	20	16.0	18.125	18
LarkinBasic	0.074	0.104	1.596	0.146	17.0	19.5	17	23.0	19.125	19
RickerEi	0.100	0.104	1.631	0.126	22.0	19.5	19	17.0	19.375	20
LarkinBasicCycAge	0.073	0.109	1.662	0.156	15.5	21.0	21	26.5	21.000	21
PowerBasicCycAge	0.110	0.112	1.927	0.129	23.0	22.0	24	18.0	21.750	22
PowerBasic	0.117	0.117	1.947	0.133	24.0	23.0	25	20.0	23.000	23
RickerCyc	0.099	0.121	1.772	0.155	21.0	24.0	22	25.0	23.000	24

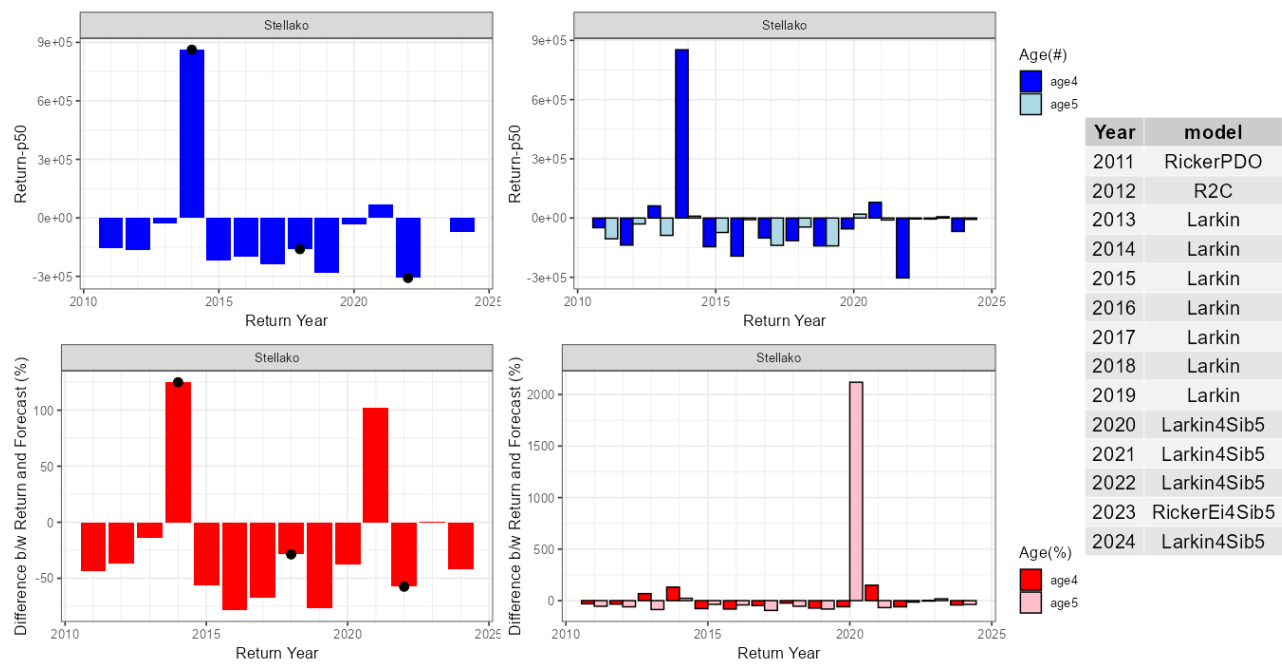
model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerPDO	0.120	0.123	1.909	0.138	25.0	25.0	23	21.0	23.500	25
RickerBasic	0.126	0.130	1.964	0.152	26.0	26.0	26	24.0	25.500	26
RickerFRDMean	0.130	0.132	2.130	0.156	27.0	27.0	27	26.5	26.875	27
RickerFRDpeak	0.131	0.135	2.143	0.158	28.0	28.0	28	28.0	28.000	28
MRS	0.227	0.231	3.160	0.278	30.0	30.0	29	31.0	30.000	29
LLY	0.152	0.200	3.451	0.375	29.0	29.0	31	33.0	30.500	30
RAC	0.235	0.235	3.949	0.276	31.0	31.0	33	30.0	31.250	31
RSC	0.236	0.244	3.370	0.297	32.0	32.0	30	32.0	31.500	32
TSA	0.251	0.251	3.909	0.262	33.0	33.0	32	29.0	31.750	33

(Age5)-Other

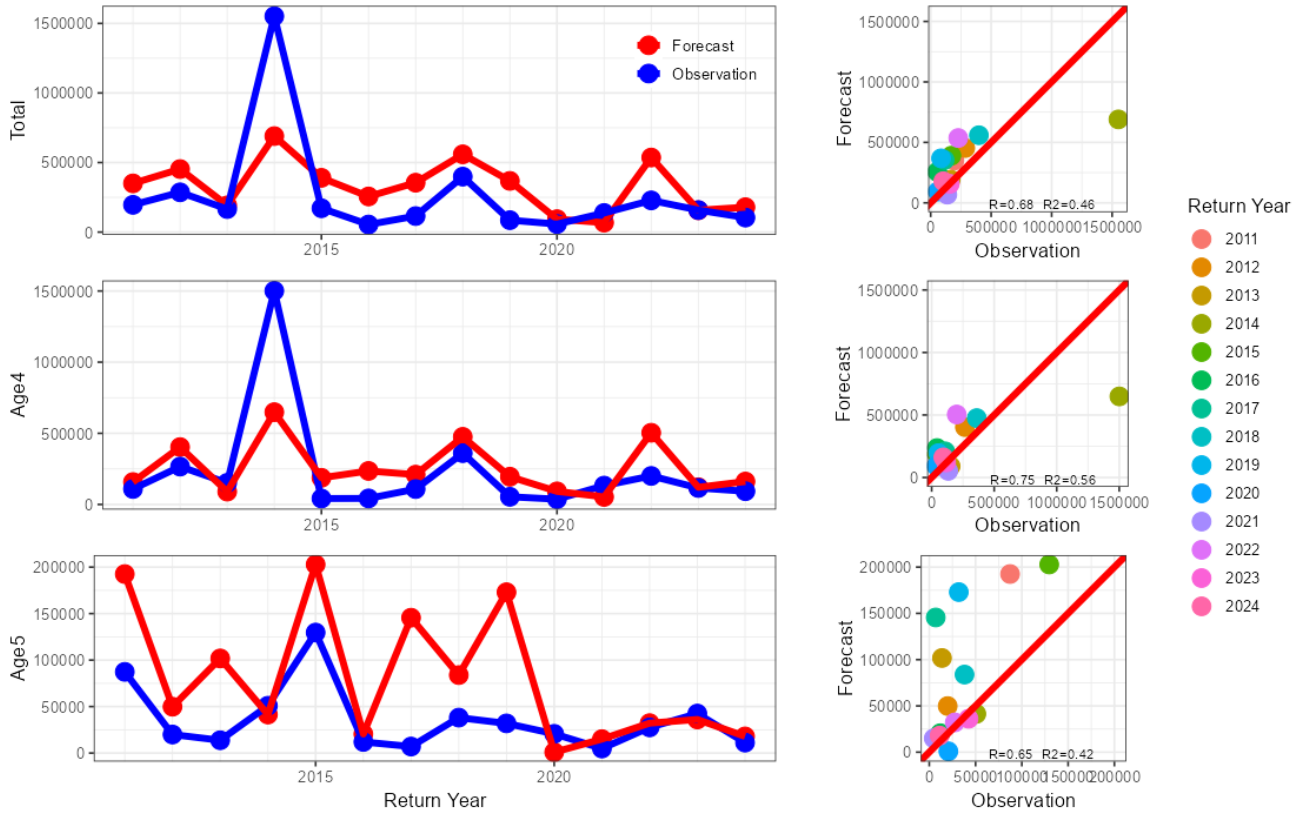
model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
sibling5	0.023	0.023	1.255	0.031	5.0	1.0	4	1.0	2.750	1
R1C	-0.007	0.030	1.233	0.041	2.0	4.0	3	5.0	3.500	2
RickerPink	0.015	0.027	1.112	0.042	4.0	3.0	2	7.5	4.125	3
RickerSalmon_Total	-0.008	0.026	-0.072	0.044	3.0	2.0	1	11.5	4.375	4
R2C	0.001	0.033	1.604	0.043	1.0	7.5	6	9.5	6.000	5
RickerSockeye	0.031	0.031	2.062	0.038	10.0	5.0	11	2.5	7.125	6
PowerSalmon_Total	0.024	0.033	1.829	0.042	6.0	7.5	8	7.5	7.250	7
RickerPi	0.032	0.032	2.533	0.038	11.0	6.0	13	2.5	8.125	8
PowerChum	0.026	0.036	2.022	0.041	8.0	11.0	10	5.0	8.500	9
PowerPink	0.025	0.035	1.981	0.045	7.0	9.5	9	13.0	9.625	10
RickerChum	0.027	0.037	1.689	0.048	9.0	12.0	7	15.0	10.750	11
RickerEiW	0.033	0.035	2.856	0.041	12.5	9.5	17	5.0	11.000	12
PowerSockeye	0.033	0.039	2.616	0.044	12.5	14.5	15	11.5	13.375	13
RickerPiW	0.038	0.038	3.019	0.043	16.0	13.0	20	9.5	14.625	14
LLY	0.035	0.039	1.461	0.069	14.0	14.5	5	26.0	14.875	15
RickerBasic	0.039	0.042	3.013	0.048	17.5	16.5	19	15.0	17.000	16
RickerEi	0.043	0.043	2.973	0.049	22.5	18.5	18	17.5	19.125	17
RickerFRDMean	0.041	0.043	3.351	0.048	19.0	18.5	25	15.0	19.375	18
RS8yr	0.039	0.045	2.564	0.066	17.5	22.0	14	24.5	19.500	19
RickerPDO	0.042	0.042	3.343	0.049	20.5	16.5	24	17.5	19.625	20
RS4yr	0.037	0.051	2.377	0.074	15.0	25.0	12	27.0	19.750	21
RickerFRDpeak	0.043	0.044	3.492	0.051	22.5	20.0	27	19.0	22.125	22
Larkin40k	0.045	0.045	3.335	0.053	24.5	22.0	23	21.0	22.625	23
LarkinBasic	0.045	0.045	3.308	0.054	24.5	22.0	22	22.0	22.625	24
PowerBasic	0.042	0.046	3.387	0.052	20.5	24.0	26	20.0	22.625	25
RS2	0.048	0.057	2.625	0.085	26.0	29.0	16	30.5	25.375	26
RAC	0.052	0.054	4.320	0.059	28.0	26.0	28	23.0	26.250	27
PowerBasicCycAge	0.050	0.056	4.791	0.066	27.0	28.0	30	24.5	27.375	28

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
LarkinBasicCycAge	0.055	0.055	4.768	0.075	29.0	27.0	29	28.0	28.250	29
RS1	0.059	0.081	3.061	0.131	31.0	32.0	21	32.0	29.000	30
RickerCyc	0.058	0.058	5.073	0.083	30.0	30.0	31	29.0	30.000	31
TSA	0.065	0.072	6.946	0.085	32.0	31.0	32	30.5	31.375	32
RSC	0.147	0.147	8.803	0.207	33.0	33.0	34	33.0	33.250	33
MRS	0.154	0.154	8.482	0.220	34.0	34.0	33	34.0	33.750	34

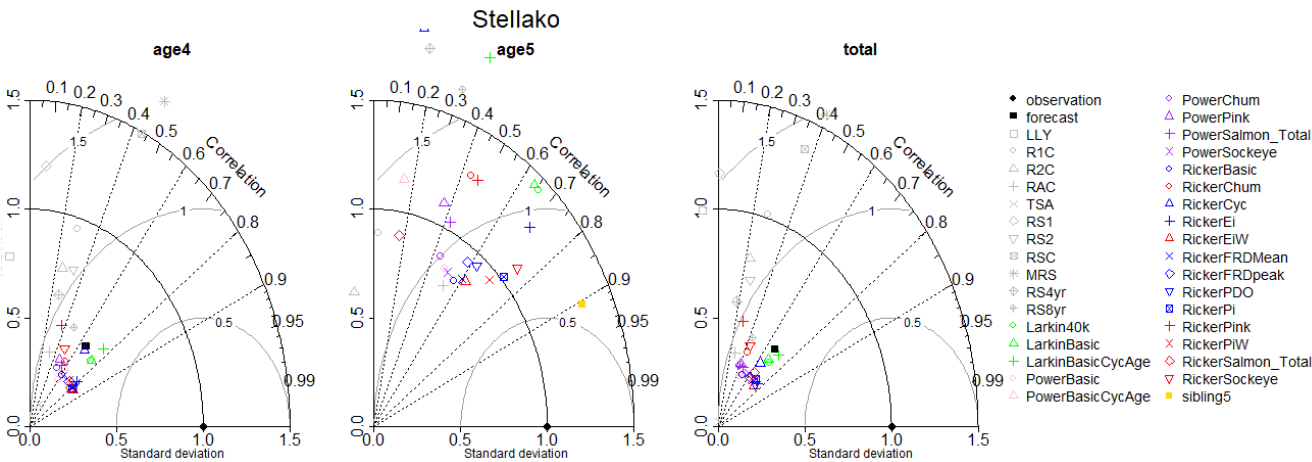
Diff



FC-TS



Bowron Retrospective: Taylor



Ranking (Total)-Alllys

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerPink	0.001	0.003	2.563	0.005	2.5	1.0	2	1.5	1.750	1

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerSalmon_Total	-0.001	0.004	1.814	0.005	2.5	3.5	1	1.5	2.125	2
R1C	0.001	0.004	3.001	0.006	2.5	3.5	3	4.5	3.375	3
PowerSalmon_Total	0.002	0.004	4.924	0.006	5.5	3.5	7	4.5	5.125	4
PowerPink	0.003	0.005	5.246	0.006	8.5	8.5	8	4.5	7.375	5
RickerPi	0.003	0.005	4.839	0.007	8.5	8.5	6	8.5	7.875	6
RickerPiW	0.004	0.005	4.510	0.007	12.0	8.5	4	8.5	8.250	7
PowerSockeye	0.004	0.004	6.320	0.006	12.0	3.5	14	4.5	8.500	8
RickerChum	0.003	0.005	4.700	0.008	8.5	8.5	5	12.0	8.500	9
PowerChum	0.003	0.005	5.309	0.007	8.5	8.5	9	8.5	8.625	10
R2C	0.002	0.005	6.854	0.007	5.5	8.5	17	8.5	9.875	11
RickerEiW	0.004	0.006	5.529	0.008	12.0	13.0	11	12.0	12.000	12
RickerSockeye	0.005	0.006	5.886	0.008	15.0	13.0	12	12.0	13.000	13
RickerEi	0.005	0.006	7.016	0.009	15.0	13.0	18	15.5	15.375	14
RickerPDO	0.006	0.007	6.382	0.009	19.0	17.0	15	15.5	16.625	15
RS8yr	0.005	0.007	5.917	0.011	15.0	17.0	13	22.0	16.750	16
RickerCyc	0.006	0.007	6.607	0.009	19.0	17.0	16	15.5	16.875	17
LLY	0.001	0.008	8.362	0.010	2.5	22.0	25	19.0	17.125	18
LarkinBasicCycAge	0.006	0.007	7.484	0.009	19.0	17.0	21	15.5	18.125	19
LarkinBasic	0.006	0.007	8.187	0.010	19.0	17.0	22	19.0	19.250	20
RS4yr	0.006	0.009	7.250	0.015	19.0	25.5	19	26.0	22.375	21
PowerBasicCycAge	0.007	0.008	9.275	0.010	23.5	22.0	27	19.0	22.875	22
RickerFRDMean	0.007	0.008	8.286	0.011	23.5	22.0	24	22.0	22.875	23
RS2	0.009	0.012	5.406	0.023	27.0	27.0	10	29.0	23.250	24
RickerBasic	0.007	0.008	8.253	0.012	23.5	22.0	23	24.5	23.250	25
PowerBasic	0.007	0.008	9.880	0.011	23.5	22.0	28	22.0	23.875	26
RickerFRDpeak	0.008	0.009	8.789	0.012	26.0	25.5	26	24.5	25.500	27
RS1	0.011	0.016	7.371	0.034	28.0	30.0	20	31.0	27.250	28
MRS	0.014	0.014	11.551	0.021	29.5	28.0	30	27.0	28.625	29
RSC	0.014	0.015	10.887	0.022	29.5	29.0	29	28.0	28.875	30
TSA	0.031	0.031	41.025	0.031	31.0	31.0	32	30.0	31.000	31
RAC	0.032	0.032	35.409	0.039	32.0	32.0	31	32.0	31.750	32

(Age4)-Allyrs

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerPink	0.000	0.003	3.365	0.004	1.0	1.0	2	1.0	1.250	1
PowerSalmon_Total	0.001	0.004	5.939	0.005	4.0	6.5	5	4.5	5.000	2
R1C	0.001	0.004	6.013	0.005	4.0	6.5	6	4.5	5.250	3
PowerPink	0.001	0.004	6.229	0.005	4.0	6.5	7	4.5	5.500	4
RickerSalmon_Total	-0.002	0.004	2.409	0.005	10.0	6.5	1	4.5	5.500	5
RickerPi	0.002	0.004	5.260	0.005	10.0	6.5	4	4.5	6.250	6

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerPiW	0.002	0.004	5.122	0.006	10.0	6.5	3	9.5	7.250	7
PowerSockeye	0.002	0.004	7.242	0.005	10.0	6.5	10	4.5	7.750	8
RickerEiW	0.002	0.004	8.178	0.006	10.0	6.5	14	9.5	10.000	9
RickerSockeye	0.003	0.004	7.291	0.006	14.5	6.5	11	9.5	10.375	10
PowerChum	0.001	0.005	7.226	0.007	4.0	14.5	9	14.5	10.500	11
RickerChum	0.002	0.004	7.492	0.007	10.0	6.5	12	14.5	10.750	12
R2C	0.002	0.005	10.323	0.006	10.0	14.5	17	9.5	12.750	13
RickerPDO	0.004	0.005	7.794	0.007	18.0	14.5	13	14.5	15.000	14
RickerEi	0.003	0.005	10.452	0.007	14.5	14.5	18	14.5	15.375	15
RickerCyc	0.004	0.005	9.501	0.007	18.0	14.5	15	14.5	15.500	16
LarkinBasic	0.004	0.005	10.833	0.007	18.0	14.5	21	14.5	17.000	17
LLY	0.001	0.007	15.934	0.010	4.0	24.0	27	24.0	19.750	18
RickerFRDMean	0.005	0.006	10.318	0.008	23.5	20.0	16	19.5	19.750	19
LarkinBasicCycAge	0.004	0.006	11.968	0.008	18.0	20.0	24	19.5	20.375	20
RickerBasic	0.005	0.006	10.706	0.009	23.5	20.0	20	22.5	21.500	21
PowerBasic	0.005	0.006	13.090	0.008	23.5	20.0	25	19.5	22.000	22
RS8yr	0.004	0.007	10.935	0.011	18.0	24.0	22	25.0	22.250	23
PowerBasicCycAge	0.005	0.006	14.009	0.008	23.5	20.0	26	19.5	22.250	24
RS2	0.008	0.011	7.200	0.022	27.0	27.0	8	29.0	22.750	25
RickerFRDpeak	0.005	0.007	11.792	0.009	23.5	24.0	23	22.5	23.250	26
RS4yr	0.005	0.008	16.353	0.014	23.5	26.0	28	26.0	25.875	27
RS1	0.009	0.014	10.594	0.033	28.0	30.0	19	31.0	27.000	28
RSC	0.012	0.013	16.999	0.021	29.5	28.5	29	28.0	28.750	29
MRS	0.012	0.013	19.489	0.019	29.5	28.5	30	27.0	28.750	30
TSA	0.026	0.026	55.011	0.027	31.0	31.0	31	30.0	30.750	31
RAC	0.028	0.028	62.756	0.035	32.0	32.0	32	32.0	32.000	32

(Age5)-Allyrs

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerSalmon_Total	0.000	0.001	1.008	0.001	5.5	13.5	1	9.5	7.375	1
RickerPink	0.000	0.001	1.292	0.001	5.5	13.5	2	9.5	7.625	2
PowerSalmon_Total	0.000	0.001	4.941	0.001	5.5	13.5	3	9.5	7.875	3
R1C	0.000	0.001	4.963	0.001	5.5	13.5	4	9.5	8.125	4
PowerPink	0.000	0.001	4.989	0.001	5.5	13.5	5	9.5	8.375	5
PowerChum	0.000	0.001	6.539	0.001	5.5	13.5	8	9.5	9.125	6
LLY	0.000	0.001	6.893	0.001	5.5	13.5	9	9.5	9.375	7
RickerCyc	0.000	0.001	8.658	0.001	5.5	13.5	11	9.5	9.875	8
sibling5	0.000	0.001	8.950	0.001	5.5	13.5	15	9.5	10.875	9
RickerChum	0.001	0.001	5.387	0.001	19.5	13.5	6	9.5	12.125	10
R2C	0.000	0.001	10.012	0.001	5.5	13.5	22	9.5	12.625	11

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerEi	0.001	0.001	8.723	0.001	19.5	13.5	12	9.5	13.625	12
RickerPiW	0.001	0.001	8.873	0.001	19.5	13.5	14	9.5	14.125	13
RickerSockeye	0.001	0.001	8.974	0.001	19.5	13.5	16	9.5	14.625	14
RickerEiW	0.001	0.001	9.472	0.001	19.5	13.5	18	9.5	15.125	15
PowerSockeye	0.001	0.001	10.121	0.001	19.5	13.5	23	9.5	16.375	16
RickerPDO	0.001	0.001	10.326	0.001	19.5	13.5	24	9.5	16.625	17
RS8yr	0.001	0.001	8.727	0.002	19.5	13.5	13	22.5	17.125	18
RickerPi	0.001	0.001	10.424	0.001	19.5	13.5	26	9.5	17.125	19
LarkinBasic	0.001	0.001	9.493	0.002	19.5	13.5	19	22.5	18.625	20
RickerFRDMean	0.001	0.001	9.899	0.002	19.5	13.5	20	22.5	18.875	21
RickerFRDpeak	0.001	0.001	9.996	0.002	19.5	13.5	21	22.5	19.125	22
RickerBasic	0.001	0.001	10.344	0.002	19.5	13.5	25	22.5	20.125	23
LarkinBasicCycAge	0.001	0.001	11.491	0.002	19.5	13.5	27	22.5	20.625	24
PowerBasic	0.001	0.001	12.196	0.002	19.5	13.5	28	22.5	20.875	25
PowerBasicCycAge	0.001	0.001	13.337	0.002	19.5	13.5	29	22.5	21.125	26
RS2	0.001	0.002	6.418	0.004	19.5	29.0	7	29.5	21.250	27
RS4yr	0.001	0.002	7.793	0.003	19.5	29.0	10	27.5	21.500	28
RS1	0.002	0.002	9.134	0.006	30.0	29.0	17	33.0	27.250	29
MRS	0.002	0.002	15.611	0.003	30.0	29.0	31	27.5	29.375	30
RSC	0.002	0.002	13.739	0.004	30.0	29.0	30	29.5	29.625	31
RAC	0.004	0.004	32.628	0.005	32.5	32.5	32	31.5	32.125	32
TSA	0.004	0.004	46.915	0.005	32.5	32.5	33	31.5	32.375	33

(Total)-Cycle

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerSalmon_Total	0.000	0.001	1.244	0.001	1.5	4.5	1	3.5	2.625	1
RickerPink	0.000	0.001	1.536	0.001	1.5	4.5	2	3.5	2.875	2
RS1	0.001	0.001	2.386	0.001	6.0	4.5	3	3.5	4.250	3
RS2	0.001	0.001	2.653	0.001	6.0	4.5	4	3.5	4.500	4
R1C	0.001	0.001	2.846	0.001	6.0	4.5	5	3.5	4.750	5
RickerChum	0.001	0.001	3.625	0.001	6.0	4.5	7	3.5	5.250	6
RS4yr	0.001	0.001	2.862	0.002	6.0	4.5	6	11.5	7.000	7
RS8yr	0.001	0.001	4.464	0.002	6.0	4.5	8	11.5	7.500	8
RickerSockeye	0.001	0.002	5.540	0.002	6.0	15.5	9	11.5	10.500	9
LarkinBasic	0.002	0.002	6.162	0.002	16.0	15.5	10	11.5	13.250	10
RickerFRDpeak	0.002	0.002	6.489	0.002	16.0	15.5	11	11.5	13.500	11
RickerEiW	0.002	0.002	6.571	0.002	16.0	15.5	12	11.5	13.750	12
RickerCyc	0.002	0.002	6.706	0.002	16.0	15.5	13	11.5	14.000	13
RickerPiW	0.002	0.002	6.761	0.002	16.0	15.5	14	11.5	14.250	14
RickerFRDMean	0.002	0.002	6.764	0.002	16.0	15.5	15	11.5	14.500	15

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerEi	0.002	0.002	6.868	0.002	16.0	15.5	16	11.5	14.750	16
RickerBasic	0.002	0.002	7.065	0.003	16.0	15.5	17	21.5	17.500	17
PowerSalmon_Total	0.002	0.002	7.142	0.003	16.0	15.5	18	21.5	17.750	18
RickerPDO	0.002	0.002	7.218	0.003	16.0	15.5	19	21.5	18.000	19
PowerPink	0.002	0.002	7.324	0.003	16.0	15.5	20	21.5	18.250	20
RickerPi	0.002	0.002	7.479	0.003	16.0	15.5	22	21.5	18.750	21
LarkinBasicCycAge	0.002	0.002	7.528	0.003	16.0	15.5	23	21.5	19.000	22
PowerChum	0.003	0.003	7.452	0.003	25.5	25.0	21	21.5	23.250	23
RSC	0.003	0.003	7.734	0.003	25.5	25.0	24	21.5	24.000	24
MRS	0.003	0.003	8.389	0.003	25.5	25.0	25	21.5	24.250	25
PowerSockeye	0.003	0.003	9.220	0.003	25.5	25.0	26	21.5	24.500	26
PowerBasic	0.003	0.003	10.607	0.004	25.5	25.0	27	27.5	26.250	27
R2C	0.003	0.004	15.244	0.007	25.5	28.5	29	29.5	28.125	28
PowerBasicCycAge	0.004	0.004	11.889	0.004	29.0	28.5	28	27.5	28.250	29
LLY	0.006	0.006	19.582	0.007	30.0	30.0	30	29.5	29.875	30
RAC	0.024	0.024	62.115	0.024	31.0	31.0	31	31.0	31.000	31
TSA	0.036	0.036	92.111	0.036	32.0	32.0	32	32.0	32.000	32

(Age4)-Cycle

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RS4yr	0.000	0.000	0.859	0.000	10.5	3.0	4	1.0	4.625	1
RickerPink	0.000	0.000	0.054	0.001	10.5	3.0	1	12.0	6.625	2
RickerSalmon_Total	0.000	0.000	-0.058	0.001	10.5	3.0	2	12.0	6.875	3
RickerChum	0.000	0.000	0.858	0.001	10.5	3.0	3	12.0	7.125	4
RS2	0.000	0.000	1.120	0.001	10.5	3.0	7	12.0	8.125	5
RS1	0.000	0.001	0.904	0.001	10.5	16.0	5	12.0	10.875	6
RickerSockeye	0.000	0.001	1.072	0.001	10.5	16.0	6	12.0	11.125	7
LarkinBasicCycAge	0.000	0.001	1.657	0.001	10.5	16.0	8	12.0	11.625	8
RickerFRDpeak	0.000	0.001	1.702	0.001	10.5	16.0	9	12.0	11.875	9
LarkinBasic	0.000	0.001	1.743	0.001	10.5	16.0	10	12.0	12.125	10
RickerEiW	0.000	0.001	1.751	0.001	10.5	16.0	11	12.0	12.375	11
RickerFRDMean	0.000	0.001	1.862	0.001	10.5	16.0	12	12.0	12.625	12
RickerPiW	0.000	0.001	1.884	0.001	10.5	16.0	13	12.0	12.875	13
RickerPDO	0.000	0.001	1.894	0.001	10.5	16.0	14	12.0	13.125	14
RickerCyc	0.000	0.001	1.904	0.001	10.5	16.0	15	12.0	13.375	15
RickerBasic	0.000	0.001	1.939	0.001	10.5	16.0	16	12.0	13.625	16
RS8yr	0.000	0.001	1.979	0.001	10.5	16.0	17	12.0	13.875	17
RickerPi	0.000	0.001	2.083	0.001	10.5	16.0	18	12.0	14.125	18
RickerEi	0.000	0.001	2.265	0.001	10.5	16.0	19	12.0	14.375	19
R1C	0.000	0.001	2.724	0.001	10.5	16.0	20	12.0	14.625	20

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
MRS	0.001	0.001	3.468	0.001	24.5	16.0	21	12.0	18.375	21
PowerSockeye	0.001	0.001	3.625	0.001	24.5	16.0	22	12.0	18.625	22
RSC	0.001	0.001	3.766	0.002	24.5	16.0	23	25.5	22.250	23
PowerChum	0.001	0.001	4.137	0.002	24.5	16.0	24	25.5	22.500	24
PowerBasicCycAge	0.001	0.001	4.717	0.002	24.5	16.0	26	25.5	23.000	25
PowerBasic	0.001	0.001	4.823	0.002	24.5	16.0	27	25.5	23.250	26
PowerSalmon_Total	0.001	0.002	4.561	0.002	24.5	27.5	25	25.5	25.625	27
PowerPink	0.001	0.002	4.831	0.002	24.5	27.5	28	25.5	26.375	28
R2C	0.003	0.003	14.740	0.006	29.0	29.0	29	29.5	29.125	29
LLY	0.005	0.005	19.882	0.006	30.0	30.0	30	29.5	29.875	30
RAC	0.021	0.021	63.294	0.021	31.0	31.0	31	31.0	31.000	31
TSA	0.031	0.031	93.885	0.031	32.0	32.0	32	32.0	32.000	32

(Age5)-Cycle

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerPink	0.000	0.000	3.143	0.000	2.5	2.5	1	2.0	2.000	1
RickerSalmon_Total	0.000	0.000	3.370	0.000	2.5	2.5	2	2.0	2.250	2
R1C	0.000	0.000	4.456	0.000	2.5	2.5	3	2.0	2.500	3
R2C	0.000	0.000	22.158	0.001	2.5	2.5	11	12.5	7.125	4
PowerPink	0.001	0.001	13.317	0.001	16.0	16.0	4	12.5	12.125	5
RS2	0.001	0.001	13.346	0.001	16.0	16.0	5	12.5	12.375	6
PowerSalmon_Total	0.001	0.001	13.464	0.001	16.0	16.0	6	12.5	12.625	7
RickerChum	0.001	0.001	14.871	0.001	16.0	16.0	7	12.5	12.875	8
RS1	0.001	0.001	16.592	0.001	16.0	16.0	8	12.5	13.125	9
PowerChum	0.001	0.001	18.547	0.001	16.0	16.0	9	12.5	13.375	10
LLY	0.001	0.001	22.617	0.001	16.0	16.0	12	12.5	14.125	11
RS8yr	0.001	0.001	24.987	0.001	16.0	16.0	14	12.5	14.625	12
LarkinBasic	0.001	0.001	25.307	0.001	16.0	16.0	15	12.5	14.875	13
RickerEi	0.001	0.001	25.330	0.001	16.0	16.0	16	12.5	15.125	14
RickerSockeye	0.001	0.001	25.713	0.001	16.0	16.0	17	12.5	15.375	15
RickerFRDpeak	0.001	0.001	26.089	0.001	16.0	16.0	18	12.5	15.625	16
RickerPiW	0.001	0.001	27.119	0.001	16.0	16.0	20	12.5	16.125	17
sibling5	0.001	0.001	28.048	0.001	16.0	16.0	21	12.5	16.375	18
RickerEiW	0.001	0.001	28.697	0.001	16.0	16.0	22	12.5	16.625	19
PowerSockeye	0.001	0.001	29.702	0.001	16.0	16.0	23	12.5	16.875	20
RS4yr	0.001	0.001	19.762	0.002	16.0	16.0	10	26.5	17.125	21
RickerPi	0.001	0.001	32.117	0.001	16.0	16.0	26	12.5	17.625	22
RickerCyc	0.001	0.001	24.683	0.002	16.0	16.0	13	26.5	17.875	23
RickerFRDMean	0.001	0.001	26.134	0.002	16.0	16.0	19	26.5	19.375	24
RickerBasic	0.001	0.001	29.781	0.002	16.0	16.0	24	26.5	20.625	25

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerPDO	0.001	0.001	30.258	0.002	16.0	16.0	25	26.5	20.875	26
PowerBasic	0.001	0.001	32.447	0.002	16.0	16.0	27	26.5	21.375	27
LarkinBasicCycAge	0.002	0.002	33.313	0.002	29.5	29.5	28	26.5	28.375	28
RSC	0.002	0.002	34.678	0.002	29.5	29.5	29	26.5	28.625	29
PowerBasicCycAge	0.002	0.002	37.650	0.002	29.5	29.5	30	26.5	28.875	30
MRS	0.002	0.002	42.020	0.002	29.5	29.5	31	26.5	29.125	31
RAC	0.003	0.003	68.699	0.003	32.0	32.0	32	32.0	32.000	32
TSA	0.005	0.005	101.559	0.005	33.0	33.0	33	33.0	33.000	33

(Total)-Other

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerPink	0.000	0.003	3.161	0.004	1.5	4.0	2	3.0	2.625	1
RickerSalmon_Total	-0.001	0.003	2.267	0.004	3.0	4.0	1	3.0	2.750	2
R1C	0.000	0.003	3.599	0.004	1.5	4.0	3	3.0	2.875	3
PowerSalmon_Total	0.002	0.003	6.155	0.004	6.5	4.0	8	3.0	5.375	4
RickerChum	0.002	0.003	5.690	0.005	6.5	4.0	6	7.0	5.875	5
PowerChum	0.003	0.003	6.612	0.004	13.0	4.0	10	3.0	7.500	6
PowerPink	0.002	0.004	6.546	0.005	6.5	9.5	9	7.0	8.000	7
RS2	0.002	0.004	5.607	0.007	6.5	9.5	5	14.5	8.875	8
RickerPiW	0.003	0.004	5.574	0.006	13.0	9.5	4	10.0	9.125	9
R2C	0.003	0.003	8.504	0.005	13.0	4.0	17	7.0	10.250	10
RS8yr	0.002	0.004	6.960	0.007	6.5	9.5	11	14.5	10.375	11
RickerPi	0.003	0.005	6.154	0.006	13.0	15.5	7	10.0	11.375	12
RickerSockeye	0.003	0.005	7.255	0.007	13.0	15.5	13	14.5	14.000	13
RickerCyc	0.003	0.005	8.130	0.007	13.0	15.5	16	14.5	14.750	14
PowerSockeye	0.004	0.005	8.039	0.006	19.5	15.5	15	10.0	15.000	15
RickerPDO	0.004	0.005	7.850	0.007	19.5	15.5	14	14.5	15.875	16
RickerEiW	0.004	0.005	7.040	0.008	19.5	15.5	12	19.0	16.500	17
LarkinBasicCycAge	0.004	0.005	9.314	0.007	19.5	15.5	21	14.5	17.625	18
RS4yr	0.003	0.005	8.744	0.010	13.0	15.5	19	26.0	18.375	19
RS1	0.002	0.006	8.539	0.011	6.5	22.5	18	28.5	18.875	20
RickerEi	0.004	0.006	8.746	0.008	19.5	22.5	20	19.0	20.250	21
LLY	0.004	0.006	10.801	0.009	19.5	22.5	25	22.5	22.375	22
RickerBasic	0.005	0.006	10.001	0.009	24.5	22.5	22	22.5	22.875	23
LarkinBasic	0.005	0.006	10.237	0.009	24.5	22.5	23	22.5	23.125	24
RickerFRDMean	0.005	0.006	10.376	0.009	24.5	22.5	24	22.5	23.375	25
PowerBasicCycAge	0.005	0.007	11.611	0.008	24.5	27.5	27	19.0	24.500	26
RickerFRDpeak	0.006	0.007	10.878	0.010	27.5	27.5	26	26.0	26.750	27
PowerBasic	0.006	0.007	12.413	0.010	27.5	27.5	28	26.0	27.250	28
RSC	0.007	0.007	12.710	0.011	29.5	27.5	29	28.5	28.625	29

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
MRS	0.007	0.008	13.672	0.012	29.5	30.0	30	30.0	29.875	30
TSA	0.033	0.033	51.570	0.034	31.0	31.0	32	31.0	31.250	31
RAC	0.038	0.038	44.697	0.044	32.0	32.0	31	32.0	31.750	32

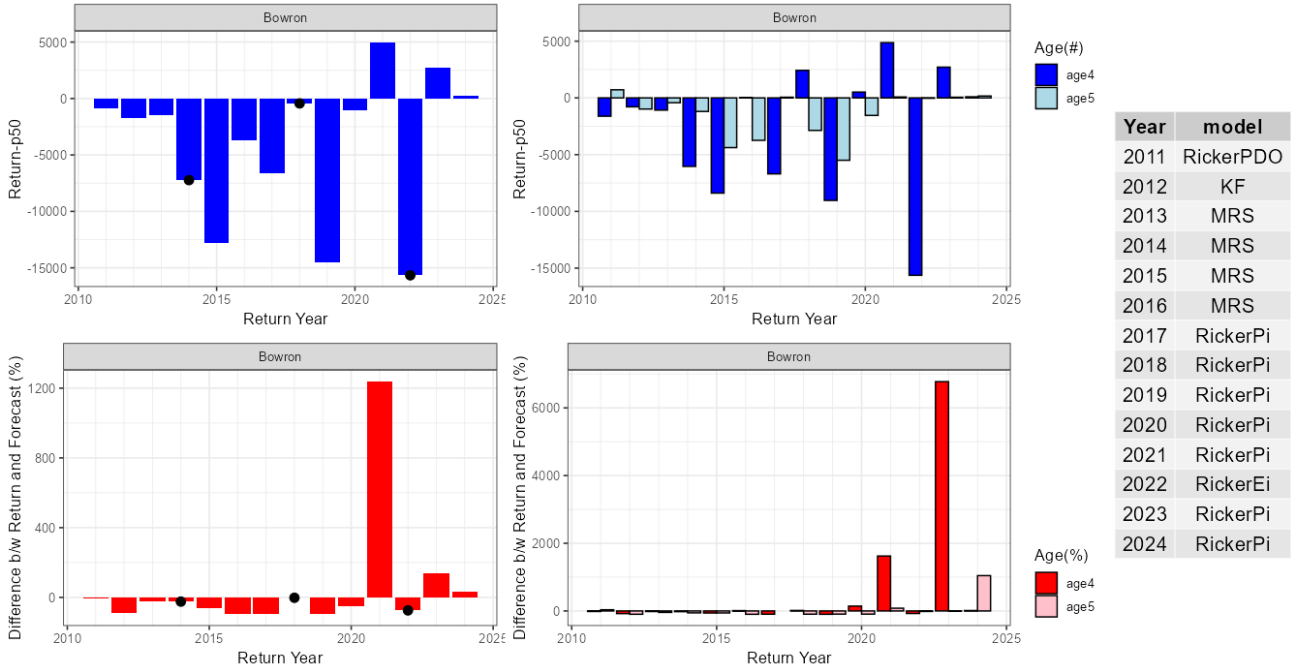
(Age4)-Other

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerSalmon_Total	-0.001	0.002	3.050	0.003	8.5	2.0	1	3.5	3.750	1
RickerPink	-0.001	0.002	4.214	0.003	8.5	2.0	2	3.5	4.000	2
PowerChum	0.001	0.002	9.117	0.003	8.5	2.0	10	3.5	6.000	3
RickerPiW	0.001	0.003	6.376	0.003	8.5	10.5	3	3.5	6.375	4
R1C	0.000	0.003	7.481	0.004	2.0	10.5	5	10.0	6.875	5
PowerSalmon_Total	0.001	0.003	7.482	0.003	8.5	10.5	6	3.5	7.125	6
PowerPink	0.001	0.003	7.834	0.003	8.5	10.5	7	3.5	7.375	7
RS2	0.000	0.003	7.851	0.004	2.0	10.5	8	10.0	7.625	8
RickerPi	0.001	0.003	6.717	0.004	8.5	10.5	4	10.0	8.250	9
RickerSockeye	0.001	0.003	9.086	0.004	8.5	10.5	9	10.0	9.500	10
RickerChum	0.001	0.003	9.326	0.004	8.5	10.5	12	10.0	10.250	11
RS1	0.000	0.003	12.627	0.005	2.0	10.5	16	16.5	11.250	12
PowerSockeye	0.002	0.003	9.264	0.004	18.5	10.5	11	10.0	12.500	13
RickerPDO	0.002	0.003	9.695	0.004	18.5	10.5	13	10.0	13.000	14
RS8yr	0.001	0.003	13.333	0.005	8.5	10.5	21	16.5	14.125	15
RickerEiW	0.002	0.003	10.488	0.005	18.5	10.5	14	16.5	14.875	16
R2C	0.003	0.003	12.968	0.005	25.5	10.5	17	16.5	17.375	17
RickerCyc	0.002	0.004	11.918	0.005	18.5	21.5	15	16.5	17.875	18
RickerEi	0.002	0.004	13.214	0.005	18.5	21.5	20	16.5	19.125	19
RickerFRDMean	0.002	0.004	13.040	0.006	18.5	21.5	18	22.5	20.125	20
RickerBasic	0.002	0.004	13.143	0.006	18.5	21.5	19	22.5	20.375	21
LarkinBasic	0.002	0.004	13.710	0.006	18.5	21.5	22	22.5	21.125	22
LarkinBasicCycAge	0.002	0.004	15.165	0.006	18.5	21.5	24	22.5	21.625	23
RickerFRDpeak	0.003	0.004	14.807	0.006	25.5	21.5	23	22.5	23.125	24
RS4yr	0.002	0.004	20.321	0.008	18.5	21.5	27	27.5	23.625	25
PowerBasic	0.003	0.005	16.622	0.006	25.5	26.5	25	22.5	24.875	26
PowerBasicCycAge	0.003	0.005	17.803	0.007	25.5	26.5	26	26.0	26.000	27
LLY	0.004	0.006	20.449	0.008	28.5	28.5	28	27.5	28.125	28
RSC	0.004	0.006	20.468	0.009	28.5	28.5	29	29.0	28.750	29
MRS	0.005	0.007	23.759	0.010	30.0	30.0	30	30.0	30.000	30
TSA	0.029	0.029	69.463	0.029	31.0	31.0	31	31.0	31.000	31
RAC	0.034	0.034	79.567	0.039	32.0	32.0	32	32.0	32.000	32

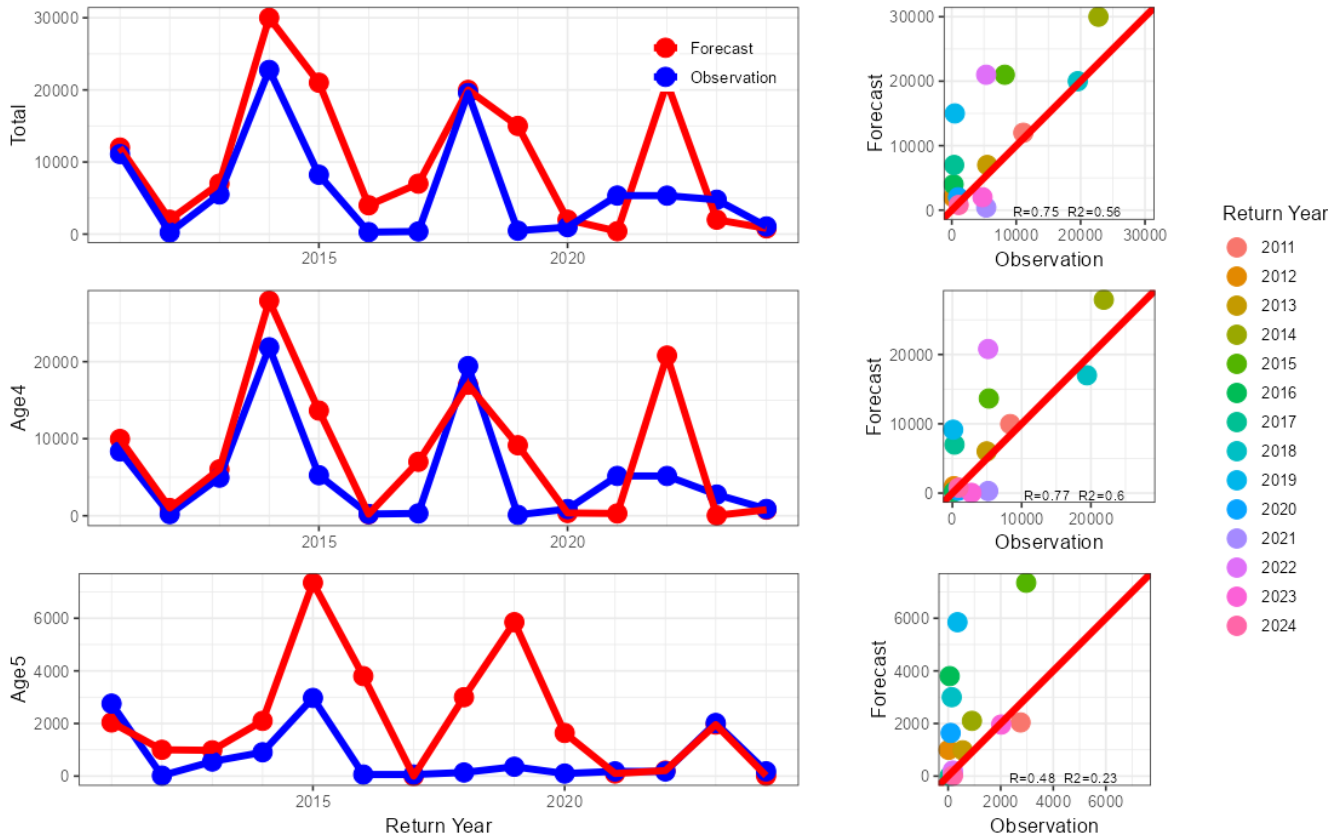
(Age5)-Other

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerSalmon_Total	0.000	0.001	1.318	0.001	5.0	13.0	1	9.0	7.000	1
RickerPink	0.000	0.001	1.418	0.001	5.0	13.0	2	9.0	7.250	2
R1C	0.000	0.001	3.220	0.001	5.0	13.0	3	9.0	7.500	3
PowerSalmon_Total	0.000	0.001	5.942	0.001	5.0	13.0	4	9.0	7.750	4
LLY	0.000	0.001	8.601	0.001	5.0	13.0	9	9.0	9.000	5
R2C	0.000	0.001	9.954	0.001	5.0	13.0	11	9.0	9.500	6
RickerCyc	0.000	0.001	10.024	0.001	5.0	13.0	12	9.0	9.750	7
sibling5	0.000	0.001	10.883	0.001	5.0	13.0	15	9.0	10.500	8
PowerPink	0.001	0.001	6.017	0.001	18.5	13.0	5	9.0	11.375	9
RickerChum	0.001	0.001	6.448	0.001	18.5	13.0	6	9.0	11.625	10
PowerChum	0.001	0.001	7.871	0.001	18.5	13.0	7	9.0	11.875	11
RickerEi	0.001	0.001	10.785	0.001	18.5	13.0	14	9.0	13.625	12
RickerSockeye	0.001	0.001	10.982	0.001	18.5	13.0	16	9.0	14.125	13
RickerPiW	0.001	0.001	11.275	0.001	18.5	13.0	18	9.0	14.625	14
RickerEiW	0.001	0.001	11.975	0.001	18.5	13.0	23	9.0	15.875	15
PowerSockeye	0.001	0.001	12.419	0.001	18.5	13.0	24	9.0	16.125	16
RickerPi	0.001	0.001	13.080	0.001	18.5	13.0	26	9.0	16.625	17
LarkinBasicCycAge	0.000	0.001	13.393	0.002	5.0	13.0	27	22.0	16.750	18
LarkinBasic	0.001	0.001	11.241	0.002	18.5	13.0	17	22.0	17.625	19
RickerFRDpeak	0.001	0.001	11.733	0.002	18.5	13.0	20	22.0	18.375	20
RickerFRDMean	0.001	0.001	11.787	0.002	18.5	13.0	21	22.0	18.625	21
RickerBasic	0.001	0.001	11.970	0.002	18.5	13.0	22	22.0	18.875	22
RickerPDO	0.001	0.001	12.884	0.002	18.5	13.0	25	22.0	19.625	23
RS8yr	0.001	0.002	10.508	0.002	18.5	26.5	13	22.0	20.000	24
PowerBasic	0.001	0.001	14.273	0.002	18.5	13.0	28	22.0	20.375	25
RS4yr	0.001	0.002	9.278	0.003	18.5	26.5	10	27.0	20.500	26
PowerBasicCycAge	0.001	0.001	15.519	0.002	18.5	13.0	29	22.0	20.625	27
RS2	0.002	0.003	7.949	0.005	29.5	29.5	8	31.0	24.500	28
RS1	0.002	0.003	11.367	0.007	29.5	29.5	19	33.0	27.750	29
RSC	0.002	0.003	15.702	0.004	29.5	29.5	30	28.5	29.375	30
MRS	0.002	0.003	18.037	0.004	29.5	29.5	31	28.5	29.625	31
TSA	0.004	0.004	54.133	0.005	32.0	32.0	33	31.0	32.000	32
RAC	0.005	0.005	37.729	0.005	33.0	33.0	32	31.0	32.250	33

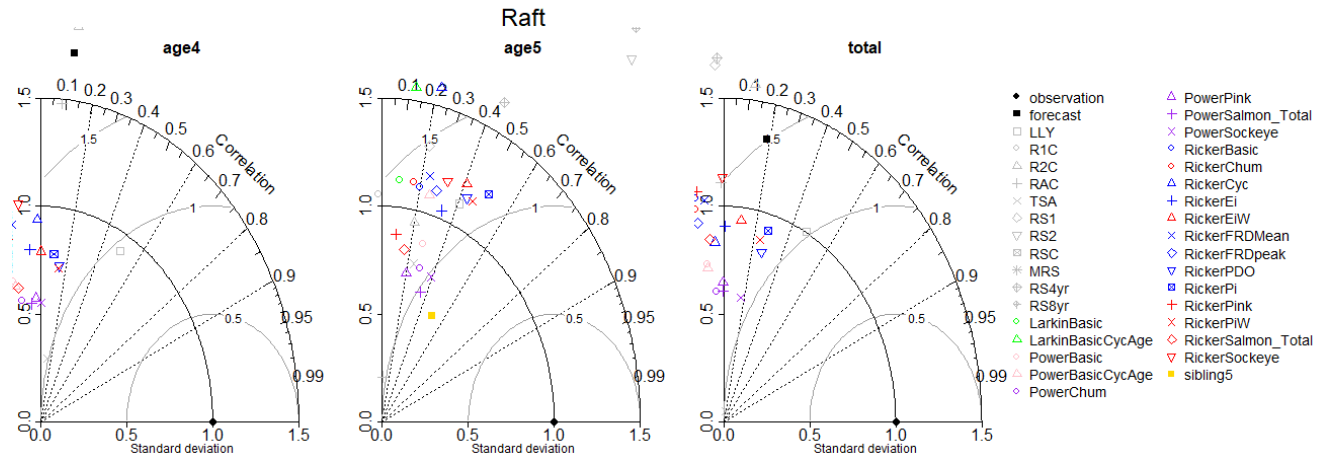
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FC-TS



Raft Retrospective: Taylor



Ranking (Total)-Alllys

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
LLY	-0.001	0.009	0.749	0.013	1.0	1.0	1	1.0	1.000	1
PowerSockeye	0.003	0.012	2.100	0.015	3.0	2.5	3	2.0	2.625	2
PowerSalmon_Total	0.004	0.012	2.428	0.016	6.0	2.5	6	3.5	4.500	3
PowerPink	0.004	0.013	2.503	0.016	6.0	4.0	9	3.5	5.625	4
RickerPi	0.008	0.015	2.433	0.017	8.5	6.0	8	5.0	6.875	5
RickerSalmon_Total	-0.004	0.015	2.429	0.019	6.0	6.0	7	9.5	7.125	6
R1C	0.003	0.017	1.950	0.021	3.0	13.5	2	14.5	8.250	7
PowerChum	0.008	0.015	3.118	0.018	8.5	6.0	13	7.0	8.625	8
RickerPiW	0.009	0.016	2.923	0.018	11.0	9.5	12	7.0	9.875	9
RickerPink	-0.003	0.017	2.543	0.021	3.0	13.5	10	14.5	10.250	10
RickerEiW	0.009	0.016	3.610	0.020	11.0	9.5	18	12.0	12.625	11
TSA	0.013	0.016	3.130	0.018	21.0	9.5	14	7.0	12.875	12
RickerPDO	0.012	0.017	3.233	0.019	17.5	13.5	16	9.5	14.125	13
PowerBasicCycAge	0.010	0.016	3.734	0.020	14.5	9.5	21	12.0	14.250	14
PowerBasic	0.010	0.017	3.702	0.020	14.5	13.5	19	12.0	14.750	15
RS1	0.010	0.018	2.374	0.027	14.5	17.5	5	27.0	16.000	16
RickerChum	0.009	0.018	3.927	0.022	11.0	17.5	22	17.5	17.000	17
RickerSockeye	0.010	0.019	3.538	0.022	14.5	21.0	17	17.5	17.500	18
R2C	0.013	0.020	2.294	0.026	21.0	23.5	4	24.0	18.125	19
RAC	0.014	0.019	2.619	0.024	24.0	21.0	11	20.0	19.000	20
RickerCyc	0.013	0.018	3.729	0.022	21.0	17.5	20	17.5	19.000	21
RickerEi	0.012	0.018	4.246	0.022	17.5	17.5	24	17.5	19.125	22
LarkinBasic	0.013	0.020	4.699	0.026	21.0	23.5	26	24.0	23.625	23

LarkinBasicCycAge	0.013	0.019	4.773	0.026	21.0	21.0	29	24.0	23.750	24
RS2	0.022	0.027	3.201	0.047	29.0	29.0	15	30.0	25.750	25
RickerFRDpeak	0.016	0.021	4.783	0.025	26.5	25.5	30	21.0	25.750	26
RS4yr	0.015	0.023	4.039	0.029	25.0	27.5	23	28.0	25.875	27
RickerFRDMean	0.016	0.021	4.724	0.026	26.5	25.5	28	24.0	26.000	28
RickerBasic	0.017	0.023	4.522	0.026	28.0	27.5	25	24.0	26.125	29
RS8yr	0.027	0.030	4.717	0.042	30.0	30.0	27	29.0	29.000	30
RSC	0.034	0.038	8.943	0.049	31.0	31.5	32	31.5	31.500	31
MRS	0.035	0.038	8.755	0.049	32.0	31.5	31	31.5	31.500	32

(Age4)-Allyrs

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
LLY	-0.001	0.007	1.315	0.010	5.5	1.0	1	1.0	2.125	1
PowerPink	-0.001	0.009	2.612	0.012	5.5	3.5	5	4.5	4.625	2
PowerSalmon_Total	-0.001	0.009	2.738	0.012	5.5	3.5	6	4.5	4.875	3
RickerPi	0.000	0.010	2.871	0.012	1.0	7.5	8	4.5	5.250	4
PowerSockeye	-0.002	0.009	2.305	0.012	11.5	3.5	3	4.5	5.625	5
RickerPiW	0.001	0.009	3.384	0.012	5.5	3.5	12	4.5	6.375	6
PowerChum	0.001	0.010	3.532	0.013	5.5	7.5	14	9.0	9.000	7
RickerPDO	0.003	0.010	3.654	0.012	14.5	7.5	15	4.5	10.375	8
RickerCyc	0.004	0.011	1.950	0.014	17.0	11.5	2	12.5	10.750	9
RickerEiW	0.001	0.010	4.630	0.013	5.5	7.5	22	9.0	11.000	10
PowerBasicCycAge	0.002	0.011	3.770	0.013	11.5	11.5	16	9.0	12.000	11
PowerBasic	0.002	0.011	4.271	0.014	11.5	11.5	19	12.5	13.625	12
RickerSockeye	0.001	0.012	3.995	0.015	5.5	16.5	18	16.0	14.000	13
RickerChum	0.001	0.012	4.908	0.015	5.5	16.5	23	16.0	15.250	14
R1C	0.002	0.014	2.891	0.016	11.5	23.0	9	20.0	15.875	15
RickerEi	0.003	0.011	5.304	0.014	14.5	11.5	27	12.5	16.375	16
RickerSalmon_Total	-0.007	0.012	2.956	0.015	23.0	16.5	10	16.0	16.375	17
RickerPink	-0.006	0.014	2.867	0.016	21.5	23.0	7	20.0	17.875	18
TSA	0.009	0.012	4.295	0.014	25.0	16.5	20	12.5	18.500	19
LarkinBasicCycAge	0.004	0.012	4.527	0.016	17.0	16.5	21	20.0	18.625	20
LarkinBasic	0.004	0.012	5.201	0.017	17.0	16.5	24	23.5	20.250	21
RS1	0.008	0.017	2.540	0.027	24.0	27.0	4	28.0	20.750	22
RickerFRDMean	0.005	0.013	5.228	0.016	19.5	20.5	25	20.0	21.250	23
RickerFRDpeak	0.005	0.013	5.710	0.016	19.5	20.5	28	20.0	22.000	24
R2C	0.010	0.016	3.098	0.022	26.5	25.5	11	26.0	22.250	25
RAC	0.011	0.016	3.470	0.020	28.0	25.5	13	25.0	22.875	26
RickerBasic	0.006	0.014	5.277	0.017	21.5	23.0	26	23.5	23.500	27
RS2	0.017	0.024	3.921	0.043	29.0	29.0	17	32.0	26.750	28
RS4yr	0.010	0.018	6.088	0.024	26.5	28.0	29	27.0	27.625	29

RS8yr	0.019	0.025	6.539	0.035	30.0	30.0	30	29.0	29.750	30
MRS	0.025	0.030	12.611	0.038	31.0	31.0	31	30.0	30.750	31
RSC	0.026	0.031	14.398	0.040	32.0	32.0	32	31.0	31.750	32

(Age5)-Allyrs

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
sibling5	0.000	0.002	0.699	0.003	1.5	1.0	2	1.0	1.375	1
LLY	0.000	0.003	0.511	0.004	1.5	4.0	1	3.5	2.500	2
RickerSalmon_Total	-0.001	0.003	0.968	0.005	4.0	4.0	3	9.0	5.000	3
PowerSockeye	0.002	0.003	1.687	0.004	7.5	4.0	6	3.5	5.250	4
PowerSalmon_Total	0.002	0.003	1.829	0.004	7.5	4.0	7	3.5	5.500	5
PowerPink	0.002	0.003	2.013	0.004	7.5	4.0	9	3.5	6.000	6
RickerPink	-0.001	0.004	1.164	0.005	4.0	12.5	4	9.0	7.375	7
R1C	0.001	0.004	1.523	0.006	4.0	12.5	5	17.5	9.750	8
RickerPi	0.003	0.004	1.874	0.005	14.5	12.5	8	9.0	11.000	9
RickerPiW	0.003	0.004	2.119	0.005	14.5	12.5	10	9.0	11.500	10
RAC	0.003	0.004	2.326	0.005	14.5	12.5	12	9.0	12.000	11
PowerChum	0.003	0.004	2.397	0.005	14.5	12.5	14	9.0	12.500	12
PowerBasic	0.003	0.004	2.787	0.005	14.5	12.5	18	9.0	13.500	13
R2C	0.003	0.004	2.210	0.006	14.5	12.5	11	17.5	13.875	14
RickerSockeye	0.003	0.004	2.520	0.006	14.5	12.5	15	17.5	14.875	15
RickerEiW	0.003	0.004	2.523	0.006	14.5	12.5	16	17.5	15.125	16
RS1	0.002	0.005	2.343	0.006	7.5	24.0	13	17.5	15.500	17
RickerChum	0.003	0.004	2.823	0.006	14.5	12.5	20	17.5	16.125	18
PowerBasicCycAge	0.003	0.004	3.121	0.006	14.5	12.5	23	17.5	16.875	19
RickerPDO	0.004	0.005	2.701	0.006	23.0	24.0	17	17.5	20.375	20
TSA	0.004	0.005	2.810	0.006	23.0	24.0	19	17.5	20.875	21
RickerEi	0.004	0.005	2.918	0.006	23.0	24.0	22	17.5	21.625	22
RS4yr	0.004	0.005	3.148	0.007	23.0	24.0	24	25.0	24.000	23
LarkinBasic	0.004	0.005	3.503	0.007	23.0	24.0	27	25.0	24.750	24
RickerFRDpeak	0.005	0.005	3.453	0.007	28.0	24.0	25	25.0	25.500	25
RickerBasic	0.005	0.005	3.474	0.007	28.0	24.0	26	25.0	25.750	26
RickerCyc	0.004	0.005	3.950	0.008	23.0	24.0	29	28.5	26.125	27
RickerFRDMean	0.005	0.005	3.617	0.007	28.0	24.0	28	25.0	26.250	28
LarkinBasicCycAge	0.004	0.005	4.002	0.008	23.0	24.0	30	28.5	26.375	29
RS2	0.006	0.006	2.878	0.009	30.0	30.0	21	30.0	27.750	30
RS8yr	0.008	0.008	4.090	0.011	31.0	31.0	31	31.0	31.000	31
RSC	0.009	0.009	6.167	0.012	32.5	32.0	32	32.0	32.125	32
MRS	0.009	0.010	7.043	0.014	32.5	33.0	33	33.0	32.875	33

(Total)-Cycle

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
LLY	-0.002	0.004	-0.255	0.004	3.0	1.0	3	1.0	2.000	1
PowerPink	0.002	0.007	0.458	0.008	3.0	2.0	6	2.0	3.250	2
PowerSalmon_Total	0.002	0.008	0.443	0.009	3.0	4.5	5	3.5	4.000	3
RickerSalmon_Total	-0.006	0.008	-0.205	0.010	8.5	4.5	1	5.0	4.750	4
PowerSockeye	0.001	0.010	0.428	0.011	1.0	9.0	4	6.5	5.125	5
RickerPink	-0.007	0.009	-0.213	0.011	12.0	7.0	2	6.5	6.875	6
RS1	0.008	0.008	0.719	0.009	15.0	4.5	8	3.5	7.750	7
LarkinBasicCycAge	0.006	0.008	0.920	0.012	8.5	4.5	14	9.0	9.000	8
PowerChum	0.006	0.010	0.857	0.012	8.5	9.0	11	9.0	9.375	9
PowerBasicCycAge	0.006	0.010	0.876	0.012	8.5	9.0	13	9.0	9.875	10
RickerSockeye	0.005	0.014	0.783	0.015	5.0	19.0	10	13.0	11.750	11
RS4yr	0.008	0.013	0.662	0.016	15.0	14.5	7	16.0	13.125	12
PowerBasic	0.008	0.012	1.077	0.015	15.0	12.0	16	13.0	14.000	13
LarkinBasic	0.008	0.011	1.133	0.015	15.0	11.0	19	13.0	14.500	14
RickerChum	0.006	0.014	0.991	0.016	8.5	19.0	15	16.0	14.625	15
R1C	0.006	0.015	0.725	0.017	8.5	23.5	9	18.5	14.875	16
RickerPi	0.008	0.014	0.872	0.016	15.0	19.0	12	16.0	15.500	17
TSA	0.013	0.013	1.271	0.014	23.5	14.5	20	11.0	17.250	18
RickerPiW	0.010	0.014	1.122	0.017	18.0	19.0	17	18.5	18.125	19
RS2	0.011	0.013	1.352	0.018	19.5	14.5	21	21.0	19.000	20
RickerCyc	0.013	0.013	1.440	0.018	23.5	14.5	25	21.0	21.000	21
RickerFRDMean	0.012	0.015	1.386	0.018	21.0	23.5	23	21.0	22.125	22
RickerEiW	0.011	0.015	1.404	0.019	19.5	23.5	24	23.5	22.625	23
RickerPDO	0.014	0.014	1.356	0.019	27.0	19.0	22	23.5	22.875	24
RickerEi	0.013	0.015	1.494	0.020	23.5	23.5	26	25.5	24.625	25
RS8yr	0.014	0.019	1.130	0.027	27.0	28.0	18	29.0	25.500	26
RickerBasic	0.013	0.016	1.547	0.020	23.5	26.0	28	25.5	25.750	27
RickerFRDpeak	0.014	0.017	1.725	0.022	27.0	27.0	29	27.0	27.500	28
MRS	0.020	0.020	2.105	0.026	29.0	29.0	30	28.0	29.000	29
R2C	0.023	0.027	1.514	0.038	31.0	31.0	27	32.0	30.250	30
RSC	0.021	0.021	2.282	0.028	30.0	30.0	31	30.0	30.250	31
RAC	0.036	0.036	2.940	0.036	32.0	32.0	32	31.0	31.750	32

(Age4)-Cycle

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
LLY	-0.001	0.003	-0.188	0.004	6.0	1.0	8	1.0	4.000	1
LarkinBasic	-0.002	0.005	0.113	0.006	10.5	4.0	4	3.5	5.500	2
PowerPink	-0.004	0.005	-0.150	0.006	15.5	4.0	6	3.5	7.250	3
RickerPDO	0.000	0.005	0.351	0.007	2.0	4.0	14	9.0	7.250	4
PowerSalmon_Total	-0.004	0.005	-0.153	0.006	15.5	4.0	7	3.5	7.500	5

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
PowerChum	-0.003	0.006	0.057	0.007	13.5	8.5	1	9.0	8.000	6
PowerBasic	-0.002	0.006	0.147	0.007	10.5	8.5	5	9.0	8.250	7
RickerPiW	-0.001	0.006	0.236	0.007	6.0	8.5	10	9.0	8.375	8
LarkinBasicCycAge	0.002	0.005	0.485	0.006	10.5	4.0	17	3.5	8.750	9
RickerEi	0.001	0.006	0.339	0.007	6.0	8.5	13	9.0	9.125	10
RickerPi	-0.003	0.007	0.061	0.007	13.5	15.0	2	9.0	9.875	11
RickerBasic	0.000	0.007	0.390	0.008	2.0	15.0	15	15.0	11.750	12
RickerEiW	-0.001	0.007	0.275	0.008	6.0	15.0	12	15.0	12.000	13
RickerFRDMean	0.000	0.007	0.395	0.008	2.0	15.0	16	15.0	12.000	14
RickerChum	-0.005	0.007	-0.075	0.008	17.0	15.0	3	15.0	12.500	15
PowerBasicCycAge	0.002	0.007	0.507	0.007	10.5	15.0	18	9.0	13.125	16
RickerFRDpeak	0.001	0.007	0.541	0.009	6.0	15.0	19	19.0	14.750	17
RickerSockeye	-0.006	0.007	-0.237	0.009	20.0	15.0	11	19.0	16.250	18
PowerSockeye	-0.006	0.008	-0.234	0.009	20.0	20.5	9	19.0	17.125	19
RS1	0.006	0.007	0.733	0.008	20.0	15.0	23	15.0	18.250	20
RS4yr	0.006	0.010	0.550	0.012	20.0	23.5	20	23.0	21.625	21
RickerSalmon_Total	-0.010	0.010	-0.647	0.011	25.5	23.5	21	21.5	22.875	22
RickerPink	-0.010	0.010	-0.663	0.011	25.5	23.5	22	21.5	23.125	23
RS2	0.007	0.008	1.268	0.014	23.0	20.5	26	25.0	23.625	24
R1C	0.006	0.014	0.875	0.016	20.0	27.5	24	27.0	24.625	25
RickerCyc	0.009	0.010	1.272	0.014	24.0	23.5	27	25.0	24.875	26
TSA	0.012	0.012	1.405	0.014	28.0	26.0	28	25.0	26.750	27
RS8yr	0.011	0.014	1.063	0.021	27.0	27.5	25	30.0	27.375	28
MRS	0.015	0.015	1.912	0.020	29.0	29.0	30	28.5	29.125	29
RSC	0.016	0.016	1.948	0.020	30.0	30.0	31	28.5	29.875	30
R2C	0.021	0.025	1.784	0.035	31.0	31.0	29	32.0	30.750	31
RAC	0.033	0.033	3.180	0.033	32.0	32.0	32	31.0	31.750	32

(Age5)-Cycle

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerCyc	0.000	0.001	0.220	0.001	2.0	1.5	2	1.0	1.625	1
R1C	0.000	0.001	0.217	0.002	2.0	1.5	1	4.5	2.250	2
RickerSalmon_Total	-0.001	0.002	0.236	0.002	7.5	6.5	3	4.5	5.375	3
TSA	0.000	0.002	0.918	0.002	2.0	6.5	9	4.5	5.500	4
LLY	-0.001	0.002	-0.358	0.002	7.5	6.5	5	4.5	5.875	5
RickerPink	-0.001	0.002	0.428	0.002	7.5	6.5	6	4.5	6.125	6
sibling5	0.001	0.002	0.580	0.002	7.5	6.5	7	4.5	6.375	7
R2C	0.001	0.002	0.671	0.003	7.5	6.5	8	9.5	7.875	8
PowerBasicCycAge	0.001	0.002	1.211	0.003	7.5	6.5	11	9.5	8.625	9

LarkinBasicCycAge	0.001	0.002	1.380	0.003	7.5	6.5	13	9.5	9.125	10
RS1	0.001	0.004	0.255	0.006	7.5	16.0	4	19.0	11.625	11
RS4yr	0.002	0.004	1.330	0.004	12.0	16.0	12	13.0	13.250	12
RAC	0.003	0.003	2.302	0.003	14.5	12.0	18	9.5	13.500	13
PowerSalmon_Total	0.003	0.003	1.960	0.004	14.5	12.0	15	13.0	13.625	14
PowerPink	0.003	0.003	2.097	0.004	14.5	12.0	16	13.0	13.875	15
RS8yr	0.003	0.004	1.519	0.006	14.5	16.0	14	19.0	15.875	16
PowerSockeye	0.004	0.004	2.147	0.005	18.0	16.0	17	15.5	16.625	17
PowerChum	0.004	0.004	2.799	0.005	18.0	16.0	20	15.5	17.375	18
MRS	0.004	0.005	3.233	0.006	18.0	20.5	23	19.0	20.125	19
PowerBasic	0.005	0.005	3.271	0.006	21.5	20.5	24	19.0	21.250	20
LarkinBasic	0.005	0.005	3.475	0.006	21.5	20.5	26	19.0	21.750	21
RS2	0.005	0.006	0.982	0.010	21.5	24.5	10	33.0	22.250	22
RickerChum	0.005	0.005	3.821	0.007	21.5	20.5	28	22.5	23.125	23
RickerSockeye	0.006	0.006	3.069	0.007	26.5	24.5	22	22.5	23.875	24
RickerPi	0.006	0.007	2.553	0.008	26.5	29.5	19	26.0	25.250	25
RickerPiW	0.006	0.007	3.031	0.008	26.5	29.5	21	26.0	25.750	26
RickerFRDMean	0.006	0.006	3.809	0.008	26.5	24.5	27	26.0	26.000	27
RSC	0.006	0.006	4.128	0.008	26.5	24.5	32	26.0	27.250	28
RickerEi	0.006	0.007	3.975	0.008	26.5	29.5	29	26.0	27.750	29
RickerPDO	0.007	0.007	3.455	0.009	31.5	29.5	25	30.5	29.125	30
RickerEiW	0.007	0.007	3.980	0.009	31.5	29.5	30	30.5	30.375	31
RickerBasic	0.007	0.007	4.093	0.009	31.5	29.5	31	30.5	30.625	32
RickerFRDpeak	0.007	0.008	4.468	0.009	31.5	33.0	33	30.5	32.000	33

(Total)-Other

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
LLY	0.002	0.009	1.066	0.012	1.0	1.0	1	1.5	1.125	1
PowerSockeye	0.005	0.010	2.581	0.012	6.0	3.0	4	1.5	3.625	2
R1C	0.003	0.013	2.203	0.015	3.0	6.0	2	5.0	4.000	3
PowerSalmon_Total	0.005	0.010	2.943	0.013	6.0	3.0	6	3.5	4.625	4
PowerPink	0.005	0.010	3.023	0.013	6.0	3.0	7	3.5	4.875	5
RickerSalmon_Total	-0.003	0.013	3.110	0.017	3.0	6.0	9.5	8.0	6.625	6
RickerPink	-0.003	0.015	3.110	0.018	3.0	10.5	9.5	10.5	8.375	7
PowerChum	0.009	0.013	3.777	0.016	8.0	6.0	14	6.0	8.500	8
RickerPi	0.010	0.015	3.031	0.017	10.0	10.5	8	8.0	9.125	9
RickerPiW	0.012	0.016	3.635	0.018	14.5	14.0	13	10.5	13.000	10
TSA	0.015	0.015	3.614	0.017	22.0	10.5	12	8.0	13.125	11
PowerBasicCycAge	0.011	0.014	4.521	0.019	12.0	8.0	20	13.0	13.250	12
PowerBasic	0.012	0.015	4.483	0.019	14.5	10.5	19	13.0	14.250	13
RS1	0.012	0.016	2.681	0.027	14.5	14.0	5	27.0	15.125	14

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerSockeye	0.010	0.017	4.275	0.020	10.0	18.0	17	16.0	15.250	15
RickerChum	0.010	0.016	4.736	0.020	10.0	14.0	22	16.0	15.500	16
RickerPDO	0.014	0.017	3.916	0.019	18.5	18.0	16	13.0	16.375	17
RickerCyc	0.014	0.017	4.474	0.020	18.5	18.0	18	16.0	17.625	18
RickerEiW	0.012	0.017	4.576	0.021	14.5	18.0	21	18.0	17.875	19
R2C	0.015	0.019	2.503	0.026	22.0	23.5	3	25.0	18.375	20
RAC	0.018	0.019	3.119	0.024	26.5	23.5	11	21.5	20.625	21
LarkinBasicCycAge	0.014	0.017	5.778	0.023	18.5	18.0	29	19.5	21.250	22
RickerEi	0.015	0.018	5.275	0.023	22.0	21.5	24	19.5	21.750	23
LarkinBasic	0.014	0.018	5.693	0.024	18.5	21.5	27	21.5	22.125	24
RickerFRDMean	0.017	0.021	5.706	0.025	24.5	25.5	28	23.0	25.250	25
RS4yr	0.017	0.022	4.853	0.030	24.5	27.5	23	28.0	25.750	26
RS2	0.027	0.029	3.790	0.052	29.0	29.0	15	32.0	26.250	27
RickerBasic	0.019	0.022	5.356	0.026	28.0	27.5	25	25.0	26.375	28
RickerFRDpeak	0.018	0.021	5.849	0.026	26.5	25.5	30	25.0	26.750	29
RS8yr	0.029	0.033	5.610	0.045	30.0	30.0	26	29.0	28.750	30
MRS	0.035	0.037	10.354	0.047	31.0	31.0	31	30.0	30.750	31
RSC	0.037	0.040	10.771	0.050	32.0	32.0	32	31.0	31.750	32

(Age4)-Other

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
LLY	0.002	0.007	1.810	0.008	6.0	1.0	1	1.0	2.250	1
PowerSockeye	-0.001	0.008	2.975	0.010	2.5	3.5	4	3.5	3.375	2
PowerSalmon_Total	0.000	0.008	3.483	0.010	1.0	3.5	6	3.5	3.500	3
PowerPink	-0.001	0.008	3.301	0.010	2.5	3.5	5	3.5	3.625	4
PowerChum	0.002	0.008	4.495	0.011	6.0	3.5	14	7.0	7.625	5
RickerPi	0.002	0.009	3.749	0.011	6.0	7.5	10	7.0	7.625	6
RickerPiW	0.003	0.009	4.362	0.010	10.5	7.5	13	3.5	8.625	7
RickerPDO	0.004	0.009	4.657	0.011	13.0	7.5	15	7.0	10.625	8
RickerCyc	0.006	0.010	2.430	0.012	18.5	12.0	2	10.5	10.750	9
PowerBasic	0.003	0.009	5.441	0.012	10.5	7.5	20	10.5	12.125	10
PowerBasicCycAge	0.005	0.010	4.825	0.012	15.0	12.0	17	10.5	13.625	11
RickerEiW	0.003	0.010	6.031	0.012	10.5	12.0	22	10.5	13.750	12
R1C	0.003	0.012	3.493	0.014	10.5	20.5	7	18.0	14.000	13
RickerSockeye	0.002	0.011	5.089	0.014	6.0	16.5	18	18.0	14.625	14
RickerChum	0.002	0.011	6.242	0.014	6.0	16.5	23	18.0	15.875	15
RickerSalmon_Total	-0.006	0.012	3.925	0.013	18.5	20.5	11	14.0	16.000	16
RickerPink	-0.006	0.012	3.666	0.014	18.5	20.5	9	18.0	16.500	17
RickerEi	0.005	0.010	6.849	0.013	15.0	12.0	27	14.0	17.000	18
LarkinBasicCycAge	0.006	0.010	5.743	0.014	18.5	12.0	21	18.0	17.375	19

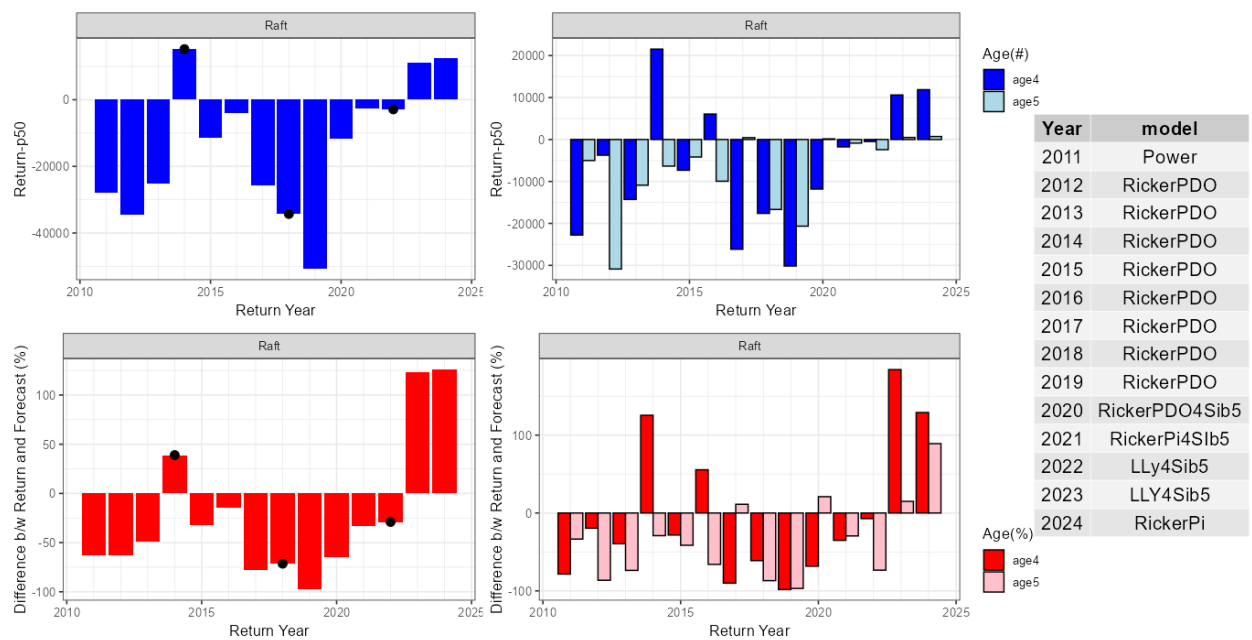
model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
TSA	0.011	0.011	5.211	0.013	25.0	16.5	19	14.0	18.625	20
LarkinBasic	0.005	0.011	6.559	0.015	15.0	16.5	24	21.5	19.250	21
RS1	0.009	0.015	2.879	0.028	24.0	25.0	3	28.0	20.000	22
R2C	0.012	0.016	3.652	0.023	26.0	26.0	8	26.0	21.500	23
RickerFRDMean	0.007	0.012	6.644	0.015	21.5	20.5	26	21.5	22.375	24
RAC	0.015	0.017	4.289	0.022	28.0	27.0	12	25.0	23.000	25
RickerBasic	0.008	0.013	6.578	0.017	23.0	23.5	25	24.0	23.875	26
RickerFRDpeak	0.007	0.013	7.288	0.016	21.5	23.5	28	23.0	24.000	27
RS2	0.021	0.024	4.761	0.047	29.0	29.0	16	32.0	26.500	28
RS4yr	0.013	0.018	7.551	0.024	27.0	28.0	29	27.0	27.750	29
RS8yr	0.023	0.027	8.060	0.038	30.0	30.0	30	29.5	29.875	30
MRS	0.027	0.030	15.469	0.038	31.0	31.0	31	29.5	30.625	31
RSC	0.030	0.033	17.940	0.042	32.0	32.0	32	31.0	31.750	32

(Age5)-Other

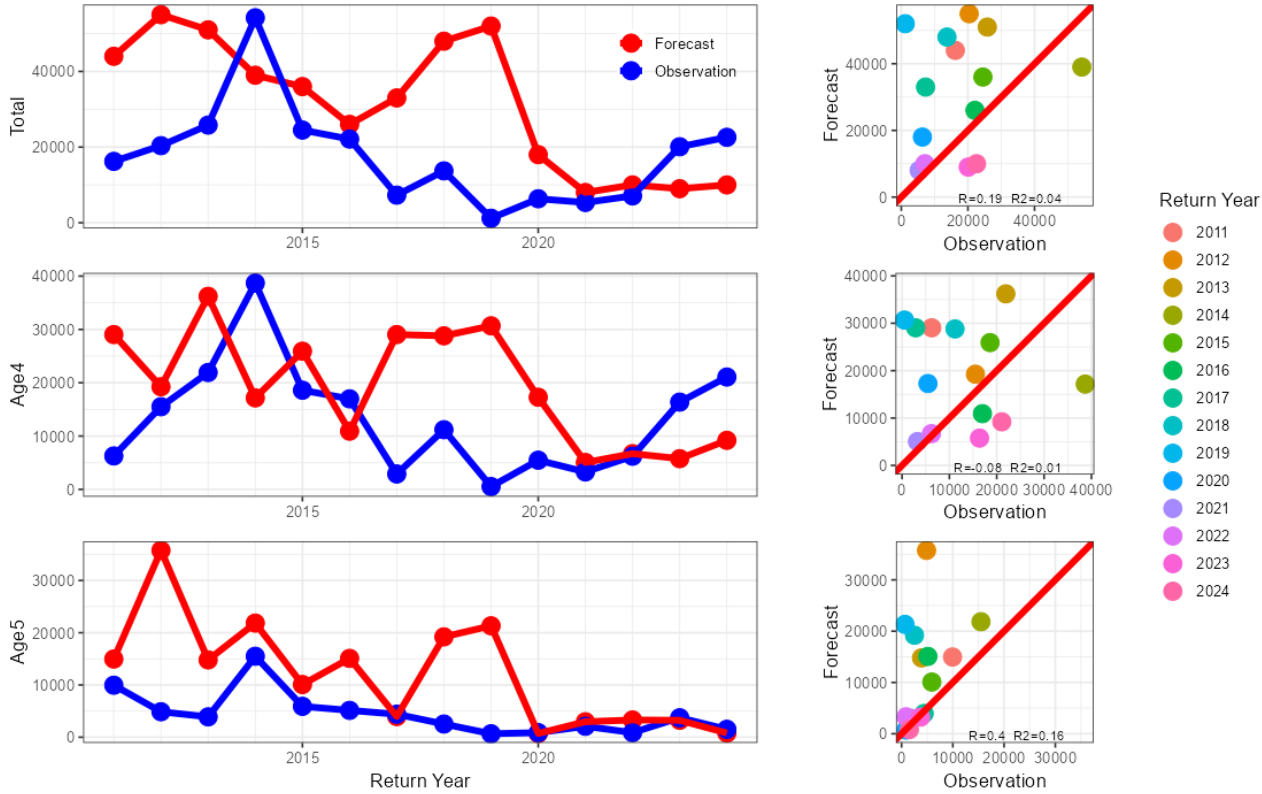
model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
R1C	0.000	0.002	1.149	0.003	1.0	2.0	3	2.0	2.000	1
sibling5	0.001	0.002	0.826	0.003	3.5	2.0	2	2.0	2.375	2
PowerSalmon_Total	0.002	0.002	1.968	0.003	7.0	2.0	8	2.0	4.750	3
RickerSalmon_Total	-0.001	0.003	1.216	0.004	3.5	7.0	4	6.5	5.250	4
RickerPink	-0.001	0.003	1.363	0.004	3.5	7.0	5	6.5	5.500	5
LLY	0.001	0.003	0.624	0.005	3.5	7.0	1	12.5	6.000	6
PowerSockeye	0.002	0.003	1.801	0.004	7.0	7.0	7	6.5	6.875	7
PowerPink	0.002	0.003	2.224	0.004	7.0	7.0	11	6.5	7.875	8
R2C	0.003	0.003	1.610	0.005	12.5	7.0	6	12.5	9.500	9
PowerChum	0.003	0.003	2.509	0.004	12.5	7.0	14	6.5	10.000	10
RAC	0.003	0.004	2.202	0.004	12.5	15.5	10	6.5	11.125	11
RickerPi	0.003	0.004	2.000	0.005	12.5	15.5	9	12.5	12.375	12
RickerSockeye	0.003	0.004	2.658	0.005	12.5	15.5	15	12.5	13.875	13
TSA	0.004	0.004	2.497	0.005	22.0	15.5	13	12.5	15.750	14
RickerChum	0.003	0.004	3.006	0.006	12.5	15.5	20	19.5	16.875	15
PowerBasic	0.004	0.004	2.896	0.005	22.0	15.5	18	12.5	17.000	16
RickerPiW	0.004	0.004	2.441	0.006	22.0	15.5	12	19.5	17.250	17
PowerBasicCycAge	0.003	0.004	3.218	0.006	12.5	15.5	23	19.5	17.625	18
RS1	0.003	0.005	2.688	0.007	12.5	25.0	16	25.5	19.750	19
RickerPDO	0.004	0.005	2.860	0.006	22.0	25.0	17	19.5	20.875	20
LarkinBasic	0.004	0.004	3.786	0.006	22.0	15.5	28	19.5	21.250	21
RickerEiW	0.004	0.005	2.982	0.006	22.0	25.0	19	19.5	21.375	22
RickerEi	0.004	0.005	3.180	0.006	22.0	25.0	21	19.5	21.875	23
RS4yr	0.004	0.005	3.292	0.007	22.0	25.0	24	25.5	24.125	24

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
LarkinBasicCycAge	0.004	0.004	4.317	0.008	22.0	15.5	31	28.5	24.250	25
RickerBasic	0.004	0.005	3.482	0.007	22.0	25.0	25	25.5	24.375	26
RickerFRDMean	0.005	0.005	3.703	0.006	28.5	25.0	27	19.5	25.000	27
RickerCyc	0.004	0.005	4.207	0.008	22.0	25.0	29	28.5	26.125	28
RickerFRDpeak	0.005	0.005	3.679	0.007	28.5	25.0	26	25.5	26.250	29
RS2	0.006	0.006	3.204	0.009	30.5	30.0	22	30.5	28.250	30
RS8yr	0.006	0.007	4.229	0.009	30.5	31.5	30	30.5	30.625	31
RSC	0.007	0.007	6.092	0.011	32.0	31.5	32	32.0	31.875	32
MRS	0.008	0.008	7.118	0.013	33.0	33.0	33	33.0	33.000	33

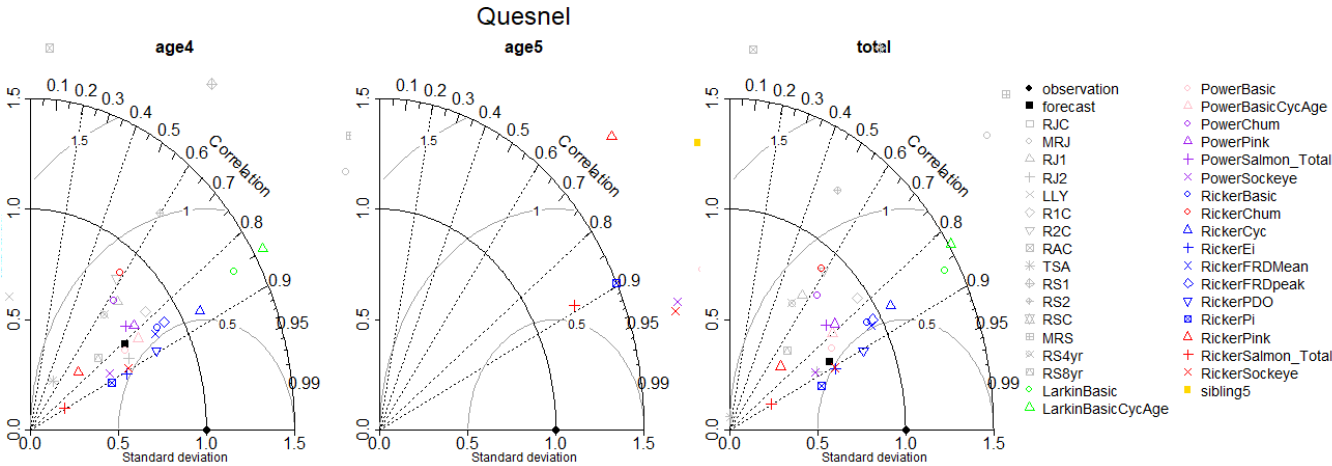
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FC-TS



Quesnel Retrospective: Taylor



Ranking (Total)-Alllys

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerPiW	0.008	0.244	5.488	0.370	1.0	2.0	14	1.0	4.500	1

RickerSockeye	-0.040	0.240	4.583	0.424	6.0	1.0	9	5.0	5.250	2
PowerBasic	-0.015	0.254	5.439	0.485	3.0	4.0	12	8.0	6.750	3
RickerEi	-0.014	0.276	5.476	0.417	2.0	8.0	13	4.0	6.750	4
RickerEiW	-0.074	0.274	5.201	0.403	12.0	7.0	10	3.0	8.000	5
R1C	-0.054	0.245	3.545	0.553	8.5	3.0	7	15.0	8.375	6
PowerPink	-0.094	0.258	2.440	0.546	16.0	5.0	4	14.0	9.750	7
RickerPi	-0.082	0.299	5.395	0.454	14.0	10.0	11	6.0	10.250	8
PowerSockeye	-0.117	0.269	3.869	0.509	18.0	6.0	8	11.0	10.750	9
PowerSalmon_Total	-0.120	0.283	2.067	0.576	19.0	9.0	3	16.0	11.750	10
RickerPDO	0.131	0.305	6.329	0.392	20.0	11.0	16	2.0	12.250	11
PowerBasicCycAge	0.058	0.310	5.606	0.523	11.0	12.0	15	12.0	12.500	12
PowerChum	-0.078	0.375	2.543	0.684	13.0	17.0	5	19.0	13.500	13
RickerChum	-0.036	0.429	2.774	0.754	4.0	22.0	6	23.0	13.750	14
RickerFRDMean	0.172	0.350	7.023	0.470	21.0	14.0	21	7.0	15.750	15
RickerPink	-0.315	0.366	1.985	0.728	25.0	15.0	2	22.0	16.000	16
RS8yr	-0.099	0.348	6.707	0.646	17.0	13.0	19	18.0	16.750	17
RickerSalmon_Total	-0.367	0.393	1.190	0.759	26.0	19.0	1	24.0	17.500	18
RickerBasic	0.201	0.376	6.996	0.489	24.0	18.0	20	9.0	17.750	19
RickerFRDpeak	0.185	0.372	7.463	0.495	23.0	16.0	23	10.0	18.000	20
RS4yr	-0.054	0.423	7.307	0.725	8.5	21.0	22	21.0	18.125	21
R2C	0.057	0.414	9.862	0.718	10.0	20.0	28	20.0	19.500	22
RJ2	0.086	0.445	14.035	0.542	15.0	23.0	30	13.0	20.250	23
RickerCyc	0.395	0.511	6.396	0.629	27.0	24.0	17	17.0	21.250	24
RJ1	0.039	0.585	10.353	0.795	5.0	27.0	29	25.0	21.500	25
RS2	0.183	0.563	6.541	0.977	22.0	25.0	18	27.0	23.000	26
LLY	0.041	0.920	16.574	1.297	7.0	30.0	31	30.0	24.500	27
LarkinBasic	0.495	0.579	7.479	0.816	29.0	26.0	24	26.0	26.250	28
LarkinBasicCycAge	0.650	0.723	8.083	0.997	31.0	28.0	25	28.0	28.000	29
RS1	0.449	0.836	9.648	1.515	28.0	29.0	26	31.0	28.500	30
RAC	0.590	0.985	9.836	1.711	30.0	31.0	27	32.0	30.000	31
TSA	0.794	1.116	166.580	1.149	32.0	32.0	36	29.0	32.250	32
MRS	1.312	1.354	32.480	1.885	33.0	33.0	33	33.0	33.000	33
RSC	1.678	1.678	37.938	2.522	34.0	34.0	34	35.0	34.250	34
MRJ	1.731	1.731	54.741	2.181	35.0	35.0	35	34.0	34.750	35
RJC	3.061	3.061	27.466	4.233	36.0	36.0	32	36.0	35.000	36

(Age4)-Allyrs

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerPiW	-0.064	0.220	4.383	0.403	7.0	2.0	14	2.0	6.250	1
RickerPDO	0.027	0.262	4.947	0.395	4.0	10.0	16	1.0	7.750	2
PowerBasicCycAge	-0.036	0.230	5.218	0.490	5.0	4.0	18	9.0	9.000	3

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerSockeye	-0.109	0.226	3.412	0.465	15.0	3.0	12	7.0	9.250	4
RickerFRDMean	0.046	0.263	6.216	0.452	6.0	11.0	22	3.5	10.625	5
R1C	-0.087	0.209	5.099	0.540	11.0	1.0	17	14.0	10.750	6
RickerEi	-0.100	0.245	6.143	0.457	14.0	6.5	21	5.0	11.625	7
PowerPink	-0.139	0.237	2.434	0.558	18.0	5.0	8	16.0	11.750	8
PowerBasic	-0.093	0.245	5.628	0.515	12.0	6.5	20	11.0	12.375	9
RickerEiW	-0.146	0.265	4.537	0.452	19.0	12.5	15	3.5	12.500	10
RS2	-0.014	0.370	0.549	0.851	1.0	22.0	1	27.0	12.750	11
RickerBasic	0.078	0.287	6.299	0.462	9.0	14.0	23	6.0	13.000	12
PowerSalmon_Total	-0.159	0.261	1.997	0.586	21.0	9.0	7	17.0	13.500	13
RS8yr	-0.203	0.253	1.040	0.619	25.0	8.0	4	18.0	13.750	14
RickerFRDpeak	0.066	0.289	6.326	0.473	8.0	15.0	24	8.0	13.750	15
RickerPi	-0.150	0.299	3.835	0.518	20.0	16.0	13	12.0	15.250	16
PowerSockeye	-0.178	0.265	3.150	0.550	24.0	12.5	11	15.0	15.625	17
RJ2	-0.023	0.333	30.644	0.494	3.0	18.0	33	10.0	16.000	18
RS4yr	-0.172	0.314	1.316	0.676	23.0	17.0	5	19.0	16.000	19
PowerChum	-0.138	0.346	2.652	0.696	17.0	19.0	9	20.0	16.250	20
RickerChum	-0.096	0.395	2.996	0.754	13.0	24.0	10	25.0	18.000	21
R2C	0.015	0.394	16.611	0.716	2.0	23.0	30	22.0	19.250	22
RickerCyc	0.231	0.366	5.317	0.520	26.0	20.0	19	13.0	19.500	23
RickerPink	-0.349	0.368	1.801	0.751	28.0	21.0	6	24.0	19.750	24
RS1	0.167	0.554	0.635	1.320	22.0	28.0	2	31.0	20.750	25
RickerSalmon_Total	-0.402	0.408	0.739	0.805	29.0	25.0	3	26.0	20.750	26
RJ1	-0.081	0.431	21.101	0.700	10.0	26.0	32	21.0	22.250	27
LarkinBasic	0.344	0.474	6.701	0.719	27.0	27.0	26	23.0	25.750	28
LLY	-0.135	0.747	46.735	1.074	16.0	30.0	34	30.0	27.500	29
LarkinBasicCycAge	0.461	0.556	6.534	0.886	30.0	29.0	25	28.0	28.000	30
MRS	0.810	0.873	9.200	1.537	33.0	31.0	28	32.0	31.000	31
TSA	0.502	0.878	479.971	0.905	31.0	32.0	36	29.0	32.000	32
RAC	0.558	1.000	20.891	1.718	32.0	33.0	31	34.0	32.500	33
RSC	1.045	1.046	8.664	2.106	34.0	34.0	27	35.0	32.500	34
RJC	1.969	1.969	12.572	3.523	36.0	36.0	29	36.0	34.250	35
MRJ	1.123	1.123	104.312	1.697	35.0	35.0	35	33.0	34.500	36

(Age5)-Alllys

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerSalmon_Total	-0.003	0.007	-0.142	0.011	2.0	1.0	2	1.0	1.500	1
RickerPink	0.002	0.012	-0.067	0.026	1.0	2.0	1	7.0	2.750	2
RickerEiW	0.013	0.014	5.012	0.020	4.0	4.0	9	3.0	5.000	3
RickerPi	0.013	0.014	5.086	0.019	4.0	4.0	10	2.0	5.000	4

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
PowerSockeye	0.013	0.014	4.446	0.022	4.0	4.0	8	4.5	5.125	5
PowerSalmon_Total	0.015	0.018	2.139	0.037	7.5	9.5	4	10.0	7.750	6
RickerSockeye	0.015	0.016	5.388	0.022	7.5	6.0	14	4.5	8.000	7
PowerPink	0.015	0.019	2.079	0.038	7.5	12.0	3	11.5	8.500	8
PowerChum	0.015	0.018	4.030	0.040	7.5	9.5	5	13.0	8.750	9
PowerBasic	0.016	0.017	5.348	0.027	10.0	7.0	13	8.0	9.500	10
RickerPiW	0.017	0.018	5.159	0.025	11.5	9.5	11	6.0	9.500	11
RickerChum	0.017	0.018	4.291	0.042	11.5	9.5	7	14.0	10.500	12
RickerEi	0.020	0.021	5.706	0.035	13.0	13.0	15	9.0	12.500	13
sibling5	0.023	0.023	5.217	0.038	14.0	14.0	12	11.5	12.875	14
RickerPDO	0.028	0.029	7.192	0.048	15.5	15.5	17	15.0	15.750	15
RickerFRDMean	0.028	0.029	8.819	0.049	15.5	15.5	20	16.0	16.750	16
RickerBasic	0.031	0.033	8.765	0.053	17.0	17.5	19	18.0	17.875	17
PowerBasicCycAge	0.058	0.059	4.041	0.118	22.5	22.5	6	23.0	18.500	18
RickerFRDpeak	0.034	0.034	8.853	0.055	20.0	19.0	21	19.0	19.750	19
RAC	0.032	0.033	22.127	0.051	18.0	17.5	30	17.0	20.625	20
LarkinBasic	0.058	0.059	9.913	0.100	22.5	22.5	22	22.0	22.250	21
RickerCyc	0.103	0.104	6.142	0.199	24.0	24.0	16	25.0	22.250	22
R1C	0.033	0.045	27.117	0.090	19.0	20.0	31	21.0	22.750	23
R2C	0.042	0.049	32.908	0.085	21.0	21.0	32	20.0	23.500	24
LarkinBasicCycAge	0.141	0.141	7.753	0.281	27.0	27.0	18	27.0	24.750	25
RS8yr	0.104	0.105	13.680	0.198	25.0	25.0	26	24.0	25.000	26
RS4yr	0.118	0.119	15.489	0.260	26.0	26.0	28	26.0	26.500	27
LLY	0.177	0.178	12.170	0.345	28.0	28.0	23	29.0	27.000	28
RS2	0.197	0.198	12.572	0.480	29.0	29.0	25	32.0	28.750	29
RJ1	0.208	0.208	12.372	0.359	30.5	30.5	24	31.0	29.000	30
RJ2	0.208	0.208	13.856	0.311	30.5	30.5	27	28.0	29.000	31
RS1	0.282	0.286	19.368	0.732	32.0	32.0	29	33.0	31.500	32
TSA	0.292	0.292	121.660	0.355	33.0	33.0	37	30.0	33.250	33
MRS	0.501	0.502	60.455	0.945	34.0	34.0	35	34.0	34.250	34
MRJ	0.623	0.623	52.856	1.025	35.0	35.0	34	35.0	34.750	35
RJC	0.994	0.995	41.037	1.833	37.0	37.0	33	37.0	36.000	36
RSC	0.633	0.634	68.631	1.226	36.0	36.0	36	36.0	36.000	37

(Total)-Cycle

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerSalmon_Total	0.003	0.010	4.273	0.014	1.0	3.0	1	3.5	2.125	1
PowerSalmon_Total	0.004	0.011	5.166	0.014	2.0	4.0	2	3.5	2.875	2
PowerChum	0.008	0.008	5.713	0.012	5.5	1.5	4	1.0	3.000	3
RickerChum	0.008	0.008	5.949	0.013	5.5	1.5	5	2.0	3.500	4

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerPink	0.005	0.012	5.663	0.017	3.0	5.5	3	6.0	4.375	5
PowerPink	0.006	0.012	6.099	0.015	4.0	5.5	6	5.0	5.125	6
RickerCyc	0.012	0.015	9.094	0.020	8.0	7.0	7	7.0	7.250	7
PowerSockeye	0.012	0.018	9.904	0.023	8.0	9.5	8	8.0	8.375	8
PowerBasicCycAge	0.017	0.017	11.613	0.025	11.0	8.0	9	9.5	9.375	9
LarkinBasicCycAge	0.018	0.018	11.835	0.025	12.0	9.5	11	9.5	10.500	10
RickerSockeye	0.015	0.020	11.679	0.028	10.0	12.0	10	11.0	10.750	11
R1C	0.012	0.023	12.023	0.034	8.0	16.5	12	18.0	13.625	12
PowerBasic	0.020	0.020	13.462	0.029	15.5	12.0	14	13.0	13.625	13
RickerEiW	0.019	0.022	13.331	0.029	13.5	15.0	13	13.0	13.625	14
RickerEi	0.020	0.020	13.487	0.029	15.5	12.0	15	13.0	13.875	15
RickerPiW	0.021	0.021	14.314	0.034	17.0	14.0	17	18.0	16.500	16
LarkinBasic	0.023	0.023	14.551	0.030	19.0	16.5	19	15.0	17.375	17
RS2	0.022	0.025	13.991	0.031	18.0	21.0	16	16.0	17.750	18
RickerPi	0.019	0.024	14.538	0.036	13.5	18.5	18	21.5	17.875	19
RickerFRDMean	0.024	0.024	16.226	0.035	20.0	18.5	21	20.0	19.875	20
RickerPDO	0.025	0.025	15.048	0.034	21.5	21.0	20	18.0	20.125	21
RickerBasic	0.025	0.025	16.592	0.036	21.5	21.0	22	21.5	21.500	22
RickerFRDpeak	0.026	0.026	17.483	0.038	23.0	23.0	24	24.0	23.500	23
RAC	0.035	0.035	17.447	0.037	27.0	27.0	23	23.0	25.000	24
RS8yr	0.031	0.031	18.542	0.041	25.0	25.0	25	25.0	25.000	25
RS1	0.027	0.030	20.036	0.045	24.0	24.0	26	26.5	25.125	26
RS4yr	0.034	0.034	20.266	0.045	26.0	26.0	27	26.5	26.375	27
R2C	0.045	0.054	31.800	0.085	28.0	28.0	28	31.0	28.750	28
RJC	0.075	0.075	36.600	0.075	29.0	29.0	30	28.0	29.000	29
LLY	0.076	0.076	34.064	0.081	30.0	30.0	29	29.5	29.625	30
RJ1	0.081	0.081	38.100	0.081	31.0	31.0	31	29.5	30.625	31
RJ2	0.135	0.135	53.083	0.142	32.0	32.0	32	32.0	32.000	32
MRS	0.147	0.147	80.394	0.161	33.0	33.0	33	33.0	33.000	33
RSC	0.171	0.171	92.361	0.184	34.0	34.0	34	34.0	34.000	34
MRJ	0.433	0.433	206.715	0.433	35.0	35.0	35	35.0	35.000	35
TSA	1.283	1.283	560.991	1.285	36.0	36.0	36	36.0	36.000	36

(Age4)-Cycle

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RS1	-0.002	0.003	0.168	0.005	12.0	1.0	1	1.0	3.750	1
PowerChum	0.000	0.005	2.983	0.006	2.0	6.0	6.5	3.5	4.500	2
RS8yr	-0.001	0.005	2.008	0.006	6.5	6.0	3	3.5	4.750	3
RS2	-0.002	0.004	0.752	0.006	12.0	2.0	2	3.5	4.875	4
RickerSalmon_Total	-0.001	0.005	2.123	0.006	6.5	6.0	4	3.5	5.000	5

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RS4yr	0.000	0.005	2.397	0.007	2.0	6.0	5	7.5	5.125	6
RickerChum	0.000	0.005	2.983	0.007	2.0	6.0	6.5	7.5	5.500	7
RickerPink	0.001	0.005	3.318	0.007	6.5	6.0	8	7.5	7.000	8
PowerSalmon_Total	0.001	0.005	3.782	0.007	6.5	6.0	9	7.5	7.250	9
PowerPink	0.002	0.006	4.828	0.008	12.0	11.0	10	10.0	10.750	10
RickerSockeye	0.001	0.007	4.898	0.009	6.5	15.5	11	12.5	11.375	11
PowerSockeye	0.001	0.007	5.268	0.009	6.5	15.5	12	12.5	11.625	12
RickerCyc	0.002	0.006	5.342	0.009	12.0	11.0	13	12.5	12.125	13
RickerEiW	0.002	0.006	5.555	0.009	12.0	11.0	14	12.5	12.375	14
LarkinBasicCycAge	0.003	0.007	6.585	0.010	17.5	15.5	15	16.0	16.000	15
RSC	0.003	0.007	6.804	0.010	17.5	15.5	16	16.0	16.250	16
LarkinBasic	0.003	0.007	6.929	0.010	17.5	15.5	17	16.0	16.500	17
RickerPDO	0.004	0.007	7.290	0.011	22.5	15.5	19	19.0	19.000	18
RickerPiW	0.003	0.008	7.605	0.011	17.5	21.5	20	19.0	19.500	19
PowerBasicCycAge	0.003	0.008	8.150	0.011	17.5	21.5	21	19.0	19.750	20
RickerPi	0.003	0.008	7.182	0.012	17.5	21.5	18	22.0	19.750	21
RickerFRDMean	0.004	0.008	8.428	0.012	22.5	21.5	22	22.0	22.000	22
PowerBasic	0.004	0.008	9.027	0.012	22.5	21.5	25	22.0	22.750	23
RickerEi	0.005	0.008	8.492	0.013	25.5	21.5	23	25.5	23.875	24
RickerBasic	0.004	0.009	8.831	0.013	22.5	25.5	24	25.5	24.375	25
RickerFRDpeak	0.005	0.009	9.172	0.013	25.5	25.5	26	25.5	25.625	26
MRS	0.006	0.010	11.011	0.015	27.0	27.0	27	28.0	27.250	27
RJC	0.013	0.013	42.315	0.013	29.0	28.0	29	25.5	27.875	28
R1C	0.009	0.014	15.756	0.023	28.0	29.0	28	29.0	28.500	29
RAC	0.023	0.023	52.233	0.024	30.0	30.0	30	30.0	30.000	30
RJ1	0.031	0.031	106.041	0.032	32.0	31.0	33	31.0	31.750	31
R2C	0.030	0.036	52.995	0.056	31.0	32.0	31	34.0	32.000	32
RJ2	0.046	0.046	154.807	0.047	33.0	33.0	34	32.0	33.000	33
LLY	0.048	0.048	83.385	0.052	34.0	34.0	32	33.0	33.250	34
MRJ	0.151	0.151	509.674	0.152	35.0	35.0	35	35.0	35.000	35
TSA	0.799	0.799	1623.553	0.802	36.0	36.0	36	36.0	36.000	36

(Age5)-Cycle

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerSalmon_Total	-0.001	0.002	0.396	0.004	2.5	1.5	2	1.5	1.875	1
RickerPink	-0.002	0.002	0.178	0.004	4.0	1.5	1	1.5	2.000	2
PowerPink	0.000	0.004	2.192	0.005	1.0	5.5	3	5.5	3.750	3
PowerSalmon_Total	0.001	0.004	2.573	0.005	2.5	5.5	4	5.5	4.375	4
PowerBasicCycAge	0.003	0.004	2.844	0.005	5.5	5.5	5	5.5	5.375	5
RickerCyc	0.004	0.004	2.904	0.005	8.0	5.5	6	5.5	6.250	6

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
PowerChum	0.004	0.004	3.701	0.005	8.0	5.5	7	5.5	6.500	7
RickerChum	0.004	0.004	3.830	0.005	8.0	5.5	8	5.5	6.750	8
PowerSockeye	0.005	0.006	6.541	0.007	10.0	9.5	10	9.0	9.625	9
PowerBasic	0.006	0.006	7.023	0.008	11.0	9.5	11	10.0	10.375	10
LarkinBasicCycAge	0.007	0.007	4.960	0.009	13.5	11.5	9	11.0	11.250	11
RickerEi	0.007	0.007	7.246	0.010	13.5	11.5	12	12.5	12.375	12
RickerSockeye	0.007	0.008	9.358	0.010	13.5	13.5	15	12.5	13.625	13
R1C	0.003	0.009	9.288	0.012	5.5	16.5	14	19.0	13.750	14
sibling5	0.008	0.008	9.104	0.011	16.0	13.5	13	15.5	14.500	15
RickerPi	0.007	0.009	10.430	0.011	13.5	16.5	17	15.5	15.625	16
RickerFRDMean	0.009	0.009	9.949	0.011	17.5	16.5	16	15.5	16.375	17
RickerPiW	0.009	0.009	10.558	0.011	17.5	16.5	18	15.5	16.875	18
RickerEiW	0.010	0.010	10.977	0.012	19.0	19.0	20	19.0	19.250	19
RickerPDO	0.011	0.011	11.177	0.012	21.0	21.0	21	19.0	20.500	20
RickerFRDpeak	0.011	0.011	11.839	0.013	21.0	21.0	22	22.0	21.500	21
RAC	0.012	0.012	10.833	0.013	23.0	23.0	19	22.0	21.750	22
RickerBasic	0.011	0.011	12.045	0.013	21.0	21.0	23	22.0	21.750	23
LarkinBasic	0.014	0.014	13.344	0.015	24.5	24.0	24	24.0	24.125	24
R2C	0.014	0.018	24.604	0.029	24.5	25.0	27	26.0	25.625	25
LLY	0.027	0.027	23.602	0.029	27.0	27.0	26	26.0	26.500	26
RS2	0.024	0.024	27.177	0.029	26.0	26.0	29	26.0	26.750	27
RS8yr	0.032	0.032	35.821	0.038	29.0	29.0	31	28.0	29.250	28
RS1	0.029	0.029	42.647	0.045	28.0	28.0	33	30.0	29.750	29
RJC	0.053	0.053	26.033	0.055	31.0	31.0	28	31.0	30.250	30
RJ1	0.059	0.059	21.062	0.061	32.0	32.0	25	32.0	30.250	31
RS4yr	0.034	0.034	38.948	0.042	30.0	30.0	32	29.0	30.250	32
RJ2	0.078	0.078	28.825	0.084	33.0	33.0	30	33.0	32.250	33
MRS	0.142	0.142	137.657	0.150	34.0	34.0	35	34.0	34.250	34
RSC	0.168	0.168	163.541	0.179	35.0	35.0	36	35.0	35.250	35
MRJ	0.251	0.251	114.394	0.255	36.0	36.0	34	36.0	35.500	36
TSA	0.485	0.485	358.470	0.485	37.0	37.0	37	37.0	37.000	37

(Total)-Other

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerSalmon_Total	-0.024	0.057	1.765	0.092	3.0	3.0	1	2.0	2.250	1
R1C	0.014	0.046	4.527	0.065	1.5	1.0	7	1.0	2.625	2
RickerPink	0.014	0.054	2.791	0.099	1.5	2.0	3	4.0	2.625	3
PowerSalmon_Total	0.035	0.066	2.752	0.093	4.0	4.0	2	3.0	3.250	4
PowerPink	0.041	0.077	3.225	0.107	5.0	5.0	4	5.0	4.750	5
PowerChum	0.089	0.089	3.361	0.142	6.0	6.0	5	7.0	6.000	6

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
PowerSockeye	0.097	0.100	5.139	0.130	7.0	7.0	8	6.0	7.000	7
RickerChum	0.107	0.107	3.634	0.164	8.0	8.0	6	9.0	7.750	8
RickerSockeye	0.122	0.124	6.027	0.156	9.0	9.0	9	8.0	8.750	9
RickerEiW	0.129	0.130	6.871	0.189	10.0	10.0	10	10.0	10.000	10
RickerPi	0.140	0.142	7.130	0.210	11.0	11.0	11	13.0	11.500	11
PowerBasic	0.154	0.154	7.140	0.198	13.0	13.0	12	11.0	12.250	12
RickerPiW	0.144	0.144	7.186	0.202	12.0	12.0	13	12.0	12.250	13
RickerEi	0.155	0.155	7.190	0.211	14.0	14.0	14	14.0	14.000	14
RS8yr	0.158	0.158	8.656	0.239	15.0	15.0	19	15.0	16.000	15
RickerPDO	0.211	0.211	8.226	0.267	17.0	17.0	16	16.0	16.500	16
PowerBasicCycAge	0.222	0.222	7.342	0.294	19.0	18.0	15	17.0	17.250	17
RS4yr	0.171	0.182	9.387	0.312	16.0	16.0	22	19.5	18.375	18
RickerFRDMean	0.237	0.237	9.121	0.312	20.0	20.0	21	19.5	20.125	19
RickerFRDpeak	0.241	0.242	9.684	0.310	21.0	21.0	24	18.0	21.000	20
RickerBasic	0.267	0.267	8.892	0.336	23.0	23.0	20	21.0	21.750	21
R2C	0.219	0.230	12.594	0.499	18.0	19.0	27	25.0	22.250	22
RS2	0.250	0.256	8.277	0.541	22.0	22.0	18	27.0	22.250	23
LarkinBasic	0.358	0.358	9.558	0.479	26.0	25.0	23	24.0	24.500	24
RickerCyc	0.398	0.398	8.232	0.519	28.0	27.0	17	26.0	24.500	25
RJ1	0.313	0.313	14.868	0.474	24.0	24.0	29	23.0	25.000	26
RJ2	0.379	0.379	20.166	0.465	27.0	26.0	30	22.0	26.250	27
RS1	0.354	0.403	12.084	0.831	25.0	28.0	26	29.0	27.000	28
LarkinBasicCycAge	0.488	0.488	10.305	0.655	29.0	29.0	25	28.0	27.750	29
LLY	0.561	0.663	21.343	1.077	30.0	30.0	31	30.0	30.250	30
RAC	1.002	1.002	12.632	1.852	32.0	32.0	28	35.0	31.750	31
MRS	0.992	0.992	40.960	1.318	31.0	31.0	33	32.0	31.750	32
RSC	1.115	1.115	47.721	1.582	33.0	33.0	34	33.0	33.250	33
TSA	1.215	1.215	212.104	1.218	34.0	34.0	36	31.0	33.750	34
MRJ	1.387	1.387	77.628	1.671	35.0	35.0	35	34.0	34.750	35
RJC	1.805	1.805	37.909	2.479	36.0	36.0	32	36.0	35.000	36

(Age4)-Other

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RS2	0.002	0.010	0.652	0.013	2.5	1.0	2	1.0	1.625	1
PowerSalmon_Total	-0.001	0.032	2.670	0.050	1.0	2.0	7	2.0	3.000	2
RS8yr	0.031	0.033	1.448	0.053	8.0	3.0	4	3.0	4.500	3
RS1	-0.004	0.046	0.615	0.065	4.0	8.5	1	8.0	5.375	4
PowerPink	0.002	0.039	3.228	0.060	2.5	6.0	8	5.5	5.500	5
RickerPink	-0.011	0.036	2.563	0.063	5.0	4.0	6	7.0	5.500	6
RS4yr	0.026	0.042	1.765	0.059	7.0	7.0	5	4.0	5.750	7

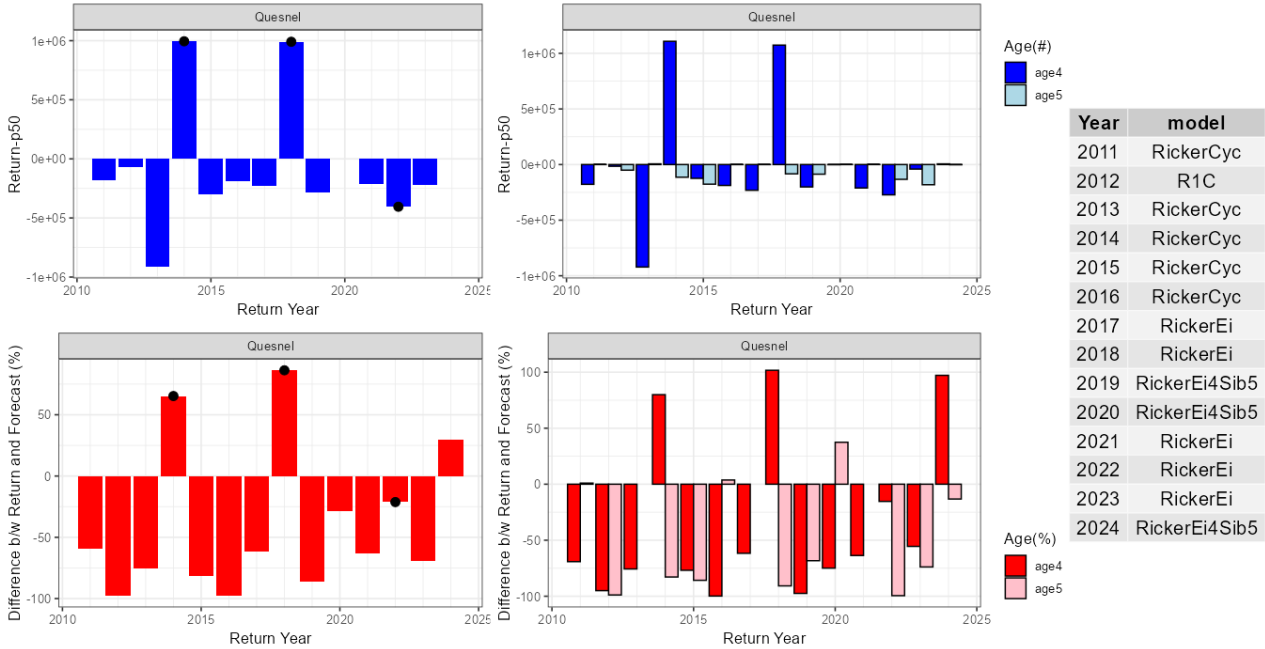
model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
R1C	0.017	0.038	6.530	0.060	6.0	5.0	17	5.5	8.375	8
RickerSalmon_Total	-0.039	0.047	1.195	0.087	9.0	10.0	3	12.0	8.500	9
PowerChum	0.044	0.046	3.520	0.067	10.0	8.5	9	9.0	9.125	10
PowerSockeye	0.055	0.057	4.223	0.082	11.0	11.0	11	11.0	11.000	11
RickerChum	0.056	0.058	3.938	0.081	12.0	12.0	10	10.0	11.000	12
RickerSockeye	0.075	0.078	4.528	0.111	13.0	13.5	12	13.0	12.875	13
RickerEiW	0.077	0.078	6.028	0.131	14.0	13.5	15	14.0	14.125	14
RickerPiW	0.088	0.089	5.767	0.154	15.0	15.0	14	17.0	15.250	15
RickerPi	0.096	0.098	5.123	0.181	17.0	17.0	13	19.0	16.500	16
RickerEi	0.094	0.095	8.084	0.149	16.0	16.0	22	16.0	17.500	17
PowerBasic	0.098	0.100	7.410	0.142	18.0	18.0	20	15.0	17.750	18
PowerBasicCycAge	0.116	0.118	6.846	0.176	19.0	19.0	19	18.0	18.750	19
RickerPDO	0.129	0.131	6.456	0.191	21.0	21.0	16	20.0	19.500	20
RickerFRDpeak	0.152	0.154	8.240	0.226	22.0	22.0	24	21.5	22.375	21
RickerFRDMean	0.159	0.161	8.116	0.240	23.0	23.0	23	23.0	23.000	22
RickerBasic	0.173	0.174	8.036	0.247	24.0	24.0	21	24.0	23.250	23
RJ1	0.128	0.128	29.089	0.226	20.0	20.0	32	21.5	23.375	24
RickerCyc	0.213	0.215	6.845	0.342	26.5	27.0	18	25.0	24.125	25
R2C	0.205	0.207	21.206	0.490	25.0	25.0	30	29.0	27.250	26
LarkinBasic	0.237	0.239	8.583	0.387	28.0	28.0	26	27.0	27.250	27
LarkinBasicCycAge	0.271	0.273	8.304	0.458	29.0	29.0	25	28.0	27.750	28
RJ2	0.213	0.213	42.247	0.348	26.5	26.0	33	26.0	27.875	29
RSC	0.337	0.339	10.476	0.506	30.0	30.0	27	30.0	29.250	30
MRS	0.389	0.390	11.346	0.624	32.0	31.0	28	31.0	30.500	31
RJC	0.516	0.516	16.147	0.842	33.0	33.0	29	33.5	32.125	32
LLY	0.339	0.439	59.732	0.690	31.0	32.0	34	32.0	32.250	33
MRJ	0.647	0.647	142.951	0.842	34.0	34.0	35	33.5	34.125	34
RAC	0.991	0.991	26.718	1.846	36.0	36.0	31	36.0	34.750	35
TSA	0.878	0.878	610.982	0.890	35.0	35.0	36	35.0	35.250	36

(Age5)-Other

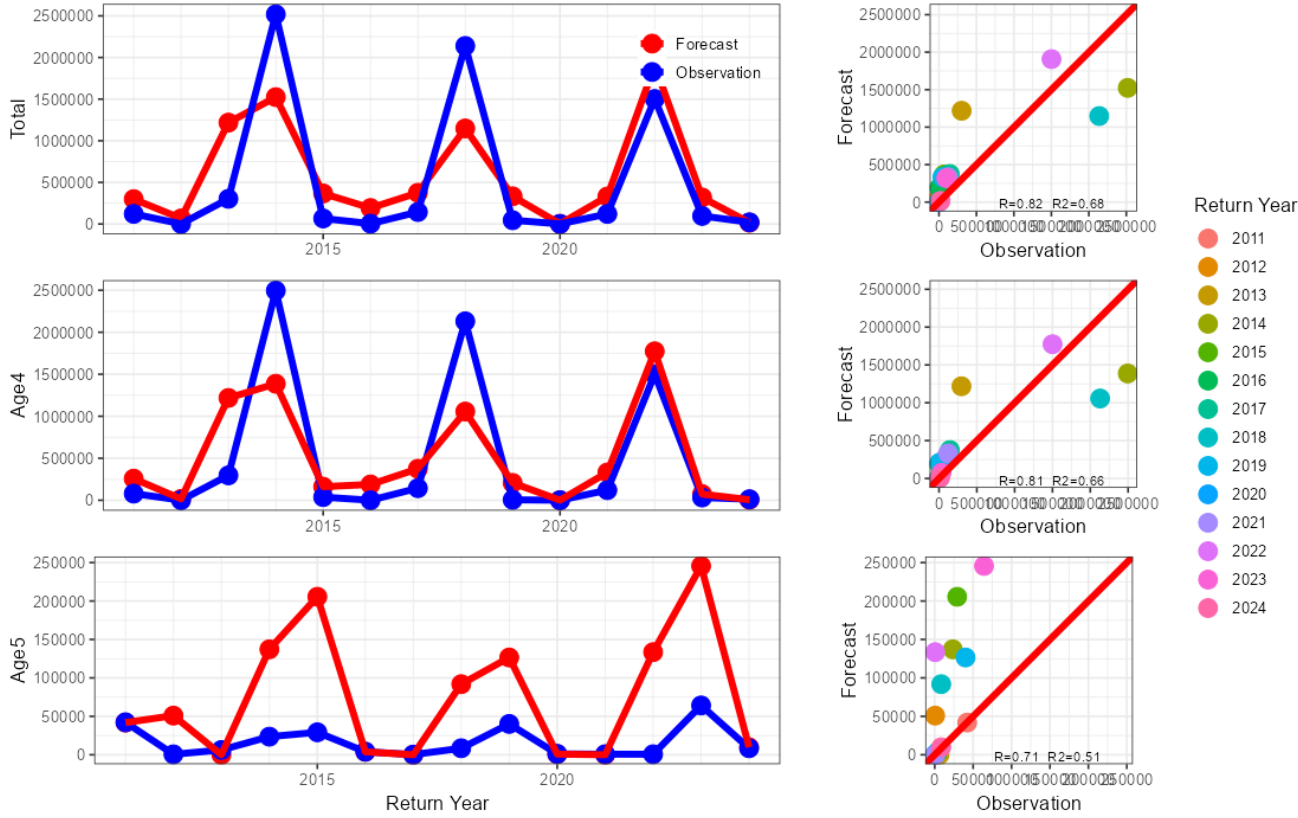
model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerSalmon_Total	-0.002	0.008	-0.193	0.011	1.0	1.0	2	1.0	1.250	1
RickerPink	0.004	0.013	-0.081	0.029	2.5	4.0	1	10.0	4.375	2
R1C	-0.004	0.011	3.559	0.017	2.5	2.0	11	3.0	4.625	3
PowerSockeye	0.013	0.015	2.622	0.023	6.5	6.5	8	6.0	6.750	4
RickerPi	0.011	0.013	4.175	0.019	4.5	4.0	15	4.0	6.875	5
RAC	0.011	0.013	10.916	0.013	4.5	4.0	25	2.0	8.875	6
RickerEiW	0.013	0.015	4.438	0.022	6.5	6.5	18	5.0	9.000	7
RickerSockeye	0.015	0.016	3.780	0.024	9.0	8.0	12	7.0	9.000	8

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
PowerBasic	0.016	0.017	2.934	0.028	10.0	9.0	9	9.0	9.250	9
PowerSalmon_Total	0.018	0.021	1.132	0.041	13.5	13.0	4	12.5	10.750	10
PowerChum	0.017	0.019	1.467	0.045	11.5	11.5	5	16.0	11.000	11
PowerPink	0.019	0.022	1.014	0.042	15.0	14.0	3	14.0	11.500	12
RickerPiW	0.017	0.018	4.331	0.027	11.5	10.0	17	8.0	11.625	13
RickerChum	0.018	0.019	1.549	0.047	13.5	11.5	6	17.0	12.000	14
RickerEi	0.021	0.023	3.102	0.039	16.0	15.0	10	11.0	13.000	15
sibling5	0.024	0.024	4.008	0.041	17.0	16.5	14	12.5	15.000	16
R2C	0.014	0.024	9.477	0.044	8.0	16.5	24	15.0	15.875	17
RickerFRDMean	0.026	0.027	4.287	0.052	18.0	18.0	16	18.0	17.500	18
PowerBasicCycAge	0.070	0.072	2.580	0.134	23.0	23.0	7	23.0	19.000	19
RickerBasic	0.029	0.032	4.744	0.056	19.0	19.5	19	20.0	19.375	20
RickerPDO	0.030	0.032	4.804	0.054	20.0	19.5	20	19.0	19.625	21
RickerFRDpeak	0.032	0.033	5.134	0.059	21.0	21.0	21	21.0	21.000	22
RickerCyc	0.124	0.126	3.937	0.226	24.0	24.0	13	25.0	21.500	23
LarkinBasic	0.061	0.062	6.374	0.111	22.0	22.0	23	22.0	22.250	24
RS8yr	0.127	0.128	15.270	0.223	25.0	25.0	29	24.0	25.750	25
LarkinBasicCycAge	0.170	0.172	5.758	0.319	27.0	27.0	22	27.0	25.750	26
RS4yr	0.146	0.147	16.559	0.293	26.0	26.0	31	26.0	27.250	27
LLY	0.222	0.224	13.877	0.389	28.0	28.0	27	29.0	28.000	28
RJ2	0.259	0.259	15.339	0.357	30.0	30.0	30	28.0	29.500	29
RS2	0.249	0.250	14.316	0.541	29.0	29.0	28	32.0	29.500	30
RJ1	0.266	0.266	12.212	0.413	31.0	31.0	26	31.0	29.750	31
TSA	0.337	0.338	136.500	0.395	32.0	32.0	37	30.0	32.750	32
RS1	0.358	0.361	21.767	0.825	33.0	33.0	32	33.0	32.750	33
MRS	0.603	0.604	62.415	1.064	34.0	34.0	35	34.0	34.250	34
MRJ	0.784	0.784	55.154	1.180	36.0	36.0	34	35.0	35.250	35
RSC	0.778	0.779	75.534	1.382	35.0	35.0	36	36.0	35.500	36
RJC	1.277	1.277	38.556	2.115	37.0	37.0	33	37.0	36.000	37

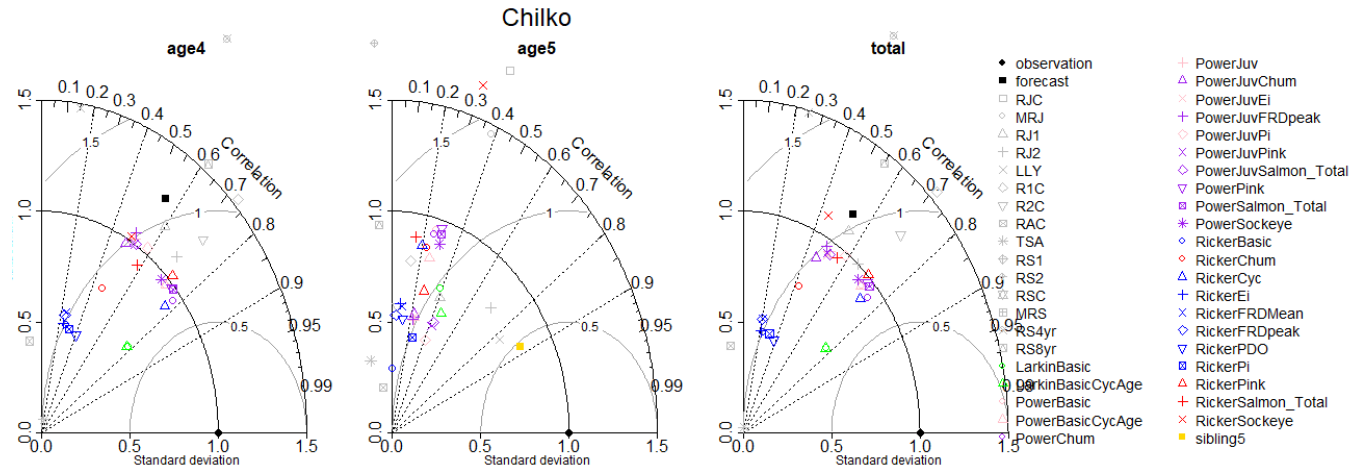
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FC-TS



Chilko Retrospective: Taylor



Ranking (Total)-Alllys

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
LarkinBasicCycAge	-0.028	0.377	0.478	0.518	4.0	1.5	2	1.0	2.125	1
LarkinBasic	-0.019	0.377	0.497	0.519	2.5	1.5	3	2.0	2.250	2
RickerPink	0.019	0.409	0.555	0.608	2.5	3.0	4	3.0	3.125	3
RickerSalmon_Total	-0.167	0.548	0.145	0.743	13.0	8.0	1	10.5	8.125	4
R2C	0.231	0.477	0.802	0.737	16.0	4.0	6	9.0	8.750	5
PowerSalmon_Total	0.260	0.485	1.102	0.625	20.0	5.0	10	4.0	9.750	6
RickerPi	0.017	0.602	1.048	0.758	1.0	15.0	8	15.0	9.750	7
PowerPink	0.247	0.493	1.080	0.633	18.5	6.0	9	6.0	9.875	8
RickerChum	0.160	0.569	0.977	0.769	11.0	10.0	7	18.0	11.500	9
RickerCyc	0.317	0.560	1.154	0.631	24.0	9.0	11	5.0	12.250	10
RickerPDO	0.147	0.589	1.392	0.747	10.0	12.0	15	12.0	12.250	11
RickerEiW	0.041	0.618	1.310	0.765	5.0	19.5	13	17.0	13.625	12
PowerChum	0.365	0.525	1.416	0.650	26.0	7.0	16	7.0	14.000	13
RickerPiW	0.105	0.618	1.329	0.774	7.0	19.5	14	19.0	14.875	14
RickerChilkoLength	0.143	0.623	1.441	0.794	8.0	21.5	17	21.0	16.875	15
RickerBasic	0.194	0.604	1.595	0.802	15.0	16.0	20	22.0	18.250	16
PowerJuvChilko	0.316	0.574	1.837	0.693	23.0	11.0	32	8.0	18.500	17
R1C	0.164	0.675	0.557	0.863	12.0	32.0	5	31.0	20.000	18
RickerEi	0.183	0.632	1.602	0.814	14.0	23.0	21	23.0	20.250	19
RickerChilko	0.145	0.664	1.566	0.840	9.0	29.0	19	25.0	20.500	20
RickerChilkoNum	0.071	0.674	1.448	0.854	6.0	31.0	18	29.0	21.000	21
PowerBasicCycAge	0.461	0.591	1.824	0.743	33.0	13.0	31	10.5	21.875	22

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerFRDpeak	0.237	0.652	1.627	0.845	17.0	24.0	23	26.0	22.500	23
PowerSockeye	0.450	0.610	1.696	0.759	32.0	17.0	28	16.0	23.250	24
PowerBasic	0.476	0.599	1.855	0.757	34.0	14.0	33	14.0	23.750	25
PowerJuvChilkoNum	0.383	0.623	1.989	0.755	28.0	21.5	36	13.0	24.625	26
PowerJuvPink	0.292	0.669	1.628	0.831	21.0	30.0	24	24.0	24.750	27
RickerFRDMean	0.247	0.657	1.690	0.848	18.5	26.0	27	28.0	24.875	28
PowerChilkoLength	0.382	0.658	1.688	0.783	27.0	27.0	26	20.0	25.000	29
PowerJuvSalmon_Total	0.357	0.654	1.748	0.846	25.0	25.0	30	27.0	26.750	30
RJ1	0.498	0.615	1.988	0.976	36.0	18.0	35	36.0	31.250	31
LLY	0.308	1.052	1.197	1.264	22.0	47.0	12	47.0	32.000	32
PowerChilko	0.438	0.700	1.907	0.858	31.0	33.0	34	30.0	32.000	33
RJ2	0.581	0.663	1.999	0.914	39.0	28.0	37	33.0	34.250	34
RickerSockeye	0.500	0.708	1.723	1.008	37.0	34.0	29	39.0	34.750	35
TSA	0.401	0.751	2.703	0.872	29.0	37.0	46	32.0	36.000	36
RS8yr	0.481	0.821	1.603	1.071	35.0	44.0	22	43.0	36.000	37
PowerChilkoNum	0.537	0.777	2.016	0.951	38.0	39.0	38	34.0	37.250	38
PowerJuvPi	0.641	0.735	2.339	0.970	41.0	35.0	40	35.0	37.750	39
PowerJuvChum	0.611	0.750	2.511	1.001	40.0	36.0	42	38.0	39.000	40
RAC	0.435	0.819	3.077	0.987	30.0	42.0	50	37.0	39.750	41
PowerJuvChilkoLength	0.680	0.772	2.657	1.025	42.0	38.0	44	40.0	41.000	42
PowerJuvPiW	0.720	0.799	2.637	1.029	43.0	41.0	43	41.0	42.000	43
RS2	0.803	1.191	1.677	1.934	49.0	48.0	25	49.0	42.750	44
PowerJuvEiW	0.742	0.781	2.748	1.065	45.0	40.0	47	42.0	43.500	45
PowerJuvFRDpeak	0.731	0.854	2.690	1.084	44.0	46.0	45	45.0	45.000	46
PowerJuvEi	0.757	0.826	2.847	1.082	46.0	45.0	48	44.0	45.750	47
PowerJuv	0.773	0.820	2.931	1.097	47.0	43.0	49	46.0	46.250	48
RS4yr	0.799	1.227	2.399	1.608	48.0	49.0	41	48.0	46.500	49
RS1	1.194	1.727	2.296	3.113	50.0	50.0	39	52.0	47.750	50
MRJ	1.949	1.949	5.386	2.499	51.0	51.0	53	50.0	51.250	51
RJC	1.973	1.973	5.558	2.655	52.0	52.0	54	51.0	52.250	52
MRS	2.508	2.562	4.444	3.704	53.0	53.0	52	53.0	52.750	53
RSC	2.747	2.778	4.360	4.170	54.0	54.0	51	54.0	53.250	54

(Age4)-Allyrs

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
LarkinBasic	-0.070	0.346	0.672	0.494	9.5	1.0	4	1.0	3.875	1
RickerPink	-0.048	0.366	0.589	0.574	5.0	3.0	2	7.0	4.250	2
LarkinBasicCycAge	-0.076	0.352	0.669	0.496	11.0	2.0	3	2.0	4.500	3
PowerPink	0.159	0.438	1.361	0.559	16.0	6.0	7	5.5	8.625	4
PowerSalmon_Total	0.175	0.426	1.404	0.555	18.0	4.5	8	4.0	8.625	5

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerChum	0.063	0.478	1.086	0.708	7.0	9.0	5	16.5	9.375	6
RickerCyc	0.199	0.462	1.542	0.530	19.0	8.0	9	3.0	9.750	7
PowerChum	0.261	0.426	1.887	0.559	25.0	4.5	12	5.5	11.750	8
R2C	0.229	0.445	1.553	0.682	22.0	7.0	10	12.0	12.750	9
RickerSalmon_Total	-0.228	0.527	0.092	0.708	21.0	13.0	1	16.5	12.875	10
RickerPDO	0.070	0.533	2.169	0.700	9.5	14.0	17	13.0	13.375	11
RickerPi	-0.045	0.570	1.670	0.733	4.0	19.5	11	19.0	13.375	12
RickerEiW	-0.023	0.570	2.112	0.723	2.0	19.5	16	18.0	13.875	13
RickerPiW	0.027	0.576	2.039	0.734	3.0	21.0	14	20.0	14.500	14
RickerChilkoLength	0.056	0.589	2.252	0.753	6.0	26.0	19	23.0	18.500	15
RickerBasic	0.128	0.540	2.464	0.739	13.0	16.0	27	21.0	19.250	16
PowerSockeye	0.339	0.534	2.376	0.671	30.0	15.0	23	11.0	19.750	17
PowerBasicCycAge	0.346	0.514	2.599	0.651	31.0	10.0	33	9.0	20.750	18
R1C	0.168	0.630	1.108	0.796	17.0	34.0	6	29.0	21.500	19
PowerJuvChilko	0.260	0.548	3.215	0.645	23.5	17.0	38	8.0	21.625	20
PowerBasic	0.352	0.515	2.617	0.658	32.0	11.0	34	10.0	21.750	21
RickerChilkoNum	-0.013	0.625	2.332	0.818	1.0	33.0	22	33.0	22.250	22
RickerEi	0.098	0.578	2.486	0.768	12.0	22.0	31	25.0	22.500	23
PowerJuvPink	0.209	0.616	2.110	0.766	20.0	31.5	15	24.0	22.625	24
PowerChilkoLength	0.266	0.585	2.466	0.704	26.0	23.5	29	15.0	23.375	25
PowerJuvSalmon_Total	0.260	0.596	2.286	0.779	23.5	27.0	21	26.0	24.375	26
RickerChilko	0.064	0.616	2.465	0.806	8.0	31.5	28	31.0	24.625	27
RickerFRDpeak	0.150	0.605	2.478	0.786	15.0	29.0	30	27.0	25.250	28
RickerFRDMean	0.148	0.598	2.495	0.787	14.0	28.0	32	28.0	25.500	29
RickerSockeye	0.356	0.562	2.182	0.846	33.0	18.0	18	35.0	26.000	30
PowerJuvChilkoNum	0.320	0.587	3.346	0.702	29.0	25.0	42	14.0	27.500	31
RJ1	0.440	0.518	2.434	0.862	37.0	12.0	26	36.0	27.750	32
PowerChilko	0.306	0.611	2.702	0.743	28.0	30.0	35	22.0	28.750	33
RJ2	0.528	0.585	2.405	0.819	41.0	23.5	25	34.0	30.875	34
LLY	0.305	1.034	1.891	1.254	27.0	47.0	13	47.0	33.500	35
PowerChilkoNum	0.381	0.665	2.728	0.804	35.0	37.0	36	30.0	34.500	36
RS8yr	0.451	0.742	2.275	0.998	38.0	44.0	20	46.0	37.000	37
PowerJuvChum	0.468	0.654	3.272	0.890	39.0	35.5	39	38.0	37.875	38
PowerJuvPi	0.511	0.654	3.285	0.867	40.0	35.5	40	37.0	38.125	39
TSA	0.374	0.703	4.968	0.816	34.0	40.0	49	32.0	38.750	40
PowerJuvChilkoLength	0.539	0.683	3.775	0.900	42.0	38.0	45	39.0	41.000	41
PowerJuvPiW	0.577	0.705	3.679	0.915	43.0	41.0	44	40.0	42.000	42
RS2	0.747	1.092	2.380	1.870	49.0	48.0	24	49.0	42.500	43
PowerJuvEiW	0.596	0.696	3.805	0.951	45.0	39.0	46	42.0	43.000	44
RAC	0.413	0.807	5.722	0.938	36.0	46.0	52	41.0	43.750	45

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
PowerJuvFRDpeak	0.578	0.755	3.637	0.962	44.0	45.0	43	43.0	43.750	46
PowerJuvEi	0.598	0.733	3.960	0.964	46.0	43.0	47	44.0	45.000	47
PowerJuv	0.606	0.714	3.970	0.965	47.0	42.0	48	45.0	45.500	48
RS4yr	0.745	1.118	3.309	1.503	48.0	49.0	41	48.0	46.500	49
RS1	1.110	1.654	2.986	3.049	50.0	50.0	37	52.0	47.250	50
MRJ	1.846	1.846	6.317	2.380	51.0	51.0	53	50.0	51.250	51
RJC	1.930	1.930	6.386	2.609	52.0	52.0	54	51.0	52.250	52
MRS	2.320	2.379	5.514	3.564	53.0	53.0	51	53.0	52.500	53
RSC	2.542	2.575	5.093	4.025	54.0	54.0	50	54.0	53.000	54

(Age5)-Alllys

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
LarkinBasicCycAge	0.001	0.035	0.481	0.048	1.0	2.0	6	1.0	2.500	1
sibling5	0.002	0.040	0.348	0.049	2.5	4.0	3	2.0	2.875	2
LarkinBasic	0.003	0.037	0.461	0.053	5.0	3.0	5	3.5	4.125	3
RickerPink	-0.013	0.034	0.008	0.057	14.5	1.0	1	6.5	5.750	4
LLY	0.003	0.045	0.449	0.059	5.0	8.5	4	8.5	6.500	5
RickerPi	0.005	0.041	0.743	0.053	9.0	5.5	10	3.5	7.000	6
RickerEiW	0.004	0.041	0.853	0.056	7.0	5.5	12	5.0	7.375	7
RickerPiW	0.010	0.045	0.940	0.057	12.0	8.5	13	6.5	10.000	8
RickerChum	0.011	0.043	0.648	0.063	13.0	7.0	9	12.5	10.375	9
PowerPink	0.014	0.046	0.530	0.064	17.0	11.0	7	16.0	12.750	10
PowerSalmon_Total	0.016	0.046	0.594	0.064	20.0	11.0	8	16.0	13.750	11
RickerPDO	0.015	0.049	1.097	0.059	19.0	13.5	15	8.5	14.000	12
RickerChilkoNum	0.013	0.046	1.404	0.063	14.5	11.0	25	12.5	15.750	13
RickerSalmon_Total	-0.021	0.049	-	0.070	25.0	13.5	2	22.5	15.750	14
RickerFRDpeak	0.018	0.052	1.151	0.062	21.0	18.0	19	10.0	17.000	15
RickerEi	0.019	0.053	1.156	0.063	22.5	19.0	20	12.5	18.500	16
RickerFRDMean	0.021	0.055	1.214	0.063	25.0	20.0	21	12.5	19.625	17
RickerChilko	0.014	0.051	1.683	0.067	17.0	16.0	31	18.5	20.625	18
RickerChilkoLength	0.019	0.051	1.680	0.064	22.5	16.0	30	16.0	21.125	19
PowerChum	0.027	0.056	1.002	0.069	29.5	21.5	14	20.5	21.375	20
RickerBasic	-0.003	0.075	1.117	0.106	5.0	32.5	17	33.0	21.875	21
RickerCyc	0.027	0.051	1.234	0.069	29.5	16.0	22	20.5	22.000	22
PowerSockeye	0.030	0.056	1.099	0.067	32.5	21.5	16	18.5	22.125	23
R1C	-0.005	0.070	0.821	0.121	9.0	29.5	11	46.0	23.875	24
PowerJuvChilko	-0.007	0.066	1.401	0.109	11.0	26.0	24	35.5	24.125	25
R2C	0.002	0.074	1.545	0.115	2.5	31.0	28	40.0	25.375	26
PowerJuvChilkoNum	-0.005	0.068	1.626	0.111	9.0	27.0	29	37.5	25.625	27

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
PowerBasic	0.034	0.061	1.262	0.072	35.5	24.0	23	24.0	26.625	28
PowerBasicCycAge	0.036	0.059	1.480	0.070	37.0	23.0	26	22.5	27.125	29
PowerJuvPink	0.014	0.077	1.847	0.099	17.0	34.0	35	30.0	29.000	30
RickerSockeye	0.042	0.070	1.130	0.098	41.5	29.5	18	29.0	29.500	31
PowerChilkoLength	0.034	0.062	1.857	0.077	35.5	25.0	36	25.0	30.375	32
PowerChilko	0.042	0.069	2.012	0.086	41.5	28.0	37	26.0	33.125	33
PowerJuvSalmon_Total	0.021	0.081	2.216	0.101	25.0	36.0	41	31.0	33.250	34
RJ1	0.033	0.085	1.684	0.109	34.0	38.0	32	35.5	34.875	35
PowerJuvPi	0.027	0.084	2.385	0.102	29.5	37.0	43	32.0	35.375	36
RJ2	0.051	0.079	1.791	0.093	48.0	35.0	34	27.5	36.125	37
RAC	0.023	0.086	2.249	0.111	27.0	39.0	42	37.5	36.375	38
PowerChilkoNum	0.049	0.075	2.022	0.093	47.0	32.5	39	27.5	36.500	39
RS8yr	0.030	0.111	1.494	0.148	32.5	48.0	27	48.0	38.875	40
PowerJuvPiW	0.038	0.091	2.868	0.107	38.0	40.0	45	34.0	39.250	41
TSA	0.027	0.093	2.754	0.122	29.5	41.0	44	47.0	40.375	42
PowerJuvChilkoLength	0.040	0.096	2.871	0.113	39.0	43.0	46	39.0	41.750	43
PowerJuvChum	0.041	0.098	3.124	0.118	40.0	44.0	48	42.0	43.500	44
PowerJuvEiW	0.043	0.095	3.154	0.116	43.0	42.0	49	41.0	43.750	45
PowerJuvFRDpeak	0.045	0.101	3.027	0.119	44.0	46.5	47	44.0	45.375	46
RS2	0.056	0.143	1.776	0.218	50.0	49.5	33	50.0	45.625	47
PowerJuvEi	0.046	0.100	3.320	0.119	45.0	45.0	51	44.0	46.250	48
RS4yr	0.054	0.143	2.014	0.189	49.0	49.5	38	49.0	46.375	49
PowerJuv	0.048	0.101	3.234	0.119	46.0	46.5	50	44.0	46.625	50
RS1	0.084	0.185	2.112	0.311	51.0	52.0	40	53.0	49.000	51
MRJ	0.174	0.179	4.424	0.233	52.0	51.0	54	51.0	52.000	52
RJC	0.188	0.200	4.525	0.261	53.0	53.0	55	52.0	53.250	53
MRS	0.189	0.238	4.010	0.313	54.0	54.0	53	54.0	53.750	54
RSC	0.205	0.249	3.960	0.347	55.0	55.0	52	55.0	54.250	55

(Total)-Cycle

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerSalmon_Total	-0.056	0.059	-0.107	0.100	1.0	1.0	1	1.0	1.000	1
R1C	0.062	0.159	0.711	0.171	2.0	7.0	2	3.5	3.625	2
RickerChum	0.134	0.134	0.971	0.148	6.0	2.0	6	2.0	4.000	3
LarkinBasicCycAge	0.140	0.140	0.850	0.171	7.5	4.5	3	3.5	4.625	4
R2C	0.119	0.139	1.236	0.188	4.0	3.0	7	6.0	5.000	5
LarkinBasic	0.142	0.142	0.871	0.173	9.0	6.0	4	5.0	6.000	6
RickerPink	0.140	0.140	0.897	0.199	7.5	4.5	5	7.0	6.000	7
RS8yr	0.122	0.232	1.968	0.313	5.0	9.0	11	9.0	8.500	8

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RJ1	0.228	0.228	2.099	0.287	12.0	8.0	13	8.0	10.250	9
RS2	0.110	0.294	2.013	0.368	3.0	11.0	12	15.0	10.250	10
PowerSalmon_Total	0.281	0.281	1.804	0.332	13.0	10.0	8.5	11.0	10.625	11
PowerPink	0.295	0.295	1.804	0.348	14.0	12.0	8.5	13.0	11.875	12
RickerCyc	0.309	0.309	1.936	0.342	16.0	14.0	10	12.0	13.000	13
RJ2	0.301	0.301	2.168	0.329	15.0	13.0	15	10.0	13.250	14
PowerChum	0.316	0.316	2.310	0.357	17.0	15.0	16	14.0	15.500	15
RS4yr	0.166	0.354	2.782	0.468	10.0	16.0	20	21.0	16.750	16
RickerPi	0.377	0.377	2.339	0.428	19.0	18.0	17	16.0	17.500	17
RickerSockeye	0.376	0.376	2.558	0.443	18.0	17.0	19	17.0	17.750	18
RS1	0.175	0.430	2.520	0.486	11.0	23.0	18	23.0	18.750	19
RickerChilkoLength	0.385	0.385	2.882	0.445	20.0	19.0	22	18.0	19.750	20
RickerEiW	0.404	0.404	2.936	0.462	21.0	20.0	23	20.0	21.000	21
PowerChilkoLength	0.409	0.409	3.133	0.461	22.0	21.0	27	19.0	22.250	22
RickerPiW	0.442	0.442	2.876	0.499	25.0	25.0	21	25.5	24.125	23
RickerPDO	0.455	0.455	3.009	0.485	27.0	27.0	25	22.0	25.250	24
PowerBasicCycAge	0.437	0.437	3.272	0.487	24.0	24.0	30	24.0	25.500	25
PowerSockeye	0.458	0.458	2.976	0.514	28.0	28.0	24	27.0	26.750	26
RSC	0.415	0.415	3.487	0.537	23.0	22.0	34	30.0	27.250	27
PowerBasic	0.449	0.449	3.335	0.499	26.0	26.0	33	25.5	27.625	28
LLY	0.554	0.554	2.124	0.655	33.0	33.0	14	33.0	28.250	29
RickerFRDpeak	0.483	0.483	3.186	0.529	30.0	30.0	28	29.0	29.250	30
RickerEi	0.476	0.476	3.322	0.523	29.0	29.0	32	28.0	29.500	31
RickerFRDMean	0.490	0.490	3.311	0.545	31.0	31.0	31	31.0	31.000	32
PowerJuvPink	0.559	0.559	3.079	0.729	34.0	34.0	26	35.0	32.250	33
RickerBasic	0.513	0.513	3.626	0.573	32.0	32.0	35	32.0	32.750	34
PowerJuvSalmon_To tal	0.585	0.585	3.205	0.786	35.0	35.0	29	36.0	33.750	35
RickerChilkoNum	0.594	0.594	3.714	0.813	36.0	36.0	36	38.0	36.500	36
MRS	0.597	0.597	4.526	0.707	37.0	37.0	43	34.0	37.750	37
RickerChilko	0.655	0.655	3.839	0.843	38.0	38.0	37	39.0	38.000	38
PowerChilko	0.747	0.747	4.330	1.031	39.0	39.0	38	44.0	40.000	39
PowerJuvChilko	0.766	0.766	4.438	0.858	42.0	42.0	39	41.0	41.000	40
PowerJuvChum	0.755	0.755	4.453	0.953	41.0	41.0	40	43.0	41.250	41
RJC	0.749	0.749	5.571	0.811	40.0	40.0	51	37.0	42.000	42
PowerJuvChilkoNum	0.796	0.796	4.597	0.905	44.0	44.0	44	42.0	43.500	43
PowerChilkoNum	0.794	0.794	4.500	1.129	43.0	43.0	41	51.0	44.500	44
PowerJuvPi	0.825	0.825	4.501	1.080	46.0	46.0	42	46.0	45.000	45
MRJ	0.799	0.799	5.714	0.852	45.0	45.0	52	40.0	45.500	46
PowerJuvFRDpeak	0.858	0.858	4.888	1.052	48.0	48.0	45	45.0	46.500	47
PowerJuvChilkoLeng th	0.856	0.856	5.050	1.082	47.0	47.0	47	47.0	47.000	48

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
PowerJuvPiW	0.882	0.882	5.000	1.107	49.0	49.0	46	48.0	48.000	49
PowerJuvEi	0.912	0.912	5.344	1.127	51.0	51.0	49	50.0	50.250	50
PowerJuvEiW	0.897	0.897	5.208	1.164	50.0	50.0	48	53.0	50.250	51
PowerJuv	0.937	0.937	5.512	1.153	52.0	52.0	50	52.0	51.500	52
TSA	1.103	1.103	7.429	1.116	53.0	53.0	53	49.0	52.000	53
RAC	1.394	1.394	8.946	1.398	54.0	54.0	54	54.0	54.000	54

(Age4)-Cycle

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerChum	0.040	0.049	0.983	0.061	1.0	1.0	3	1.0	1.500	1
RickerSalmon_Total	-0.083	0.083	-0.247	0.134	7.0	2.0	1	4.0	3.500	2
RickerPink	0.076	0.094	0.922	0.140	5.0	3.0	2	5.0	3.750	3
LarkinBasic	0.097	0.097	1.424	0.118	8.0	4.0	4	2.0	4.500	4
LarkinBasicCycAge	0.099	0.099	1.440	0.122	9.0	5.0	5	3.0	5.500	5
R1C	0.082	0.176	2.297	0.195	6.0	8.5	6	7.0	6.875	6
RJ1	0.141	0.141	3.036	0.177	12.0	6.0	9	6.0	8.250	7
RS8yr	0.059	0.176	3.485	0.225	2.0	8.5	13	10.0	8.375	8
R2C	0.134	0.156	3.393	0.207	11.0	7.0	12	8.0	9.500	9
RJ2	0.204	0.204	3.066	0.223	13.5	10.5	10	9.0	10.750	10
PowerSalmon_Total	0.204	0.204	2.655	0.258	13.5	10.5	8	12.0	11.000	11
PowerPink	0.221	0.221	2.635	0.274	17.0	13.0	7	14.0	12.750	12
PowerChum	0.209	0.209	3.625	0.252	15.0	12.0	14	11.0	13.000	13
RickerCyc	0.217	0.228	3.274	0.272	16.0	14.5	11	13.0	13.625	14
RS2	0.072	0.272	4.414	0.319	3.0	19.0	20	17.0	14.750	15
RickerSockeye	0.228	0.228	3.710	0.283	18.0	14.5	16	15.0	15.875	16
RS4yr	0.074	0.274	4.646	0.327	4.0	21.0	22	20.0	16.750	17
RSC	0.233	0.233	4.694	0.318	19.0	16.0	23	16.0	18.500	18
RickerPi	0.273	0.273	4.031	0.325	22.0	20.0	18	18.5	19.625	19
RickerEiW	0.271	0.271	5.000	0.325	21.0	18.0	26	18.5	20.875	20
RickerChilkoLength	0.270	0.270	5.184	0.335	20.0	17.0	28	22.0	21.750	21
RS1	0.118	0.376	4.536	0.412	10.0	32.0	21	31.0	23.500	22
PowerChilkoLength	0.281	0.281	5.401	0.331	23.0	22.0	29	21.0	23.750	23
RickerPiW	0.327	0.327	4.855	0.388	26.0	25.0	24	26.0	25.250	24
PowerBasic	0.313	0.313	5.495	0.360	24.0	23.0	32	23.0	25.500	25
PowerBasicCycAge	0.317	0.317	5.493	0.362	25.0	24.0	31	24.0	26.000	26
RickerPDO	0.334	0.334	5.182	0.371	27.0	26.0	27	25.0	26.250	27
PowerSockeye	0.336	0.336	4.916	0.389	28.0	27.0	25	27.0	26.750	28
RickerEi	0.347	0.347	5.742	0.394	29.0	28.0	34	28.0	29.750	29
RickerFRDMean	0.351	0.351	5.474	0.409	30.0	29.0	30	30.0	29.750	30
PowerJuvPink	0.445	0.445	3.991	0.620	34.0	34.0	17	36.0	30.250	31

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerFRDpeak	0.363	0.363	5.535	0.408	31.0	30.0	33	29.0	30.750	32
PowerJuvSalmon_Tot al	0.462	0.462	4.293	0.675	35.0	35.0	19	38.0	31.750	33
LLY	0.543	0.543	3.681	0.637	38.0	38.0	15	37.0	32.000	34
RickerBasic	0.373	0.373	6.208	0.435	32.0	31.0	36	32.0	32.750	35
MRS	0.404	0.404	6.699	0.477	33.0	33.0	40	33.0	34.750	36
RJC	0.480	0.480	6.770	0.505	36.0	36.0	42	34.0	37.000	37
RickerChilkoNum	0.503	0.503	6.521	0.767	37.0	37.0	38	39.0	37.750	38
RickerChilko	0.553	0.553	6.515	0.787	39.0	39.0	37	41.0	39.000	39
PowerJuvChum	0.564	0.564	6.032	0.792	41.0	41.0	35	42.0	39.750	40
MRJ	0.560	0.560	7.594	0.586	40.0	40.0	47	35.0	40.500	41
PowerChilkoNum	0.582	0.582	6.679	0.869	43.0	43.0	39	45.0	42.500	42
PowerChilko	0.572	0.572	6.799	0.838	42.0	42.0	43	44.0	42.750	43
PowerJuvChilko	0.651	0.651	8.358	0.768	44.0	44.0	51	40.0	44.750	44
PowerJuvPi	0.652	0.652	6.751	0.925	45.0	45.0	41	48.0	44.750	45
PowerJuvChilkoLengt h	0.659	0.659	7.834	0.900	46.0	46.0	48	46.0	46.500	46
PowerJuvFRDpeak	0.680	0.680	7.225	0.902	48.0	48.0	44	47.0	46.750	47
PowerJuvChilkoNum	0.675	0.675	8.410	0.811	47.0	47.0	52	43.0	47.250	48
PowerJuvPiW	0.689	0.689	7.426	0.929	49.0	49.0	45	49.0	48.000	49
PowerJuvEiW	0.699	0.699	7.578	0.980	50.0	50.0	46	52.0	49.500	50
PowerJuvEi	0.717	0.717	7.970	0.956	51.0	51.0	50	50.0	50.500	51
PowerJuv	0.724	0.724	7.928	0.968	52.0	52.0	49	51.0	51.000	52
TSA	1.038	1.038	14.807	1.050	53.0	53.0	53	53.0	53.000	53
RAC	1.308	1.308	17.566	1.312	54.0	54.0	54	54.0	54.000	54

(Age5)-Cycle

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerPink	0.009	0.018	0.287	0.022	3.0	1.5	2	1.0	1.875	1
R2C	-0.015	0.018	-0.119	0.029	6.0	1.5	1	4.5	3.250	2
R1C	-0.020	0.020	-0.377	0.029	7.0	3.0	3	4.5	4.375	3
PowerPink	0.021	0.021	0.584	0.025	8.5	4.0	5	2.0	4.875	4
LarkinBasicCycAge	0.002	0.029	0.729	0.033	1.0	9.0	6	8.0	6.000	5
LarkinBasic	0.005	0.027	0.758	0.032	2.0	8.0	8	7.0	6.250	6
RickerChum	0.021	0.024	1.084	0.027	8.5	5.0	11	3.0	6.875	7
PowerSalmon_Total	0.026	0.026	0.744	0.031	10.5	6.5	7	6.0	7.500	8
RickerSalmon_Total	-0.026	0.026	-0.436	0.036	10.5	6.5	4	9.5	7.625	9
LLY	0.011	0.033	1.011	0.036	5.0	10.0	10	9.5	8.625	10
sibling5	0.010	0.034	0.954	0.039	4.0	11.0	9	11.0	8.750	11
RickerChilkoNum	0.031	0.040	1.347	0.043	12.0	14.0	15	13.0	13.500	12
RickerPi	0.039	0.039	1.340	0.041	16.0	13.0	14	12.0	13.750	13

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
PowerChum	0.042	0.042	1.471	0.045	17.0	15.0	18	14.5	16.125	14
PowerSockeye	0.044	0.044	1.465	0.045	18.0	16.0	17	14.5	16.375	15
RickerChilko	0.034	0.045	1.605	0.048	13.0	17.5	22	19.5	18.000	16
RickerCyc	0.037	0.038	1.930	0.046	14.0	12.0	32	16.0	18.500	17
PowerBasicCycAge	0.046	0.046	1.545	0.047	20.0	19.5	19	17.5	19.000	18
RS2	0.038	0.046	1.125	0.070	15.0	19.5	12	32.0	19.625	19
RickerFRDpeak	0.045	0.045	1.707	0.048	19.0	17.5	25	19.5	20.250	20
RickerPiW	0.047	0.047	1.670	0.047	21.5	21.5	24	17.5	21.125	21
PowerChilkoLength	0.047	0.047	1.588	0.049	21.5	21.5	21	21.0	21.250	22
PowerBasic	0.049	0.049	1.629	0.051	23.5	23.5	23	22.0	23.000	23
RickerChilkoLength	0.049	0.049	1.732	0.052	23.5	23.5	27	23.0	24.250	24
RickerEiW	0.051	0.051	1.725	0.054	25.0	25.0	26	24.0	25.000	25
PowerJuvPink	0.057	0.057	1.302	0.071	30.5	30.5	13	33.0	26.750	26
RickerEi	0.054	0.054	1.782	0.057	28.0	28.0	29	27.0	28.000	27
RickerFRDMean	0.054	0.054	1.815	0.056	28.0	28.0	31	26.0	28.250	28
RickerPDO	0.054	0.054	2.036	0.055	28.0	28.0	35	25.0	29.000	29
PowerJuvChilko	0.053	0.053	2.490	0.060	26.0	26.0	39	29.0	30.000	30
RickerBasic	0.057	0.057	1.986	0.059	30.5	30.5	34	28.0	30.750	31
PowerJuvSalmon_Tot	0.064	0.064	1.560	0.075	36.0	34.0	20	34.0	31.000	32
RickerSockeye	0.060	0.060	1.736	0.064	34.0	33.0	28	31.0	31.500	33
PowerJuvChilkoNum	0.059	0.059	2.646	0.063	33.0	32.0	40	30.0	33.750	34
RS1	0.058	0.085	1.384	0.142	32.0	39.5	16	50.0	34.375	35
PowerChilko	0.069	0.069	1.798	0.080	38.0	36.5	30	36.0	35.125	36
RS8yr	0.063	0.069	1.931	0.105	35.0	36.5	33	45.0	37.375	37
PowerChilkoNum	0.084	0.084	2.075	0.098	39.0	38.0	36	41.0	38.500	38
PowerJuvPi	0.085	0.085	2.485	0.091	40.0	39.5	38	37.0	38.625	39
TSA	0.065	0.065	3.008	0.078	37.0	35.0	48	35.0	38.750	40
PowerJuvFRDpeak	0.091	0.091	2.845	0.098	43.0	43.0	42	41.0	42.250	41
PowerJuvPiW	0.092	0.092	2.895	0.096	44.5	44.0	43	38.5	42.500	42
RAC	0.086	0.086	3.750	0.096	41.0	41.0	51	38.5	42.875	43
RJ1	0.087	0.087	2.800	0.122	42.0	42.0	41	49.0	43.500	44
PowerJuvChum	0.093	0.093	2.933	0.102	46.0	45.0	44	43.0	44.500	45
PowerJuvChilkoLength	0.094	0.094	2.937	0.098	47.0	46.0	45	41.0	44.750	46
RS4yr	0.092	0.095	2.288	0.170	44.5	47.0	37	51.0	44.875	47
PowerJuvEi	0.097	0.097	2.967	0.104	49.0	49.0	46	44.0	47.000	48
RJ2	0.096	0.096	3.048	0.116	48.0	48.0	49	48.0	48.250	49
PowerJuv	0.100	0.100	3.092	0.107	50.0	50.0	50	46.0	49.000	50
PowerJuvEiW	0.104	0.104	2.975	0.112	51.0	51.0	47	47.0	49.000	51
RSC	0.182	0.182	4.330	0.226	52.0	52.0	52	52.0	52.000	52
MRS	0.193	0.193	4.612	0.239	53.0	53.0	53	53.0	53.000	53

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
MRJ	0.239	0.239	6.634	0.305	54.0	54.0	54	54.0	54.000	54
RJC	0.269	0.269	7.430	0.342	55.0	55.0	55	55.0	55.000	55

(Total)-Other

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
LarkinBasicCycAge	0.121	0.281	0.679	0.336	5.0	1.5	3	1.0	2.625	1
LarkinBasic	0.132	0.281	0.703	0.340	6.0	1.5	4	2.0	3.375	2
R2C	0.051	0.360	0.868	0.515	2.0	3.0	6	3.0	3.500	3
RickerSalmon_Total	-0.106	0.441	0.238	0.679	4.0	4.0	1	11.0	5.000	4
RickerPink	0.001	0.497	0.709	0.689	1.0	7.0	5	14.0	6.750	5
RickerCyc	0.301	0.472	1.411	0.544	11.0	5.0	10	4.0	7.500	6
RickerPi	0.315	0.489	1.492	0.557	13.0	6.0	11	5.0	8.750	7
PowerSalmon_Total	0.284	0.577	1.403	0.702	9.0	13.0	9	15.0	11.500	8
RickerEiW	0.345	0.512	1.838	0.625	15.0	8.0	15	8.0	11.500	9
R1C	-0.054	0.597	0.587	0.751	3.0	18.0	2	24.0	11.750	10
PowerPink	0.262	0.583	1.370	0.706	8.0	15.5	8	16.0	11.875	11
RickerPiW	0.400	0.540	1.839	0.613	19.0	10.0	16	7.0	13.000	12
RickerPDO	0.427	0.524	1.904	0.589	22.0	9.0	18	6.0	13.750	13
RickerChum	0.355	0.545	1.321	0.740	16.0	11.0	7	22.0	14.000	14
RickerBasic	0.443	0.573	2.101	0.664	24.0	12.0	23	9.0	17.000	15
RickerChilkoLength	0.413	0.583	1.965	0.687	21.0	15.5	20	12.5	17.250	16
PowerChum	0.401	0.609	1.799	0.727	20.0	21.0	14	19.0	18.500	17
RickerEi	0.482	0.578	2.180	0.673	27.0	14.0	26	10.0	19.250	18
RS2	0.174	0.667	1.629	0.895	7.0	28.0	12	32.0	19.750	19
RickerChilkoNum	0.364	0.605	2.000	0.738	17.0	20.0	21	21.0	19.750	20
RickerChilko	0.432	0.598	2.135	0.717	23.0	19.0	24	18.0	21.000	21
PowerJuvPink	0.314	0.654	1.915	0.843	12.0	26.0	19	29.0	21.500	22
PowerJuvChilko	0.480	0.585	2.240	0.687	26.0	17.0	32	12.5	21.875	23
RS8yr	0.285	0.718	1.846	0.981	10.0	34.0	17	35.5	24.125	24
PowerJuvSalmon_Total	0.394	0.655	2.063	0.877	18.0	27.0	22	31.0	24.500	25
RickerFRDpeak	0.526	0.630	2.195	0.712	31.0	22.0	28	17.0	24.500	26
RickerFRDMean	0.538	0.637	2.278	0.734	33.0	24.0	34	20.0	27.750	27
PowerSockeye	0.519	0.697	2.167	0.838	30.0	31.0	25	26.0	28.000	28
PowerChilkoLength	0.467	0.707	2.181	0.842	25.0	33.0	27	28.0	28.250	29
PowerJuvChilkoNum	0.568	0.636	2.424	0.750	36.0	23.0	37	23.0	29.750	30
PowerBasicCycAge	0.527	0.677	2.334	0.824	32.0	29.0	35	25.0	30.250	31
PowerBasic	0.542	0.688	2.372	0.840	34.0	30.0	36	27.0	31.750	32
RJ1	0.583	0.653	2.220	1.025	37.0	25.0	29	37.0	32.000	33
PowerChilko	0.514	0.734	2.456	0.921	29.0	35.0	38	33.0	33.750	34

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RJ2	0.679	0.704	2.233	0.958	40.0	32.0	30	34.0	34.000	35
RS1	0.336	0.909	2.271	1.377	14.0	48.0	33	49.0	36.000	36
PowerChilkoNum	0.566	0.763	2.562	0.981	35.0	36.0	39	35.5	36.375	37
LLY	0.649	1.083	1.654	1.329	38.0	50.0	13	48.0	37.250	38
RickerSockeye	0.667	0.820	2.234	1.129	39.0	41.0	31	44.0	38.750	39
TSA	0.683	0.782	3.511	0.873	41.0	37.0	49	30.0	39.250	40
PowerJuvChum	0.700	0.785	2.982	1.064	43.0	38.0	42	40.0	40.750	41
PowerJuvPi	0.707	0.800	2.766	1.038	44.0	40.0	41	39.0	41.000	42
RS4yr	0.505	1.050	2.759	1.447	28.0	49.0	40	50.0	41.750	43
PowerJuvChilkoLength	0.739	0.799	3.133	1.072	45.0	39.0	44	41.0	42.250	44
PowerJuvPiW	0.787	0.852	3.112	1.089	47.0	43.0	43	42.0	43.750	45
PowerJuvFRDpeak	0.783	0.848	3.158	1.100	46.0	42.0	45	43.0	44.000	46
RAC	0.691	0.905	3.967	1.031	42.0	47.0	50	38.0	44.250	47
PowerJuvEiW	0.821	0.868	3.261	1.155	48.0	44.0	46	46.0	46.000	48
PowerJuvEi	0.831	0.876	3.363	1.143	49.0	45.0	47	45.0	46.500	49
PowerJuv	0.842	0.888	3.463	1.167	50.0	46.0	48	47.0	47.750	50
MRS	1.646	1.714	4.923	2.554	51.0	52.0	52	52.0	51.750	51
RSC	1.660	1.701	4.670	2.660	52.0	51.0	51	54.0	52.000	52
MRJ	1.941	1.941	5.906	2.547	54.0	54.0	53	51.0	53.000	53
RJC	1.895	1.895	6.072	2.652	53.0	53.0	54	53.0	53.250	54

(Age4)-Other

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
LarkinBasicCycAge	0.067	0.252	0.940	0.316	2.0	2.0	3	2.0	2.250	1
LarkinBasic	0.079	0.245	0.946	0.315	4.0	1.0	4	1.0	2.500	2
R2C	0.068	0.342	1.833	0.487	3.0	3.0	9	4.0	4.750	3
RickerCyc	0.171	0.383	1.932	0.454	8.0	4.0	10	3.0	6.250	4
RickerPink	-0.081	0.443	0.760	0.650	5.0	6.0	2	17.0	7.500	5
RickerPi	0.246	0.437	2.316	0.519	14.0	5.0	11	5.0	8.750	6
RickerSalmon_Total	-0.172	0.452	0.183	0.665	9.0	10.0	1	19.0	9.750	7
PowerPink	0.158	0.514	1.745	0.627	7.0	16.0	7	12.0	10.500	8
PowerSalmon_Total	0.180	0.504	1.801	0.623	10.0	15.0	8	11.0	11.000	9
RickerChum	0.250	0.449	1.485	0.678	15.0	8.0	6	20.0	12.250	10
R1C	-0.027	0.552	1.293	0.682	1.0	23.0	5	21.5	12.625	11
RickerEiW	0.261	0.450	2.890	0.579	17.0	9.0	21	8.0	13.750	12
RickerPiW	0.311	0.473	2.779	0.554	21.0	11.0	18	7.0	14.250	13
PowerChum	0.286	0.500	2.427	0.628	19.0	14.0	12	13.0	14.500	14
RickerPDO	0.339	0.445	2.932	0.528	24.0	7.0	23	6.0	15.000	15
RS2	0.092	0.530	2.504	0.715	6.0	18.0	14	25.0	15.750	16

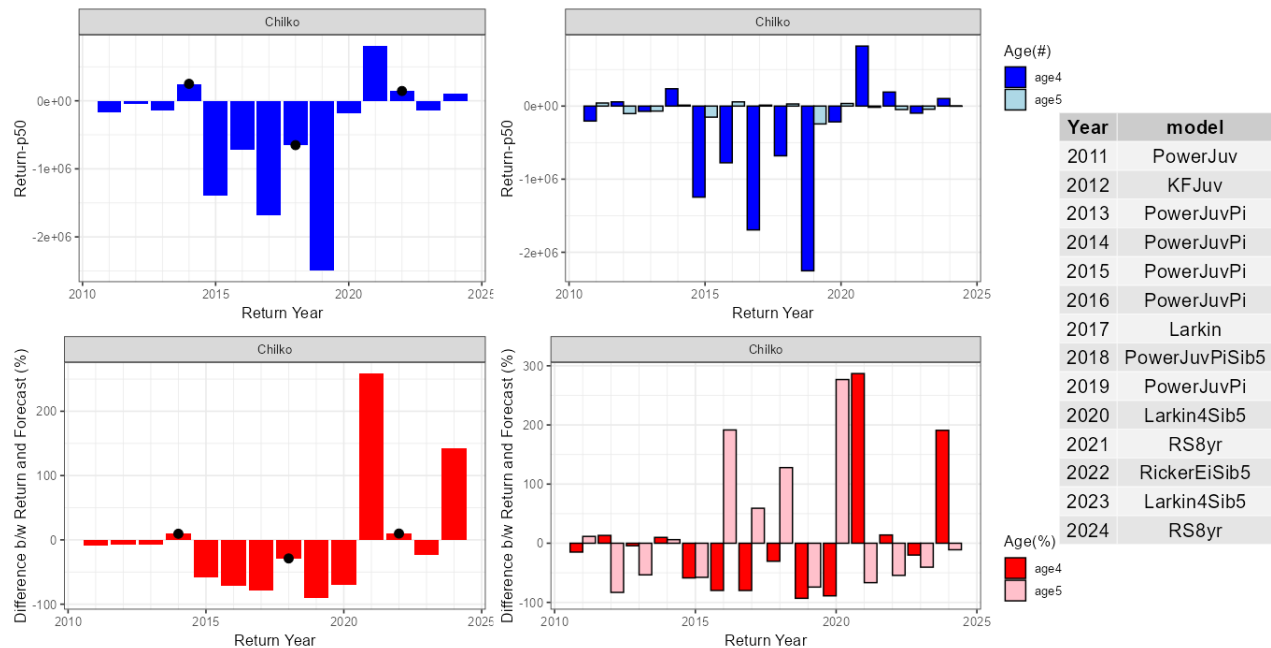
model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerChilkoLength	0.310	0.528	3.033	0.637	20.0	17.0	24	15.5	19.125	17
RickerBasic	0.376	0.474	3.227	0.590	27.0	12.0	29	9.0	19.250	18
RickerEi	0.388	0.491	3.349	0.610	28.0	13.0	32.5	10.0	20.875	19
PowerJuvPink	0.208	0.606	2.492	0.779	11.0	31.5	13	31.0	21.625	20
RickerChilkoNum	0.260	0.537	3.161	0.692	16.0	20.0	27	24.0	21.750	21
RickerChilko	0.330	0.543	3.315	0.682	22.0	21.0	30	21.5	23.625	22
PowerJuvSalmon_Tot al	0.271	0.594	2.707	0.804	18.0	29.5	17	33.0	24.375	23
RS8yr	0.241	0.611	2.696	0.889	13.0	33.5	16	36.0	24.625	24
RickerFRDMean	0.435	0.535	3.349	0.656	33.0	19.0	32.5	18.0	25.625	25
RickerFRDpeak	0.437	0.544	3.324	0.637	34.5	22.0	31	15.5	25.750	26
PowerJuvChilko	0.416	0.553	3.899	0.632	32.0	24.0	39	14.0	27.250	27
PowerSockeye	0.397	0.594	3.067	0.741	30.0	29.5	25	28.0	28.125	28
PowerBasicCycAge	0.393	0.578	3.353	0.722	29.0	26.0	34	26.0	28.750	29
PowerChilkoLength	0.333	0.617	3.204	0.754	23.0	36.0	28	29.0	29.000	30
PowerBasic	0.406	0.575	3.380	0.729	31.0	25.0	35	27.0	29.500	31
RJ1	0.516	0.582	2.909	0.940	38.0	27.0	22	39.0	31.500	32
PowerChilko	0.343	0.612	3.489	0.777	25.0	35.0	37	30.0	31.750	33
RJ2	0.575	0.606	2.843	0.861	42.0	31.5	19	35.0	31.875	34
PowerChilkoNum	0.366	0.611	3.487	0.786	26.0	33.5	36	32.0	31.875	35
PowerJuvChilkoNum	0.497	0.592	4.059	0.687	36.0	28.0	42	23.0	32.250	36
RS1	0.222	0.785	3.123	1.105	12.0	47.0	26	48.0	33.250	37
RickerSockeye	0.498	0.668	2.847	0.953	37.0	37.0	20	41.0	33.750	38
PowerJuvChum	0.529	0.680	3.896	0.943	39.0	38.0	38	40.0	38.750	39
PowerJuvPi	0.558	0.698	3.903	0.922	40.0	40.0	40	37.0	39.250	40
LLY	0.634	1.070	2.538	1.327	45.0	50.0	15	50.0	40.000	41
PowerJuvChilkoLengt h	0.573	0.695	4.476	0.931	41.0	39.0	45	38.0	40.750	42
PowerJuvFRDpeak	0.602	0.733	4.295	0.959	43.0	42.0	43	42.0	42.500	43
TSA	0.643	0.728	6.398	0.821	46.0	41.0	51	34.0	43.000	44
RS4yr	0.437	0.911	3.911	1.314	34.5	49.0	41	49.0	43.375	45
PowerJuvPiW	0.620	0.745	4.365	0.964	44.0	43.0	44	43.0	43.500	46
PowerJuvEi	0.648	0.768	4.701	1.014	47.0	45.0	47	45.0	46.000	47
PowerJuv	0.653	0.763	4.714	1.023	49.0	44.0	48	46.0	46.750	48
PowerJuvEiW	0.652	0.772	4.531	1.031	48.0	46.0	46	47.0	46.750	49
RAC	0.659	0.893	7.338	0.986	50.0	48.0	54	44.0	49.000	50
MRS	1.433	1.508	6.268	2.316	51.0	52.0	50	52.0	51.250	51
RSC	1.434	1.476	5.583	2.417	52.0	51.0	49	54.0	51.500	52
RJC	1.598	1.598	7.274	2.334	53.0	53.0	52	53.0	52.750	53
MRJ	1.658	1.658	7.277	2.266	54.0	54.0	53	51.0	53.000	54

(Age5)-Other

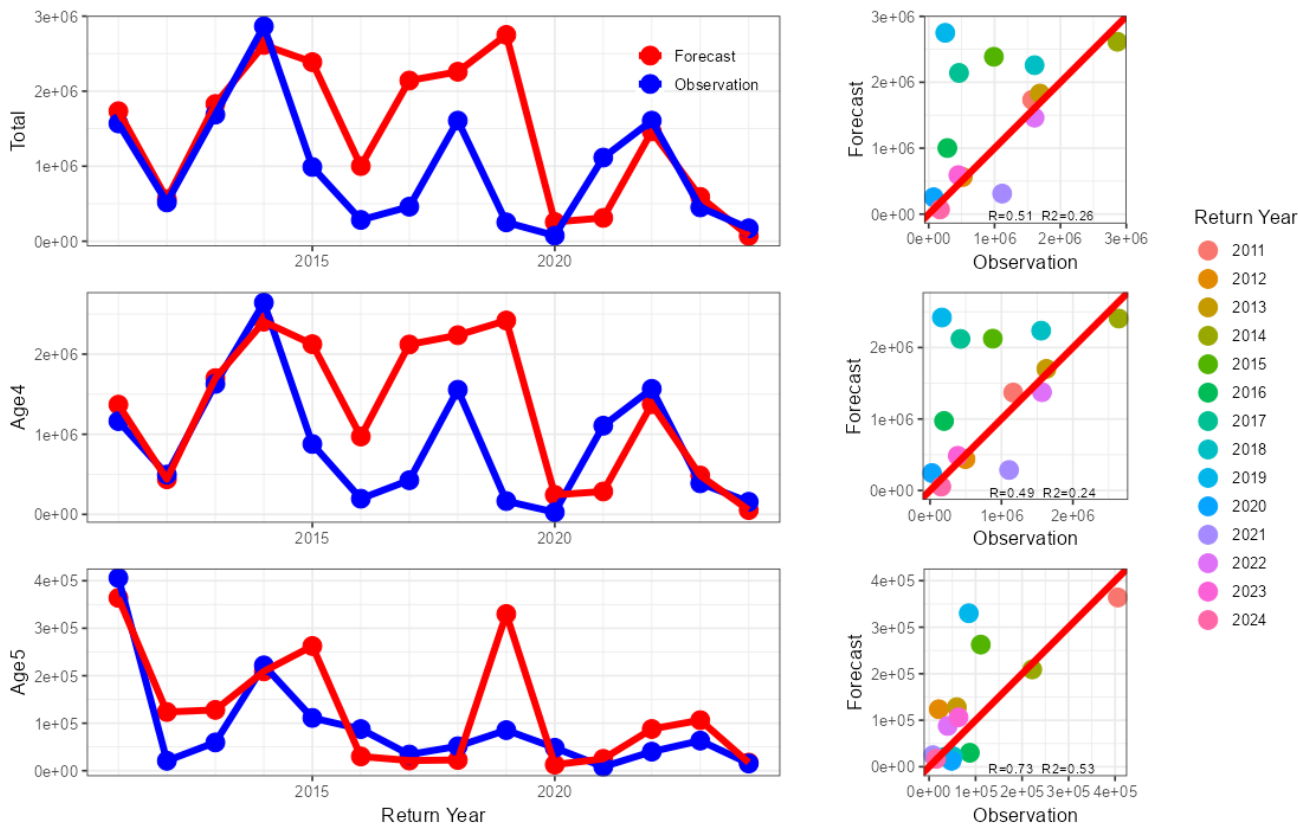
model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerPink	-0.001	0.020	0.052	0.027	1.5	1.0	1	1.0	1.125	1
LarkinBasicCycAge	0.007	0.026	0.534	0.036	5.0	2.0	5	3.0	3.750	2
LarkinBasic	0.009	0.027	0.468	0.038	7.0	3.0	4	4.0	4.500	3
RickerSalmon_Total	-0.014	0.033	-0.217	0.045	8.5	6.0	2	11.0	6.875	4
RickerPi	0.015	0.032	0.889	0.035	10.0	5.0	11	2.0	7.000	5
sibling5	0.008	0.037	0.399	0.044	6.0	10.5	3	9.5	7.250	6
PowerPink	0.029	0.034	0.623	0.041	19.0	7.0	7	6.0	9.750	7
RickerEiW	0.019	0.036	1.117	0.041	12.0	9.0	12	6.0	9.750	8
RickerChum	0.023	0.031	0.760	0.046	13.5	4.0	10	12.0	9.875	9
RickerPiW	0.023	0.037	1.168	0.041	13.5	10.5	14	6.0	11.000	10
PowerSalmon_Total	0.031	0.035	0.696	0.042	22.0	8.0	9	8.0	11.750	11
LLY	0.014	0.043	0.605	0.055	8.5	13.5	6	21.5	12.375	12
RickerFRDpeak	0.024	0.039	1.250	0.044	15.0	12.0	17	9.5	13.375	13
RickerPDO	0.026	0.043	1.323	0.047	16.0	13.5	19	13.0	15.375	14
RickerFRDMean	0.029	0.044	1.353	0.048	19.0	16.5	21	14.0	17.625	15
RickerEi	0.029	0.044	1.339	0.050	19.0	16.5	20	16.0	17.875	16
PowerSockeye	0.041	0.044	1.222	0.049	31.0	16.5	16	15.0	19.625	17
PowerChum	0.040	0.045	1.130	0.052	29.5	19.5	13	17.5	19.875	18
RickerBasic	-0.002	0.070	1.210	0.107	3.5	30.5	15	33.5	20.625	19
PowerJuvChilko	0.001	0.068	1.701	0.115	1.5	28.0	25	36.5	22.750	20
RickerChilkoLength	0.034	0.044	2.120	0.052	26.0	16.5	32	17.5	23.000	21
RickerChilkoNum	0.031	0.045	1.880	0.055	22.0	19.5	29	21.5	23.000	22
R2C	-0.017	0.066	1.480	0.115	11.0	27.0	23	36.5	24.375	23
PowerBasic	0.046	0.050	1.418	0.054	34.0	23.5	22	19.5	24.750	24
R1C	-0.027	0.069	0.687	0.129	17.0	29.0	8	46.0	25.000	25
PowerJuvChilkoNum	0.002	0.070	1.965	0.117	3.5	30.5	31	38.0	25.750	26
RickerCyc	0.047	0.047	1.580	0.061	35.0	21.0	24	24.0	26.000	27
PowerBasicCycAge	0.049	0.049	1.725	0.054	36.5	22.0	27	19.5	26.250	28
RickerChilko	0.032	0.050	2.235	0.059	24.0	23.5	35	23.0	26.375	29
RickerSockeye	0.059	0.063	1.298	0.096	39.5	26.0	18	29.0	28.125	30
RJ1	0.038	0.075	1.727	0.103	27.0	34.0	28	32.0	30.250	31
PowerChilkoLength	0.049	0.053	2.267	0.064	36.5	25.0	36	25.0	30.625	32
PowerJuvPink	0.031	0.077	2.275	0.098	22.0	35.0	37	30.0	31.000	33
RJ2	0.063	0.073	1.951	0.090	43.0	32.0	30	27.0	33.000	34
PowerJuvSalmon_Tot al	0.039	0.083	2.728	0.101	28.0	37.0	42	31.0	34.500	35
RAC	0.033	0.089	2.727	0.118	25.0	38.5	41	39.0	35.875	36
PowerChilko	0.070	0.074	2.680	0.085	48.0	33.0	39.5	26.0	36.625	37
PowerJuvPi	0.043	0.089	2.899	0.107	32.0	38.5	43	33.5	36.750	38
PowerChilkoNum	0.077	0.081	2.680	0.095	49.0	36.0	39.5	28.0	38.125	39
RS8yr	0.045	0.111	1.724	0.154	33.0	47.5	26	48.0	38.625	40

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
PowerJuvPiW	0.054	0.098	3.464	0.113	38.0	40.0	45	35.0	39.500	41
TSA	0.040	0.100	3.411	0.130	29.5	41.0	44	47.0	40.375	42
PowerJuvChilkoLength	0.059	0.105	3.496	0.119	39.5	43.0	46	40.0	42.125	43
PowerJuvEiW	0.061	0.104	3.823	0.123	42.0	42.0	49	41.0	43.500	44
PowerJuvChum	0.060	0.107	3.809	0.125	41.0	44.0	48	42.0	43.750	45
RS4yr	0.068	0.143	2.214	0.199	47.0	49.0	34	49.0	44.750	46
PowerJuvFRDpeak	0.064	0.110	3.665	0.126	44.5	46.0	47	43.5	45.250	47
RS2	0.082	0.156	2.163	0.238	50.0	50.0	33	50.0	45.750	48
PowerJuvEi	0.064	0.109	4.016	0.126	44.5	45.0	51	43.5	46.000	49
PowerJuv	0.066	0.111	3.902	0.127	46.0	47.5	50	45.0	47.125	50
RS1	0.114	0.203	2.474	0.344	51.0	52.0	38	54.0	48.750	51
MRJ	0.187	0.187	4.709	0.243	52.0	51.0	54	51.0	52.000	52
MRS	0.213	0.251	4.351	0.334	53.0	54.0	53	53.0	53.250	53
RJC	0.215	0.215	5.020	0.280	54.0	53.0	55	52.0	53.500	54
RSC	0.226	0.261	4.151	0.370	55.0	55.0	52	55.0	54.250	55

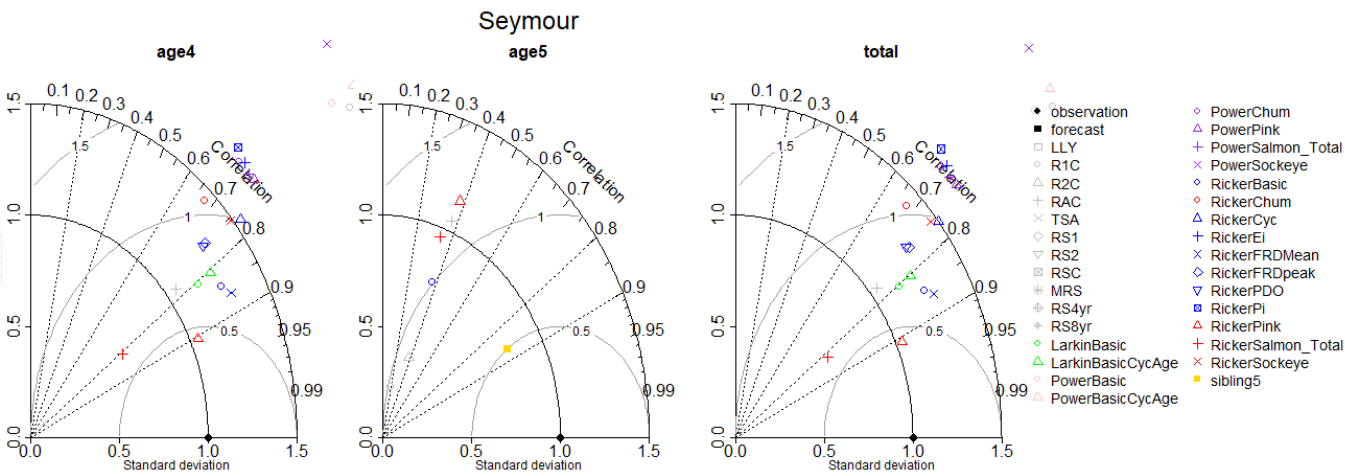
Diff



FC-TS



Seymour Retrospective: Taylor



Ranking (Total)-Allrys

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerPink	-0.002	0.030	0.821	0.055	1.0	1.0	2	1.0	1.250	1
RickerSalmon_Total	-0.019	0.040	0.629	0.079	4.0	4.0	1	2.0	2.750	2
LarkinBasic	0.026	0.035	2.265	0.091	5.0	2.0	11	3.0	5.250	3
RickerEiW	0.014	0.057	2.236	0.103	2.0	6.0	9	7.0	6.000	4
RickerPiW	0.017	0.063	1.883	0.112	3.0	8.0	5	9.0	6.250	5
LarkinBasicCycAge	0.032	0.036	2.284	0.098	6.5	3.0	12	6.0	6.875	6
RickerSockeye	0.035	0.071	1.930	0.129	8.0	11.0	6	12.0	9.250	7
RickerBasic	0.047	0.055	4.064	0.094	14.5	5.0	19	4.0	10.625	8
RickerPDO	0.037	0.068	3.016	0.115	9.0	10.0	16	10.0	11.250	9
RickerPi	0.032	0.080	1.457	0.168	6.5	16.0	3	20.5	11.500	10
RickerFRDMean	0.048	0.059	4.283	0.096	16.5	7.0	20	5.0	12.125	11
RickerChum	0.039	0.077	2.412	0.138	10.0	14.0	13	14.0	12.750	12
PowerSalmon_Total	0.042	0.081	1.982	0.156	11.0	17.0	7	17.0	13.000	13
PowerPink	0.044	0.079	2.264	0.154	12.0	15.0	10	16.0	13.250	14
RickerCyc	0.054	0.064	3.536	0.135	18.0	9.0	18	13.0	14.500	15
RickerFRDpeak	0.048	0.073	4.495	0.119	16.5	12.0	21	11.0	15.125	16
RickerEi	0.046	0.085	2.925	0.163	13.0	18.0	15	19.0	16.250	17
PowerChum	0.047	0.086	2.443	0.162	14.5	19.0	14	18.0	16.375	18
R1C	0.073	0.093	1.816	0.218	21.5	21.0	4	22.0	17.125	19
RAC	0.068	0.076	12.460	0.109	19.0	13.0	29	8.0	17.250	20
PowerSockeye	0.070	0.108	2.127	0.246	20.0	23.0	8	25.0	19.000	21
R2C	0.084	0.088	3.381	0.168	24.0	20.0	17	20.5	20.375	22
PowerBasic	0.085	0.104	4.581	0.222	25.0	22.0	22	23.0	23.000	23
TSA	0.073	0.135	38.287	0.141	21.5	25.0	32	15.0	23.375	24
PowerBasicCycAge	0.095	0.112	4.961	0.241	26.0	24.0	23	24.0	24.250	25
LLY	0.076	0.186	16.716	0.331	23.0	26.0	31	26.0	26.500	26
RS8yr	0.188	0.191	6.907	0.471	27.0	27.0	26	27.0	26.750	27
RS4yr	0.208	0.211	6.676	0.549	28.0	28.0	24	28.0	27.000	28
RS1	0.251	0.255	6.840	0.644	29.0	29.0	25	29.0	28.000	29
RS2	0.335	0.340	7.963	0.853	30.0	30.0	27	30.0	29.250	30
MRS	0.362	0.364	12.026	0.888	31.0	31.0	28	31.0	30.250	31
RSC	0.475	0.477	13.655	1.163	32.0	32.0	30	32.0	31.500	32

(Age4)-Allyrs

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerPink	-0.004	0.030	1.022	0.057	1.0	1.0	2	1.0	1.250	1
RickerSalmon_Total	-0.021	0.040	0.798	0.079	4.0	4.0	1	2.0	2.750	2
LarkinBasic	0.022	0.033	2.564	0.090	5.0	2.0	10	3.0	5.000	3
RickerPiW	0.013	0.060	1.848	0.110	3.0	9.0	4	9.0	6.250	4
RickerEiW	0.009	0.053	2.664	0.101	2.0	6.5	13	7.0	7.125	5

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
LarkinBasicCycAge	0.028	0.034	2.686	0.097	7.5	3.0	14	6.0	7.625	6
RickerSockeye	0.028	0.066	1.851	0.126	7.5	11.0	5	12.0	8.875	7
RickerPi	0.026	0.076	1.259	0.167	6.0	15.0	3	20.0	11.000	8
RickerBasic	0.040	0.050	4.285	0.092	15.5	5.0	20	4.5	11.250	9
RickerFRDMean	0.039	0.053	4.368	0.092	13.0	6.5	21	4.5	11.250	10
RickerPDO	0.030	0.063	2.999	0.112	9.0	10.0	18	10.0	11.750	11
RickerChum	0.032	0.073	2.597	0.138	10.0	14.0	12	15.0	12.750	12
PowerSalmon_Total	0.037	0.078	2.005	0.156	11.0	17.0	7	17.0	13.000	13
PowerPink	0.039	0.077	2.226	0.154	13.0	16.0	8	16.0	13.250	14
RickerCyc	0.047	0.057	2.877	0.134	18.0	8.0	16	14.0	14.000	15
PowerChum	0.041	0.082	2.576	0.162	17.0	19.0	11	18.5	16.375	16
RickerFRDpeak	0.040	0.067	4.949	0.117	15.5	12.0	27	11.0	16.375	17
RickerEi	0.039	0.080	3.550	0.162	13.0	18.0	19	18.5	17.125	18
RAC	0.063	0.072	18.945	0.106	21.0	13.0	30	8.0	18.000	19
PowerSockeye	0.062	0.103	1.948	0.245	20.0	24.0	6	25.0	18.750	20
R1C	0.074	0.091	2.787	0.218	23.0	21.0	15	22.0	20.250	21
TSA	0.061	0.122	42.344	0.129	19.0	25.0	32	13.0	22.250	22
R2C	0.084	0.089	4.723	0.169	25.5	20.0	24	21.0	22.625	23
PowerBasic	0.076	0.098	4.832	0.222	24.0	22.0	26	23.0	23.750	24
RS1	0.218	0.226	2.232	0.640	29.0	29.0	9	29.0	24.000	25
PowerBasicCycAge	0.084	0.102	4.806	0.239	25.5	23.0	25	24.0	24.375	26
RS8yr	0.165	0.169	4.451	0.468	27.0	26.0	22	27.0	25.500	27
LLY	0.065	0.174	36.797	0.309	22.0	27.0	31	26.0	26.500	28
RS2	0.296	0.302	2.922	0.848	30.0	30.0	17	30.0	26.750	29
RS4yr	0.183	0.187	4.596	0.546	28.0	28.0	23	28.0	26.750	30
MRS	0.320	0.322	8.120	0.882	31.0	31.0	28	31.0	30.250	31
RSC	0.420	0.423	8.378	1.155	32.0	32.0	29	32.0	31.250	32

(Age5)-Alllys

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerPink	0.000	0.001	-0.199	0.002	2.5	1.5	1	1.5	1.625	1
RickerSalmon_Total	0.000	0.001	-0.253	0.002	2.5	1.5	2	1.5	1.875	2
RickerEiW	0.001	0.002	1.368	0.004	6.5	4.0	7	4.5	5.500	3
RickerPiW	0.001	0.002	1.395	0.004	6.5	4.0	8	4.5	5.750	4
sibling5	0.000	0.002	1.957	0.003	2.5	4.0	17	3.0	6.625	5
LarkinBasic	0.002	0.003	1.046	0.005	13.0	11.5	5	7.5	9.250	6
LarkinBasicCycAge	0.002	0.003	1.574	0.005	13.0	11.5	10	7.5	10.500	7
PowerPink	0.002	0.003	0.895	0.006	13.0	11.5	3	14.5	10.500	8
PowerSalmon_Total	0.002	0.003	0.908	0.006	13.0	11.5	4	14.5	10.750	9
PowerChum	0.002	0.003	1.287	0.006	13.0	11.5	6	14.5	11.250	10

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerPDO	0.002	0.003	1.915	0.005	13.0	11.5	16	7.5	12.000	11
RickerEi	0.002	0.003	1.615	0.006	13.0	11.5	11	14.5	12.500	12
RickerFRDpeak	0.002	0.003	2.125	0.005	13.0	11.5	18	7.5	12.500	13
RickerPi	0.002	0.003	1.674	0.006	13.0	11.5	12	14.5	12.750	14
R2C	0.000	0.003	6.335	0.006	2.5	11.5	24	14.5	13.125	15
R1C	-0.001	0.003	3.859	0.006	6.5	11.5	21	14.5	13.375	16
RickerBasic	0.001	0.004	1.884	0.006	6.5	20.0	15	14.5	14.000	17
RickerFRDMean	0.003	0.003	2.144	0.006	20.0	11.5	19	14.5	16.250	18
RickerChum	0.003	0.004	1.460	0.008	20.0	20.0	9	21.0	17.500	19
PowerSockeye	0.003	0.004	1.707	0.009	20.0	20.0	13	23.0	19.000	20
RickerCyc	0.003	0.004	3.922	0.006	20.0	20.0	22	14.5	19.125	21
PowerBasic	0.003	0.004	2.233	0.008	20.0	20.0	20	21.0	20.250	22
RickerSockeye	0.004	0.005	1.857	0.012	23.5	23.0	14	24.0	21.125	23
RAC	0.004	0.006	12.074	0.008	23.5	24.0	26	21.0	23.625	24
PowerBasicCycAge	0.006	0.007	4.813	0.019	25.0	25.0	23	26.0	24.750	25
LLY	0.012	0.013	8.544	0.025	27.0	26.0	25	27.0	26.250	26
TSA	0.011	0.014	51.121	0.016	26.0	27.0	33	25.0	27.750	27
RS8yr	0.025	0.026	16.578	0.057	28.0	28.0	29	28.0	28.250	28
RS4yr	0.027	0.028	16.208	0.065	29.0	29.0	27	29.0	28.500	29
RS1	0.035	0.036	16.402	0.080	30.0	30.0	28	30.0	29.500	30
RS2	0.042	0.044	22.324	0.097	31.0	31.0	30	31.0	30.750	31
MRS	0.045	0.046	29.180	0.100	32.0	32.0	31	32.0	31.750	32
RSC	0.058	0.059	35.664	0.129	33.0	33.0	32	33.0	32.750	33

(Total)-Cycle

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerPink	0.000	0.001	0.027	0.001	1.5	3.5	1	2.5	2.125	1
RickerSalmon_Total	0.000	0.001	0.086	0.001	1.5	3.5	2	2.5	2.375	2
RickerSockeye	0.001	0.001	0.700	0.001	4.5	3.5	3	2.5	3.375	3
RickerChum	0.001	0.001	0.898	0.001	4.5	3.5	5	2.5	3.875	4
LarkinBasic	0.001	0.001	0.977	0.002	4.5	3.5	6	8.0	5.500	5
PowerSockeye	0.001	0.001	1.114	0.002	4.5	3.5	7	8.0	5.750	6
RickerPi	0.002	0.002	1.236	0.002	10.0	10.0	8	8.0	9.000	7
LarkinBasicCycAge	0.002	0.002	1.422	0.002	10.0	10.0	9	8.0	9.250	8
PowerSalmon_Total	0.002	0.002	1.493	0.002	10.0	10.0	10	8.0	9.500	9
PowerChum	0.002	0.002	1.575	0.002	10.0	10.0	11	8.0	9.750	10
R1C	0.002	0.002	0.881	0.003	10.0	10.0	4	15.5	9.875	11
RickerEiW	0.002	0.002	1.901	0.002	10.0	10.0	13	8.0	10.250	12
PowerPink	0.002	0.002	1.887	0.003	10.0	10.0	12	15.5	11.875	13
RickerPiW	0.003	0.003	2.058	0.003	16.5	16.5	14	15.5	15.625	14

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerEi	0.003	0.003	2.239	0.003	16.5	16.5	15	15.5	15.875	15
RickerFRDMean	0.003	0.003	2.263	0.003	16.5	16.5	16	15.5	16.125	16
RickerPDO	0.003	0.003	2.294	0.003	16.5	16.5	17	15.5	16.375	17
RickerFRDpeak	0.003	0.003	2.321	0.003	16.5	16.5	18	15.5	16.625	18
RickerBasic	0.003	0.003	2.384	0.003	16.5	16.5	19	15.5	16.875	19
RickerCyc	0.004	0.004	2.896	0.004	20.5	20.5	21	20.5	20.625	20
PowerBasic	0.004	0.004	3.178	0.004	20.5	20.5	22	20.5	20.875	21
RS1	0.005	0.005	2.467	0.007	23.0	23.0	20	24.5	22.625	22
PowerBasicCycAge	0.005	0.005	4.362	0.006	23.0	23.0	23	22.0	22.750	23
RS2	0.005	0.005	4.441	0.007	23.0	23.0	24	24.5	23.625	24
RS4yr	0.006	0.006	4.751	0.007	25.5	25.5	25	24.5	25.125	25
RS8yr	0.006	0.006	5.145	0.007	25.5	25.5	26	24.5	25.375	26
MRS	0.012	0.012	9.855	0.014	27.5	27.5	28	27.0	27.500	27
R2C	0.012	0.012	5.812	0.022	27.5	27.5	27	29.0	27.750	28
RSC	0.013	0.013	10.582	0.015	29.0	29.0	29	28.0	28.750	29
LLY	0.018	0.018	12.503	0.023	30.0	30.0	30	30.0	30.000	30
RAC	0.030	0.030	22.902	0.030	31.0	31.0	31	31.0	31.000	31
TSA	0.136	0.136	106.337	0.136	32.0	32.0	32	32.0	32.000	32

(Age4)-Cycle

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RS4yr	0.000	0.000	0.322	0.000	6.5	2.0	9.5	1.0	4.750	1
PowerSockeye	0.000	0.000	0.002	0.001	6.5	2.0	1	12.0	5.375	2
RickerPi	0.000	0.000	0.114	0.001	6.5	2.0	2	12.0	5.625	3
RickerChum	0.000	0.001	0.126	0.001	6.5	15.5	3	12.0	9.250	4
RickerSalmon_Total	0.000	0.001	-0.215	0.001	6.5	15.5	4	12.0	9.500	5
RS1	0.000	0.001	0.255	0.001	6.5	15.5	5	12.0	9.750	6
RS2	0.000	0.001	0.284	0.001	6.5	15.5	6	12.0	10.000	7
RickerSockeye	0.000	0.001	-0.292	0.001	6.5	15.5	8	12.0	10.500	8
LarkinBasicCycAge	0.000	0.001	0.322	0.001	6.5	15.5	9.5	12.0	10.875	9
LarkinBasic	0.000	0.001	0.360	0.001	6.5	15.5	11	12.0	11.250	10
RS8yr	0.000	0.001	0.429	0.001	6.5	15.5	12	12.0	11.500	11
RickerEiW	0.000	0.001	0.546	0.001	6.5	15.5	13	12.0	11.750	12
RickerPink	-0.001	0.001	-0.288	0.001	20.0	15.5	7	12.0	13.625	13
PowerChum	0.001	0.001	0.635	0.001	20.0	15.5	14	12.0	15.375	14
RickerCyc	0.001	0.001	0.684	0.001	20.0	15.5	15	12.0	15.625	15
RickerFRDMean	0.001	0.001	0.723	0.001	20.0	15.5	16	12.0	15.875	16
RickerFRDpeak	0.001	0.001	0.790	0.001	20.0	15.5	18	12.0	16.375	17
RSC	0.001	0.001	0.821	0.001	20.0	15.5	19	12.0	16.625	18
RickerBasic	0.001	0.001	0.849	0.001	20.0	15.5	20	12.0	16.875	19

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerPiW	0.001	0.001	0.855	0.001	20.0	15.5	21	12.0	17.125	20
PowerSalmon_Total	0.001	0.001	0.861	0.001	20.0	15.5	22	12.0	17.375	21
RickerPDO	0.001	0.001	0.896	0.001	20.0	15.5	23	12.0	17.625	22
R1C	0.001	0.001	0.726	0.002	20.0	15.5	17	25.5	19.500	23
RickerEi	0.001	0.001	0.931	0.002	20.0	15.5	24	25.5	21.250	24
PowerPink	0.001	0.001	1.235	0.002	20.0	15.5	25	25.5	21.500	25
MRS	0.001	0.001	1.396	0.002	20.0	15.5	26	25.5	21.750	26
PowerBasicCycAge	0.001	0.001	1.427	0.002	20.0	15.5	27	25.5	22.000	27
PowerBasic	0.002	0.002	1.505	0.002	28.0	28.0	28	25.5	27.375	28
R2C	0.010	0.010	5.123	0.018	29.0	29.0	29	29.5	29.125	29
LLY	0.015	0.015	11.631	0.018	30.0	30.0	30	29.5	29.875	30
RAC	0.024	0.024	20.940	0.024	31.0	31.0	31	31.0	31.000	31
TSA	0.110	0.110	97.587	0.110	32.0	32.0	32	32.0	32.000	32

(Age5)-Cycle

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerSalmon_Total	0.000	0.000	-0.054	0.000	4.0	4.0	1	3.5	3.125	1
RickerPink	0.000	0.000	-0.148	0.000	4.0	4.0	2	3.5	3.375	2
LarkinBasic	0.000	0.000	0.743	0.000	4.0	4.0	3	3.5	3.625	3
PowerPink	0.000	0.000	1.381	0.000	4.0	4.0	4	3.5	3.875	4
PowerSalmon_Total	0.000	0.000	1.657	0.000	4.0	4.0	5	3.5	4.125	5
RickerChum	0.000	0.000	2.086	0.000	4.0	4.0	6	3.5	4.375	6
PowerChum	0.000	0.000	2.647	0.001	4.0	4.0	7	14.0	7.250	7
R1C	0.001	0.001	2.722	0.001	14.5	14.5	8	14.0	12.750	8
LarkinBasicCycAge	0.001	0.001	3.402	0.001	14.5	14.5	9	14.0	13.000	9
RickerSockeye	0.001	0.001	4.060	0.001	14.5	14.5	10	14.0	13.250	10
RickerPiW	0.001	0.001	4.329	0.001	14.5	14.5	11	14.0	13.500	11
PowerSockeye	0.001	0.001	4.367	0.001	14.5	14.5	12	14.0	13.750	12
RickerEi	0.001	0.001	4.409	0.001	14.5	14.5	13	14.0	14.000	13
RickerEiW	0.001	0.001	4.881	0.001	14.5	14.5	14	14.0	14.250	14
RickerFRDMean	0.001	0.001	4.920	0.001	14.5	14.5	15	14.0	14.500	15
PowerBasic	0.001	0.001	4.957	0.001	14.5	14.5	16	14.0	14.750	16
RickerBasic	0.001	0.001	5.262	0.001	14.5	14.5	17	14.0	15.000	17
RickerFRDpeak	0.001	0.001	5.361	0.001	14.5	14.5	18	14.0	15.250	18
RickerPDO	0.001	0.001	5.568	0.001	14.5	14.5	19	14.0	15.500	19
sibling5	0.001	0.001	5.912	0.001	14.5	14.5	20	14.0	15.750	20
RickerPi	0.001	0.001	6.043	0.001	14.5	14.5	21	14.0	16.000	21
RickerCyc	0.002	0.002	11.735	0.002	22.5	22.5	22	22.0	22.250	22
PowerBasicCycAge	0.002	0.002	13.373	0.003	22.5	22.5	23	23.0	22.750	23
R2C	0.003	0.003	15.806	0.005	24.0	24.0	24	24.5	24.125	24

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
LLY	0.005	0.005	24.939	0.005	25.5	25.5	25	24.5	25.125	25
RS1	0.005	0.005	25.651	0.009	25.5	25.5	26	30.0	26.750	26
RAC	0.006	0.006	31.920	0.006	28.0	28.0	27	26.0	27.250	27
RS4yr	0.006	0.006	32.739	0.007	28.0	28.0	28	27.5	27.875	28
RS8yr	0.006	0.006	35.500	0.007	28.0	28.0	29	27.5	28.125	29
RS2	0.007	0.007	37.553	0.008	30.0	30.0	30	29.0	29.750	30
MRS	0.012	0.012	65.274	0.014	31.0	31.0	31	31.0	31.000	31
RSC	0.013	0.013	75.438	0.016	32.0	32.0	32	32.0	32.000	32
TSA	0.026	0.026	142.622	0.026	33.0	33.0	33	33.0	33.000	33

(Total)-Other

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerSalmon_Total	-0.004	0.010	0.719	0.015	3.0	3.0	1	1.0	2.000	1
RickerPink	-0.002	0.011	1.055	0.017	2.0	4.0	2	3.5	2.875	2
R1C	0.001	0.014	1.563	0.019	1.0	5.0	3	5.0	3.500	3
LarkinBasicCycAge	0.005	0.009	2.333	0.016	4.5	1.5	9	2.0	4.250	4
LarkinBasic	0.005	0.009	2.369	0.017	4.5	1.5	10	3.5	4.875	5
PowerSalmon_Total	0.007	0.015	2.079	0.022	6.5	7.5	5	7.5	6.625	6
PowerPink	0.007	0.015	2.436	0.022	6.5	7.5	11	7.5	8.125	7
RickerPiW	0.009	0.015	2.130	0.025	8.0	7.5	6	11.0	8.125	8
RickerPi	0.010	0.015	1.663	0.030	10.5	7.5	4	13.0	8.750	9
PowerChum	0.010	0.016	2.590	0.023	10.5	10.5	13	9.0	10.750	10
R2C	0.010	0.016	3.603	0.021	10.5	10.5	17	6.0	11.000	11
RickerChum	0.010	0.017	2.509	0.024	10.5	12.0	12	10.0	11.125	12
RickerEiW	0.012	0.018	2.783	0.030	13.0	13.5	14	13.0	13.375	13
PowerSockeye	0.013	0.019	2.280	0.036	15.0	15.5	8	17.0	13.875	14
RickerSockeye	0.013	0.020	2.163	0.037	15.0	17.5	7	18.0	14.375	15
RickerCyc	0.013	0.018	3.755	0.030	15.0	13.5	18	13.0	14.875	16
RickerEi	0.014	0.019	3.355	0.031	17.0	15.5	15	15.0	15.625	17
RickerPDO	0.017	0.020	3.441	0.034	18.0	17.5	16	16.0	16.875	18
RickerBasic	0.023	0.027	4.670	0.041	20.0	20.5	19	19.0	19.625	19
RickerFRDMean	0.023	0.027	5.130	0.044	20.0	20.5	20	21.0	20.375	20
PowerBasic	0.023	0.027	5.325	0.042	20.0	20.5	22	20.0	20.625	21
RickerFRDpeak	0.024	0.027	5.259	0.045	22.0	20.5	21	22.0	21.375	22
PowerBasicCycAge	0.027	0.031	5.771	0.052	23.0	23.0	23	23.0	23.000	23
RS8yr	0.042	0.047	7.638	0.078	24.0	24.5	25	24.0	24.375	24
RS4yr	0.044	0.047	7.322	0.081	25.0	24.5	24	25.0	24.625	25
RS1	0.047	0.053	7.886	0.090	26.0	26.0	26	27.0	26.250	26
RS2	0.058	0.064	8.254	0.117	27.0	28.0	27	28.0	27.500	27
RAC	0.060	0.063	15.362	0.082	28.0	27.0	30	26.0	27.750	28

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
MRS	0.082	0.084	13.244	0.141	29.0	29.0	28	30.0	29.000	29
RSC	0.096	0.099	14.653	0.173	30.0	30.0	29	31.0	30.000	30
TSA	0.125	0.125	48.695	0.126	31.0	31.0	32	29.0	30.750	31
LLY	0.162	0.172	21.514	0.344	32.0	32.0	31	32.0	31.750	32

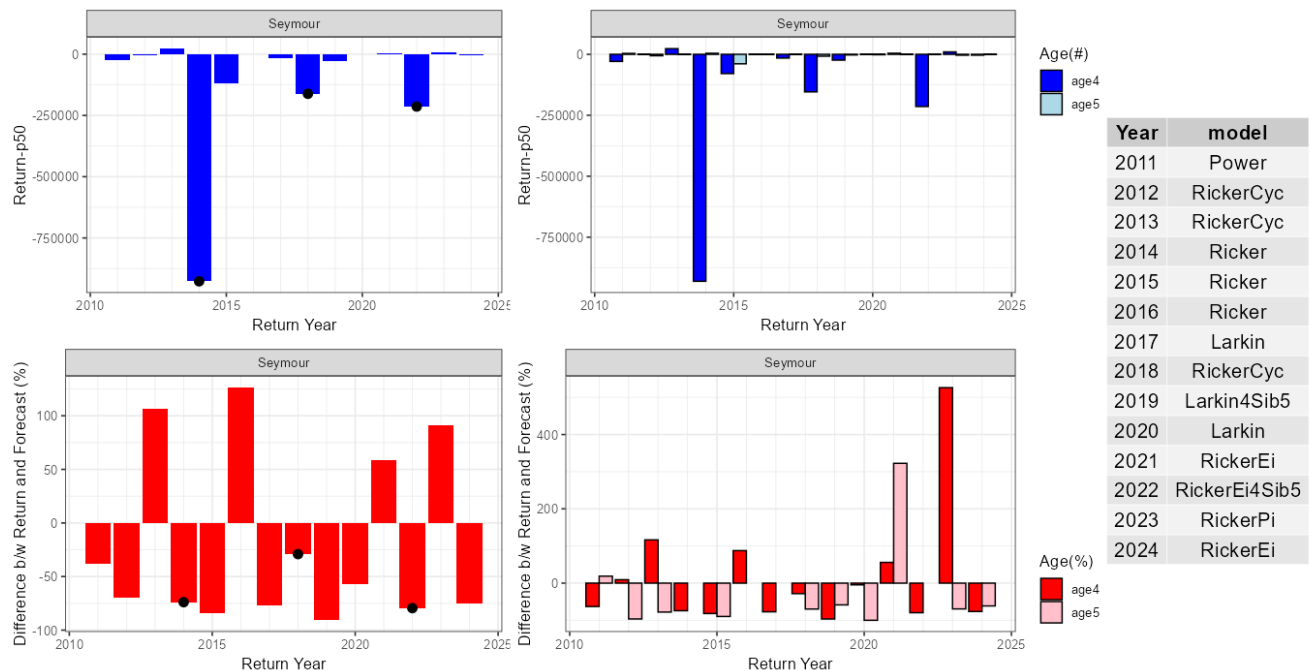
(Age4)-Other

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
LarkinBasic	-0.001	0.007	2.754	0.011	3.0	1.5	12	1.5	4.500	1
LarkinBasicCycAge	-0.001	0.007	2.851	0.011	3.0	1.5	15	1.5	5.250	2
PowerSalmon_Total	0.000	0.010	2.105	0.015	1.0	6.5	9	6.5	5.750	3
RickerPi	0.003	0.010	1.403	0.015	8.0	6.5	3	6.5	6.000	4
RickerPiW	0.003	0.010	2.083	0.014	8.0	6.5	8	3.5	6.500	5
RickerCyc	0.003	0.009	2.892	0.014	8.0	3.0	16	3.5	7.625	6
RickerSalmon_Total	-0.006	0.010	0.937	0.015	16.5	6.5	1	6.5	7.625	7
PowerChum	0.003	0.010	2.762	0.015	8.0	6.5	13	6.5	8.500	8
PowerPink	0.001	0.011	2.382	0.016	3.0	10.5	10	10.5	8.500	9
RickerChum	0.003	0.010	2.746	0.016	8.0	6.5	11	10.5	9.000	10
RickerPink	-0.005	0.011	1.318	0.016	14.0	10.5	2	10.5	9.250	11
PowerSockeye	0.004	0.012	2.044	0.017	11.5	14.0	6	13.5	11.250	12
R1C	0.002	0.012	2.795	0.017	5.0	14.0	14	13.5	11.625	13
RickerSockeye	0.004	0.012	2.058	0.018	11.5	14.0	7	15.5	12.000	14
RickerEi	0.005	0.012	4.169	0.016	14.0	14.0	19	10.5	14.375	15
RS2	0.007	0.015	1.818	0.022	18.0	18.5	4	18.0	14.625	16
RS1	0.006	0.015	2.010	0.023	16.5	18.5	5	20.0	15.000	17
RickerEiW	0.005	0.012	3.339	0.018	14.0	14.0	17	15.5	15.125	18
RickerPDO	0.009	0.013	3.423	0.022	19.0	17.0	18	18.0	18.000	19
R2C	0.010	0.016	5.308	0.022	20.0	21.0	24	18.0	20.750	20
RS4yr	0.011	0.016	4.661	0.025	21.0	21.0	21	21.0	21.000	21
RS8yr	0.012	0.018	4.500	0.031	22.5	24.0	20	24.0	22.625	22
PowerBasicCycAge	0.012	0.016	5.563	0.028	22.5	21.0	25	22.5	22.750	23
PowerBasic	0.013	0.017	5.653	0.028	24.0	23.0	26	22.5	23.875	24
RickerBasic	0.014	0.019	4.952	0.032	26.0	26.0	22	26.0	25.000	25
RickerFRDMean	0.014	0.019	5.246	0.032	26.0	26.0	23	26.0	25.250	26
RickerFRDpeak	0.014	0.019	5.852	0.032	26.0	26.0	27	26.0	26.250	27
RSC	0.026	0.030	7.911	0.048	28.0	28.5	28	28.0	28.125	28
MRS	0.028	0.030	8.253	0.052	29.0	28.5	29	29.0	28.875	29
RAC	0.054	0.058	23.613	0.076	30.0	30.0	30	30.0	30.000	30
TSA	0.109	0.109	53.857	0.110	31.0	31.0	32	31.0	31.250	31
LLY	0.147	0.157	47.071	0.317	32.0	32.0	31	32.0	31.750	32

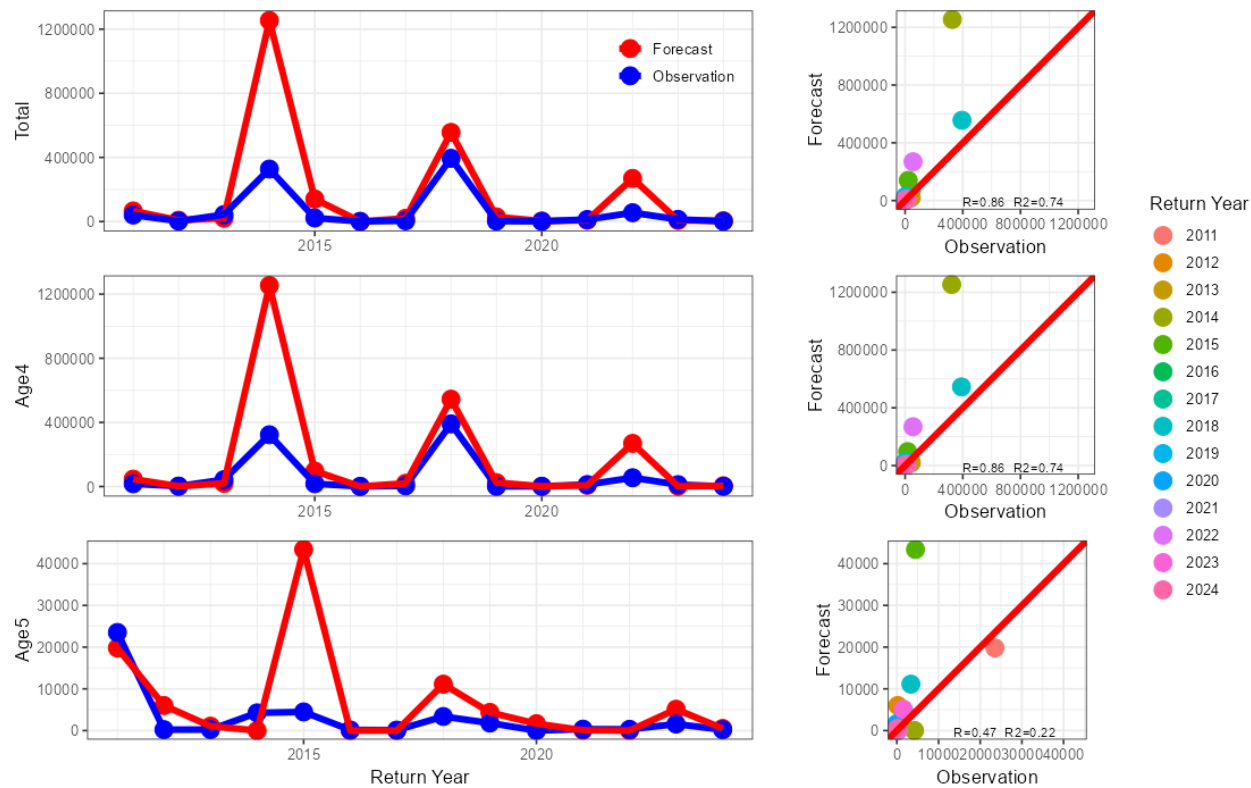
(Age5)-Other

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerPink	0.000	0.001	0.012	0.002	2.0	1.5	1	2.0	1.625	1
RickerSalmon_Total	0.000	0.001	-0.047	0.001	2.0	1.5	2	1.0	1.625	2
RickerEiW	0.002	0.002	2.046	0.005	6.5	3.5	7	5.5	5.625	3
sibling5	0.001	0.002	2.405	0.003	4.5	3.5	12	3.0	5.750	4
LarkinBasic	0.003	0.003	1.566	0.005	12.0	9.5	5	5.5	8.000	5
RickerPiW	0.003	0.003	2.098	0.005	12.0	9.5	8	5.5	8.750	6
PowerPink	0.003	0.003	1.416	0.007	12.0	9.5	3	16.5	10.250	7
PowerSalmon_Total	0.003	0.003	1.422	0.007	12.0	9.5	4	16.5	10.500	8
RickerEi	0.003	0.003	2.331	0.006	12.0	9.5	10	10.5	10.500	9
RickerPDO	0.003	0.003	2.682	0.005	12.0	9.5	16	5.5	10.750	10
PowerChum	0.003	0.003	1.866	0.007	12.0	9.5	6	16.5	11.000	11
RickerPi	0.003	0.003	2.458	0.006	12.0	9.5	13	10.5	11.250	12
RickerFRDpeak	0.003	0.003	2.937	0.006	12.0	9.5	19	10.5	12.750	13
R2C	0.000	0.004	7.937	0.006	2.0	16.5	24	10.5	13.250	14
R1C	-0.002	0.003	4.693	0.007	6.5	9.5	21	16.5	13.375	15
RickerBasic	0.001	0.005	2.498	0.007	4.5	20.5	15	16.5	14.125	16
LarkinBasicCycAge	0.004	0.004	2.337	0.006	19.0	16.5	11	10.5	14.250	17
RickerFRDMean	0.004	0.004	2.906	0.006	19.0	16.5	18	10.5	16.000	18
RickerChum	0.004	0.005	2.133	0.009	19.0	20.5	9	21.0	17.375	19
PowerSockeye	0.004	0.004	2.463	0.010	19.0	16.5	14	23.0	18.125	20
PowerBasic	0.004	0.005	3.037	0.009	19.0	20.5	20	21.0	20.125	21
RickerCyc	0.005	0.005	5.444	0.007	22.0	20.5	22	16.5	20.250	22
RickerSockeye	0.006	0.006	2.684	0.014	23.5	23.0	17	24.0	21.875	23
RAC	0.006	0.008	15.474	0.009	23.5	24.0	26	21.0	23.625	24
PowerBasicCycAge	0.009	0.009	6.594	0.022	25.0	25.0	23	26.0	24.750	25
LLY	0.017	0.017	11.387	0.029	27.0	26.5	25	27.0	26.375	26
TSA	0.015	0.017	66.550	0.018	26.0	26.5	33	25.0	27.625	27
RS8yr	0.033	0.033	21.820	0.065	28.0	28.0	29	28.0	28.250	28
RS4yr	0.035	0.035	21.336	0.074	29.0	29.0	27	29.0	28.500	29
RS1	0.046	0.046	21.583	0.091	30.0	30.0	28	30.0	29.500	30
RS2	0.056	0.056	29.293	0.111	31.0	31.0	30	31.0	30.750	31
MRS	0.059	0.059	38.187	0.114	32.0	32.0	31	32.0	31.750	32
RSC	0.076	0.076	46.626	0.147	33.0	33.0	32	33.0	32.750	33

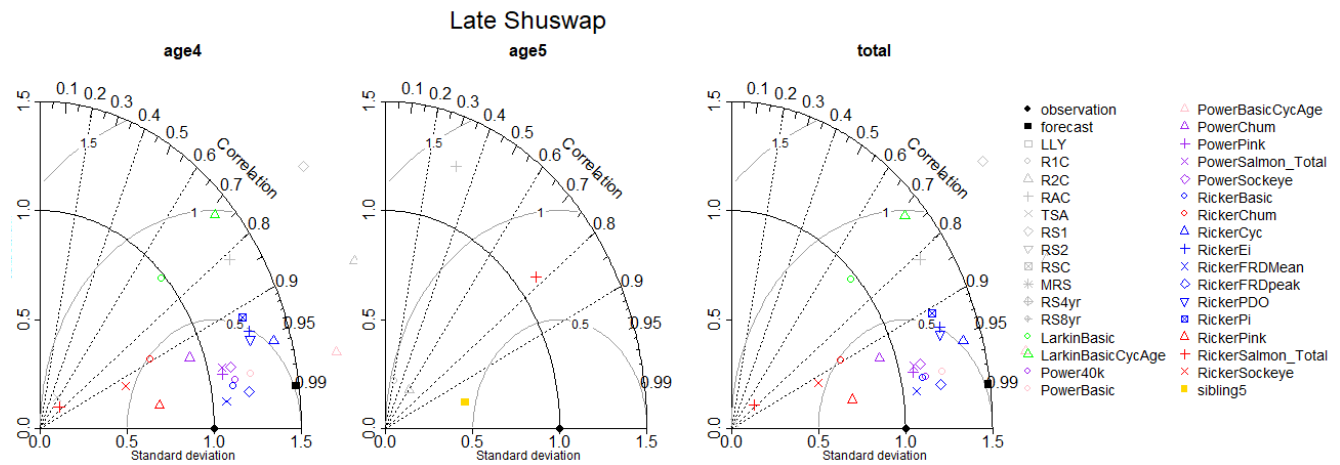
Diff



FC-TS



Late Shuswap Retrospective: Taylor



Ranking (Total)-Allrys

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
PowerPink	0.210	0.416	11.435	0.652	8.0	3.0	7	2.0	5.000	1
PowerSalmon_Total	0.175	0.443	10.841	0.705	6.0	4.0	6	4.0	5.000	2
PowerChum	0.025	0.466	11.745	0.836	1.0	7.0	8	9.0	6.250	3
RickerPiW	0.060	0.464	14.128	0.809	2.0	6.0	12	7.0	6.750	4
PowerSockeye	0.199	0.467	13.740	0.753	7.0	8.0	11	6.0	8.000	5
RickerFRDMean	0.281	0.325	16.146	0.513	11.0	1.0	19	1.0	8.000	6
RickerPink	-0.332	0.476	6.107	0.849	13.0	9.0	2	10.0	8.500	7
RickerEiW	0.092	0.509	13.359	0.982	3.0	10.5	10	12.0	8.875	8
RickerBasic	0.360	0.404	14.805	0.678	16.0	2.0	15	3.0	9.000	9
RickerChum	-0.162	0.658	9.849	1.154	5.0	16.0	3	13.0	9.250	10
Power40k	0.342	0.444	15.749	0.713	15.0	5.0	17	5.0	10.500	11
RickerEi	0.220	0.646	9.952	1.203	9.0	15.0	4	15.0	10.750	12
RickerFRDpeak	0.470	0.515	14.515	0.823	18.0	12.0	13	8.0	12.750	13
PowerBasic	0.422	0.509	14.670	0.891	17.0	10.5	14	11.0	13.125	14
RickerPi	0.099	0.630	23.655	1.293	4.0	13.0	21	16.0	13.500	15
LarkinBasic	0.261	0.912	12.323	1.785	10.0	20.0	9	19.0	14.500	16
RickerSockeye	-0.284	0.636	15.092	1.304	12.0	14.0	16	17.0	14.750	17
RickerSalmon_Total	-0.824	0.905	3.763	2.209	21.0	19.0	1	22.0	15.750	18
RickerPDO	0.339	0.673	16.993	1.164	14.0	17.0	20	14.0	16.250	19
R1C	1.155	1.238	10.738	2.781	24.0	24.0	5	25.0	19.500	20
RickerCyc	0.725	0.756	47.708	1.418	19.0	18.0	24	18.0	19.750	21
RAC	0.999	1.106	46.565	2.032	23.0	22.0	23	20.0	22.000	22
LarkinBasicCycAge	0.760	1.151	35.683	2.407	20.0	23.0	22	23.0	22.000	23
PowerBasicCycAge	0.909	0.945	55.796	2.038	22.0	21.0	25	21.0	22.250	24
R2C	1.290	1.343	15.824	2.847	28.0	26.0	18	26.0	24.500	25
RS1	1.229	1.294	72.017	3.193	26.0	25.0	26	27.0	26.000	26

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
TSA	1.214	2.317	2491.081	2.534	25.0	29.0	33	24.0	27.750	27
RS2	2.087	2.087	72.886	3.908	29.0	27.0	27	28.0	27.750	28
RSC	2.094	2.107	164.608	4.022	30.0	28.0	28	29.0	28.750	29
LLY	1.238	3.204	330.158	5.693	27.0	31.0	32	30.0	30.000	30
RS4yr	3.112	3.151	261.553	7.156	31.0	30.0	31	31.0	30.750	31
MRS	3.869	3.895	182.908	8.027	32.0	32.0	29	32.0	31.250	32
RS8yr	4.091	4.114	209.556	9.307	33.0	33.0	30	33.0	32.250	33

(Age4)-Allyrs

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerFRDMean	0.145	0.210	31.868	0.373	9.0	1.0	11	1.0	5.500	1
RickerBasic	0.210	0.280	34.649	0.555	13.0	2.0	14	2.0	7.750	2
RickerEiW	-0.014	0.418	28.698	0.936	2.0	11.0	6	12.0	7.750	3
RickerPiW	-0.050	0.368	37.014	0.759	3.0	6.5	16	8.0	8.375	4
PowerPink	0.101	0.334	55.899	0.602	7.0	3.0	24	3.0	9.250	5
RickerFRDpeak	0.308	0.351	31.116	0.692	16.0	5.0	10	6.0	9.250	6
RickerPi	-0.010	0.539	29.454	1.259	1.0	13.0	7	16.0	9.250	7
PowerSalmon_Total	0.078	0.368	52.452	0.673	5.0	6.5	23	5.0	9.875	8
PowerChum	-0.066	0.401	45.008	0.835	4.0	9.0	20	10.0	10.750	9
PowerSockeye	0.083	0.382	50.003	0.706	6.0	8.0	22	7.0	10.750	10
RickerPink	-0.395	0.456	19.988	0.872	18.0	12.0	4	11.0	11.250	11
Power40k	0.193	0.347	58.871	0.628	11.0	4.0	27	4.0	11.500	12
RickerPDO	0.203	0.556	30.309	1.095	12.0	15.0	9	13.0	12.250	13
RickerChum	-0.241	0.605	26.915	1.167	14.0	17.0	5	15.0	12.750	14
RickerEi	0.107	0.547	39.269	1.158	8.0	14.0	17	14.0	13.250	15
RickerCyc	0.666	0.696	17.714	1.407	19.0	18.0	2	18.0	14.250	16
PowerBasic	0.254	0.410	56.588	0.808	15.0	10.0	25	9.0	14.750	17
LarkinBasic	0.170	0.833	33.516	1.781	10.0	19.0	13	19.0	15.250	18
RickerSockeye	-0.375	0.591	40.616	1.325	17.0	16.0	18	17.0	17.000	19
RickerSalmon_Total	-0.878	0.916	17.358	2.275	24.0	21.0	1	23.0	17.250	20
LarkinBasicCycAge	0.715	1.105	19.183	2.404	20.0	24.0	3	24.0	17.750	21
PowerBasicCycAge	0.847	0.883	32.589	2.027	22.0	20.0	12	21.0	18.750	22
RS1	0.875	0.939	30.141	3.090	23.0	22.0	8	27.0	20.000	23
RAC	0.964	1.071	1227.224	2.014	25.0	23.0	31	20.0	24.750	24
RS2	1.667	1.668	35.314	3.808	29.0	27.0	15	28.0	24.750	25
TSA	0.823	1.925	89199.887	2.231	21.0	29.0	33	22.0	26.250	26
R1C	1.167	1.221	503.868	2.780	27.0	25.0	29	25.0	26.500	27
RSC	1.673	1.685	44.023	3.909	30.0	28.0	19	29.0	26.500	28
R2C	1.299	1.352	725.719	2.847	28.0	26.0	30	26.0	27.500	29
MRS	3.191	3.216	47.217	7.886	32.0	32.0	21	32.0	29.250	30

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
LLY	0.990	2.956	15645.538	5.265	26.0	31.0	32	30.0	29.750	31
RS4yr	2.421	2.458	73.622	6.994	31.0	30.0	28	31.0	30.000	32
RS8yr	3.372	3.393	57.001	9.158	33.0	33.0	26	33.0	31.250	33

(Age5)-Allyrs

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerSalmon_Total	0.000	0.003	1.486	0.005	1.0	1.0	1	1.0	1.000	1
RickerPink	0.015	0.017	4.424	0.034	3.0	2.0	2	2.0	2.250	2
sibling5	-0.009	0.019	7.275	0.042	2.0	3.0	4	3.0	3.000	3
R2C	-0.017	0.027	8.188	0.067	4.0	4.0	5	5.0	4.500	4
R1C	-0.021	0.028	5.266	0.074	5.0	5.0	3	6.0	4.750	5
RickerChum	0.044	0.046	15.295	0.077	7.0	7.0	7	7.0	7.000	6
RickerSockeye	0.027	0.029	18.716	0.047	6.0	6.0	13	4.0	7.250	7
PowerChum	0.052	0.054	15.818	0.108	10.0	9.0	8	12.0	9.750	8
RickerEiW	0.048	0.050	17.803	0.103	9.0	8.0	12	11.0	10.000	9
PowerSalmon_Total	0.060	0.062	17.226	0.111	14.5	13.5	11	14.0	13.250	10
PowerSockeye	0.060	0.062	17.140	0.128	14.5	13.5	10	15.0	13.250	11
LarkinBasicCycAge	0.055	0.057	63.717	0.093	11.0	10.0	24	9.5	13.625	12
PowerPink	0.066	0.069	14.433	0.135	17.0	16.0	6	17.0	14.000	13
RickerCyc	0.058	0.060	78.216	0.085	12.0	11.0	25	8.0	14.000	14
PowerBasicCycAge	0.059	0.061	90.422	0.093	13.0	12.0	26	9.5	15.125	15
RAC	0.047	0.072	42.742	0.109	8.0	17.5	23	13.0	15.375	16
RickerPiW	0.064	0.066	22.609	0.133	16.0	15.0	18	16.0	16.250	17
RickerBasic	0.076	0.082	21.011	0.161	19.0	19.0	17	19.0	18.500	18
Power40k	0.085	0.087	19.771	0.166	21.0	21.0	14	21.0	19.250	19
RickerFRDMean	0.083	0.085	23.550	0.153	20.0	20.0	19	18.0	19.250	20
RickerPi	0.070	0.072	32.566	0.170	18.0	17.5	22	22.0	19.875	21
RickerFRDpeak	0.086	0.088	20.563	0.162	22.0	22.0	16	20.0	20.000	22
RickerEi	0.087	0.089	16.367	0.211	23.0	23.0	9	26.0	20.250	23
PowerBasic	0.102	0.104	19.987	0.209	26.0	26.0	15	25.0	23.000	24
LarkinBasic	0.098	0.100	26.336	0.181	25.0	25.0	20	23.0	23.250	25
RickerPDO	0.088	0.090	26.516	0.190	24.0	24.0	21	24.0	23.250	26
LLY	0.346	0.348	196.498	0.585	27.0	27.0	29	27.0	27.500	27
RS1	0.496	0.498	122.293	0.943	28.0	28.0	27	29.0	28.000	28
RS2	0.588	0.591	148.489	1.014	30.0	30.0	28	31.0	29.750	29
TSA	0.506	0.516	2949.517	0.645	29.0	29.0	34	28.0	30.000	30
RSC	0.590	0.592	294.313	1.005	31.0	31.0	30	30.0	30.500	31
MRS	0.949	0.951	347.710	1.638	32.0	32.0	31	32.0	31.750	32
RS4yr	0.967	0.969	508.904	1.699	33.0	33.0	33	33.0	33.000	33

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RS8yr	1.007	1.009	401.481	1.811	34.0	34.0	32	34.0	33.500	34

(Total)-Cycle

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall Rank
RickerSalmon_Total	0.001	0.001	8.078	0.002	1.0	1.0	1	1.0	1.000	1
RickerPink	0.003	0.003	11.739	0.004	4.0	4.0	2	3.0	3.250	2
RickerChum	0.003	0.003	18.438	0.004	4.0	4.0	4	3.0	3.750	3
LarkinBasic	0.003	0.003	21.465	0.004	4.0	4.0	7	3.0	4.500	4
RickerEi	0.003	0.003	16.689	0.005	4.0	4.0	3	7.5	4.625	5
PowerSalmon_Total	0.004	0.004	20.762	0.005	10.0	10.0	5	7.5	8.125	6
PowerPink	0.004	0.004	21.313	0.005	10.0	10.0	6	7.5	8.375	7
RickerFRDpeak	0.004	0.004	23.691	0.005	10.0	10.0	8	7.5	8.875	8
R1C	0.003	0.003	30.402	0.006	4.0	4.0	16	12.0	9.000	9
PowerBasic	0.004	0.004	24.279	0.005	10.0	10.0	9	7.5	9.125	10
PowerChum	0.004	0.004	24.336	0.005	10.0	10.0	10	7.5	9.375	11
PowerSockeye	0.004	0.004	27.840	0.006	10.0	10.0	11	12.0	10.750	12
Power40k	0.004	0.004	28.525	0.006	10.0	10.0	13	12.0	11.250	13
RickerEiW	0.005	0.005	28.298	0.007	15.5	15.5	12	15.5	14.625	14
RickerBasic	0.005	0.005	28.924	0.007	15.5	15.5	14	15.5	15.125	15
RickerFRDMean	0.005	0.005	30.740	0.007	15.5	15.5	17	15.5	15.875	16
RickerPDO	0.005	0.005	35.168	0.007	15.5	15.5	18	15.5	16.125	17
RickerPiW	0.006	0.006	30.393	0.008	19.0	19.0	15	18.5	17.875	18
RickerSockeye	0.006	0.006	35.909	0.008	19.0	19.0	19	18.5	18.875	19
R2C	0.006	0.006	45.834	0.009	19.0	19.0	20	20.0	19.500	20
RickerPi	0.008	0.008	62.548	0.013	21.0	21.0	21	21.0	21.000	21
LarkinBasicCycAge	0.014	0.014	103.980	0.020	22.0	22.0	22	22.0	22.000	22
RAC	0.025	0.025	104.618	0.025	24.0	24.0	23	23.0	23.500	23
RS1	0.022	0.023	185.627	0.036	23.0	23.0	27	24.0	24.250	24
RickerCyc	0.028	0.028	142.369	0.038	25.0	25.0	24	25.0	24.750	25
RS2	0.031	0.031	177.821	0.042	26.0	26.0	26	26.0	26.000	26
PowerBasicCycAge	0.032	0.032	165.538	0.043	27.0	27.0	25	27.0	26.500	27
RSC	0.100	0.100	493.193	0.133	28.0	28.0	28	28.0	28.000	28
MRS	0.106	0.106	519.327	0.141	29.5	29.5	29	29.0	29.250	29
RS4yr	0.106	0.106	787.494	0.153	29.5	29.5	31	30.0	30.000	30
RS8yr	0.121	0.121	613.987	0.161	32.0	32.0	30	31.0	31.250	31
LLY	0.108	0.108	974.015	0.189	31.0	31.0	32	32.0	31.500	32
TSA	2.236	2.236	8582.011	2.237	33.0	33.0	33	33.0	33.000	33

(Age4)-Cycle

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerCyc	0.000	0.000	48.786	0.000	14.5	14.0	1	13.5	10.750	1
RickerSalmon_Total	0.000	0.000	53.760	0.000	14.5	14.0	2	13.5	11.000	2
LarkinBasicCycAge	0.000	0.000	56.296	0.000	14.5	14.0	3	13.5	11.250	3
RickerPink	0.000	0.000	59.815	0.000	14.5	14.0	4	13.5	11.500	4
RickerChum	0.000	0.000	81.717	0.000	14.5	14.0	5	13.5	11.750	5
RickerEiW	0.000	0.000	86.522	0.000	14.5	14.0	6	13.5	12.000	6
RickerPi	0.000	0.000	90.852	0.000	14.5	14.0	7	13.5	12.250	7
RickerPDO	0.000	0.000	91.373	0.000	14.5	14.0	8	13.5	12.500	8
RickerFRDpeak	0.000	0.000	92.252	0.000	14.5	14.0	9	13.5	12.750	9
PowerBasicCycAge	0.000	0.000	92.436	0.000	14.5	14.0	10	13.5	13.000	10
RickerFRDMean	0.000	0.000	95.046	0.000	14.5	14.0	11	13.5	13.250	11
LarkinBasic	0.000	0.000	105.534	0.000	14.5	14.0	13	13.5	13.750	12
RickerBasic	0.000	0.000	111.638	0.000	14.5	14.0	14	13.5	14.000	13
RickerPiW	0.000	0.000	114.984	0.000	14.5	14.0	15	13.5	14.250	14
RS2	0.000	0.000	116.720	0.000	14.5	14.0	16	13.5	14.500	15
RickerEi	0.000	0.000	121.715	0.000	14.5	14.0	17	13.5	14.750	16
RickerSockeye	0.000	0.000	125.256	0.000	14.5	14.0	18	13.5	15.000	17
RSC	0.000	0.000	128.162	0.000	14.5	14.0	19	13.5	15.250	18
MRS	0.000	0.000	140.410	0.000	14.5	14.0	20	13.5	15.500	19
PowerChum	0.000	0.000	141.337	0.000	14.5	14.0	21	13.5	15.750	20
PowerSockeye	0.000	0.000	155.724	0.000	14.5	14.0	22	13.5	16.000	21
PowerSalmon_Total	0.000	0.000	165.089	0.000	14.5	14.0	23	13.5	16.250	22
PowerBasic	0.000	0.000	175.169	0.000	14.5	14.0	24	13.5	16.500	23
PowerPink	0.000	0.000	175.982	0.000	14.5	14.0	25	13.5	16.750	24
RS8yr	0.000	0.000	179.219	0.000	14.5	14.0	26	13.5	17.000	25
Power40k	0.000	0.000	182.274	0.000	14.5	14.0	27	13.5	17.250	26
RS1	0.000	0.001	100.975	0.001	14.5	28.0	12	27.5	20.500	27
RS4yr	0.000	0.000	242.694	0.001	14.5	14.0	28	27.5	21.000	28
R1C	0.002	0.002	1749.885	0.004	29.0	29.0	29	29.0	29.000	29
R2C	0.003	0.003	2505.802	0.005	30.0	30.0	30	30.0	30.000	30
RAC	0.014	0.014	4083.824	0.014	31.0	31.0	31	31.0	31.000	31
LLY	0.062	0.062	54017.449	0.108	32.0	32.0	32	32.0	32.000	32
TSA	1.267	1.267	311788.126	1.267	33.0	33.0	33	33.0	33.000	33

(Age5)-Cycle

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerSalmon_Total	0.001	0.001	3.492	0.001	1.5	1.0	1	1.0	1.125	1
R1C	0.001	0.002	13.483	0.003	1.5	4.0	3	3.0	2.875	2
sibling5	0.002	0.002	16.947	0.003	4.5	4.0	5	3.0	4.125	3
RickerPink	0.002	0.002	7.100	0.004	4.5	4.0	2	8.0	4.625	4

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
R2C	0.002	0.002	20.270	0.004	4.5	4.0	9	8.0	6.375	5
LarkinBasic	0.002	0.002	21.749	0.004	4.5	4.0	12	8.0	7.125	6
RickerChum	0.003	0.003	17.832	0.003	10.0	10.0	7	3.0	7.500	7
RickerEi	0.003	0.003	16.646	0.004	10.0	10.0	4	8.0	8.000	8
PowerPink	0.003	0.003	17.214	0.004	10.0	10.0	6	8.0	8.500	9
PowerBasic	0.003	0.003	20.474	0.004	10.0	10.0	10	8.0	9.500	10
PowerChum	0.003	0.003	20.974	0.004	10.0	10.0	11	8.0	9.750	11
PowerSalmon_Total	0.003	0.003	18.241	0.005	10.0	10.0	8	13.5	10.375	12
Power40k	0.003	0.003	23.108	0.005	10.0	10.0	13	13.5	11.625	13
RickerFRDpeak	0.004	0.004	24.120	0.005	14.5	14.5	14	13.5	14.125	14
PowerSockeye	0.004	0.004	24.250	0.005	14.5	14.5	15	13.5	14.375	15
RickerBasic	0.005	0.005	29.764	0.006	18.0	18.0	17	16.0	17.250	16
RickerEiW	0.005	0.005	29.180	0.007	18.0	18.0	16	18.0	17.500	17
RickerFRDMean	0.005	0.005	31.733	0.007	18.0	18.0	18	18.0	18.000	18
RickerPDO	0.005	0.005	36.766	0.007	18.0	18.0	21	18.0	18.750	19
RickerSockeye	0.005	0.005	35.347	0.008	18.0	18.0	20	20.5	19.125	20
RickerPiW	0.006	0.006	32.202	0.008	21.0	21.0	19	20.5	20.375	21
RickerPi	0.008	0.008	59.984	0.012	22.0	22.0	22	23.0	22.250	22
RAC	0.011	0.011	83.724	0.011	23.0	23.0	23	22.0	22.750	23
LarkinBasicCycAge	0.014	0.014	121.720	0.020	24.0	24.0	24	24.0	24.000	24
RS1	0.022	0.022	206.107	0.035	25.0	25.0	28	25.0	25.750	25
RickerCyc	0.027	0.027	160.818	0.037	26.0	26.0	25	26.0	25.750	26
RS2	0.031	0.031	199.667	0.042	27.0	27.0	27	27.0	27.000	27
PowerBasicCycAge	0.032	0.032	190.855	0.043	28.0	28.0	26	28.0	27.500	28
LLY	0.046	0.046	442.089	0.080	29.0	29.0	29	29.0	29.000	29
RSC	0.100	0.100	584.744	0.133	30.0	30.0	30	30.0	30.000	30
MRS	0.106	0.106	618.041	0.141	31.5	31.5	31	31.0	31.250	31
RS4yr	0.106	0.106	840.014	0.152	31.5	31.5	33	32.0	32.000	32
RS8yr	0.121	0.121	691.084	0.161	33.0	33.0	32	33.0	32.750	33
TSA	0.969	0.969	7324.035	0.970	34.0	34.0	34	34.0	34.000	34

(Total)-Other

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerSalmon_Total	0.013	0.093	5.082	0.164	1.0	1.0	1	2.0	1.250	1
R1C	0.015	0.120	13.278	0.196	2.0	4.0	5	4.0	3.750	2
RickerPink	0.051	0.136	8.090	0.244	4.0	6.0	2	7.0	4.750	3
R2C	0.046	0.114	19.576	0.166	3.0	3.0	16	3.0	6.250	4
RickerChum	0.086	0.151	12.737	0.251	6.0	8.0	3	8.0	6.250	5
LarkinBasic	0.090	0.141	15.672	0.218	7.0	7.0	9	6.0	7.250	6
LarkinBasicCycAge	0.059	0.098	45.789	0.132	5.0	2.0	22	1.0	7.500	7

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
PowerSalmon_Total	0.100	0.167	14.001	0.294	11.0	11.0	6	11.0	9.750	8
PowerChum	0.097	0.162	15.179	0.296	9.5	10.0	8	12.0	9.875	9
RickerCyc	0.091	0.132	61.645	0.212	8.0	5.0	24	5.0	10.500	10
RickerSockeye	0.097	0.160	19.629	0.273	9.5	9.0	17	9.0	11.125	11
PowerPink	0.118	0.185	14.762	0.343	12.0	14.0	7	13.0	11.500	12
RickerEi	0.122	0.186	12.891	0.391	14.0	15.0	4	15.0	12.000	13
RickerPiW	0.121	0.184	18.341	0.373	13.0	13.0	12	14.0	13.000	14
RickerEiW	0.126	0.188	17.389	0.411	15.5	16.5	10	17.0	14.750	15
PowerSockeye	0.135	0.199	17.802	0.393	18.0	18.0	11	16.0	15.750	16
PowerBasicCycAge	0.132	0.179	72.214	0.280	17.0	12.0	25	10.0	16.000	17
RickerPi	0.126	0.188	30.787	0.427	15.5	16.5	21	19.0	18.000	18
RickerFRDMean	0.174	0.231	20.904	0.421	20.0	20.0	19	18.0	19.250	19
RickerFRDpeak	0.187	0.245	18.712	0.454	22.0	22.0	13	22.0	19.750	20
Power40k	0.179	0.240	20.351	0.441	21.0	21.0	18	20.0	20.000	21
RickerPDO	0.164	0.221	21.977	0.465	19.0	19.0	20	23.0	20.250	22
RickerBasic	0.196	0.252	18.713	0.443	24.0	24.0	14	21.0	20.750	23
PowerBasic	0.189	0.249	18.941	0.473	23.0	23.0	15	24.0	21.250	24
RAC	0.417	0.483	58.762	0.738	25.0	25.0	23	25.0	24.500	25
RS1	0.454	0.514	91.360	0.913	26.0	26.0	26	26.0	26.000	26
RS2	0.585	0.585	92.127	0.996	27.0	27.0	27	27.0	27.000	27
RSC	0.708	0.725	208.965	1.142	28.0	28.0	28	28.0	28.000	28
MRS	0.993	1.026	231.734	1.715	30.0	30.0	29	29.0	29.500	29
RS4yr	0.953	1.002	331.054	1.720	29.0	29.0	31	30.0	29.750	30
RS8yr	1.016	1.045	265.383	1.884	31.0	31.0	30	31.0	30.750	31
TSA	2.160	2.160	3170.506	2.169	32.0	32.0	33	32.0	32.250	32
LLY	2.784	2.870	420.466	5.829	33.0	33.0	32	33.0	32.750	33

(Age4)-Other

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
LarkinBasicCycAge	0.001	0.039	24.338	0.071	3.0	2.0	3	1.0	2.250	1
RickerPi	-0.001	0.059	38.328	0.110	3.0	6.0	8	7.0	6.000	2
RickerCyc	0.016	0.055	22.653	0.103	16.5	4.0	1	4.0	6.375	3
LarkinBasic	-0.014	0.035	43.227	0.081	15.0	1.0	13	2.0	7.750	4
RickerChum	0.001	0.065	34.927	0.120	3.0	12.0	5	11.5	7.875	5
RickerEiW	0.003	0.064	37.333	0.119	7.5	10.0	6	10.0	8.375	6
RickerPiW	-0.002	0.060	48.097	0.109	5.0	7.5	16	6.0	8.625	7
RS1	0.003	0.063	38.063	0.121	7.5	9.0	7	13.0	9.125	8
RickerEi	-0.005	0.057	51.010	0.108	11.0	5.0	17	5.0	9.500	9
RickerPDO	0.009	0.065	39.292	0.117	12.0	12.0	9	9.0	10.500	10
RS2	0.050	0.051	44.308	0.094	24.0	3.0	15	3.0	11.250	11

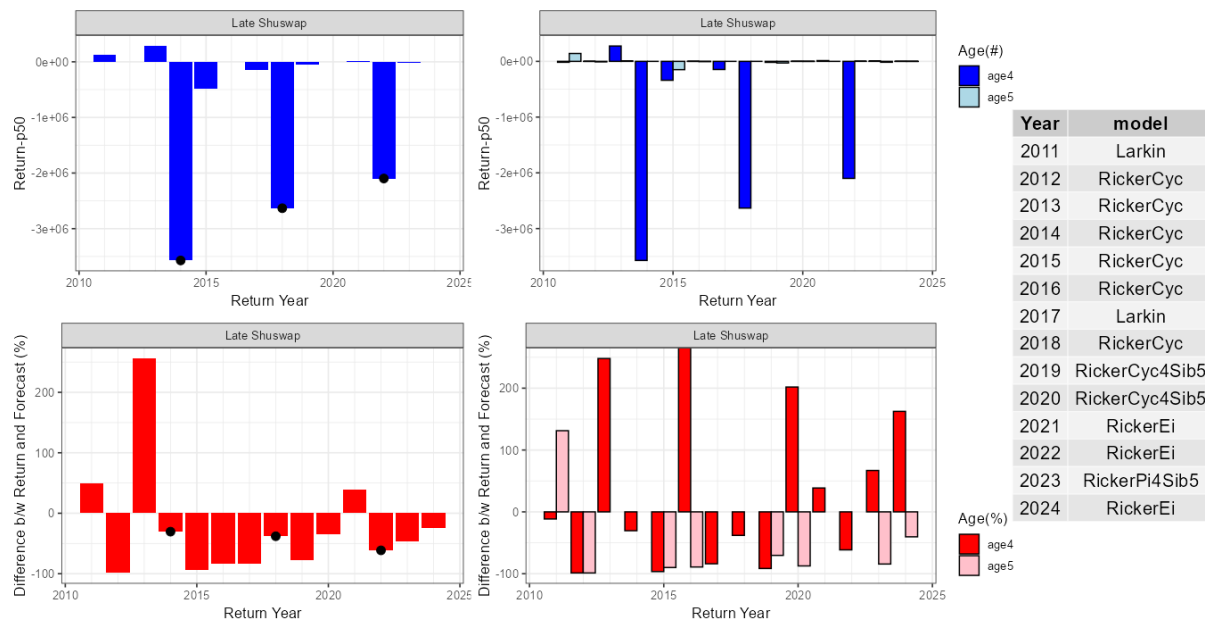
model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
PowerChum	-0.004	0.060	58.425	0.111	10.0	7.5	20	8.0	11.375	12
RickerSalmon_Total	-0.016	0.065	22.764	0.127	16.5	12.0	2	15.0	11.375	13
PowerSalmon_Total	0.000	0.067	68.100	0.120	1.0	14.0	23	11.5	12.375	14
RickerPink	-0.003	0.082	26.142	0.150	7.5	19.0	4	20.0	12.625	15
PowerPink	0.003	0.069	72.572	0.125	7.5	15.0	25	14.0	15.375	16
RickerSockeye	0.013	0.074	52.819	0.131	14.0	17.0	18	17.0	16.500	17
PowerSockeye	0.010	0.073	64.950	0.129	13.0	16.0	22	16.0	16.750	18
RickerFRDpeak	0.027	0.083	40.305	0.149	20.5	21.0	10	19.0	17.625	19
RickerFRDMean	0.027	0.082	41.350	0.151	20.5	19.0	11	21.0	17.875	20
PowerBasic	0.024	0.082	73.449	0.147	18.0	19.0	26	18.0	20.250	21
RickerBasic	0.032	0.085	43.977	0.154	23.0	22.5	14	23.0	20.625	22
PowerBasicCycAge	0.053	0.099	42.045	0.182	25.0	24.5	12	26.0	21.875	23
Power40k	0.025	0.085	76.419	0.152	19.0	22.5	27	22.0	22.625	24
R1C	0.030	0.099	640.898	0.175	22.0	24.5	29	24.5	25.000	25
R2C	0.057	0.124	923.078	0.175	26.0	27.0	30	24.5	26.875	26
MRS	0.131	0.162	59.035	0.300	29.0	29.0	21	29.0	27.000	27
RS4yr	0.074	0.122	91.867	0.191	27.0	26.0	28	27.0	27.000	28
RS8yr	0.101	0.128	71.220	0.205	28.0	28.0	24	28.0	27.000	29
RSC	0.172	0.186	55.493	0.398	30.0	30.0	19	30.0	27.250	30
RAC	0.373	0.439	1561.418	0.672	31.0	31.0	31	31.0	31.000	31
TSA	1.661	1.661	113527.168	1.693	32.0	32.0	33	32.0	32.250	32
LLY	2.469	2.553	19912.768	5.291	33.0	33.0	32	33.0	32.750	33

(Age5)-Other

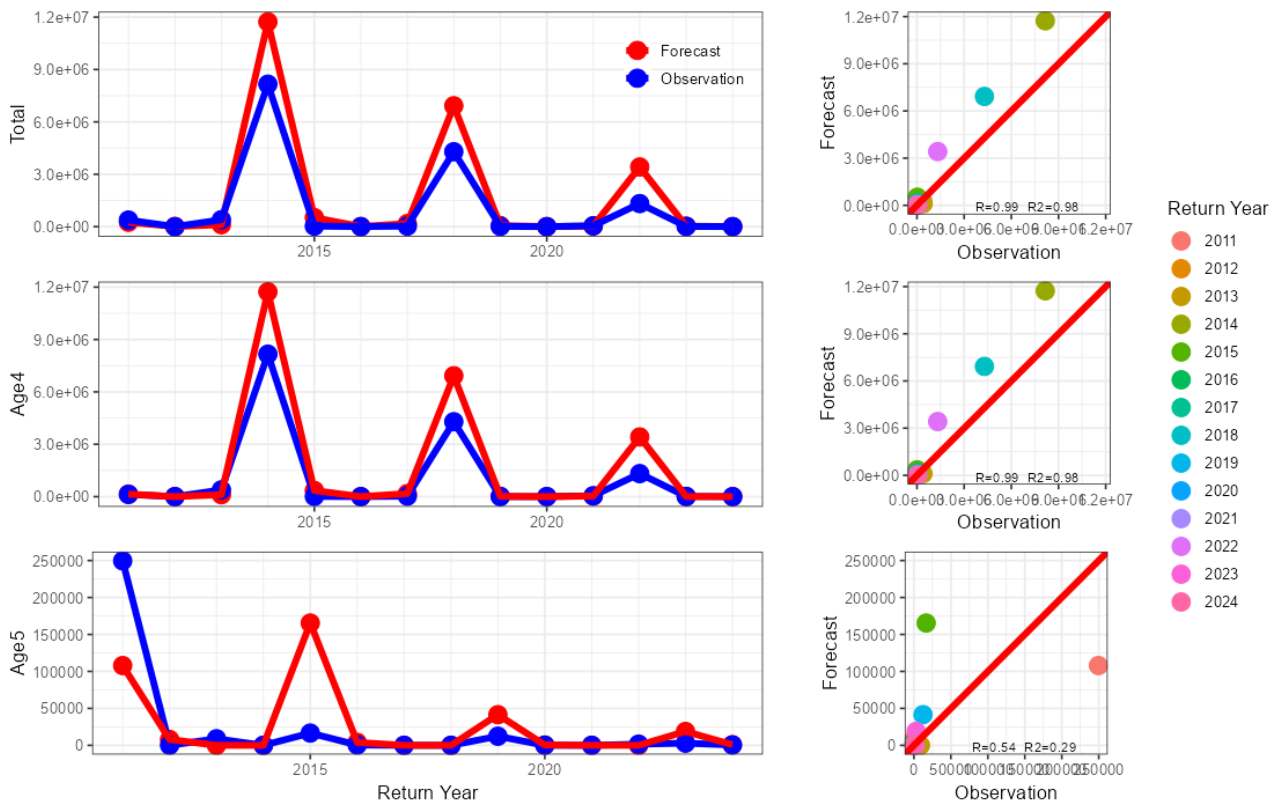
model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerSalmon_Total	0.000	0.003	1.774	0.005	1.0	1.0	1	1.0	1.000	1
RickerPink	0.017	0.019	5.099	0.036	3.0	2.0	2	2.0	2.250	2
sibling5	-0.010	0.021	7.993	0.044	2.0	3.0	4	3.0	3.000	3
R2C	-0.018	0.029	9.173	0.070	4.0	4.0	5	5.0	4.500	4
R1C	-0.024	0.031	5.938	0.078	5.0	5.0	3	6.0	4.750	5
RickerChum	0.050	0.052	17.211	0.081	7.0	7.0	7	7.0	7.000	6
RickerSockeye	0.030	0.033	21.071	0.050	6.0	6.0	13	4.0	7.250	7
PowerChum	0.058	0.061	17.815	0.115	10.0	9.0	8	12.5	9.875	8
RickerEiW	0.054	0.056	20.088	0.109	9.0	8.0	12	11.0	10.000	9
PowerSalmon_Total	0.068	0.070	19.417	0.118	14.5	13.5	11	14.0	13.250	10
PowerSockeye	0.068	0.070	19.295	0.135	14.5	13.5	10	15.0	13.250	11
LarkinBasicCycAge	0.062	0.064	71.757	0.099	11.0	10.0	24	10.0	13.750	12
PowerPink	0.075	0.077	16.274	0.143	17.0	16.0	6	17.0	14.000	13
RickerCyc	0.065	0.068	88.078	0.091	12.0	11.0	25	8.0	14.000	14
PowerBasicCycAge	0.067	0.069	101.823	0.098	13.0	12.0	26	9.0	15.000	15

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RAC	0.053	0.080	47.559	0.115	8.0	17.0	23	12.5	15.125	16
RickerPiW	0.072	0.074	25.496	0.141	16.0	15.0	18	16.0	16.250	17
RickerBasic	0.084	0.091	23.297	0.169	19.0	19.0	17	19.0	18.500	18
Power40k	0.095	0.098	22.259	0.177	21.0	21.0	14	21.0	19.250	19
RickerFRDMean	0.093	0.096	26.492	0.162	20.0	20.0	19	18.0	19.250	20
RickerFRDpeak	0.097	0.099	23.142	0.171	22.0	22.0	16	20.0	20.000	21
RickerPi	0.079	0.081	36.723	0.181	18.0	18.0	22	22.0	20.000	22
RickerEi	0.098	0.100	18.421	0.224	23.0	23.0	9	26.0	20.250	23
PowerBasic	0.115	0.117	22.491	0.222	26.0	26.0	15	25.0	23.000	24
LarkinBasic	0.110	0.112	29.516	0.192	25.0	25.0	20	23.0	23.250	25
RickerPDO	0.099	0.102	29.858	0.202	24.0	24.0	21	24.0	23.250	26
LLY	0.385	0.387	218.442	0.617	27.0	27.0	29	27.0	27.500	27
RS1	0.551	0.553	135.992	0.994	28.0	28.0	27	29.0	28.000	28
RS2	0.654	0.656	165.098	1.069	30.0	30.0	28	31.0	29.750	29
TSA	0.563	0.573	3277.339	0.680	29.0	29.0	34	28.0	30.000	30
RSC	0.656	0.658	327.124	1.059	31.0	31.0	30	30.0	30.500	31
MRS	1.054	1.056	386.455	1.727	32.0	32.0	31	32.0	31.750	32
RS4yr	1.075	1.077	565.558	1.790	33.0	33.0	33	33.0	33.000	33
RS8yr	1.119	1.120	446.200	1.909	34.0	34.0	32	34.0	33.500	34

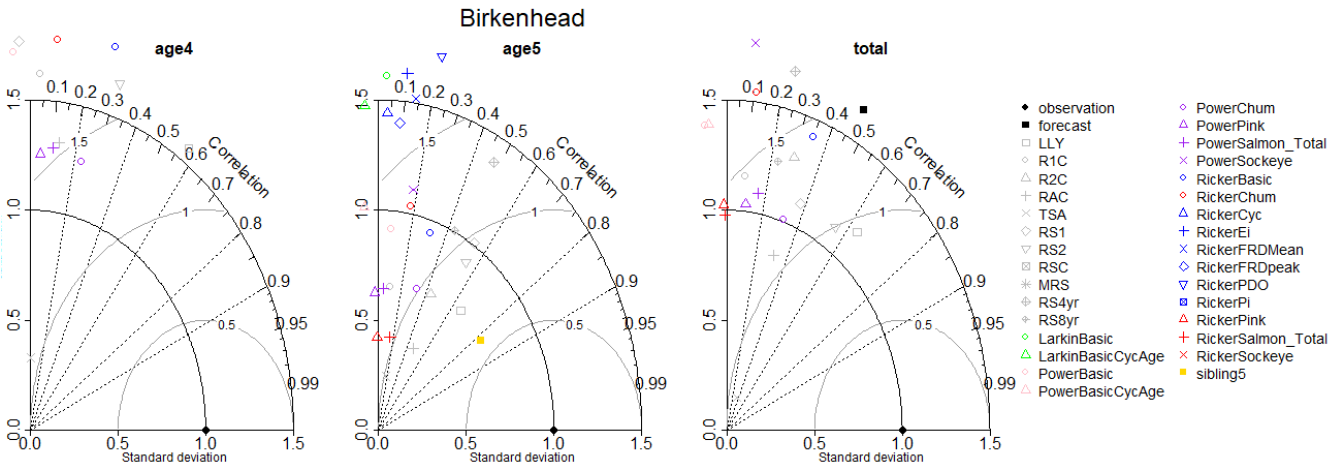
Diff



FC-TS



Birkenhead Retrospective: Taylor



Ranking (Total)-Alllys

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerPink	-0.014	0.058	1.366	0.070	2.0	3.0	3	1.0	2.250	1

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerSalmon_Total	-0.023	0.056	1.150	0.071	4.0	1.5	2	2.0	2.375	2
LLY	0.019	0.056	0.856	0.087	3.0	1.5	1	6.0	2.875	3
PowerSalmon_Total	0.033	0.060	2.631	0.072	6.0	4.0	5	3.0	4.500	4
PowerPink	0.035	0.062	2.836	0.074	8.0	5.0	7	4.0	6.000	5
R1C	0.013	0.103	1.979	0.133	1.0	11.0	4	11.0	6.750	6
RS2	0.035	0.076	2.771	0.097	8.0	8.0	6	8.0	7.500	7
RickerChum	0.035	0.068	2.889	0.091	8.0	7.0	8	7.0	7.500	8
PowerChum	0.049	0.063	3.350	0.075	10.0	6.0	10	5.0	7.750	9
RS1	0.029	0.090	3.468	0.111	5.0	9.0	11	9.0	8.500	10
RS8yr	0.052	0.109	3.815	0.138	11.0	12.0	14	13.0	12.500	11
R2C	0.056	0.099	5.081	0.137	12.0	10.0	17	12.0	12.750	12
PowerSockeye	0.094	0.113	4.854	0.132	16.0	13.0	16	10.0	13.750	13
RS4yr	0.067	0.120	3.299	0.171	13.0	14.0	9	20.0	14.000	14
RickerPi	0.091	0.129	3.595	0.164	15.0	16.0	12	16.0	14.750	15
RickerPiW	0.090	0.124	3.607	0.165	14.0	15.0	13	17.0	14.750	16
RickerEiW	0.098	0.134	5.730	0.175	18.0	17.0	18	21.0	18.500	17
RickerSockeye	0.096	0.137	4.361	0.182	17.0	18.5	15	24.5	18.750	18
PowerBasicCycAge	0.130	0.137	7.583	0.155	24.0	18.5	23	14.0	19.875	19
RickerCyc	0.110	0.138	6.839	0.169	20.0	20.5	21	18.0	19.875	20
RickerPDO	0.117	0.140	5.791	0.170	21.0	23.0	19	19.0	20.500	21
RickerEi	0.109	0.139	6.153	0.177	19.0	22.0	20	23.0	21.000	22
PowerBasic	0.131	0.138	7.687	0.156	25.0	20.5	24	15.0	21.125	23
RickerFRDpeak	0.127	0.152	7.965	0.176	22.0	24.0	26	22.0	23.500	24
RickerFRDMean	0.128	0.155	7.700	0.182	23.0	25.0	25	24.5	24.375	25
RickerBasic	0.132	0.156	7.478	0.185	26.0	26.0	22	26.0	25.000	26
LarkinBasicCycAge	0.146	0.167	9.425	0.199	27.0	27.0	28	27.0	27.250	27
LarkinBasic	0.148	0.168	9.419	0.201	28.0	28.0	27	28.0	27.750	28
RAC	0.232	0.234	11.340	0.252	29.0	29.0	29	29.0	29.000	29
TSA	0.242	0.245	12.195	0.257	30.0	30.0	32	30.0	30.500	30
MRS	0.329	0.352	11.797	0.464	31.0	31.0	30	32.0	31.000	31
RSC	0.335	0.359	11.950	0.460	32.0	32.0	31	31.0	31.500	32

(Age4)-Allyrs

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
PowerSalmon_Total	0.015	0.035	3.861	0.044	3.0	1.0	4	2.0	2.500	1
RickerPink	-0.012	0.039	2.303	0.048	1.0	4.0	3	4.0	3.000	2
PowerPink	0.016	0.036	4.188	0.045	4.0	2.5	5	3.0	3.625	3
RickerSalmon_Total	-0.018	0.040	2.245	0.049	5.0	5.0	2	5.0	4.250	4
PowerChum	0.022	0.036	5.450	0.043	6.0	2.5	11	1.0	5.125	5

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
LLY	0.026	0.042	2.238	0.065	8.0	6.0	1	7.0	5.500	6
RickerChum	0.013	0.045	5.199	0.054	2.0	7.0	9	6.0	6.000	7
RS2	0.032	0.061	4.868	0.082	10.0	9.0	7	10.0	9.000	8
R1C	0.023	0.068	4.422	0.089	7.0	14.0	6	12.0	9.750	9
PowerSockeye	0.040	0.058	6.490	0.069	13.0	8.0	13	8.0	10.500	10
RickerPi	0.038	0.067	5.080	0.090	11.5	13.0	8	13.0	11.375	11
RickerPiW	0.038	0.066	5.348	0.092	11.5	11.0	10	14.0	11.625	12
RS1	0.027	0.074	7.409	0.099	9.0	17.0	15	16.0	14.250	13
PowerBasic	0.057	0.066	10.672	0.079	22.0	11.0	20	9.0	15.500	14
RickerSockeye	0.042	0.077	5.952	0.103	14.0	21.0	12	22.0	17.250	15
PowerBasicCycAge	0.059	0.066	11.995	0.083	24.5	11.0	25	11.0	17.875	16
RickerPDO	0.053	0.075	8.748	0.097	20.5	19.0	17	15.0	17.875	17
RickerEi	0.050	0.074	10.140	0.101	18.0	17.0	19	18.0	18.000	18
RickerCyc	0.049	0.074	10.856	0.101	17.0	17.0	21	18.0	18.250	19
RickerEiW	0.045	0.076	9.914	0.103	16.0	20.0	18	22.0	19.000	20
RS8yr	0.043	0.082	8.117	0.109	15.0	25.0	16	25.0	20.250	21
R2C	0.053	0.069	12.229	0.107	20.5	15.0	26	24.0	21.375	22
RickerFRDMean	0.058	0.079	10.975	0.101	23.0	22.5	23	18.0	21.625	23
RS4yr	0.051	0.092	6.663	0.137	19.0	28.0	14	28.0	22.250	24
RickerFRDpeak	0.059	0.079	10.995	0.102	24.5	22.5	24	20.0	22.750	25
RickerBasic	0.060	0.080	10.896	0.103	26.0	24.0	22	22.0	23.500	26
LarkinBasicCycAge	0.068	0.088	15.740	0.115	27.0	26.0	28	26.0	26.750	27
LarkinBasic	0.071	0.089	14.119	0.119	28.0	27.0	27	27.0	27.250	28
RAC	0.175	0.175	22.807	0.189	29.0	29.0	31	30.0	29.750	29
TSA	0.181	0.181	22.595	0.187	30.0	30.0	30	29.0	29.750	30
MRS	0.209	0.222	22.581	0.329	31.0	31.0	29	31.0	30.500	31
RSC	0.220	0.236	23.241	0.344	32.0	32.0	32	32.0	32.000	32

(Age5)-Allyrs

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
sibling5	0.000	0.021	0.967	0.028	1.0	1.0	2	1.0	1.250	1
PowerSalmon_Total	0.001	0.024	7.771	0.032	2.5	4.0	8	3.0	4.375	2
PowerPink	0.001	0.025	7.443	0.033	2.5	5.5	7	4.5	4.875	3
LLY	-0.007	0.027	0.819	0.037	8.0	7.0	1	8.0	6.000	4
RickerSalmon_Total	-0.017	0.023	2.563	0.033	14.0	2.5	3	4.5	6.000	5
RickerPink	-0.016	0.025	2.691	0.034	12.5	5.5	4	6.0	7.000	6
PowerChum	0.008	0.023	10.297	0.029	9.0	2.5	15	2.0	7.125	7
RickerChum	0.005	0.028	9.444	0.036	7.0	8.0	12	7.0	8.500	8
RS2	0.004	0.036	6.176	0.044	6.0	13.0	6	10.0	8.750	9
R2C	0.003	0.035	7.873	0.045	5.0	11.5	9	11.0	9.125	10

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RS1	0.002	0.033	10.221	0.046	4.0	9.5	13	12.0	9.625	11
R1C	-0.010	0.035	4.959	0.055	11.0	11.5	5	18.0	11.375	12
PowerSockeye	0.021	0.033	11.724	0.042	15.0	9.5	18	9.0	12.875	13
RS8yr	0.009	0.040	11.243	0.052	10.0	14.5	17	14.5	14.000	14
RS4yr	0.016	0.041	9.313	0.062	12.5	16.0	11	26.0	16.375	15
RickerPi	0.023	0.043	8.364	0.059	16.0	19.0	10	22.0	16.750	16
PowerBasic	0.031	0.040	19.114	0.047	24.0	14.5	21	13.0	18.125	17
RickerPiW	0.025	0.044	10.223	0.061	17.0	20.0	14	24.0	18.750	18
RickerCyc	0.026	0.042	19.947	0.054	19.5	17.5	24	16.5	19.375	19
RickerEi	0.026	0.042	20.164	0.056	19.5	17.5	25	19.5	20.375	20
RickerEiW	0.026	0.045	17.580	0.062	19.5	21.5	20	26.0	21.750	21
RickerPDO	0.031	0.046	14.436	0.058	24.0	24.0	19	21.0	22.000	22
RickerSockeye	0.026	0.046	10.964	0.065	19.5	24.0	16	29.0	22.125	23
RickerFRDpeak	0.031	0.045	21.273	0.054	24.0	21.5	27	16.5	22.250	24
PowerBasicCycAge	0.034	0.046	21.009	0.052	27.5	24.0	26	14.5	23.000	25
RickerFRDMean	0.032	0.047	19.528	0.056	26.0	26.5	23	19.5	23.750	26
RickerBasic	0.030	0.051	19.124	0.062	22.0	29.0	22	26.0	24.750	27
LarkinBasicCycAge	0.034	0.047	28.365	0.060	27.5	26.5	30	23.0	26.750	28
LarkinBasic	0.036	0.048	24.576	0.063	29.0	28.0	29	28.0	28.500	29
RAC	0.057	0.066	22.872	0.071	30.0	30.0	28	30.0	29.500	30
TSA	0.061	0.070	29.033	0.077	31.0	31.0	31	31.0	31.000	31
RSC	0.114	0.126	30.423	0.179	32.0	32.0	32	32.0	32.000	32
MRS	0.119	0.130	30.531	0.196	33.0	33.0	33	33.0	33.000	33

(Total)-Cycle

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerPink	-0.019	0.027	0.132	0.034	3.0	1.0	2	1.0	1.750	1
RickerSalmon_Total	-0.020	0.028	0.128	0.035	4.0	2.0	1	2.0	2.250	2
R2C	0.015	0.033	2.343	0.040	2.0	5.0	8	4.0	4.750	3
PowerSalmon_Total	0.029	0.029	1.843	0.038	9.0	3.0	5	3.0	5.000	4
R1C	0.004	0.044	1.389	0.045	1.0	9.0	4	7.0	5.250	5
RickerChum	0.022	0.034	2.167	0.041	5.5	6.0	7	5.5	6.000	6
PowerPink	0.032	0.032	1.869	0.041	10.0	4.0	6	5.5	6.375	7
RS2	0.028	0.040	3.067	0.051	7.5	7.0	10	8.5	8.250	8
RS8yr	0.028	0.056	2.902	0.063	7.5	10.5	9	10.0	9.250	9
PowerChum	0.043	0.043	3.160	0.051	12.0	8.0	14	8.5	10.625	10
RS1	0.022	0.056	4.653	0.079	5.5	10.5	17	11.0	11.000	11
RS4yr	0.038	0.072	3.068	0.084	11.0	13.0	11	12.0	11.750	12

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerSockeye	0.066	0.081	3.107	0.094	14.0	14.0	13	14.5	13.875	13
RickerCyc	0.060	0.069	5.235	0.085	13.0	12.0	18	13.0	14.000	14
RickerPi	0.075	0.087	3.082	0.098	15.5	16.0	12	16.0	14.875	15
RickerPiW	0.075	0.084	3.587	0.094	15.5	15.0	15	14.5	15.000	16
LLY	0.086	0.088	1.036	0.138	21.0	17.0	3	28.0	17.250	17
RickerFRDMean	0.081	0.090	5.766	0.102	17.0	20.0	20	17.0	18.500	18
PowerSockeye	0.089	0.089	4.466	0.104	24.0	18.5	16	19.0	19.375	19
RickerEi	0.084	0.091	5.834	0.104	19.5	21.5	21	19.0	20.250	20
RickerPDO	0.088	0.091	5.321	0.104	23.0	21.5	19	19.0	20.625	21
RickerEiW	0.083	0.092	5.865	0.105	18.0	23.0	22	21.0	21.000	22
LarkinBasic	0.084	0.089	7.509	0.117	19.5	18.5	27	23.0	22.000	23
RickerFRDpeak	0.087	0.095	6.833	0.113	22.0	24.0	24	22.0	23.000	24
RickerBasic	0.098	0.106	6.721	0.121	26.0	26.0	23	24.0	24.750	25
LarkinBasicCycAge	0.092	0.096	7.968	0.125	25.0	25.0	28	25.0	25.750	26
PowerBasic	0.121	0.121	7.454	0.132	27.0	27.0	25	26.0	26.250	27
PowerBasicCycAge	0.124	0.124	7.507	0.136	28.0	28.0	26	27.0	27.250	28
RSC	0.183	0.193	8.501	0.231	29.0	29.0	29	30.0	29.250	29
RAC	0.194	0.194	10.323	0.196	31.0	30.0	31	29.0	30.250	30
MRS	0.190	0.198	9.416	0.234	30.0	31.0	30	31.0	30.500	31
TSA	0.279	0.279	14.289	0.280	32.0	32.0	32	32.0	32.000	32

(Age4)-Cycle

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
PowerSalmon_Total	0.005	0.007	0.435	0.008	8.5	1.0	3	1.0	3.375	1
RickerPi	-0.001	0.013	0.617	0.017	1.5	4.0	5	4.0	3.625	2
PowerChum	0.004	0.011	0.813	0.014	5.5	3.0	8	3.0	4.875	3
PowerPink	0.009	0.009	0.582	0.011	14.5	2.0	4	2.0	5.625	4
RickerPiW	0.002	0.015	0.976	0.019	3.0	6.0	10	5.5	6.125	5
RickerEi	0.005	0.014	1.062	0.019	8.5	5.0	11	5.5	7.500	6
RickerSockeye	-0.011	0.019	0.059	0.020	18.0	9.0	1	7.0	8.750	7
RickerFRDMean	0.005	0.018	1.400	0.025	8.5	7.0	14	9.5	9.750	8
RickerChum	-0.014	0.020	-0.124	0.022	20.5	12.0	2	8.0	10.625	9
RickerCyc	0.001	0.022	1.248	0.026	1.5	17.5	13	12.0	11.000	10
RS8yr	-0.005	0.026	0.966	0.028	8.5	20.5	9	16.0	13.500	11
RickerEiW	0.004	0.022	1.508	0.028	5.5	17.5	16	16.0	13.750	12
RickerPink	-0.021	0.021	-0.717	0.025	24.5	15.0	6	9.5	13.750	13
RickerPDO	0.008	0.019	1.666	0.027	12.5	9.0	21	14.0	14.125	14
RickerFRDpeak	0.008	0.019	1.661	0.028	12.5	9.0	20	16.0	14.375	15
RickerSalmon_Total	-0.021	0.021	-0.742	0.026	24.5	15.0	7	12.0	14.625	16
LarkinBasicCycAge	0.007	0.020	1.651	0.029	11.0	12.0	19	18.0	15.000	17

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RS4yr	-0.003	0.028	1.230	0.031	4.0	24.0	12	20.5	15.125	18
LarkinBasic	0.009	0.020	1.901	0.031	14.5	12.0	22	20.5	17.250	19
PowerSockeye	0.018	0.026	1.516	0.026	22.0	20.5	17	12.0	17.875	20
RickerBasic	0.011	0.021	2.049	0.033	18.0	15.0	23	22.5	19.625	21
R1C	0.011	0.030	1.481	0.033	18.0	25.5	15	22.5	20.250	22
R2C	0.019	0.024	2.087	0.030	23.0	19.0	24	19.0	21.250	23
RS2	0.010	0.027	2.349	0.039	16.0	22.5	25	25.5	22.250	24
RSC	0.014	0.027	2.644	0.042	20.5	22.5	26	27.0	24.000	25
PowerBasicCycAge	0.030	0.030	2.719	0.037	27.5	25.5	27	24.0	26.000	26
LLY	0.069	0.071	1.621	0.108	30.0	30.0	18	30.0	27.000	27
PowerBasic	0.033	0.033	2.808	0.039	29.0	27.0	28	25.5	27.375	28
RS1	0.023	0.037	3.753	0.058	26.0	28.0	29	28.5	27.875	29
MRS	0.030	0.038	3.998	0.058	27.5	29.0	30	28.5	28.750	30
RAC	0.144	0.144	9.525	0.144	31.0	31.0	31	31.0	31.000	31
TSA	0.202	0.202	13.201	0.203	32.0	32.0	32	32.0	32.000	32

(Age5)-Cycle

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerSalmon_Total	-0.007	0.014	8.008	0.018	4.5	1.0	4	1.5	2.750	1
RickerPink	-0.007	0.015	7.588	0.019	4.5	3.0	3	3.5	3.500	2
R2C	-0.004	0.015	17.518	0.019	2.0	3.0	7	3.5	3.875	3
R1C	-0.007	0.015	11.237	0.020	4.5	3.0	5	5.5	4.500	4
PowerPink	0.007	0.017	18.979	0.018	4.5	5.5	8	1.5	4.875	5
RS1	-0.001	0.019	26.546	0.024	1.0	7.0	13	7.0	7.000	6
PowerSalmon_Total	0.011	0.017	20.485	0.020	7.0	5.5	10	5.5	7.000	7
sibling5	0.022	0.022	1.837	0.028	10.0	8.5	2	10.0	7.625	8
LLY	0.017	0.024	1.544	0.032	8.0	11.0	1	11.0	7.750	9
RS2	0.018	0.022	13.781	0.027	9.0	8.5	6	9.0	8.125	10
PowerChum	0.023	0.023	28.882	0.026	11.0	10.0	16	8.0	11.250	11
RickerChum	0.026	0.027	26.828	0.035	12.0	12.0	14	12.0	12.500	12
PowerSockeye	0.040	0.040	30.306	0.047	14.0	14.0	17	13.0	14.500	13
RS8yr	0.033	0.037	31.643	0.053	13.0	13.0	18	16.5	15.125	14
RickerCyc	0.042	0.042	54.432	0.050	16.0	15.0	23	14.0	17.000	15
PowerBasic	0.046	0.046	50.225	0.052	17.0	16.0	21	15.0	17.250	16
RS4yr	0.041	0.049	24.586	0.077	15.0	18.0	11	29.0	18.250	17
RickerPiW	0.053	0.055	24.776	0.068	22.0	22.5	12	23.0	19.875	18
RAC	0.051	0.051	57.517	0.053	20.0	19.5	27	16.5	20.750	19
LarkinBasic	0.048	0.048	67.285	0.061	18.0	17.0	29	19.0	20.750	20
RickerFRDpeak	0.050	0.051	57.960	0.059	19.0	19.5	28	18.0	21.125	21
RickerPi	0.056	0.058	20.024	0.073	24.0	26.0	9	28.0	21.750	22

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerFRDMean	0.054	0.055	52.308	0.063	23.0	22.5	22	20.5	22.000	23
RickerEi	0.052	0.054	56.901	0.063	21.0	21.0	26	20.5	22.125	24
PowerBasicCycAge	0.057	0.057	56.040	0.064	26.0	24.5	25	22.0	24.375	25
RickerEiW	0.057	0.059	47.787	0.069	26.0	27.5	20	24.0	24.375	26
RickerPDO	0.059	0.059	37.160	0.071	28.0	27.5	19	26.0	25.125	27
RickerSockeye	0.062	0.064	28.349	0.088	30.0	30.0	15	31.0	26.500	28
RickerBasic	0.060	0.061	54.439	0.070	29.0	29.0	24	25.0	26.750	29
LarkinBasicCycAge	0.057	0.057	80.353	0.072	26.0	24.5	31	27.0	27.125	30
TSA	0.076	0.076	78.075	0.078	31.0	31.0	30	30.0	30.500	31
MRS	0.160	0.161	82.986	0.208	32.0	32.0	32	32.0	32.000	32
RSC	0.169	0.170	86.488	0.219	33.0	33.0	33	33.0	33.000	33

(Total)-Other

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerSalmon_Total	-0.026	0.043	1.385	0.053	4.0	1.0	2	1.0	2.000	1
RickerPink	-0.015	0.047	1.667	0.055	2.0	2.0	3	2.0	2.250	2
PowerSalmon_Total	0.036	0.051	3.177	0.066	7.0	3.0	5	3.0	4.500	3
RS2	0.035	0.058	3.218	0.078	5.5	6.5	6	6.0	6.000	4
PowerPink	0.038	0.054	3.405	0.067	9.0	4.0	7	4.0	6.000	5
LLY	0.038	0.058	1.190	0.091	9.0	6.5	1	9.0	6.375	6
R1C	0.004	0.092	2.237	0.127	1.0	11.0	4	12.0	7.000	7
RS1	0.024	0.071	4.138	0.082	3.0	10.0	11	7.0	7.750	8
RickerChum	0.038	0.058	3.542	0.085	9.0	6.5	8	8.0	7.875	9
PowerChum	0.054	0.058	4.115	0.072	12.0	6.5	10	5.0	8.375	10
R2C	0.035	0.069	5.783	0.096	5.5	9.0	16	10.0	10.125	11
RS8yr	0.050	0.096	4.483	0.129	11.0	12.0	14	13.0	12.500	12
RS4yr	0.065	0.107	3.873	0.163	13.0	14.0	9	21.0	14.250	13
RickerPiW	0.090	0.108	4.274	0.147	14.0	15.0	13	15.0	14.250	14
PowerSockeye	0.097	0.105	5.789	0.126	17.0	13.0	17	11.0	14.500	15
RickerPi	0.092	0.114	4.195	0.150	15.0	17.0	12	16.0	15.000	16
RickerCyc	0.095	0.111	8.001	0.132	16.0	16.0	21	14.0	16.750	17
RickerEiW	0.100	0.119	7.011	0.157	19.0	18.0	19	20.0	19.000	18
RickerPDO	0.113	0.125	6.815	0.154	21.0	20.0	18	18.0	19.250	19
RickerSockeye	0.098	0.123	5.113	0.178	18.0	19.0	15	26.0	19.500	20
RickerEi	0.109	0.127	7.490	0.164	20.0	21.0	20	22.5	20.875	21
PowerBasic	0.135	0.135	9.252	0.154	25.5	22.0	25	18.0	22.625	22
PowerBasicCycAge	0.135	0.136	9.145	0.154	25.5	23.0	24	18.0	22.625	23
RickerFRDpeak	0.122	0.138	9.497	0.164	22.0	24.0	26	22.5	23.625	24
RickerFRDMean	0.123	0.140	9.121	0.168	23.0	25.5	23	24.0	23.875	25
RickerBasic	0.126	0.140	8.689	0.170	24.0	25.5	22	25.0	24.125	26

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
LarkinBasicCycAge	0.137	0.149	11.247	0.180	27.0	27.0	28	27.0	27.250	27
LarkinBasic	0.139	0.151	11.203	0.183	28.0	28.0	27	28.0	27.750	28
RAC	0.204	0.206	12.962	0.221	29.0	29.0	29	29.0	29.000	29
TSA	0.248	0.251	14.492	0.264	30.0	30.0	32	30.0	30.500	30
MRS	0.332	0.346	13.618	0.466	31.0	31.0	30	31.0	30.750	31
RSC	0.344	0.360	13.815	0.470	32.0	32.0	31	32.0	31.750	32

(Age4)-Other

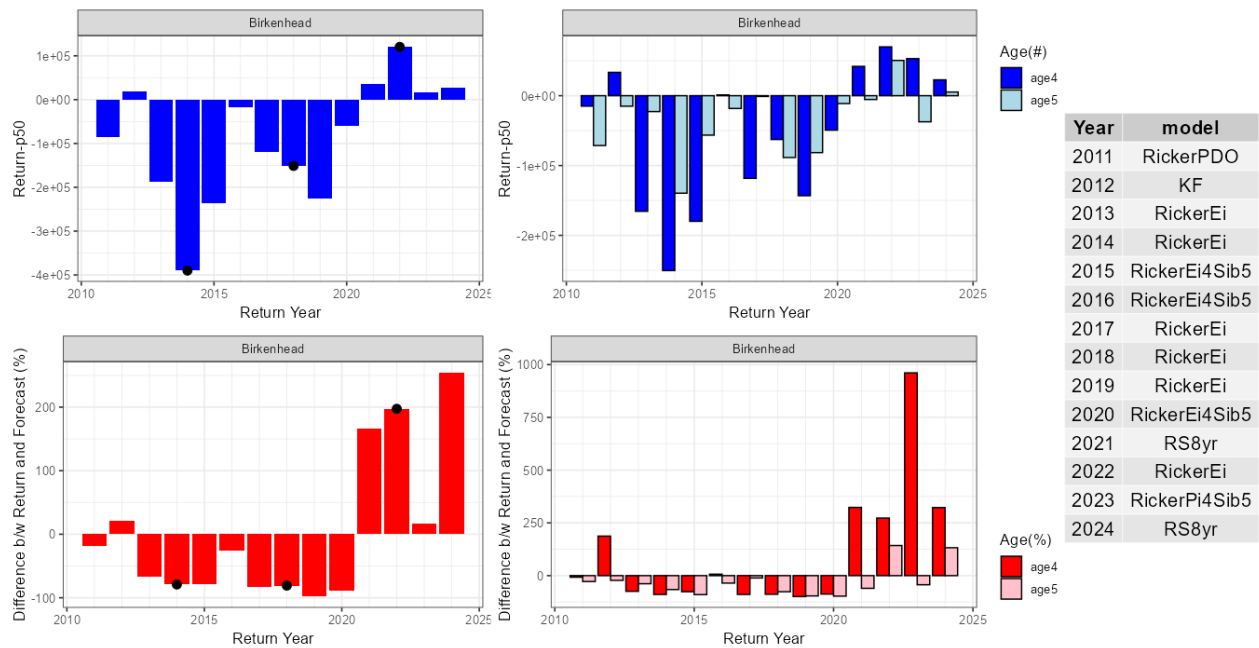
model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
PowerSalmon_Total	0.008	0.026	4.171	0.033	1.0	1.0	4	1.0	1.750	1
PowerPink	0.009	0.027	4.480	0.034	2.0	2.0	6	2.0	3.000	2
RickerPink	-0.020	0.031	2.490	0.035	7.0	4.0	2	3.0	4.000	3
RickerSalmon_Total	-0.026	0.033	2.461	0.038	9.0	5.0	1	5.0	5.000	4
PowerChum	0.019	0.030	6.420	0.037	6.0	3.0	11	4.0	6.000	5
RickerChum	0.010	0.040	6.201	0.046	3.0	6.0	10	6.0	6.250	6
RS2	0.023	0.045	5.018	0.059	8.0	9.0	7	7.0	7.750	7
R1C	0.011	0.055	4.340	0.073	4.0	12.0	5	14.0	8.750	8
LLY	0.034	0.043	2.678	0.070	14.0	8.0	3	11.0	9.000	9
RickerPiW	0.031	0.054	5.888	0.072	10.5	11.0	9	12.0	10.625	10
RS1	0.014	0.057	8.291	0.068	5.0	15.0	15	10.0	11.250	11
PowerSockeye	0.037	0.051	7.289	0.061	16.5	10.0	14	9.0	12.375	12
R2C	0.031	0.042	13.108	0.060	10.5	7.0	25	8.0	12.625	13
RickerPi	0.033	0.056	5.619	0.075	13.0	13.5	8	16.5	12.750	14
RickerCyc	0.037	0.056	12.532	0.073	16.5	13.5	22	14.0	16.500	15
RickerEiW	0.037	0.061	11.656	0.078	16.5	19.0	18	18.0	17.875	16
RS8yr	0.032	0.069	8.952	0.091	12.0	24.5	16	21.0	18.375	17
RickerSockeye	0.037	0.067	6.528	0.096	16.5	21.0	12	25.0	18.625	18
RickerEi	0.042	0.060	11.940	0.080	20.0	17.5	19	19.0	18.875	19
PowerBasic	0.056	0.060	12.409	0.073	25.5	17.5	21	14.0	19.500	20
RickerPDO	0.047	0.064	9.932	0.084	21.0	20.0	17	20.0	19.500	21
PowerBasicCycAge	0.054	0.058	13.946	0.075	23.5	16.0	26	16.5	20.500	22
RS4yr	0.038	0.077	7.210	0.115	19.0	26.5	13	28.0	21.625	23
RickerFRDMean	0.053	0.068	12.624	0.092	22.0	22.5	24	22.5	22.750	24
RickerFRDpeak	0.054	0.068	12.592	0.092	23.5	22.5	23	22.5	22.875	25
RickerBasic	0.056	0.069	12.328	0.093	25.5	24.5	20	24.0	23.500	26
LarkinBasicCycAge	0.061	0.077	18.651	0.104	27.0	26.5	28	26.0	26.875	27
LarkinBasic	0.067	0.081	16.730	0.112	28.0	28.0	27	27.0	27.500	28
RAC	0.146	0.146	24.411	0.151	29.0	29.0	29	29.0	29.000	29
TSA	0.176	0.176	25.376	0.182	30.0	30.0	31	30.0	30.250	30
MRS	0.191	0.202	24.788	0.303	31.0	31.0	30	31.0	30.750	31

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RSC	0.220	0.233	26.349	0.346	32.0	32.0	32	32.0	32.000	32

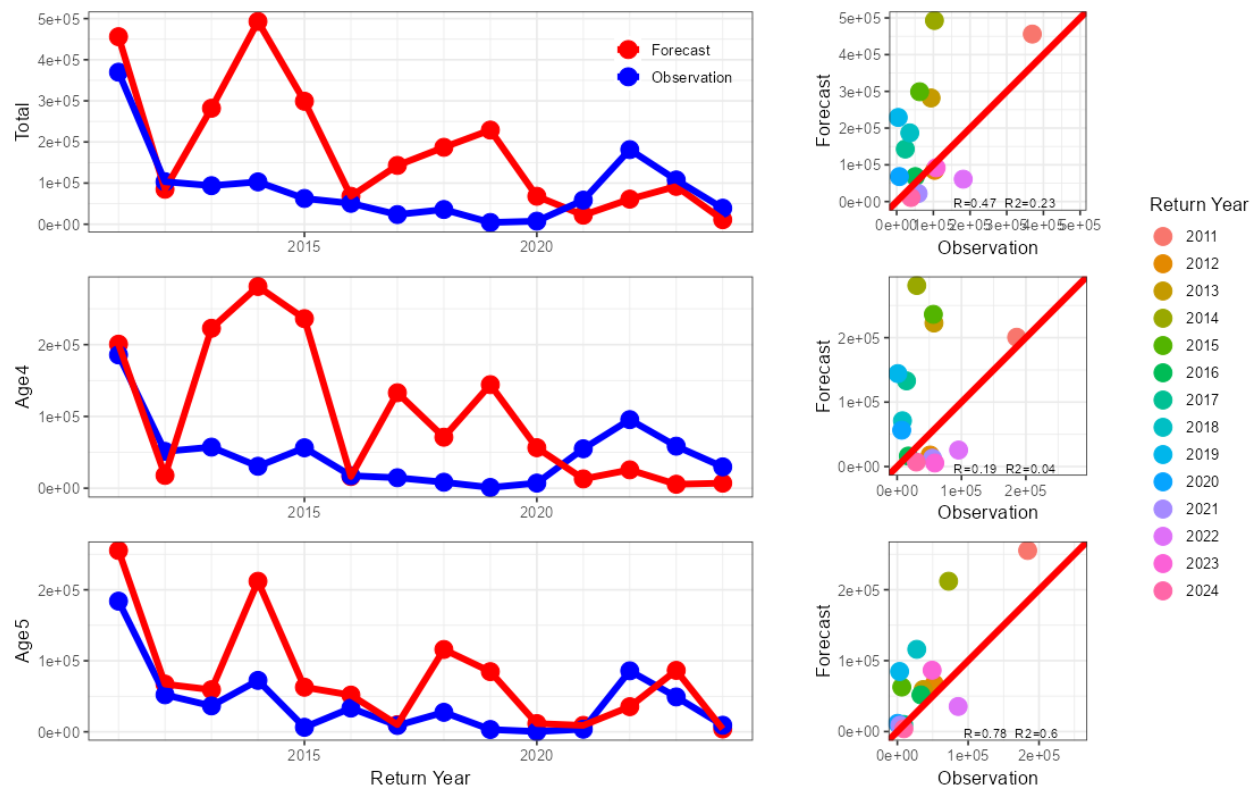
(Age5)-Other

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerSalmon_Total	-0.010	0.016	3.498	0.022	6.5	1.0	3	1.0	2.875	1
RickerPink	-0.007	0.018	3.682	0.023	4.0	2.5	4	2.0	3.125	2
sibling5	0.008	0.018	1.350	0.026	5.0	2.5	2	5.5	3.750	3
LLY	0.004	0.022	1.250	0.032	1.5	7.0	1	7.0	4.125	4
PowerPink	0.012	0.019	9.771	0.025	9.0	4.5	7	3.5	6.000	5
PowerSalmon_Total	0.012	0.019	10.212	0.025	9.0	4.5	9	3.5	6.500	6
R2C	0.004	0.033	9.959	0.044	1.5	11.0	8	11.0	7.875	7
RS2	0.012	0.032	7.874	0.040	9.0	9.5	6	9.0	8.375	8
PowerChum	0.016	0.021	13.437	0.026	12.0	6.0	15	5.5	9.625	9
RickerChum	0.014	0.026	12.339	0.034	11.0	8.0	12	8.0	9.750	10
R1C	-0.006	0.038	6.392	0.058	3.0	13.5	5	19.0	10.125	11
RS1	0.010	0.032	13.062	0.046	6.5	9.5	13	12.0	10.250	12
PowerSockeye	0.030	0.034	15.191	0.043	15.0	12.0	18	10.0	13.750	13
RS8yr	0.018	0.038	14.313	0.052	13.0	13.5	17	14.0	14.375	14
RS4yr	0.027	0.042	11.902	0.067	14.0	17.0	11	28.0	17.500	15
RickerCyc	0.032	0.041	25.738	0.054	16.0	15.5	24	15.5	17.750	16
RickerPi	0.033	0.044	10.837	0.062	17.5	20.0	10	23.5	17.750	17
PowerBasic	0.039	0.041	24.687	0.049	26.5	15.5	22	13.0	19.250	18
RickerFRDpeak	0.036	0.043	27.402	0.054	21.5	18.0	27	15.5	20.500	19
RickerPiW	0.036	0.045	13.304	0.064	21.5	22.5	14	26.0	21.000	20
RickerEi	0.035	0.044	26.189	0.059	19.5	20.0	25	20.5	21.250	21
RickerFRDMean	0.037	0.045	25.114	0.056	23.0	22.5	23	18.0	21.625	22
RickerSockeye	0.035	0.047	14.168	0.069	19.5	26.0	16	29.0	22.625	23
RickerBasic	0.033	0.051	24.088	0.063	17.5	29.0	21	25.0	23.125	24
RickerPDO	0.039	0.046	18.638	0.062	26.5	24.5	19	23.5	23.375	25
LarkinBasic	0.038	0.044	31.544	0.059	24.5	20.0	29	20.5	23.500	26
RickerEiW	0.038	0.049	22.892	0.066	24.5	27.5	20	27.0	24.750	27
PowerBasicCycAge	0.046	0.049	27.224	0.055	29.0	27.5	26	17.0	24.875	28
LarkinBasicCycAge	0.040	0.046	36.623	0.061	28.0	24.5	30	22.0	26.125	29
RAC	0.058	0.069	28.736	0.074	30.0	30.0	28	30.0	29.500	30
TSA	0.072	0.083	36.740	0.085	31.0	31.0	31	31.0	31.000	31
RSC	0.124	0.132	38.014	0.191	32.0	32.0	32	32.0	32.000	32
MRS	0.141	0.145	38.414	0.217	33.0	33.0	33	33.0	33.000	33

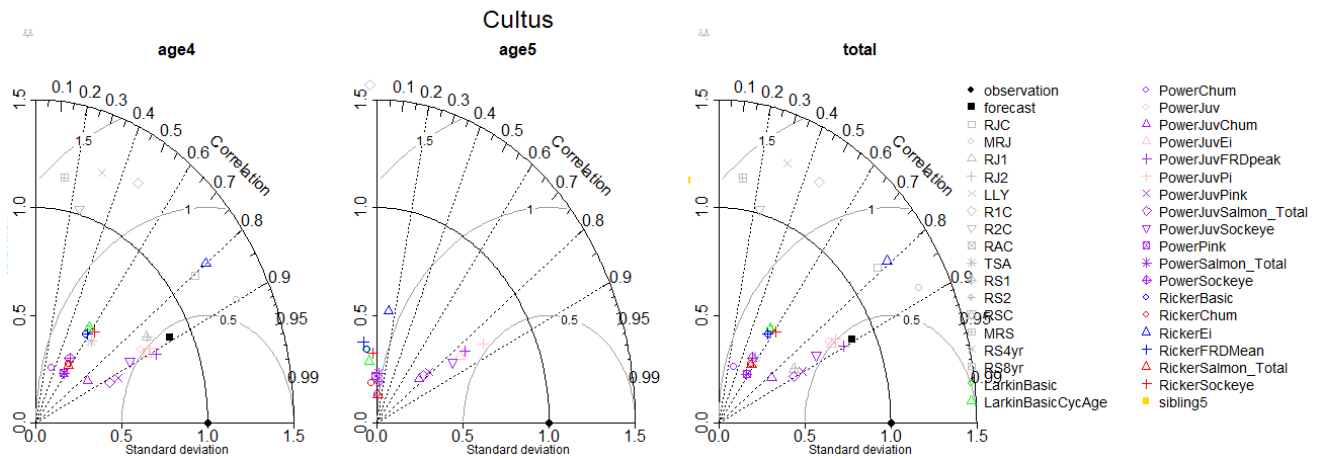
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FC-TS



Cultus Retrospective: Taylor



Ranking (Total)-Allysrs

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
PowerJuvSalmon_Total	0.000	0.001	1.616	0.003	4.0	1.5	15	9.0	7.375	1
PowerJuvPink	0.000	0.001	1.673	0.003	4.0	1.5	17	9.0	7.875	2
RickerEI	0.000	0.002	0.883	0.004	4.0	9.0	4	15.0	8.000	3
RickerPiW	-0.001	0.002	0.099	0.003	17.5	9.0	2	9.0	9.375	4
PowerJuvSockeye	0.000	0.002	1.811	0.003	4.0	9.0	18	9.0	10.000	5
RJ2	0.000	0.002	2.055	0.003	4.0	9.0	20	9.0	10.500	6
PowerJuvPi	0.001	0.002	1.393	0.002	17.5	9.0	13	2.5	10.500	7
PowerJuvChum	0.000	0.002	2.060	0.003	4.0	9.0	21	9.0	10.750	8
RickerEiW	-0.001	0.002	0.628	0.004	17.5	9.0	3	15.0	11.125	9
PowerJuvPiW	0.001	0.002	1.650	0.002	17.5	9.0	16	2.5	11.250	10
RJ1	0.000	0.002	2.337	0.003	4.0	9.0	26	9.0	12.000	11
PowerJuvEiW	0.001	0.002	2.130	0.002	17.5	9.0	22	2.5	12.750	12
PowerJuvFRDpeak	0.001	0.002	2.311	0.002	17.5	9.0	25	2.5	13.500	13
PowerJuv	0.001	0.002	2.206	0.003	17.5	9.0	23	9.0	14.625	14
RickerSockeye	-0.001	0.003	0.905	0.004	17.5	21.0	5	15.0	14.625	15
PowerJuvEi	0.001	0.002	2.228	0.003	17.5	9.0	24	9.0	14.875	16
PowerSalmon_Total	-0.001	0.003	0.977	0.005	17.5	21.0	7	23.0	17.125	17
PowerPink	-0.001	0.003	1.096	0.005	17.5	21.0	8	23.0	17.375	18
RickerBasic	-0.001	0.003	1.161	0.005	17.5	21.0	9	23.0	17.625	19
LarkinBasic	-0.001	0.003	1.194	0.005	17.5	21.0	10	23.0	17.875	20
LarkinBasicCycAge	-0.001	0.003	1.231	0.005	17.5	21.0	11	23.0	18.125	21
RickerFRDMean	-0.001	0.003	1.275	0.005	17.5	21.0	12	23.0	18.375	22
RickerSalmon_Total	-0.002	0.003	-0.044	0.005	29.5	21.0	1	23.0	18.625	23
PowerSockeye	-0.001	0.003	1.579	0.005	17.5	21.0	14	23.0	18.875	24
RickerChum	-0.002	0.003	0.909	0.005	29.5	21.0	6	23.0	19.875	25

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
PowerChum	-0.001	0.003	1.818	0.005	17.5	21.0	19	23.0	20.125	26
R1C	0.001	0.004	5.692	0.006	17.5	28.5	30	30.0	26.500	27
LLY	0.001	0.004	5.023	0.007	17.5	28.5	29	31.5	26.625	28
MRS	0.001	0.005	3.289	0.008	17.5	32.0	27	33.0	27.375	29
RJC	0.004	0.004	5.718	0.005	33.0	28.5	31	23.0	28.875	30
MRJ	0.004	0.004	5.980	0.005	33.0	28.5	32	23.0	29.125	31
RS2	0.005	0.005	12.419	0.005	35.5	32.0	35	23.0	31.375	32
RSC	0.002	0.007	4.417	0.012	29.5	34.0	28	34.0	31.375	33
R2C	0.002	0.005	17.612	0.007	29.5	32.0	36	31.5	32.250	34
RS8yr	0.004	0.009	7.165	0.015	33.0	35.0	33	35.0	34.000	35
RS4yr	0.005	0.011	9.213	0.019	35.5	36.0	34	36.0	35.375	36
RS1	0.023	0.024	20.722	0.059	37.0	37.0	37	39.0	37.500	37
TSA	0.033	0.033	132.060	0.033	38.0	38.0	38	37.0	37.750	38
RAC	0.034	0.034	225.876	0.043	39.0	39.0	39	38.0	38.750	39

(Age4)-Allyrs

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
PowerJuvPiW	0.000	0.001	1.987	0.002	5.5	3.0	14	3.0	6.375	1
PowerJuvPi	0.000	0.002	1.730	0.002	5.5	10.5	13	3.0	8.000	2
PowerJuvEiW	0.000	0.001	2.629	0.002	5.5	3.0	21	3.0	8.125	3
PowerJuvPink	0.000	0.001	1.990	0.003	5.5	3.0	15	9.5	8.250	4
PowerJuvSalmon_Total	0.000	0.001	2.032	0.003	5.5	3.0	16	9.5	8.500	5
RickerEi	0.000	0.002	0.965	0.004	5.5	10.5	4	15.5	8.875	6
RickerPiW	-0.001	0.002	0.301	0.003	18.5	10.5	2	9.5	10.125	7
PowerJuvEi	0.000	0.002	2.715	0.002	5.5	10.5	23	3.0	10.500	8
PowerJuvSockeye	0.000	0.002	2.177	0.003	5.5	10.5	17	9.5	10.625	9
RJ2	0.000	0.002	2.358	0.003	5.5	10.5	18	9.5	10.875	10
RickerEiW	-0.001	0.002	0.659	0.004	18.5	10.5	3	15.5	11.875	11
RJ1	0.000	0.002	2.727	0.003	5.5	10.5	24	9.5	12.375	12
PowerJuvFRDpeak	0.001	0.001	2.756	0.002	18.5	3.0	25	3.0	12.375	13
PowerJuv	0.001	0.002	2.549	0.003	18.5	10.5	20	9.5	14.625	14
RickerSockeye	-0.001	0.003	0.974	0.004	18.5	21.0	5	15.5	15.000	15
PowerJuvChum	-0.001	0.002	2.705	0.003	18.5	10.5	22	9.5	15.125	16
RickerFRDMean	-0.001	0.003	1.310	0.004	18.5	21.0	12	15.5	16.750	17
LarkinBasicCycAge	-0.001	0.003	1.178	0.005	18.5	21.0	8	23.0	17.625	18
LarkinBasic	-0.001	0.003	1.211	0.005	18.5	21.0	9	23.0	17.875	19
RickerBasic	-0.001	0.003	1.214	0.005	18.5	21.0	10	23.0	18.125	20
PowerPink	-0.001	0.003	1.216	0.005	18.5	21.0	11	23.0	18.375	21
RickerSalmon_Total	-0.002	0.003	-0.093	0.005	29.0	21.0	1	23.0	18.500	22

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerChum	-0.002	0.003	1.110	0.005	29.0	21.0	6	23.0	19.750	23
PowerSalmon_Total	-0.002	0.003	1.172	0.005	29.0	21.0	7	23.0	20.000	24
PowerSockeye	-0.001	0.003	2.366	0.005	18.5	21.0	19	23.0	20.375	25
PowerChum	-0.001	0.003	3.062	0.005	18.5	21.0	26	23.0	22.125	26
R1C	0.001	0.004	7.406	0.006	18.5	28.5	31	29.0	26.750	27
MRS	0.001	0.005	4.411	0.008	18.5	31.5	27	32.0	27.250	28
LLY	0.001	0.004	11.915	0.007	18.5	28.5	34	30.5	27.875	29
RJC	0.003	0.004	6.815	0.005	32.0	28.5	29	23.0	28.125	30
MRJ	0.004	0.004	7.158	0.005	33.5	28.5	30	23.0	28.750	31
RSC	0.002	0.006	5.389	0.011	29.0	33.0	28	33.0	30.750	32
R2C	0.002	0.005	27.040	0.007	29.0	31.5	37	30.5	32.000	33
RS8yr	0.004	0.008	9.693	0.015	33.5	34.0	32	34.0	33.375	34
RS4yr	0.005	0.011	11.807	0.019	35.0	35.0	33	35.0	34.500	35
RS2	0.014	0.017	21.053	0.033	36.0	36.0	36	37.0	36.250	36
RS1	0.017	0.022	19.826	0.053	37.0	37.0	35	39.0	37.000	37
TSA	0.031	0.031	265.329	0.031	38.0	38.0	38	36.0	37.500	38
RAC	0.032	0.032	516.535	0.041	39.0	39.0	39	38.0	38.750	39

(Age5)-Alllys

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
PowerJuvSockeye	0.000	0.000	0.014	0.000	18.5	18.5	1	16.0	13.500	1
PowerJuvChum	0.000	0.000	-0.018	0.000	18.5	18.5	2	16.0	13.750	2
PowerJuvPiW	0.000	0.000	-0.032	0.000	18.5	18.5	3	16.0	14.000	3
PowerJuvPi	0.000	0.000	-0.063	0.000	18.5	18.5	4	16.0	14.250	4
PowerJuvSalmon_Total	0.000	0.000	-0.075	0.000	18.5	18.5	5	16.0	14.500	5
PowerJuvPink	0.000	0.000	-0.116	0.000	18.5	18.5	6	16.0	14.750	6
PowerJuvEiW	0.000	0.000	0.128	0.000	18.5	18.5	7	16.0	15.000	7
PowerJuvFRDpeak	0.000	0.000	0.135	0.000	18.5	18.5	8	16.0	15.250	8
PowerJuvEi	0.000	0.000	0.140	0.000	18.5	18.5	9	16.0	15.500	9
RickerPiW	0.000	0.000	-0.149	0.000	18.5	18.5	10	16.0	15.750	10
PowerChum	0.000	0.000	0.224	0.000	18.5	18.5	11	16.0	16.000	11
PowerJuv	0.000	0.000	0.236	0.000	18.5	18.5	12	16.0	16.250	12
RickerEi	0.000	0.000	0.322	0.000	18.5	18.5	13	16.0	16.500	13
RickerSalmon_Total	0.000	0.000	-0.374	0.000	18.5	18.5	14	16.0	16.750	14
PowerSalmon_Total	0.000	0.000	0.649	0.000	18.5	18.5	15	16.0	17.000	15
sibling5	0.000	0.000	0.692	0.000	18.5	18.5	16	16.0	17.250	16
PowerSockeye	0.000	0.000	0.763	0.000	18.5	18.5	17	16.0	17.500	17
RickerChum	0.000	0.000	0.800	0.000	18.5	18.5	18	16.0	17.750	18
PowerPink	0.000	0.000	0.954	0.000	18.5	18.5	19	16.0	18.000	19
RickerEiW	0.000	0.000	1.031	0.000	18.5	18.5	20	16.0	18.250	20

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
LLY	0.000	0.000	1.458	0.000	18.5	18.5	21	16.0	18.500	21
RickerSockeye	0.000	0.000	1.463	0.000	18.5	18.5	22	16.0	18.750	22
LarkinBasicCycAge	0.000	0.000	1.549	0.000	18.5	18.5	23	16.0	19.000	23
RickerBasic	0.000	0.000	1.970	0.000	18.5	18.5	24	16.0	19.250	24
LarkinBasic	0.000	0.000	2.106	0.000	18.5	18.5	25	16.0	19.500	25
RickerFRDMean	0.000	0.000	2.485	0.000	18.5	18.5	26	16.0	19.750	26
RJ2	0.000	0.000	3.968	0.000	18.5	18.5	27	16.0	20.000	27
RJ1	0.000	0.000	4.161	0.000	18.5	18.5	28	16.0	20.250	28
MRS	0.000	0.000	10.206	0.000	18.5	18.5	31	16.0	21.000	29
R2C	0.000	0.000	11.885	0.000	18.5	18.5	32	16.0	21.250	30
R1C	0.000	0.000	12.252	0.000	18.5	18.5	33	16.0	21.500	31
RJC	0.000	0.000	8.836	0.001	18.5	18.5	29	34.0	25.000	32
MRJ	0.000	0.000	9.883	0.001	18.5	18.5	30	34.0	25.250	33
RSC	0.000	0.000	14.462	0.001	18.5	18.5	34	34.0	26.250	34
RS8yr	0.000	0.000	20.739	0.001	18.5	18.5	35	34.0	26.500	35
RS4yr	0.000	0.000	26.136	0.001	18.5	18.5	36	34.0	26.750	36
RS2	0.001	0.001	65.371	0.002	37.5	37.5	37	37.5	37.375	37
RS1	0.001	0.001	80.319	0.003	37.5	37.5	38	39.5	38.125	38
TSA	0.002	0.002	142.407	0.002	39.5	39.5	40	37.5	39.125	39
RAC	0.002	0.002	95.150	0.003	39.5	39.5	39	39.5	39.375	40

(Total)-Cycle

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
PowerJuvChum	0.000	0.001	0.505	0.001	4.0	9.5	4.5	3.0	5.250	1
PowerJuvSockeye	0.001	0.001	0.502	0.001	20.5	9.5	3	3.0	9.000	2
PowerJuvSalmon_Total	0.001	0.001	0.515	0.001	20.5	9.5	6	3.0	9.750	3
PowerSalmon_Total	0.000	0.001	1.560	0.001	4.0	9.5	26	3.0	10.625	4
PowerPink	0.000	0.001	1.898	0.001	4.0	9.5	29	3.0	11.375	5
RickerSalmon_Total	-0.001	0.001	-0.267	0.002	20.5	9.5	1	19.0	12.500	6
RickerPiW	-0.001	0.001	0.585	0.002	20.5	9.5	7	19.0	14.000	7
PowerJuvPink	0.001	0.001	0.595	0.002	20.5	9.5	8	19.0	14.250	8
PowerSockeye	0.000	0.001	1.669	0.002	4.0	9.5	27	19.0	14.875	9
PowerJuvPi	0.001	0.001	0.772	0.002	20.5	9.5	11	19.0	15.000	10
PowerChum	0.000	0.001	1.681	0.002	4.0	9.5	28	19.0	15.125	11
PowerJuvFRDpeak	0.001	0.001	0.806	0.002	20.5	9.5	12	19.0	15.250	12
PowerJuv	0.001	0.001	0.819	0.002	20.5	9.5	13	19.0	15.500	13
RJ2	0.001	0.001	0.835	0.002	20.5	9.5	14	19.0	15.750	14
PowerJuvPiW	0.001	0.001	0.933	0.002	20.5	9.5	15	19.0	16.000	15
PowerJuvEiW	0.001	0.001	0.940	0.002	20.5	9.5	16	19.0	16.250	16

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RJ1	0.001	0.001	0.959	0.002	20.5	9.5	17	19.0	16.500	17
MRS	-0.001	0.002	0.484	0.002	20.5	25.5	2	19.0	16.750	18
PowerJuvEi	0.001	0.001	0.964	0.002	20.5	9.5	18	19.0	16.750	19
RickerSockeye	-0.001	0.002	0.505	0.002	20.5	25.5	4.5	19.0	17.375	20
RickerChum	-0.001	0.002	0.638	0.002	20.5	25.5	9	19.0	18.500	21
R1C	0.000	0.002	3.398	0.002	4.0	25.5	34	19.0	20.625	22
R2C	0.000	0.002	4.807	0.002	4.0	25.5	35	19.0	20.875	23
LarkinBasic	-0.001	0.002	1.095	0.002	20.5	25.5	19	19.0	21.000	24
LarkinBasicCycAge	-0.001	0.002	1.132	0.002	20.5	25.5	20	19.0	21.250	25
RickerBasic	-0.001	0.002	1.174	0.002	20.5	25.5	21	19.0	21.500	26
RickerEiW	-0.001	0.002	1.302	0.002	20.5	25.5	22	19.0	21.750	27
RSC	-0.001	0.002	1.437	0.002	20.5	25.5	23	19.0	22.000	28
RickerFRDMean	-0.001	0.002	1.482	0.002	20.5	25.5	24	19.0	22.250	29
RickerEi	-0.001	0.002	1.535	0.002	20.5	25.5	25	19.0	22.500	30
RS4yr	-0.001	0.002	2.055	0.002	20.5	25.5	30	19.0	23.750	31
RS8yr	-0.001	0.002	2.391	0.002	20.5	25.5	31	19.0	24.000	32
LLY	0.002	0.003	0.755	0.005	34.0	34.5	10	36.0	28.625	33
RS1	0.001	0.004	13.265	0.004	20.5	37.0	36	34.0	31.875	34
RJC	0.003	0.003	2.893	0.005	36.0	34.5	32	36.0	34.625	35
MRJ	0.003	0.003	3.066	0.005	36.0	34.5	33	36.0	34.875	36
RS2	0.003	0.003	18.104	0.003	36.0	34.5	37	33.0	35.125	37
RAC	0.017	0.017	42.848	0.017	38.0	38.0	38	38.0	38.000	38
TSA	0.034	0.034	83.443	0.034	39.0	39.0	39	39.0	39.000	39

(Age4)-Cycle

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
PowerJuvSockeye	0.000	0.001	0.405	0.001	6.0	10.5	5	5.5	6.750	1
PowerJuvChum	0.000	0.001	0.430	0.001	6.0	10.5	6	5.5	7.000	2
PowerJuvSalmon_Tot al	0.000	0.001	0.454	0.001	6.0	10.5	9	5.5	7.750	3
RJ2	0.000	0.001	0.576	0.001	6.0	10.5	12	5.5	8.500	4
RJ1	0.000	0.001	0.694	0.001	6.0	10.5	16	5.5	9.500	5
PowerSalmon_Total	0.000	0.001	1.314	0.001	6.0	10.5	25	5.5	11.750	6
PowerJuvPink	0.001	0.001	0.550	0.001	22.0	10.5	11	5.5	12.250	7
PowerPink	0.000	0.001	1.578	0.001	6.0	10.5	27	5.5	12.250	8
PowerJuvFRDpeak	0.001	0.001	0.678	0.001	22.0	10.5	15	5.5	13.250	9
RickerSockeye	-0.001	0.001	-0.025	0.002	22.0	10.5	1	20.5	13.500	10
RickerChum	-0.001	0.001	0.274	0.002	22.0	10.5	2	20.5	13.750	11
PowerJuvEiW	0.001	0.001	0.820	0.001	22.0	10.5	21	5.5	14.750	12
PowerSockeye	0.000	0.001	1.226	0.002	6.0	10.5	23	20.5	15.000	13

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerPiW	-0.001	0.001	0.452	0.002	22.0	10.5	8	20.5	15.250	14
RickerSalmon_Total	-0.001	0.001	-0.477	0.002	22.0	10.5	10	20.5	15.750	15
PowerJuvPi	0.001	0.001	0.639	0.002	22.0	10.5	14	20.5	16.750	16
PowerJuv	0.001	0.001	0.711	0.002	22.0	10.5	18	20.5	17.750	17
LarkinBasic	-0.001	0.002	0.346	0.002	22.0	26.5	3	20.5	18.000	18
LarkinBasicCycAge	-0.001	0.002	0.350	0.002	22.0	26.5	4	20.5	18.250	19
PowerJuvEi	0.001	0.001	0.816	0.002	22.0	10.5	20	20.5	18.250	20
PowerJuvPiW	0.001	0.001	0.839	0.002	22.0	10.5	22	20.5	18.750	21
RickerBasic	-0.001	0.002	0.433	0.002	22.0	26.5	7	20.5	19.000	22
PowerChum	-0.001	0.001	1.441	0.002	22.0	10.5	26	20.5	19.750	23
RickerFRDMean	-0.001	0.002	0.580	0.002	22.0	26.5	13	20.5	20.500	24
R1C	0.000	0.002	2.970	0.002	6.0	26.5	31	20.5	21.000	25
RSC	0.000	0.002	3.756	0.002	6.0	26.5	32	20.5	21.250	26
R2C	0.000	0.002	4.218	0.002	6.0	26.5	33	20.5	21.500	27
RickerEiW	-0.001	0.002	0.737	0.002	22.0	26.5	19	20.5	22.000	28
RickerEi	-0.001	0.002	1.300	0.002	22.0	26.5	24	20.5	23.250	29
MRS	-0.001	0.002	2.802	0.002	22.0	26.5	30	20.5	24.750	30
RJC	0.002	0.002	2.516	0.003	34.0	26.5	28	31.0	29.875	31
LLY	0.002	0.003	0.709	0.005	34.0	33.5	17	35.0	29.875	32
MRJ	0.002	0.002	2.634	0.004	34.0	26.5	29	32.5	30.500	33
RS8yr	0.001	0.003	7.467	0.004	22.0	33.5	34	32.5	30.500	34
RS4yr	0.001	0.004	10.574	0.005	22.0	35.0	35	35.0	31.750	35
RS1	0.003	0.005	19.353	0.006	36.0	36.5	36	37.0	36.375	36
RS2	0.005	0.005	20.945	0.005	37.0	36.5	37	35.0	36.375	37
RAC	0.015	0.015	38.535	0.015	38.0	38.0	38	38.0	38.000	38
TSA	0.030	0.030	75.134	0.030	39.0	39.0	39	39.0	39.000	39

(Age5)-Cycle

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RS1	0.000	0.000	0.285	0.000	17.0	17.0	1	16.5	12.875	1
PowerJuvPink	0.000	0.000	0.305	0.000	17.0	17.0	2	16.5	13.125	2
RS4yr	0.000	0.000	0.307	0.000	17.0	17.0	3	16.5	13.375	3
sibling5	0.000	0.000	0.408	0.000	17.0	17.0	4	16.5	13.625	4
PowerJuvSalmon_Total	0.000	0.000	0.560	0.000	17.0	17.0	5	16.5	13.875	5
PowerJuvPiW	0.000	0.000	0.584	0.000	17.0	17.0	6	16.5	14.125	6
PowerJuvChum	0.000	0.000	0.650	0.000	17.0	17.0	7	16.5	14.375	7
PowerJuvSockeye	0.000	0.000	0.653	0.000	17.0	17.0	8	16.5	14.625	8
PowerJuvPi	0.000	0.000	0.661	0.000	17.0	17.0	9	16.5	14.875	9
PowerJuvFRDpeak	0.000	0.000	0.750	0.000	17.0	17.0	10	16.5	15.125	10
PowerJuv	0.000	0.000	0.787	0.000	17.0	17.0	11	16.5	15.375	11
PowerJuvEi	0.000	0.000	0.987	0.000	17.0	17.0	12	16.5	15.625	12

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
PowerJuvEiW	0.000	0.000	0.998	0.000	17.0	17.0	13	16.5	15.875	13
RickerPiW	0.000	0.000	1.135	0.000	17.0	17.0	14	16.5	16.125	14
RickerSalmon_Total	0.000	0.000	1.206	0.000	17.0	17.0	15	16.5	16.375	15
RSC	0.000	0.000	1.344	0.000	17.0	17.0	16	16.5	16.625	16
PowerChum	0.000	0.000	2.027	0.000	17.0	17.0	17	16.5	16.875	17
RickerEi	0.000	0.000	2.765	0.000	17.0	17.0	18	16.5	17.125	18
RS8yr	0.000	0.000	3.473	0.000	17.0	17.0	19	16.5	17.375	19
PowerSalmon_Total	0.000	0.000	4.431	0.000	17.0	17.0	21	16.5	17.875	20
PowerSockeye	0.000	0.000	4.613	0.000	17.0	17.0	22	16.5	18.125	21
RickerChum	0.000	0.000	5.189	0.000	17.0	17.0	23	16.5	18.375	22
MRS	0.000	0.000	5.314	0.000	17.0	17.0	24	16.5	18.625	23
PowerPink	0.000	0.000	5.649	0.000	17.0	17.0	25	16.5	18.875	24
RickerEiW	0.000	0.000	5.974	0.000	17.0	17.0	26	16.5	19.125	25
LarkinBasicCycAge	0.000	0.000	7.915	0.000	17.0	17.0	27	16.5	19.375	26
RickerSockeye	0.000	0.000	7.993	0.000	17.0	17.0	28	16.5	19.625	27
RickerBasic	0.000	0.000	9.796	0.000	17.0	17.0	29	16.5	19.875	28
LarkinBasic	0.000	0.000	10.351	0.000	17.0	17.0	30	16.5	20.125	29
RickerFRDMean	0.000	0.000	11.843	0.000	17.0	17.0	31	16.5	20.375	30
R2C	0.000	0.000	37.161	0.000	17.0	17.0	36	16.5	21.625	31
R1C	0.000	0.000	48.432	0.000	17.0	17.0	37	16.5	21.875	32
LLY	0.000	0.000	3.536	0.001	17.0	17.0	20	34.5	22.125	33
RJ2	0.001	0.001	13.075	0.001	35.5	35.5	32	34.5	34.375	34
RJ1	0.001	0.001	13.745	0.001	35.5	35.5	33	34.5	34.625	35
RJC	0.001	0.001	28.023	0.001	35.5	35.5	34	34.5	34.875	36
MRJ	0.001	0.001	31.397	0.002	35.5	35.5	35	37.5	35.875	37
RAC	0.002	0.002	243.920	0.002	38.0	38.0	38	37.5	37.875	38
TSA	0.004	0.004	470.764	0.004	39.0	39.0	39	39.0	39.000	39
RS2	NA	NA	NA	NA	40.0	40.0	40	40.0	40.000	40

(Total)-Other

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
PowerJuvSalmon_Tot al	0.001	0.001	2.142	0.001	17.5	5.0	15	3.0	10.125	1
PowerJuvPink	0.001	0.001	2.206	0.001	17.5	5.0	16	3.0	10.375	2
PowerJuvPi	0.001	0.001	1.917	0.002	17.5	5.0	14	9.0	11.375	3
RJ2	0.001	0.001	2.740	0.001	17.5	5.0	21	3.0	11.625	4
RickerPiW	-0.001	0.002	0.212	0.003	17.5	14.5	2	13.0	11.750	5
PowerJuvChum	0.001	0.001	2.749	0.001	17.5	5.0	22	3.0	11.875	6
PowerJuvPiW	0.001	0.001	2.224	0.002	17.5	5.0	17	9.0	12.125	7
PowerJuvSockeye	0.001	0.001	2.417	0.002	17.5	5.0	19	9.0	12.625	8

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RJ1	0.001	0.001	3.102	0.001	17.5	5.0	28	3.0	13.375	9
PowerJuvEiW	0.001	0.001	2.855	0.002	17.5	5.0	23	9.0	13.625	10
RickerEiW	-0.001	0.002	0.903	0.004	17.5	14.5	3	21.5	14.125	11
PowerSalmon_Total	-0.001	0.002	1.127	0.004	17.5	14.5	6	21.5	14.875	12
RickerEi	-0.001	0.002	1.146	0.004	17.5	14.5	7	21.5	15.125	13
PowerPink	-0.001	0.002	1.261	0.004	17.5	14.5	8	21.5	15.375	14
PowerSockeye	0.000	0.003	1.872	0.004	3.5	25.0	13	21.5	15.750	15
RickerSalmon_Total	-0.002	0.002	-0.054	0.004	31.0	14.5	1	21.5	17.000	16
RickerSockeye	-0.001	0.003	1.023	0.004	17.5	25.0	4	21.5	17.000	17
RickerChum	-0.001	0.003	1.112	0.004	17.5	25.0	5	21.5	17.250	18
PowerChum	-0.001	0.002	2.240	0.004	17.5	14.5	18	21.5	17.875	19
LarkinBasic	-0.001	0.003	1.324	0.004	17.5	25.0	9	21.5	18.250	20
RickerBasic	-0.001	0.003	1.333	0.004	17.5	25.0	10	21.5	18.500	21
LarkinBasicCycAge	-0.001	0.003	1.371	0.004	17.5	25.0	11	21.5	18.750	22
RickerFRDMean	-0.001	0.003	1.489	0.004	17.5	25.0	12	21.5	19.000	23
PowerJuv	0.002	0.002	2.896	0.002	31.0	14.5	24	9.0	19.625	24
MRS	0.000	0.003	2.630	0.005	3.5	25.0	20	31.0	19.875	25
PowerJuvEi	0.002	0.002	2.955	0.002	31.0	14.5	25	9.0	19.875	26
PowerJuvFRDpeak	0.002	0.002	3.037	0.002	31.0	14.5	27	9.0	20.375	27
R2C	0.000	0.003	20.889	0.004	3.5	25.0	37	21.5	21.750	28
R1C	0.000	0.003	6.158	0.005	3.5	25.0	30	31.0	22.375	29
RSC	0.000	0.004	3.000	0.005	3.5	32.5	26	31.0	23.250	30
RS8yr	0.000	0.004	5.578	0.006	3.5	32.5	29	34.0	24.750	31
RS2	0.003	0.003	14.885	0.004	34.5	25.0	36	21.5	29.250	32
RS1	0.002	0.004	8.049	0.004	31.0	32.5	35	21.5	30.000	33
RS4yr	0.001	0.005	7.401	0.008	17.5	36.0	33	37.0	30.875	34
LLY	0.003	0.004	6.568	0.007	34.5	32.5	31	36.0	33.500	35
RJC	0.005	0.005	7.132	0.006	36.5	36.0	32	34.0	34.625	36
MRJ	0.005	0.005	7.408	0.006	36.5	36.0	34	34.0	35.125	37
TSA	0.034	0.034	164.181	0.034	38.0	38.0	38	38.0	38.000	38
RAC	0.036	0.036	283.927	0.047	39.0	39.0	39	39.0	39.000	39

(Age4)-Other

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
PowerJuvPink	0.001	0.001	2.631	0.001	18.0	6.0	14	3.0	10.250	1
PowerJuvSalmon_Total	0.001	0.001	2.694	0.001	18.0	6.0	16	3.0	10.750	2
RJ2	0.001	0.001	3.063	0.001	18.0	6.0	19	3.0	11.500	3
PowerJuvPi	0.001	0.001	2.368	0.002	18.0	6.0	13	9.0	11.500	4
PowerJuvPiW	0.001	0.001	2.673	0.002	18.0	6.0	15	9.0	12.000	5

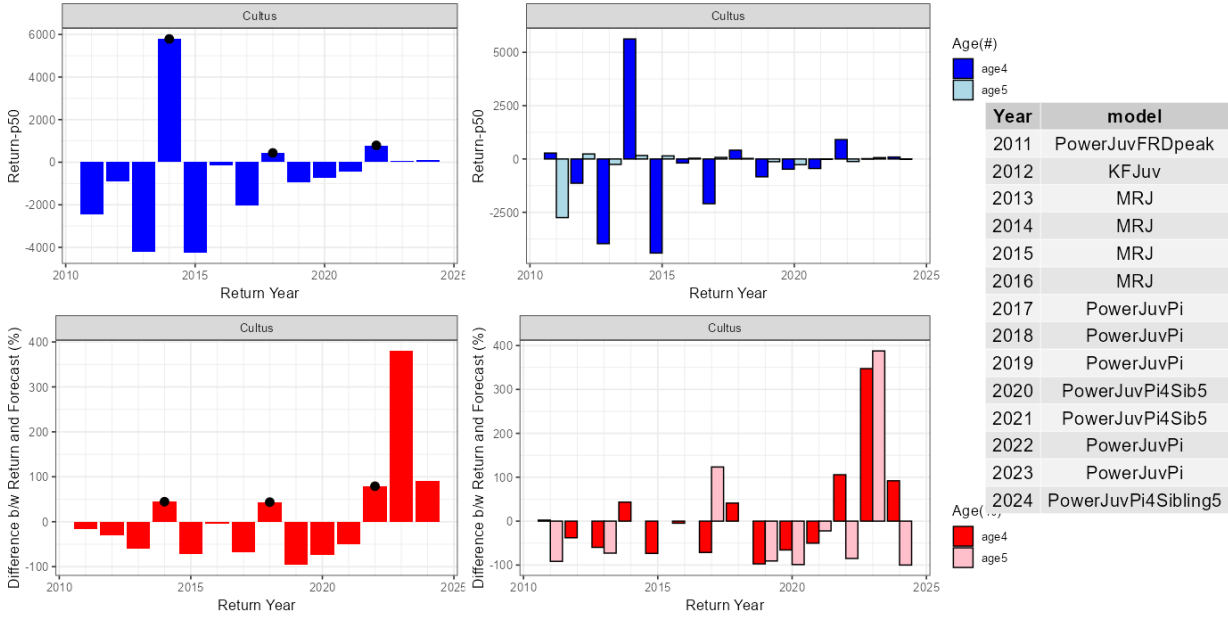
model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RJ1	0.001	0.001	3.527	0.001	18.0	6.0	22	3.0	12.250	6
RickerPiW	-0.001	0.002	0.476	0.003	18.0	16.5	2	13.0	12.375	7
PowerJuvChum	0.001	0.001	3.600	0.001	18.0	6.0	23	3.0	12.500	8
PowerJuvSockeye	0.001	0.001	2.908	0.002	18.0	6.0	18	9.0	12.750	9
PowerJuvEiW	0.001	0.001	3.514	0.002	18.0	6.0	21	9.0	13.500	10
PowerJuvEi	0.001	0.001	3.604	0.002	18.0	6.0	24	9.0	14.250	11
PowerSockeye	0.000	0.002	2.903	0.004	3.0	16.5	17	21.0	14.375	12
PowerJuvFRDpeak	0.001	0.001	3.641	0.002	18.0	6.0	25	9.0	14.500	13
RickerEiW	-0.001	0.002	0.947	0.004	18.0	16.5	3	21.0	14.625	14
RickerEi	-0.001	0.002	1.262	0.004	18.0	16.5	5	21.0	15.125	15
PowerJuv	0.001	0.002	3.369	0.002	18.0	16.5	20	9.0	15.875	16
RickerChum	-0.001	0.002	1.383	0.004	18.0	16.5	8	21.0	15.875	17
PowerSalmon_Total	-0.001	0.002	1.385	0.004	18.0	16.5	9	21.0	16.125	18
PowerPink	-0.001	0.002	1.425	0.004	18.0	16.5	11	21.0	16.625	19
RickerSockeye	-0.001	0.003	1.120	0.004	18.0	26.0	4	21.0	17.250	20
RickerSalmon_Total	-0.002	0.002	-0.114	0.004	31.5	16.5	1	21.0	17.500	21
LarkinBasicCycAge	-0.001	0.003	1.303	0.004	18.0	26.0	6	21.0	17.750	22
LarkinBasic	-0.001	0.003	1.352	0.004	18.0	26.0	7	21.0	18.000	23
RickerBasic	-0.001	0.003	1.406	0.004	18.0	26.0	10	21.0	18.750	24
RickerFRDMean	-0.001	0.003	1.542	0.004	18.0	26.0	12	21.0	19.250	25
PowerChum	-0.001	0.002	3.877	0.004	18.0	16.5	26	21.0	20.375	26
R2C	0.000	0.003	32.875	0.004	3.0	26.0	37	21.0	21.750	27
MRS	0.000	0.003	4.130	0.005	3.0	26.0	27	31.5	21.875	28
RSC	0.000	0.003	4.364	0.005	3.0	26.0	28	31.5	22.125	29
R1C	0.000	0.003	8.328	0.005	3.0	26.0	29	31.5	22.375	30
RS8yr	0.001	0.004	8.966	0.006	18.0	33.5	32	35.5	29.750	31
RS2	0.004	0.004	20.744	0.004	36.0	33.5	36	21.0	31.625	32
RJC	0.004	0.004	8.529	0.005	36.0	33.5	30	31.5	32.750	33
MRJ	0.004	0.004	8.906	0.005	36.0	33.5	31	31.5	33.000	34
RS1	0.003	0.004	11.375	0.005	33.5	33.5	34	31.5	33.125	35
LLY	0.003	0.004	15.339	0.006	33.5	33.5	35	35.5	34.375	36
RS4yr	0.002	0.006	10.887	0.008	31.5	37.0	33	37.0	34.625	37
TSA	0.031	0.031	333.766	0.031	38.0	38.0	38	38.0	38.000	38
RAC	0.034	0.034	653.830	0.044	39.0	39.0	39	39.0	39.000	39

(Age5)-Other

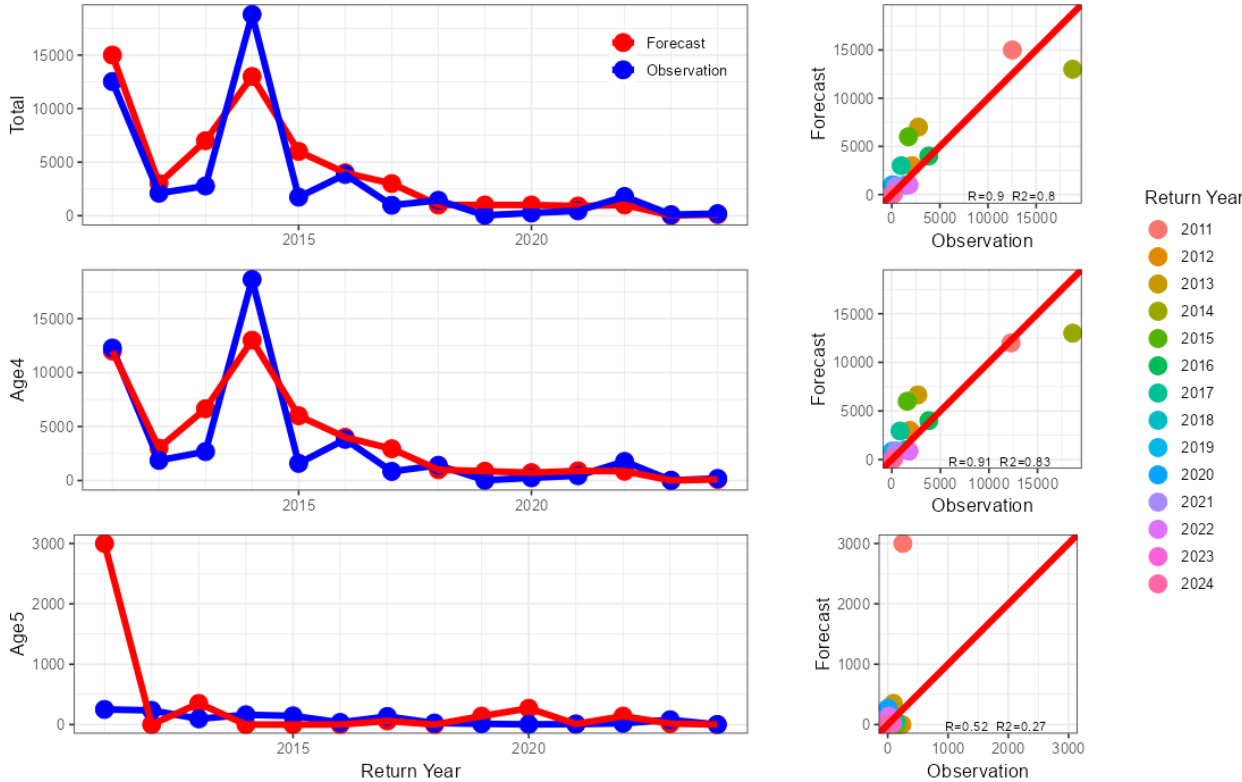
model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
PowerJuvSalmon_Total	0.000	0.000	0.006	0.000	18.0	17.5	1	15.0	12.875	1
PowerJuvChum	0.000	0.000	0.017	0.000	18.0	17.5	2.5	15.0	13.250	2
PowerJuvPi	0.000	0.000	-0.017	0.000	18.0	17.5	2.5	15.0	13.250	3

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
PowerJuvSockeye	0.000	0.000	0.023	0.000	18.0	17.5	4	15.0	13.625	4
PowerJuvPink	0.000	0.000	-0.054	0.000	18.0	17.5	5.5	15.0	14.000	5
PowerJuvPiW	0.000	0.000	0.054	0.000	18.0	17.5	5.5	15.0	14.000	6
RickerPiW	0.000	0.000	0.093	0.000	18.0	17.5	7	15.0	14.375	7
PowerJuvFRDpeak	0.000	0.000	0.137	0.000	18.0	17.5	8	15.0	14.625	8
RickerSalmon_Total	0.000	0.000	-0.196	0.000	18.0	17.5	9	15.0	14.875	9
PowerJuvEi	0.000	0.000	0.209	0.000	18.0	17.5	10	15.0	15.125	10
PowerJuv	0.000	0.000	0.221	0.000	18.0	17.5	11	15.0	15.375	11
PowerJuvEiW	0.000	0.000	0.224	0.000	18.0	17.5	12	15.0	15.625	12
PowerChum	0.000	0.000	0.383	0.000	18.0	17.5	13	15.0	15.875	13
RickerEi	0.000	0.000	0.615	0.000	18.0	17.5	14	15.0	16.125	14
sibling5	0.000	0.000	0.869	0.000	18.0	17.5	15	15.0	16.375	15
PowerSalmon_Total	0.000	0.000	1.066	0.000	18.0	17.5	16	15.0	16.625	16
PowerSockeye	0.000	0.000	1.196	0.000	18.0	17.5	17	15.0	16.875	17
RickerChum	0.000	0.000	1.260	0.000	18.0	17.5	18	15.0	17.125	18
PowerPink	0.000	0.000	1.461	0.000	18.0	17.5	19	15.0	17.375	19
RickerEiW	0.000	0.000	1.654	0.000	18.0	17.5	20	15.0	17.625	20
LLY	0.000	0.000	2.136	0.000	18.0	17.5	21	15.0	17.875	21
RickerSockeye	0.000	0.000	2.188	0.000	18.0	17.5	22	15.0	18.125	22
LarkinBasicCycAge	0.000	0.000	2.249	0.000	18.0	17.5	23	15.0	18.375	23
RickerBasic	0.000	0.000	2.824	0.000	18.0	17.5	24	15.0	18.625	24
LarkinBasic	0.000	0.000	3.021	0.000	18.0	17.5	25	15.0	18.875	25
RickerFRDMean	0.000	0.000	3.526	0.000	18.0	17.5	26	15.0	19.125	26
MRS	0.000	0.000	13.462	0.000	18.0	17.5	31	15.0	20.375	27
R2C	0.000	0.000	14.714	0.000	18.0	17.5	32	15.0	20.625	28
R1C	0.000	0.000	15.504	0.000	18.0	17.5	33	15.0	20.875	29
RJ2	0.000	0.000	5.463	0.001	18.0	17.5	27	33.0	23.875	30
RJ1	0.000	0.000	5.715	0.001	18.0	17.5	28	33.0	24.125	31
RJC	0.000	0.000	11.331	0.001	18.0	17.5	29	33.0	24.375	32
RSC	0.000	0.000	19.052	0.001	18.0	17.5	34	33.0	25.625	33
RS8yr	0.000	0.000	27.212	0.001	18.0	17.5	35	33.0	25.875	34
RS4yr	0.000	0.001	34.013	0.001	18.0	36.5	36	33.0	30.875	35
MRJ	0.001	0.001	12.767	0.001	37.0	36.5	30	33.0	34.125	36
RS2	0.001	0.001	78.246	0.002	37.0	36.5	37	37.0	36.875	37
RS1	0.001	0.001	102.858	0.003	37.0	36.5	38	39.0	37.625	38
RAC	0.002	0.002	121.651	0.003	39.5	39.5	39	39.0	39.250	39
TSA	0.002	0.002	182.873	0.003	39.5	39.5	40	39.0	39.500	40

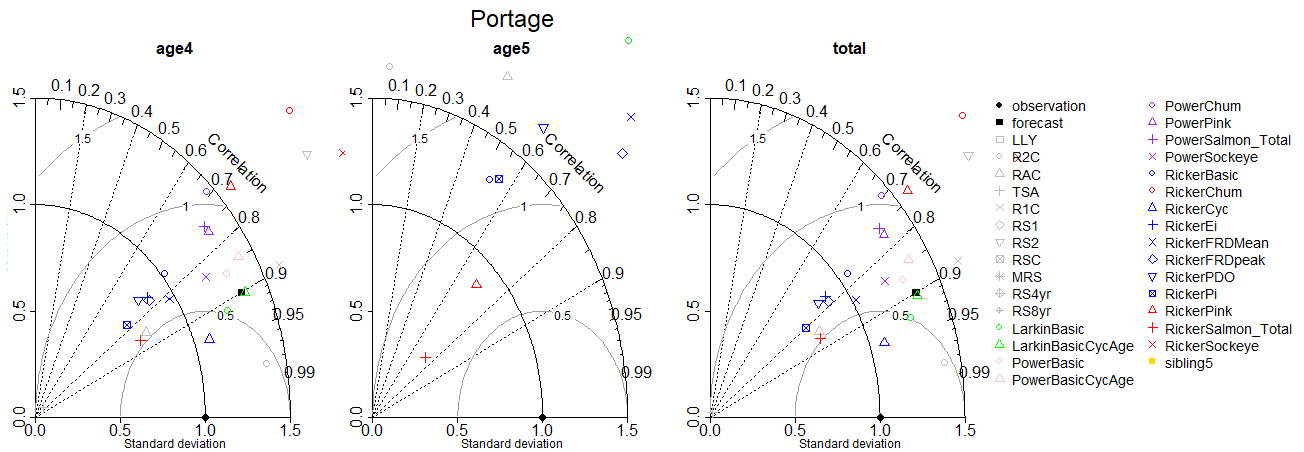
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FC-TS



Portage Retrospective: Taylor



Ranking (Total)-Alllys

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerSalmon_Total	-0.006	0.007	0.508	0.018	9.5	1.0	1	4.5	4.000	1
RickerCyc	0.007	0.008	11.475	0.013	13.0	2.0	13	1.0	7.250	2
RickerEiW	-0.005	0.009	11.802	0.018	7.0	3.5	14	4.5	7.250	3
LarkinBasic	0.009	0.009	7.114	0.018	16.0	3.5	6	4.5	7.500	4
RickerPi	-0.002	0.011	11.467	0.019	4.0	7.5	12	7.5	7.750	5
RickerPiW	-0.001	0.011	12.276	0.018	2.5	7.5	17	4.5	7.875	6
R2C	0.009	0.010	8.694	0.017	16.0	5.0	10	2.0	8.250	7
RickerEi	0.000	0.012	11.861	0.021	1.0	10.5	15	10.5	9.250	8
RickerFRDpeak	0.003	0.012	12.703	0.020	5.0	10.5	19	9.0	10.875	9
RickerFRDMean	0.006	0.011	12.817	0.019	9.5	7.5	21	7.5	11.375	10
RickerPDO	0.001	0.013	12.757	0.021	2.5	13.5	20	10.5	11.625	11
LarkinBasicCycAge	0.011	0.011	8.016	0.023	18.5	7.5	8	13.5	11.875	12
PowerPink	0.006	0.013	7.699	0.028	9.5	13.5	7	17.5	11.875	13
RickerPink	0.004	0.017	2.039	0.035	6.0	20.0	2	22.0	12.500	14
PowerSalmon_Total	0.006	0.014	8.415	0.029	9.5	16.5	9	19.0	13.500	15
RickerBasic	0.007	0.013	12.270	0.023	13.0	13.5	16	13.5	14.000	16
PowerSockeye	0.007	0.013	14.633	0.022	13.0	13.5	22	12.0	15.125	17
R1C	0.013	0.018	5.553	0.032	21.5	21.5	3	20.0	16.500	18
PowerChum	0.009	0.016	10.278	0.035	16.0	18.5	11	22.0	16.875	19
PowerBasic	0.011	0.014	15.795	0.024	18.5	16.5	24	15.0	18.500	20
RickerChum	0.018	0.025	5.883	0.051	23.5	26.0	4	26.5	20.000	21
RickerSockeye	0.019	0.022	6.904	0.051	25.5	23.0	5	26.5	20.000	22
PowerBasicCycAge	0.013	0.016	16.236	0.028	21.5	18.5	25	17.5	20.625	23
RS1	0.018	0.018	15.544	0.035	23.5	21.5	23	22.0	22.500	24
RAC	0.019	0.023	57.665	0.025	25.5	24.5	29	16.0	23.750	25

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RS2	0.022	0.023	12.518	0.047	27.5	24.5	18	25.0	23.750	26
LLY	0.012	0.044	86.161	0.066	20.0	30.0	31	29.0	27.500	27
RS4yr	0.025	0.028	25.140	0.055	29.0	27.0	26	28.0	27.500	28
TSA	0.022	0.037	136.880	0.038	27.5	29.0	32	24.0	28.125	29
RS8yr	0.034	0.035	33.939	0.077	30.0	28.0	27	30.0	28.750	30
RSC	0.063	0.063	44.586	0.105	31.0	31.0	28	31.0	30.250	31
MRS	0.131	0.131	81.464	0.243	32.0	32.0	30	32.0	31.500	32

(Age4)-Allyrs

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerSalmon_Total	- 0.007	0.007	0.132	0.018	14.5	1.5	1	4.0	5.250	1
RickerCyc	0.005	0.007	8.529	0.013	9.5	1.5	13	1.0	6.250	2
LarkinBasic	0.007	0.009	5.191	0.018	14.5	4.0	7	4.0	7.375	3
RickerEi	- 0.001	0.011	8.905	0.021	2.5	9.0	14	9.5	8.750	4
RickerEiW	- 0.006	0.008	9.474	0.018	12.0	3.0	16	4.0	8.750	5
RickerPiW	- 0.003	0.011	9.575	0.019	4.5	9.0	17	6.5	9.250	6
RickerPi	- 0.003	0.011	9.840	0.020	4.5	9.0	18	8.0	9.875	7
RickerFRDMean	0.004	0.010	11.193	0.019	7.0	6.0	22	6.5	10.375	8
LarkinBasicCycAge	0.010	0.010	4.993	0.022	19.5	6.0	6	12.0	10.875	9
RickerPDO	0.000	0.012	10.282	0.022	1.0	12.5	20	12.0	11.375	10
RickerFRDpeak	0.001	0.012	11.651	0.021	2.5	12.5	23	9.5	11.875	11
RickerPink	0.004	0.017	1.173	0.035	7.0	21.5	2	22.5	13.250	12
R2C	0.009	0.010	31.808	0.016	17.5	6.0	29	2.0	13.625	13
RickerBasic	0.004	0.012	10.365	0.023	7.0	12.5	21	14.0	13.625	14
PowerPink	0.006	0.013	6.703	0.028	12.0	15.5	10	18.0	13.875	15
PowerSalmon_Total	0.005	0.014	6.922	0.029	9.5	17.0	11	19.0	14.125	16
PowerSockeye	0.006	0.012	13.999	0.022	12.0	12.5	24	12.0	15.125	17
RS1	0.014	0.015	1.776	0.034	23.0	19.0	3	21.0	16.500	18
PowerBasic	0.009	0.013	17.665	0.024	17.5	15.5	26	15.5	18.625	19
RS2	0.017	0.018	3.711	0.046	24.5	23.0	4	25.0	19.125	20
PowerChum	0.008	0.015	10.149	0.035	16.0	19.0	19	22.5	19.125	21
R1C	0.012	0.017	9.213	0.031	22.0	21.5	15	20.0	19.625	22
PowerBasicCycAge	0.011	0.015	16.849	0.027	21.0	19.0	25	17.0	20.500	23
RickerChum	0.017	0.024	3.713	0.051	24.5	27.0	5	27.0	20.875	24
RickerSockeye	0.018	0.022	5.819	0.050	26.5	24.5	8	26.0	21.250	25
RS4yr	0.020	0.023	6.077	0.054	28.5	26.0	9	28.0	22.875	26
RAC	0.018	0.022	275.880	0.024	26.5	24.5	30	15.5	24.125	27
RS8yr	0.029	0.029	8.485	0.076	30.0	28.0	12	30.0	25.000	28

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
LLY	0.010	0.041	933.518	0.062	19.5	30.0	32	29.0	27.625	29
TSA	0.020	0.034	529.308	0.036	28.5	29.0	31	24.0	28.125	30
RSC	0.055	0.055	21.644	0.104	31.0	31.0	27	31.0	30.000	31
MRS	0.115	0.115	24.879	0.241	32.0	32.0	28	32.0	31.000	32

(Age5)-Alllys

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerPink	0.000	0.000	0.345	0.000	11.0	8.0	1	2.0	5.500	1
RickerSalmon_Total	0.000	0.000	-0.558	0.000	11.0	8.0	2	2.0	5.750	2
RickerPi	0.000	0.000	2.792	0.000	11.0	8.0	9	2.0	7.500	3
RickerSockeye	0.000	0.000	1.115	0.001	11.0	8.0	3	12.5	8.625	4
RickerFRDpeak	0.000	0.000	2.273	0.001	11.0	8.0	5	12.5	9.125	5
RickerBasic	0.000	0.000	2.599	0.001	11.0	8.0	7	12.5	9.625	6
RickerPiW	0.000	0.000	2.929	0.001	11.0	8.0	10	12.5	10.375	7
RickerFRDMean	0.000	0.000	3.093	0.001	11.0	8.0	11	12.5	10.625	8
RickerPDO	0.000	0.000	3.297	0.001	11.0	8.0	12	12.5	10.875	9
PowerPink	0.000	0.000	3.613	0.001	11.0	8.0	13	12.5	11.125	10
RickerEiW	0.000	0.000	3.884	0.001	11.0	8.0	15	12.5	11.625	11
R1C	0.000	0.001	1.398	0.001	11.0	20.5	4	12.5	12.000	12
LarkinBasic	0.000	0.000	4.373	0.001	11.0	8.0	18	12.5	12.375	13
R2C	0.000	0.001	2.389	0.001	11.0	20.5	6	12.5	12.500	14
PowerBasic	0.000	0.000	4.514	0.001	11.0	8.0	19	12.5	12.625	15
PowerSockeye	0.000	0.000	4.675	0.001	11.0	8.0	20	12.5	12.875	16
RickerEi	0.000	0.000	5.205	0.001	11.0	8.0	22	12.5	13.375	17
RickerCyc	0.000	0.001	3.667	0.001	11.0	20.5	14	12.5	14.500	18
PowerChum	0.000	0.001	3.925	0.001	11.0	20.5	16	12.5	15.000	19
sibling5	0.000	0.001	4.252	0.001	11.0	20.5	17	12.5	15.250	20
PowerSalmon_Total	0.000	0.001	4.776	0.001	11.0	20.5	21	12.5	16.250	21
RickerChum	0.001	0.001	2.655	0.002	23.5	20.5	8	23.5	18.875	22
PowerBasicCycAge	0.001	0.001	5.293	0.002	23.5	20.5	23	23.5	22.625	23
LarkinBasicCycAge	0.001	0.001	6.039	0.002	23.5	20.5	24	23.5	22.875	24
RAC	0.001	0.001	21.025	0.002	23.5	20.5	25	23.5	23.125	25
LLY	0.003	0.003	21.299	0.005	26.5	26.5	26	27.0	26.500	26
TSA	0.003	0.003	46.846	0.003	26.5	26.5	29	26.0	27.000	27
RS1	0.004	0.004	38.974	0.009	28.0	28.0	28	28.0	28.000	28
RS2	0.006	0.006	27.520	0.011	30.5	29.5	27	30.0	29.250	29
RS4yr	0.005	0.006	62.683	0.010	29.0	29.5	30	29.0	29.375	30
RS8yr	0.006	0.007	83.573	0.012	30.5	31.0	31	31.0	30.875	31
RSC	0.009	0.009	87.559	0.017	32.0	32.0	32	32.0	32.000	32

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
MRS	0.019	0.019	190.409	0.035	33.0	33.0	33	33.0	33.000	33

(Total)-Cycle

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerPink	0.000	0.000	-0.135	0.000	8.5	4.0	1	2.0	3.875	1
RickerSalmon_Total	0.000	0.000	-0.261	0.000	8.5	4.0	2	2.0	4.125	2
RickerChum	0.000	0.000	0.979	0.000	8.5	4.0	3	2.0	4.375	3
RS1	0.000	0.000	1.360	0.001	8.5	4.0	4	13.5	7.500	4
RickerSockeye	0.000	0.000	1.551	0.001	8.5	4.0	5	13.5	7.750	5
RS4yr	0.000	0.000	1.655	0.001	8.5	4.0	6	13.5	8.000	6
LarkinBasic	0.000	0.000	3.090	0.001	8.5	4.0	11	13.5	9.250	7
RS8yr	0.000	0.001	2.525	0.001	8.5	17.5	7	13.5	11.625	8
PowerPink	0.000	0.001	2.553	0.001	8.5	17.5	8	13.5	11.875	9
PowerSalmon_Total	0.000	0.001	2.603	0.001	8.5	17.5	9	13.5	12.125	10
RS2	0.000	0.001	2.833	0.001	8.5	17.5	10	13.5	12.375	11
RickerEi	0.000	0.001	3.170	0.001	8.5	17.5	12	13.5	12.875	12
RickerEiW	0.000	0.001	3.176	0.001	8.5	17.5	13	13.5	13.125	13
RickerPiW	0.000	0.001	3.305	0.001	8.5	17.5	14	13.5	13.375	14
RickerFRDMean	0.000	0.001	3.548	0.001	8.5	17.5	16	13.5	13.875	15
RickerFRDpeak	0.000	0.001	3.594	0.001	8.5	17.5	17	13.5	14.125	16
RickerPi	0.001	0.001	3.524	0.001	22.0	17.5	15	13.5	17.000	17
RickerPDO	0.001	0.001	3.719	0.001	22.0	17.5	18	13.5	17.750	18
LarkinBasicCycAge	0.001	0.001	3.813	0.001	22.0	17.5	19	13.5	18.000	19
RickerBasic	0.001	0.001	4.056	0.001	22.0	17.5	20	13.5	18.250	20
PowerChum	0.001	0.001	4.199	0.001	22.0	17.5	21	13.5	18.500	21
PowerSockeye	0.001	0.001	4.505	0.001	22.0	17.5	22	13.5	18.750	22
RickerCyc	0.001	0.001	5.017	0.001	22.0	17.5	23	13.5	19.000	23
PowerBasic	0.001	0.001	7.287	0.002	22.0	17.5	24	26.0	22.375	24
MRS	0.001	0.001	7.584	0.002	22.0	17.5	25	26.0	22.625	25
PowerBasicCycAge	0.001	0.001	8.474	0.002	22.0	17.5	26	26.0	22.875	26
RSC	0.001	0.001	9.339	0.002	22.0	17.5	27	26.0	23.125	27
LLY	0.002	0.002	10.578	0.002	28.0	28.0	28	26.0	27.500	28
R2C	0.003	0.003	15.298	0.005	29.0	29.0	29	29.0	29.000	29
RAC	0.013	0.013	109.318	0.013	30.0	30.0	30	30.0	30.000	30
TSA	0.040	0.040	330.497	0.040	31.0	31.0	31	31.0	31.000	31

(Age4)-Cycle

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
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RickerPink	0.000	0.000	-0.180	0.000	12.0	11.0	1	6.0	7.500	1
RickerSalmon_Total	0.000	0.000	-0.382	0.000	12.0	11.0	2	6.0	7.750	2
RickerChum	0.000	0.000	0.772	0.000	12.0	11.0	3	6.0	8.000	3
RS4yr	0.000	0.000	1.021	0.000	12.0	11.0	4	6.0	8.250	4
RickerSockeye	0.000	0.000	1.086	0.000	12.0	11.0	5	6.0	8.500	5
RickerEiW	0.000	0.000	2.731	0.000	12.0	11.0	8	6.0	9.250	6
LarkinBasicCycAge	0.000	0.000	2.769	0.000	12.0	11.0	9	6.0	9.500	7
RickerPiW	0.000	0.000	2.795	0.000	12.0	11.0	10.5	6.0	9.875	8
RickerFRDMean	0.000	0.000	2.980	0.000	12.0	11.0	13	6.0	10.500	9
RickerFRDpeak	0.000	0.000	3.236	0.000	12.0	11.0	16	6.0	11.250	10
LarkinBasic	0.000	0.000	3.319	0.000	12.0	11.0	19	6.0	12.000	11
RS1	0.000	0.000	2.176	0.001	12.0	11.0	6	19.5	12.125	12
RS8yr	0.000	0.000	2.195	0.001	12.0	11.0	7	19.5	12.375	13
PowerSalmon_Total	0.000	0.000	2.795	0.001	12.0	11.0	10.5	19.5	13.250	14
RickerEi	0.000	0.000	2.813	0.001	12.0	11.0	12	19.5	13.625	15
RickerPi	0.000	0.000	2.997	0.001	12.0	11.0	14	19.5	14.125	16
PowerPink	0.000	0.000	3.064	0.001	12.0	11.0	15	19.5	14.375	17
RickerBasic	0.000	0.000	3.267	0.001	12.0	11.0	17	19.5	14.875	18
RickerPDO	0.000	0.000	3.270	0.001	12.0	11.0	18	19.5	15.125	19
PowerChum	0.000	0.000	4.017	0.001	12.0	11.0	20	19.5	15.625	20
RickerCyc	0.000	0.000	4.257	0.001	12.0	11.0	21	19.5	15.875	21
RS2	0.000	0.001	4.262	0.001	12.0	24.5	22	19.5	19.500	22
PowerSockeye	0.000	0.001	4.433	0.001	12.0	24.5	23	19.5	19.750	23
PowerBasicCycAge	0.001	0.001	6.531	0.001	25.5	24.5	24	19.5	23.375	24
MRS	0.001	0.001	7.096	0.001	25.5	24.5	25	19.5	23.625	25
PowerBasic	0.001	0.001	7.689	0.001	25.5	24.5	26	19.5	23.875	26
RSC	0.001	0.001	10.880	0.001	25.5	24.5	27	19.5	24.125	27
LLY	0.002	0.002	15.013	0.002	28.0	28.0	28	28.0	28.000	28
R2C	0.003	0.003	23.125	0.005	29.0	29.0	29	29.0	29.000	29
RAC	0.012	0.012	140.140	0.012	30.0	30.0	30	30.0	30.000	30
TSA	0.037	0.037	421.272	0.037	31.0	31.0	31	31.0	31.000	31

(Age5)-Cycle

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerFRDMean	0.000	0.000	-	0.000	15.0	15.0	1	14.5	11.375	1
RickerPiW	0.000	0.000	0.006	0.000	15.0	15.0	2	14.5	11.625	2
RickerFRDpeak	0.000	0.000	0.011	0.000	15.0	15.0	3	14.5	11.875	3
PowerSockeye	0.000	0.000	0.020	0.000	15.0	15.0	4	14.5	12.125	4
RS1	0.000	0.000	0.049	0.000	15.0	15.0	5	14.5	12.375	5
RickerPDO	0.000	0.000	0.074	0.000	15.0	15.0	6	14.5	12.625	6
			0.085							

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerEiW	0.000	0.000	0.120	0.000	15.0	15.0	7	14.5	12.875	7
RickerEi	0.000	0.000	- 0.136	0.000	15.0	15.0	8	14.5	13.125	8
PowerBasic	0.000	0.000	0.162	0.000	15.0	15.0	9	14.5	13.375	9
RickerSockeye	0.000	0.000	- 0.164	0.000	15.0	15.0	10	14.5	13.625	10
PowerChum	0.000	0.000	- 0.248	0.000	15.0	15.0	11	14.5	13.875	11
sibling5	0.000	0.000	0.256	0.000	15.0	15.0	12	14.5	14.125	12
RickerPi	0.000	0.000	0.282	0.000	15.0	15.0	13	14.5	14.375	13
RickerBasic	0.000	0.000	0.298	0.000	15.0	15.0	14	14.5	14.625	14
LarkinBasicCycAge	0.000	0.000	0.352	0.000	15.0	15.0	15	14.5	14.875	15
RS2	0.000	0.000	0.436	0.000	15.0	15.0	16	14.5	15.125	16
RickerCyc	0.000	0.000	0.478	0.000	15.0	15.0	17	14.5	15.375	17
LarkinBasic	0.000	0.000	- 0.485	0.000	15.0	15.0	18	14.5	15.625	18
RickerChum	0.000	0.000	- 0.510	0.000	15.0	15.0	19	14.5	15.875	19
PowerSalmon_Total	0.000	0.000	- 0.519	0.000	15.0	15.0	20	14.5	16.125	20
PowerPink	0.000	0.000	- 0.627	0.000	15.0	15.0	21	14.5	16.375	21
RickerSalmon_Total	0.000	0.000	- 0.892	0.000	15.0	15.0	22	14.5	16.625	22
RickerPink	0.000	0.000	- 0.905	0.000	15.0	15.0	23	14.5	16.875	23
LLY	0.000	0.000	1.892	0.000	15.0	15.0	24	14.5	17.125	24
R2C	0.000	0.000	2.016	0.000	15.0	15.0	25	14.5	17.375	25
PowerBasicCycAge	0.000	0.000	2.341	0.000	15.0	15.0	26	14.5	17.625	26
RS4yr	0.000	0.000	2.723	0.000	15.0	15.0	27	14.5	17.875	27
RS8yr	0.000	0.000	3.276	0.000	15.0	15.0	28	14.5	18.125	28
RSC	0.000	0.000	5.845	0.001	15.0	15.0	29	30.0	22.250	29

(Total)-Other

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerSalmon_Total	- 0.001	0.002	0.742	0.003	3.5	1.5	1	1.5	1.875	1
RickerPink	- 0.001	0.002	2.524	0.003	3.5	1.5	2	1.5	2.125	2
PowerPink	0.001	0.003	9.821	0.005	3.5	5.0	7	5.5	5.250	3
PowerSalmon_Total	0.001	0.003	10.755	0.005	3.5	5.0	9	5.5	5.750	4
R2C	0.002	0.003	10.913	0.004	6.5	5.0	10	3.0	6.125	5
R1C	0.000	0.004	7.639	0.006	1.0	11.5	4	8.5	6.250	6
RickerEiW	0.002	0.003	15.437	0.005	6.5	5.0	15	5.5	8.000	7
RickerEi	0.003	0.003	15.385	0.005	9.5	5.0	14	5.5	8.500	8
RickerChum	0.003	0.004	7.233	0.007	9.5	11.5	3	12.0	9.000	9
RickerSockeye	0.003	0.004	8.647	0.007	9.5	11.5	5	12.0	9.500	10
PowerChum	0.004	0.004	13.133	0.006	14.5	11.5	11	8.5	11.375	11

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerPi	0.003	0.004	14.937	0.007	9.5	11.5	13	12.0	11.500	12
LarkinBasic	0.004	0.004	9.094	0.009	14.5	11.5	6	16.5	12.125	13
LarkinBasicCycAge	0.004	0.005	10.228	0.009	14.5	17.0	8	16.5	14.000	14
RickerPiW	0.004	0.004	15.979	0.007	14.5	11.5	18	12.0	14.000	15
PowerSockeye	0.004	0.004	18.887	0.007	14.5	11.5	22	12.0	15.000	16
RickerPDO	0.005	0.005	16.565	0.008	18.0	17.0	20	15.0	17.500	17
RS1	0.004	0.005	19.554	0.010	14.5	17.0	23	18.5	18.250	18
RickerCyc	0.006	0.006	14.854	0.013	20.0	20.0	12	23.0	18.750	19
RickerFRDpeak	0.006	0.006	16.493	0.012	20.0	20.0	19	20.5	19.875	20
PowerBasic	0.006	0.006	20.364	0.010	20.0	20.0	24	18.5	20.625	21
RickerBasic	0.007	0.007	15.552	0.014	23.0	23.0	17	25.5	22.125	22
RS2	0.008	0.009	15.540	0.013	25.5	25.5	16	23.0	22.500	23
PowerBasicCycAge	0.007	0.007	20.902	0.012	23.0	23.0	25	20.5	22.875	24
RickerFRDMean	0.007	0.007	16.606	0.014	23.0	23.0	21	25.5	23.125	25
RS4yr	0.008	0.009	31.616	0.013	25.5	25.5	26	23.0	25.000	26
RS8yr	0.010	0.011	42.704	0.016	27.0	27.0	27	27.0	27.000	27
RAC	0.024	0.024	73.352	0.026	28.0	28.0	29	28.0	28.250	28
RSC	0.027	0.027	55.905	0.047	29.0	29.0	28	30.0	29.000	29
MRS	0.035	0.035	101.635	0.052	31.0	30.0	30	31.0	30.500	30
LLY	0.034	0.037	109.909	0.064	30.0	31.5	31	32.0	31.125	31
TSA	0.037	0.037	174.316	0.038	32.0	31.5	32	29.0	31.125	32

(Age4)-Other

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RS1	0.000	0.001	2.029	0.002	2.5	1.0	3	1.0	1.875	1
RickerSalmon_Total	-0.001	0.002	0.262	0.003	7.5	5.0	1	3.0	4.125	2
RickerPink	-0.001	0.002	1.399	0.003	7.5	5.0	2	3.0	4.375	3
PowerSalmon_Total	0.000	0.002	8.813	0.004	2.5	5.0	11	7.0	6.375	4
RickerChum	0.001	0.002	4.408	0.005	7.5	5.0	5	10.5	7.000	5
RickerEi	0.001	0.002	11.552	0.003	7.5	5.0	14	3.0	7.375	6
PowerPink	0.000	0.003	8.525	0.004	2.5	14.0	10	7.0	8.375	7
RickerEiW	0.001	0.002	12.415	0.004	7.5	5.0	15	7.0	8.625	8
RS2	0.001	0.003	4.324	0.006	7.5	14.0	4	14.5	10.000	9
PowerChum	0.002	0.002	12.964	0.004	14.0	5.0	19	7.0	11.250	10
RS4yr	0.002	0.003	7.350	0.005	14.0	14.0	9	10.5	11.875	11
RickerSockeye	0.002	0.003	7.240	0.006	14.0	14.0	8	14.5	12.625	12
R1C	0.000	0.004	12.876	0.006	2.5	22.0	18	14.5	14.250	13
RickerPiW	0.002	0.003	12.480	0.006	14.0	14.0	16	14.5	14.625	14
RickerPi	0.002	0.003	12.830	0.006	14.0	14.0	17	14.5	14.875	15
LarkinBasicCycAge	0.003	0.003	6.296	0.009	19.5	14.0	6	21.0	15.125	16

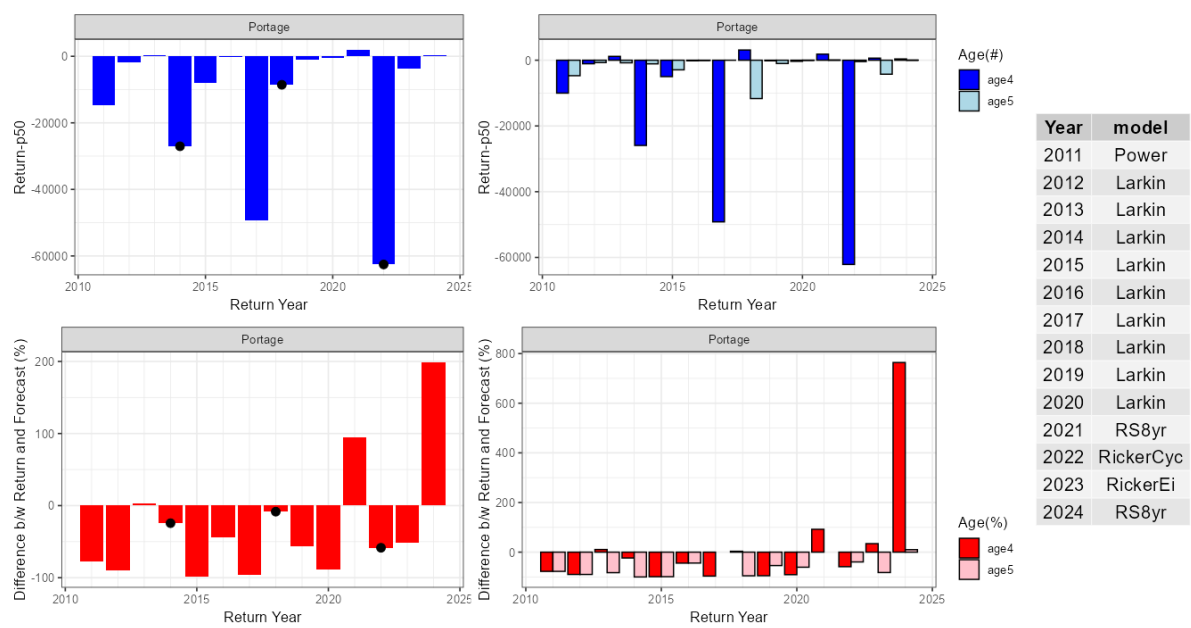
model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
LarkinBasic	0.003	0.003	6.603	0.009	19.5	14.0	7	21.0	15.375	17
R2C	0.002	0.003	40.334	0.004	14.0	14.0	29	7.0	16.000	18
PowerSockeye	0.002	0.003	18.072	0.006	14.0	14.0	24	14.5	16.625	19
RS8yr	0.003	0.004	10.305	0.008	19.5	22.0	12	19.0	18.125	20
RickerPDO	0.003	0.003	13.357	0.007	19.5	14.0	21	18.0	18.125	21
RickerCyc	0.004	0.005	11.028	0.012	23.5	25.5	13	24.5	21.625	22
PowerBasic	0.004	0.004	22.799	0.009	23.5	22.0	26	21.0	23.125	23
RickerFRDpeak	0.004	0.004	15.136	0.012	23.5	22.0	23	24.5	23.250	24
PowerBasicCycAge	0.004	0.004	21.696	0.010	23.5	22.0	25	23.0	23.375	25
RickerFRDMean	0.005	0.005	14.512	0.013	26.0	25.5	22	26.5	25.000	26
RickerBasic	0.006	0.006	13.139	0.013	27.0	27.0	20	26.5	25.125	27
MRS	0.015	0.015	29.601	0.034	28.0	28.0	28	29.0	28.250	28
RSC	0.018	0.018	26.701	0.043	29.0	29.0	27	31.0	29.000	29
RAC	0.022	0.022	351.083	0.025	30.0	30.0	30	28.0	29.500	30
TSA	0.035	0.035	673.772	0.035	32.0	32.0	31	30.0	31.250	31
LLY	0.031	0.034	1188.364	0.059	31.0	31.0	32	32.0	31.500	32

(Age5)-Other

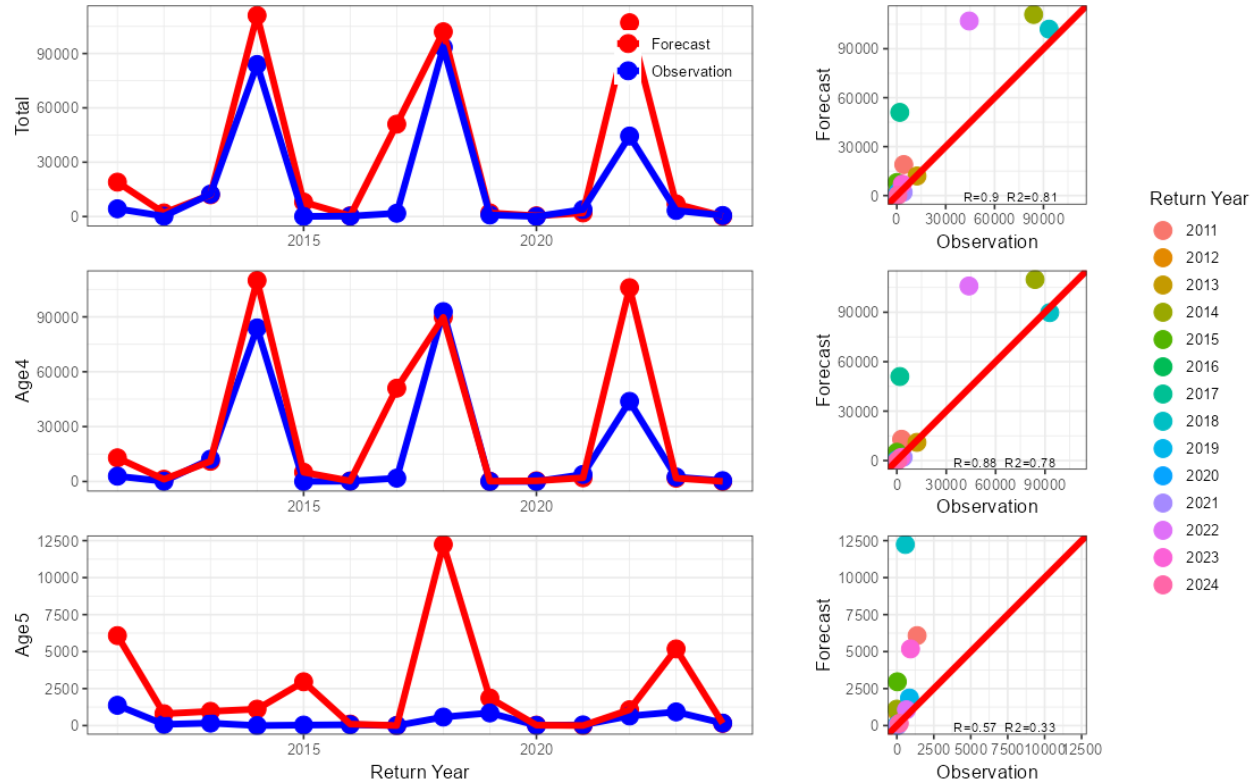
model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerSalmon_Total	0.000	0.000	-0.468	0.000	10.0	8.5	1	2.5	5.500	1
RickerPink	0.000	0.000	0.636	0.000	10.0	8.5	2	2.5	5.750	2
R2C	0.000	0.000	2.442	0.000	10.0	8.5	5	2.5	6.500	3
RickerPi	0.000	0.000	3.554	0.000	10.0	8.5	9	2.5	7.500	4
RickerSockeye	0.000	0.000	1.513	0.001	10.0	8.5	4	13.0	8.875	5
RickerFRDpeak	0.000	0.000	2.890	0.001	10.0	8.5	6	13.0	9.375	6
RickerBasic	0.000	0.000	3.217	0.001	10.0	8.5	7	13.0	9.625	7
RickerPiW	0.000	0.000	3.738	0.001	10.0	8.5	10	13.0	10.375	8
RickerFRDMean	0.000	0.000	3.879	0.001	10.0	8.5	11	13.0	10.625	9
RickerPDO	0.000	0.000	4.174	0.001	10.0	8.5	12	13.0	10.875	10
PowerPink	0.000	0.000	4.597	0.001	10.0	8.5	13	13.0	11.125	11
RickerEiW	0.000	0.000	4.931	0.001	10.0	8.5	15	13.0	11.625	12
R1C	0.000	0.001	1.359	0.001	10.0	21.0	3	13.0	11.750	13
LarkinBasic	0.000	0.000	5.444	0.001	10.0	8.5	18	13.0	12.375	14
PowerBasic	0.000	0.000	5.634	0.001	10.0	8.5	19	13.0	12.625	15
PowerSockeye	0.000	0.000	5.852	0.001	10.0	8.5	20	13.0	12.875	16
RickerEi	0.000	0.000	6.528	0.001	10.0	8.5	22	13.0	13.375	17
PowerChum	0.000	0.001	4.960	0.001	10.0	21.0	16	13.0	15.000	18
PowerSalmon_Total	0.000	0.001	6.010	0.001	10.0	21.0	21	13.0	16.250	19
RickerCyc	0.001	0.001	4.640	0.001	22.5	21.0	14	13.0	17.625	20
sibling5	0.001	0.001	5.208	0.001	22.5	21.0	17	13.0	18.375	21

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerChum	0.001	0.001	3.411	0.002	22.5	21.0	8	23.5	18.750	22
PowerBasicCycAge	0.001	0.001	6.643	0.002	22.5	21.0	23	23.5	22.500	23
LarkinBasicCycAge	0.001	0.001	7.556	0.002	22.5	21.0	24	23.5	22.750	24
RAC	0.001	0.001	24.995	0.002	22.5	21.0	25	23.5	23.000	25
LLY	0.004	0.004	25.743	0.006	27.0	27.0	26	27.0	26.750	26
TSA	0.003	0.003	56.185	0.003	26.0	26.0	29	26.0	26.750	27
RS1	0.005	0.005	46.947	0.010	28.0	28.0	28	28.0	28.000	28
RS2	0.007	0.007	33.150	0.012	29.5	29.5	27	30.0	29.000	29
RS4yr	0.007	0.007	75.360	0.011	29.5	29.5	30	29.0	29.500	30
RS8yr	0.008	0.008	100.400	0.013	31.0	31.0	31	31.0	31.000	31
RSC	0.011	0.011	104.782	0.018	32.0	32.0	32	32.0	32.000	32

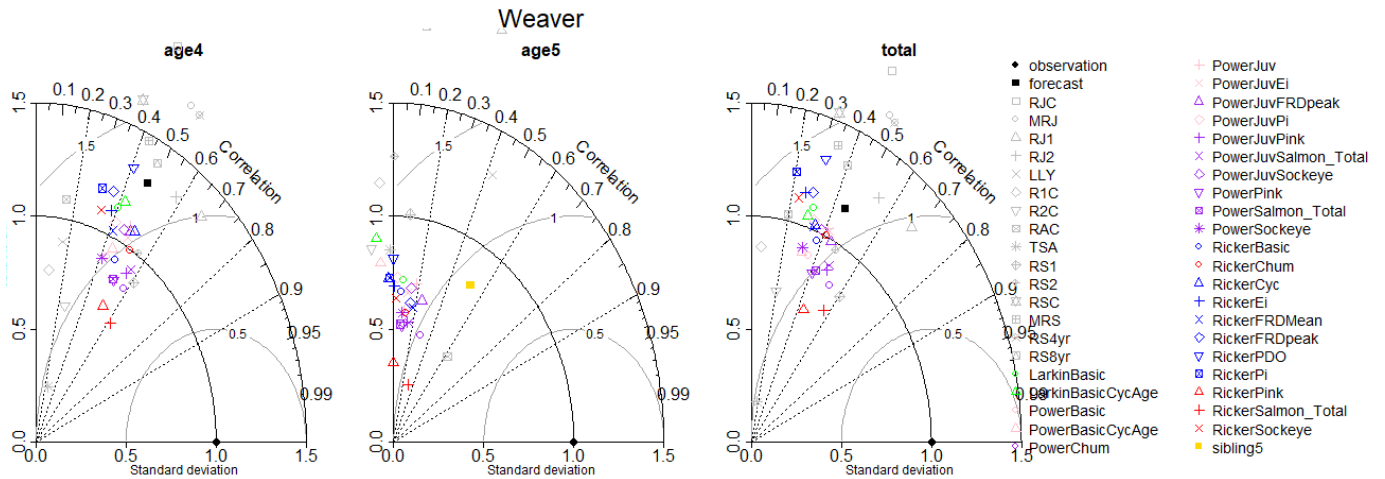
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FC-TS



Weaver Retrospective: Taylor



Ranking (Total)-Alllys

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerPink	-0.015	0.067	3.105	0.095	3.0	2.0	2	2.0	2.250	1

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerSalmon_Total	-0.025	0.061	1.844	0.089	9.5	1.0	1	1.0	3.125	2
RS1	0.010	0.068	6.851	0.097	2.0	3.0	8	3.5	4.125	3
PowerJuvPink	0.020	0.078	5.386	0.100	5.0	6.5	4	5.0	5.125	4
PowerJuvSalmon_Tot al	0.023	0.078	5.642	0.101	7.5	6.5	5	6.0	6.250	5
RickerChum	0.026	0.076	6.055	0.114	11.0	5.0	6	9.0	7.750	6
PowerSalmon_Total	0.025	0.083	7.757	0.104	9.5	8.5	17	7.0	10.500	7
PowerPink	0.023	0.084	7.769	0.105	7.5	11.0	18	8.0	11.125	8
PowerChum	0.031	0.073	8.155	0.097	15.5	4.0	23	3.5	11.500	9
RickerFRDMean	0.035	0.088	6.480	0.123	20.0	14.5	7	16.5	14.500	10
RickerPiW	0.021	0.091	7.110	0.136	6.0	19.5	9	27.5	15.500	11
RickerCyc	0.036	0.088	7.252	0.123	21.0	14.5	11	16.5	15.750	12
PowerJuvPiW	0.034	0.086	8.109	0.121	19.0	13.0	21	13.0	16.500	13
PowerJuvEi	0.042	0.083	8.480	0.119	25.5	8.5	27	11.0	18.000	14
RickerEi	0.030	0.090	7.487	0.137	13.5	17.5	15	29.5	18.875	15
R1C	0.002	0.115	4.569	0.150	1.0	38.0	3	36.0	19.500	16
RS2	0.037	0.084	8.537	0.124	22.5	11.0	28	18.0	19.875	17
RickerBasic	0.033	0.093	7.580	0.133	17.5	23.0	16	25.0	20.375	18
PowerJuvPi	0.037	0.090	8.271	0.126	22.5	17.5	24	20.0	21.000	19
RJ1	0.077	0.084	7.469	0.136	36.0	11.0	14	27.5	22.125	20
RickerPi	0.030	0.098	7.145	0.147	13.5	32.0	10	33.0	22.125	21
PowerJuvEiW	0.039	0.089	8.807	0.126	24.0	16.0	29	20.0	22.250	22
PowerJuvFRDpeak	0.056	0.091	8.436	0.121	34.0	19.5	25	13.0	22.875	23
RickerSockeye	0.033	0.099	7.277	0.137	17.5	33.0	12	29.5	23.000	24
PowerBasic	0.043	0.092	10.653	0.118	27.0	21.0	35	10.0	23.250	25
RickerEiW	0.031	0.096	8.023	0.140	15.5	30.0	19	32.0	24.125	26
PowerSockeye	0.042	0.094	10.327	0.122	25.5	25.0	33	15.0	24.625	27
RickerFRDpeak	0.046	0.096	7.448	0.139	30.5	30.0	13	31.0	26.125	28
PowerJuvSockeye	0.052	0.093	9.314	0.126	33.0	23.0	30	20.0	26.500	29
LarkinBasic	0.046	0.096	8.135	0.134	30.5	30.0	22	26.0	27.125	30
PowerBasicCycAge	0.045	0.095	11.918	0.121	28.5	27.0	40	13.0	27.125	31
PowerJuv	0.058	0.093	9.329	0.127	35.0	23.0	31	22.0	27.750	32
LarkinBasicCycAge	0.045	0.095	9.590	0.132	28.5	27.0	32	24.0	27.875	33
R2C	0.028	0.110	13.151	0.131	12.0	35.0	43	23.0	28.250	34
RickerPDO	0.047	0.095	8.077	0.148	32.0	27.0	20	34.0	28.250	35
LLY	0.017	0.119	11.112	0.149	4.0	39.0	39	35.0	29.250	36
RJ2	0.080	0.106	8.476	0.154	37.0	34.0	26	37.0	33.500	37
RS8yr	0.089	0.113	11.078	0.177	38.0	36.5	38	38.0	37.625	38
RS4yr	0.105	0.113	10.995	0.198	41.0	36.5	37	40.0	38.625	39
RSC	0.104	0.132	10.912	0.209	40.0	41.0	36	41.0	39.500	40
MRS	0.102	0.126	12.515	0.194	39.0	40.0	41	39.0	39.750	41

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RJC	0.145	0.156	10.545	0.242	43.0	42.0	34	43.0	40.500	42
MRJ	0.143	0.159	12.610	0.224	42.0	43.0	42	42.0	42.250	43
RAC	0.218	0.237	108.430	0.265	44.0	44.0	44	45.0	44.250	44
TSA	0.236	0.239	125.380	0.263	45.0	45.0	45	44.0	44.750	45

(Age4)-Alllys

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
PowerJuvPink	0.012	0.057	20.298	0.078	6.5	6.0	3	4.0	4.875	1
RickerPink	-0.017	0.049	7.750	0.077	13.5	2.0	2	3.0	5.125	2
RS1	0.005	0.059	21.595	0.088	2.0	8.0	5	9.0	6.000	3
PowerJuvSalmon_Total	0.014	0.056	21.704	0.079	9.0	5.0	6	5.0	6.250	4
PowerPink	0.011	0.059	22.410	0.080	4.5	8.0	7	6.5	6.500	5
PowerChum	0.017	0.052	25.675	0.076	13.5	3.0	9	2.0	6.875	6
RickerSalmon_Total	-0.025	0.047	2.859	0.073	25.0	1.0	1	1.0	7.000	7
PowerSalmon_Total	0.012	0.059	24.053	0.080	6.5	8.0	8	6.5	7.250	8
RickerChum	0.013	0.053	26.108	0.085	8.0	4.0	10	8.0	7.500	9
RickerCyc	0.023	0.060	21.084	0.092	22.5	10.0	4	12.5	12.250	10
PowerJuvPiW	0.018	0.063	29.374	0.091	15.5	13.0	13	10.0	12.875	11
RickerPiW	0.008	0.063	31.341	0.099	3.0	13.0	16	21.0	13.250	12
RickerFRDMean	0.019	0.063	26.825	0.096	17.5	13.0	11	16.0	14.375	13
PowerJuvEi	0.025	0.061	30.780	0.092	25.0	11.0	14	12.5	15.625	14
PowerSockeye	0.023	0.066	31.683	0.092	22.5	18.0	18	12.5	17.750	15
RickerEi	0.015	0.064	32.084	0.103	10.0	15.0	22	24.0	17.750	16
PowerJuvEiW	0.022	0.066	31.607	0.097	20.0	18.0	17	17.5	18.125	17
PowerBasic	0.025	0.065	31.835	0.092	25.0	16.0	20	12.5	18.375	18
PowerBasicCycAge	0.028	0.066	31.229	0.093	28.5	18.0	15	15.0	19.125	19
PowerJuvPi	0.022	0.068	32.099	0.099	20.0	20.5	23	21.0	21.125	20
PowerJuvFRDpeak	0.036	0.069	27.640	0.097	34.0	24.0	12	17.5	21.875	21
RickerBasic	0.016	0.069	34.557	0.104	11.5	24.0	30	25.0	22.625	22
PowerJuvSockeye	0.032	0.069	31.954	0.098	33.0	24.0	21	19.0	24.250	23
RS2	0.026	0.068	34.258	0.102	27.0	20.5	28	23.0	24.625	24
LLY	0.011	0.106	31.700	0.129	4.5	40.0	19	36.5	25.000	25
RickerSockeye	0.019	0.073	32.235	0.106	17.5	32.0	24	27.5	25.250	26
R1C	0.001	0.098	35.189	0.125	1.0	38.0	32	35.0	26.500	27
PowerJuv	0.038	0.069	33.303	0.099	35.0	24.0	26	21.0	26.500	28
RickerEiW	0.018	0.070	36.948	0.110	15.5	28.5	36	29.5	27.375	29
RickerPi	0.016	0.070	37.721	0.112	11.5	28.5	38	32.0	27.500	30
LarkinBasic	0.028	0.070	34.357	0.105	28.5	28.5	29	26.0	28.000	31
LarkinBasicCycAge	0.030	0.071	33.446	0.106	31.0	31.0	27	27.5	29.125	32

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
R2C	0.022	0.094	35.852	0.110	20.0	35.0	33	29.5	29.375	33
RickerPDO	0.030	0.069	36.177	0.116	31.0	24.0	34	33.0	30.500	34
RickerFRDpeak	0.030	0.070	37.391	0.111	31.0	28.5	37	31.0	31.875	35
RJ1	0.055	0.075	32.937	0.118	36.0	33.0	25	34.0	32.000	36
RJ2	0.058	0.086	36.523	0.129	37.0	34.0	35	36.5	35.625	37
RS8yr	0.068	0.096	47.398	0.150	38.0	36.0	40	38.0	38.000	38
RJC	0.103	0.129	34.565	0.211	42.0	43.0	31	43.0	39.750	39
RS4yr	0.080	0.097	49.609	0.171	41.0	37.0	41	40.0	39.750	40
RSC	0.076	0.109	39.488	0.180	39.0	41.0	39	41.0	40.000	41
MRS	0.077	0.104	52.913	0.164	40.0	39.0	43	39.0	40.250	42
MRJ	0.107	0.124	51.253	0.189	43.0	42.0	42	42.0	42.250	43
RAC	0.180	0.201	168.899	0.229	44.0	45.0	44	45.0	44.500	44
TSA	0.189	0.192	203.955	0.215	45.0	44.0	45	44.0	44.500	45

(Age5)-Allyrs

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
sibling5	-0.001	0.014	1.988	0.019	7.0	1.0	1	1.0	2.500	1
PowerJuvFRDpeak	0.000	0.019	119.190	0.024	2.0	12.5	13	4.5	8.000	2
PowerChum	-0.004	0.017	91.692	0.022	23.5	2.5	9	2.0	9.250	3
RickerFRDMean	-0.003	0.018	121.647	0.024	19.0	6.5	14	4.5	11.000	4
PowerJuvPink	-0.005	0.018	83.688	0.024	28.5	6.5	7	4.5	11.625	5
PowerJuvSalmon_Tot al	-0.005	0.018	88.485	0.024	28.5	6.5	8	4.5	11.875	6
RickerFRDpeak	-0.002	0.018	141.860	0.025	13.5	6.5	17	11.5	12.125	7
RickerBasic	-0.002	0.018	143.428	0.025	13.5	6.5	19	11.5	12.625	8
RickerSalmon_Total	-0.013	0.017	37.505	0.025	36.0	2.5	4	11.5	13.500	9
PowerBasic	-0.001	0.019	153.350	0.025	7.0	12.5	26	11.5	14.250	10
PowerJuvSockeye	0.000	0.020	160.535	0.025	2.0	17.5	30	11.5	15.250	11
PowerPink	-0.005	0.019	98.612	0.025	28.5	12.5	10	11.5	15.625	12
PowerSalmon_Total	-0.005	0.019	100.092	0.025	28.5	12.5	11	11.5	15.875	13
PowerSockeye	-0.003	0.019	146.640	0.025	19.0	12.5	21	11.5	16.000	14
RickerPink	-0.011	0.018	66.640	0.026	34.0	6.5	6	17.5	16.000	15
PowerJuv	0.001	0.020	158.880	0.025	7.0	17.5	29	11.5	16.250	16
RickerChum	-0.005	0.019	123.343	0.025	28.5	12.5	15	11.5	16.875	17
PowerJuvEi	-0.002	0.020	146.851	0.026	13.5	17.5	22	17.5	17.625	18
LarkinBasic	-0.001	0.021	146.130	0.027	7.0	22.5	20	21.5	17.750	19
R1C	0.001	0.022	23.008	0.034	7.0	27.5	3	35.0	18.125	20
PowerJuvPiW	-0.002	0.021	137.664	0.027	13.5	22.5	16	21.5	18.375	21
PowerJuvEiW	-0.002	0.021	158.518	0.027	13.5	22.5	28	21.5	21.375	22
RickerEi	-0.003	0.021	151.540	0.027	19.0	22.5	25	21.5	22.000	23

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
LLY	0.006	0.022	10.542	0.028	32.5	27.5	2	26.5	22.125	24
PowerJuvPi	-0.002	0.021	161.617	0.027	13.5	22.5	31	21.5	22.125	25
RickerSockeye	-0.004	0.020	155.773	0.027	23.5	17.5	27	21.5	22.375	26
RickerCyc	-0.003	0.022	142.563	0.028	19.0	27.5	18	26.5	22.750	27
R2C	0.005	0.023	50.309	0.030	28.5	31.0	5	32.0	24.125	28
RickerPDO	-0.001	0.023	175.078	0.029	7.0	31.0	32	29.5	24.875	29
RickerPi	-0.004	0.022	147.218	0.028	23.5	27.5	23	26.5	25.125	30
RickerEiW	-0.003	0.021	175.136	0.028	19.0	22.5	33	26.5	25.250	31
LarkinBasicCycAge	0.000	0.024	222.099	0.032	2.0	33.5	38	34.0	26.875	32
RickerPiW	-0.004	0.023	150.167	0.029	23.5	31.0	24	29.5	27.000	33
RS1	0.006	0.025	111.309	0.030	32.5	35.0	12	32.0	27.875	34
PowerBasicCycAge	-0.001	0.024	232.423	0.030	7.0	33.5	41	32.0	28.375	35
RS2	0.012	0.028	187.102	0.037	35.0	36.0	34	36.0	35.250	36
RJ1	0.024	0.032	188.043	0.046	38.5	37.5	35	38.0	37.250	37
RJ2	0.024	0.034	208.623	0.049	38.5	39.0	37	39.5	38.500	38
RS8yr	0.023	0.032	268.989	0.049	37.0	37.5	43	39.5	39.250	39
RAC	0.038	0.038	223.278	0.042	43.0	42.0	40	37.0	40.500	40
MRS	0.026	0.036	300.508	0.052	40.0	40.5	46	41.0	41.875	41
RS4yr	0.027	0.036	281.368	0.053	41.0	40.5	44	42.0	41.875	42
RSC	0.030	0.041	222.779	0.064	42.0	43.0	39	44.0	42.000	43
RJC	0.045	0.055	195.039	0.086	45.0	46.0	36	46.0	43.250	44
TSA	0.046	0.049	252.033	0.055	46.0	45.0	42	43.0	44.000	45
MRJ	0.039	0.047	291.175	0.066	44.0	44.0	45	45.0	44.500	46

(Total)-Cycle

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerSalmon_Total	0.004	0.004	4.272	0.008	1.0	1.0	1	1.0	1.000	1
RickerPink	0.010	0.010	6.656	0.014	2.0	2.0	2	2.0	2.000	2
RickerChum	0.015	0.015	11.363	0.021	3.5	3.5	5	3.0	3.750	3
RickerFRDMean	0.015	0.015	11.807	0.022	3.5	3.5	7	4.0	4.500	4
RickerFRDpeak	0.017	0.017	13.115	0.024	6.0	6.0	8	5.0	6.250	5
RickerSockeye	0.016	0.016	13.592	0.025	5.0	5.0	10	6.0	6.500	6
RickerEi	0.018	0.018	14.166	0.026	7.0	7.0	13	7.5	8.625	7
RickerPi	0.020	0.020	13.121	0.028	10.0	9.5	9	9.5	9.500	8
RickerPiW	0.020	0.020	14.154	0.028	10.0	9.5	12	9.5	10.250	9
RS1	0.020	0.021	15.393	0.026	10.0	12.5	15	7.5	11.250	10
RickerBasic	0.020	0.020	14.947	0.029	10.0	9.5	14	12.0	11.375	11
RickerCyc	0.021	0.021	14.131	0.029	13.0	12.5	11	12.0	12.125	12
RickerEiW	0.020	0.020	15.707	0.029	10.0	9.5	18	12.0	12.375	13
LarkinBasic	0.023	0.023	15.579	0.031	15.0	15.0	16	15.0	15.250	14

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
PowerJuvPink	0.026	0.026	11.019	0.037	19.0	19.0	4	21.0	15.750	15
RickerPDO	0.023	0.023	15.619	0.032	15.0	15.0	17	17.0	16.000	16
RJC	0.023	0.023	16.657	0.031	15.0	15.0	20	15.0	16.250	17
RJ1	0.024	0.024	15.807	0.031	17.5	17.5	19	15.0	17.250	18
PowerJuvSalmon_Total	0.027	0.027	11.523	0.038	21.0	21.0	6	22.0	17.500	19
R1C	0.029	0.029	7.861	0.046	23.0	23.0	3	27.5	19.125	20
RJ2	0.027	0.027	16.941	0.036	21.0	21.0	22	20.0	21.000	21
RSC	0.024	0.024	19.166	0.034	17.5	17.5	31	18.0	21.000	22
RS2	0.027	0.027	19.082	0.035	21.0	21.0	30	19.0	22.750	23
PowerJuvFRDpeak	0.033	0.033	16.901	0.044	27.5	27.5	21	26.0	25.500	24
RS8yr	0.030	0.030	22.519	0.042	24.5	24.5	35	23.5	26.875	25
RS4yr	0.030	0.030	23.440	0.042	24.5	24.5	37	23.5	27.375	26
LarkinBasicCycAge	0.032	0.032	20.649	0.043	26.0	26.0	34	25.0	27.750	27
PowerJuvEi	0.034	0.034	17.984	0.046	29.0	29.0	26	27.5	27.875	28
PowerJuvPiW	0.035	0.035	17.611	0.047	30.5	30.5	25	30.0	29.000	29
PowerJuvEiW	0.035	0.035	18.817	0.047	30.5	30.5	29	30.0	30.000	30
PowerJuvPi	0.036	0.036	18.172	0.049	32.5	32.5	27	32.5	31.125	31
MRS	0.033	0.033	25.078	0.047	27.5	27.5	40	30.0	31.250	32
PowerPink	0.037	0.037	17.582	0.051	35.0	35.0	23	35.5	32.125	33
PowerChum	0.037	0.037	18.319	0.051	35.0	35.0	28	35.5	33.375	34
PowerJuv	0.037	0.037	19.191	0.050	35.0	35.0	32	34.0	34.000	35
PowerSalmon_Total	0.039	0.039	17.596	0.053	37.5	37.5	24	37.0	34.000	36
MRJ	0.036	0.036	24.167	0.049	32.5	32.5	39	32.5	34.125	37
PowerJuvSockeye	0.039	0.039	19.914	0.054	37.5	37.5	33	38.0	36.500	38
PowerBasic	0.042	0.042	23.806	0.057	39.0	39.0	38	39.0	38.750	39
PowerSockeye	0.045	0.045	23.269	0.061	40.0	40.0	36	40.0	39.000	40
R2C	0.050	0.050	28.532	0.067	41.0	41.0	42	41.0	41.250	41
PowerBasicCycAge	0.051	0.051	28.271	0.069	42.0	42.0	41	42.0	41.750	42
LLY	0.101	0.101	32.768	0.159	43.0	43.0	43	43.0	43.000	43
RAC	0.295	0.295	356.669	0.295	44.0	44.0	44	44.0	44.000	44
TSA	0.329	0.329	404.258	0.330	45.0	45.0	45	45.0	45.000	45

(Age4)-Cycle

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RJ1	0.000	0.001	2.002	0.001	4.0	2.0	16	1.0	5.750	1
RJ2	0.000	0.001	1.836	0.002	4.0	2.0	14	3.0	5.750	2
LarkinBasicCycAge	0.000	0.002	1.475	0.003	4.0	7.0	13	7.0	7.750	3
LarkinBasic	0.000	0.002	1.901	0.003	4.0	7.0	15	7.0	8.250	4
RickerEi	-0.001	0.002	1.408	0.003	14.5	7.0	10	7.0	9.625	5
MRJ	0.001	0.001	2.704	0.002	14.5	2.0	20	3.0	9.875	6

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RJC	0.001	0.002	2.971	0.002	14.5	7.0	21	3.0	11.375	7
RickerCyc	0.001	0.002	2.351	0.003	14.5	7.0	17	7.0	11.375	8
RickerPink	-0.002	0.002	0.233	0.004	22.0	7.0	2	16.0	11.750	9
RS4yr	0.000	0.002	3.535	0.003	4.0	7.0	30	7.0	12.000	10
RickerChum	-0.001	0.003	0.736	0.004	14.5	17.0	3	16.0	12.625	11
RickerFRDMean	-0.001	0.003	1.098	0.004	14.5	17.0	4	16.0	12.875	12
RickerFRDpeak	-0.001	0.003	1.132	0.004	14.5	17.0	5	16.0	13.125	13
RickerSockeye	-0.001	0.003	1.142	0.004	14.5	17.0	6	16.0	13.375	14
RickerPi	-0.001	0.003	1.163	0.004	14.5	17.0	7	16.0	13.625	15
RickerEiW	-0.001	0.003	1.325	0.004	14.5	17.0	8	16.0	13.875	16
RickerBasic	-0.001	0.003	1.366	0.004	14.5	17.0	9	16.0	14.125	17
RickerPiW	-0.001	0.003	1.412	0.004	14.5	17.0	11	16.0	14.625	18
RS8yr	0.000	0.003	3.252	0.004	4.0	17.0	22	16.0	14.750	19
RickerSalmon_Total	-0.003	0.003	-0.202	0.006	23.5	17.0	1	25.0	16.625	20
RickerPDO	-0.001	0.003	1.446	0.005	14.5	17.0	12	23.5	16.750	21
RSC	0.000	0.003	3.693	0.004	4.0	17.0	31	16.0	17.000	22
MRS	0.001	0.003	3.311	0.004	14.5	17.0	26	16.0	18.375	23
PowerJuvSalmon_Total	0.009	0.009	2.372	0.015	27.0	27.0	18	27.0	24.750	24
PowerJuvPink	0.009	0.009	2.496	0.015	27.0	27.0	19	27.0	25.000	25
RS2	0.003	0.004	7.371	0.004	23.5	24.5	39	16.0	25.750	26
PowerJuvEiW	0.009	0.009	3.402	0.015	27.0	27.0	28	27.0	27.250	27
RS1	0.004	0.004	9.356	0.005	25.0	24.5	41	23.5	28.500	28
PowerJuvPi	0.010	0.010	3.270	0.016	30.5	30.5	23	30.0	28.500	29
PowerJuvEi	0.010	0.010	3.295	0.016	30.5	30.5	24	30.0	28.750	30
PowerJuvFRDpeak	0.010	0.010	3.309	0.016	30.5	30.5	25	30.0	29.000	31
PowerJuvPiW	0.010	0.010	3.338	0.017	30.5	30.5	27	32.5	30.125	32
PowerJuv	0.011	0.011	3.880	0.017	33.0	33.0	32	32.5	32.625	33
PowerJuvSockeye	0.012	0.012	3.442	0.020	34.0	34.0	29	35.0	33.000	34
PowerBasicCycAge	0.013	0.013	5.964	0.019	35.0	35.0	35	34.0	34.750	35
PowerChum	0.015	0.015	5.890	0.022	37.0	37.0	33	36.5	35.875	36
PowerSalmon_Total	0.015	0.015	5.963	0.023	37.0	37.0	34	38.5	36.625	37
PowerBasic	0.015	0.015	7.054	0.022	37.0	37.0	38	36.5	37.125	38
PowerPink	0.016	0.016	6.268	0.023	39.0	39.0	36	38.5	38.125	39
PowerSockeye	0.018	0.018	7.006	0.027	40.0	40.0	37	40.0	39.250	40
R1C	0.027	0.027	7.793	0.042	41.0	41.0	40	41.0	40.750	41
R2C	0.044	0.044	31.022	0.060	42.0	42.0	42	42.0	42.000	42
LLY	0.086	0.086	59.705	0.136	43.0	43.0	43	43.0	43.000	43
RAC	0.247	0.247	496.004	0.248	44.0	44.0	44	44.0	44.000	44
TSA	0.275	0.275	563.305	0.276	45.0	45.0	45	45.0	45.000	45

(Age5)-Cycle

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
R1C	0.002	0.003	55.154	0.004	1.0	1.5	3	1.0	1.625	1
RickerSalmon_Total	0.003	0.003	111.901	0.005	2.0	1.5	4	2.0	2.375	2
R2C	0.006	0.006	138.233	0.007	3.0	3.0	5	3.0	3.500	3
RickerPink	0.007	0.007	198.459	0.010	4.0	4.0	6	4.0	4.500	4
sibling5	0.010	0.010	5.656	0.016	6.0	6.0	1	9.5	5.625	5
PowerJuvPink	0.010	0.010	247.708	0.013	6.0	6.0	7	5.0	6.000	6
PowerJuvSalmon_Total	0.010	0.010	262.400	0.014	6.0	6.0	8	6.5	6.625	7
PowerChum	0.011	0.011	272.028	0.014	8.5	8.5	9	6.5	8.125	8
PowerPink	0.011	0.011	291.706	0.015	8.5	8.5	10	8.0	8.750	9
PowerSalmon_Total	0.012	0.012	296.430	0.016	10.0	10.0	11	9.5	10.125	10
RickerFRDMean	0.013	0.013	360.968	0.018	11.5	11.5	14	12.0	12.250	11
RickerChum	0.013	0.013	367.730	0.018	11.5	11.5	15	12.0	12.500	12
PowerJuvFRDpeak	0.014	0.014	351.901	0.018	15.0	15.0	13	12.0	13.750	13
RickerFRDpeak	0.014	0.014	421.554	0.020	15.0	15.0	17	15.0	15.500	14
LLY	0.015	0.015	30.567	0.022	20.0	20.0	2	23.0	16.250	15
PowerSockeye	0.014	0.014	435.646	0.020	15.0	15.0	20	15.0	16.250	16
PowerJuvPiW	0.015	0.015	410.030	0.020	20.0	20.0	16	15.0	17.750	17
RickerEi	0.014	0.014	452.021	0.021	15.0	15.0	24	18.5	18.125	18
RickerSockeye	0.014	0.014	463.961	0.021	15.0	15.0	27	18.5	18.875	19
RickerCyc	0.015	0.015	423.378	0.021	20.0	20.0	18	18.5	19.125	20
PowerJuvEi	0.015	0.015	437.461	0.021	20.0	20.0	21	18.5	19.875	21
RickerBasic	0.015	0.015	461.974	0.022	20.0	20.0	26	23.0	22.250	22
RickerPi	0.016	0.016	439.961	0.022	25.0	25.0	22	23.0	23.750	23
RickerPiW	0.016	0.016	448.223	0.022	25.0	25.0	23	23.0	24.000	24
PowerBasic	0.016	0.016	454.737	0.022	25.0	25.0	25	23.0	24.500	25
RS1	0.017	0.017	348.595	0.023	30.0	30.0	12	28.5	25.125	26
LarkinBasic	0.017	0.017	434.529	0.023	30.0	30.0	19	28.5	26.875	27
PowerJuvEiW	0.016	0.016	472.295	0.023	25.0	25.0	29	28.5	26.875	28
PowerJuvSockeye	0.016	0.016	477.521	0.023	25.0	25.0	30	28.5	27.125	29
PowerJuv	0.017	0.017	471.651	0.023	30.0	30.0	28	28.5	29.125	30
PowerJuvPi	0.017	0.017	482.380	0.023	30.0	30.0	31	28.5	29.875	31
RickerEiW	0.017	0.017	522.642	0.024	30.0	30.0	33	32.0	31.250	32
RickerPDO	0.020	0.020	522.417	0.027	33.0	33.0	32	33.0	32.750	33
RJC	0.022	0.022	606.229	0.030	34.0	34.0	36	34.0	34.500	34
RJ1	0.024	0.024	603.451	0.031	37.0	37.0	35	35.0	36.000	35
RS2	0.024	0.024	597.248	0.033	37.0	37.0	34	36.5	36.125	36
RSC	0.023	0.023	699.900	0.033	35.0	35.0	41	36.5	36.875	37
PowerBasicCycAge	0.024	0.024	692.684	0.034	37.0	37.0	40	38.0	38.000	38
LarkinBasicCycAge	0.026	0.026	662.994	0.036	39.5	39.5	37	39.5	38.875	39

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RJ2	0.026	0.026	666.612	0.036	39.5	39.5	38	39.5	39.125	40
RS8yr	0.029	0.029	859.541	0.041	41.5	41.5	43	41.5	41.875	41
RS4yr	0.029	0.029	904.263	0.041	41.5	41.5	44	41.5	42.125	42
RAC	0.048	0.048	688.594	0.048	45.0	45.0	39	45.0	43.500	43
MRS	0.032	0.032	958.664	0.045	43.0	43.0	46	43.0	43.750	44
MRJ	0.035	0.035	926.289	0.047	44.0	44.0	45	44.0	44.250	45
TSA	0.054	0.054	768.930	0.054	46.0	46.0	42	46.0	45.000	46

(Total)-Other

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerPink	- 0.009	0.046	3.946	0.062	1.0	2.0	2	1.0	1.500	1
RickerSalmon_Total	- 0.028	0.043	2.301	0.065	11.0	1.0	1	2.0	3.750	2
PowerJuvPink	0.019	0.057	6.749	0.076	3.0	6.0	4	4.0	4.250	3
RS1	0.021	0.049	8.550	0.067	4.0	3.0	8	3.0	4.500	4
PowerJuvSalmon_Total	0.023	0.057	7.095	0.079	5.5	6.0	5	5.0	5.375	5
RickerChum	0.026	0.055	7.672	0.095	8.5	4.0	6	10.0	7.125	6
RickerFRDMean	0.031	0.059	8.057	0.094	13.5	8.0	7	9.0	9.375	7
PowerPink	0.025	0.064	9.857	0.083	7.0	13.0	18	7.0	11.250	8
PowerSalmon_Total	0.027	0.063	9.851	0.084	10.0	11.5	17	8.0	11.625	9
PowerChum	0.035	0.057	10.408	0.082	18.5	6.0	23	6.0	13.375	10
RickerCyc	0.035	0.063	9.150	0.099	18.5	11.5	12	12.0	13.500	11
RickerPiW	0.023	0.069	9.062	0.115	5.5	22.0	9	24.5	15.250	12
PowerJuvPiW	0.040	0.065	10.326	0.104	21.0	14.5	22	15.5	18.250	13
PowerJuvEi	0.045	0.061	10.787	0.100	27.0	9.0	28	13.0	19.250	14
RickerFRDpeak	0.041	0.066	9.284	0.115	22.5	17.0	13	24.5	19.250	15
RickerSockeye	0.030	0.073	9.148	0.116	12.0	28.5	11	27.0	19.625	16
RS2	0.043	0.062	10.644	0.105	25.0	10.0	27	17.5	19.875	17
R1C	0.012	0.104	5.674	0.142	2.0	40.0	3	36.0	20.250	18
RickerEi	0.032	0.067	9.514	0.119	15.5	19.0	16	30.5	20.250	19
RickerBasic	0.031	0.071	9.347	0.118	13.5	25.0	15	28.5	20.500	20
PowerJuvFRDpeak	0.055	0.065	10.532	0.097	34.0	14.5	26	11.0	21.375	21
RickerPDO	0.041	0.066	10.187	0.119	22.5	17.0	19	30.5	22.250	22
PowerJuvPi	0.043	0.068	10.528	0.106	25.0	20.5	25	19.5	22.500	23
PowerJuvEiW	0.043	0.066	11.206	0.106	25.0	17.0	29	19.5	22.625	24
RickerEiW	0.032	0.072	10.195	0.120	15.5	26.5	20	32.0	23.500	25
RickerPi	0.035	0.076	9.101	0.130	18.5	33.0	10	34.0	23.875	26
LarkinBasic	0.047	0.070	10.239	0.115	30.0	23.5	21	24.5	24.750	27
PowerBasic	0.046	0.072	13.528	0.101	28.5	26.5	36	14.0	26.250	28

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
PowerJuv	0.057	0.068	11.724	0.108	35.0	20.5	30	21.5	26.750	29
PowerSockeye	0.046	0.074	13.120	0.104	28.5	30.5	34	15.5	27.125	30
PowerJuvSockeye	0.054	0.070	11.763	0.108	33.0	23.5	31	21.5	27.250	31
RJ1	0.074	0.074	9.287	0.126	37.0	30.5	14	33.0	28.625	32
LarkinBasicCycAge	0.051	0.073	12.200	0.115	32.0	28.5	32	24.5	29.250	33
PowerBasicCycAge	0.050	0.075	15.192	0.105	31.0	32.0	40	17.5	30.125	34
R2C	0.035	0.096	16.486	0.118	18.5	37.0	43	28.5	31.750	35
LLY	0.026	0.124	14.096	0.156	8.5	42.0	39	38.0	31.875	36
RJ2	0.079	0.083	10.459	0.132	39.0	34.0	24	35.0	33.000	37
RSC	0.073	0.089	13.155	0.155	36.0	36.0	35	37.0	36.000	38
RS8yr	0.078	0.088	13.659	0.158	38.0	35.0	38	39.0	37.500	39
RJC	0.108	0.108	12.539	0.171	42.0	41.0	33	40.0	39.000	40
RS4yr	0.090	0.100	13.637	0.184	40.5	39.0	37	42.0	39.625	41
MRS	0.090	0.098	15.398	0.174	40.5	38.0	41	41.0	40.125	42
MRJ	0.131	0.133	15.416	0.200	43.0	43.0	42	43.0	42.750	43
RAC	0.180	0.203	136.812	0.220	44.0	44.0	44	44.0	44.000	44
TSA	0.256	0.256	158.916	0.276	45.0	45.0	45	45.0	45.000	45

(Age4)-Other

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerPink	-0.013	0.029	9.895	0.045	7.5	1.0	2	1.0	2.875	1
PowerJuvPink	0.009	0.037	25.966	0.057	3.0	8.0	3	7.0	5.250	2
RickerCyc	0.016	0.031	26.822	0.055	12.5	2.5	4	3.5	5.625	3
RS1	0.011	0.038	26.906	0.055	4.5	10.0	5	3.5	5.750	4
PowerJuvSalmon_Tot al	0.013	0.037	27.833	0.057	7.5	8.0	6	7.0	7.125	5
RickerSalmon_Total	-0.027	0.032	3.559	0.052	24.0	4.0	1	2.0	7.750	6
PowerPink	0.011	0.040	28.691	0.057	4.5	13.0	7	7.0	7.875	7
RickerChum	0.014	0.031	33.656	0.060	10.5	2.5	10	10.0	8.250	8
PowerChum	0.020	0.034	33.046	0.056	17.0	5.0	9	5.0	9.000	9
PowerSalmon_Total	0.013	0.040	30.859	0.059	7.5	13.0	8	9.0	9.375	10
RickerFRDMean	0.021	0.036	34.361	0.065	18.0	6.0	11	11.0	11.500	11
RickerPiW	0.008	0.041	40.471	0.075	2.0	15.0	17	19.0	13.250	12
RickerEi	0.016	0.037	41.380	0.072	12.5	8.0	22	16.5	14.750	13
PowerJuvPiW	0.022	0.044	37.880	0.071	19.5	20.0	13	14.5	16.750	14
PowerJuvEi	0.029	0.040	39.668	0.069	29.0	13.0	14	12.5	17.125	15
PowerBasicCycAge	0.028	0.042	39.942	0.069	26.5	16.0	15	12.5	17.500	16
PowerJuvEiW	0.026	0.043	40.711	0.073	23.0	18.0	18	18.0	19.250	17
PowerBasic	0.028	0.043	40.849	0.071	26.5	18.0	20	14.5	19.750	18
PowerSockeye	0.028	0.046	40.716	0.072	26.5	23.0	19	16.5	21.250	19

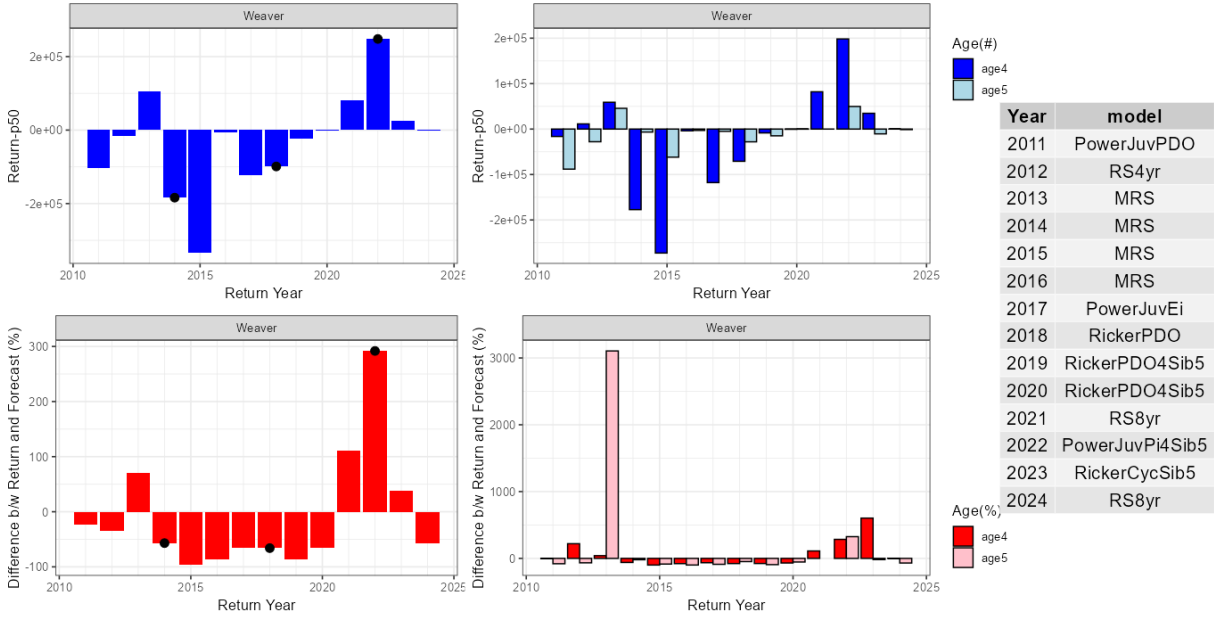
model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
PowerJuvFRDpeak	0.040	0.046	35.298	0.076	35.0	23.0	12	20.0	22.500	20
RickerPDO	0.024	0.039	46.576	0.080	21.0	11.0	35	23.5	22.625	21
RickerSockeye	0.017	0.048	41.451	0.080	14.0	30.5	24	23.5	23.000	22
RS2	0.025	0.046	43.124	0.081	22.0	23.0	29	25.0	24.750	23
RickerEiW	0.018	0.045	47.688	0.085	15.0	21.0	36	28.0	25.000	24
PowerJuvPi	0.028	0.048	41.422	0.078	26.5	30.5	23	21.0	25.250	25
RickerBasic	0.014	0.048	43.510	0.087	10.5	30.5	30	31.0	25.500	26
PowerJuvSockeye	0.036	0.048	41.048	0.079	33.0	30.5	21	22.0	26.625	27
LLY	0.013	0.109	40.158	0.135	7.5	43.0	16	41.0	26.875	28
R1C	0.004	0.087	44.357	0.117	1.0	41.0	32	37.0	27.750	29
RickerPi	0.019	0.047	48.794	0.088	16.0	26.5	38	32.0	28.125	30
LarkinBasicCycAge	0.032	0.047	42.987	0.084	31.5	26.5	28	27.0	28.250	31
RickerFRDpeak	0.030	0.043	48.075	0.086	30.0	18.0	37	29.5	28.625	32
PowerJuv	0.041	0.047	42.720	0.082	36.0	26.5	27	26.0	28.875	33
LarkinBasic	0.032	0.047	44.231	0.086	31.5	26.5	31	29.5	29.625	34
R2C	0.022	0.080	44.997	0.097	19.5	38.5	33	33.0	31.000	35
RJ1	0.047	0.064	41.563	0.104	37.0	35.0	25	35.0	33.000	36
RJ2	0.051	0.063	45.935	0.103	38.5	33.5	34	34.0	35.000	37
RSC	0.037	0.063	48.890	0.106	34.0	33.5	39	36.0	35.625	38
RJC	0.057	0.080	42.463	0.125	40.0	38.5	26	39.0	35.875	39
RS8yr	0.051	0.068	59.530	0.119	38.5	36.0	40	38.0	38.125	40
MRS	0.060	0.074	66.375	0.134	41.5	37.0	43	40.0	40.375	41
RS4yr	0.060	0.081	62.549	0.149	41.5	40.0	41	42.0	41.125	42
MRJ	0.091	0.095	64.188	0.160	43.0	42.0	42	43.0	42.500	43
RAC	0.140	0.167	212.679	0.182	44.0	44.0	44	44.0	44.000	44
TSA	0.198	0.202	258.220	0.220	45.0	45.0	45	45.0	45.000	45

(Age5)-Other

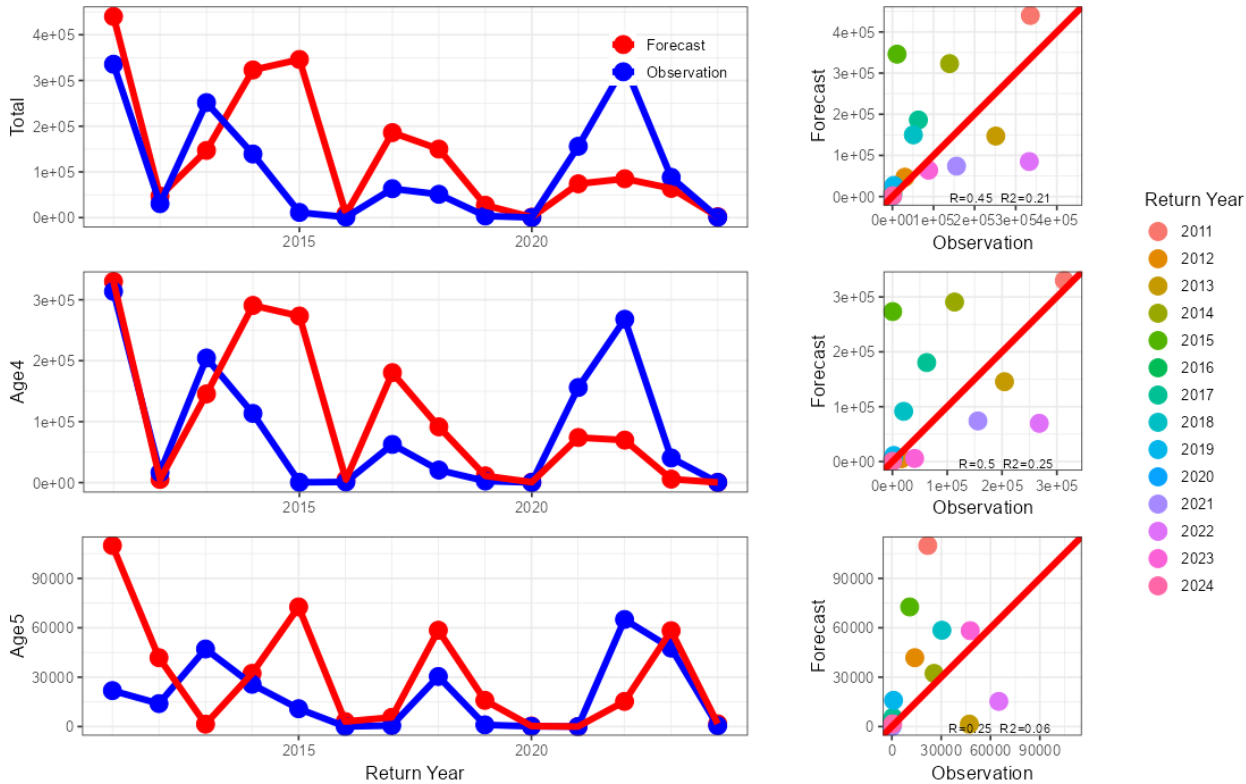
model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
PowerChum	0.000	0.016	122.361	0.020	2.5	5.0	9	2.0	4.625	1
PowerJuvPink	0.000	0.016	111.685	0.021	2.5	5.0	7	5.0	4.875	2
PowerJuvSalmon_Total	0.000	0.016	118.083	0.021	2.5	5.0	8	5.0	5.125	3
sibling5	0.003	0.012	2.661	0.017	19.5	1.0	1	1.0	5.625	4
PowerPink	0.001	0.017	131.598	0.021	6.5	7.5	10	5.0	7.250	5
PowerSalmon_Total	0.001	0.017	133.590	0.022	6.5	7.5	11	8.0	8.250	6
RickerChum	0.001	0.018	164.588	0.024	6.5	9.0	15	11.0	10.375	7
RickerPink	- 0.005	0.014	89.080	0.021	27.5	3.0	6	5.0	10.375	8
RickerSalmon_Total	- 0.008	0.013	50.219	0.021	31.5	2.0	4	5.0	10.625	9
RickerFRDMean	0.000	0.019	162.260	0.025	2.5	13.5	14	16.5	11.625	10

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
PowerJuvFRDpeak	0.002	0.019	158.918	0.023	11.5	13.5	13	9.0	11.750	11
RickerFRDpeak	0.001	0.019	189.207	0.025	6.5	13.5	18	16.5	13.625	12
PowerSockeye	0.002	0.019	195.625	0.024	11.5	13.5	21	11.0	14.250	13
PowerJuvPiW	0.003	0.019	183.627	0.025	19.5	13.5	16	16.5	16.375	14
RickerBasic	0.003	0.019	186.547	0.025	19.5	13.5	17	16.5	16.625	15
PowerJuvEi	0.003	0.019	195.865	0.025	19.5	13.5	22	16.5	17.875	16
PowerBasic	0.003	0.020	204.544	0.024	19.5	20.0	26	11.0	19.125	17
PowerJuvSockeye	0.003	0.019	214.065	0.025	19.5	13.5	30	16.5	19.875	18
RickerSockeye	0.002	0.020	207.813	0.026	11.5	20.0	27	21.5	20.000	19
RickerPi	0.002	0.021	196.420	0.027	11.5	25.0	23	24.0	20.875	20
PowerJuvEiW	0.003	0.020	211.423	0.025	19.5	20.0	28	16.5	21.000	21
PowerJuvPi	0.002	0.020	215.537	0.026	11.5	20.0	31	21.5	21.000	22
RickerEi	0.002	0.021	202.182	0.027	11.5	25.0	25	24.0	21.375	23
LarkinBasic	0.003	0.021	194.879	0.027	19.5	25.0	20	24.0	22.125	24
PowerJuv	0.004	0.020	211.838	0.025	25.5	20.0	29	16.5	22.750	25
LLY	0.014	0.022	13.828	0.028	35.0	29.0	2	27.5	23.375	26
RickerPiW	0.003	0.021	200.366	0.028	19.5	25.0	24	27.5	24.000	27
R1C	0.008	0.022	30.030	0.034	31.5	29.0	3	35.0	24.625	28
RickerCyc	0.004	0.022	190.258	0.028	25.5	29.0	19	27.5	25.250	29
R2C	0.011	0.024	65.477	0.031	33.5	33.0	5	32.0	25.875	30
RickerEiW	0.003	0.021	233.649	0.028	19.5	25.0	33	27.5	26.250	31
RS1	0.011	0.027	144.785	0.032	33.5	35.0	12	33.5	28.500	32
RickerPDO	0.005	0.023	233.531	0.029	27.5	31.5	32	30.0	30.250	33
PowerBasicCycAge	0.007	0.023	310.072	0.030	29.5	31.5	41	31.0	33.250	34
LarkinBasicCycAge	0.007	0.025	296.269	0.032	29.5	34.0	40	33.5	34.250	35
RS2	0.019	0.031	243.269	0.040	36.0	36.0	34	36.0	35.500	36
RJ1	0.030	0.039	244.419	0.052	38.0	38.5	35	38.0	37.375	37
RJ2	0.030	0.039	271.136	0.055	38.0	38.5	37	39.5	38.250	38
RAC	0.039	0.039	289.931	0.043	42.0	38.5	39	37.0	39.125	39
RS8yr	0.030	0.039	349.654	0.055	38.0	38.5	43	39.5	39.750	40
RS4yr	0.033	0.042	365.750	0.059	40.5	41.5	44	41.5	41.875	41
RSC	0.040	0.049	289.590	0.072	43.0	43.0	38	44.0	42.000	42
MRS	0.033	0.042	390.605	0.059	40.5	41.5	46	41.5	42.375	43
RJC	0.056	0.064	253.389	0.097	45.0	46.0	36	46.0	43.250	44
TSA	0.059	0.059	327.543	0.062	46.0	45.0	42	43.0	44.000	45
MRJ	0.045	0.053	378.311	0.073	44.0	44.0	45	45.0	44.500	46

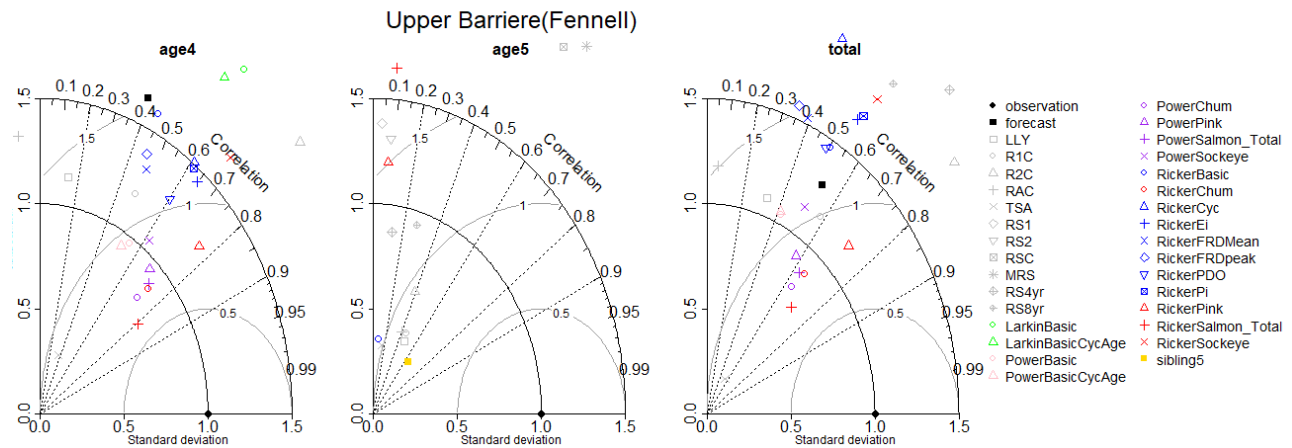
Diff



FC-TS



Upper Barriere (Fennell) Retrospective: Taylor



Ranking (Total)-Alllys

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerPink	0.000	0.003	0.254	0.005	1.0	1.5	1	3.0	1.625	1
RickerSalmon_Total	-0.001	0.003	0.309	0.004	2.5	1.5	2	1.0	1.750	2
PowerSalmon_Total	0.002	0.004	1.742	0.005	5.0	3.5	5	3.0	4.125	3
RickerChum	0.003	0.004	1.947	0.005	7.0	3.5	6	3.0	4.875	4
R1C	0.002	0.005	1.456	0.007	5.0	6.5	4	7.0	5.625	5
LLY	0.001	0.006	1.296	0.008	2.5	10.0	3	8.5	6.000	6
PowerPink	0.002	0.005	1.966	0.006	5.0	6.5	7	5.5	6.000	7
PowerChum	0.004	0.005	2.618	0.006	8.0	6.5	8	5.5	7.000	8
PowerSockeye	0.005	0.005	3.222	0.008	9.0	6.5	13	8.5	9.250	9
RickerPi	0.006	0.006	2.927	0.010	11.0	10.0	11	11.0	10.750	10
RickerSockeye	0.006	0.006	2.884	0.011	11.0	10.0	10	14.0	11.250	11
RickerPiW	0.006	0.007	2.772	0.011	11.0	13.5	9	14.0	11.875	12
PowerBasicCycAge	0.007	0.007	4.629	0.010	14.0	13.5	19	11.0	14.375	13
PowerBasic	0.007	0.007	4.724	0.010	14.0	13.5	20	11.0	14.625	14
RickerEiW	0.007	0.007	3.577	0.012	14.0	13.5	16	17.0	15.125	15
RickerEi	0.008	0.008	3.994	0.011	16.0	16.0	17	14.0	15.750	16
R2C	0.009	0.009	3.003	0.012	19.5	18.0	12	17.0	16.625	17
RS4yr	0.009	0.010	3.482	0.014	19.5	22.0	15	22.0	19.625	18
RickerPDO	0.009	0.009	5.193	0.012	19.5	18.0	24	17.0	19.625	19
RS8yr	0.009	0.010	4.247	0.014	19.5	22.0	18	22.0	20.375	20
RickerFRDMean	0.009	0.009	5.477	0.013	19.5	18.0	26	19.0	20.625	21
RickerCyc	0.009	0.010	5.002	0.014	19.5	22.0	22	22.0	21.375	22
LarkinBasicCycAge	0.010	0.010	5.132	0.015	24.0	22.0	23	25.0	23.500	23
RickerFRDpeak	0.010	0.010	6.330	0.014	24.0	22.0	28	22.0	24.000	24
RS1	0.012	0.014	3.449	0.022	27.0	27.5	14	30.0	24.625	25

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
LarkinBasic	0.010	0.011	5.410	0.016	24.0	25.5	25	26.0	25.125	26
RickerBasic	0.011	0.011	6.004	0.014	26.0	25.5	27	22.0	25.125	27
RS2	0.013	0.014	4.829	0.020	28.0	27.5	21	28.5	26.250	28
TSA	0.017	0.017	9.530	0.018	29.0	29.0	32	27.0	29.250	29
RAC	0.018	0.018	9.436	0.020	30.0	30.0	31	28.5	29.875	30
MRS	0.025	0.025	8.961	0.037	31.0	31.0	29	31.0	30.500	31
RSC	0.026	0.026	9.084	0.038	32.0	32.0	30	32.0	31.500	32

(Age4)-Allyrs

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerPink	0.000	0.003	-0.018	0.005	1.0	2.5	1	6.0	2.625	1
PowerSalmon_Total	0.001	0.003	2.258	0.004	3.5	2.5	3	3.0	3.000	2
RickerChum	0.001	0.003	2.599	0.004	3.5	2.5	5	3.0	3.500	3
RickerSalmon_Total	-0.002	0.003	0.118	0.004	7.5	2.5	2	3.0	3.750	4
PowerPink	0.001	0.004	2.467	0.004	3.5	6.0	4	3.0	4.125	5
PowerChum	0.002	0.004	3.872	0.004	7.5	6.0	12	3.0	7.125	6
R1C	0.002	0.005	2.625	0.007	7.5	12.0	6	10.0	8.875	7
PowerSockeye	0.002	0.004	4.506	0.006	7.5	6.0	16	7.0	9.125	8
RickerPiW	0.003	0.005	3.076	0.007	11.0	12.0	7	10.0	10.000	9
LLY	0.001	0.005	3.367	0.008	3.5	12.0	10	15.5	10.250	10
RickerPi	0.003	0.005	3.592	0.007	11.0	12.0	11	10.0	11.000	11
RickerSockeye	0.003	0.005	3.269	0.008	11.0	12.0	9	15.5	11.875	12
RickerEiW	0.004	0.005	5.442	0.008	15.0	12.0	18	15.5	15.125	13
PowerBasicCycAge	0.004	0.005	6.893	0.007	15.0	12.0	24	10.0	15.250	14
PowerBasic	0.004	0.005	6.993	0.007	15.0	12.0	25	10.0	15.500	15
RickerCyc	0.004	0.006	4.446	0.008	15.0	18.0	15	15.5	15.875	16
RickerEi	0.004	0.005	6.155	0.008	15.0	12.0	21	15.5	15.875	17
RickerPDO	0.005	0.006	6.832	0.008	18.5	18.0	23	15.5	18.750	18
RickerFRDMean	0.005	0.006	7.647	0.009	18.5	18.0	26	19.5	20.500	19
LarkinBasic	0.006	0.007	5.832	0.011	21.0	21.0	19	22.5	20.875	20
LarkinBasicCycAge	0.006	0.007	5.859	0.011	21.0	21.0	20	22.5	21.125	21
RS4yr	0.007	0.009	4.056	0.013	24.5	25.5	14	25.5	22.375	22
RickerFRDpeak	0.006	0.007	8.955	0.009	21.0	21.0	28	19.5	22.375	23
R2C	0.007	0.008	6.559	0.011	24.5	23.5	22	22.5	23.125	24
RS1	0.010	0.013	3.239	0.023	27.0	27.5	8	30.0	23.125	25
RS8yr	0.007	0.009	5.202	0.013	24.5	25.5	17	25.5	23.125	26
RS2	0.011	0.013	3.934	0.020	28.0	27.5	13	29.0	24.375	27
RickerBasic	0.007	0.008	8.668	0.011	24.5	23.5	27	22.5	24.375	28
TSA	0.014	0.014	16.838	0.015	29.0	29.0	31	27.0	29.000	29
RAC	0.015	0.016	18.435	0.017	30.0	30.0	32	28.0	30.000	30

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
MRS	0.020	0.020	11.532	0.032	31.5	31.0	29	31.0	30.625	31
RSC	0.020	0.021	12.205	0.033	31.5	32.0	30	32.0	31.375	32

(Age5)-Alllys

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerPink	0.000	0.000	-0.070	0.001	3.0	1.5	1	3.5	2.250	1
RickerSalmon_Total	0.000	0.000	0.115	0.001	3.0	1.5	2	3.5	2.500	2
PowerSalmon_Total	0.001	0.001	1.631	0.001	14.0	10.0	3	3.5	7.625	3
PowerPink	0.001	0.001	1.644	0.001	14.0	10.0	4	3.5	7.875	4
RickerChum	0.001	0.001	2.192	0.001	14.0	10.0	8	3.5	8.875	5
PowerChum	0.001	0.001	2.574	0.001	14.0	10.0	9	3.5	9.125	6
sibling5	0.000	0.001	1.837	0.003	3.0	10.0	6	21.0	10.000	7
PowerSockeye	0.001	0.001	3.195	0.002	14.0	10.0	10	12.5	11.625	8
RickerPi	0.001	0.001	3.364	0.002	14.0	10.0	11	12.5	11.875	9
RickerPiW	0.001	0.001	3.616	0.002	14.0	10.0	12	12.5	12.125	10
RickerEi	0.001	0.001	3.617	0.002	14.0	10.0	13	12.5	12.375	11
LLY	0.000	0.002	1.677	0.003	3.0	21.0	5	21.0	12.500	12
RickerSockeye	0.001	0.001	3.662	0.002	14.0	10.0	14	12.5	12.625	13
RickerEiW	0.001	0.001	3.917	0.002	14.0	10.0	15	12.5	12.875	14
R1C	0.000	0.002	2.031	0.003	3.0	21.0	7	21.0	13.000	15
PowerBasic	0.001	0.001	4.050	0.002	14.0	10.0	16	12.5	13.125	16
PowerBasicCycAge	0.001	0.001	4.183	0.002	14.0	10.0	17	12.5	13.375	17
RickerFRDMean	0.001	0.001	4.278	0.002	14.0	10.0	19	12.5	13.875	18
RickerPDO	0.001	0.001	4.446	0.002	14.0	10.0	21	12.5	14.375	19
RickerFRDpeak	0.001	0.002	4.411	0.002	14.0	21.0	20	12.5	16.875	20
RickerBasic	0.001	0.002	4.525	0.004	14.0	21.0	22	25.0	20.500	21
R2C	0.001	0.003	4.239	0.004	14.0	26.0	18	25.0	20.750	22
LarkinBasicCycAge	0.002	0.002	5.009	0.002	26.0	21.0	24	12.5	20.875	23
RickerCyc	0.002	0.002	4.756	0.003	26.0	21.0	23	21.0	22.750	24
LarkinBasic	0.002	0.002	5.352	0.003	26.0	21.0	25	21.0	23.250	25
RS8yr	0.002	0.003	6.187	0.005	26.0	26.0	26	28.0	26.500	26
RS4yr	0.002	0.003	6.364	0.005	26.0	26.0	27	28.0	26.750	27
RS2	0.002	0.004	8.382	0.006	26.0	29.5	28	30.5	28.500	28
RAC	0.003	0.004	10.296	0.004	30.5	29.5	30	25.0	28.750	29
RS1	0.002	0.004	8.800	0.006	26.0	29.5	29	30.5	28.750	30
TSA	0.003	0.004	11.326	0.005	30.5	29.5	31	28.0	29.750	31
MRS	0.006	0.006	13.240	0.008	32.5	32.5	32	32.5	32.375	32
RSC	0.006	0.006	13.374	0.008	32.5	32.5	33	32.5	32.625	33

(Total)-Cycle

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerChum	0.000	0.002	0.604	0.002	1.0	2.0	4	1.0	2.000	1
RickerPink	-0.002	0.002	-0.220	0.003	7.0	2.0	1	3.5	3.375	2
RickerSalmon_Total	-0.002	0.002	-0.438	0.003	7.0	2.0	3	3.5	3.875	3
R1C	0.002	0.003	0.763	0.003	7.0	7.0	5.5	3.5	5.750	4
PowerSalmon_Total	0.001	0.003	0.763	0.004	2.5	7.0	5.5	8.0	5.750	5
PowerChum	0.002	0.003	1.341	0.003	7.0	7.0	9	3.5	6.625	6
RickerSockeye	0.002	0.003	0.975	0.004	7.0	7.0	8	8.0	7.500	7
PowerPink	0.001	0.004	0.934	0.004	2.5	13.0	7	8.0	7.625	8
RS8yr	0.002	0.003	1.567	0.004	7.0	7.0	10	8.0	8.000	9
LLY	0.003	0.003	0.375	0.006	12.0	7.0	2	15.0	9.000	10
RS4yr	0.002	0.004	1.693	0.004	7.0	13.0	12	8.0	10.000	11
PowerSockeye	0.003	0.003	1.667	0.005	12.0	7.0	11	11.5	10.375	12
LarkinBasicCycAge	0.003	0.004	1.945	0.005	12.0	13.0	13	11.5	12.375	13
LarkinBasic	0.004	0.004	2.269	0.006	15.0	13.0	15	15.0	14.500	14
RickerPi	0.004	0.004	2.018	0.007	15.0	13.0	14	20.0	15.500	15
RickerCyc	0.004	0.005	2.377	0.006	15.0	17.5	16	15.0	15.875	16
PowerBasicCycAge	0.005	0.005	2.605	0.006	18.5	17.5	19	15.0	17.500	17
PowerBasic	0.005	0.005	2.817	0.006	18.5	17.5	20	15.0	17.750	18
RickerFRDMean	0.005	0.005	2.842	0.007	18.5	17.5	21	20.0	19.250	19
RickerPiW	0.006	0.006	2.482	0.007	22.0	21.5	18	20.0	20.375	20
RickerEiW	0.005	0.006	2.945	0.007	18.5	21.5	23	20.0	20.750	21
RickerFRDpeak	0.006	0.006	2.911	0.007	22.0	21.5	22	20.0	21.375	22
RickerEi	0.006	0.006	2.953	0.008	22.0	21.5	24	24.5	23.000	23
RSC	0.007	0.007	3.198	0.008	26.0	26.0	25	24.5	25.375	24
RickerPDO	0.007	0.007	3.312	0.008	26.0	26.0	26	24.5	25.625	25
RS2	0.007	0.007	3.803	0.008	26.0	26.0	29	24.5	26.375	26
RickerBasic	0.007	0.007	3.495	0.009	26.0	26.0	27	27.5	26.625	27
R2C	0.010	0.011	2.415	0.016	30.0	30.0	17	30.0	26.750	28
RS1	0.007	0.007	4.404	0.010	26.0	26.0	30	29.0	27.750	29
MRS	0.008	0.008	3.574	0.009	29.0	29.0	28	27.5	28.375	30
TSA	0.020	0.020	8.874	0.020	31.0	31.0	31	31.0	31.000	31
RAC	0.027	0.027	11.903	0.027	32.0	32.0	32	32.0	32.000	32

(Age4)-Cycle

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
PowerChum	0.000	0.002	0.543	0.003	5.0	3.0	6	3.5	4.375	1
PowerSalmon_Total	0.000	0.003	0.268	0.003	5.0	10.0	3	3.5	5.375	2
RickerChum	-0.002	0.002	-0.065	0.003	19.0	3.0	1	3.5	6.625	3

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
PowerSockeye	0.000	0.003	0.669	0.003	5.0	10.0	9	3.5	6.875	4
RickerSockeye	-0.002	0.002	-0.143	0.003	19.0	3.0	2	3.5	6.875	5
R1C	0.001	0.002	0.798	0.003	11.5	3.0	10	3.5	7.000	6
PowerPink	0.000	0.003	0.558	0.004	5.0	10.0	7	14.5	9.125	7
LarkinBasic	0.000	0.003	0.848	0.004	5.0	10.0	11	14.5	10.125	8
RickerPi	0.000	0.003	0.904	0.004	5.0	10.0	12	14.5	10.375	9
RickerPink	-0.002	0.002	-0.454	0.004	19.0	3.0	5	14.5	10.375	10
LarkinBasicCycAge	0.000	0.003	1.127	0.004	5.0	10.0	13	14.5	10.625	11
RS4yr	0.000	0.003	1.509	0.004	5.0	10.0	16	14.5	11.375	12
RS8yr	0.000	0.004	1.320	0.004	5.0	19.5	14	14.5	13.250	13
RickerSalmon_Total	-0.003	0.003	-0.649	0.004	26.0	10.0	8	14.5	14.625	14
RickerFRDpeak	0.001	0.004	1.613	0.004	11.5	19.5	18	14.5	15.875	15
RickerCyc	0.001	0.004	1.647	0.004	11.5	19.5	19	14.5	16.125	16
LLY	0.003	0.003	0.312	0.005	26.0	10.0	4	25.0	16.250	17
RickerEiW	0.001	0.004	1.694	0.004	11.5	19.5	21	14.5	16.625	18
RickerEi	0.002	0.004	1.535	0.004	19.0	19.5	17	14.5	17.500	19
RickerFRDMean	0.002	0.004	1.663	0.004	19.0	19.5	20	14.5	18.250	20
PowerBasic	0.002	0.004	1.778	0.004	19.0	19.5	22	14.5	18.750	21
RickerBasic	0.002	0.004	1.874	0.004	19.0	19.5	23	14.5	19.000	22
RickerPiW	0.002	0.004	1.504	0.005	19.0	19.5	15	25.0	19.625	23
PowerBasicCycAge	0.002	0.004	2.199	0.004	19.0	19.5	26	14.5	19.750	24
RickerPDO	0.002	0.005	1.997	0.005	19.0	26.0	24	25.0	23.500	25
RSC	0.002	0.005	2.163	0.005	19.0	26.0	25	25.0	23.750	26
MRS	0.003	0.005	2.701	0.005	26.0	26.0	28	25.0	26.250	27
RS2	0.004	0.007	4.134	0.008	28.5	28.5	29	28.0	28.500	28
RS1	0.004	0.007	5.673	0.010	28.5	28.5	30	29.0	29.000	29
R2C	0.009	0.009	2.485	0.014	30.0	30.0	27	30.0	29.250	30
TSA	0.017	0.017	9.569	0.017	31.0	31.0	31	31.0	31.000	31
RAC	0.023	0.023	12.795	0.023	32.0	32.0	32	32.0	32.000	32

(Age5)-Cycle

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerSalmon_Total	0.000	0.000	-0.135	0.000	2.5	2.5	1	1.5	1.875	1
RickerPink	0.000	0.000	-0.347	0.000	2.5	2.5	2	1.5	2.125	2
R1C	0.000	0.000	1.738	0.001	2.5	2.5	3.5	6.5	3.750	3
PowerPink	0.000	0.000	1.738	0.001	2.5	2.5	3.5	6.5	3.750	4
PowerSalmon_Total	0.001	0.001	2.188	0.001	8.0	8.0	5	6.5	6.875	5
LLY	0.001	0.001	2.436	0.001	8.0	8.0	6	6.5	7.125	6
sibling5	0.001	0.001	3.063	0.001	8.0	8.0	7	6.5	7.375	7
RickerChum	0.001	0.001	3.655	0.001	8.0	8.0	8	6.5	7.625	8

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
PowerBasicCycAge	0.001	0.001	4.584	0.001	8.0	8.0	9	6.5	7.875	9
PowerChum	0.001	0.001	4.684	0.001	8.0	8.0	10	6.5	8.125	10
RickerCyc	0.001	0.001	5.119	0.002	8.0	8.0	11	15.5	10.625	11
R2C	0.002	0.002	5.543	0.002	19.5	19.5	12	15.5	16.625	12
PowerSockeye	0.002	0.002	6.231	0.002	19.5	19.5	13	15.5	16.875	13
PowerBasic	0.002	0.002	6.672	0.002	19.5	19.5	14	15.5	17.125	14
RickerFRDpeak	0.002	0.002	6.719	0.002	19.5	19.5	15	15.5	17.375	15
RickerFRDMean	0.002	0.002	6.931	0.002	19.5	19.5	16	15.5	17.625	16
RickerPi	0.002	0.002	7.264	0.002	19.5	19.5	18	15.5	18.125	17
RickerEi	0.002	0.002	7.274	0.002	19.5	19.5	19	15.5	18.375	18
RickerBasic	0.002	0.002	7.722	0.002	19.5	19.5	21	15.5	18.875	19
RickerPDO	0.002	0.002	7.932	0.002	19.5	19.5	23	15.5	19.375	20
LarkinBasicCycAge	0.002	0.002	7.248	0.003	19.5	19.5	17	24.5	20.125	21
RickerPiW	0.002	0.002	7.323	0.003	19.5	19.5	20	24.5	20.875	22
RickerSockeye	0.002	0.002	7.791	0.003	19.5	19.5	22	24.5	21.375	23
RS8yr	0.002	0.002	8.363	0.003	19.5	19.5	24	24.5	21.875	24
RickerEiW	0.002	0.002	8.414	0.003	19.5	19.5	25	24.5	22.125	25
RS4yr	0.002	0.002	8.868	0.003	19.5	19.5	26	24.5	22.375	26
LarkinBasic	0.002	0.002	9.536	0.003	19.5	19.5	27	24.5	22.625	27
TSA	0.003	0.003	11.819	0.003	29.0	29.0	30	24.5	28.125	28
RS2	0.003	0.003	11.443	0.004	29.0	29.0	29	29.5	29.125	29
RS1	0.003	0.003	10.620	0.006	29.0	29.0	28	31.0	29.250	30
RAC	0.004	0.004	15.857	0.004	31.0	31.0	31	29.5	30.625	31
MRS	0.005	0.005	20.614	0.007	32.0	32.0	32	32.0	32.000	32
RSC	0.006	0.006	22.107	0.008	33.0	33.0	33	33.0	33.000	33

(Total)-Other

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerPink	-0.001	0.002	0.173	0.003	1.5	1.0	1	1.0	1.125	1
RickerSalmon_Total	-0.001	0.003	0.410	0.004	1.5	2.0	2	2.0	1.875	2
PowerSalmon_Total	0.002	0.004	2.135	0.005	4.0	5.0	5	4.0	4.500	3
R1C	0.002	0.004	1.658	0.006	4.0	5.0	3	6.5	4.625	4
PowerPink	0.002	0.004	2.383	0.005	4.0	5.0	6	4.0	4.750	5
RickerChum	0.003	0.004	2.388	0.005	6.0	5.0	7	4.0	5.500	6
LLY	0.004	0.004	1.870	0.008	7.5	5.0	4	8.0	6.125	7
PowerChum	0.004	0.005	3.263	0.006	7.5	8.0	8	6.5	7.500	8
PowerSockeye	0.006	0.006	4.034	0.009	9.5	9.5	13	9.0	10.250	9
RickerSockeye	0.006	0.006	3.548	0.011	9.5	9.5	10	13.0	10.500	10
RickerPiW	0.007	0.007	3.555	0.011	13.0	11.5	11	13.0	12.125	11
RickerPi	0.007	0.007	3.738	0.011	13.0	11.5	12	13.0	12.375	12

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
R2C	0.007	0.008	3.469	0.012	13.0	16.0	9	16.5	13.625	13
RS8yr	0.007	0.008	4.876	0.012	13.0	16.0	17	16.5	15.625	14
RS4yr	0.007	0.008	4.064	0.013	13.0	16.0	15	20.5	16.125	15
PowerBasicCycAge	0.008	0.008	5.792	0.010	18.5	16.0	20	10.5	16.250	16
PowerBasic	0.008	0.008	5.909	0.010	18.5	16.0	21	10.5	16.500	17
RickerEi	0.008	0.008	5.055	0.012	18.5	16.0	18	16.5	17.250	18
RickerEiW	0.008	0.008	4.602	0.013	18.5	16.0	16	20.5	17.750	19
RickerCyc	0.008	0.009	5.992	0.013	18.5	21.5	22	20.5	20.625	20
RickerFRDMean	0.009	0.009	6.743	0.012	22.5	21.5	26	16.5	21.625	21
LarkinBasicCycAge	0.008	0.009	6.148	0.014	18.5	21.5	23	24.5	21.875	22
LarkinBasic	0.009	0.009	6.482	0.014	22.5	21.5	25	24.5	23.375	23
RickerPDO	0.010	0.010	6.478	0.013	25.0	24.5	24	20.5	23.500	24
RS1	0.010	0.012	4.036	0.019	25.0	27.5	14	28.5	23.750	25
RS2	0.011	0.012	5.469	0.017	27.5	27.5	19	27.0	25.250	26
RickerFRDpeak	0.010	0.010	7.838	0.014	25.0	24.5	28	24.5	25.500	27
RickerBasic	0.011	0.011	7.300	0.014	27.5	26.0	27	24.5	26.250	28
TSA	0.019	0.019	11.745	0.019	29.0	29.0	32	28.5	29.625	29
MRS	0.021	0.021	10.230	0.033	30.5	30.5	29	31.0	30.250	30
RAC	0.021	0.021	11.730	0.022	30.5	30.5	31	30.0	30.500	31
RSC	0.022	0.022	10.422	0.035	32.0	32.0	30	32.0	31.500	32

(Age4)-Other

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerSalmon_Total	-0.001	0.002	0.166	0.003	3.0	1.5	1	1.5	1.750	1
RickerPink	-0.002	0.002	-0.191	0.003	6.5	1.5	2	1.5	2.875	2
PowerSalmon_Total	0.000	0.003	2.813	0.004	1.0	4.5	3	4.5	3.250	3
PowerPink	0.001	0.003	3.049	0.004	3.0	4.5	4	4.5	4.000	4
RickerChum	0.001	0.003	3.266	0.004	3.0	4.5	6	4.5	4.500	5
R1C	0.002	0.004	3.207	0.006	6.5	8.5	5	7.5	6.875	6
PowerChum	0.002	0.003	4.923	0.004	6.5	4.5	14	4.5	7.375	7
RickerSockeye	0.002	0.004	4.082	0.008	6.5	8.5	9	16.0	10.000	8
PowerSockeye	0.003	0.004	5.751	0.006	10.5	8.5	16	7.5	10.625	9
RickerPiW	0.003	0.005	3.969	0.007	10.5	13.5	8	11.0	10.750	10
LLY	0.004	0.004	4.513	0.007	16.0	8.5	11	11.0	11.625	11
RickerCyc	0.003	0.005	5.442	0.007	10.5	13.5	15	11.0	12.500	12
RickerPi	0.003	0.005	4.663	0.008	10.5	13.5	12	16.0	13.000	13
RickerEiW	0.004	0.005	7.059	0.008	16.0	13.5	18	16.0	15.875	14
PowerBasicCycAge	0.004	0.005	8.831	0.007	16.0	13.5	24	11.0	16.125	15
PowerBasic	0.004	0.005	8.938	0.007	16.0	13.5	25	11.0	16.375	16
RickerEi	0.004	0.006	7.909	0.008	16.0	19.0	21	16.0	18.000	17

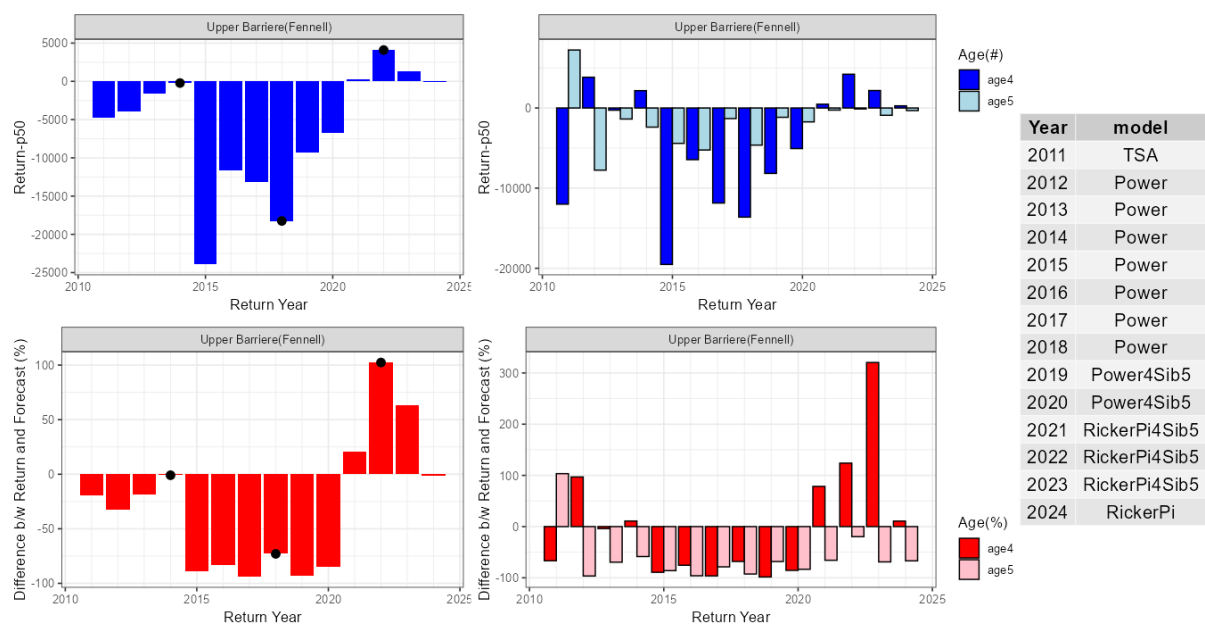
model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
LarkinBasic	0.004	0.006	7.128	0.009	16.0	19.0	19	20.5	18.625	18
LarkinBasicCycAge	0.004	0.006	7.204	0.009	16.0	19.0	20	20.5	18.875	19
RickerPDO	0.005	0.006	8.693	0.008	22.0	19.0	23	16.0	20.000	20
RS4yr	0.005	0.007	4.797	0.011	22.0	23.5	13	24.5	20.750	21
RS8yr	0.005	0.007	6.087	0.011	22.0	23.5	17	24.5	21.750	22
RickerFRDMean	0.005	0.006	9.711	0.009	22.0	19.0	26	20.5	21.875	23
RS1	0.007	0.010	3.741	0.021	26.0	27.5	7	30.0	22.625	24
RS2	0.008	0.010	4.288	0.017	28.0	27.5	10	28.0	23.375	25
RickerFRDpeak	0.005	0.007	11.366	0.009	22.0	23.5	28	20.5	23.500	26
R2C	0.007	0.007	8.076	0.011	26.0	23.5	22	24.5	24.000	27
RickerBasic	0.007	0.008	10.815	0.011	26.0	26.0	27	24.5	25.875	28
TSA	0.016	0.016	21.129	0.016	30.5	29.5	31	27.0	29.500	29
MRS	0.015	0.016	13.496	0.027	29.0	29.5	29	31.0	29.625	30
RSC	0.016	0.017	14.403	0.030	30.5	31.0	30	32.0	30.875	31
RAC	0.018	0.018	23.253	0.019	32.0	32.0	32	29.0	31.250	32

(Age5)-Other

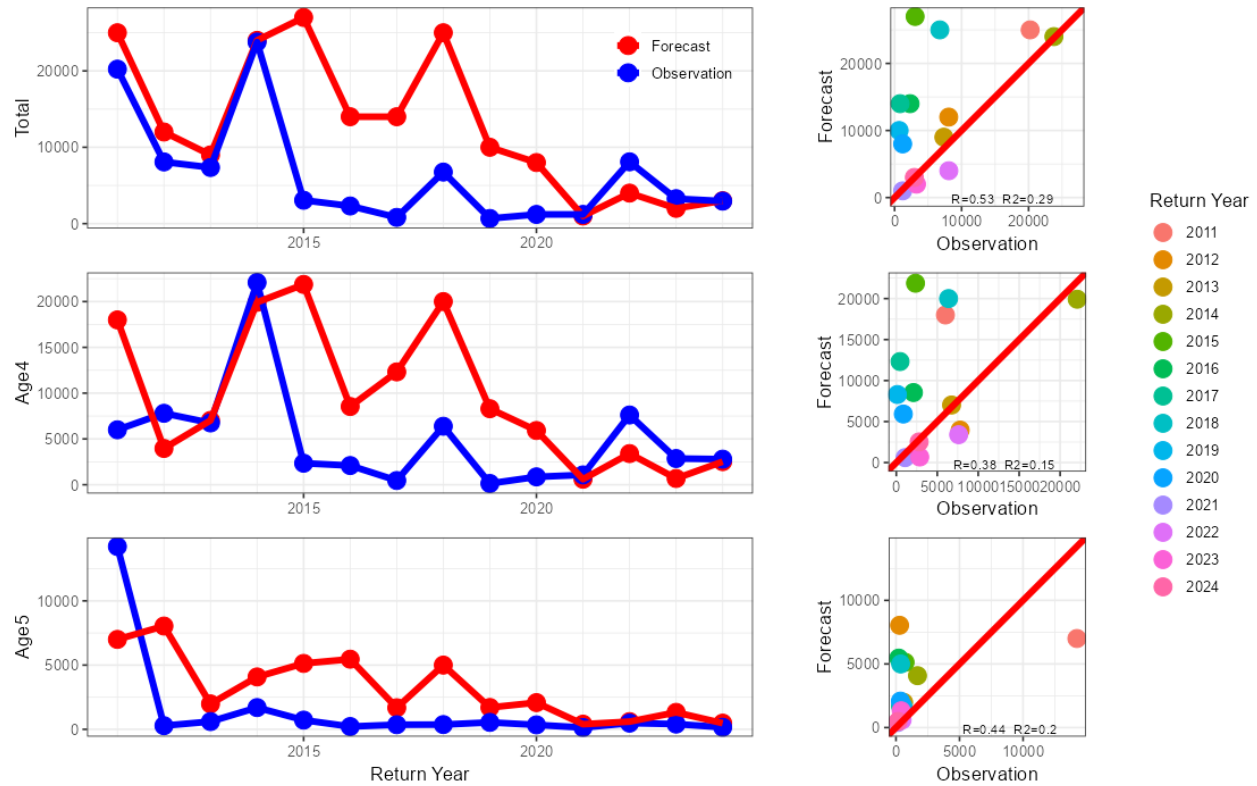
model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerPink	0.000	0.000	0.052	0.000	3.0	1.5	1	1.0	1.625	1
RickerSalmon_Total	0.000	0.000	0.374	0.001	3.0	1.5	2	4.0	2.625	2
PowerSalmon_Total	0.001	0.001	2.136	0.001	9.5	5.5	4	4.0	5.750	3
PowerPink	0.001	0.001	2.142	0.001	9.5	5.5	5	4.0	6.000	4
RickerChum	0.001	0.001	2.795	0.001	9.5	5.5	8	4.0	6.750	5
PowerChum	0.001	0.001	3.208	0.001	9.5	5.5	9	4.0	7.000	6
PowerSockeye	0.001	0.001	3.925	0.002	9.5	5.5	11	12.0	9.500	7
RickerPi	0.001	0.001	4.149	0.002	9.5	5.5	12	12.0	9.750	8
R1C	0.000	0.002	1.392	0.003	3.0	16.5	3	20.5	10.750	9
sibling5	0.000	0.002	2.345	0.003	3.0	16.5	7	20.5	11.750	10
LLY	0.000	0.002	2.256	0.004	3.0	16.5	6	24.5	12.500	11
R2C	0.001	0.002	3.779	0.003	9.5	16.5	10	20.5	14.125	12
RickerEi	0.002	0.002	4.588	0.002	20.5	16.5	13	12.0	15.500	13
RickerSockeye	0.002	0.002	4.627	0.002	20.5	16.5	14	12.0	15.750	14
RickerPiW	0.002	0.002	4.730	0.002	20.5	16.5	15	12.0	16.000	15
RickerFRDMean	0.002	0.002	4.747	0.002	20.5	16.5	16	12.0	16.250	16
PowerBasic	0.002	0.002	4.778	0.002	20.5	16.5	17	12.0	16.500	17
RickerFRDpeak	0.002	0.002	4.854	0.002	20.5	16.5	18	12.0	16.750	18
PowerBasicCycAge	0.002	0.002	4.952	0.002	20.5	16.5	19	12.0	17.000	19
RickerEiW	0.002	0.002	5.047	0.002	20.5	16.5	21	12.0	17.500	20
RickerPDO	0.002	0.002	5.401	0.002	20.5	16.5	22	12.0	17.750	21
RickerBasic	0.001	0.003	5.036	0.004	9.5	25.0	20	24.5	19.750	22

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerCyc	0.002	0.002	5.828	0.003	20.5	16.5	23	20.5	20.125	23
LarkinBasicCycAge	0.002	0.002	6.041	0.003	20.5	16.5	24	20.5	20.375	24
LarkinBasic	0.002	0.002	6.465	0.003	20.5	16.5	25	20.5	20.625	25
RS8yr	0.002	0.004	7.396	0.005	20.5	27.0	26	27.5	25.250	26
RS4yr	0.002	0.004	7.644	0.005	20.5	27.0	27	27.5	25.500	27
RAC	0.003	0.004	11.690	0.005	29.5	27.0	30	27.5	28.500	28
TSA	0.003	0.005	12.680	0.005	29.5	30.0	31	27.5	29.500	29
RS2	0.003	0.005	10.672	0.007	29.5	30.0	28	30.5	29.500	30
RS1	0.003	0.005	11.261	0.007	29.5	30.0	29	30.5	29.750	31
RSC	0.007	0.007	15.686	0.009	32.5	32.5	32	32.5	32.375	32
MRS	0.007	0.007	15.742	0.009	32.5	32.5	33	32.5	32.625	33

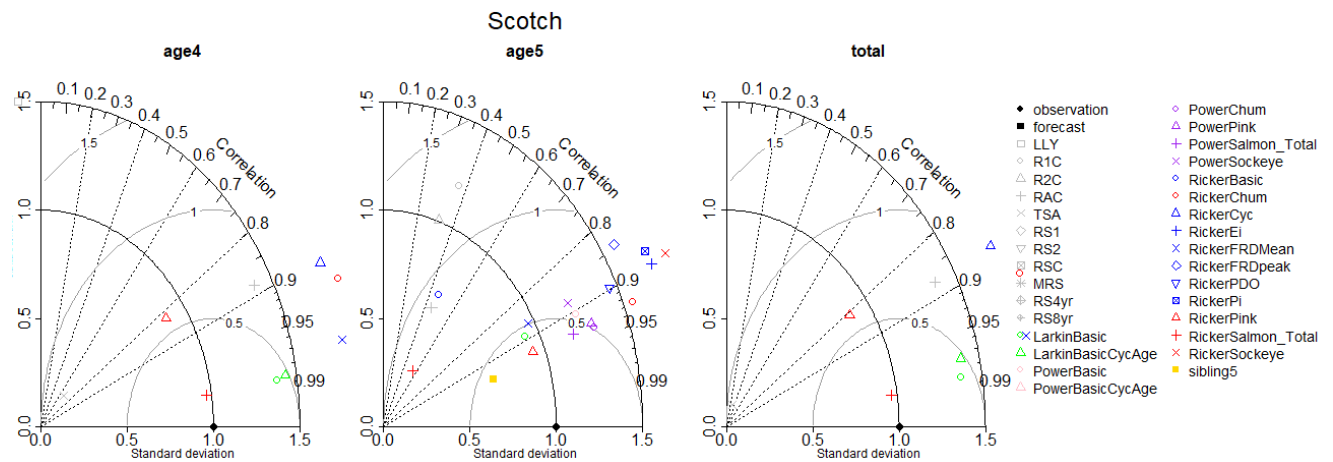
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FC-TS



Scotch Retrospective: Taylor



Ranking (Total)-Allyrs

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerSalmon_Total	-0.005	0.013	0.107	0.018	2.0	1.0	1	1.0	1.250	1
LarkinBasic	0.024	0.032	0.860	0.054	3.0	2.0	3	2.0	2.500	2
RickerPink	-0.002	0.039	0.748	0.066	1.0	3.0	2	4.0	2.500	3
RAC	0.030	0.042	1.987	0.082	4.0	4.0	14	5.0	6.750	4
RickerFRDMean	0.042	0.056	1.469	0.104	7.0	6.0	8	6.0	6.750	5
LarkinBasicCycAge	0.037	0.044	2.088	0.065	5.0	5.0	16	3.0	7.250	6
RickerChum	0.057	0.063	1.827	0.125	12.0	8.0	13	8.0	10.250	7
PowerSockeye	0.049	0.070	1.434	0.175	8.0	10.5	7	16.5	10.500	8
PowerBasic	0.052	0.060	2.202	0.154	9.0	7.0	17	11.0	11.000	9
RickerPiW	0.053	0.070	1.693	0.172	10.0	10.5	10	14.5	11.250	10
PowerPink	0.058	0.068	1.302	0.179	13.5	9.0	6	19.0	11.875	11
PowerSalmon_Total	0.056	0.071	1.154	0.180	11.0	12.0	5	20.0	12.000	12
PowerChum	0.058	0.074	1.806	0.163	13.5	14.0	12	12.0	12.875	13
R1C	0.063	0.080	1.014	0.175	16.0	17.5	4	16.5	13.500	14
TSA	0.040	0.096	18.467	0.113	6.0	22.0	31	7.0	16.500	15
RickerEiW	0.066	0.072	2.274	0.178	17.0	13.0	18	18.0	16.500	16
RickerPi	0.059	0.083	1.611	0.209	15.0	20.0	9	22.0	16.500	17
RickerPDO	0.070	0.076	2.656	0.151	19.0	16.0	22	10.0	16.750	18
PowerBasicCycAge	0.068	0.075	3.503	0.172	18.0	15.0	23	14.5	17.625	19
RickerCyc	0.074	0.080	4.051	0.133	21.0	17.5	24	9.0	17.875	20
RickerFRDpeak	0.075	0.081	2.388	0.165	22.0	19.0	19	13.0	18.250	21
R2C	0.081	0.094	1.760	0.183	23.0	21.0	11	21.0	19.000	22
RickerSockeye	0.096	0.103	1.988	0.282	24.0	23.0	15	24.0	21.500	23
RickerBasic	0.099	0.105	2.497	0.272	26.0	24.0	21	23.0	23.500	24
LLY	0.072	0.175	9.057	0.300	20.0	26.0	25	25.0	24.000	25
RickerEi	0.098	0.111	2.421	0.312	25.0	25.0	20	26.0	24.000	26
RS8yr	0.350	0.353	16.422	0.718	27.0	27.0	26	27.0	26.750	27
MRS	0.382	0.385	16.660	0.797	28.0	28.0	27	28.0	27.750	28
RS2	0.430	0.434	18.327	0.921	29.0	29.0	30	29.0	29.250	29
RS1	0.445	0.458	17.254	1.007	30.0	31.0	28	31.0	30.000	30
RSC	0.455	0.457	19.201	0.942	31.0	30.0	32	30.0	30.750	31
RS4yr	0.492	0.493	17.704	1.160	32.0	32.0	29	32.0	31.250	32

(Age4)-Allyrs

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerSalmon_Total	-	0.012	-0.007	0.018	2.0	1.0	1	1.0	1.250	1
RickerPink	0.006	0.036	0.601	0.064	1.0	4.0	2	4.0	2.750	2
LarkinBasic	0.005	0.030	0.694	0.053	3.5	2.0	4	2.0	2.875	3

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
LarkinBasicCycAge	0.025	0.033	0.641	0.059	5.5	3.0	3	3.0	3.625	4
RickerFRDMean	0.039	0.053	1.386	0.103	8.0	6.0	8	7.0	7.250	5
RAC	0.029	0.039	1.825	0.081	7.0	5.0	14	5.0	7.750	6
RickerCyc	0.053	0.060	1.387	0.122	16.0	10.0	9	8.0	10.750	7
RickerChum	0.052	0.057	1.801	0.123	13.5	8.0	13	9.0	10.875	8
RickerPiW	0.046	0.064	1.578	0.168	10.5	11.0	12	15.0	12.125	9
PowerBasic	0.046	0.056	2.230	0.152	10.5	7.0	21	11.0	12.375	10
PowerSockeye	0.045	0.066	1.493	0.174	9.0	14.0	10	16.5	12.375	11
PowerBasicCycAge	0.049	0.058	2.116	0.161	12.0	9.0	18	12.5	12.875	12
PowerPink	0.055	0.065	1.269	0.180	18.0	12.5	7	19.5	14.250	13
PowerSalmon_Total	0.053	0.068	1.103	0.180	16.0	15.5	6	19.5	14.250	14
R1C	0.062	0.076	1.047	0.175	20.5	18.5	5	18.0	15.500	15
TSA	0.022	0.077	16.213	0.098	3.5	20.5	32	6.0	15.500	16
PowerChum	0.053	0.070	1.876	0.163	16.0	17.0	15	14.0	15.500	17
RickerPi	0.052	0.077	1.519	0.203	13.5	20.5	11	22.0	16.750	18
RickerEiW	0.058	0.065	2.228	0.174	19.0	12.5	20	16.5	17.000	19
RickerPDO	0.062	0.068	2.455	0.148	20.5	15.5	24	10.0	17.500	20
RickerFRDpeak	0.069	0.076	2.144	0.161	22.0	18.5	19	12.5	18.000	21
R2C	0.080	0.091	1.911	0.182	23.0	22.0	16	21.0	20.500	22
LLY	0.025	0.128	10.243	0.205	5.5	26.0	31	23.0	21.375	23
RickerSockeye	0.089	0.096	1.919	0.278	24.0	23.0	17	25.0	22.250	24
RickerBasic	0.092	0.099	2.451	0.270	26.0	24.0	23	24.0	24.250	25
RickerEi	0.091	0.105	2.502	0.310	25.0	25.0	25	26.0	25.250	26
RS8yr	0.233	0.242	3.610	0.648	27.0	27.0	30	27.0	27.750	27
MRS	0.249	0.255	3.520	0.719	28.0	28.0	28	28.0	28.000	28
RS2	0.284	0.293	3.143	0.839	29.0	29.0	26	29.0	28.250	29
RS1	0.291	0.307	2.243	0.922	30.0	31.0	22	31.0	28.500	30
RSC	0.296	0.301	3.586	0.854	31.0	30.0	29	30.0	30.000	31
RS4yr	0.336	0.342	3.448	1.061	32.0	32.0	27	32.0	30.750	32

(Age5)-Allyrs

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerPDO	0.000	0.001	-0.015	0.001	8.5	9.5	1	5.5	6.125	1
RickerChum	0.000	0.001	-0.063	0.001	8.5	9.5	5	5.5	7.125	2
PowerChum	0.000	0.001	-0.119	0.001	8.5	9.5	7	5.5	7.625	3
PowerBasic	0.000	0.001	-0.166	0.001	8.5	9.5	10	5.5	8.375	4
RickerEiW	0.000	0.001	-0.042	0.002	8.5	9.5	3	14.0	8.750	5
PowerSockeye	0.000	0.001	-0.303	0.001	8.5	9.5	12	5.5	8.875	6
RickerFRDpeak	0.000	0.001	-0.054	0.002	8.5	9.5	4	14.0	9.000	7
PowerSalmon_Total	0.000	0.001	-0.310	0.001	8.5	9.5	13	5.5	9.125	8

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerFRDMean	0.000	0.001	-0.324	0.001	8.5	9.5	14	5.5	9.375	9
RickerPiW	0.000	0.001	-0.104	0.002	8.5	9.5	6	14.0	9.500	10
PowerPink	0.000	0.001	-0.345	0.001	8.5	9.5	15	5.5	9.625	11
LarkinBasic	0.000	0.001	-0.391	0.001	8.5	9.5	16	5.5	9.875	12
RickerPi	0.000	0.001	-0.122	0.002	8.5	9.5	8	14.0	10.000	13
RickerEi	0.000	0.001	0.133	0.002	8.5	9.5	9	14.0	10.250	14
RickerSockeye	0.000	0.001	-0.210	0.002	8.5	9.5	11	14.0	10.750	15
RickerPink	-0.001	0.001	-0.547	0.001	19.0	9.5	17	5.5	12.750	16
sibling5	0.000	0.001	1.279	0.003	8.5	9.5	19	18.0	13.750	17
RickerBasic	-0.001	0.003	-0.032	0.006	19.0	19.0	2	19.5	14.875	18
RickerSalmon_Total	-0.001	0.001	-0.670	0.002	19.0	9.5	18	14.0	15.125	19
R1C	0.001	0.004	3.384	0.008	19.0	20.5	22	22.0	20.875	20
RAC	0.001	0.004	8.076	0.006	19.0	20.5	25	19.5	21.000	21
R2C	0.002	0.005	4.362	0.007	22.0	22.0	24	21.0	22.250	22
LarkinBasicCycAge	0.011	0.012	2.969	0.025	23.0	23.0	21	23.0	22.500	23
PowerBasicCycAge	0.012	0.013	2.845	0.033	24.0	24.0	20	26.0	23.500	24
RickerCyc	0.014	0.015	4.295	0.029	25.0	25.0	23	25.0	24.500	25
LLY	0.055	0.055	13.801	0.114	27.0	27.0	26	27.0	26.750	26
TSA	0.022	0.022	77.165	0.027	26.0	26.0	33	24.0	27.250	27
RS8yr	0.136	0.136	54.517	0.318	28.0	28.0	29	28.0	28.250	28
MRS	0.156	0.156	55.665	0.352	29.0	29.0	30	29.0	29.250	29
RS2	0.171	0.171	50.359	0.401	30.0	30.0	28	30.0	29.500	30
RS1	0.180	0.180	49.863	0.438	31.0	31.0	27	32.0	30.250	31
RS4yr	0.182	0.183	60.790	0.485	32.0	32.0	31	33.0	32.000	32
RSC	0.184	0.185	61.674	0.412	33.0	33.0	32	31.0	32.250	33

(Total)-Cycle

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
R1C	0.001	0.002	0.483	0.002	7.0	2.0	2	1.5	3.125	1
RickerFRDMean	0.001	0.002	0.650	0.002	7.0	2.0	4	1.5	3.625	2
RickerSalmon_Total	0.000	0.003	0.087	0.003	1.0	7.5	1	6.5	4.000	3
RickerFRDpeak	0.001	0.002	0.791	0.003	7.0	2.0	5	6.5	5.125	4
RickerSockeye	0.001	0.003	0.636	0.003	7.0	7.5	3	6.5	6.000	5
PowerSockeye	0.001	0.003	0.808	0.003	7.0	7.5	6	6.5	6.750	6
LarkinBasic	0.001	0.003	0.972	0.003	7.0	7.5	7	6.5	7.000	7
LarkinBasicCycAge	0.001	0.003	0.978	0.003	7.0	7.5	8.5	6.5	7.375	8
RickerPi	0.001	0.003	0.978	0.003	7.0	7.5	8.5	6.5	7.375	9
RickerChum	0.001	0.003	1.129	0.003	7.0	7.5	11	6.5	8.000	10
RickerPink	0.001	0.004	1.038	0.004	7.0	16.5	10	14.5	12.000	11
PowerSalmon_Total	0.001	0.004	1.277	0.004	7.0	16.5	12	14.5	12.500	12

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
PowerChum	0.002	0.003	1.436	0.004	16.0	7.5	15	14.5	13.250	13
RickerBasic	0.002	0.004	1.313	0.004	16.0	16.5	13	14.5	15.000	14
RickerPDO	0.002	0.004	1.417	0.004	16.0	16.5	14	14.5	15.250	15
RickerEiW	0.002	0.004	1.440	0.004	16.0	16.5	16	14.5	15.750	16
RickerCyc	0.002	0.004	1.459	0.004	16.0	16.5	17	14.5	16.000	17
PowerPink	0.002	0.004	1.478	0.005	16.0	16.5	18	20.5	17.750	18
RickerPiW	0.002	0.004	1.587	0.005	16.0	16.5	19	20.5	18.000	19
RickerEi	0.003	0.004	1.815	0.004	21.0	16.5	21	14.5	18.250	20
PowerBasic	0.003	0.004	1.844	0.005	21.0	16.5	22	20.5	20.000	21
PowerBasicCycAge	0.003	0.005	1.911	0.005	21.0	22.0	23	20.5	21.625	22
R2C	0.007	0.007	1.654	0.011	23.0	23.0	20	24.0	22.500	23
RAC	0.009	0.009	4.368	0.009	24.0	24.0	25	23.0	24.000	24
RS1	0.011	0.011	3.937	0.014	25.0	25.0	24	25.0	24.750	25
RS2	0.015	0.015	6.916	0.018	26.0	26.0	27	26.0	26.250	26
RS8yr	0.016	0.016	7.350	0.021	27.0	27.0	28	27.0	27.250	27
MRS	0.018	0.018	7.706	0.023	28.5	28.5	29	28.5	28.625	28
RS4yr	0.018	0.018	8.196	0.026	28.5	28.5	31	30.0	29.500	29
RSC	0.019	0.019	7.935	0.023	30.0	30.0	30	28.5	29.625	30
LLY	0.022	0.022	6.321	0.034	31.0	31.0	26	31.0	29.750	31
TSA	0.100	0.100	49.165	0.101	32.0	32.0	32	32.0	32.000	32

(Age4)-Cycle

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
R1C	0.000	0.001	0.185	0.001	6.0	2.5	3	1.0	3.125	1
RickerFRDpeak	0.000	0.001	0.241	0.002	6.0	2.5	5	6.0	4.875	2
RickerFRDMean	0.000	0.001	0.244	0.002	6.0	2.5	6	6.0	5.125	3
PowerSockeye	0.000	0.002	0.209	0.002	6.0	10.0	4	6.0	6.500	4
RickerSockeye	-0.001	0.001	-0.014	0.002	19.0	2.5	1	6.0	7.125	5
RickerPi	0.000	0.002	0.379	0.002	6.0	10.0	7	6.0	7.250	6
RickerBasic	0.000	0.002	0.615	0.002	6.0	10.0	9	6.0	7.750	7
RickerPDO	0.000	0.002	0.702	0.002	6.0	10.0	10	6.0	8.000	8
LarkinBasicCycAge	0.000	0.002	0.715	0.002	6.0	10.0	11	6.0	8.250	9
LarkinBasic	0.000	0.002	0.728	0.002	6.0	10.0	12	6.0	8.500	10
RickerChum	0.000	0.002	0.505	0.003	6.0	10.0	8	17.5	10.375	11
RickerSalmon_Total	-0.001	0.002	-0.144	0.003	19.0	10.0	2	17.5	12.125	12
RickerEiW	0.001	0.002	0.742	0.003	19.0	10.0	13	17.5	14.875	13
RickerPink	0.000	0.003	0.841	0.003	6.0	20.5	16	17.5	15.000	14
RickerCyc	0.001	0.002	0.805	0.003	19.0	10.0	14	17.5	15.125	15
PowerChum	0.001	0.002	0.920	0.003	19.0	10.0	18	17.5	16.125	16
RS4yr	0.001	0.003	0.830	0.003	19.0	20.5	15	17.5	18.000	17

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerPiW	0.001	0.003	0.911	0.003	19.0	20.5	17	17.5	18.500	18
RickerEi	0.001	0.003	1.058	0.003	19.0	20.5	19	17.5	19.000	19
MRS	0.001	0.003	1.131	0.003	19.0	20.5	22.5	17.5	19.875	20
PowerBasic	0.001	0.003	1.131	0.003	19.0	20.5	22.5	17.5	19.875	21
PowerBasicCycAge	0.001	0.003	1.142	0.003	19.0	20.5	24	17.5	20.250	22
RSC	0.001	0.003	1.168	0.003	19.0	20.5	25	17.5	20.500	23
RS8yr	0.001	0.003	1.238	0.003	19.0	20.5	26	17.5	20.750	24
PowerSalmon_Total	0.001	0.003	1.074	0.004	19.0	20.5	20	25.5	21.250	25
PowerPink	0.001	0.004	1.314	0.004	19.0	27.0	27	25.5	24.625	26
R2C	0.004	0.004	1.128	0.007	28.5	27.0	21	30.0	26.625	27
RS1	0.003	0.004	1.640	0.006	27.0	27.0	28	28.0	27.500	28
RS2	0.004	0.006	3.003	0.006	28.5	29.5	29	28.0	28.750	29
RAC	0.006	0.006	3.270	0.006	30.0	29.5	30	28.0	29.375	30
LLY	0.015	0.015	4.930	0.022	31.0	31.0	31	31.0	31.000	31
TSA	0.071	0.071	38.858	0.072	32.0	32.0	32	32.0	32.000	32

(Age5)-Cycle

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
PowerSalmon_Total	0.000	0.000	0.045	0.000	11.0	11.0	1	8.5	7.875	1
RickerFRDMean	0.000	0.000	0.049	0.000	11.0	11.0	2	8.5	8.125	2
RickerSockeye	0.000	0.000	0.190	0.000	11.0	11.0	3	8.5	8.375	3
PowerSockeye	0.000	0.000	0.264	0.000	11.0	11.0	5	8.5	8.875	4
RickerCyc	0.000	0.000	0.297	0.000	11.0	11.0	7	8.5	9.375	5
RickerFRDpeak	0.000	0.000	0.304	0.000	11.0	11.0	8	8.5	9.625	6
PowerBasic	0.000	0.000	0.455	0.000	11.0	11.0	10	8.5	10.125	7
RickerPiW	0.000	0.000	0.473	0.000	11.0	11.0	12	8.5	10.625	8
PowerChum	0.000	0.000	0.485	0.000	11.0	11.0	13	8.5	10.875	9
RickerBasic	0.000	0.000	0.515	0.000	11.0	11.0	15	8.5	11.375	10
PowerPink	0.000	0.000	-0.222	0.001	11.0	11.0	4	20.0	11.500	11
RickerPi	0.000	0.000	0.556	0.000	11.0	11.0	16	8.5	11.625	12
RickerChum	0.000	0.000	0.585	0.000	11.0	11.0	17	8.5	11.875	13
LarkinBasic	0.000	0.000	-0.286	0.001	11.0	11.0	6	20.0	12.000	14
RickerPDO	0.000	0.000	0.603	0.000	11.0	11.0	18	8.5	12.125	15
RickerEiW	0.000	0.000	0.615	0.000	11.0	11.0	19	8.5	12.375	16
RickerEi	0.000	0.000	1.102	0.000	11.0	11.0	20	8.5	12.625	17
RickerPink	0.000	0.000	-0.429	0.001	11.0	11.0	9	20.0	12.750	18
PowerBasicCycAge	0.000	0.000	1.365	0.000	11.0	11.0	21	8.5	12.875	19
RickerSalmon_Total	0.000	0.000	-0.457	0.001	11.0	11.0	11	20.0	13.250	20
LarkinBasicCycAge	0.000	0.000	0.510	0.001	11.0	11.0	14	20.0	14.000	21
sibling5	0.001	0.001	2.607	0.001	22.5	22.5	22	20.0	21.750	22

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
R1C	0.001	0.001	4.151	0.001	22.5	22.5	23	20.0	22.000	23
R2C	0.003	0.003	7.647	0.004	24.5	24.5	24	25.0	24.500	24
RAC	0.003	0.003	20.241	0.003	24.5	24.5	26	24.0	24.750	25
LLY	0.008	0.008	18.430	0.012	26.5	26.5	25	27.0	26.250	26
RS1	0.008	0.008	43.182	0.011	26.5	26.5	27	26.0	26.500	27
RS2	0.011	0.011	44.491	0.014	28.0	28.0	28	28.0	28.000	28
RS8yr	0.014	0.014	74.698	0.020	29.0	29.0	29	29.0	29.000	29
MRS	0.017	0.017	75.592	0.022	30.0	30.0	30	30.0	30.000	30
RSC	0.018	0.018	76.716	0.023	31.5	31.5	31	31.0	31.250	31
RS4yr	0.018	0.018	78.699	0.025	31.5	31.5	32	32.0	31.750	32
TSA	0.030	0.030	203.706	0.030	33.0	33.0	33	33.0	33.000	33

(Total)-Other

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
LarkinBasic	-0.001	0.009	0.958	0.014	3.0	1.5	3	1.0	2.125	1
RickerPink	0.000	0.015	0.924	0.021	1.0	3.5	2	4.0	2.625	2
RickerSalmon_Total	-0.005	0.009	0.127	0.015	8.0	1.5	1	2.0	3.125	3
PowerSalmon_Total	0.002	0.015	1.266	0.021	5.0	3.5	5	4.0	4.375	4
PowerPink	0.003	0.016	1.463	0.022	6.5	5.5	6	6.0	6.000	5
RAC	0.001	0.016	2.274	0.021	3.0	5.5	14	4.0	6.625	6
R1C	-0.001	0.021	1.000	0.030	3.0	12.5	4	10.5	7.500	7
RickerFRDMean	0.009	0.017	1.778	0.026	9.0	7.5	8	8.0	8.125	8
R2C	0.003	0.019	1.804	0.026	6.5	9.5	9	8.0	8.250	9
PowerChum	0.011	0.017	2.099	0.026	10.5	7.5	13	8.0	9.750	10
PowerSockeye	0.011	0.020	1.751	0.036	10.5	11.0	7	13.5	10.500	11
RickerChum	0.012	0.019	2.046	0.030	12.5	9.5	11	10.5	10.875	12
LarkinBasicCycAge	0.012	0.021	2.538	0.033	12.5	12.5	16	12.0	13.250	13
RickerPiW	0.014	0.022	2.060	0.044	14.0	14.5	12	16.0	14.125	14
PowerBasic	0.015	0.022	2.737	0.036	15.0	14.5	17	13.5	15.000	15
RickerPi	0.016	0.023	1.974	0.050	16.0	16.0	10	21.0	15.750	16
RickerFRDpeak	0.018	0.025	2.841	0.041	19.0	18.0	19	15.0	17.750	17
RickerEiW	0.018	0.025	2.763	0.047	19.0	18.0	18	18.5	18.375	18
RickerSockeye	0.017	0.026	2.282	0.050	17.0	20.5	15	21.0	18.375	19
RickerBasic	0.018	0.026	2.855	0.047	19.0	20.5	20	18.5	19.500	20
RickerEi	0.019	0.025	2.860	0.050	21.0	18.0	21	21.0	20.250	21
RickerPDO	0.020	0.028	3.210	0.046	22.0	22.0	22	17.0	20.750	22
RickerCyc	0.029	0.038	4.919	0.061	23.0	23.5	24	23.0	23.375	23
PowerBasicCycAge	0.032	0.038	4.416	0.075	24.0	23.5	23	24.0	23.625	24
LLY	0.151	0.163	11.770	0.314	26.0	26.0	25	26.0	25.750	25
TSA	0.086	0.086	23.617	0.092	25.0	25.0	32	25.0	26.750	26

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RS8yr	0.162	0.166	19.962	0.354	27.0	27.0	26	27.0	26.750	27
MRS	0.185	0.188	20.236	0.390	28.0	28.0	27	28.0	27.750	28
RS2	0.194	0.199	22.237	0.432	29.0	29.0	30	29.0	29.250	29
RS1	0.199	0.202	20.933	0.457	30.0	30.0	28	31.0	29.750	30
RS4yr	0.214	0.215	21.230	0.534	31.0	31.0	29	32.0	30.750	31
RSC	0.216	0.219	23.280	0.453	32.0	32.0	31	30.0	31.250	32

(Age4)-Other

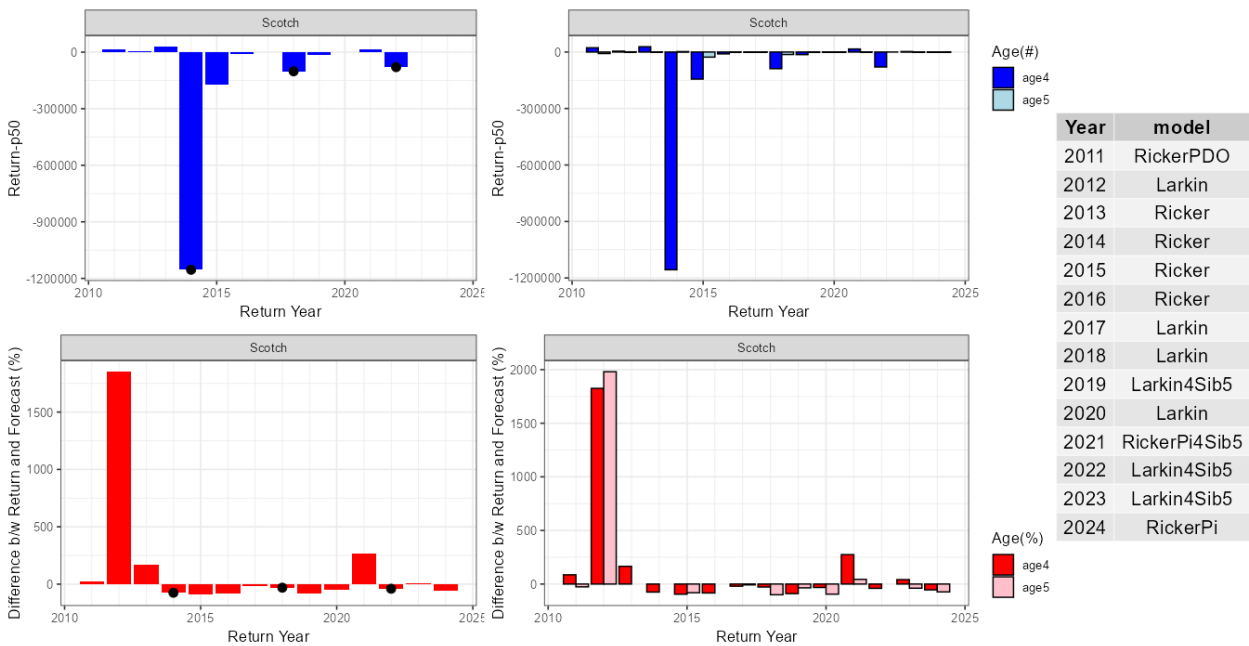
model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
LarkinBasicCycAge	-0.004	0.007	0.655	0.011	9.5	1.5	2	1.0	3.500	1
LarkinBasic	-0.004	0.007	0.744	0.012	9.5	1.5	4	2.5	4.375	2
RickerSalmon_Total	-0.006	0.008	-0.020	0.014	15.0	3.0	1	4.0	5.750	3
RS1	0.003	0.010	1.823	0.012	7.5	4.0	10	2.5	6.000	4
PowerSalmon_Total	-0.002	0.012	1.199	0.016	5.0	7.5	6	6.0	6.125	5
RickerPink	-0.003	0.012	0.737	0.017	7.5	7.5	3	9.0	6.750	6
RickerCyc	0.002	0.012	1.458	0.017	5.0	7.5	8	9.0	7.375	7
PowerPink	-0.001	0.013	1.419	0.017	2.5	11.5	7	9.0	7.500	8
RAC	0.000	0.012	2.067	0.016	1.0	7.5	16	6.0	7.625	9
R2C	0.001	0.014	1.996	0.019	2.5	13.5	14	12.0	10.500	10
PowerChum	0.005	0.012	2.193	0.016	12.0	7.5	17	6.0	10.625	11
R1C	-0.002	0.017	1.040	0.023	5.0	20.0	5	14.5	11.125	12
RickerChum	0.005	0.012	2.016	0.018	12.0	7.5	15	11.0	11.375	13
RickerFRDMean	0.005	0.013	1.672	0.020	12.0	11.5	9	13.0	11.375	14
PowerSockeye	0.006	0.015	1.828	0.024	15.0	15.5	11	17.0	14.625	15
RickerPiW	0.006	0.014	1.912	0.024	15.0	13.5	13	17.0	14.625	16
RickerPi	0.008	0.016	1.857	0.029	17.5	18.0	12	22.0	17.375	17
PowerBasicCycAge	0.009	0.015	2.614	0.023	21.0	15.5	20	14.5	17.750	18
PowerBasic	0.009	0.016	2.778	0.024	21.0	18.0	22	17.0	19.500	19
RickerEiW	0.009	0.018	2.708	0.028	21.0	22.0	21	20.0	21.000	20
RickerEi	0.009	0.016	2.964	0.028	21.0	18.0	26	20.0	21.250	21
RS2	0.008	0.019	2.907	0.028	17.5	24.0	24	20.0	21.375	22
RickerSockeye	0.009	0.018	2.198	0.032	21.0	22.0	18	25.0	21.500	23
RickerFRDpeak	0.010	0.018	2.531	0.030	24.5	22.0	19	23.0	22.125	24
RickerBasic	0.010	0.020	2.800	0.032	24.5	26.0	23	25.0	24.625	25
RickerPDO	0.011	0.020	2.956	0.032	26.0	26.0	25	25.0	25.500	26
RSC	0.014	0.020	3.401	0.035	27.5	26.0	28	27.5	27.250	27
RS4yr	0.015	0.022	3.080	0.035	29.5	28.5	27	27.5	28.125	28
MRS	0.015	0.022	3.509	0.038	29.5	28.5	29	29.0	29.000	29
RS8yr	0.014	0.025	3.653	0.041	27.5	30.0	30	30.0	29.375	30
TSA	0.063	0.063	20.748	0.067	31.0	31.0	32	31.0	31.250	31

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
LLY	0.091	0.103	13.279	0.194	32.0	32.0	31	32.0	31.750	32

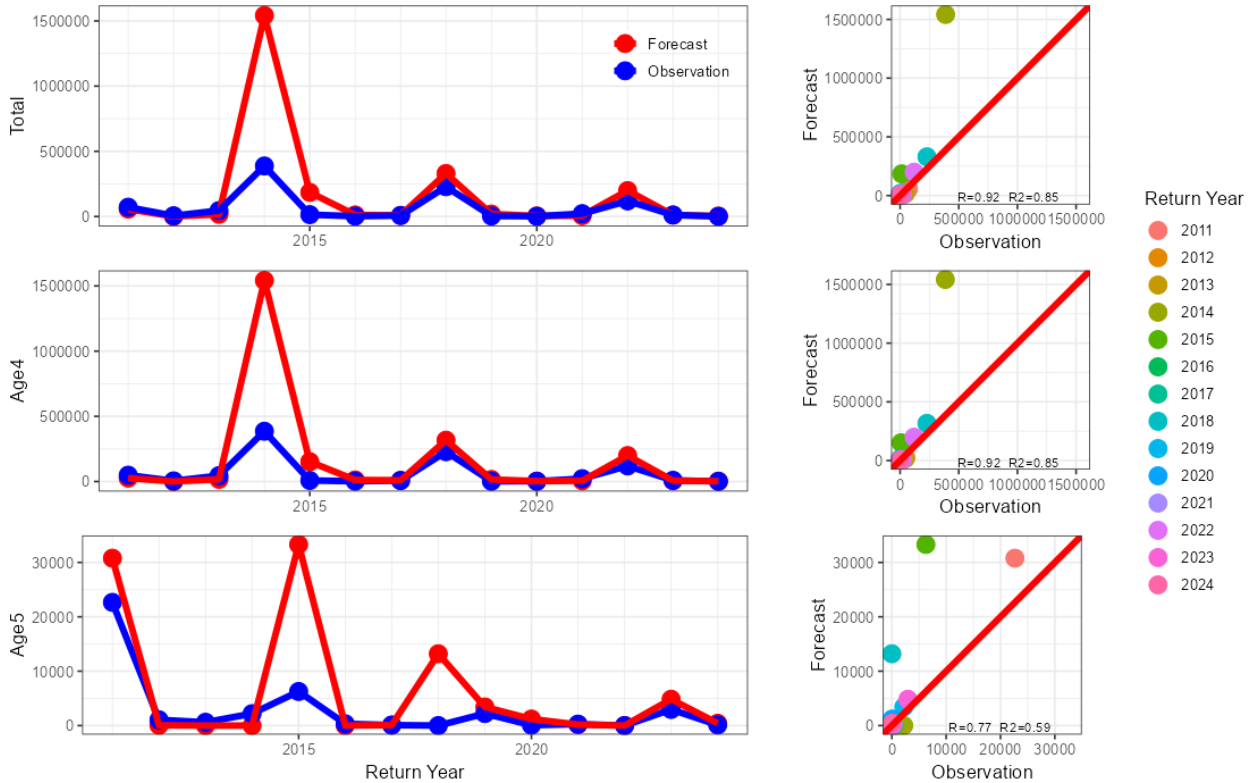
(Age5)-Other

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
PowerChum	0.000	0.000	-0.041	0.001	9.0	2.0	4	5.5	5.125	1
RickerChum	0.000	0.001	0.023	0.001	9.0	10.5	1	5.5	6.500	2
PowerSalmon_Total	0.000	0.000	-0.244	0.001	9.0	2.0	13	5.5	7.375	3
RickerPDO	0.000	0.001	0.077	0.001	9.0	10.5	8	5.5	8.250	4
RickerPink	0.000	0.000	-0.503	0.001	9.0	2.0	17	5.5	8.375	5
PowerBasic	0.000	0.001	-0.091	0.001	9.0	10.5	9	5.5	8.500	6
RickerPiW	0.000	0.001	-0.025	0.002	9.0	10.5	2	14.0	8.875	7
RickerFRDpeak	0.000	0.001	0.033	0.002	9.0	10.5	3	14.0	9.125	8
PowerSockeye	0.000	0.001	-0.240	0.001	9.0	10.5	12	5.5	9.250	9
RickerEiW	0.000	0.001	0.044	0.002	9.0	10.5	5	14.0	9.625	10
RickerFRDMean	0.000	0.001	-0.261	0.001	9.0	10.5	14	5.5	9.750	11
PowerPink	0.000	0.001	-0.283	0.001	9.0	10.5	15	5.5	10.000	12
RickerPi	0.000	0.001	-0.049	0.002	9.0	10.5	6.5	14.0	10.000	13
LarkinBasic	0.000	0.001	-0.336	0.001	9.0	10.5	16	5.5	10.250	14
RickerSockeye	0.000	0.001	-0.140	0.002	9.0	10.5	10	14.0	10.875	15
RickerEi	0.000	0.001	0.235	0.002	9.0	10.5	11	14.0	11.125	16
RickerSalmon_Total	-0.001	0.001	-0.638	0.002	19.5	10.5	18	14.0	15.500	17
sibling5	0.000	0.002	1.384	0.003	9.0	18.0	19	18.0	16.000	18
RickerBasic	-0.001	0.003	0.049	0.006	19.5	19.0	6.5	19.5	16.125	19
R1C	0.001	0.004	3.753	0.008	19.5	20.5	22	21.5	20.875	20
RAC	0.001	0.004	8.890	0.006	19.5	20.5	25	19.5	21.125	21
R2C	0.002	0.005	4.825	0.008	22.0	22.0	24	21.5	22.375	22
LarkinBasicCycAge	0.012	0.013	3.353	0.026	23.0	23.0	21	23.0	22.500	23
PowerBasicCycAge	0.013	0.014	3.209	0.034	24.0	24.0	20	26.0	23.500	24
RickerCyc	0.016	0.016	4.809	0.031	25.0	25.0	23	25.0	24.500	25
LLY	0.060	0.060	15.145	0.119	27.0	27.0	26	27.0	26.750	26
TSA	0.024	0.024	84.267	0.028	26.0	26.0	33	24.0	27.250	27
RS8yr	0.148	0.148	59.563	0.332	28.0	28.0	29	28.0	28.250	28
MRS	0.170	0.170	60.815	0.368	29.0	29.0	30	29.0	29.250	29
RS2	0.187	0.187	55.027	0.419	30.0	30.0	28	30.0	29.500	30
RS1	0.196	0.196	54.486	0.457	31.0	31.0	27	32.0	30.250	31
RS4yr	0.199	0.199	66.406	0.506	32.0	32.0	31	33.0	32.000	32
RSC	0.201	0.202	67.371	0.431	33.0	33.0	32	31.0	32.250	33

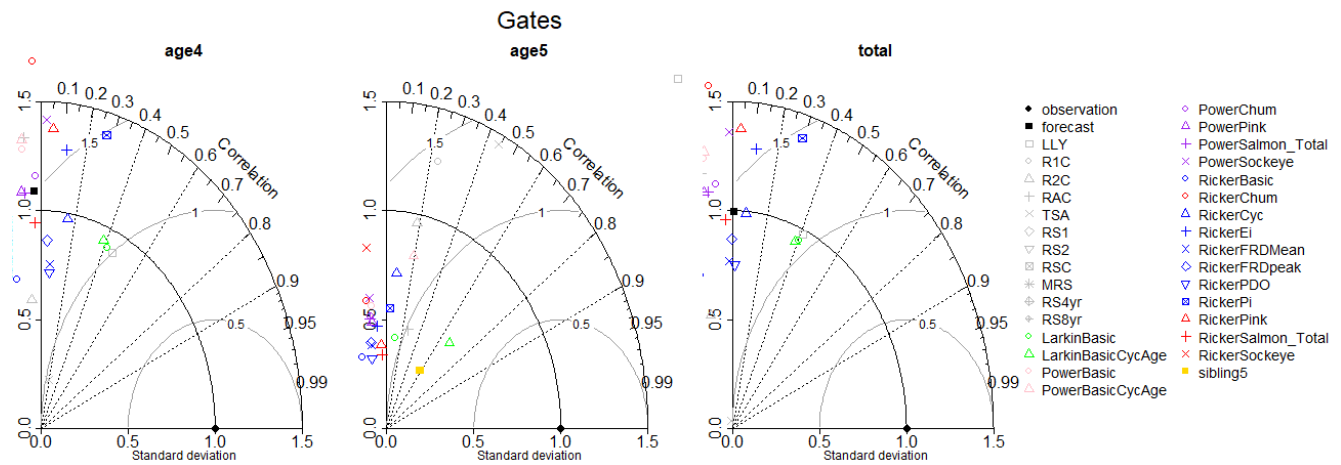
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FC-TS



Gates Retrospective: Taylor



Ranking (Total)-Alllys

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
LLY	0.001	0.030	0.779	0.039	2.0	3.0	2	3.5	2.625	1
LarkinBasic	0.011	0.028	1.012	0.033	6.5	1.0	5	1.0	3.375	2
RickerSalmon_Total	-0.002	0.031	0.632	0.042	3.0	4.0	1	6.5	3.625	3
LarkinBasicCycAge	0.011	0.029	1.032	0.034	6.5	2.0	6	2.0	4.125	4
RickerPi	0.014	0.033	0.969	0.045	9.5	5.5	4	11.5	7.625	5
R2C	0.005	0.035	1.522	0.045	4.0	7.0	9	11.5	7.875	6
RickerPink	0.007	0.036	0.881	0.050	5.0	9.5	3	15.5	8.250	7
TSA	0.012	0.033	1.958	0.039	8.0	5.5	18	3.5	8.750	8
RickerPiW	0.017	0.036	1.453	0.042	14.0	9.5	8	6.5	9.500	9
RickerEiW	0.018	0.037	1.584	0.042	15.0	12.0	10	6.5	10.875	10
RickerCyc	0.021	0.036	1.733	0.045	18.0	9.5	11	11.5	12.500	11
RickerFRDMean	0.020	0.036	1.908	0.042	17.0	9.5	17	6.5	12.500	12
R1C	0.000	0.044	1.252	0.057	1.0	20.0	7	22.5	12.625	13
PowerSalmon_Total	0.016	0.040	1.770	0.049	12.0	15.0	13	14.0	13.500	14
PowerPink	0.016	0.041	1.834	0.050	12.0	16.5	15	15.5	14.750	15
RickerPDO	0.022	0.039	1.985	0.043	20.0	13.5	19	9.0	15.375	16
RickerBasic	0.014	0.045	1.830	0.052	9.5	22.0	14	18.5	16.000	17
PowerSockeye	0.019	0.041	1.750	0.053	16.0	16.5	12	20.0	16.125	18
RickerFRDpeak	0.022	0.039	1.998	0.045	20.0	13.5	20	11.5	16.250	19
RickerEi	0.024	0.042	1.839	0.052	22.0	18.5	16	18.5	18.750	20
PowerChum	0.022	0.042	2.096	0.051	20.0	18.5	22	17.0	19.375	21
RAC	0.016	0.047	2.133	0.062	12.0	24.0	23	24.0	20.750	22
PowerBasic	0.025	0.045	2.271	0.056	23.5	22.0	24	21.0	22.625	23

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
PowerBasicCycAge	0.025	0.045	2.274	0.057	23.5	22.0	25	22.5	23.250	24
RickerSockeye	0.028	0.049	2.058	0.074	25.0	25.0	21	26.0	24.250	25
RickerChum	0.031	0.051	2.513	0.065	26.0	26.0	26	25.0	25.750	26
RS8yr	0.059	0.091	5.122	0.105	27.0	27.0	27	27.0	27.000	27
RS4yr	0.065	0.097	5.828	0.120	28.0	28.0	29	28.0	28.250	28
MRS	0.075	0.102	5.753	0.138	29.0	30.0	28	29.5	29.125	29
RSC	0.077	0.101	6.360	0.138	30.0	29.0	30	29.5	29.625	30
RS1	0.080	0.115	7.269	0.250	31.0	31.0	32	32.0	31.500	31
RS2	0.084	0.118	6.476	0.165	32.0	32.0	31	31.0	31.500	32

(Age4)-Alllys

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
LLY	-0.001	0.026	0.882	0.033	1.5	3.0	3	3.0	2.625	1
LarkinBasic	0.008	0.024	1.040	0.030	6.5	1.0	6	1.0	3.625	2
LarkinBasicCycAge	0.008	0.025	1.021	0.031	6.5	2.0	5	2.0	3.875	3
RickerSalmon_Total	-0.005	0.028	0.517	0.039	5.0	4.0	1	10.5	5.125	4
RickerPi	0.010	0.030	0.958	0.042	10.0	6.5	4	13.0	8.375	5
RickerPink	0.003	0.033	0.834	0.046	3.0	12.0	2	18.0	8.750	6
RickerPiW	0.012	0.031	1.421	0.036	12.5	9.0	8	5.5	8.750	7
R2C	0.004	0.031	1.592	0.040	4.0	9.0	11	12.0	9.000	8
TSA	0.009	0.029	2.070	0.034	8.5	5.0	20	4.0	9.375	9
RickerCyc	0.014	0.030	1.484	0.038	15.5	6.5	9	9.0	10.000	10
RickerEiW	0.014	0.033	1.537	0.037	15.5	12.0	10	7.5	11.250	11
RickerFRDMean	0.014	0.031	1.859	0.036	15.5	9.0	15	5.5	11.250	12
R1C	-0.001	0.040	1.276	0.051	1.5	22.5	7	22.5	13.375	13
PowerSalmon_Total	0.011	0.036	1.851	0.044	11.0	16.0	14	14.5	13.875	14
RickerFRDpeak	0.016	0.033	2.000	0.039	18.5	12.0	18	10.5	14.750	15
PowerPink	0.012	0.036	1.925	0.044	12.5	16.0	17	14.5	15.000	16
RickerBasic	0.009	0.039	1.860	0.045	8.5	20.5	16	16.0	15.250	17
RickerPDO	0.017	0.034	2.040	0.037	20.5	14.0	19	7.5	15.250	18
PowerSockeye	0.014	0.036	1.766	0.049	15.5	16.0	12	20.0	15.875	19
RickerEi	0.019	0.037	1.792	0.046	23.0	18.5	13	18.0	18.125	20
PowerChum	0.017	0.037	2.120	0.046	20.5	18.5	21	18.0	19.500	21
PowerBasic	0.019	0.039	2.350	0.050	23.0	20.5	25	21.0	22.375	22
RAC	0.016	0.045	2.243	0.059	18.5	26.0	23	24.0	22.875	23
PowerBasicCycAge	0.019	0.040	2.318	0.051	23.0	22.5	24	22.5	23.000	24
RickerSockeye	0.022	0.044	2.135	0.071	25.0	24.5	22	26.0	24.375	25
RickerChum	0.025	0.044	2.526	0.060	26.0	24.5	26	25.0	25.375	26
RS8yr	0.050	0.079	4.990	0.096	27.0	27.0	27	27.0	27.000	27
RS4yr	0.055	0.084	5.626	0.110	28.0	29.0	29	28.0	28.500	28

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RSC	0.060	0.082	5.949	0.119	29.0	28.0	30	29.0	29.000	29
MRS	0.062	0.086	5.509	0.125	30.0	30.0	28	30.0	29.500	30
RS1	0.073	0.105	7.529	0.244	31.0	31.0	32	32.0	31.500	31
RS2	0.077	0.110	6.706	0.158	32.0	32.0	31	31.0	31.500	32

(Age5)-Allyrs

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
LarkinBasicCycAge	0.000	0.003	1.429	0.004	7.5	3.0	6	1.0	4.375	1
sibling5	-0.001	0.003	0.789	0.005	18.5	3.0	3	4.5	7.250	2
RAC	0.000	0.004	1.630	0.005	7.5	14.5	7	4.5	8.375	3
LarkinBasic	-0.001	0.003	1.807	0.005	18.5	3.0	8	4.5	8.500	4
RickerSalmon_Total	-0.002	0.003	0.632	0.006	24.0	3.0	2	15.0	11.000	5
PowerPink	0.000	0.004	1.913	0.006	7.5	14.5	9	15.0	11.500	6
RickerPink	-0.002	0.003	0.802	0.006	24.0	3.0	4	15.0	11.500	7
RickerPDO	0.000	0.004	2.439	0.005	7.5	14.5	20	4.5	11.625	8
RickerPi	-0.001	0.004	1.918	0.005	18.5	14.5	10	4.5	11.875	9
PowerSalmon_Total	0.000	0.004	1.986	0.006	7.5	14.5	11	15.0	12.000	10
RickerEiW	-0.001	0.004	2.069	0.005	18.5	14.5	12	4.5	12.375	11
RickerFRDMean	0.000	0.004	2.221	0.006	7.5	14.5	13	15.0	12.500	12
PowerSockeye	0.000	0.004	2.351	0.006	7.5	14.5	15	15.0	13.000	13
RickerEi	0.000	0.004	2.391	0.006	7.5	14.5	17	15.0	13.500	14
RickerPiW	0.000	0.004	2.393	0.006	7.5	14.5	18	15.0	13.750	15
PowerChum	0.000	0.004	2.561	0.006	7.5	14.5	22	15.0	14.750	16
RickerFRDpeak	0.000	0.004	2.609	0.006	7.5	14.5	23	15.0	15.000	17
PowerBasic	0.000	0.004	2.660	0.006	7.5	14.5	24	15.0	15.250	18
RickerChum	0.000	0.004	2.948	0.006	7.5	14.5	26	15.0	15.750	19
LLY	0.003	0.004	0.591	0.009	26.5	14.5	1	27.0	17.250	20
PowerBasicCycAge	0.001	0.004	2.554	0.006	18.5	14.5	21	15.0	17.250	21
R1C	0.001	0.005	1.132	0.007	18.5	25.5	5	24.0	18.250	22
RickerCyc	0.001	0.004	2.863	0.006	18.5	14.5	25	15.0	18.250	23
RickerSockeye	0.000	0.004	2.959	0.007	7.5	14.5	27	24.0	18.250	24
RickerBasic	-0.001	0.005	2.362	0.006	18.5	25.5	16	15.0	18.750	25
R2C	0.002	0.005	2.279	0.007	24.0	25.5	14	24.0	21.875	26
TSA	0.003	0.005	2.433	0.008	26.5	25.5	19	26.0	24.250	27
RS1	0.006	0.010	6.828	0.013	28.0	28.0	32	28.0	29.000	28
RS2	0.007	0.011	5.787	0.018	29.0	29.0	30	29.0	29.250	29
RS8yr	0.009	0.012	5.364	0.022	30.0	30.0	28	30.5	29.625	30
MRS	0.013	0.016	5.660	0.035	32.0	32.0	29	32.0	31.250	31
RS4yr	0.010	0.013	7.144	0.022	31.0	31.0	33	30.5	31.375	32

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RSC	0.016	0.019	6.190	0.044	33.0	33.0	31	33.0	32.500	33

(Total)-Cycle

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerSalmon_Total	-0.002	0.028	0.537	0.036	1.0	4.0	1	8.5	3.625	1
R1C	0.007	0.023	0.717	0.029	7.5	3.0	2	3.0	3.875	2
LarkinBasicCycAge	0.006	0.029	1.084	0.033	5.0	5.0	8	4.5	5.625	3
PowerSockeye	0.004	0.030	0.895	0.036	3.5	6.5	6	8.5	6.125	4
LarkinBasic	0.007	0.030	1.145	0.033	7.5	6.5	10	4.5	7.125	5
RickerSockeye	0.003	0.031	0.784	0.039	2.0	8.5	4	14.0	7.125	6
RickerPi	0.007	0.031	1.036	0.035	7.5	8.5	7	7.0	7.500	7
LLY	0.022	0.022	0.871	0.028	23.0	2.0	5	2.0	8.000	8
R2C	0.017	0.020	1.379	0.025	18.0	1.0	12	1.0	8.000	9
RickerPink	0.004	0.035	0.774	0.040	3.5	13.5	3	17.0	9.250	10
PowerSalmon_Total	0.007	0.033	1.112	0.037	7.5	10.5	9	10.5	9.375	11
PowerPink	0.008	0.034	1.164	0.038	10.0	12.0	11	12.0	11.250	12
PowerChum	0.011	0.035	1.406	0.037	11.0	13.5	13	10.5	12.000	13
PowerBasicCycAge	0.012	0.037	1.507	0.039	12.0	15.5	14	14.0	13.875	14
RickerFRDMean	0.015	0.037	1.667	0.039	15.0	15.5	17	14.0	15.375	15
PowerBasic	0.013	0.038	1.575	0.040	13.0	17.0	15	17.0	15.500	16
TSA	0.023	0.033	2.208	0.034	24.0	10.5	24	6.0	16.125	17
RickerChum	0.014	0.040	1.622	0.042	14.0	19.0	16	19.5	17.125	18
RickerFRDpeak	0.016	0.039	1.807	0.040	16.5	18.0	18	17.0	17.375	19
RickerEiW	0.016	0.041	1.931	0.042	16.5	20.0	20	19.5	19.000	20
RickerBasic	0.018	0.042	1.997	0.044	19.0	21.0	21	22.0	20.750	21
RickerPiW	0.019	0.043	1.907	0.046	20.5	22.5	19	23.5	21.375	22
RickerEi	0.019	0.043	2.117	0.043	20.5	22.5	22	21.0	21.500	23
RickerPDO	0.021	0.045	2.177	0.046	22.0	24.0	23	23.5	23.125	24
RickerCyc	0.031	0.051	2.554	0.057	25.0	25.0	25	25.5	25.125	25
MRS	0.033	0.055	3.073	0.057	26.0	26.0	26	25.5	25.875	26
RSC	0.036	0.057	3.210	0.059	28.5	27.0	27	27.0	27.375	27
RS2	0.035	0.062	4.077	0.066	27.0	28.0	29	29.0	28.250	28
RS8yr	0.037	0.063	4.054	0.065	30.5	29.0	28	28.0	28.875	29
RS4yr	0.037	0.064	4.352	0.082	30.5	30.0	30	30.0	30.125	30
RS1	0.036	0.066	4.365	0.090	28.5	31.0	31	31.0	30.375	31
RAC	0.093	0.093	6.236	0.094	32.0	32.0	32	32.0	32.000	32

(Age4)-Cycle

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
LarkinBasicCycAge	0.000	0.023	0.743	0.028	1.0	7.5	9	3.0	5.125	1
LarkinBasic	-0.001	0.023	0.658	0.028	4.5	7.5	7	3.0	5.500	2
RickerPi	-0.001	0.024	0.636	0.029	4.5	9.0	6	5.5	6.250	3
PowerSockeye	-0.006	0.021	0.331	0.030	12.5	3.5	3	8.5	6.875	4
RickerSockeye	-0.009	0.020	0.091	0.030	18.0	1.5	2	8.5	7.500	5
PowerSalmon_Total	-0.001	0.025	0.624	0.031	4.5	10.0	5	12.5	8.000	6
R1C	0.008	0.022	0.780	0.029	15.0	5.5	10	5.5	9.000	7
PowerChum	0.001	0.026	0.813	0.030	4.5	11.5	12	8.5	9.125	8
RickerSalmon_Total	-0.010	0.021	0.057	0.031	20.0	3.5	1	12.5	9.250	9
PowerPink	0.001	0.026	0.698	0.032	4.5	11.5	8	16.0	10.000	10
RickerChum	0.001	0.027	0.806	0.031	4.5	13.0	11	12.5	10.250	11
LLY	0.022	0.022	0.925	0.028	24.0	5.5	13	3.0	11.375	12
RickerPink	-0.003	0.028	0.396	0.033	8.5	15.0	4	18.0	11.375	13
R2C	0.018	0.020	1.490	0.025	22.0	1.5	22	1.0	11.625	14
RickerFRDMean	0.006	0.028	1.052	0.030	12.5	15.0	16	8.5	13.000	15
PowerBasic	0.003	0.028	0.962	0.032	8.5	15.0	14	16.0	13.375	16
RickerFRDpeak	0.005	0.029	1.156	0.031	11.0	17.5	17	12.5	14.500	17
PowerBasicCycAge	0.004	0.029	1.036	0.032	10.0	17.5	15	16.0	14.625	18
RickerBasic	0.008	0.033	1.389	0.035	15.0	21.5	19	21.0	19.125	19
RickerEiW	0.008	0.033	1.421	0.035	15.0	21.5	20	21.0	19.375	20
RickerPiW	0.009	0.033	1.317	0.036	18.0	21.5	18	23.0	20.125	21
RickerEi	0.009	0.033	1.477	0.035	18.0	21.5	21	21.0	20.375	22
TSA	0.023	0.032	2.349	0.034	25.0	19.0	25	19.0	22.000	23
RickerPDO	0.011	0.035	1.595	0.037	21.0	24.0	23	24.0	23.000	24
RickerCyc	0.019	0.039	1.884	0.043	23.0	25.0	24	25.0	24.250	25
MRS	0.032	0.053	3.154	0.055	27.0	26.0	26	26.0	26.250	26
RSC	0.035	0.055	3.308	0.058	29.5	27.0	27	27.0	27.625	27
RS2	0.032	0.058	4.046	0.062	27.0	28.0	28	28.0	27.750	28
RS8yr	0.036	0.061	4.202	0.063	31.0	29.0	29	29.0	29.500	29
RS1	0.032	0.062	4.353	0.082	27.0	30.5	30	31.0	29.625	30
RS4yr	0.035	0.062	4.557	0.079	29.5	30.5	31	30.0	30.250	31
RAC	0.092	0.092	6.550	0.094	32.0	32.0	32	32.0	32.000	32

(Age5)-Cycle

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
TSA	0.000	0.000	0.060	0.000	2.5	2.5	1	2.0	2.000	1
R2C	0.000	0.000	-0.261	0.000	2.5	2.5	2	2.0	2.250	2
LLY	0.000	0.000	-0.268	0.000	2.5	2.5	3	2.0	2.500	3
R1C	0.000	0.000	-0.414	0.001	2.5	2.5	4	4.5	3.375	4
RAC	0.001	0.001	1.404	0.001	6.5	5.0	5	4.5	5.250	5

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RSC	0.001	0.002	1.780	0.002	6.5	9.5	6	7.0	7.250	6
MRS	0.001	0.002	2.348	0.002	6.5	9.5	7	7.0	7.500	7
RS8yr	0.001	0.002	2.411	0.002	6.5	9.5	8	7.0	7.750	8
RS4yr	0.002	0.002	2.444	0.003	11.0	9.5	9	11.0	10.125	9
RickerPink	0.002	0.002	2.933	0.003	11.0	9.5	10	11.0	10.375	10
RickerSalmon_Total	0.002	0.002	3.074	0.003	11.0	9.5	11	11.0	10.625	11
sibling5	0.002	0.002	3.091	0.003	11.0	9.5	12	11.0	10.875	12
LarkinBasicCycAge	0.002	0.002	3.890	0.003	11.0	9.5	13	11.0	11.125	13
RickerEiW	0.003	0.003	5.063	0.004	19.5	16.5	16	16.0	17.000	14
LarkinBasic	0.003	0.003	5.612	0.004	19.5	16.5	22	16.0	18.500	15
PowerPink	0.003	0.003	5.012	0.005	19.5	16.5	15	23.0	18.500	16
PowerBasicCycAge	0.003	0.003	5.375	0.005	19.5	16.5	19	23.0	19.500	17
RickerCyc	0.003	0.003	5.387	0.005	19.5	16.5	20	23.0	19.750	18
RickerFRDMean	0.003	0.004	5.496	0.004	19.5	25.5	21	16.0	20.500	19
RickerPi	0.003	0.003	5.645	0.005	19.5	16.5	23	23.0	20.500	20
PowerSalmon_Total	0.003	0.004	5.253	0.005	19.5	25.5	17	23.0	21.250	21
RickerPDO	0.003	0.004	5.670	0.004	19.5	25.5	24	16.0	21.250	22
RS2	0.003	0.004	5.263	0.005	19.5	25.5	18	23.0	21.500	23
RickerBasic	0.003	0.004	5.691	0.004	19.5	25.5	25	16.0	21.500	24
RS1	0.003	0.004	3.984	0.008	19.5	25.5	14	32.5	22.875	25
RickerPiW	0.004	0.004	6.212	0.005	28.5	25.5	26	23.0	25.750	26
RickerFRDpeak	0.004	0.004	6.220	0.005	28.5	25.5	27	23.0	26.000	27
RickerEi	0.004	0.004	6.295	0.005	28.5	25.5	28	23.0	26.250	28
PowerSockeye	0.004	0.004	6.703	0.006	28.5	25.5	29	29.5	28.125	29
PowerChum	0.004	0.004	6.868	0.006	28.5	25.5	30	29.5	28.375	30
PowerBasic	0.004	0.004	6.874	0.006	28.5	25.5	31	29.5	28.625	31
RickerChum	0.005	0.005	8.036	0.006	32.5	32.5	32	29.5	31.625	32
RickerSockeye	0.005	0.005	8.599	0.008	32.5	32.5	33	32.5	32.625	33

(Total)-Other

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
LLY	-0.008	0.028	0.201	0.037	5.5	1.0	1	3.0	2.625	1
LarkinBasic	0.009	0.031	0.936	0.036	8.0	2.0	4	1.5	3.875	2
LarkinBasicCycAge	0.009	0.032	0.928	0.036	8.0	3.0	3	1.5	3.875	3
RickerSalmon_Total	-0.004	0.039	0.705	0.048	2.5	7.5	2	9.5	5.375	4
TSA	0.008	0.035	1.466	0.039	5.5	4.0	9	4.0	5.625	5
R2C	0.004	0.038	1.379	0.049	2.5	6.0	8	11.0	6.875	6
RickerPi	0.012	0.037	1.023	0.050	10.0	5.0	6	12.5	8.375	7
RickerPiW	0.017	0.041	1.500	0.046	13.5	10.0	10	7.0	10.125	8
RickerPink	0.007	0.045	0.965	0.057	4.0	14.5	5	18.5	10.500	9

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerEiW	0.017	0.041	1.637	0.046	13.5	10.0	12	7.0	10.625	10
RickerFRDMean	0.018	0.039	1.774	0.044	15.5	7.5	17	5.0	11.250	11
PowerSalmon_Total	0.014	0.045	1.682	0.053	11.5	14.5	13	14.0	13.250	12
R1C	-0.002	0.051	1.253	0.063	1.0	23.0	7	23.0	13.500	13
RickerPDO	0.020	0.042	1.831	0.046	17.0	12.0	18	7.0	13.500	14
RickerBasic	0.009	0.049	1.623	0.056	8.0	20.0	11	16.5	13.875	15
RickerCyc	0.021	0.041	1.726	0.050	19.0	10.0	15	12.5	14.125	16
PowerPink	0.014	0.046	1.729	0.054	11.5	16.5	16	15.0	14.750	17
RickerFRDpeak	0.021	0.043	1.887	0.048	19.0	13.0	19	9.5	15.125	18
PowerSockeye	0.018	0.046	1.718	0.059	15.5	16.5	14	20.0	16.500	19
PowerChum	0.022	0.048	2.071	0.056	21.0	19.0	21	16.5	19.375	20
RickerEi	0.024	0.047	1.923	0.057	23.5	18.0	20	18.5	20.000	21
PowerBasicCycAge	0.023	0.050	2.173	0.061	22.0	21.5	23	21.5	22.000	22
PowerBasic	0.024	0.050	2.220	0.061	23.5	21.5	24	21.5	22.625	23
RAC	0.021	0.055	2.530	0.069	19.0	24.0	25	24.0	23.000	24
RickerSockeye	0.029	0.057	2.111	0.083	25.0	25.0	22	26.0	24.500	25
RickerChum	0.033	0.058	2.554	0.072	26.0	26.0	26	25.0	25.750	26
RS8yr	0.059	0.099	4.781	0.112	27.0	27.0	27	27.0	27.000	27
RS4yr	0.064	0.104	5.151	0.129	28.0	29.0	28	28.0	28.250	28
RSC	0.070	0.101	5.933	0.139	29.0	28.0	30	29.0	29.000	29
MRS	0.072	0.106	5.403	0.144	30.0	30.0	29	30.0	29.750	30
RS1	0.084	0.129	7.721	0.279	31.0	31.0	32	32.0	31.500	31
RS2	0.092	0.133	6.780	0.181	32.0	32.0	31	31.0	31.500	32

(Age4)-Other

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
LarkinBasic	0.004	0.026	0.677	0.031	4.5	1.0	3	1.0	2.375	1
LLY	-	0.027	0.218	0.035	8.0	2.5	1	3.0	3.625	2
LarkinBasicCycAge	0.007	0.027	0.714	0.033	6.0	2.5	4	2.0	3.625	3
TSA	0.005	0.032	1.500	0.036	8.0	4.0	15	4.0	7.750	4
RickerPi	0.007	0.033	0.833	0.045	8.0	5.5	6	13.0	8.125	5
RickerSalmon_Total	-	0.034	0.420	0.043	11.0	8.5	2	11.0	8.125	6
RickerPiW	0.009	0.034	1.160	0.039	13.0	8.5	7	7.0	8.875	7
R2C	0.010	0.034	1.403	0.044	4.5	8.5	12	12.0	9.250	8
RickerFRDMean	0.004	0.034	1.467	0.038	15.0	5.5	13	5.5	9.750	9
RickerPink	0.012	0.033	0.732	0.052	1.5	15.0	5	19.0	10.125	10
RickerCyc	0.002	0.040	1.239	0.042	17.5	8.5	8	10.0	11.000	11
RickerEiW	0.013	0.034	1.345	0.040	14.0	11.5	11	8.0	11.125	12

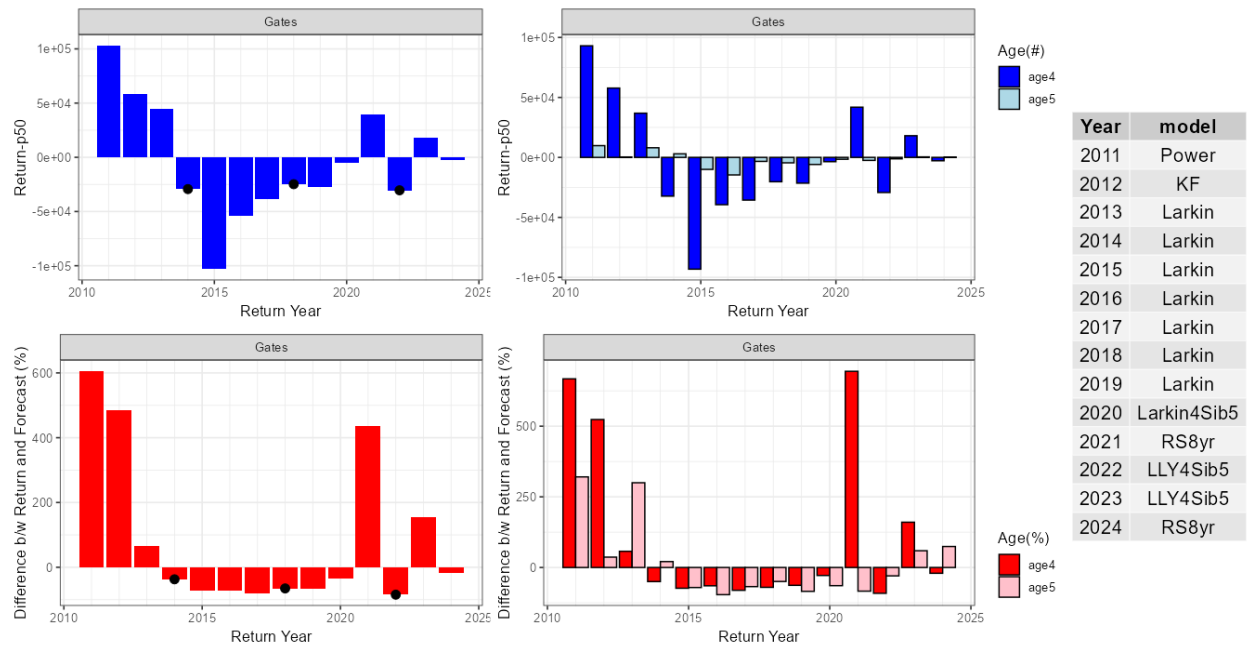
model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerBasic	0.003	0.041	1.304	0.048	3.0	18.5	10	14.5	11.500	13
RickerPDO	0.013	0.035	1.480	0.038	17.5	11.5	14	5.5	12.125	14
R1C	- 0.002	0.047	1.281	0.057	1.5	23.0	9	22.5	14.000	15
PowerSalmon_Total	0.009	0.040	1.516	0.048	11.0	15.0	16	14.5	14.125	16
RickerFRDpeak	0.013	0.036	1.543	0.041	17.5	13.0	17	9.0	14.125	17
PowerPink	0.009	0.041	1.578	0.049	11.0	18.5	19	16.0	16.125	18
RickerEi	0.017	0.040	1.601	0.050	21.5	15.0	20	17.0	18.375	19
PowerSockeye	0.013	0.041	1.563	0.055	17.5	18.5	18	20.5	18.625	20
PowerChum	0.016	0.041	1.872	0.051	20.0	18.5	21	18.0	19.375	21
PowerBasic	0.017	0.044	2.019	0.055	21.5	21.0	23	20.5	21.500	22
PowerBasicCycAge	0.018	0.045	2.064	0.057	23.0	22.0	24	22.5	22.875	23
RickerSockeye	0.023	0.051	1.999	0.080	25.0	24.5	22	26.0	24.375	24
RickerChum	0.026	0.051	2.341	0.067	26.0	24.5	25	24.5	25.000	25
RAC	0.021	0.054	2.631	0.067	24.0	26.0	26	24.5	25.125	26
RS8yr	0.057	0.093	5.107	0.107	27.0	27.0	27	27.0	27.000	27
RS4yr	0.061	0.098	5.452	0.123	28.0	29.0	28	28.0	28.250	28
RSC	0.068	0.096	6.464	0.133	29.0	28.0	30	29.0	29.000	29
MRS	0.070	0.100	5.844	0.139	30.0	30.0	29	30.0	29.750	30
RS1	0.080	0.121	8.026	0.272	31.0	31.0	32	32.0	31.500	31
RS2	0.090	0.129	7.175	0.176	32.0	32.0	31	31.0	31.500	32

(Age5)-Other

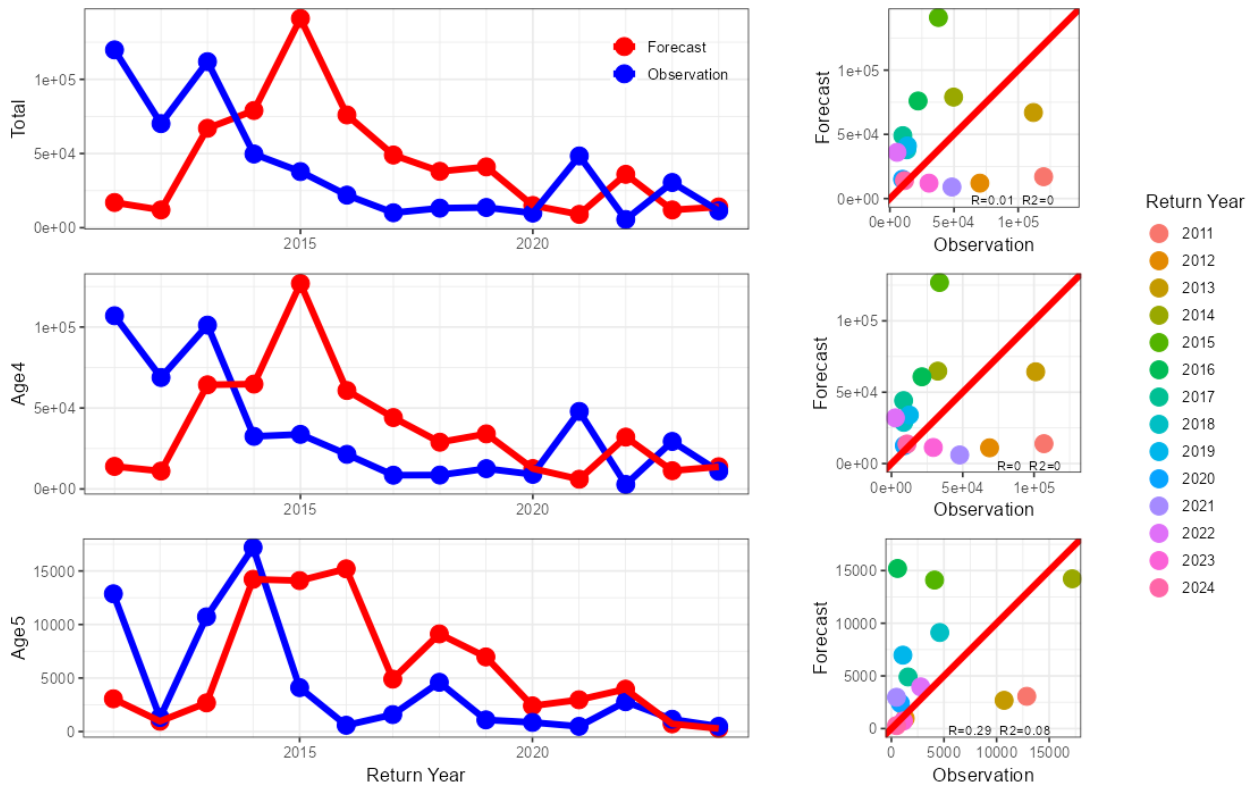
model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerSalmon_Total	0.000	0.002	1.072	0.004	3.5	2.5	2	8.0	4.000	1
RickerPink	0.000	0.002	1.287	0.004	3.5	2.5	5	8.0	4.750	2
LLY	- 0.001	0.001	0.053	0.003	16.0	1.0	1	1.5	4.875	3
LarkinBasicCycAge	0.000	0.003	1.907	0.003	3.5	11.5	6	1.5	5.625	4
RAC	0.000	0.003	1.917	0.004	3.5	11.5	7	8.0	7.500	5
sibling5	- 0.001	0.003	1.098	0.004	16.0	11.5	4	8.0	9.875	6
TSA	0.001	0.003	2.143	0.004	16.0	11.5	8	8.0	10.875	7
LarkinBasic	0.001	0.003	2.494	0.004	16.0	11.5	10	8.0	11.375	8
PowerPink	0.001	0.003	2.566	0.004	16.0	11.5	11	8.0	11.625	9
PowerSalmon_Total	0.001	0.003	2.660	0.004	16.0	11.5	12	8.0	11.875	10
RickerEiW	0.001	0.003	2.860	0.004	16.0	11.5	14	8.0	12.375	11
RickerFRDMean	0.001	0.003	2.951	0.004	16.0	11.5	15	8.0	12.625	12
RickerPDO	0.001	0.003	3.285	0.004	16.0	11.5	20	8.0	13.875	13
R1C	0.000	0.004	1.075	0.007	3.5	23.5	3	28.5	14.625	14
RickerPi	0.001	0.003	2.675	0.005	16.0	11.5	13	19.0	14.875	15
PowerSockeye	0.001	0.003	3.132	0.005	16.0	11.5	17	19.0	15.875	16

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerEi	0.001	0.003	3.249	0.005	16.0	11.5	19	19.0	16.375	17
R2C	0.001	0.004	2.381	0.005	16.0	23.5	9	19.0	16.875	18
RickerPiW	0.001	0.003	3.294	0.005	16.0	11.5	21	19.0	16.875	19
PowerChum	0.001	0.003	3.369	0.005	16.0	11.5	22	19.0	17.125	20
RickerBasic	0.000	0.004	3.093	0.006	3.5	23.5	16	25.5	17.125	21
PowerBasic	0.001	0.003	3.483	0.005	16.0	11.5	24	19.0	17.625	22
PowerBasicCycAge	0.001	0.004	3.139	0.005	16.0	23.5	18	19.0	19.125	23
RickerFRDpeak	0.001	0.004	3.463	0.005	16.0	23.5	23	19.0	20.375	24
RickerCyc	0.002	0.004	3.743	0.005	29.0	23.5	25	19.0	24.125	25
RickerChum	0.002	0.004	3.839	0.005	29.0	23.5	26	19.0	24.375	26
RS8yr	0.001	0.005	4.323	0.007	16.0	28.5	30	28.5	25.750	27
RickerSockeye	0.002	0.004	3.916	0.006	29.0	23.5	28	25.5	26.500	28
RSC	0.002	0.005	3.897	0.007	29.0	28.5	27	28.5	28.250	29
MRS	0.002	0.006	3.981	0.007	29.0	31.0	29	28.5	29.375	30
RS2	0.002	0.006	5.708	0.008	29.0	31.0	31	31.0	30.500	31
RS4yr	0.002	0.006	6.129	0.009	29.0	31.0	32	32.0	31.000	32
RS1	0.004	0.008	7.544	0.011	33.0	33.0	33	33.0	33.000	33

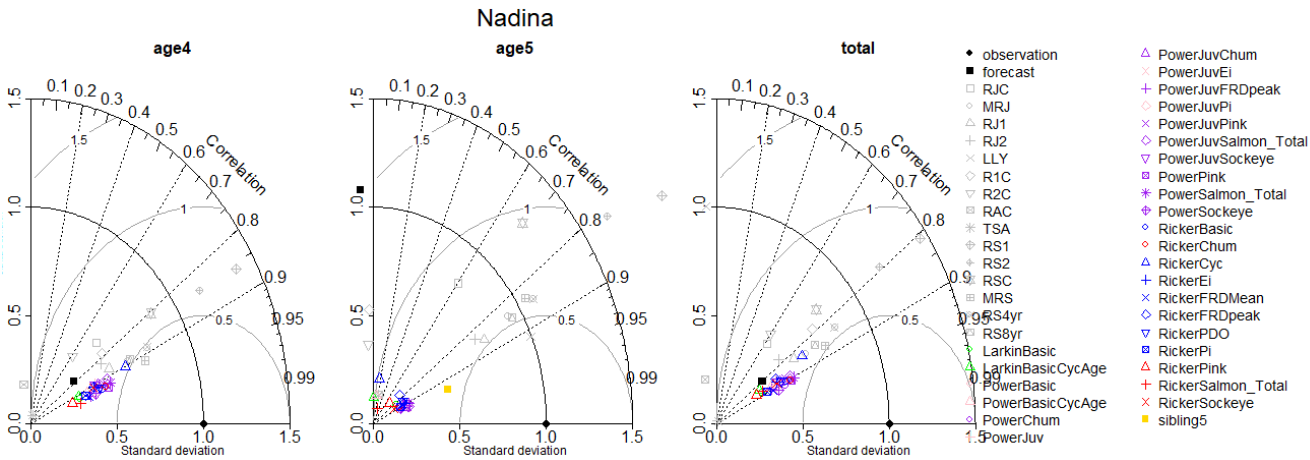
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FC-TS



Nadina Retrospective: Taylor



Ranking (Total)-Alllys

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
R1C	-0.046	0.073	-0.010	0.103	14.5	8.0	1	8.0	7.875	1
RJ1	-0.042	0.071	0.575	0.103	12.5	5.5	17	8.0	10.750	2
RS8yr	-0.021	0.061	0.712	0.086	6.0	1.0	33	3.5	10.875	3
RS4yr	-0.016	0.067	0.849	0.083	5.0	3.5	36	2.0	11.625	4
RickerChum	-0.048	0.073	0.531	0.103	18.5	8.0	14	8.0	12.125	5
MRS	0.009	0.066	1.608	0.077	3.0	2.0	43	1.0	12.250	6
MRJ	0.003	0.067	1.618	0.086	2.0	3.5	44	3.5	13.250	7
RickerBasic	-0.042	0.074	0.675	0.102	12.5	10.5	27	6.0	14.000	8
PowerJuvSalmon_Tot tal	-0.055	0.073	0.396	0.108	33.0	8.0	7	14.0	15.500	9
RickerCyc	-0.025	0.076	1.008	0.093	8.0	14.0	37	5.0	16.000	10
RickerPiW	-0.048	0.077	0.599	0.106	18.5	17.0	20	10.0	16.375	11
RJ2	-0.029	0.071	0.795	0.109	9.0	5.5	35	17.0	16.625	12
PowerChum	-0.052	0.076	0.471	0.108	27.0	14.0	13	14.0	17.000	13
PowerSalmon_Total	-0.060	0.074	0.239	0.107	41.5	10.5	5	11.5	17.125	14
PowerPink	-0.060	0.076	0.282	0.108	41.5	14.0	6	14.0	18.875	15
PowerJuvPink	-0.056	0.075	0.410	0.111	36.5	12.0	10	20.5	19.750	16
PowerJuvChum	-0.048	0.077	0.641	0.111	18.5	17.0	25	20.5	20.250	17
PowerJuvEi	-0.048	0.079	0.611	0.112	18.5	20.5	21.5	22.0	20.625	18
PowerJuvPiW	-0.050	0.077	0.663	0.109	22.5	17.0	26	17.0	20.625	19
RickerEi	-0.048	0.080	0.577	0.113	18.5	22.5	18	23.5	20.625	20
RickerPDO	-0.046	0.079	0.705	0.109	14.5	20.5	32	17.0	21.000	21
PowerJuvSockeye	-0.052	0.078	0.558	0.114	27.0	19.0	16	25.5	21.875	22
PowerJuvPi	-0.050	0.080	0.682	0.113	22.5	22.5	28.5	23.5	24.250	23
PowerSockeye	-0.060	0.081	0.401	0.116	41.5	25.5	8	28.0	25.750	24
RSC	0.038	0.086	2.535	0.107	11.0	35.0	46	11.5	25.875	25
PowerJuv	-0.048	0.081	0.721	0.114	18.5	25.5	34	25.5	25.875	26
RS2	0.024	0.097	1.374	0.110	7.0	41.0	41	19.0	27.000	27
PowerJuvEiW	-0.056	0.081	0.403	0.125	36.5	25.5	9	37.0	27.000	28
R2C	-0.052	0.095	0.226	0.130	27.0	39.5	4	39.0	27.375	29
PowerBasic	-0.053	0.083	0.622	0.116	29.0	30.5	23	28.0	27.625	30
RickerSockeye	-0.059	0.082	0.444	0.118	39.0	28.5	11	32.0	27.625	31
RickerFRDMean	-0.051	0.082	0.693	0.116	24.5	28.5	30	28.0	27.750	32
PowerJuvFRDpeak	-0.054	0.081	0.630	0.118	30.0	25.5	24	32.0	27.875	33
RickerFRDpeak	-0.055	0.083	0.587	0.117	33.0	30.5	19	30.0	28.125	34
RickerEiW	-0.055	0.084	0.467	0.122	33.0	32.5	12	35.5	28.250	35
RJC	-0.002	0.093	2.033	0.118	1.0	38.0	45	32.0	29.000	36
RickerPi	-0.057	0.084	0.550	0.122	38.0	32.5	15	35.5	30.250	37
RickerPink	-0.085	0.095	0.028	0.145	45.0	39.5	3	43.0	32.625	38
RickerSalmon_Total	-0.088	0.098	-0.027	0.143	46.0	42.5	2	42.0	33.125	39
PowerBasicCycAge	-0.055	0.086	0.697	0.120	33.0	35.0	31	34.0	33.250	40

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
LLY	-0.011	0.144	1.028	0.216	4.0	46.0	38	46.0	33.500	41
LarkinBasic	-0.060	0.086	0.611	0.128	41.5	35.0	21.5	38.0	34.000	42
RS1	0.037	0.108	1.483	0.134	10.0	44.0	42	41.0	34.250	43
LarkinBasicCycAge	-0.061	0.090	0.682	0.131	44.0	37.0	28.5	40.0	37.375	44
RAC	-0.051	0.113	1.130	0.169	24.5	45.0	40	45.0	38.625	45
TSA	-0.055	0.098	1.082	0.156	33.0	42.5	39	44.0	39.625	46

(Age4)-Alllys

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerCyc	-0.017	0.058	1.970	0.085	7.0	5.0	7	5.0	6.000	1
RS8yr	-0.024	0.051	2.237	0.084	10.0	2.0	16	4.0	8.000	2
MRS	-0.001	0.050	3.647	0.069	1.0	1.0	41	1.0	11.000	3
RS2	0.008	0.070	1.803	0.096	3.0	30.0	5	7.0	11.250	4
RJ2	-0.030	0.061	2.218	0.106	11.0	7.5	14	18.0	12.625	5
MRJ	-0.006	0.056	3.943	0.082	2.0	4.0	42	3.0	12.750	6
RS4yr	-0.019	0.054	2.979	0.077	8.0	3.0	39	2.0	13.000	7
RSC	0.020	0.060	2.661	0.094	9.0	6.0	32.5	6.0	13.375	8
PowerJuvSalmon_Tot al	-0.042	0.061	2.044	0.103	25.0	7.5	8	13.0	13.375	9
PowerSalmon_Total	-0.046	0.062	1.655	0.101	37.5	9.5	4	9.5	15.125	10
RickerChum	-0.038	0.064	2.428	0.102	15.0	13.5	22	11.5	15.500	11
PowerJuvPink	-0.044	0.062	2.045	0.105	32.0	9.5	9	15.5	16.500	12
PowerPink	-0.047	0.063	1.562	0.102	40.0	11.5	3	11.5	16.500	13
RickerBasic	-0.033	0.063	2.773	0.100	12.0	11.5	38	8.0	17.375	14
RJ1	-0.040	0.064	2.527	0.101	21.5	13.5	27	9.5	17.875	15
RickerPiW	-0.040	0.067	2.375	0.105	21.5	21.0	20	15.5	19.500	16
RickerPDO	-0.037	0.067	2.594	0.105	13.0	21.0	29	15.5	19.625	17
PowerChum	-0.042	0.067	2.320	0.107	25.0	21.0	18	19.0	20.750	18
PowerJuvPiW	-0.040	0.065	2.661	0.105	21.5	15.5	32.5	15.5	21.250	19
PowerJuvChum	-0.038	0.065	2.704	0.108	15.0	15.5	37	20.0	21.875	20
PowerJuvPi	-0.039	0.067	2.630	0.109	18.0	21.0	31	21.0	22.750	21
PowerJuvSockeye	-0.042	0.066	2.492	0.112	25.0	17.0	25	26.5	23.375	22
RickerFRDpeak	-0.045	0.067	2.195	0.113	35.5	21.0	12	28.5	24.250	23
PowerJuvEi	-0.040	0.067	2.669	0.110	21.5	21.0	35	22.5	25.000	24
R1C	-0.039	0.071	2.509	0.111	18.0	32.0	26	24.5	25.125	25
RS1	0.016	0.076	2.472	0.115	5.5	39.0	23	34.0	25.375	26
PowerSockeye	-0.047	0.068	2.076	0.112	40.0	25.5	10	26.5	25.500	27
PowerJuv	-0.038	0.068	2.984	0.110	15.0	25.5	40	22.5	25.750	28
RickerFRDMean	-0.043	0.069	2.374	0.114	28.0	27.5	19	31.5	26.500	29
RickerEi	-0.039	0.070	2.668	0.111	18.0	30.0	34	24.5	26.625	30

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
PowerJuvFRDpeak	-0.044	0.067	2.538	0.114	32.0	21.0	28	31.5	28.125	31
RJC	-0.009	0.077	3.988	0.113	4.0	40.0	43	28.5	28.875	32
RickerSockeye	-0.048	0.070	2.250	0.114	42.0	30.0	17	31.5	30.125	33
RickerPi	-0.046	0.072	2.211	0.119	37.5	34.0	13	36.5	30.250	34
PowerJuvEiW	-0.044	0.069	2.484	0.121	32.0	27.5	24	38.0	30.375	35
R2C	-0.044	0.084	1.907	0.134	32.0	43.0	6	42.0	30.750	36
PowerBasic	-0.043	0.072	2.626	0.114	28.0	34.0	30	31.5	30.875	37
RickerEiW	-0.044	0.072	2.396	0.119	32.0	34.0	21	36.5	30.875	38
RickerSalmon_Total	-0.070	0.079	0.765	0.133	45.5	41.0	1	41.0	32.125	39
LarkinBasic	-0.049	0.073	2.187	0.125	43.0	36.0	11	39.0	32.250	40
RickerPink	-0.070	0.080	1.236	0.140	45.5	42.0	2	43.0	33.125	41
LarkinBasicCycAge	-0.050	0.074	2.234	0.126	44.0	37.5	15	40.0	34.125	42
LLY	-0.016	0.143	13.612	0.213	5.5	46.0	46	46.0	35.875	43
PowerBasicCycAge	-0.045	0.074	2.677	0.118	35.5	37.5	36	35.0	36.000	44
RAC	-0.043	0.108	4.322	0.169	28.0	45.0	45	45.0	40.750	45
TSA	-0.047	0.098	4.173	0.160	40.0	44.0	44	44.0	43.000	46

(Age5)-Alllys

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
sibling5	-0.014	0.016	0.019	0.031	12.0	2.0	2	8.0	6.000	1
RJ1	-0.003	0.017	1.750	0.025	3.5	3.0	33	2.5	10.500	2
LLY	0.005	0.015	2.543	0.020	5.0	1.0	37	1.0	11.000	3
RS8yr	0.002	0.018	2.183	0.025	2.0	4.5	35	2.5	11.000	4
RJ2	0.001	0.020	2.505	0.027	1.0	6.5	36	4.5	12.000	5
RS4yr	0.003	0.018	2.128	0.028	3.5	4.5	34	6.0	12.000	6
PowerJuvSockeye	-0.020	0.023	0.096	0.044	18.5	11.5	11	12.0	13.250	7
RickerBasic	-0.020	0.023	0.097	0.044	18.5	11.5	12.5	12.0	13.625	8
PowerJuvSalmon_Total	-0.021	0.023	-0.036	0.044	28.5	11.5	5	12.0	14.250	9
PowerJuvEi	-0.020	0.023	0.118	0.044	18.5	11.5	16	12.0	14.500	10
MRJ	0.009	0.020	3.536	0.027	7.0	6.5	41	4.5	14.750	11
MRS	0.011	0.021	3.458	0.030	10.0	8.0	40	7.0	16.250	12
PowerJuv	-0.020	0.023	0.219	0.044	18.5	11.5	27	12.0	17.250	13
PowerJuvFRDpeak	-0.021	0.023	0.037	0.046	28.5	11.5	6	27.0	18.250	14
PowerJuvPink	-0.021	0.024	-0.035	0.045	28.5	23.0	4	18.5	18.500	15
PowerBasic	-0.021	0.024	0.105	0.045	28.5	23.0	15	18.5	21.250	16
RickerPDO	-0.020	0.024	0.185	0.045	18.5	23.0	26	18.5	21.500	17
RickerFRDpeak	-0.021	0.024	0.054	0.046	28.5	23.0	8	27.0	21.625	18
RickerPi	-0.021	0.024	0.065	0.046	28.5	23.0	10	27.0	22.125	19
PowerChum	-0.022	0.024	0.017	0.046	40.0	23.0	1	27.0	22.750	20

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
PowerJuvPiW	-0.021	0.024	0.140	0.045	28.5	23.0	22	18.5	23.000	21
RickerPiW	-0.021	0.024	0.100	0.046	28.5	23.0	14	27.0	23.125	22
PowerSockeye	-0.022	0.024	-0.022	0.046	40.0	23.0	3	27.0	23.250	23
RickerEi	-0.021	0.024	0.142	0.045	28.5	23.0	23	18.5	23.250	24
RickerChum	-0.021	0.024	0.063	0.047	28.5	23.0	9	33.0	23.375	25
PowerJuvChum	-0.021	0.024	0.148	0.045	28.5	23.0	24	18.5	23.500	26
PowerJuvPi	-0.021	0.024	0.120	0.046	28.5	23.0	17	27.0	23.875	27
RickerFRDMean	-0.021	0.024	0.124	0.046	28.5	23.0	18	27.0	24.125	28
RJC	0.008	0.029	4.563	0.040	6.0	38.0	44	9.0	24.250	29
PowerJuvEiW	-0.021	0.024	0.134	0.046	28.5	23.0	21	27.0	24.875	30
PowerPink	-0.022	0.024	-0.131	0.045	40.0	23.0	19.5	18.5	25.250	31
PowerSalmon_Total	-0.022	0.024	-0.131	0.045	40.0	23.0	19.5	18.5	25.250	32
RickerSockeye	-0.022	0.025	0.044	0.048	40.0	33.0	7	37.0	29.250	33
LarkinBasic	-0.022	0.025	0.097	0.048	40.0	33.0	12.5	37.0	30.625	34
TSA	-0.010	0.031	3.784	0.047	8.5	43.0	42	33.0	31.625	35
RAC	-0.010	0.031	4.996	0.047	8.5	43.0	45	33.0	32.375	36
R1C	-0.014	0.030	4.163	0.048	12.0	40.5	43	37.0	33.125	37
RickerCyc	-0.020	0.030	0.966	0.052	18.5	40.5	32	43.0	33.500	38
RickerEiW	-0.022	0.025	0.160	0.048	40.0	33.0	25	37.0	33.750	39
RS2	0.018	0.032	3.375	0.051	14.0	45.5	39	41.5	35.000	40
RSC	0.019	0.031	5.225	0.048	15.0	43.0	46	37.0	35.250	41
R2C	-0.014	0.032	5.318	0.049	12.0	45.5	47	40.0	36.125	42
RickerPink	-0.025	0.027	-0.309	0.051	46.0	35.0	28	41.5	37.625	43
PowerBasicCycAge	-0.022	0.029	0.677	0.053	40.0	38.0	31	44.0	38.250	44
RickerSalmon_Total	-0.027	0.028	-0.399	0.054	47.0	36.0	29	45.5	39.375	45
LarkinBasicCycAge	-0.023	0.029	0.538	0.054	45.0	38.0	30	45.5	39.625	46
RS1	0.022	0.036	3.176	0.063	40.0	47.0	38	47.0	43.000	47

(Total)-Cycle

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
LLY	0.005	0.036	0.304	0.039	10.0	1.0	16	1.0	7.000	1
PowerPink	-0.016	0.045	0.128	0.057	29.5	3.0	2	3.0	9.375	2
PowerSalmon_Total	-0.020	0.046	0.083	0.059	35.0	4.5	1	6.0	11.625	3
RickerChum	-0.007	0.051	0.336	0.058	15.5	10.5	17	4.5	11.875	4
RS8yr	0.006	0.044	0.477	0.054	12.0	2.0	32	2.0	12.000	5
PowerJuvPink	-0.017	0.046	0.153	0.061	31.0	4.5	5	9.5	12.500	6
PowerChum	-0.010	0.052	0.290	0.060	23.0	13.0	13	7.5	14.125	7
LarkinBasicCycAge	-0.006	0.053	0.364	0.061	12.0	16.0	20	9.5	14.375	8
RickerPiW	-0.003	0.053	0.404	0.060	6.0	16.0	28	7.5	14.375	9
TSA	-0.012	0.047	0.251	0.064	25.0	6.5	11	15.5	14.500	10

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
PowerJuvSalmon_Total	-0.019	0.048	0.138	0.064	34.0	8.0	3	15.5	15.125	11
RickerPDO	0.004	0.053	0.518	0.058	8.5	16.0	34	4.5	15.750	12
RickerPink	-0.036	0.047	- 0.190	0.062	40.0	6.5	7	11.0	16.125	13
LarkinBasic	-0.008	0.053	0.342	0.063	19.0	16.0	19	12.0	16.500	14
RickerFRDMean	-0.004	0.053	0.407	0.064	8.5	16.0	29	15.5	17.250	15
RickerFRDpeak	-0.012	0.051	0.256	0.067	25.0	10.5	12	24.0	17.875	16
RickerPi	-0.006	0.056	0.390	0.064	12.0	21.5	25	15.5	18.500	17
PowerJuvFRDpeak	-0.016	0.051	0.236	0.070	29.5	10.5	9	28.5	19.375	18
PowerJuvChum	-0.009	0.054	0.340	0.066	21.5	19.5	18	20.5	19.875	19
RickerEiW	0.002	0.057	0.519	0.064	3.5	25.5	35	15.5	19.875	20
PowerJuvPiW	-0.012	0.054	0.295	0.067	25.0	19.5	15	24.0	20.875	21
PowerJuvEiW	-0.007	0.056	0.387	0.067	15.5	21.5	23	24.0	21.000	22
RickerBasic	0.000	0.058	0.491	0.065	1.5	30.5	33	19.0	21.000	23
RickerEi	0.002	0.058	0.521	0.064	3.5	30.5	36	15.5	21.375	24
PowerBasic	-0.008	0.057	0.369	0.066	19.0	25.5	21.5	20.5	21.625	25
RickerSalmon_Total	-0.038	0.051	- 0.140	0.072	41.0	10.5	4	34.5	22.500	26
PowerJuvEi	-0.007	0.057	0.395	0.068	15.5	25.5	26.5	27.0	23.625	27
PowerBasicCycAge	-0.009	0.058	0.369	0.067	21.5	30.5	21.5	24.0	24.375	28
RickerSockeye	-0.018	0.057	0.223	0.071	32.5	25.5	8	31.5	24.375	29
PowerSockeye	-0.021	0.057	0.171	0.071	36.0	25.5	6	31.5	24.750	30
PowerJuvPi	-0.008	0.058	0.388	0.070	19.0	30.5	24	28.5	25.500	31
RJ2	0.003	0.062	0.447	0.071	6.0	34.0	31	31.5	25.625	32
RS4yr	0.003	0.067	0.536	0.067	6.0	36.0	37	24.0	25.750	33
PowerJuvSockeye	-0.015	0.057	0.291	0.073	28.0	25.5	14	36.0	25.875	34
RJ1	-0.018	0.065	0.244	0.071	32.5	35.0	10	31.5	27.250	35
R1C	0.000	0.079	0.395	0.101	1.5	41.0	26.5	41.0	27.500	36
PowerJuv	-0.007	0.060	0.428	0.072	15.5	33.0	30	34.5	28.250	37
RAC	0.034	0.077	1.037	0.078	39.0	40.0	39	37.5	38.875	38
MRJ	0.032	0.074	1.064	0.080	38.0	39.0	40	40.0	39.250	39
MRS	0.039	0.068	1.140	0.078	42.0	37.0	41	37.5	39.375	40
RS1	0.014	0.115	1.149	0.126	27.0	45.0	42	45.0	39.750	41
R2C	0.024	0.103	0.900	0.116	37.0	44.0	38	44.0	40.750	42
RickerCyc	0.041	0.071	1.170	0.079	43.0	38.0	43	39.0	40.750	43
RS2	0.042	0.100	1.335	0.103	44.0	42.5	44	42.0	43.125	44
RJC	0.074	0.100	1.810	0.110	45.0	42.5	45	43.0	43.875	45
RSC	0.122	0.122	2.576	0.147	46.0	46.0	46	46.0	46.000	46

(Age4)-Cycle

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
LLY	-0.007	0.035	0.127	0.037	8.0	1.0	8	1.0	4.500	1
PowerPink	-0.019	0.044	0.048	0.054	30.5	6.0	2	3.0	10.375	2
PowerJuvPink	-0.018	0.041	0.084	0.057	29.0	2.5	6	6.0	10.875	3
RS8yr	0.003	0.041	0.434	0.051	4.0	2.5	36	2.0	11.125	4
PowerSalmon_Total	-0.022	0.044	0.020	0.056	35.5	6.0	1	4.5	11.750	5
RickerPDO	-0.002	0.049	0.408	0.056	3.0	12.5	33	4.5	13.250	6
PowerJuvSalmon_Total	-0.021	0.044	0.073	0.061	34.0	6.0	4	12.0	14.000	7
TSA	-0.022	0.044	0.069	0.062	35.5	6.0	3	14.0	14.625	8
RickerChum	-0.012	0.050	0.243	0.059	18.0	16.5	17	8.0	14.875	9
LarkinBasicCycAge	-0.009	0.050	0.303	0.059	11.5	16.5	25	8.0	15.250	10
LarkinBasic	-0.012	0.049	0.260	0.061	18.0	12.5	19	12.0	15.375	11
RickerPiW	-0.008	0.050	0.324	0.059	10.0	16.5	30	8.0	16.125	12
PowerChum	-0.016	0.050	0.192	0.061	25.5	16.5	14.5	12.0	17.125	13
RickerFRDMean	-0.009	0.050	0.318	0.063	11.5	16.5	27.5	16.5	18.000	14
RickerFRDpeak	-0.017	0.047	0.152	0.067	27.5	9.5	9.5	28.0	18.625	15
RickerPink	-0.038	0.044	-0.257	0.060	42.0	6.0	18	10.0	19.000	16
PowerJuvPiW	-0.017	0.050	0.192	0.064	27.5	16.5	14.5	20.0	19.625	17
RickerPi	-0.010	0.053	0.316	0.063	13.0	23.5	26	16.5	19.750	18
PowerJuvEiW	-0.012	0.052	0.294	0.065	18.0	21.0	23	22.5	21.125	19
PowerJuvFRDpeak	-0.020	0.047	0.152	0.069	32.5	9.5	9.5	33.0	21.125	20
RickerEiW	-0.004	0.055	0.428	0.063	5.5	29.5	35	16.5	21.625	21
PowerJuvChum	-0.013	0.051	0.267	0.066	22.5	20.0	20	25.5	22.000	22
RickerBasic	-0.007	0.055	0.383	0.064	8.0	29.5	31	20.0	22.125	23
RickerEi	-0.004	0.056	0.427	0.063	5.5	32.5	34	16.5	22.125	24
PowerJuvEi	-0.012	0.053	0.296	0.066	18.0	23.5	24	25.5	22.750	25
PowerBasicCycAge	-0.012	0.055	0.293	0.065	18.0	29.5	22	22.5	23.000	26
RS4yr	-0.001	0.064	0.478	0.064	1.5	37.5	37	20.0	24.000	27
RJ2	0.001	0.058	0.402	0.068	1.5	34.0	32	30.0	24.375	28
PowerJuvPi	-0.011	0.054	0.318	0.068	14.0	26.5	27.5	30.0	24.500	29
PowerBasic	-0.014	0.055	0.276	0.066	24.0	29.5	21	25.5	25.000	30
RickerSockeye	-0.024	0.053	0.113	0.070	37.0	23.5	7	35.0	25.625	31
RickerSalmon_Total	-0.039	0.048	-0.221	0.069	43.0	11.0	16	33.0	25.750	32
PowerJuvSockeye	-0.019	0.053	0.190	0.071	30.5	23.5	13	36.5	25.875	33
PowerSockeye	-0.025	0.054	0.082	0.071	38.0	26.5	5	36.5	26.500	34
RJ1	-0.020	0.061	0.187	0.068	32.5	35.0	12	30.0	27.375	35
PowerJuv	-0.012	0.056	0.321	0.069	18.0	32.5	29	33.0	28.125	36
R1C	-0.013	0.066	0.170	0.088	22.5	39.0	11	41.0	28.375	37
RAC	0.016	0.062	0.738	0.066	25.5	36.0	39	25.5	31.500	38
R2C	0.007	0.083	0.598	0.097	8.0	42.0	38	42.0	32.500	39

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RS1	0.012	0.111	1.121	0.124	18.0	45.0	42	45.0	37.500	40
MRS	0.035	0.064	1.092	0.073	40.0	37.5	41	38.0	39.125	41
MRJ	0.028	0.069	1.006	0.075	39.0	41.0	40	39.5	39.875	42
RickerCyc	0.037	0.068	1.130	0.075	41.0	40.0	43	39.5	40.875	43
RS2	0.040	0.098	1.348	0.101	44.0	44.0	44	43.0	43.750	44
RJC	0.070	0.095	1.781	0.105	45.0	43.0	45	44.0	44.250	45
RSC	0.121	0.121	2.633	0.145	46.0	46.0	46	46.0	46.000	46

(Age5)-Cycle

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerPDO	-0.001	0.002	0.130	0.003	15.5	2.0	12	2.0	7.875	1
sibling5	-0.002	0.002	0.009	0.003	32.5	2.0	2	2.0	9.625	2
LarkinBasic	-0.001	0.003	0.022	0.004	15.5	17.5	3	12.5	12.125	3
RickerCyc	-0.001	0.003	-0.037	0.004	15.5	17.5	4	12.5	12.375	4
RickerPi	-0.001	0.003	0.046	0.004	15.5	17.5	5	12.5	12.625	5
RS2	0.001	0.002	0.552	0.003	15.5	2.0	33	2.0	13.125	6
PowerJuvFRDpeak	-0.001	0.003	0.060	0.004	15.5	17.5	7.5	12.5	13.250	7
RickerPiW	-0.001	0.003	0.060	0.004	15.5	17.5	7.5	12.5	13.250	8
RickerFRDMean	-0.001	0.003	0.116	0.004	15.5	17.5	10	12.5	13.875	9
PowerSockeye	-0.001	0.003	0.119	0.004	15.5	17.5	11	12.5	14.125	10
RickerFRDpeak	-0.001	0.003	0.139	0.004	15.5	17.5	13	12.5	14.625	11
RickerSockeye	-0.001	0.003	0.161	0.004	15.5	17.5	16	12.5	15.375	12
RickerEi	0.000	0.003	0.345	0.004	2.0	17.5	30	12.5	15.500	13
PowerJuvSockeye	-0.001	0.003	0.170	0.004	15.5	17.5	17	12.5	15.625	14
PowerChum	-0.001	0.003	0.182	0.004	15.5	17.5	18	12.5	15.875	15
PowerBasicCycAge	0.000	0.003	0.459	0.004	2.0	17.5	32	12.5	16.000	16
PowerBasic	-0.001	0.003	0.186	0.004	15.5	17.5	20	12.5	16.375	17
RickerChum	-0.001	0.003	0.206	0.004	15.5	17.5	22	12.5	16.875	18
RickerBasic	-0.001	0.003	0.267	0.004	15.5	17.5	27	12.5	18.125	19
RickerEiW	-0.001	0.003	0.283	0.004	15.5	17.5	28	12.5	18.375	20
PowerJuvPi	-0.001	0.003	0.140	0.005	15.5	17.5	14	28.5	18.875	21
RSC	0.001	0.003	0.816	0.004	15.5	17.5	34	12.5	19.875	22
PowerJuvChum	-0.001	0.003	0.184	0.005	15.5	17.5	19	28.5	20.125	23
LarkinBasicCycAge	-0.001	0.003	0.205	0.005	15.5	17.5	21	28.5	20.625	24
PowerJuvPiW	-0.001	0.003	0.213	0.005	15.5	17.5	23	28.5	21.125	25
PowerJuvSalmon_Total	-0.002	0.003	-0.050	0.005	32.5	17.5	6	28.5	21.125	26
PowerJuvEi	-0.001	0.003	0.224	0.005	15.5	17.5	24	28.5	21.375	27
PowerJuvEiW	-0.001	0.003	0.259	0.005	15.5	17.5	26	28.5	21.875	28
PowerSalmon_Total	-0.002	0.003	-0.088	0.005	32.5	17.5	9	28.5	21.875	29

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
PowerPink	-0.002	0.003	-0.147	0.005	32.5	17.5	15	28.5	23.375	30
PowerJuv	0.000	0.004	0.419	0.005	2.0	36.0	31	28.5	24.375	31
PowerJuvPink	-0.002	0.004	0.003	0.005	32.5	36.0	1	28.5	24.500	32
RS8yr	0.003	0.003	1.512	0.005	38.0	17.5	37	28.5	30.250	33
RickerPink	-0.002	0.004	-0.255	0.005	32.5	36.0	25	28.5	30.500	34
RickerSalmon_Total	-0.002	0.004	-0.339	0.006	32.5	36.0	29	37.0	33.625	35
RJ2	0.002	0.004	1.654	0.005	32.5	36.0	39	28.5	34.000	36
RS1	0.002	0.004	1.002	0.006	32.5	36.0	35	37.0	35.125	37
RJ1	0.002	0.004	1.424	0.006	32.5	36.0	36	37.0	35.375	38
RS4yr	0.004	0.004	1.621	0.007	40.5	36.0	38	40.0	38.625	39
MRS	0.004	0.004	1.979	0.007	40.5	36.0	40	40.0	39.125	40
MRJ	0.004	0.005	2.187	0.007	40.5	41.5	41	40.0	40.750	41
RJC	0.004	0.005	2.213	0.008	40.5	41.5	42	42.0	41.500	42
TSA	0.010	0.010	7.567	0.011	43.0	43.0	44	43.0	43.250	43
LLY	0.012	0.012	5.960	0.013	44.0	44.0	43	44.0	43.750	44
R1C	0.013	0.015	12.427	0.021	45.0	45.0	45	46.0	45.250	45
RAC	0.018	0.018	13.246	0.020	47.0	46.0	46	45.0	46.000	46
R2C	0.017	0.020	15.976	0.024	46.0	47.0	47	47.0	46.750	47

(Total)-Other

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RJ1	-0.005	0.041	0.877	0.052	3.0	2.0	16	2.5	5.875	1
RickerChum	-0.009	0.043	0.837	0.052	13.5	5.5	14	2.5	8.875	2
PowerChum	-0.012	0.043	0.769	0.053	21.0	5.5	12	4.5	10.750	3
RickerEi	-0.005	0.047	0.907	0.055	3.0	17.0	18	8.0	11.500	4
RickerEiW	-0.009	0.046	0.773	0.057	13.5	12.0	13	10.5	12.250	5
RickerPiW	-0.008	0.045	0.934	0.055	10.0	10.0	21	8.0	12.250	6
RS8yr	0.012	0.038	1.026	0.045	21.0	1.0	29	1.0	13.000	7
RJ2	0.008	0.042	1.107	0.053	10.0	3.0	35	4.5	13.125	8
RickerPDO	-0.003	0.046	1.074	0.054	1.0	12.0	34	6.0	13.250	9
RickerBasic	-0.005	0.047	0.992	0.055	3.0	17.0	26	8.0	13.500	10
PowerSalmon_Total	-0.023	0.043	0.467	0.057	37.0	5.5	5	10.5	14.500	11
RickerPi	-0.011	0.046	0.882	0.058	18.0	12.0	17	14.0	15.250	12
PowerPink	-0.022	0.043	0.525	0.058	36.0	5.5	6	14.0	15.375	13
PowerJuvSalmon_Total	-0.020	0.044	0.648	0.059	33.5	8.5	7	17.5	16.625	14
PowerJuvEiW	-0.013	0.047	0.660	0.060	24.5	17.0	8	20.5	17.500	15
PowerJuvPink	-0.020	0.044	0.670	0.060	33.5	8.5	9	20.5	17.875	16
PowerJuvChum	-0.010	0.047	0.961	0.059	16.0	17.0	22	17.5	18.125	17
RickerFRDMean	-0.007	0.048	1.060	0.058	7.0	24.0	31	14.0	19.000	18

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
PowerBasic	-0.009	0.048	0.973	0.058	13.5	24.0	25	14.0	19.125	19
PowerJuvEi	-0.009	0.049	0.926	0.060	13.5	29.0	19	20.5	20.500	20
PowerSockeye	-0.019	0.047	0.680	0.061	32.0	17.0	10	24.0	20.750	21
PowerJuvSockeye	-0.014	0.047	0.857	0.062	28.0	17.0	15	27.5	21.875	22
PowerJuvPiW	-0.012	0.048	1.001	0.060	21.0	24.0	27	20.5	23.125	23
R2C	-0.007	0.062	0.460	0.081	7.0	41.0	4	41.0	23.250	24
RickerSockeye	-0.018	0.048	0.741	0.062	31.0	24.0	11	27.5	23.375	25
RickerPink	-0.035	0.047	0.243	0.066	39.0	17.0	3	35.5	23.625	26
LarkinBasic	-0.013	0.048	0.963	0.061	24.5	24.0	23	24.0	23.875	27
RickerFRDpeak	-0.013	0.048	0.932	0.062	24.5	24.0	20	27.5	24.000	28
TSA	0.006	0.049	1.570	0.061	5.0	29.0	39	24.0	24.250	29
R1C	-0.016	0.050	0.128	0.072	30.0	31.0	1	39.0	25.250	30
PowerJuv	-0.008	0.051	1.070	0.063	10.0	33.0	32	30.5	26.375	31
PowerJuvPi	-0.011	0.049	1.023	0.063	18.0	29.0	28	30.5	26.375	32
PowerJuvFRDpeak	-0.014	0.048	0.964	0.064	28.0	24.0	24	32.5	27.125	33
RS4yr	0.013	0.053	1.200	0.058	24.5	35.0	36	14.0	27.375	34
PowerBasicCycAge	-0.011	0.051	1.073	0.062	18.0	33.0	33	27.5	27.875	35
RickerCyc	0.007	0.058	1.427	0.069	7.0	38.5	37	38.0	30.125	36
RickerSalmon_Total	-0.041	0.055	0.176	0.076	43.0	36.0	2	40.0	30.250	37
LarkinBasicCycAge	-0.014	0.051	1.059	0.064	28.0	33.0	30	32.5	30.875	38
RAC	0.021	0.058	1.674	0.066	35.0	38.5	40	35.5	37.250	39
MRJ	0.033	0.057	2.126	0.065	38.0	37.0	44	34.0	38.250	40
MRS	0.037	0.059	2.124	0.067	41.0	40.0	43	37.0	40.250	41
RS2	0.040	0.078	1.821	0.087	42.0	43.0	41	43.0	42.250	42
RS1	0.036	0.089	1.910	0.108	40.0	45.0	42	45.0	43.000	43
RJC	0.046	0.070	2.716	0.084	44.0	42.0	45	42.0	43.250	44
LLY	0.079	0.090	1.562	0.144	46.0	46.0	38	46.0	44.000	45
RSC	0.072	0.086	3.307	0.106	45.0	44.0	46	44.0	44.750	46

(Age4)-Other

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
PowerJuvPink	-0.002	0.026	2.801	0.040	6.0	3.5	9	5.0	5.875	1
PowerPink	-0.004	0.026	2.193	0.037	15.5	3.5	3	2.0	6.000	2
PowerSalmon_Total	-0.005	0.025	2.311	0.038	21.5	1.5	4	3.0	7.500	3
PowerJuvSalmon_Total	-0.003	0.027	2.796	0.042	10.0	6.0	8	11.0	8.750	4
LarkinBasic	0.003	0.029	3.019	0.042	10.0	11.5	13	11.0	11.375	5
RS8yr	0.010	0.025	2.973	0.035	34.0	1.5	12	1.0	12.125	6
RickerFRDpeak	0.001	0.027	3.026	0.046	3.0	6.0	14	26.0	12.250	7
RickerPink	-0.015	0.027	1.819	0.040	36.0	6.0	2	5.0	12.250	8

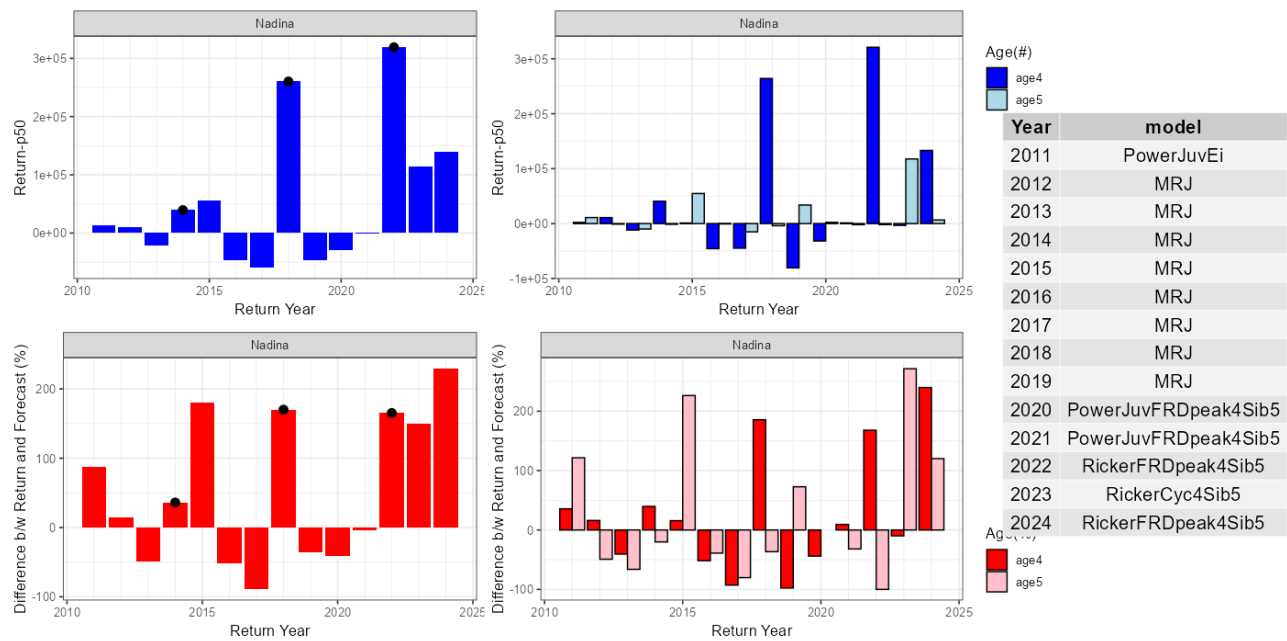
model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
LarkinBasicCycAge	0.004	0.029	3.088	0.041	15.5	11.5	16	8.0	12.750	9
PowerChum	0.003	0.029	3.179	0.042	10.0	11.5	19	11.0	12.875	10
RickerPi	0.004	0.030	3.047	0.043	15.5	18.5	15	14.5	15.875	11
RickerPiW	0.006	0.029	3.253	0.041	26.0	11.5	20.5	8.0	16.500	12
RickerFRDMean	0.005	0.029	3.253	0.043	21.5	11.5	20.5	14.5	17.000	13
PowerSockeye	-0.003	0.030	2.863	0.047	10.0	18.5	10	30.0	17.125	14
RickerChum	0.005	0.030	3.309	0.041	21.5	18.5	23	8.0	17.750	15
RickerSockeye	-0.002	0.030	3.095	0.047	6.0	18.5	17	30.0	17.875	16
PowerJuvFRDpeak	0.001	0.028	3.451	0.048	3.0	8.0	28	33.0	18.000	17
RJ1	0.000	0.031	3.367	0.045	1.0	25.5	25	21.0	18.125	18
PowerJuvEiW	0.003	0.030	3.371	0.045	10.0	18.5	26	21.0	18.875	19
RickerSalmon_Total	-0.017	0.029	1.209	0.046	37.0	11.5	1	26.0	18.875	20
PowerJuvPiW	0.002	0.030	3.605	0.045	6.0	18.5	33	21.0	19.625	21
RickerPDO	0.009	0.030	3.535	0.040	31.5	18.5	30	5.0	21.250	22
RJ2	0.009	0.031	2.927	0.044	31.5	25.5	11	17.5	21.375	23
RickerEiW	0.006	0.031	3.286	0.043	26.0	25.5	22	14.5	22.000	24
PowerJuvSockeye	0.001	0.031	3.378	0.048	3.0	25.5	27	33.0	22.125	25
RickerBasic	0.007	0.030	3.668	0.043	28.0	18.5	38	14.5	24.750	26
PowerJuvEi	0.004	0.031	3.612	0.046	15.5	25.5	34	26.0	25.250	27
PowerJuvChum	0.004	0.031	3.649	0.046	15.5	25.5	36	26.0	25.750	28
PowerJuvPi	0.004	0.032	3.561	0.047	15.5	30.5	31	30.0	26.750	29
PowerBasic	0.005	0.032	3.585	0.046	21.5	30.5	32	26.0	27.500	30
PowerBasicCycAge	0.005	0.032	3.658	0.045	21.5	30.5	37	21.0	27.500	31
RickerEi	0.008	0.032	3.631	0.044	29.0	30.5	35	17.5	28.000	32
RickerCyc	0.020	0.034	2.686	0.049	39.5	34.0	7	35.0	28.875	33
R2C	0.011	0.040	2.624	0.061	35.0	39.0	6	41.0	30.250	34
R1C	0.005	0.036	3.365	0.057	21.5	36.5	24	40.0	30.500	35
RS2	0.018	0.044	2.369	0.062	38.0	40.5	5	42.0	31.375	36
RS4yr	0.009	0.035	3.916	0.045	31.5	35.0	39	21.0	31.625	37
PowerJuv	0.006	0.033	4.018	0.048	26.0	33.0	40	33.0	33.000	38
RS1	0.009	0.049	3.170	0.077	31.5	43.0	18	44.0	34.125	39
MRS	0.026	0.036	4.728	0.051	42.0	36.5	41	36.0	38.875	40
MRJ	0.024	0.039	5.096	0.052	41.0	38.0	42	37.5	39.625	41
TSA	0.020	0.044	5.523	0.052	39.5	40.5	44	37.5	40.375	42
RSC	0.050	0.052	3.472	0.088	45.0	45.0	29	45.0	41.000	43
RAC	0.033	0.050	5.746	0.054	43.0	44.0	45	39.0	42.750	44
RJC	0.038	0.048	5.214	0.068	44.0	42.0	43	43.0	43.000	45
LLY	0.073	0.088	17.583	0.139	46.0	46.0	46	46.0	46.000	46

(Age5)-Other

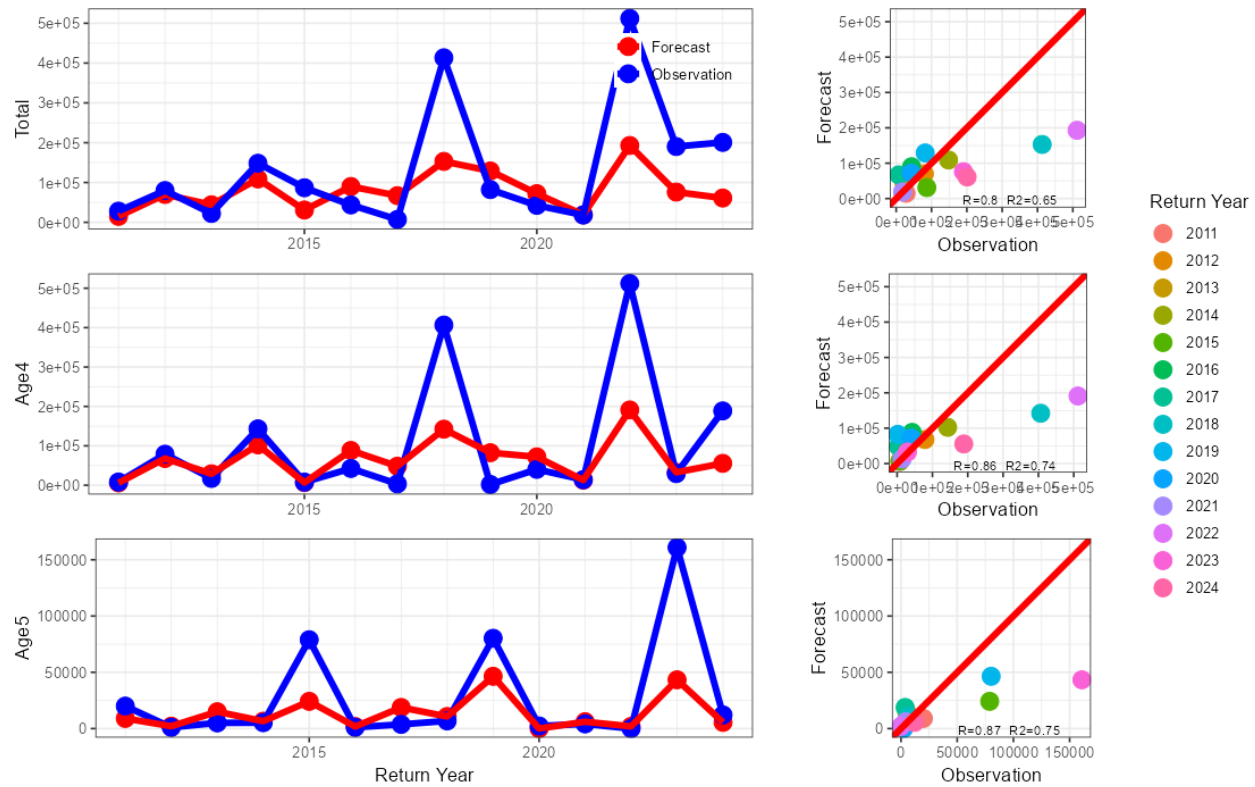
model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
sibling5	-0.016	0.019	0.132	0.033	11.0	2.0	9.5	8.0	7.625	1
RJ1	-0.004	0.020	2.012	0.027	3.5	3.5	33	2.5	10.625	2
RS8yr	0.002	0.020	2.485	0.027	2.0	3.5	35	2.5	10.750	3
LLY	0.006	0.018	3.055	0.022	5.0	1.0	37	1.0	11.000	4
RJ2	0.000	0.023	2.727	0.029	1.0	7.0	36	4.5	12.125	5
RS4yr	0.004	0.021	2.481	0.030	3.5	5.0	34	6.0	12.125	6
RickerBasic	-0.023	0.027	0.181	0.047	16.5	9.0	16	10.0	12.875	7
MRJ	0.009	0.022	3.842	0.029	7.0	6.0	39	4.5	14.125	8
PowerJuvSalmon_Tot tal	-0.025	0.028	0.030	0.048	31.5	17.5	1	12.0	15.500	9
MRS	0.011	0.024	3.844	0.032	8.0	8.0	40	7.0	15.750	10
PowerJuvSockeye	-0.024	0.028	0.164	0.048	21.0	17.5	14	12.0	16.125	11
PowerJuvPink	-0.025	0.028	0.039	0.049	31.5	17.5	2	17.5	17.125	12
PowerSalmon_Total	-0.025	0.028	-0.051	0.049	31.5	17.5	5	17.5	17.875	13
PowerJuvEi	-0.024	0.028	0.195	0.049	21.0	17.5	19	17.5	18.750	14
PowerJuv	-0.024	0.028	0.305	0.048	21.0	17.5	28	12.0	19.625	15
PowerJuvChum	-0.024	0.028	0.229	0.049	21.0	17.5	23	17.5	19.750	16
PowerJuvFRDpeak	-0.025	0.028	0.084	0.050	31.5	17.5	6	24.5	19.875	17
PowerPink	-0.026	0.028	-0.046	0.049	41.5	17.5	3	17.5	19.875	18
RickerEi	-0.024	0.028	0.250	0.049	21.0	17.5	25	17.5	20.250	19
RickerFRDMean	-0.024	0.028	0.215	0.050	21.0	17.5	21	24.5	21.000	20
PowerBasic	-0.025	0.028	0.192	0.049	31.5	17.5	18	17.5	21.125	21
PowerJuvPiW	-0.025	0.028	0.209	0.049	31.5	17.5	20	17.5	21.625	22
RickerFRDpeak	-0.025	0.028	0.132	0.051	31.5	17.5	9.5	31.5	22.500	23
RickerPDO	-0.024	0.028	0.289	0.050	21.0	17.5	27	24.5	22.500	24
PowerSockeye	-0.026	0.028	0.048	0.051	41.5	17.5	4	31.5	23.625	25
RJC	0.007	0.033	5.104	0.043	6.0	37.0	44	9.0	24.000	26
PowerChum	-0.025	0.029	0.100	0.051	31.5	29.5	7	31.5	24.875	27
RickerPiW	-0.025	0.029	0.169	0.050	31.5	29.5	15	24.5	25.125	28
PowerJuvPi	-0.025	0.029	0.188	0.050	31.5	29.5	17	24.5	25.625	29
RickerPi	-0.025	0.029	0.142	0.051	31.5	29.5	11	31.5	25.875	30
RickerChum	-0.025	0.029	0.150	0.051	31.5	29.5	12	31.5	26.125	31
TSA	-0.014	0.034	4.011	0.050	10.0	39.5	41	24.5	28.750	32
PowerJuvEiW	-0.025	0.029	0.235	0.051	31.5	29.5	24	31.5	29.125	33
RickerSockeye	-0.026	0.029	0.124	0.053	41.5	29.5	8	39.5	29.625	34
LarkinBasic	-0.026	0.029	0.152	0.052	41.5	29.5	13	37.0	30.250	35
R1C	-0.020	0.033	4.390	0.051	13.0	37.0	43	31.5	31.125	36
RickerEiW	-0.025	0.030	0.282	0.052	31.5	34.0	26	37.0	32.125	37
RAC	-0.012	0.036	5.837	0.051	9.0	44.0	45	31.5	32.375	38
RickerCyc	-0.023	0.036	1.190	0.057	16.5	44.0	32	43.0	33.875	39
RSC	0.022	0.035	6.067	0.052	14.5	41.5	47	37.0	35.000	40

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
R2C	-0.019	0.036	5.908	0.053	12.0	44.0	46	39.5	35.375	41
RickerPink	-0.029	0.031	-0.224	0.055	46.0	35.0	22	41.0	36.000	42
RS2	0.022	0.037	4.031	0.056	14.5	46.0	42	42.0	36.125	43
PowerBasicCycAge	-0.026	0.034	0.778	0.058	41.5	39.5	31	44.0	39.000	44
RickerSalmon_Total	-0.031	0.033	-0.347	0.060	47.0	37.0	29	46.0	39.750	45
LarkinBasicCycAge	-0.028	0.035	0.572	0.059	45.0	41.5	30	45.0	40.375	46
RS1	0.026	0.042	3.809	0.068	41.5	47.0	38	47.0	43.375	47

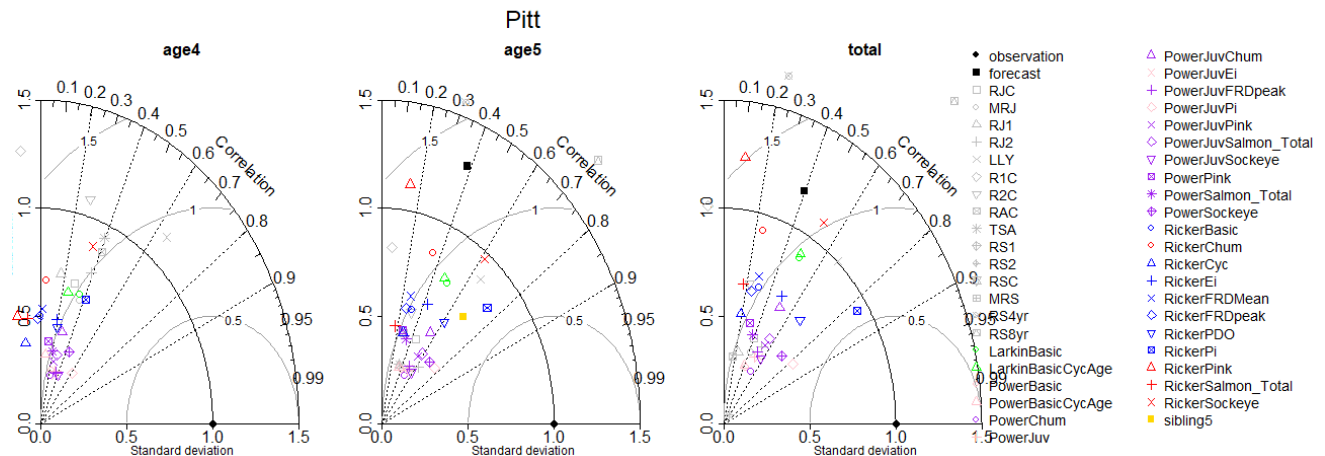
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FC-TS



Pitt Retrospective: Taylor



Ranking (Total)-Alllys

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
PowerSockeye	0.000	0.014	0.663	0.019	2.0	1.5	18	2.5	6.000	1
LLY	0.000	0.018	0.299	0.021	2.0	4.0	15	4.0	6.250	2
RickerPi	0.007	0.014	0.666	0.016	6.5	1.5	19	1.0	7.000	3
PowerSalmon_Total	-0.001	0.019	0.732	0.023	4.5	5.5	20	5.5	8.875	4

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerPiW	0.010	0.015	0.919	0.019	10.5	3.0	24	2.5	10.000	5
PowerPink	0.001	0.020	0.833	0.024	4.5	8.0	21.5	8.5	10.625	6
PowerJuvChum	-0.010	0.021	0.332	0.024	10.5	12.0	16	8.5	11.750	7
PowerJuvSalmon_Tot al	-0.012	0.021	0.252	0.024	15.5	12.0	12	8.5	12.000	8
PowerChum	0.007	0.021	1.015	0.023	6.5	12.0	26	5.5	12.500	9
PowerJuvPink	-0.013	0.021	0.217	0.025	18.0	12.0	10	11.5	12.875	10
RickerEiW	0.011	0.019	1.170	0.025	12.5	5.5	30	11.5	14.875	11
PowerJuvPi	-0.018	0.021	-0.160	0.024	31.5	12.0	9	8.5	15.250	12
LarkinBasicCycAge	0.009	0.022	0.833	0.026	8.5	17.5	21.5	15.5	15.750	13
LarkinBasic	0.009	0.022	0.853	0.026	8.5	17.5	23	15.5	16.125	14
RJ2	-0.014	0.022	0.256	0.026	20.5	17.5	13	15.5	16.625	15
PowerJuvPiW	-0.018	0.022	-0.087	0.026	31.5	17.5	5	15.5	17.375	16
RickerEi	0.014	0.020	1.323	0.026	20.5	8.0	31	15.5	18.750	17
PowerJuvEi	-0.016	0.023	0.104	0.027	25.0	24.5	6	20.5	19.000	18
PowerJuvSockeye	-0.017	0.023	0.077	0.027	28.5	24.5	3	20.5	19.125	19
PowerJuvFRDpeak	-0.016	0.023	0.134	0.027	25.0	24.5	7	20.5	19.250	20
PowerJuv	-0.016	0.023	0.146	0.027	25.0	24.5	8	20.5	19.500	21
PowerJuvEiW	-0.017	0.023	0.082	0.028	28.5	24.5	4	25.0	20.500	22
RickerPDO	0.018	0.020	1.384	0.026	31.5	8.0	32	15.5	21.750	23
RickerSockeye	0.011	0.023	0.981	0.028	12.5	24.5	25	25.0	21.750	24
RJ1	-0.014	0.024	0.391	0.028	20.5	29.0	17	25.0	22.875	25
R2C	0.012	0.022	1.405	0.029	15.5	17.5	34	28.0	23.750	26
RJC	-0.020	0.026	0.054	0.030	35.0	32.0	2	29.5	24.625	27
MRJ	-0.021	0.027	0.010	0.031	36.0	34.5	1	31.0	25.625	28
RickerCyc	0.014	0.022	1.601	0.030	20.5	17.5	37	29.5	26.125	29
R1C	0.000	0.032	1.056	0.037	2.0	40.0	27	39.0	27.000	30
RickerChum	0.012	0.026	1.164	0.032	15.5	32.0	29	32.0	27.125	31
PowerBasicCycAge	0.016	0.023	1.489	0.028	25.0	24.5	35	25.0	27.375	32
PowerBasic	0.016	0.023	1.496	0.028	25.0	24.5	36	25.0	27.625	33
RickerPink	-0.012	0.033	0.280	0.040	15.5	41.0	14	40.0	27.625	34
RickerSalmon_Total	-0.019	0.028	0.221	0.034	34.0	36.0	11	34.5	28.875	35
RS4yr	0.018	0.031	1.114	0.047	31.5	39.0	28	41.0	34.875	36
RickerBasic	0.022	0.025	1.722	0.033	37.5	30.0	39	33.0	34.875	37
RickerFRDpeak	0.022	0.026	1.858	0.034	37.5	32.0	40	34.5	36.000	38
RickerFRDMean	0.024	0.029	1.889	0.035	39.0	37.5	42	36.5	38.750	39
TSA	0.026	0.029	1.872	0.035	40.5	37.5	41	36.5	38.875	40
RAC	0.026	0.027	1.896	0.036	40.5	34.5	43	38.0	39.000	41
RS8yr	0.038	0.043	1.389	0.054	44.0	42.0	33	42.0	40.250	42
RS2	0.037	0.049	1.661	0.067	43.0	43.0	38	43.0	41.750	43
RS1	0.027	0.059	2.444	0.102	42.0	44.0	44	44.0	43.500	44

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
MRS	0.108	0.109	4.792	0.135	45.0	45.0	45	45.0	45.000	45
RSC	0.117	0.117	5.134	0.153	46.0	46.0	46	46.0	46.000	46

(Age4)-Alllys

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE_rank	average	Overall_rank
RJ2	0.000	0.006	1.755	0.007	5.0	7.5	24	8.0	11.125	1
PowerBasicCycAge	0.000	0.006	1.871	0.007	5.0	7.5	25	8.0	11.375	2
RickerPi	-0.001	0.006	1.325	0.007	14.0	7.5	18	8.0	11.875	3
PowerSockeye	-0.002	0.006	1.182	0.007	21.0	7.5	13	8.0	12.375	4
MRJ	-0.002	0.006	1.279	0.007	21.0	7.5	14	8.0	12.625	5
PowerBasic	0.000	0.006	2.064	0.007	5.0	7.5	30	8.0	12.625	6
RickerPiW	-0.001	0.006	1.555	0.007	14.0	7.5	21	8.0	12.625	7
PowerChum	-0.001	0.006	1.648	0.007	14.0	7.5	22	8.0	12.875	8
PowerSalmon_Total	-0.002	0.006	1.308	0.007	21.0	7.5	15	8.0	12.875	9
LarkinBasicCycAge	0.000	0.007	1.321	0.007	5.0	24.0	17	8.0	13.500	10
LarkinBasic	0.000	0.007	1.530	0.007	5.0	24.0	20	8.0	14.250	11
PowerJuvPi	-0.005	0.006	0.120	0.008	31.0	7.5	1	22.0	15.375	12
RickerCyc	0.000	0.006	2.054	0.008	5.0	7.5	28	22.0	15.625	13
RJ1	0.000	0.006	2.062	0.008	5.0	7.5	29	22.0	15.875	14
RickerEi	0.000	0.007	2.038	0.007	5.0	24.0	27	8.0	16.000	15
RickerPDO	0.000	0.007	2.074	0.007	5.0	24.0	31	8.0	17.000	16
RJC	-0.002	0.007	1.313	0.007	21.0	24.0	16	8.0	17.250	17
RickerEiW	-0.001	0.007	1.709	0.007	14.0	24.0	23	8.0	17.250	18
PowerPink	-0.002	0.006	1.435	0.008	21.0	7.5	19	22.0	17.375	19
PowerJuvPiW	-0.005	0.007	0.261	0.008	31.0	24.0	2	22.0	19.750	20
PowerJuvChum	-0.004	0.007	1.015	0.008	25.0	24.0	12	22.0	20.750	21
PowerJuvPink	-0.005	0.007	0.725	0.008	31.0	24.0	9	22.0	21.500	22
RickerSockeye	-0.001	0.007	2.010	0.008	14.0	24.0	26	22.0	21.500	23
PowerJuvSalmon_Total	-0.005	0.007	0.756	0.008	31.0	24.0	10	22.0	21.750	24
LLY	0.004	0.006	2.564	0.008	25.0	7.5	34	22.0	22.125	25
PowerJuvSockeye	-0.005	0.007	0.407	0.009	31.0	24.0	4	31.5	22.625	26
PowerJuvEi	-0.005	0.007	0.453	0.009	31.0	24.0	5	31.5	22.875	27
PowerJuvEiW	-0.005	0.007	0.480	0.009	31.0	24.0	6	31.5	23.125	28
RickerBasic	0.001	0.007	2.491	0.008	14.0	24.0	33	22.0	23.250	29
PowerJuvFRDpeak	-0.005	0.007	0.502	0.009	31.0	24.0	7	31.5	23.375	30
PowerJuv	-0.005	0.007	0.525	0.009	31.0	24.0	8	31.5	23.625	31
RickerFRDpeak	0.001	0.007	2.608	0.008	14.0	24.0	36	22.0	24.000	32
RickerFRDMean	0.001	0.007	2.758	0.008	14.0	24.0	37	22.0	24.250	33
RickerSalmon_Total	-0.006	0.009	0.324	0.010	36.5	36.0	3	35.0	27.625	34

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerChum	-0.001	0.008	2.146	0.009	14.0	34.0	32	31.5	27.875	35
RickerPink	-0.006	0.009	0.881	0.011	36.5	36.0	11	36.0	29.875	36
R1C	0.004	0.010	3.806	0.012	25.0	38.0	40	37.5	35.125	37
R2C	0.008	0.009	3.686	0.012	39.0	36.0	39	37.5	37.875	38
RS4yr	0.007	0.011	2.577	0.016	38.0	39.0	35	41.0	38.250	39
RAC	0.012	0.012	4.801	0.014	40.5	40.0	43	39.0	40.625	40
TSA	0.013	0.013	4.968	0.015	42.5	41.0	44	40.0	41.875	41
RS8yr	0.013	0.015	3.835	0.023	42.5	42.0	41	42.0	41.875	42
RS2	0.015	0.019	3.430	0.031	44.0	43.0	38	43.0	42.000	43
RS1	0.012	0.021	4.644	0.037	40.5	44.0	42	44.0	42.625	44
MRS	0.034	0.035	12.107	0.046	45.0	45.0	45	45.0	45.000	45
RSC	0.038	0.039	12.521	0.056	46.0	46.0	46	46.0	46.000	46

(Age5)-Allyrs

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
sibling5	0.001	0.014	0.539	0.016	1.0	3.5	18	1.5	6.000	1
LLY	-0.004	0.014	0.190	0.018	9.0	3.5	9	4.0	6.375	2
RickerPi	0.003	0.013	0.706	0.016	5.0	1.0	19	1.5	6.625	3
PowerSockeye	-0.002	0.014	0.769	0.018	2.5	3.5	20	4.0	7.500	4
RickerPiW	0.005	0.014	0.987	0.018	12.5	3.5	27	4.0	11.750	5
LarkinBasic	0.004	0.017	0.805	0.021	9.0	9.5	21	8.5	12.000	6
PowerSalmon_Total	-0.003	0.017	0.822	0.022	5.0	9.5	22	13.5	12.500	7
LarkinBasicCycAge	0.004	0.017	0.824	0.022	9.0	9.5	23	13.5	13.750	8
RickerSockeye	0.006	0.015	0.951	0.021	14.0	6.5	26	8.5	13.750	9
PowerChum	0.002	0.018	1.141	0.021	2.5	15.0	30	8.5	14.000	10
PowerJuvChum	-0.009	0.018	0.422	0.021	19.0	15.0	17	8.5	14.875	11
RickerEiW	0.007	0.015	1.286	0.021	15.0	6.5	33	8.5	15.750	12
R2C	0.004	0.017	1.398	0.022	9.0	9.5	34	13.5	16.500	13
PowerJuvSalmon_Total	-0.011	0.018	0.353	0.022	22.5	15.0	16	13.5	16.750	14
PowerJuvPink	-0.011	0.018	0.324	0.023	22.5	15.0	14	18.5	17.500	15
PowerPink	-0.003	0.019	0.901	0.023	5.0	22.5	25	18.5	17.750	16
PowerJuvPi	-0.015	0.018	-0.091	0.023	37.5	15.0	5	18.5	19.000	17
RickerPDO	0.011	0.018	1.445	0.021	22.5	15.0	35.5	8.5	20.375	18
RickerEi	0.008	0.018	1.445	0.023	16.5	15.0	35.5	18.5	21.375	19
PowerJuvPiW	-0.015	0.019	-0.009	0.024	37.5	22.5	2	24.0	21.500	20
PowerJuvSockeye	-0.014	0.019	0.159	0.024	32.5	22.5	7	24.0	21.500	21
RJ2	-0.014	0.019	0.215	0.024	32.5	22.5	11	24.0	22.500	22
PowerJuvFRDpeak	-0.014	0.019	0.216	0.024	32.5	22.5	12	24.0	22.750	23
PowerJuvEi	-0.014	0.019	0.191	0.025	32.5	22.5	10	29.5	23.625	24

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
PowerJuv	-0.014	0.019	0.233	0.025	32.5	22.5	13	29.5	24.375	25
RickerChum	0.005	0.020	1.028	0.025	12.5	28.5	29	29.5	24.875	26
RickerCyc	0.008	0.019	1.687	0.024	16.5	22.5	39	24.0	25.500	27
PowerBasic	0.009	0.020	1.627	0.023	19.0	28.5	37	18.5	25.750	28
PowerJuvEiW	-0.015	0.020	0.179	0.025	37.5	28.5	8	29.5	25.875	29
PowerBasicCycAge	0.009	0.020	1.634	0.023	19.0	28.5	38	18.5	26.000	30
RJ1	-0.014	0.021	0.341	0.025	32.5	32.0	15	29.5	27.250	31
RJC	-0.018	0.022	-0.008	0.027	41.0	35.0	1	36.0	28.250	32
RickerPink	-0.013	0.027	0.119	0.034	27.0	42.0	6	41.0	29.000	33
R1C	-0.004	0.025	0.994	0.029	9.0	41.0	28	39.0	29.250	34
MRJ	-0.019	0.023	-0.024	0.027	42.5	37.5	3	36.0	29.750	35
RickerSalmon_Total	-0.019	0.024	0.053	0.030	42.5	39.5	4	40.0	31.500	36
RS4yr	0.011	0.024	0.861	0.037	22.5	39.5	24	42.5	32.125	37
TSA	0.013	0.022	1.814	0.025	27.0	35.0	40	29.5	32.875	38
RickerBasic	0.013	0.021	1.831	0.026	27.0	32.0	41	33.5	33.375	39
RAC	0.013	0.021	1.903	0.026	27.0	32.0	43	33.5	33.875	40
RickerFRDpeak	0.013	0.022	1.957	0.027	27.0	35.0	44	36.0	35.500	41
RickerFRDMean	0.015	0.023	1.976	0.028	37.5	37.5	45	38.0	39.500	42
RS8yr	0.024	0.029	1.158	0.037	45.0	43.0	31	42.5	40.375	43
RS2	0.022	0.036	1.219	0.057	44.0	44.0	32	44.0	41.000	44
RS1	0.016	0.045	1.854	0.090	40.0	45.0	42	45.0	43.000	45
MRS	0.074	0.077	4.231	0.101	46.0	46.0	46	46.0	46.000	46
RSC	0.078	0.080	4.378	0.117	47.0	47.0	47	47.0	47.000	47

(Total)-Cycle

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
LLY	-0.009	0.015	-0.121	0.016	12.5	4.0	10	1.0	6.875	1
RickerPi	0.007	0.012	0.669	0.017	7.0	1.5	21	2.0	7.875	2
PowerSockeye	-0.003	0.018	0.564	0.021	4.5	5.5	20	4.0	8.500	3
RickerPiW	0.008	0.012	0.865	0.020	9.5	1.5	26	3.0	10.000	4
RickerChum	0.000	0.021	0.714	0.026	1.5	9.0	22	8.0	10.125	5
PowerJuvChum	-0.013	0.022	0.092	0.025	19.5	10.5	8	7.0	11.250	6
RickerSockeye	0.009	0.020	0.801	0.024	12.5	8.0	24	5.5	12.500	7
PowerSalmon_Total	-0.008	0.023	0.475	0.028	9.5	13.0	18	10.5	12.750	8
PowerPink	-0.008	0.023	0.500	0.028	9.5	13.0	19	10.5	13.000	9
RickerPDO	0.012	0.013	1.145	0.024	17.0	3.0	28	5.5	13.375	10
PowerChum	0.002	0.025	0.955	0.028	3.0	21.5	27	10.5	15.500	11
PowerJuvSalmon_Tot tal	-0.015	0.024	0.157	0.028	22.0	16.0	14	10.5	15.625	12
LarkinBasic	0.003	0.025	0.792	0.029	4.5	21.5	23	14.5	15.875	13

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
LarkinBasicCycAge	0.004	0.025	0.822	0.029	6.0	21.5	25	14.5	16.750	14
PowerJuvPink	-0.016	0.025	0.137	0.029	25.0	21.5	11	14.5	18.000	15
PowerJuvPi	-0.020	0.024	-0.148	0.029	32.0	16.0	12	14.5	18.625	16
RickerEiW	0.013	0.018	1.341	0.031	19.5	5.5	31	20.0	19.000	17
RickerEi	0.008	0.023	1.356	0.033	9.5	13.0	34	24.0	20.125	18
PowerBasicCycAge	0.011	0.025	1.347	0.030	14.5	21.5	32	18.0	21.500	19
RJ2	-0.017	0.027	0.154	0.030	27.0	28.5	13	18.0	21.625	20
PowerJuvSockeye	-0.020	0.028	-0.012	0.033	32.0	31.0	1	24.0	22.000	21
PowerJuvFRDpeak	-0.019	0.028	0.063	0.033	28.5	31.0	5	24.0	22.125	22
PowerJuv	-0.020	0.028	0.017	0.033	32.0	31.0	2	24.0	22.250	23
PowerBasic	0.012	0.025	1.354	0.030	17.0	21.5	33	18.0	22.375	24
PowerJuvPiW	-0.021	0.027	-0.087	0.032	35.5	28.5	7	21.0	23.000	25
RickerBasic	0.015	0.019	1.525	0.034	22.0	7.0	38	29.5	24.125	26
RJC	-0.020	0.030	0.044	0.034	32.0	35.0	4	29.5	25.125	27
PowerJuvEi	-0.020	0.029	0.065	0.034	32.0	33.5	6	29.5	25.250	28
RickerFRDpeak	0.015	0.022	1.545	0.034	22.0	10.5	39	29.5	25.250	29
RickerCyc	0.012	0.026	1.490	0.033	17.0	26.5	36	24.0	25.875	30
RickerSalmon_Total	-0.023	0.025	-0.341	0.034	38.0	21.5	15	29.5	26.000	31
RS4yr	0.011	0.025	1.392	0.035	14.5	21.5	35	34.0	26.250	32
PowerJuvEiW	-0.021	0.029	0.026	0.035	35.5	33.5	3	34.0	26.500	33
RickerFRDMean	0.016	0.024	1.510	0.034	25.0	16.0	37	29.5	26.875	34
R1C	0.000	0.036	1.280	0.046	1.5	41.0	29	41.0	28.125	35
RJ1	-0.016	0.032	0.376	0.036	25.0	37.5	17	36.0	28.875	36
RickerPink	-0.024	0.026	-0.348	0.035	39.5	26.5	16	34.0	29.000	37
MRJ	-0.024	0.032	-0.115	0.037	39.5	37.5	9	37.0	30.750	38
R2C	0.019	0.032	1.858	0.040	28.5	37.5	40	39.0	36.250	39
TSA	0.022	0.032	1.904	0.039	37.0	37.5	41	38.0	38.375	40
RS8yr	0.037	0.042	1.306	0.047	43.0	42.0	30	42.0	39.250	41
RAC	0.032	0.033	2.308	0.045	42.0	40.0	42	40.0	41.000	42
RS1	0.031	0.067	3.607	0.090	41.0	44.0	44	44.0	43.250	43
RS2	0.055	0.059	2.332	0.068	44.0	43.0	43	43.0	43.250	44
MRS	0.103	0.104	4.619	0.131	45.0	45.0	45	45.0	45.000	45
RSC	0.143	0.143	6.091	0.176	46.0	46.0	46	46.0	46.000	46

(Age4)-Cycle

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
PowerBasic	0.000	0.004	0.111	0.004	1.5	5.0	15	2.0	5.875	1
RickerEi	-0.001	0.004	0.051	0.004	9.5	5.0	8	2.0	6.125	2
PowerChum	-0.001	0.004	0.011	0.005	9.5	5.0	2	8.5	6.250	3
PowerPink	-0.001	0.005	0.009	0.005	9.5	13.0	1	8.5	8.000	4

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RJ1	-0.001	0.005	0.020	0.005	9.5	13.0	3	8.5	8.500	5
RickerCyc	0.001	0.003	0.278	0.004	9.5	1.0	23	2.0	8.875	6
RickerPiW	-0.001	0.005	0.043	0.005	9.5	13.0	5	8.5	9.000	7
RickerPDO	-0.001	0.005	0.046	0.005	9.5	13.0	6	8.5	9.250	8
RJ2	-0.002	0.004	-0.050	0.005	19.0	5.0	7	8.5	9.875	9
PowerSalmon_Total	-0.002	0.004	-0.075	0.005	19.0	5.0	9	8.5	10.375	10
RickerBasic	-0.001	0.005	0.087	0.005	9.5	13.0	11	8.5	10.500	11
PowerBasicCycAge	0.001	0.004	0.276	0.005	9.5	5.0	22	8.5	11.250	12
RickerPi	-0.002	0.005	-0.079	0.005	19.0	13.0	10	8.5	12.625	13
RJC	-0.001	0.005	0.090	0.006	9.5	13.0	12	17.0	12.875	14
RickerFRDMean	-0.001	0.006	0.104	0.006	9.5	24.0	13	17.0	15.875	15
RickerEiW	-0.001	0.006	0.106	0.006	9.5	24.0	14	17.0	16.125	16
MRJ	-0.004	0.004	-0.255	0.006	23.0	5.0	21	17.0	16.500	17
RickerFRDpeak	-0.001	0.006	0.130	0.006	9.5	24.0	16	17.0	16.625	18
LLY	0.002	0.005	0.168	0.006	19.0	13.0	18	17.0	16.750	19
PowerSockeye	-0.004	0.005	-0.237	0.006	23.0	13.0	20	17.0	18.250	20
LarkinBasic	0.000	0.007	0.227	0.007	1.5	31.5	19	26.0	19.500	21
RickerChum	-0.002	0.008	-0.026	0.009	19.0	34.5	4	35.0	23.125	22
LarkinBasicCycAge	0.001	0.008	0.421	0.008	9.5	34.5	26.5	32.5	25.750	23
PowerJuvChum	-0.005	0.006	-0.421	0.007	26.5	24.0	26.5	26.0	25.750	24
RickerSockeye	-0.004	0.007	-0.143	0.008	23.0	31.5	17	32.5	26.000	25
PowerJuvSalmon_Total	-0.006	0.006	-0.481	0.007	33.0	24.0	28	26.0	27.750	26
PowerJuvFRDpeak	-0.006	0.006	-0.507	0.007	33.0	24.0	29	26.0	28.000	27
PowerJuvPiW	-0.006	0.006	-0.521	0.007	33.0	24.0	30	26.0	28.250	28
PowerJuvEi	-0.006	0.006	-0.527	0.007	33.0	24.0	32	26.0	28.750	29
PowerJuvEiW	-0.006	0.006	-0.527	0.007	33.0	24.0	32	26.0	28.750	30
PowerJuvPink	-0.006	0.006	-0.527	0.007	33.0	24.0	32	26.0	28.750	31
PowerJuv	-0.006	0.006	-0.534	0.007	33.0	24.0	34	26.0	29.250	32
PowerJuvPi	-0.006	0.006	-0.545	0.007	33.0	24.0	35	26.0	29.500	33
PowerJuvSockeye	-0.006	0.006	-0.562	0.007	33.0	24.0	36	26.0	29.750	34
RickerPink	-0.005	0.008	-0.399	0.009	26.5	34.5	24	35.0	30.000	35
RickerSalmon_Total	-0.005	0.008	-0.417	0.009	26.5	34.5	25	35.0	30.250	36
R1C	0.005	0.013	1.126	0.014	26.5	39.0	37	39.0	35.375	37
R2C	0.011	0.011	1.479	0.013	39.0	37.0	38	37.5	37.875	38
TSA	0.012	0.012	1.558	0.013	40.0	38.0	39	37.5	38.625	39
RS4yr	0.009	0.015	1.939	0.023	38.0	40.5	41	42.0	40.375	40
RAC	0.015	0.015	1.911	0.016	42.0	40.5	40	40.0	40.625	41
RS8yr	0.013	0.016	1.983	0.021	41.0	42.0	42	41.0	41.500	42
RS2	0.024	0.027	3.940	0.037	43.0	43.0	43	43.0	43.000	43
RS1	0.029	0.035	5.479	0.061	44.0	44.0	44	45.0	44.250	44

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
MRS	0.041	0.043	6.168	0.059	45.0	45.0	45	44.0	44.750	45
RSC	0.050	0.051	7.470	0.070	46.0	46.0	46	46.0	46.000	46

(Age5)-Cycle

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RS4yr	0.001	0.013	0.987	0.017	1.5	3.5	18	3.5	6.625	1
RickerPi	0.005	0.011	1.128	0.014	13.5	2.0	24	1.0	10.125	2
sibling5	0.001	0.017	1.029	0.021	1.5	8.5	23	8.5	10.375	3
LarkinBasic	-0.003	0.016	1.007	0.021	6.0	7.0	21	8.5	10.625	4
LarkinBasicCycAge	-0.004	0.017	0.981	0.021	9.5	8.5	17	8.5	10.875	5
RickerPiW	0.004	0.013	1.434	0.017	9.5	3.5	30	3.5	11.625	6
RickerSockeye	0.006	0.010	1.289	0.015	16.0	1.0	28	2.0	11.750	7
LLY	-0.012	0.018	0.087	0.021	28.0	10.5	1	8.5	12.000	8
PowerSockeye	-0.003	0.019	1.215	0.020	6.0	12.5	26	5.5	12.500	9
RickerChum	-0.004	0.019	1.140	0.022	9.5	12.5	25	11.0	14.500	10
RickerPDO	0.008	0.014	1.881	0.020	18.5	5.0	32	5.5	15.250	11
PowerJuvChum	-0.011	0.020	0.521	0.024	25.5	14.5	10	12.5	15.625	12
PowerJuvPi	-0.016	0.021	0.169	0.027	32.5	16.5	2	17.5	17.125	13
PowerJuvSalmon_Total	-0.011	0.022	0.708	0.026	25.5	18.0	16	14.0	18.375	14
RickerEiW	0.009	0.015	2.195	0.024	21.0	6.0	36	12.5	18.875	15
PowerJuvPink	-0.013	0.023	0.694	0.027	29.0	19.5	15	17.5	20.250	16
PowerBasicCycAge	0.002	0.026	2.149	0.027	3.5	28.0	35	17.5	21.000	17
PowerChum	-0.002	0.027	1.814	0.027	3.5	32.5	31	17.5	21.125	18
RickerFRDMean	0.010	0.018	2.496	0.027	22.5	10.5	41	17.5	22.875	19
PowerPink	-0.011	0.025	1.002	0.029	25.5	23.0	20	23.5	23.000	20
RJ2	-0.015	0.025	0.630	0.030	30.5	23.0	14	25.5	23.250	21
PowerJuvPiW	-0.018	0.025	0.286	0.031	38.5	23.0	4	28.5	23.500	22
PowerSalmon_Total	-0.011	0.025	1.018	0.029	25.5	23.0	22	23.5	23.500	23
RickerBasic	0.008	0.020	2.488	0.028	18.5	14.5	40	21.5	23.625	24
PowerJuvSockeye	-0.017	0.025	0.449	0.031	35.5	23.0	8	28.5	23.750	25
PowerBasic	0.005	0.026	2.280	0.027	13.5	28.0	37	17.5	24.000	26
RickerEi	0.005	0.023	2.437	0.030	13.5	19.5	38	25.5	24.125	27
RickerFRDpeak	0.008	0.021	2.507	0.028	18.5	16.5	42	21.5	24.625	28
PowerJuvFRDpeak	-0.017	0.026	0.545	0.031	35.5	28.0	12	28.5	26.000	29
PowerJuv	-0.017	0.026	0.488	0.032	35.5	28.0	9	32.5	26.250	30
PowerJuvEi	-0.017	0.027	0.570	0.032	35.5	32.5	13	32.5	28.375	31
RickerCyc	0.004	0.028	2.482	0.031	9.5	36.5	39	28.5	28.375	32
PowerJuvEiW	-0.018	0.027	0.536	0.033	38.5	32.5	11	35.0	29.250	33
MRJ	-0.021	0.028	0.262	0.034	41.0	36.5	3	37.0	29.375	34

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RJC	-0.019	0.028	0.386	0.034	40.0	36.5	7	37.0	30.125	35
RickerSalmon_Total	-0.025	0.027	-0.367	0.035	43.0	32.5	6	40.0	30.375	36
RJ1	-0.015	0.029	1.001	0.034	30.5	40.0	19	37.0	31.625	37
RS1	0.003	0.036	1.973	0.042	6.0	45.0	33	44.0	32.000	38
R1C	-0.005	0.029	1.978	0.037	13.5	40.0	34	42.5	32.500	39
R2C	0.008	0.028	2.813	0.032	18.5	36.5	43	32.5	32.625	40
RickerPink	-0.026	0.029	-0.360	0.037	44.0	40.0	5	42.5	32.875	41
RS8yr	0.024	0.026	1.260	0.035	42.0	28.0	27	40.0	34.250	42
TSA	0.010	0.030	2.936	0.032	22.5	42.5	44	32.5	35.375	43
RAC	0.016	0.030	3.483	0.035	32.5	42.5	45	40.0	40.000	44
RS2	0.031	0.033	1.355	0.049	45.0	44.0	29	45.0	40.750	45
MRS	0.062	0.062	5.032	0.074	46.0	46.0	46	46.0	46.000	46
RSC	0.093	0.093	6.862	0.109	47.0	47.0	47	47.0	47.000	47

(Total)-Other

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
LLY	-0.002	0.019	0.330	0.022	4.5	4.5	10	4.0	5.750	1
PowerSockeye	0.000	0.015	0.833	0.020	1.0	2.0	19	2.0	6.000	2
RickerPi	0.007	0.014	0.818	0.017	7.0	1.0	18	1.0	6.750	3
PowerJuvChum	-0.009	0.019	0.480	0.023	9.0	4.5	16	5.0	8.625	4
PowerSalmon_Total	-0.001	0.020	0.920	0.025	2.5	7.0	20	7.5	9.250	5
RickerPiW	0.011	0.016	1.152	0.021	11.5	3.0	24	3.0	10.375	6
PowerJuvSalmon_Total	-0.012	0.021	0.386	0.025	13.5	10.0	13	7.5	11.000	7
PowerPink	0.001	0.021	1.039	0.026	2.5	10.0	23	11.5	11.750	8
PowerJuvPi	-0.017	0.020	-0.063	0.025	31.5	7.0	2	7.5	12.000	9
PowerChum	0.006	0.022	1.220	0.025	6.0	14.0	26	7.5	13.375	10
PowerJuvPink	-0.013	0.022	0.352	0.026	17.5	14.0	11	11.5	13.500	11
PowerJuvPiW	-0.017	0.022	0.034	0.027	31.5	14.0	1	14.0	15.125	12
RJ2	-0.013	0.023	0.403	0.026	17.5	19.0	14	11.5	15.500	13
PowerJuvEi	-0.015	0.023	0.253	0.028	23.5	19.0	7	17.5	16.750	14
PowerJuvFRDpeak	-0.015	0.023	0.279	0.028	23.5	19.0	8	17.5	17.000	15
PowerJuv	-0.015	0.023	0.289	0.028	23.5	19.0	9	17.5	17.250	16
PowerJuvSockeye	-0.016	0.023	0.209	0.028	28.0	19.0	5	17.5	17.375	17
PowerJuvEiW	-0.016	0.024	0.226	0.028	28.0	23.0	6	17.5	18.625	18
RickerEiW	0.013	0.021	1.481	0.028	17.5	10.0	30	17.5	18.750	19
RickerPDO	0.016	0.020	1.616	0.026	28.0	7.0	32	11.5	19.625	20
LarkinBasicCycAge	0.009	0.026	0.988	0.029	9.0	29.0	21	23.0	20.500	21
LarkinBasic	0.009	0.026	1.010	0.029	9.0	29.0	22	23.0	20.750	22
RJ1	-0.013	0.026	0.570	0.030	17.5	29.0	17	26.5	22.500	23

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RickerEi	0.014	0.022	1.621	0.029	21.0	14.0	33	23.0	22.750	24
RJC	-0.018	0.026	0.208	0.030	33.0	29.0	4	26.5	23.125	25
RickerCyc	0.013	0.022	1.893	0.031	17.5	14.0	37	28.5	24.250	26
RickerSockeye	0.013	0.027	1.209	0.031	17.5	32.0	25	28.5	25.750	27
MRJ	-0.021	0.028	0.121	0.032	38.0	34.0	3	30.5	26.375	28
RickerPink	-0.011	0.034	0.408	0.043	11.5	40.5	15	40.0	26.750	29
R1C	0.002	0.031	1.305	0.037	4.5	39.0	27	38.0	27.125	30
RickerChum	0.012	0.028	1.374	0.035	13.5	34.0	29	33.5	27.500	31
R2C	0.015	0.024	1.749	0.032	23.5	23.0	34	30.5	27.750	32
PowerBasicCycAge	0.016	0.025	1.763	0.029	28.0	25.5	35	23.0	27.875	33
PowerBasic	0.016	0.025	1.776	0.029	28.0	25.5	36	23.0	28.125	34
RickerSalmon_Total	-0.020	0.029	0.360	0.036	36.0	37.0	12	36.0	30.250	35
RickerBasic	0.019	0.024	1.949	0.033	34.0	23.0	38	32.0	31.750	36
RickerFRDpeak	0.020	0.026	2.173	0.035	36.0	29.0	40	33.5	34.625	37
RS4yr	0.020	0.034	1.335	0.051	36.0	40.5	28	41.0	36.375	38
RickerFRDMean	0.022	0.028	2.191	0.036	39.0	34.0	42	36.0	37.750	39
TSA	0.025	0.029	2.162	0.036	40.0	37.0	39	36.0	38.000	40
RS8yr	0.041	0.048	1.588	0.059	43.0	42.0	31	42.0	39.500	41
RAC	0.029	0.029	2.277	0.039	41.0	37.0	43	39.0	40.000	42
RS2	0.050	0.060	2.183	0.076	44.0	43.0	41	43.0	42.750	43
RS1	0.039	0.069	3.179	0.114	42.0	44.0	44	44.0	43.500	44
MRS	0.111	0.112	5.301	0.142	45.0	45.0	45	45.0	45.000	45
RSC	0.132	0.132	6.018	0.169	46.0	46.0	46	46.0	46.000	46

(Age4)-Other

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
PowerBasicCycAge	0.000	0.006	1.793	0.007	6.0	8.5	22	6.0	10.625	1
PowerBasic	0.000	0.006	2.258	0.007	6.0	8.5	28	6.0	12.125	2
RickerPi	-0.001	0.006	1.562	0.007	15.0	8.5	19	6.0	12.125	3
RJC	-0.002	0.006	1.295	0.007	20.5	8.5	14	6.0	12.250	4
RJ2	-0.001	0.006	1.635	0.007	15.0	8.5	20	6.0	12.375	5
PowerSockeye	-0.002	0.006	1.315	0.007	20.5	8.5	15	6.0	12.500	6
MRJ	-0.003	0.006	1.169	0.007	23.5	8.5	13	6.0	12.750	7
PowerChum	-0.001	0.006	1.862	0.007	15.0	8.5	23	6.0	13.125	8
LLY	0.003	0.005	2.309	0.006	23.5	1.0	30	1.0	13.875	9
RickerCyc	0.000	0.006	2.002	0.008	6.0	8.5	25	19.0	14.625	10
RJ1	0.000	0.006	2.025	0.008	6.0	8.5	27	19.0	15.125	11
PowerJuvPi	-0.005	0.006	0.206	0.008	32.0	8.5	1	19.0	15.125	12
PowerJuvSalmon_Total	-0.004	0.006	0.880	0.008	26.0	8.5	10	19.0	15.875	13

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
PowerSalmon_Total	-0.002	0.006	1.394	0.008	20.5	8.5	16	19.0	16.000	14
LarkinBasicCycAge	0.000	0.007	1.475	0.008	6.0	23.5	17	19.0	16.375	15
RickerPiW	-0.001	0.007	1.749	0.007	15.0	23.5	21	6.0	16.375	16
PowerPink	-0.002	0.006	1.543	0.008	20.5	8.5	18	19.0	16.500	17
LarkinBasic	0.000	0.007	1.879	0.008	6.0	23.5	24	19.0	18.125	18
RickerEiW	0.000	0.007	2.007	0.008	6.0	23.5	26	19.0	18.625	19
RickerPDO	0.000	0.007	2.272	0.008	6.0	23.5	29	19.0	19.375	20
RickerEi	0.000	0.007	2.406	0.008	6.0	23.5	31	19.0	19.875	21
PowerJuvChum	-0.004	0.007	1.108	0.008	26.0	23.5	12	19.0	20.125	22
RickerSockeye	0.000	0.007	2.427	0.008	6.0	23.5	32	19.0	20.125	23
PowerJuvPink	-0.005	0.007	0.860	0.008	32.0	23.5	9	19.0	20.875	24
PowerJuvPiW	-0.005	0.007	0.357	0.009	32.0	23.5	2	31.0	22.125	25
PowerJuvSockeye	-0.005	0.007	0.463	0.009	32.0	23.5	4	31.0	22.625	26
RickerBasic	0.001	0.007	2.598	0.008	15.0	23.5	33	19.0	22.625	27
PowerJuvEi	-0.005	0.007	0.538	0.009	32.0	23.5	5	31.0	22.875	28
PowerJuvEiW	-0.005	0.007	0.583	0.009	32.0	23.5	6	31.0	23.125	29
PowerJuvFRDpeak	-0.005	0.007	0.602	0.009	32.0	23.5	7	31.0	23.375	30
PowerJuv	-0.005	0.007	0.613	0.009	32.0	23.5	8	31.0	23.625	31
RickerFRDpeak	0.001	0.008	2.904	0.008	15.0	33.0	35	19.0	25.500	32
RickerChum	0.000	0.008	2.636	0.009	6.0	33.0	34	31.0	26.000	33
RickerFRDMean	0.001	0.008	3.001	0.008	15.0	33.0	37	19.0	26.000	34
RickerSalmon_Total	-0.006	0.009	0.397	0.011	37.0	36.5	3	35.5	28.000	35
RickerPink	-0.005	0.009	1.060	0.011	32.0	36.5	11	35.5	28.750	36
R1C	0.004	0.009	3.607	0.012	26.0	36.5	38	37.0	34.375	37
R2C	0.009	0.009	3.814	0.013	38.5	36.5	40	38.0	38.250	38
RS4yr	0.009	0.012	2.946	0.018	38.5	40.0	36	41.0	38.875	39
TSA	0.012	0.012	4.728	0.014	40.5	40.0	42	39.5	40.500	40
RAC	0.012	0.012	4.827	0.014	40.5	40.0	43	39.5	40.750	41
RS8yr	0.015	0.018	4.185	0.025	43.0	42.0	41	42.0	42.000	42
RS2	0.019	0.022	3.760	0.035	44.0	43.0	39	43.0	42.250	43
RS1	0.014	0.023	5.081	0.041	42.0	44.0	44	44.0	43.500	44
MRS	0.037	0.039	13.025	0.050	45.0	45.0	45	45.0	45.000	45
RSC	0.045	0.046	14.246	0.062	46.0	46.0	46	46.0	46.000	46

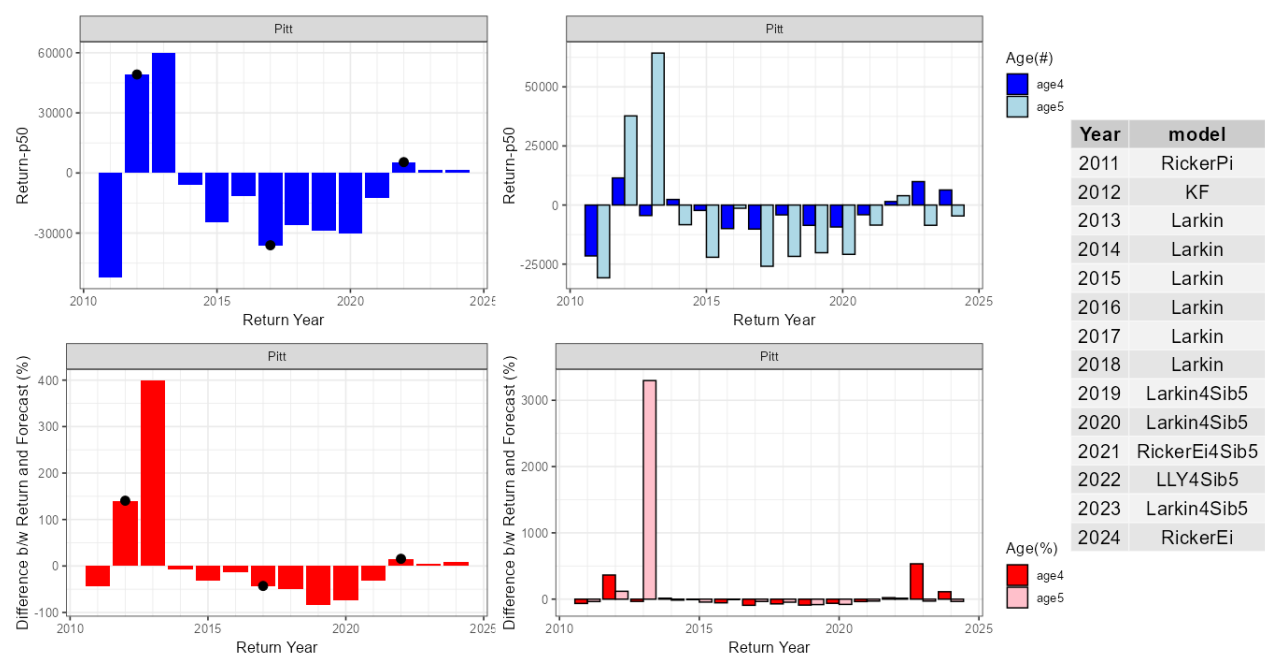
(Age5)-Other

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
LLY	-0.004	0.016	0.272	0.020	10.5	3.5	7	4.0	6.250	1
RickerPi	0.003	0.014	0.894	0.017	7.5	1.0	19	1.0	7.125	2
sibling5	0.003	0.015	0.752	0.018	7.5	2.0	18	2.0	7.375	3
PowerSockeye	-0.002	0.017	1.005	0.020	3.0	6.0	22	4.0	8.750	4

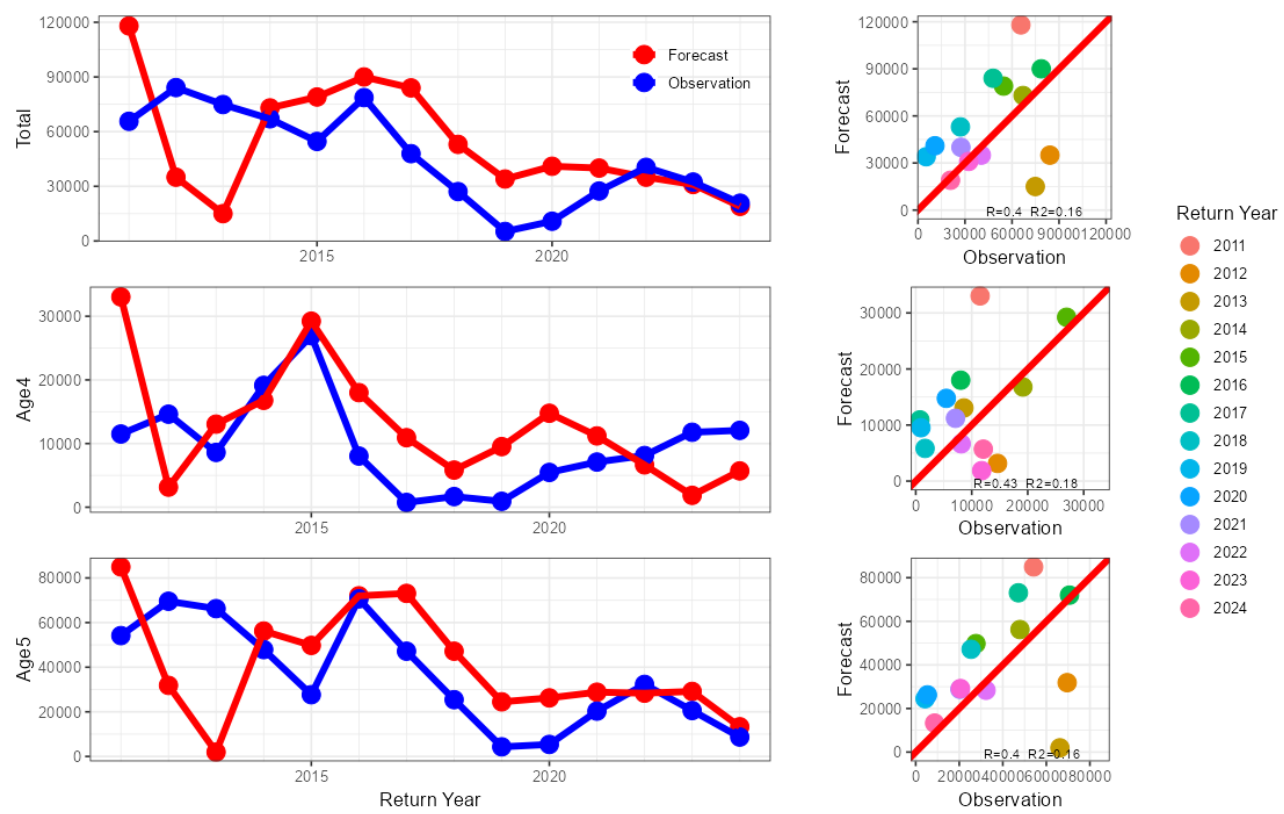
model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
LarkinBasic	0.002	0.019	0.950	0.023	3.0	13.0	20	8.5	11.125	5
PowerJuvChum	-0.008	0.017	0.633	0.022	17.0	6.0	17	6.0	11.500	6
RickerPiW	0.006	0.016	1.275	0.020	12.5	3.5	28	4.0	12.000	7
RickerSockeye	0.006	0.017	1.188	0.023	12.5	6.0	25	8.5	13.000	8
PowerSalmon_Total	-0.003	0.019	1.091	0.024	7.5	13.0	24	14.0	14.625	9
PowerJuvPi	-0.014	0.018	0.043	0.024	36.0	8.5	1	14.0	14.875	10
LarkinBasicCycAge	0.003	0.020	0.996	0.024	7.5	21.0	21	14.0	15.875	11
PowerChum	0.002	0.020	1.429	0.023	3.0	21.0	31	8.5	15.875	12
PowerJuvPink	-0.011	0.019	0.513	0.024	24.5	13.0	14	14.0	16.375	13
PowerJuvSalmon_Total	-0.011	0.019	0.540	0.024	24.5	13.0	15	14.0	16.625	14
PowerPink	-0.002	0.020	1.193	0.025	3.0	21.0	26	20.5	17.625	15
RickerEiW	0.008	0.018	1.657	0.024	17.0	8.5	32	14.0	17.875	16
PowerJuvPiW	-0.014	0.019	0.156	0.025	36.0	13.0	3	20.5	18.125	17
RickerPDO	0.009	0.019	1.748	0.023	20.0	13.0	34	8.5	18.875	18
RJ2	-0.013	0.020	0.407	0.024	31.0	21.0	11	14.0	19.250	19
R2C	0.007	0.019	1.819	0.025	14.5	13.0	36	20.5	21.000	20
PowerJuvEi	-0.013	0.020	0.391	0.026	31.0	21.0	10	26.5	22.125	21
PowerJuvFRDpeak	-0.013	0.020	0.409	0.026	31.0	21.0	12	26.5	22.625	22
PowerJuv	-0.013	0.020	0.429	0.026	31.0	21.0	13	26.5	22.875	23
PowerJuvSockeye	-0.014	0.020	0.342	0.026	36.0	21.0	8	26.5	22.875	24
PowerJuvEiW	-0.014	0.020	0.377	0.026	36.0	21.0	9	26.5	23.125	25
RickerEi	0.008	0.021	1.808	0.025	17.0	27.0	35	20.5	24.875	26
RJC	-0.016	0.022	0.170	0.027	39.5	29.5	4	31.5	26.125	27
RickerCyc	0.007	0.021	2.072	0.026	14.5	27.0	39	26.5	26.750	28
RJ1	-0.013	0.022	0.562	0.027	31.0	29.5	16	31.5	27.000	29
RickerChum	0.004	0.024	1.231	0.028	10.5	36.5	27	35.0	27.250	30
PowerBasic	0.009	0.023	2.006	0.025	20.0	32.5	37	20.5	27.500	31
R1C	-0.002	0.025	1.317	0.030	3.0	39.0	30	39.0	27.750	32
MRJ	-0.018	0.023	0.124	0.029	41.0	32.5	2	37.5	28.250	33
PowerBasicCycAge	0.009	0.024	2.031	0.025	20.0	36.5	38	20.5	28.750	34
RickerPink	-0.012	0.029	0.259	0.037	27.5	42.0	6	41.0	29.125	35
RickerBasic	0.010	0.021	2.146	0.027	22.0	27.0	40	31.5	30.125	36
RickerSalmon_Total	-0.020	0.026	0.187	0.033	42.0	40.5	5	40.0	31.875	37
RS4yr	0.011	0.026	1.020	0.041	24.5	40.5	23	42.5	32.625	38
RickerFRDpeak	0.011	0.023	2.348	0.028	24.5	32.5	42	35.0	33.500	39
RickerFRDMean	0.012	0.023	2.355	0.029	27.5	32.5	43	37.5	35.125	40
TSA	0.014	0.024	2.214	0.027	36.0	36.5	41	31.5	36.250	41
RAC	0.016	0.024	2.390	0.028	39.5	36.5	44	35.0	38.750	42
RS8yr	0.026	0.031	1.315	0.041	44.0	43.0	29	42.5	39.625	43
RS2	0.032	0.042	1.667	0.064	45.0	44.0	33	44.0	41.500	44

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RS1	0.025	0.052	2.496	0.101	43.0	45.0	45	45.0	44.500	45
MRS	0.073	0.077	4.672	0.105	46.0	46.0	46	46.0	46.000	46
RSC	0.087	0.089	5.120	0.129	47.0	47.0	47	47.0	47.000	47

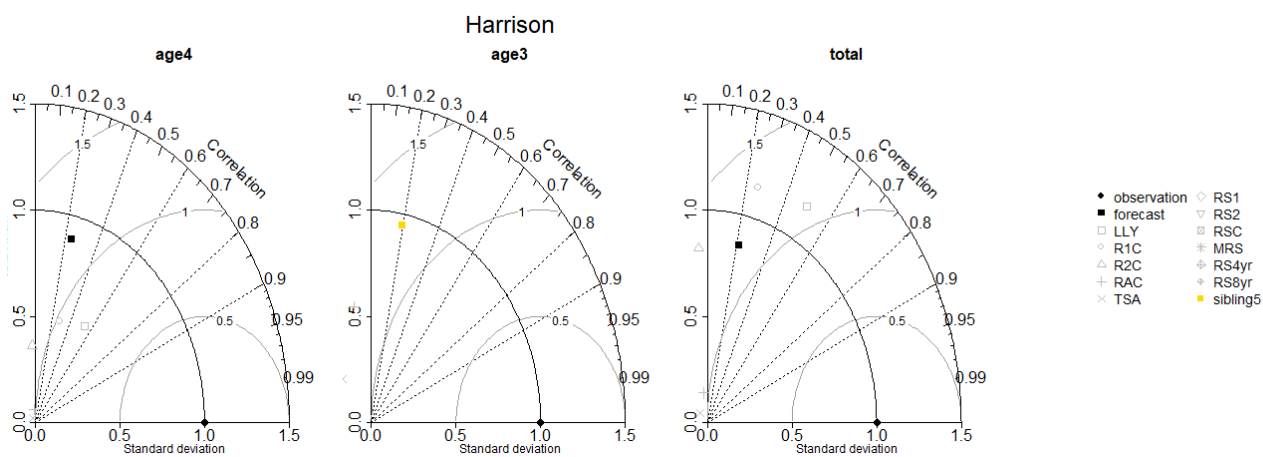
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Harrison Retrospective: Taylor



Ranking (Total)-Alllys

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
LLY	0.096	0.266	1.310	0.469	1.0	2.5	2	2.0	1.875	1
TSA	-0.178	0.252	1.118	0.471	5.0	1.0	1	3.0	2.500	2
RAC	-0.166	0.266	1.589	0.461	4.0	2.5	3	1.0	2.625	3
R1C	0.129	0.336	3.930	0.564	2.0	4.0	4	4.0	3.500	4
R2C	0.150	0.405	9.587	0.577	3.0	5.0	5	5.0	4.500	5
RSC	1.351	1.408	24.391	2.015	6.0	6.0	6	6.0	6.000	6
MRS	1.472	1.516	29.582	2.226	7.0	7.0	7	7.0	7.000	7
RS1	1.821	1.826	31.486	2.610	8.0	8.0	9	8.0	8.250	8
RS2	2.088	2.162	31.071	2.889	9.0	9.0	8	9.0	8.750	9
RS8yr	2.584	2.589	54.319	3.759	10.0	10.0	10	10.0	10.000	10
RS4yr	2.707	2.710	68.383	3.880	11.0	11.0	11	11.0	11.000	11

(Age4)-Allyrs

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
sibling4	0.022	0.052	3.869	0.077	1.0	1.0	5	1.0	2.000	1
LLY	-0.080	0.201	0.550	0.348	4.0	2.0	1	2.0	2.250	2
R1C	-0.069	0.227	2.872	0.401	3.0	4.0	4	3.0	3.500	3
TSA	-0.201	0.220	1.183	0.455	6.0	3.0	2	6.0	4.250	4
R2C	-0.058	0.270	11.127	0.439	2.0	6.0	6	4.0	4.500	5
RAC	-0.195	0.229	1.779	0.450	5.0	5.0	3	5.0	4.500	6
RSC	0.466	0.641	37.193	1.003	7.0	7.0	7	7.0	7.000	7
MRS	0.530	0.705	51.184	1.120	8.0	8.0	10	8.0	8.500	8
RS1	0.713	0.815	46.632	1.203	9.0	9.0	9	9.0	9.000	9
RS2	0.788	0.936	42.406	1.298	10.0	10.0	8	10.0	9.500	10
RS8yr	1.022	1.133	94.713	1.842	11.0	11.0	11	11.0	11.000	11
RS4yr	1.101	1.157	125.742	1.907	12.0	12.0	12	12.0	12.000	12

(Age5)-Allyrs

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
TSA	0.023	0.060	12.118	0.076	1.0	1.0	1	1.0	1.000	1
RAC	0.030	0.064	12.927	0.081	2.0	2.0	2	2.0	2.000	2
LLY	0.176	0.201	15.207	0.331	3.0	3.0	3	4.0	3.250	3
R1C	0.198	0.205	44.497	0.346	4.0	4.0	4	5.0	4.250	4
R2C	0.208	0.212	54.242	0.297	5.0	5.0	5	3.0	4.500	5
RSC	0.886	0.886	152.069	1.348	6.0	6.0	7	6.0	6.250	6
MRS	0.942	0.942	176.613	1.498	7.0	7.0	8	7.0	7.250	7
RS1	1.108	1.113	134.322	1.666	8.0	8.0	6	8.0	7.500	8
RS2	1.301	1.304	184.916	1.834	9.0	9.0	9	9.0	9.000	9
RS8yr	1.561	1.561	320.485	2.452	10.0	10.0	10	10.0	10.000	10

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RS4yr	1.606	1.607	388.345	2.528	11.0	11.0	11	11.0	11.000	11

(Total)-Cycle

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
TSA	-0.020	0.039	-0.114	0.053	1.5	1.0	2	1.0	1.375	1
R1C	-0.020	0.049	-0.099	0.065	1.5	3.0	1	3.0	2.125	2
R2C	-0.027	0.041	-0.179	0.056	3.0	2.0	3	2.0	2.500	3
RAC	-0.087	0.087	-0.742	0.091	4.0	4.0	4	4.0	4.000	4
LLY	0.414	0.474	2.870	0.724	5.0	5.0	5	5.0	5.000	5
MRS	1.084	1.084	10.596	1.530	6.0	6.0	6	6.0	6.000	6
RSC	1.245	1.245	12.194	1.686	7.0	7.0	7	7.0	7.000	7
RS4yr	1.637	1.649	15.753	2.380	8.0	8.0	8	8.0	8.000	8
RS8yr	1.784	1.784	17.429	2.616	9.0	9.0	9	10.0	9.250	9
RS1	1.790	1.790	17.548	2.838	10.0	10.0	10	11.0	10.250	10
RS2	1.819	1.819	17.953	2.421	11.0	11.0	11	9.0	10.500	11

(Age4)-Cycle

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
R1C	-0.059	0.059	-0.565	0.067	2.0	2.0	1	3.5	2.125	1
sibling4	0.029	0.029	2.339	0.031	1.0	1.0	6	1.0	2.250	2
TSA	-0.060	0.060	-0.576	0.064	3.0	3.0	2	2.0	2.500	3
R2C	-0.063	0.063	-0.609	0.067	4.0	4.0	3	3.5	3.625	4
RAC	-0.089	0.089	-0.876	0.090	5.0	5.0	4	5.0	4.750	5
LLY	0.130	0.195	1.041	0.286	6.0	6.0	5	6.0	5.750	6
MRS	0.782	0.821	8.356	1.331	7.0	7.0	7	7.0	7.000	7
RSC	0.816	0.856	8.717	1.394	8.0	8.0	8	8.0	8.000	8
RS2	0.852	0.892	9.164	1.455	9.0	9.0	9	9.0	9.000	9
RS1	0.928	0.971	9.914	1.504	10.0	10.0	10	10.0	10.000	10
RS4yr	1.264	1.305	13.377	1.859	11.0	11.0	11	11.0	11.000	11
RS8yr	1.312	1.348	14.060	2.163	12.0	12.0	12	12.0	12.000	12

(Age5)-Cycle

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
RAC	0.002	0.011	0.579	0.011	1.0	1.0	1	1.0	1.000	1
R2C	0.036	0.036	4.251	0.044	2.0	2.0	2	2.0	2.000	2
TSA	0.040	0.040	4.613	0.047	4.0	3.0	3	3.0	3.250	3
R1C	0.039	0.041	4.673	0.050	3.0	4.0	4	4.0	3.750	4
LLY	0.283	0.284	12.828	0.442	5.0	5.0	5	6.0	5.250	5

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
MRS	0.302	0.302	32.632	0.356	6.0	6.0	6	5.0	5.750	6
RS4yr	0.373	0.373	41.667	0.529	7.0	7.0	7	8.0	7.250	7
RSC	0.429	0.429	46.362	0.507	8.0	8.0	8	7.0	7.750	8
RS8yr	0.472	0.472	53.437	0.564	9.0	9.0	9	9.0	9.000	9
RS1	0.862	0.867	97.947	1.344	10.0	10.0	10	11.0	10.250	10
RS2	0.967	0.975	111.949	1.199	11.0	11.0	11	10.0	10.750	11

(Total)-Other

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
TSA	-0.151	0.213	1.104	0.438	3.0	1.0	1	2.0	1.750	1
RAC	-0.157	0.222	1.322	0.434	4.0	2.0	2	1.0	2.250	2
LLY	0.187	0.272	1.609	0.489	5.0	3.0	3	3.0	3.500	3
R1C	0.041	0.310	2.552	0.551	1.0	4.0	4	5.0	3.500	4
R2C	0.060	0.332	8.278	0.518	2.0	5.0	5	4.0	4.000	5
RSC	1.279	1.351	25.261	2.048	6.0	6.0	6	6.0	6.000	6
MRS	1.299	1.354	29.937	2.153	7.0	7.0	7	7.0	7.000	7
RS1	1.799	1.805	34.866	2.666	8.0	8.0	9	8.0	8.250	8
RS2	1.938	2.031	33.170	2.729	9.0	9.0	8	9.0	8.750	9
RS8yr	2.263	2.270	54.736	3.565	10.0	10.0	10	11.0	10.250	10
RS4yr	2.315	2.319	68.615	3.472	11.0	11.0	11	10.0	10.750	11

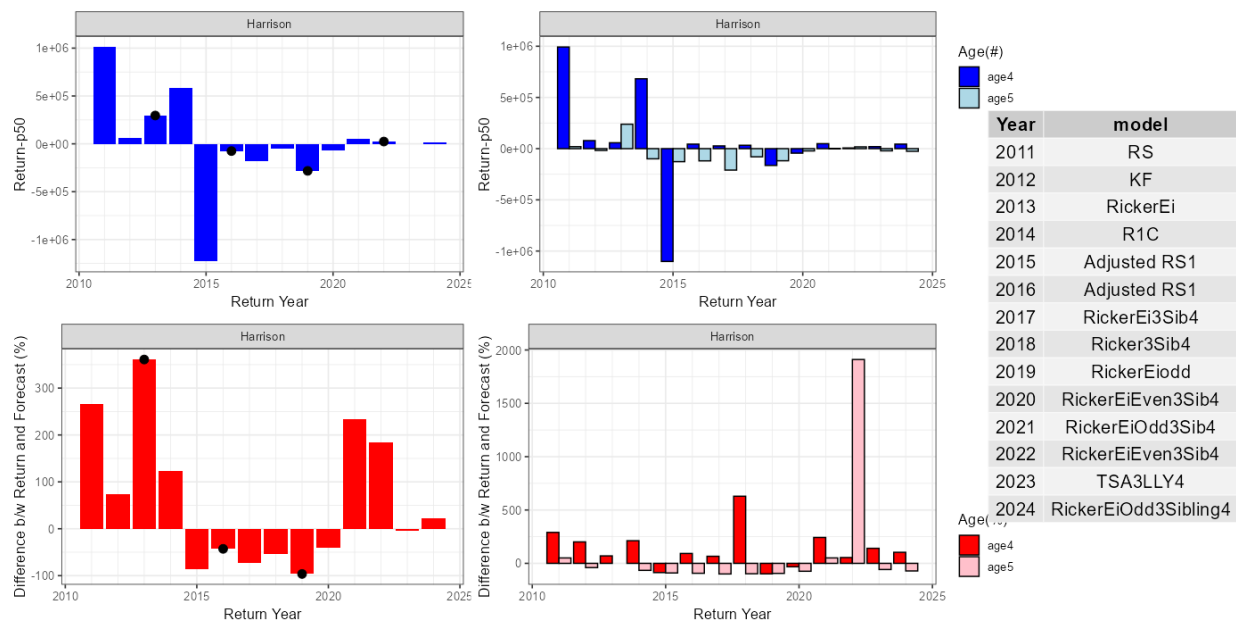
(Age4)-Other

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall rank
LLY	-0.020	0.175	0.751	0.295	2.0	2.0	1	2.0	1.750	1
sibling4	0.014	0.050	4.528	0.071	1.0	1.0	5	1.0	2.000	2
TSA	-0.170	0.184	1.394	0.419	5.0	3.0	2	4.5	3.625	3
RAC	-0.172	0.192	1.904	0.418	6.0	4.0	3	3.0	4.000	4
R1C	-0.086	0.213	2.759	0.419	4.0	5.0	4	4.5	4.375	5
R2C	-0.076	0.216	12.106	0.425	3.0	6.0	6	6.0	5.250	6
RSC	0.549	0.735	45.214	1.118	7.0	7.0	7	7.0	7.000	7
MRS	0.638	0.801	62.855	1.249	8.0	8.0	10	8.0	8.500	8
RS1	0.815	0.938	59.320	1.319	10.0	9.0	9	9.0	9.250	9
RS2	0.786	0.974	52.197	1.356	9.0	10.0	8	10.0	9.250	10
RS8yr	1.173	1.312	116.090	2.053	11.0	11.0	11	11.0	11.000	11
RS4yr	1.257	1.328	155.551	2.113	12.0	12.0	12	12.0	12.000	12

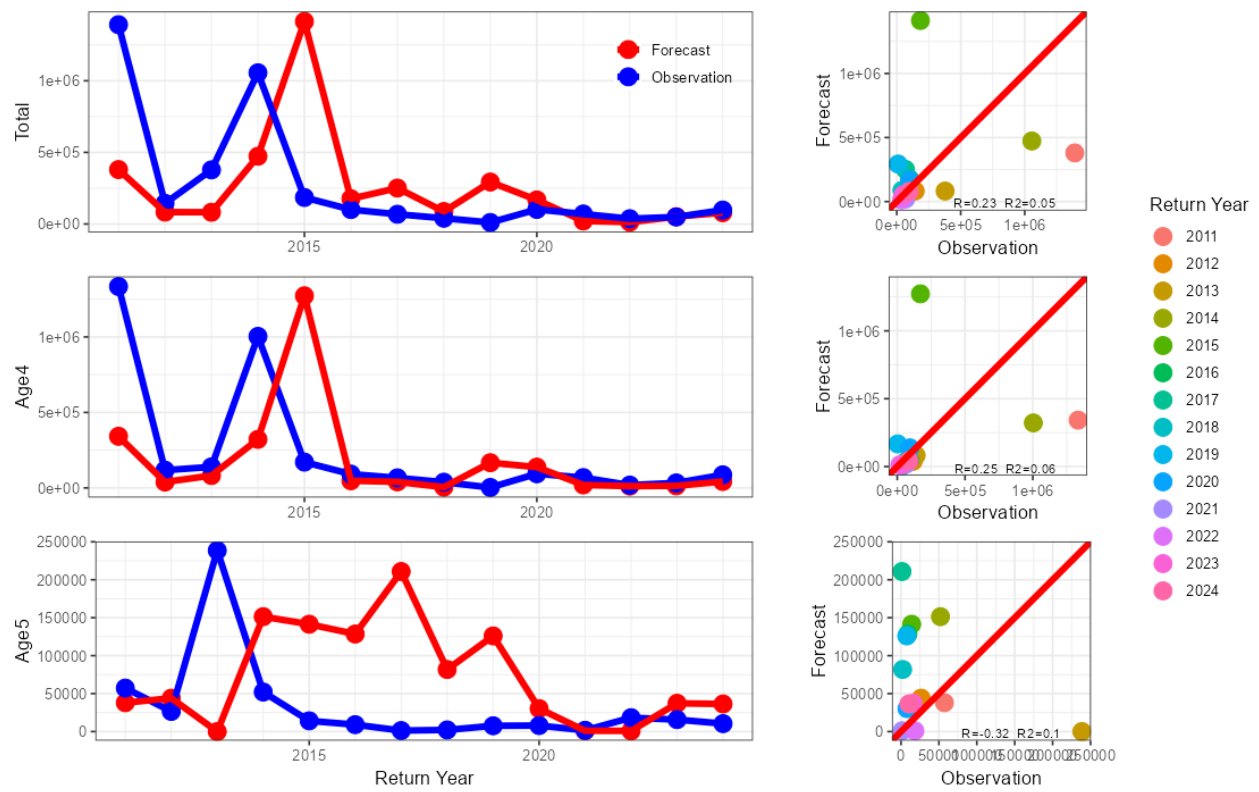
(Age5)-Other

model	MRE	MAE	MPE	RMSE	MRE rank	MAE rank	MPE rank	RMSE rank	average	Overall_rank
RAC	0.015	0.060	10.763	0.079	1.0	1.0	1	1.0	1.000	1
TSA	0.018	0.065	12.170	0.083	2.0	2.0	2	2.0	2.000	2
R1C	0.127	0.135	27.436	0.265	3.0	3.0	4	4.0	3.500	3
R2C	0.136	0.141	35.817	0.211	4.0	4.0	5	3.0	4.000	4
LLY	0.207	0.240	17.576	0.374	5.0	5.0	3	5.0	4.500	5
MRS	0.661	0.661	114.340	1.122	6.0	6.0	7	6.0	6.250	6
RSC	0.730	0.731	116.241	1.193	7.0	7.0	8	7.0	7.250	7
RS1	0.984	0.989	73.826	1.589	8.0	8.0	6	8.0	7.500	8
RS4yr	1.058	1.059	221.244	1.645	9.0	9.0	11	9.0	9.500	9
RS2	1.152	1.156	148.595	1.663	11.0	11.0	9	10.0	10.250	10
RS8yr	1.090	1.090	205.313	1.818	10.0	10.0	10	11.0	10.250	11

Diff



FC-TS



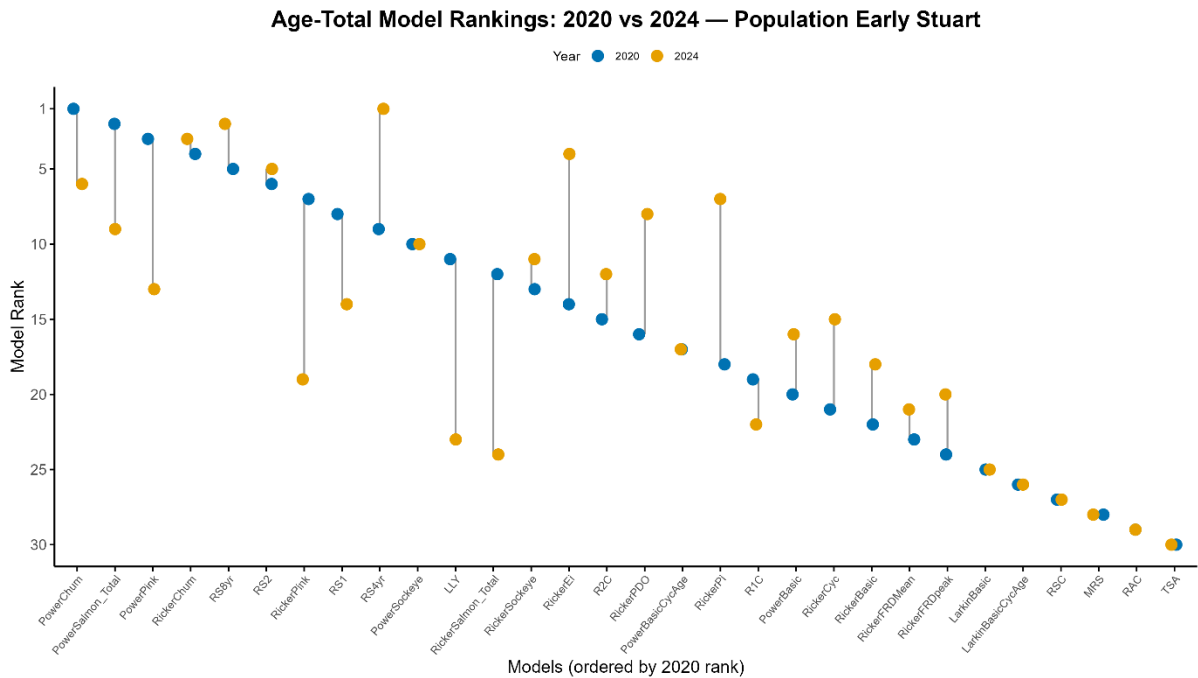
Appendix D. Comparison of 2020 and 2024 Retrospective Analysis

Individual Stock Model Comparisons

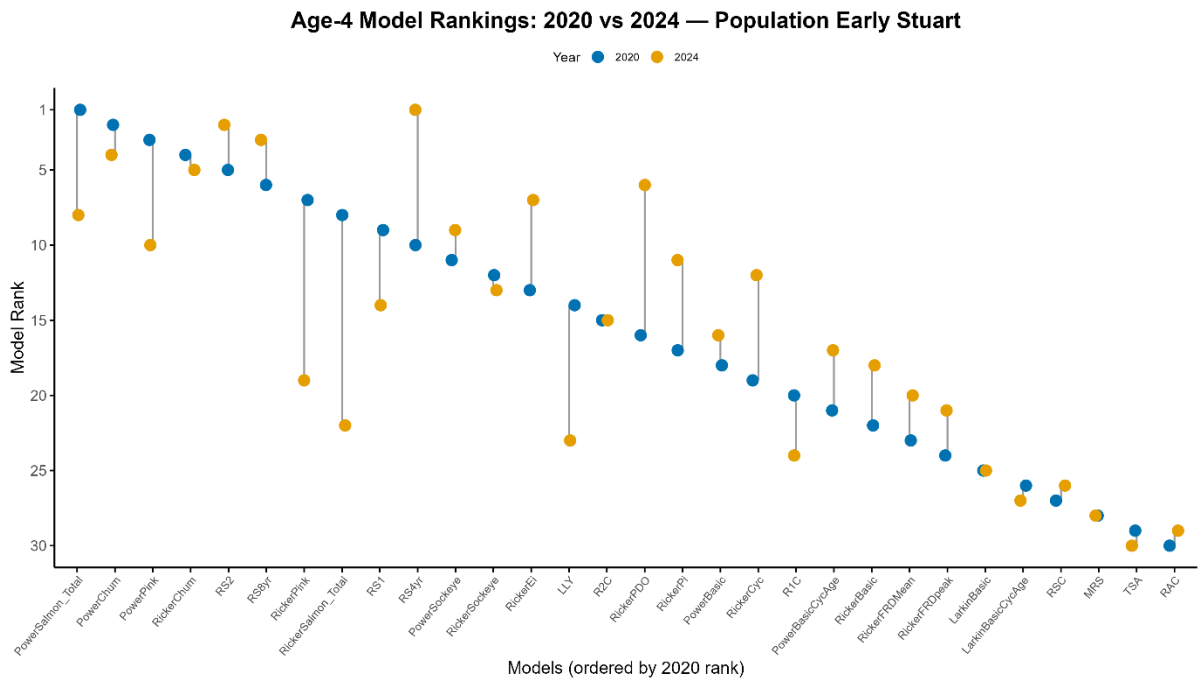
The figures below compare retrospective model rankings from the 2022 retrospective analysis (using data between 2009 – 2020) with the updated retrospective analysis conducted for the 2026 forecast year (using data from 2011 – 2024). Model rankings are displayed on the y-axis, while models included in the 2020 retrospective analysis are shown along the x-axis. Models are ordered from highest to lowest rank based on their 2020 retrospective performance. Blue and yellow points represent the 2020 and 2024 model rankings, respectively. Plots are presented for each Conservation Unit (CU) and include rankings generated using all brood years (AllYrs) as well as age-4 and age-5 specific rankings. The AllYrs analyses include all available brood years rather than restricting the dataset to cyclic brood years only.

Early Stuart

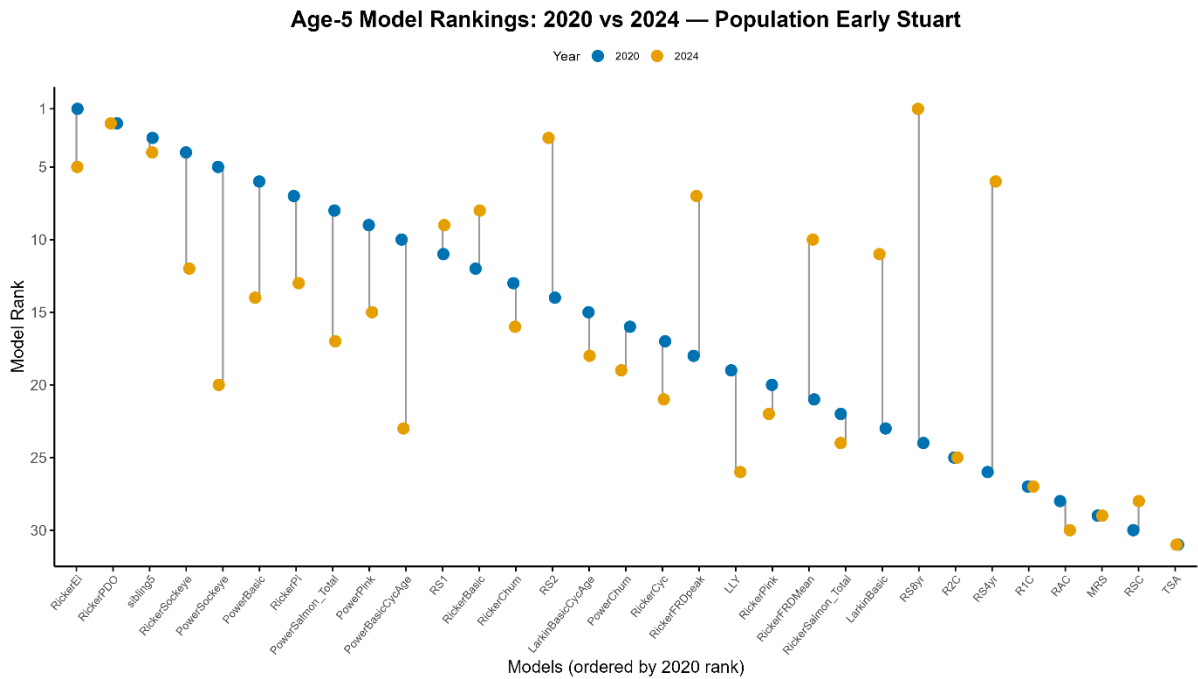
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Age4

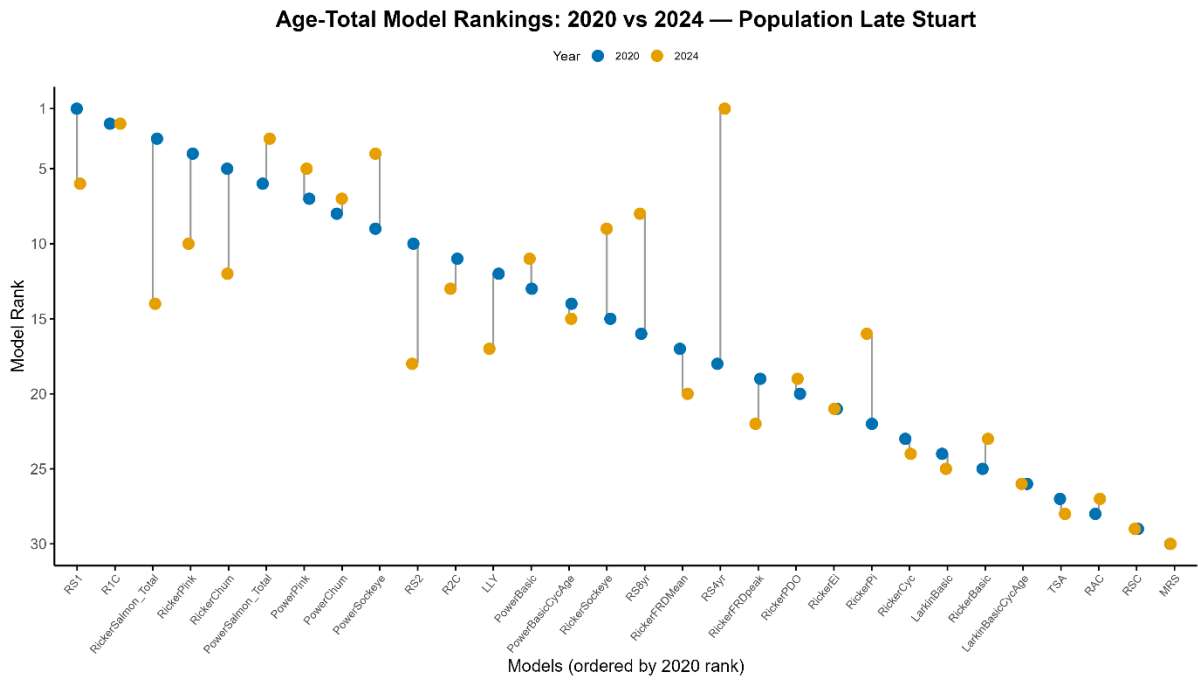


Age5

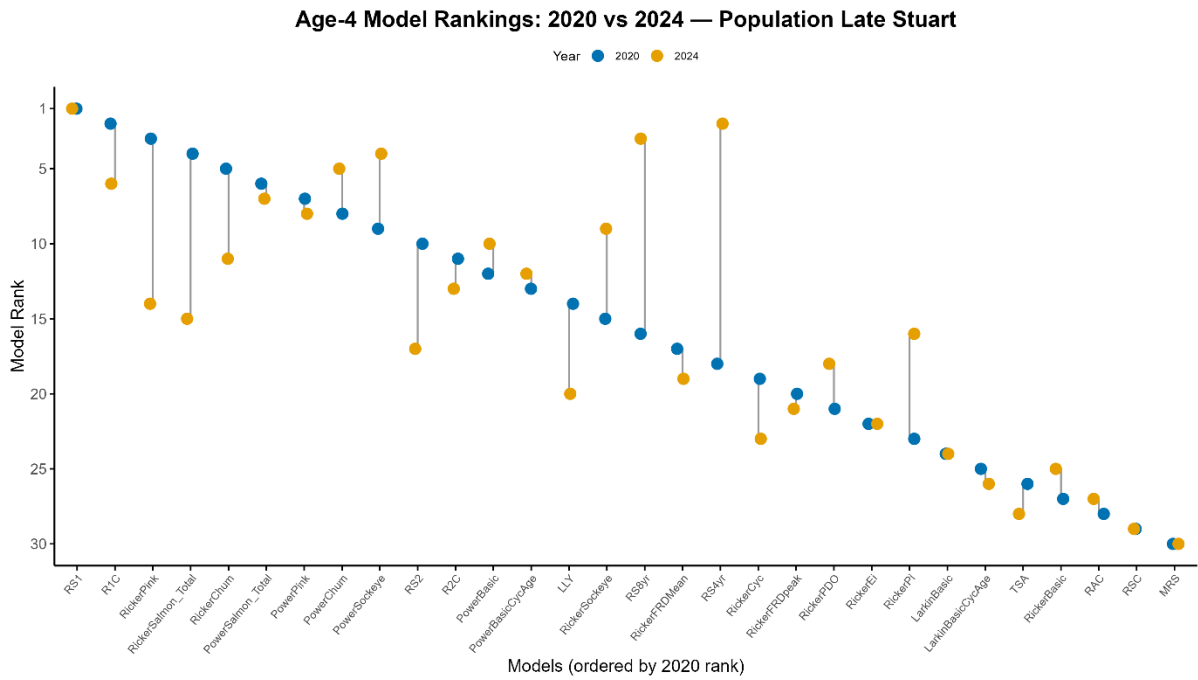


Late Stuart

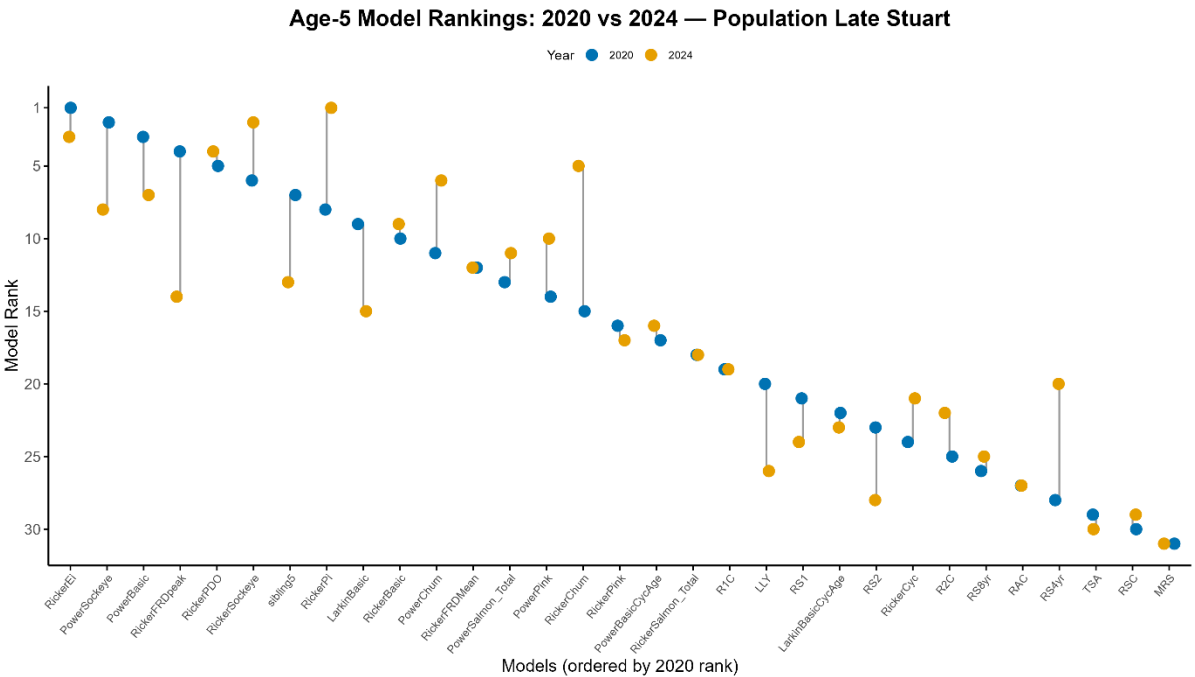
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Age4

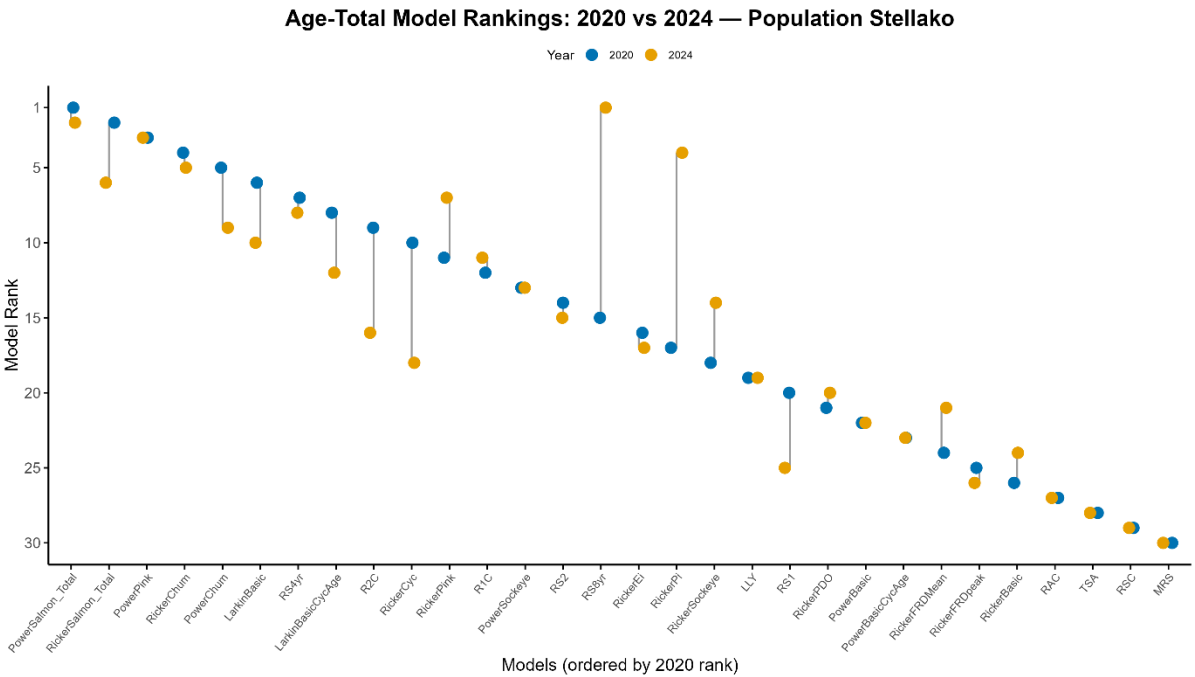


Age5

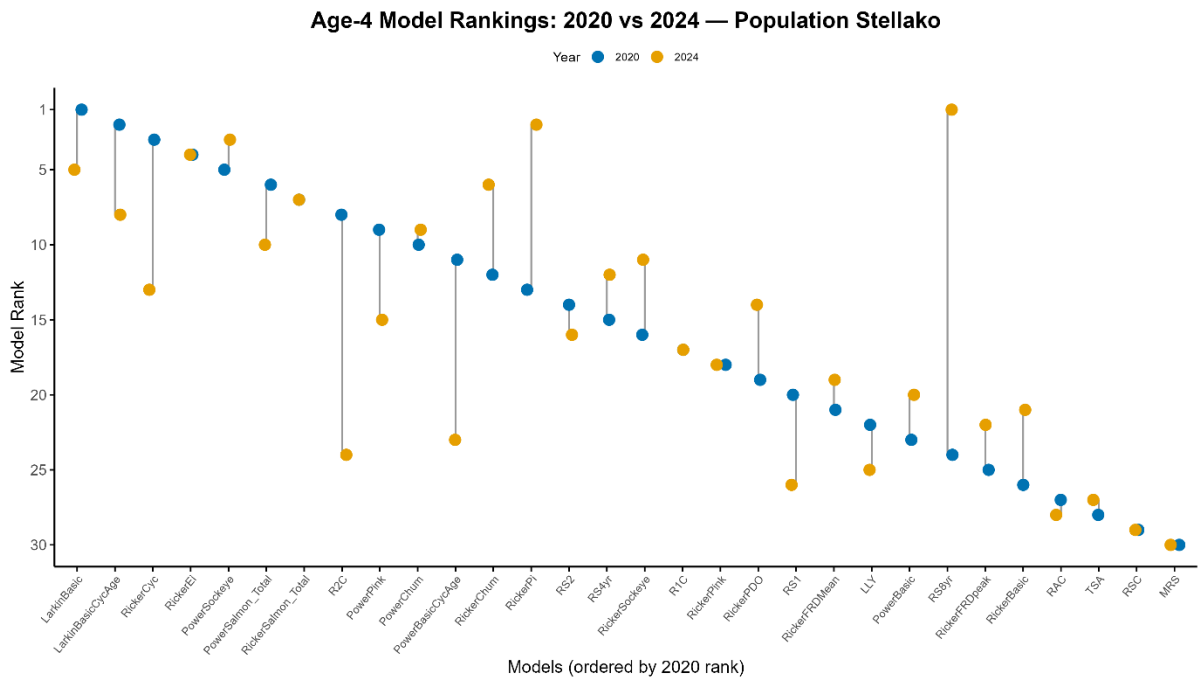


Stellako

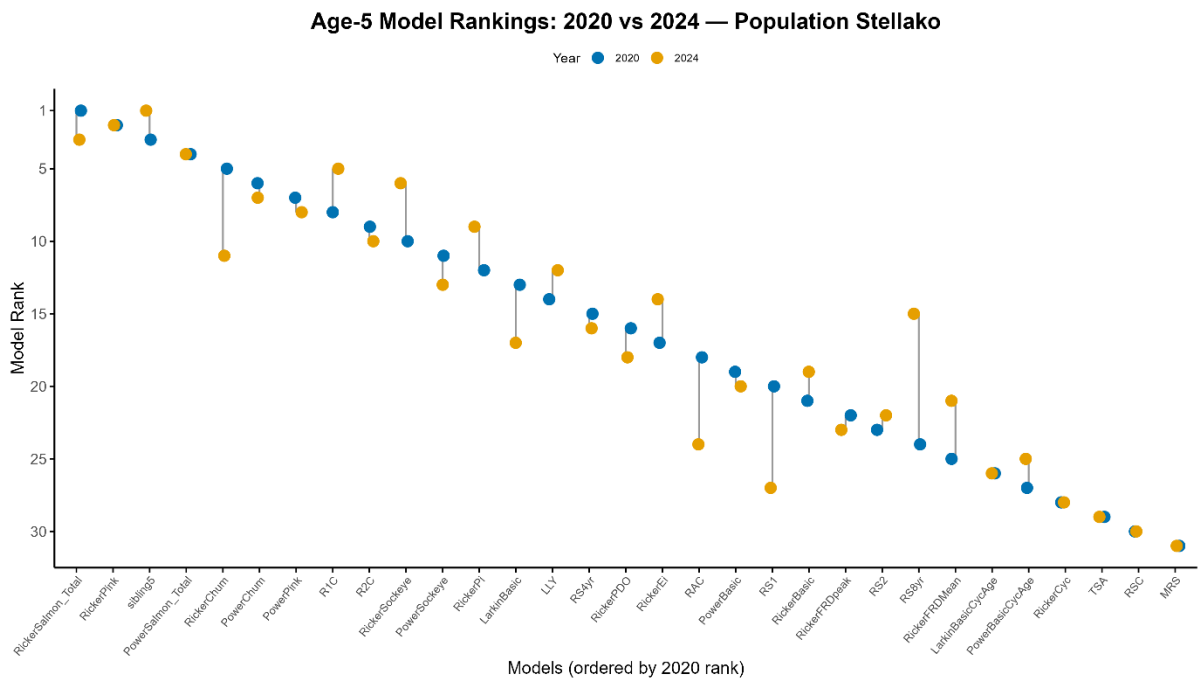
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Age4

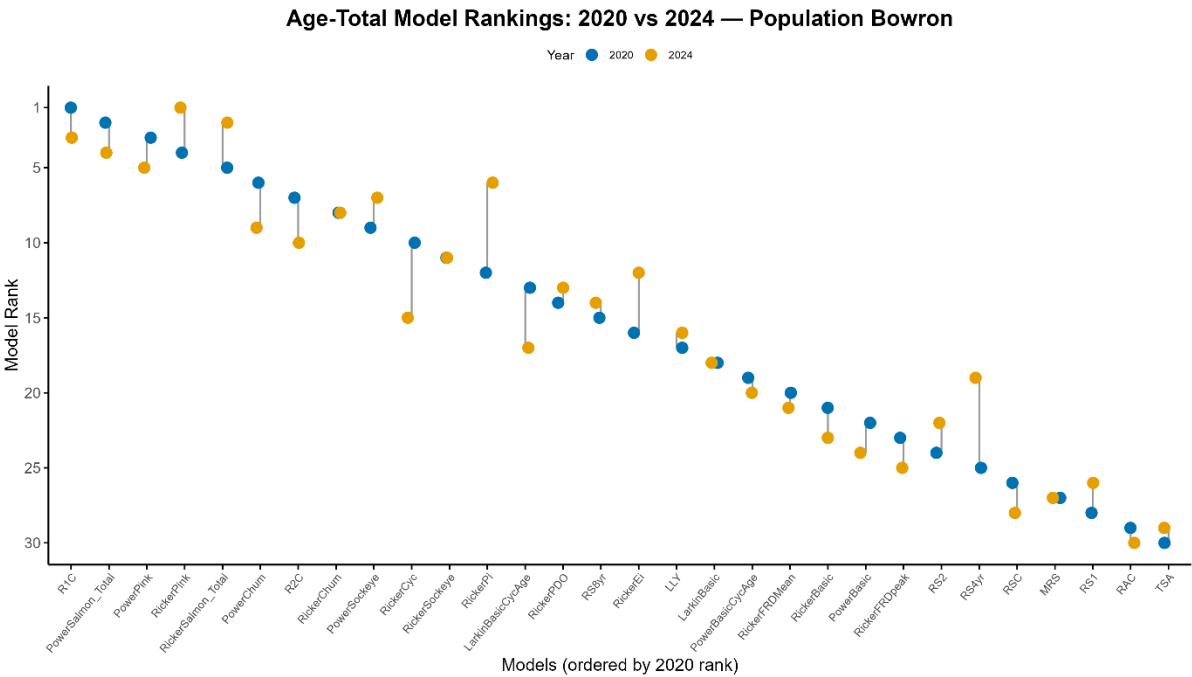


Age5

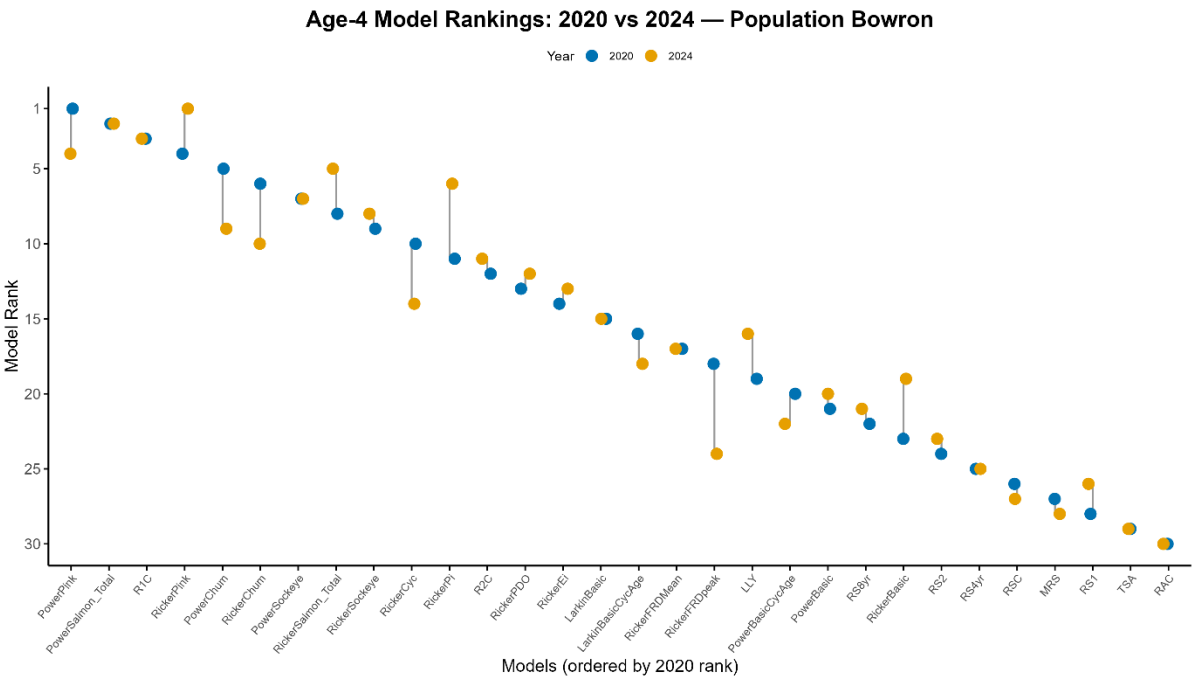


Bowron

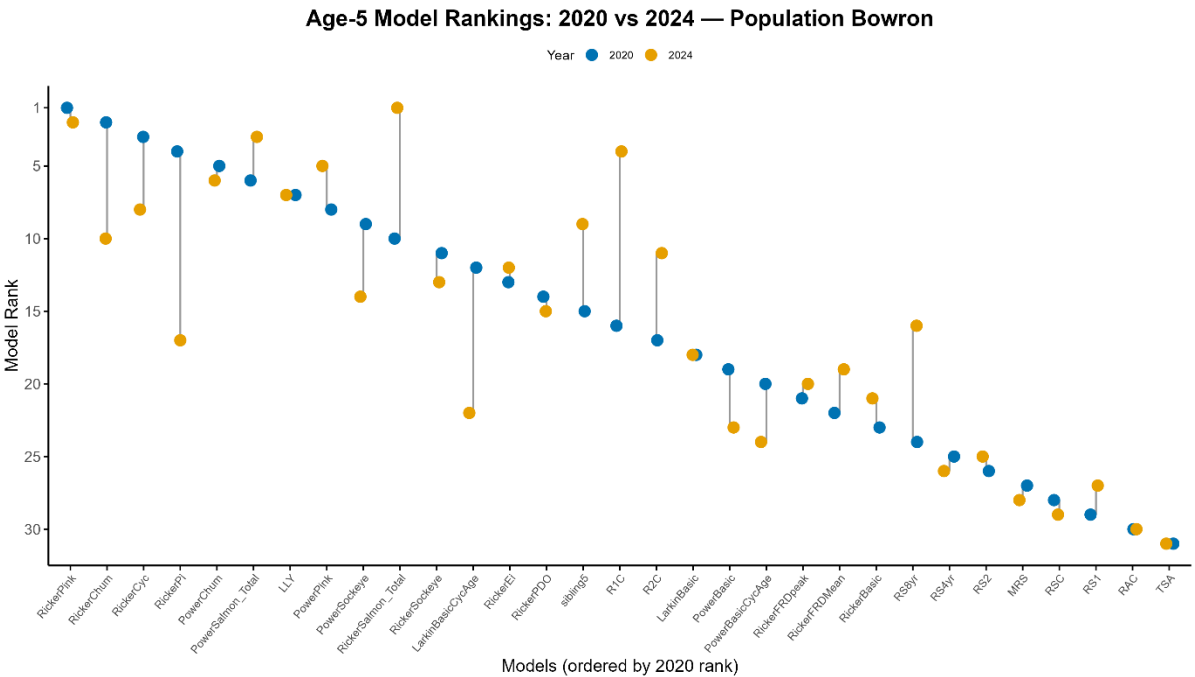
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Age4

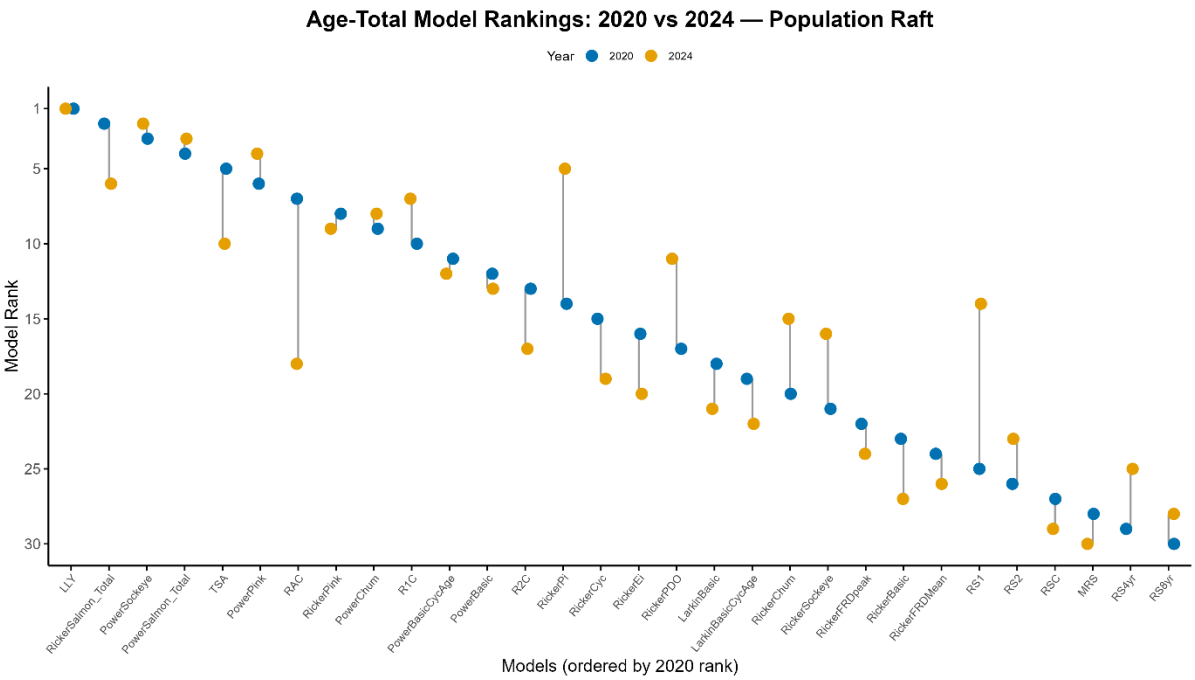


Age5

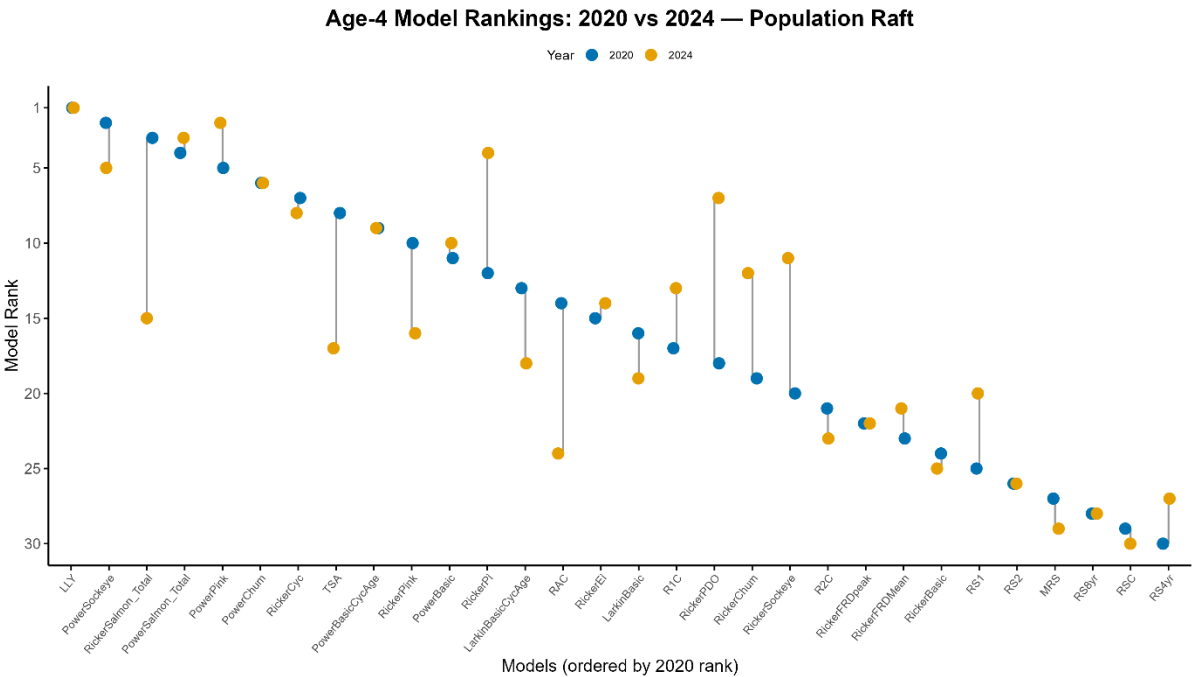


Raft

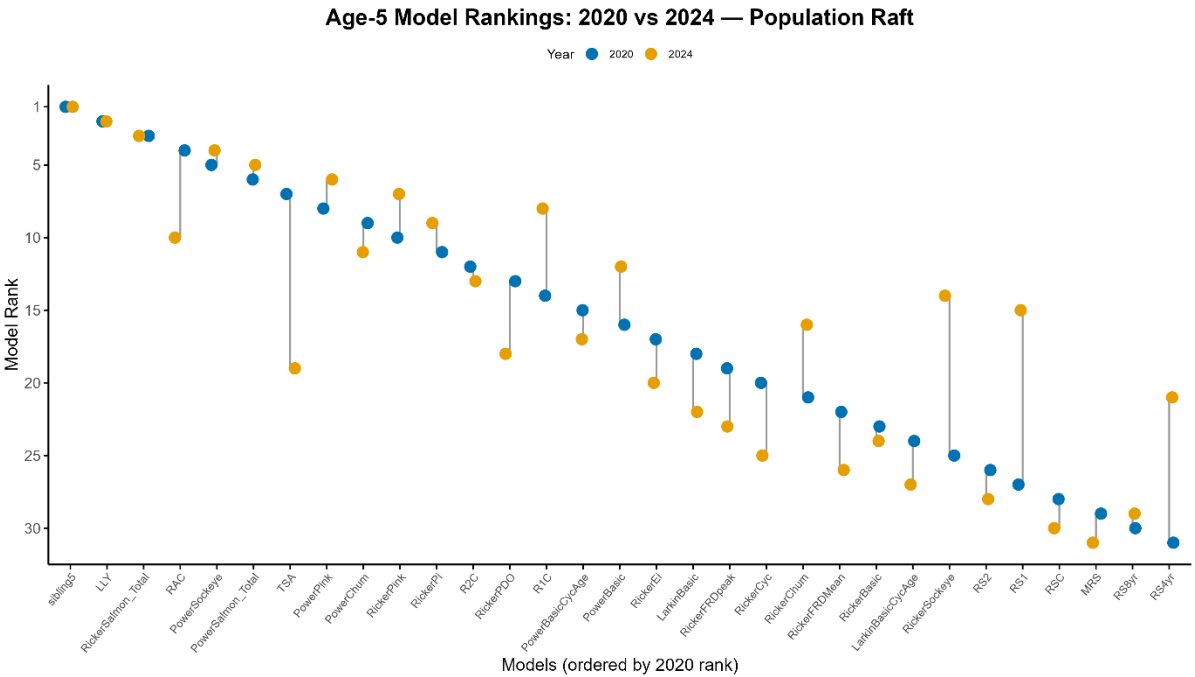
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Age4

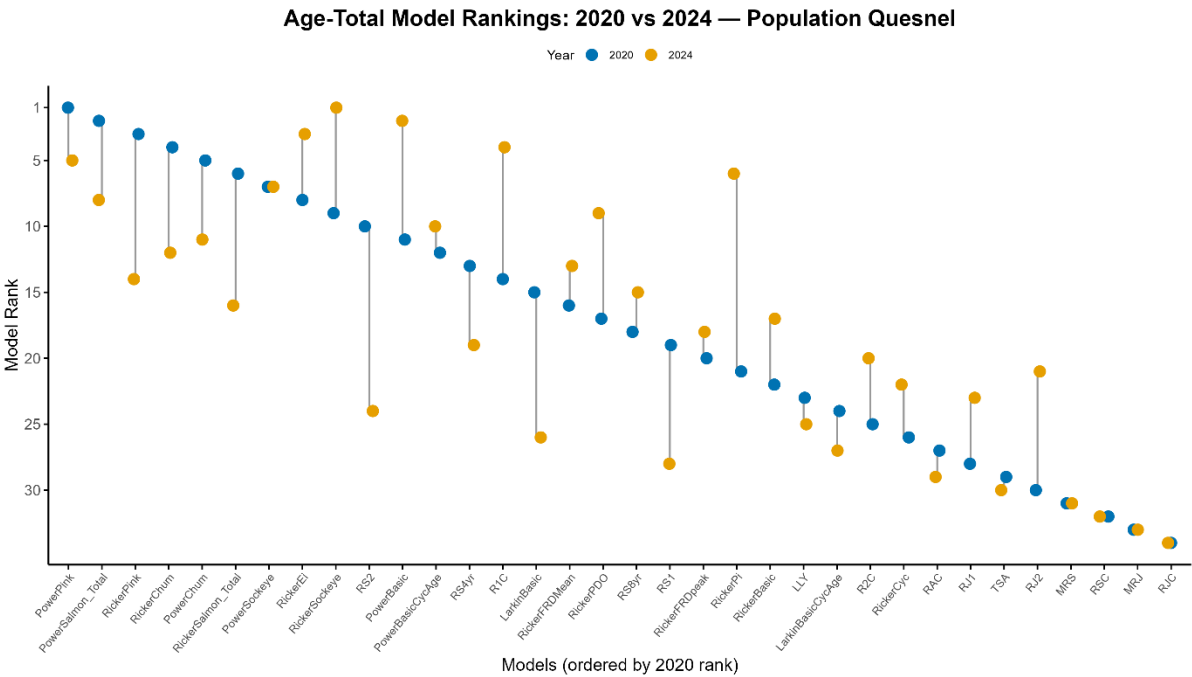


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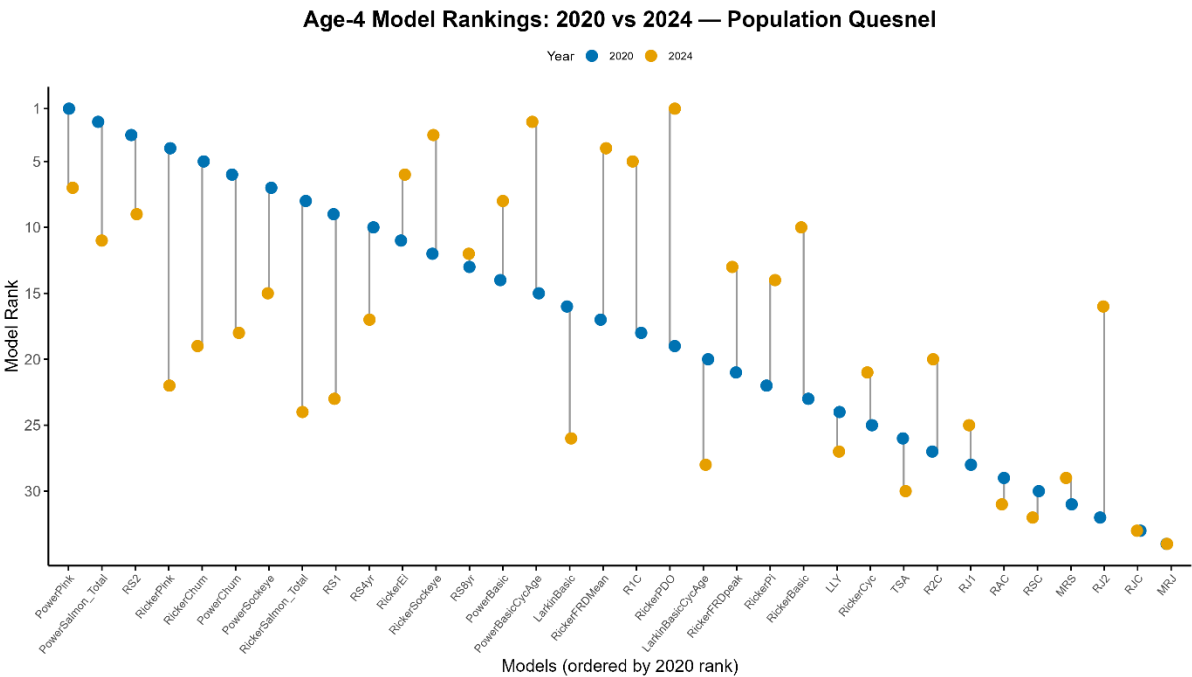


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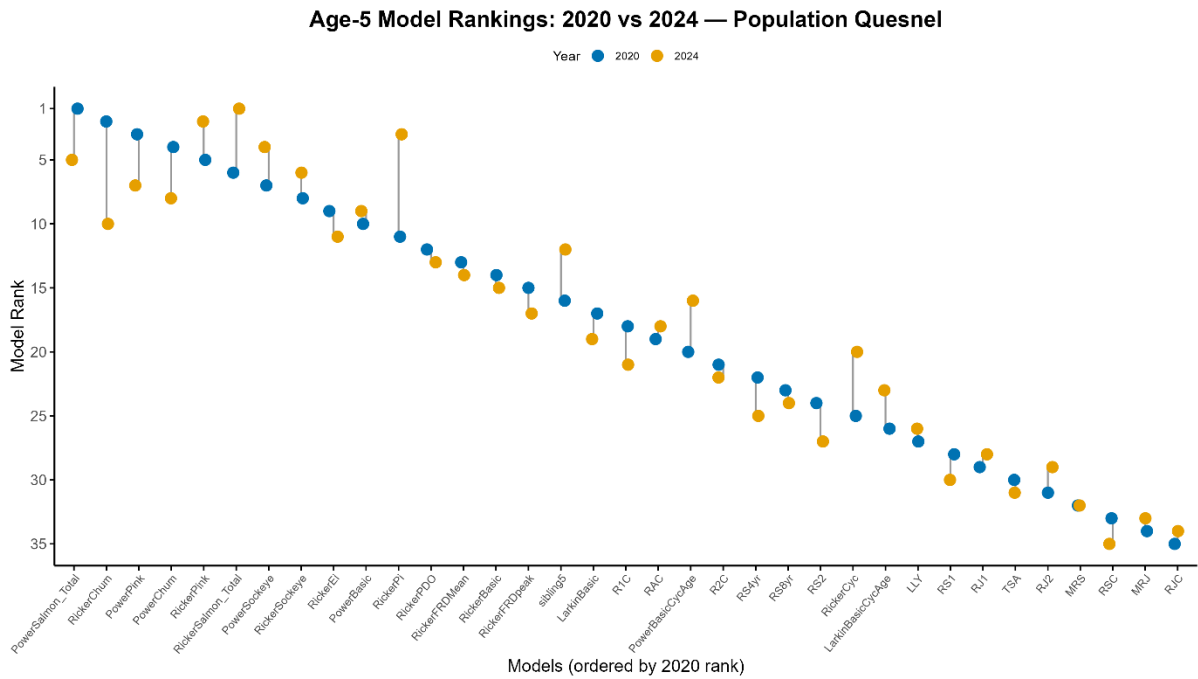
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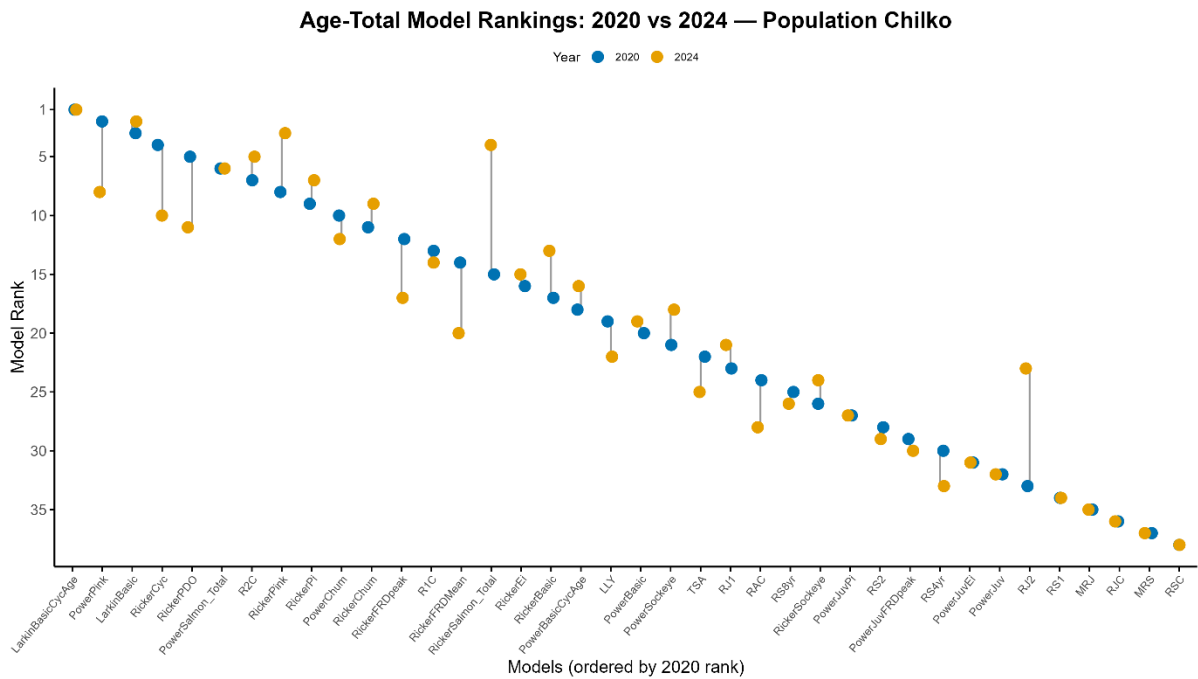


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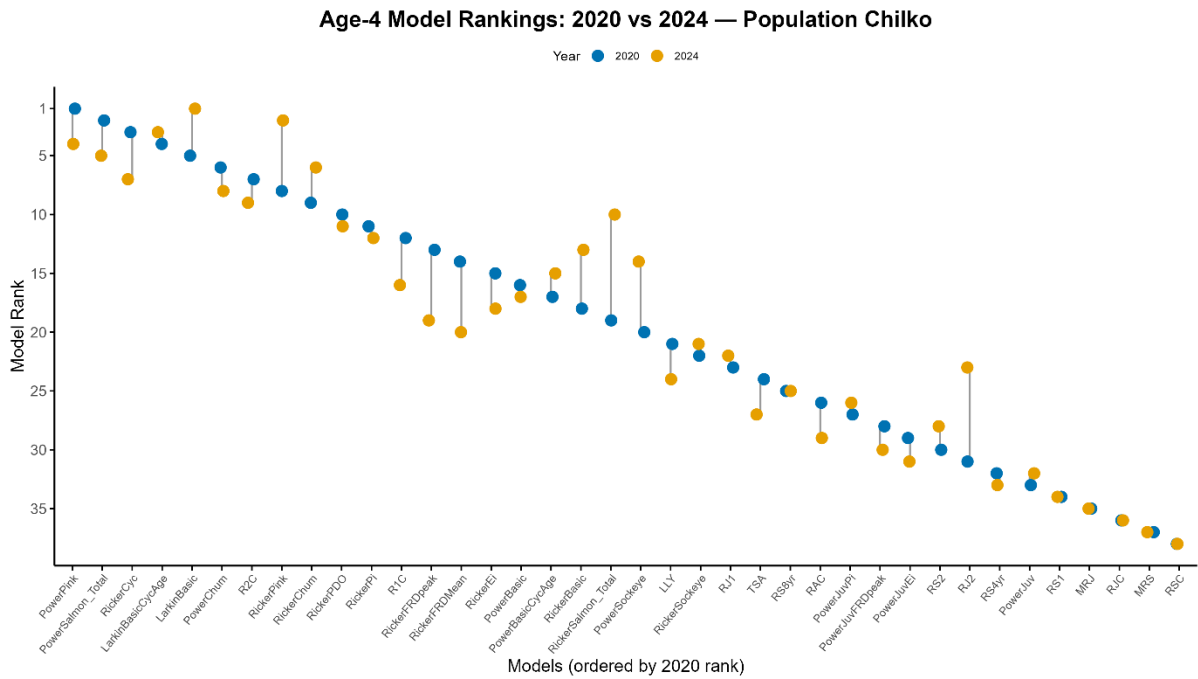


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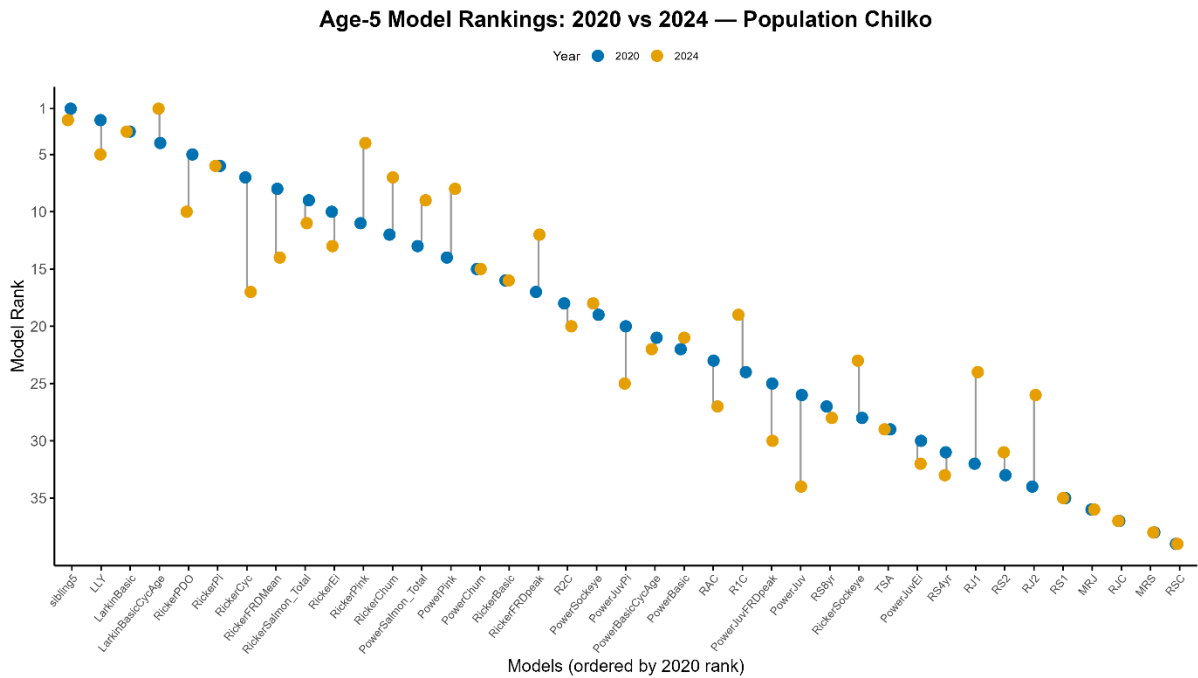
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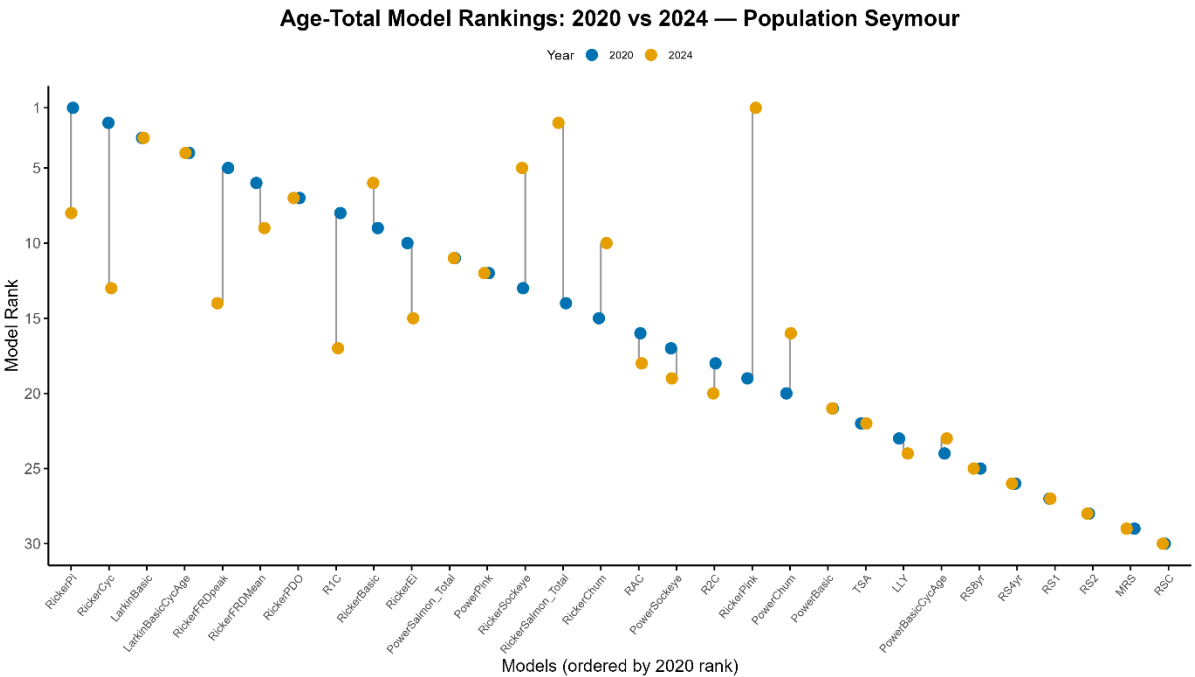


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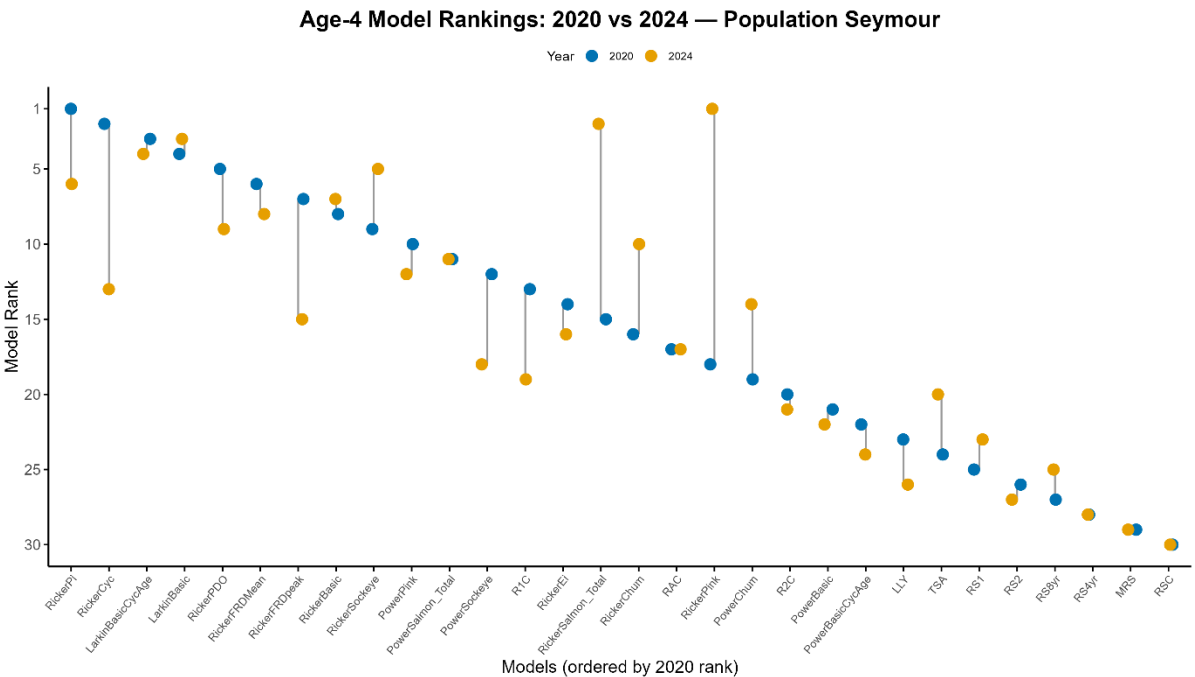


Seymour

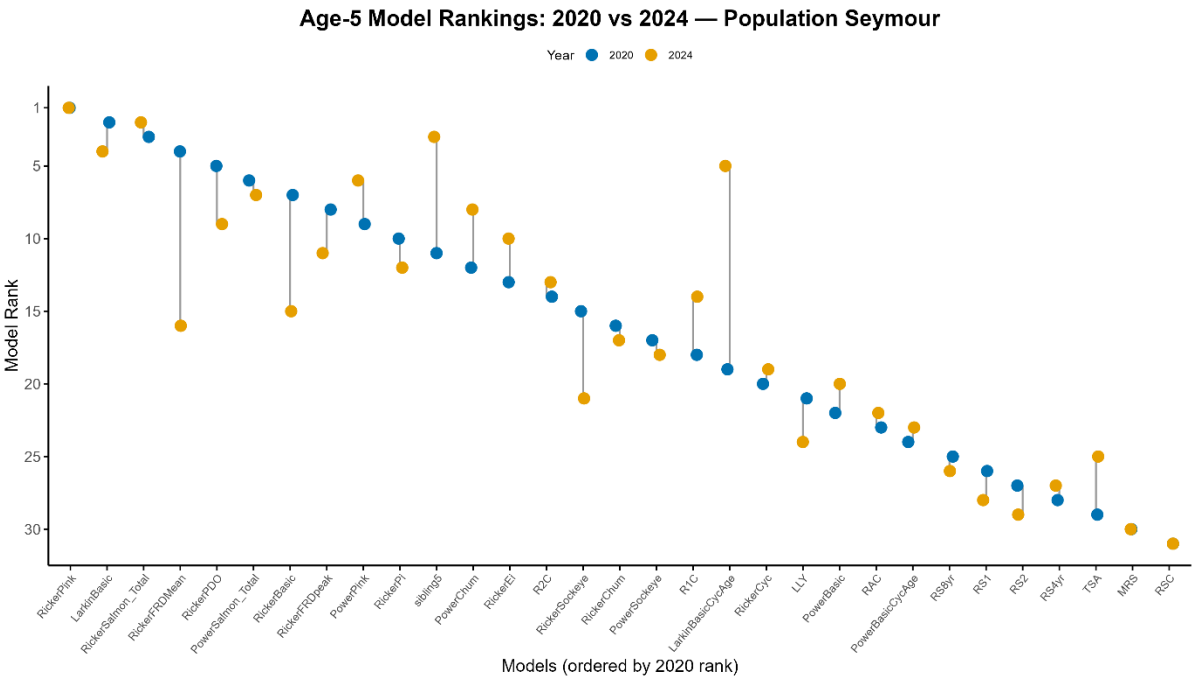
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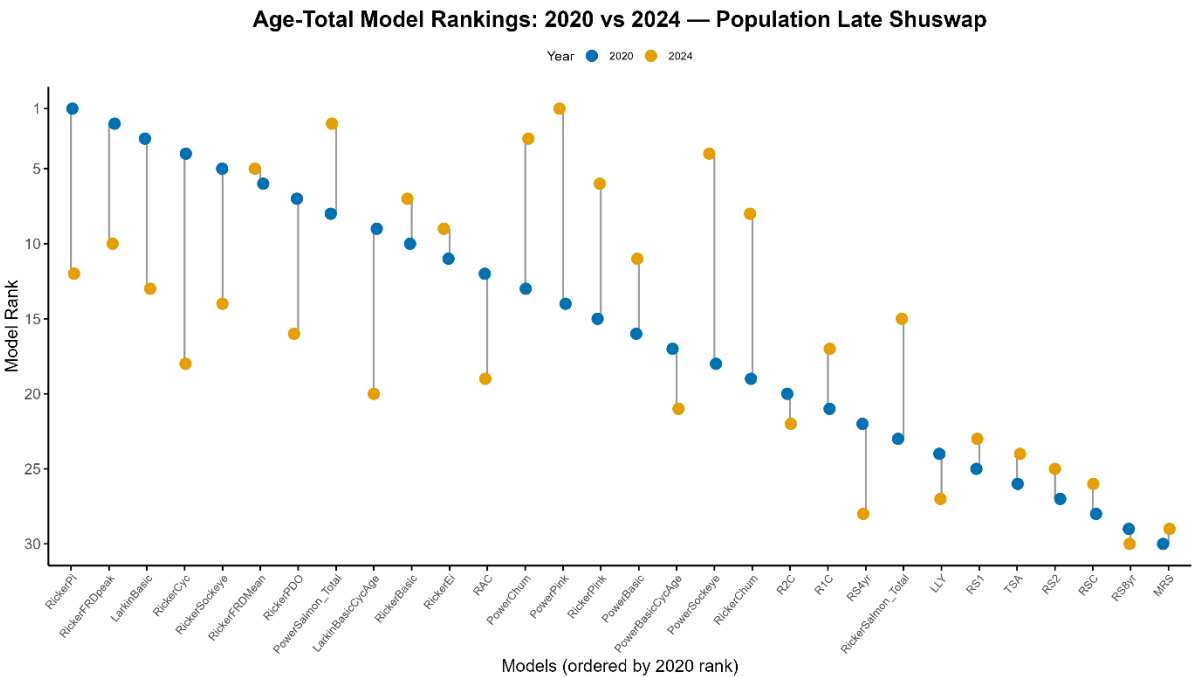


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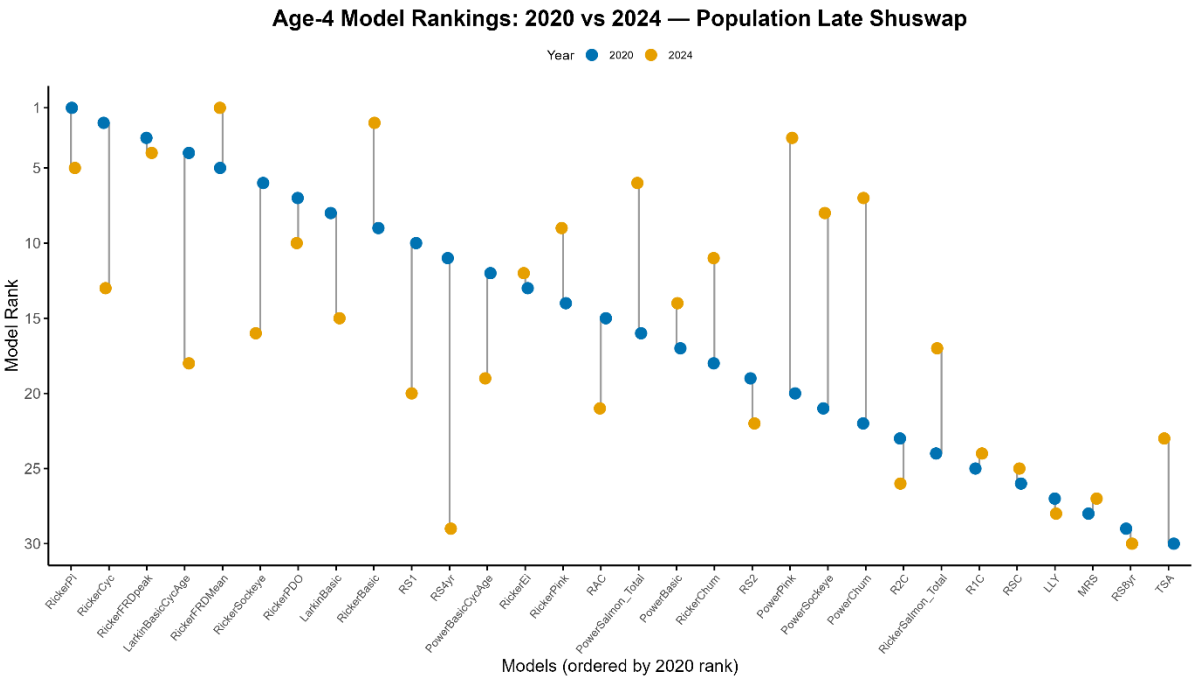


Late Shuswap

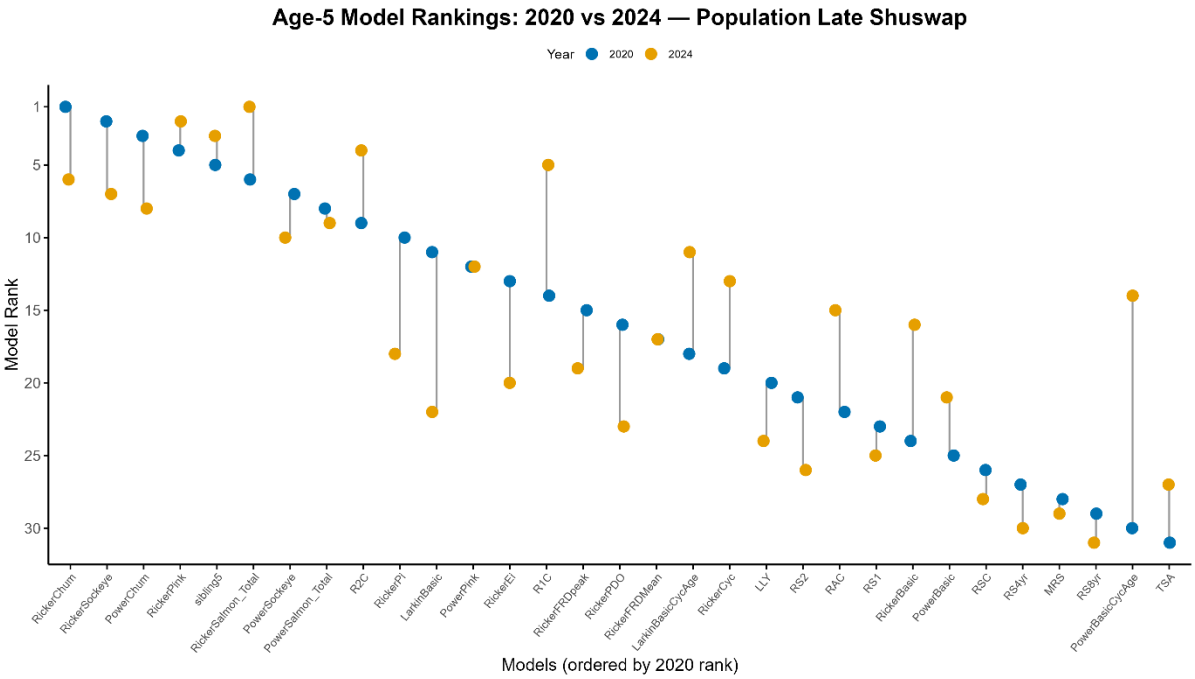
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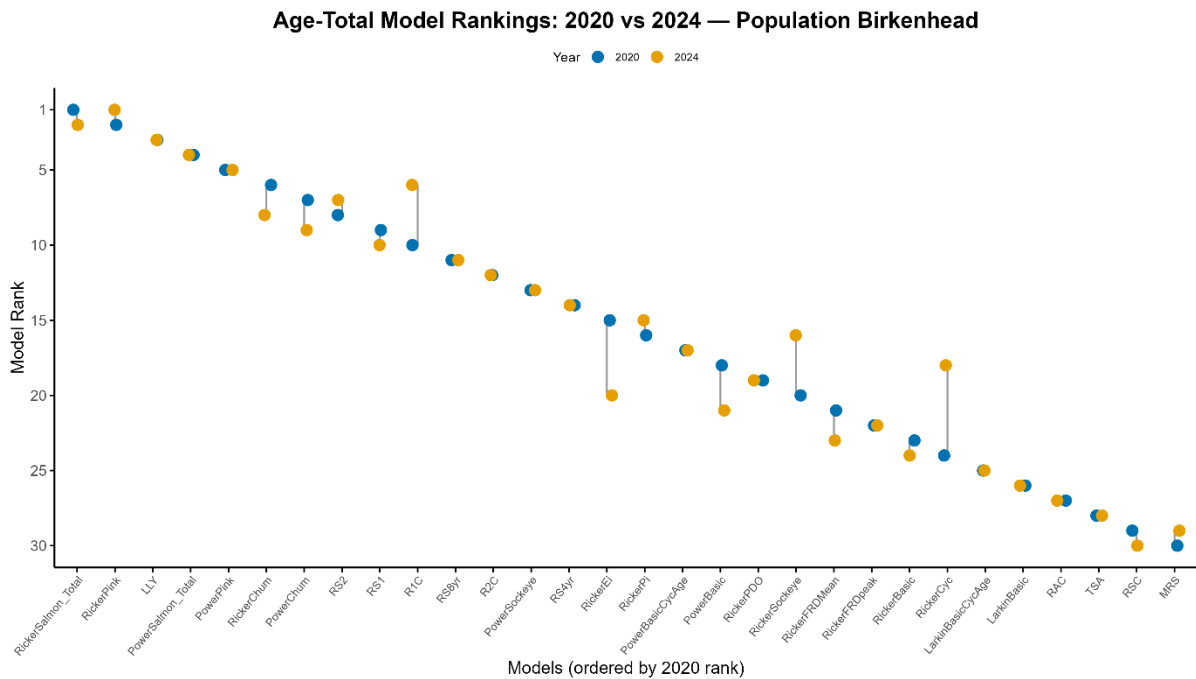


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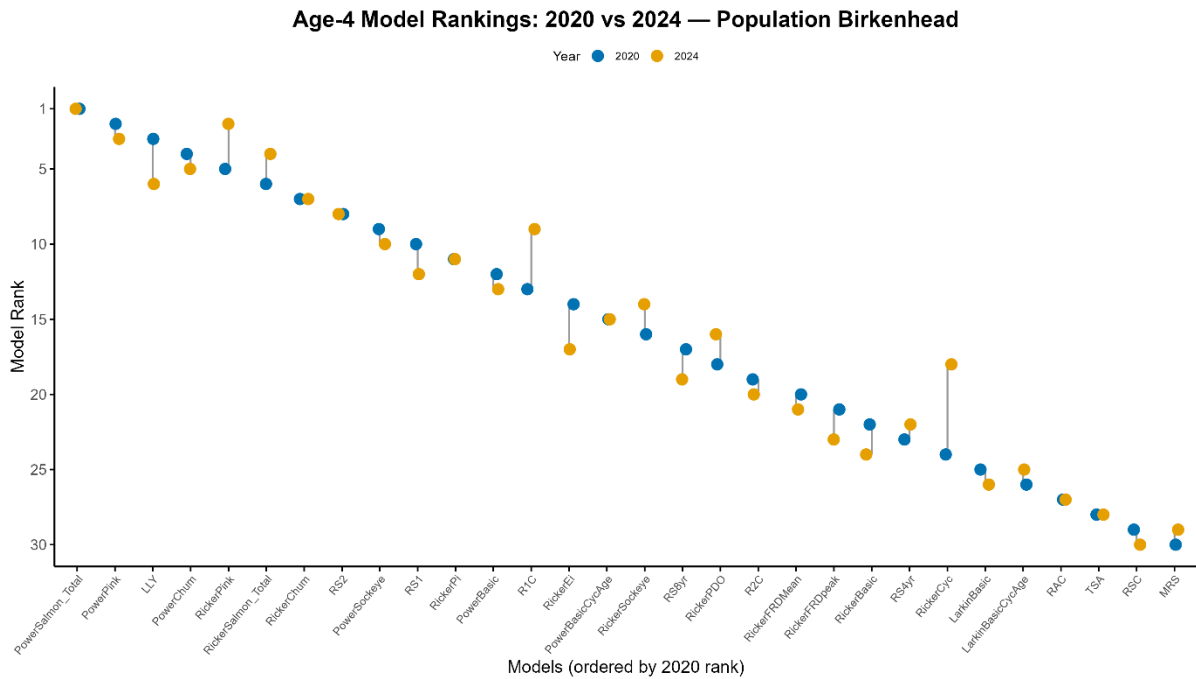


Birkenhead

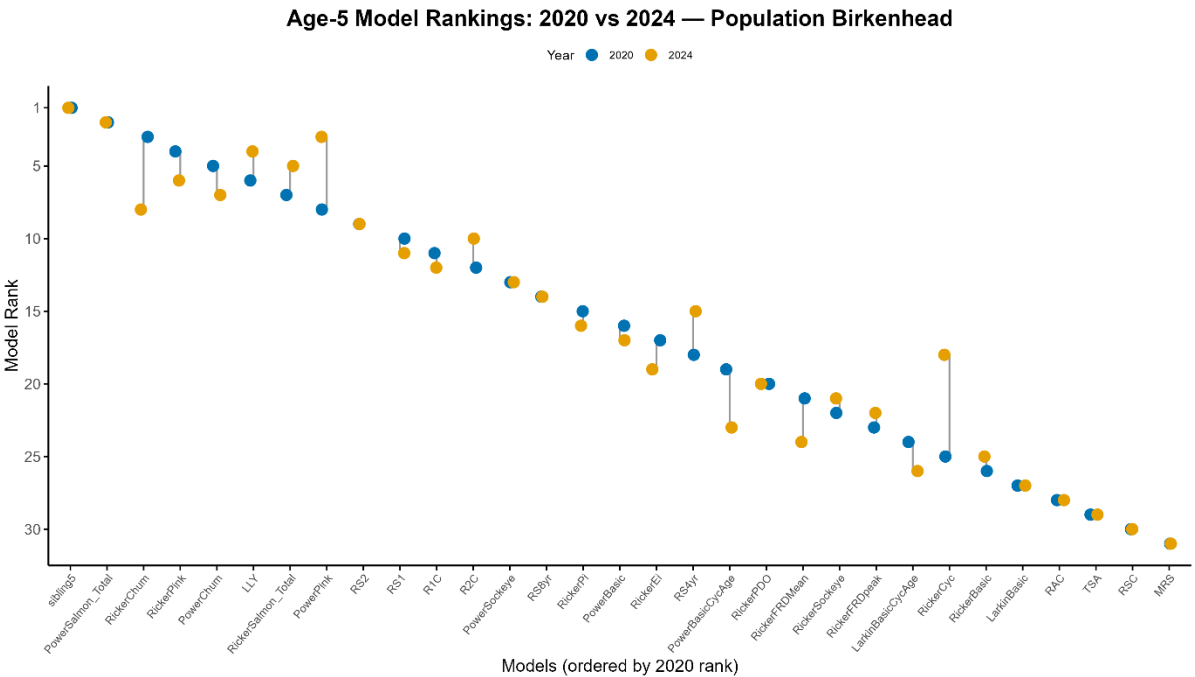
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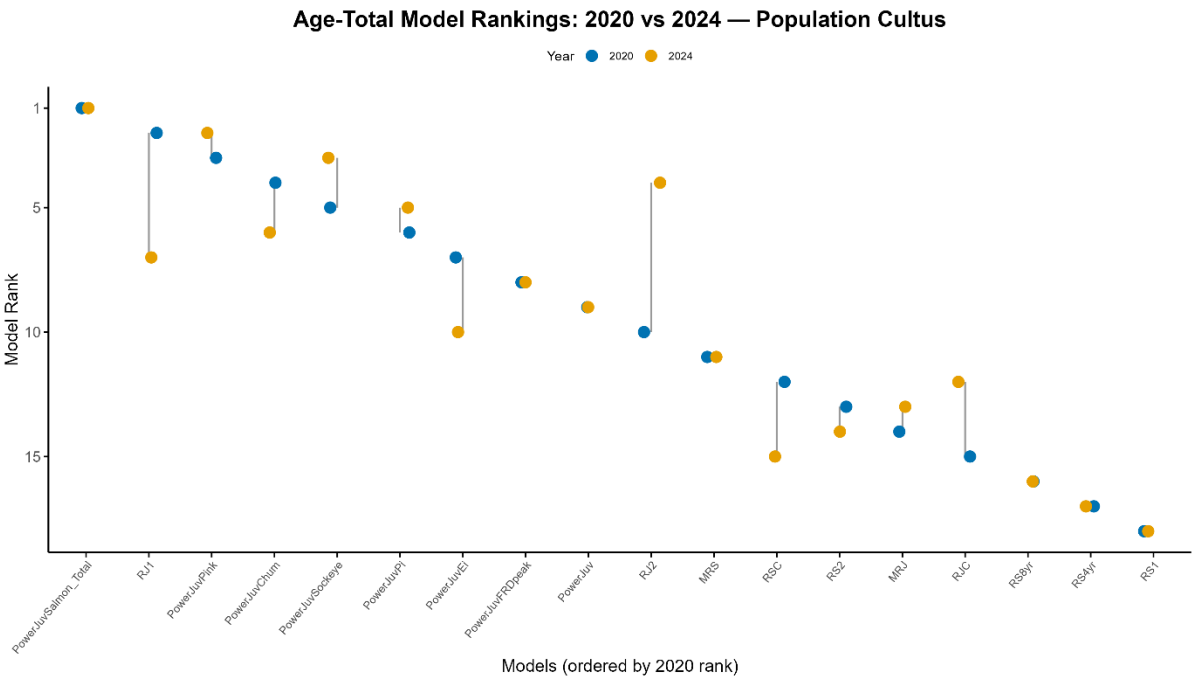


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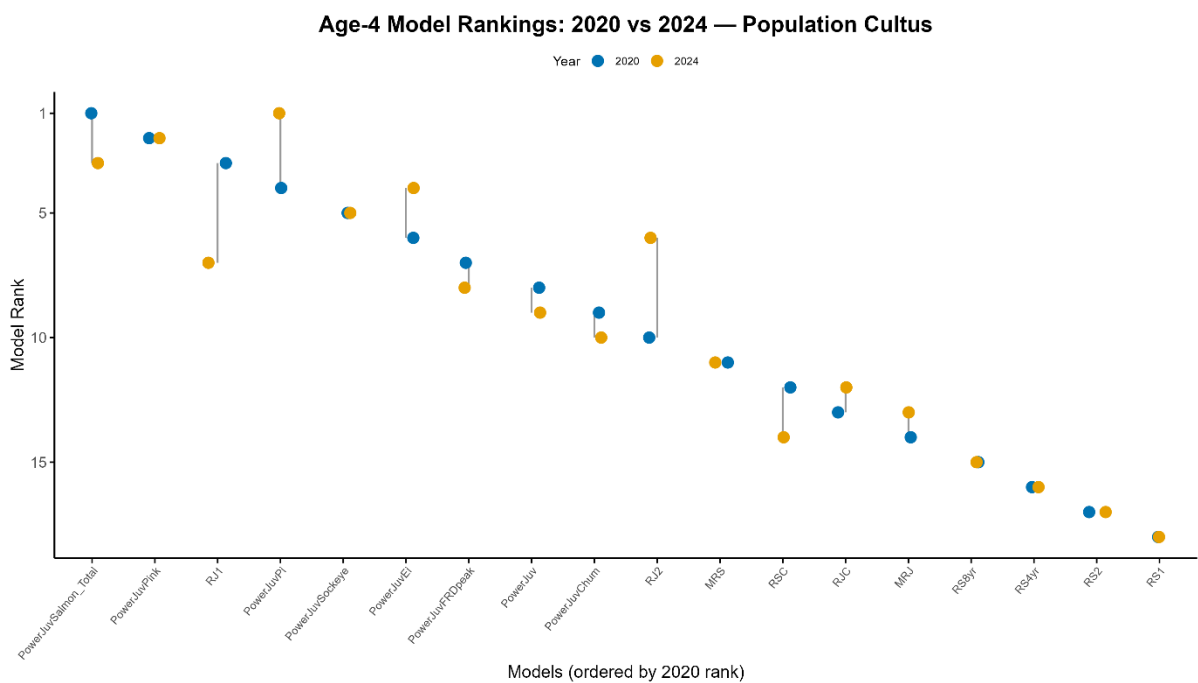


Cultus

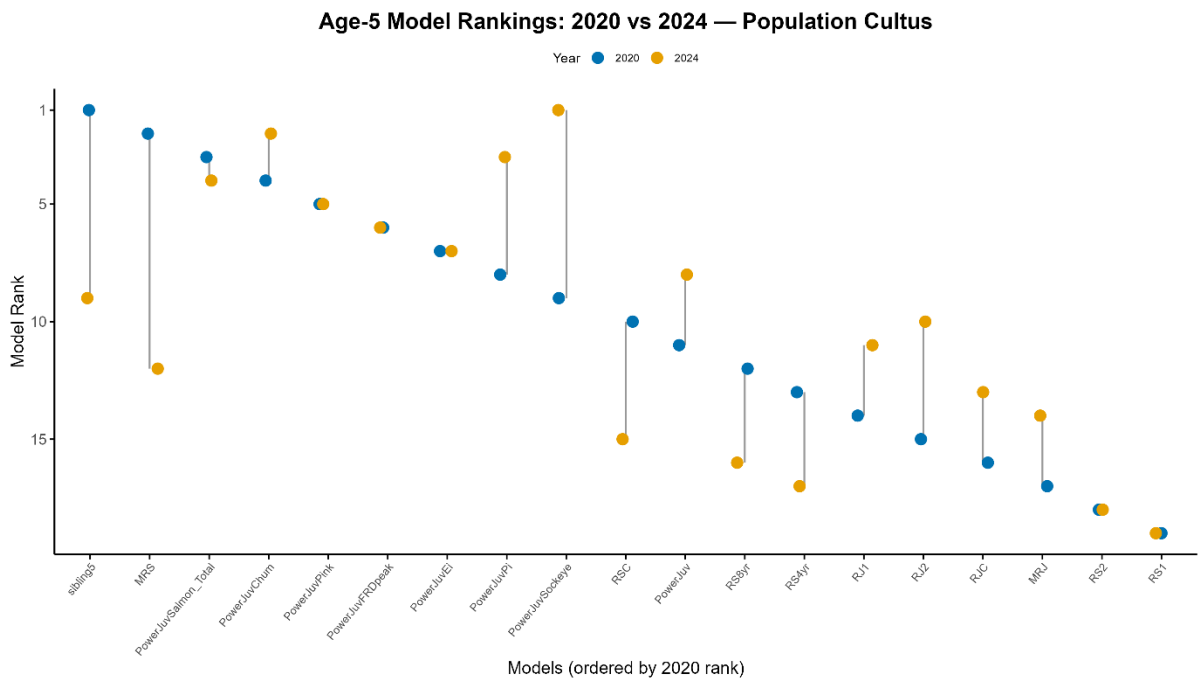
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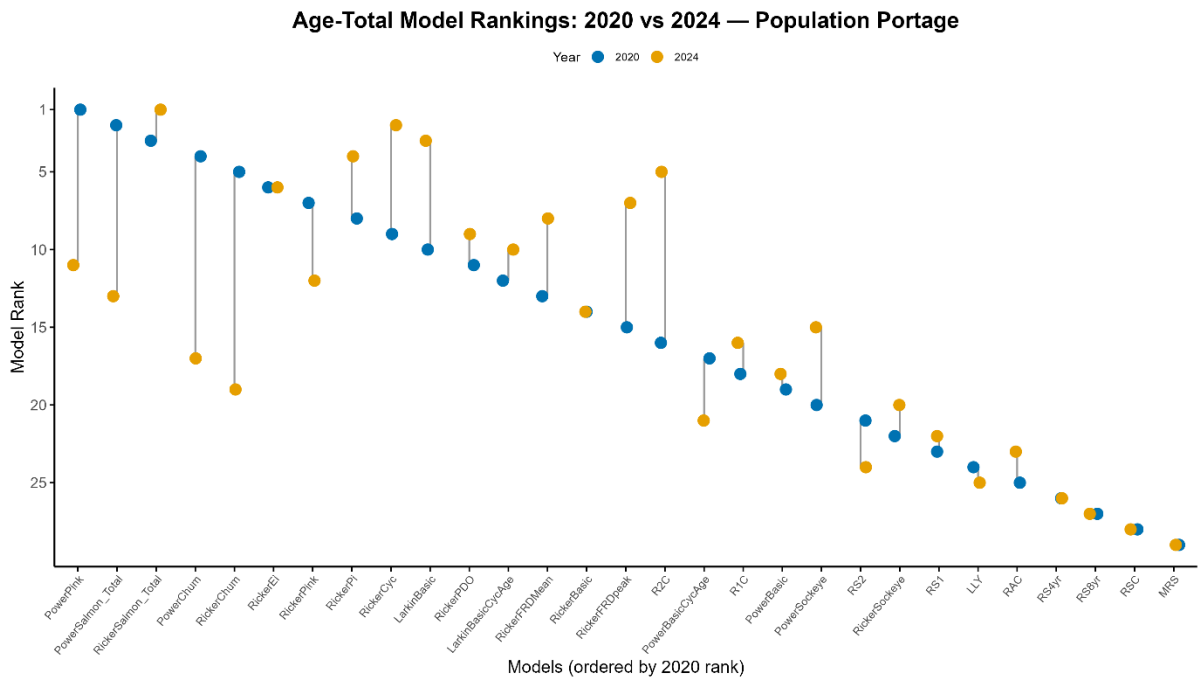


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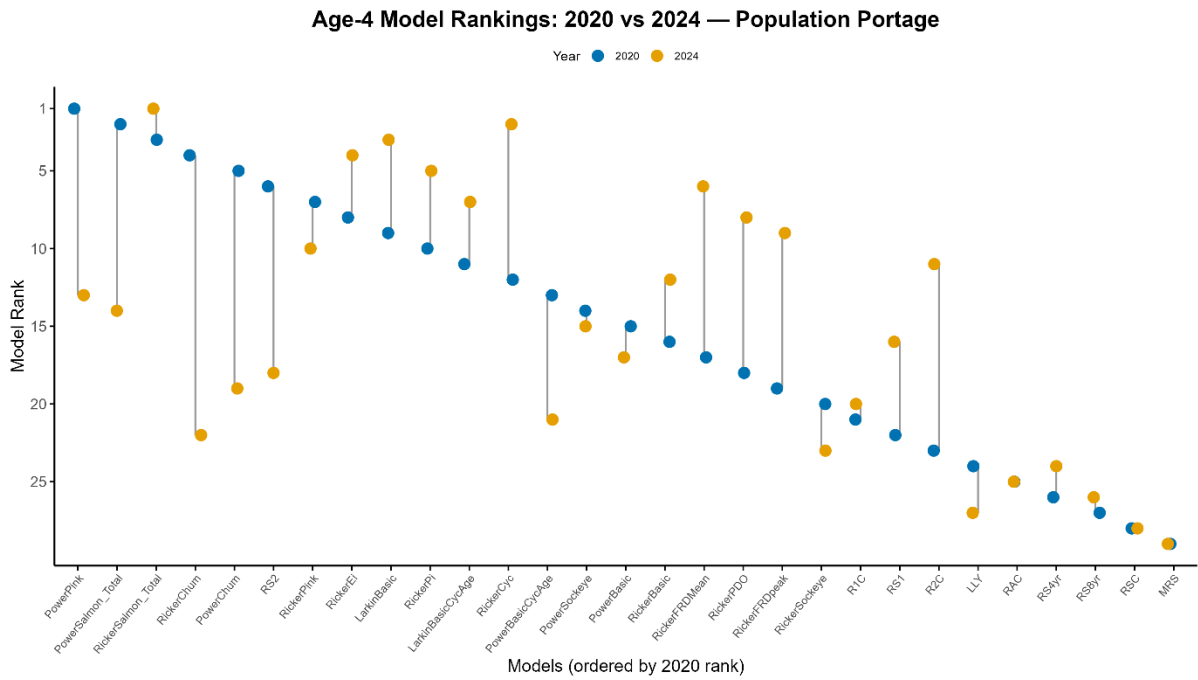


Portage

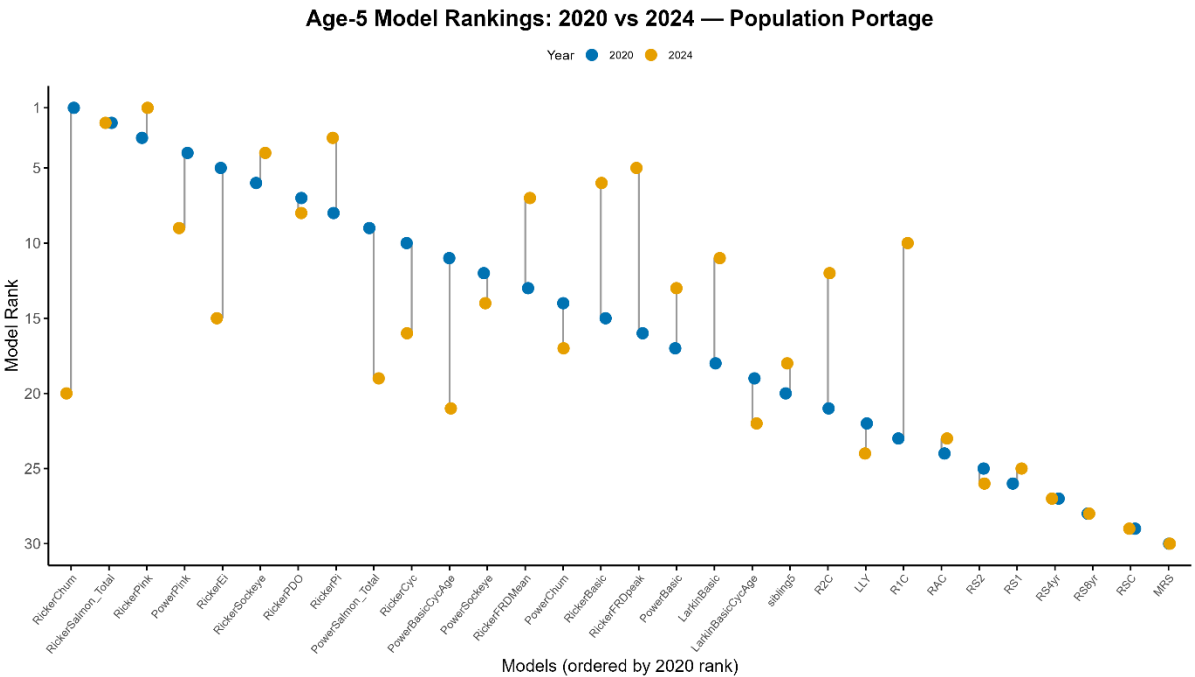
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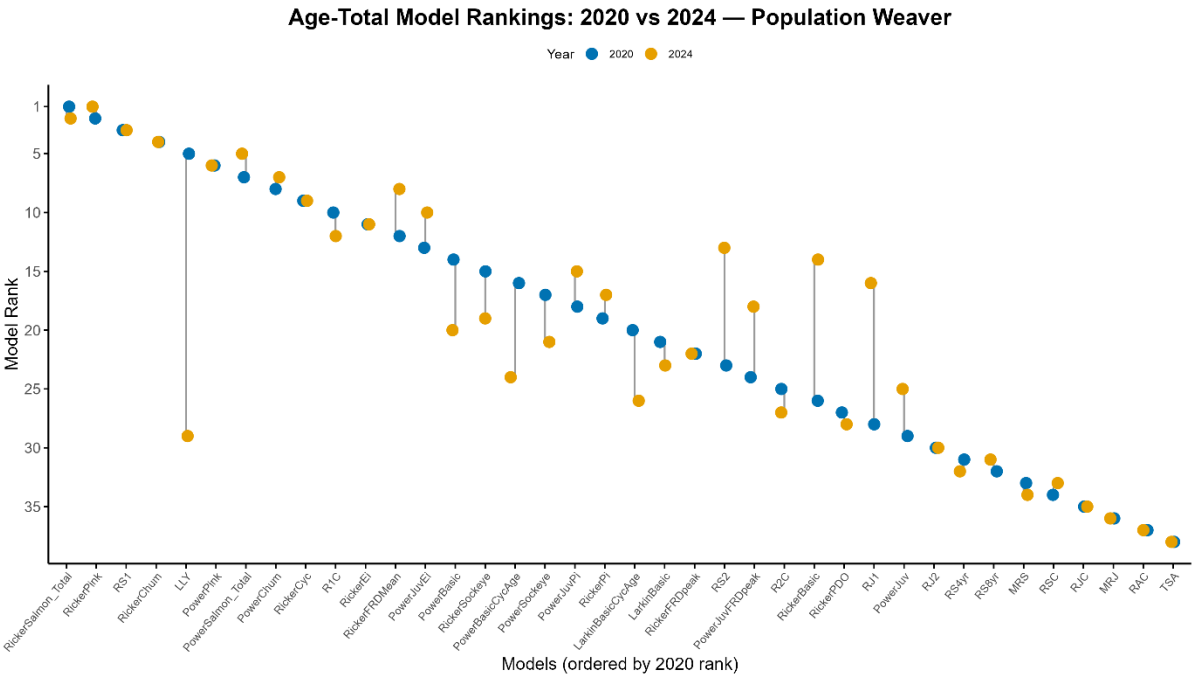


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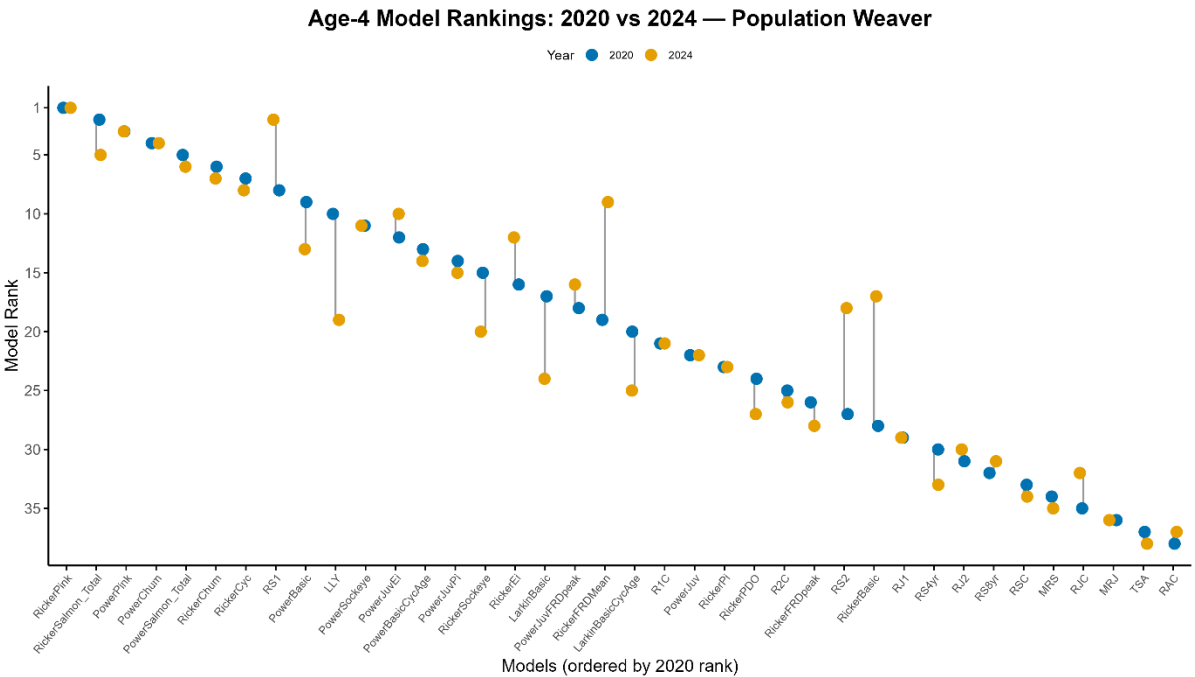


Weaver Creek

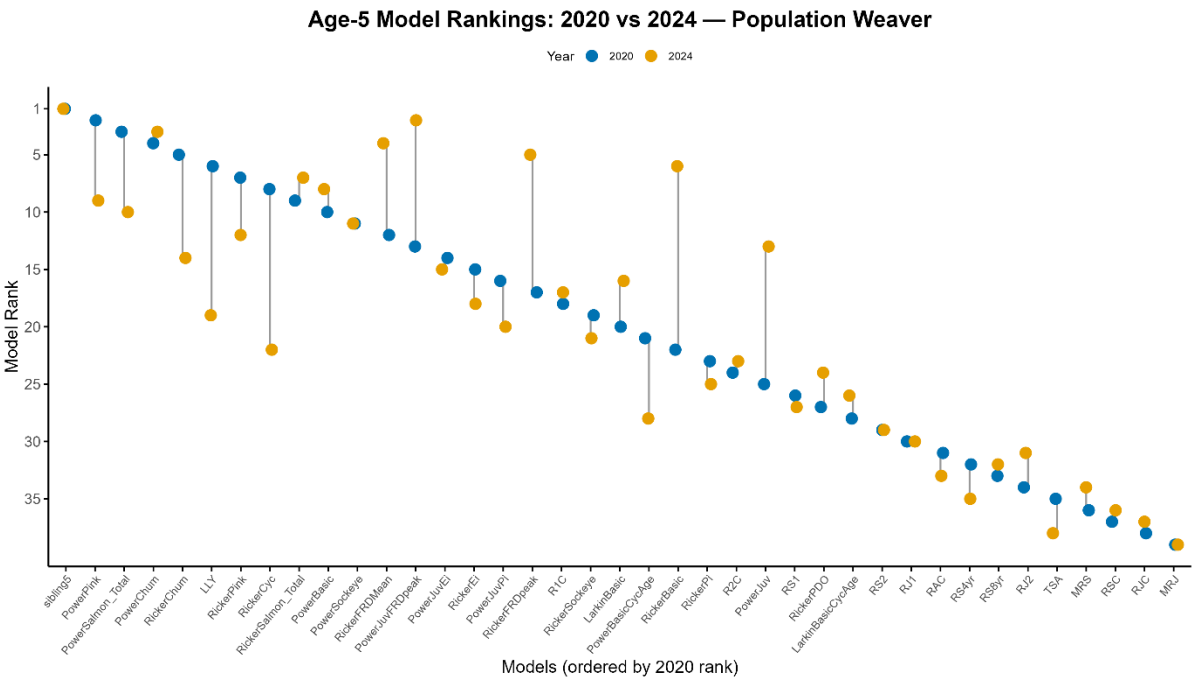
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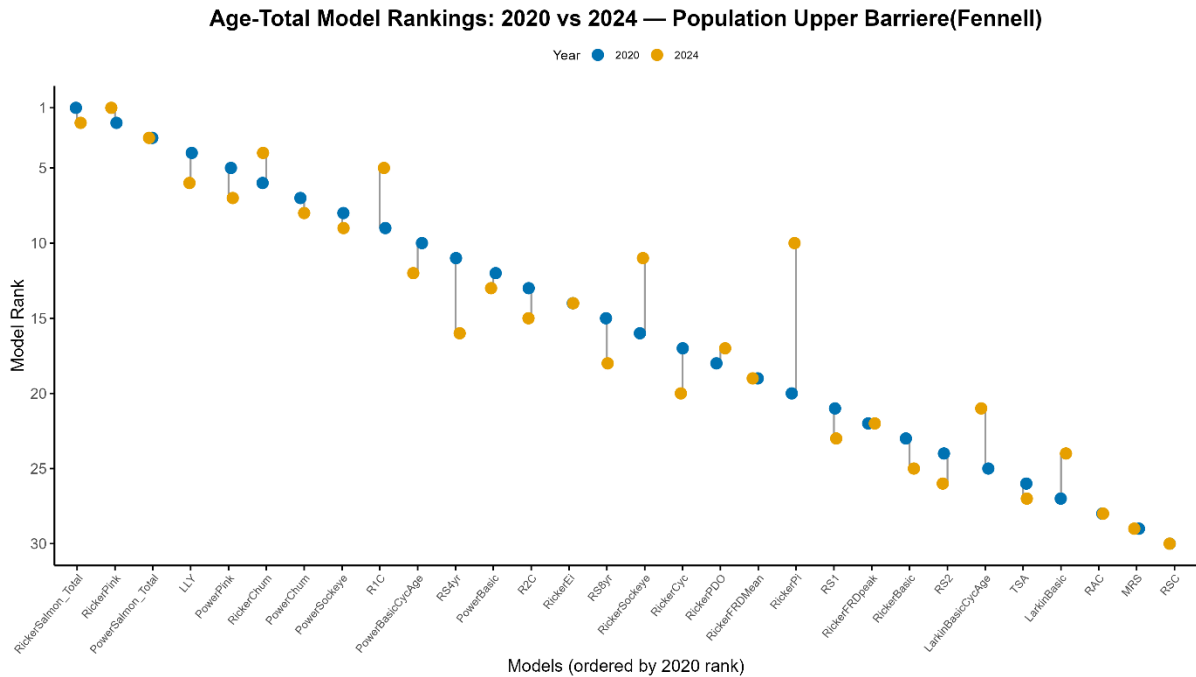


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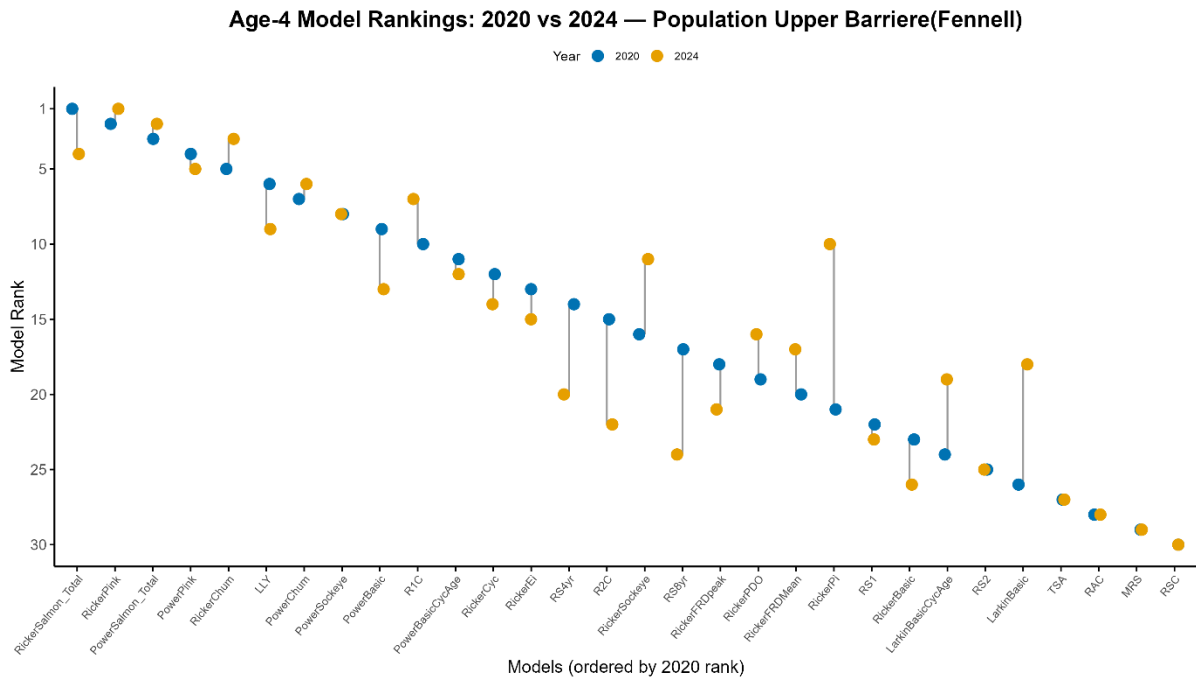


Fennel Creek

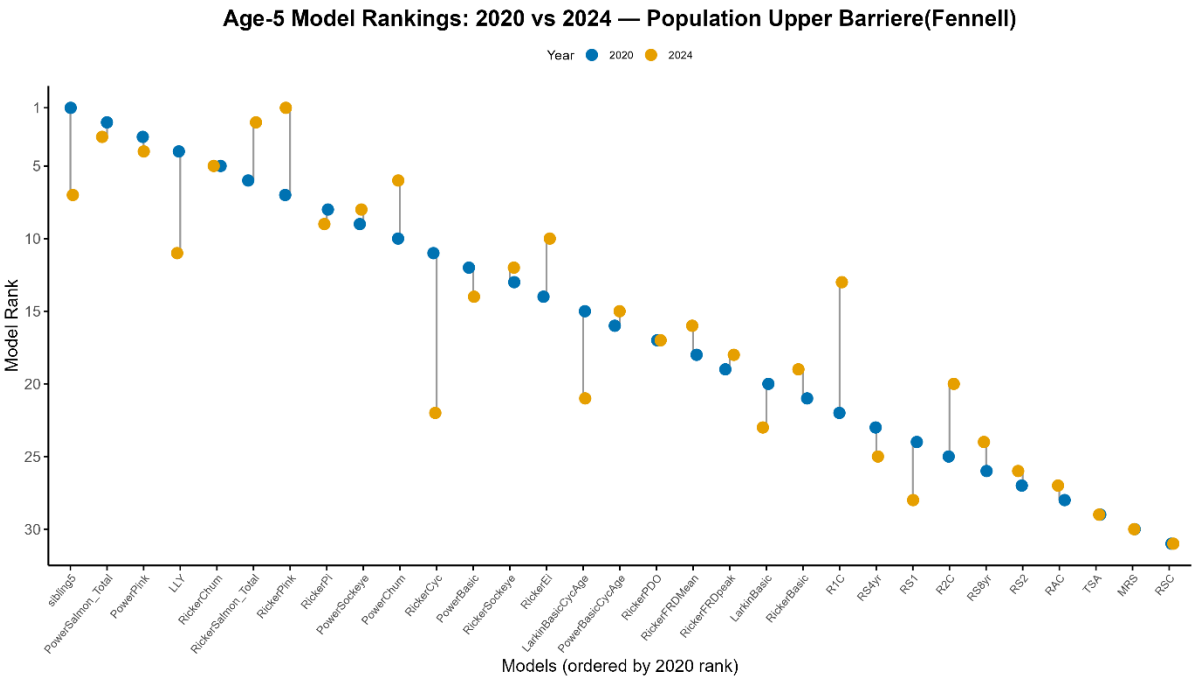
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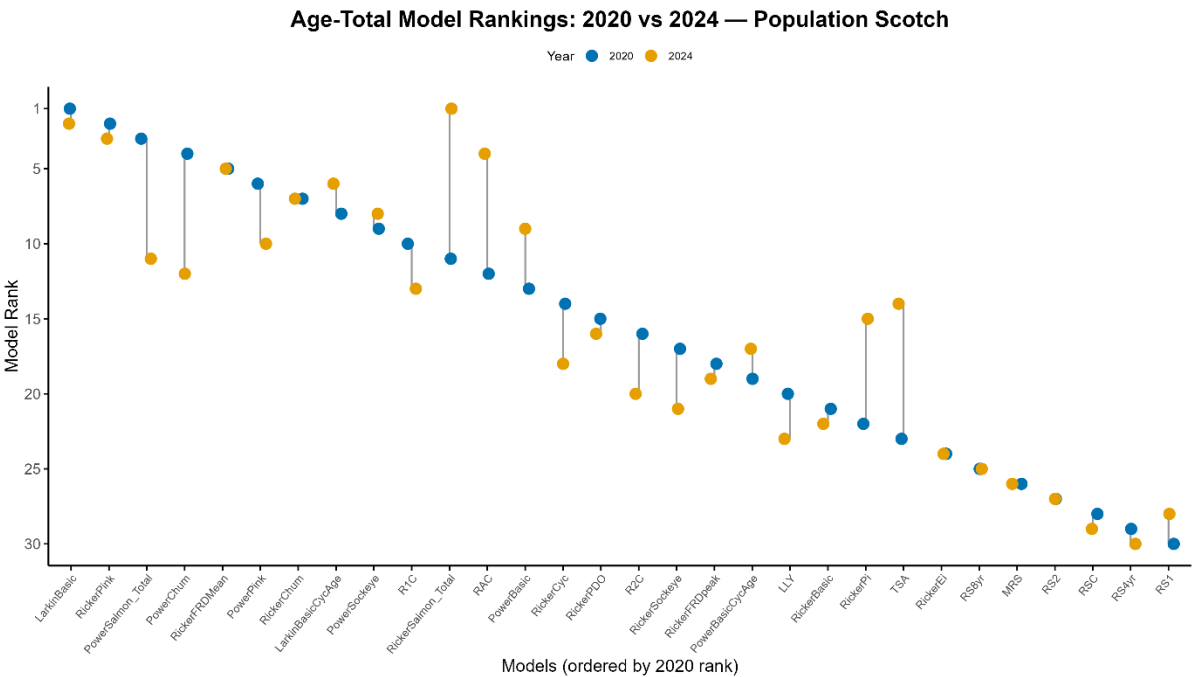


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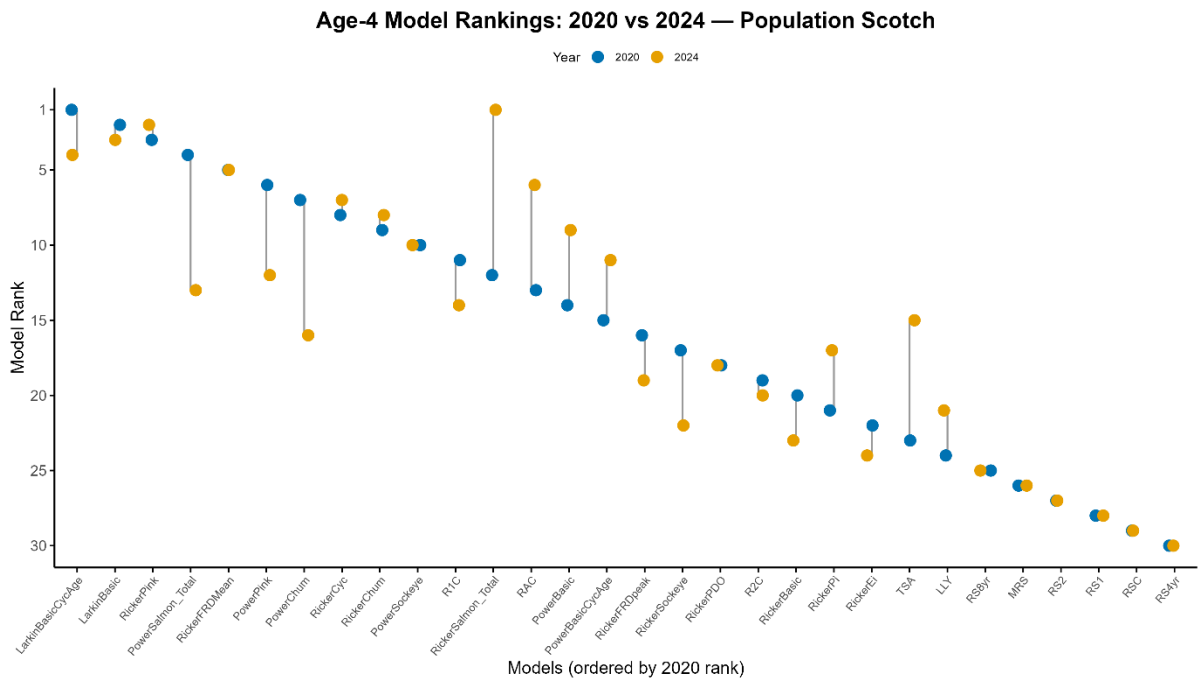


Scotch Creek

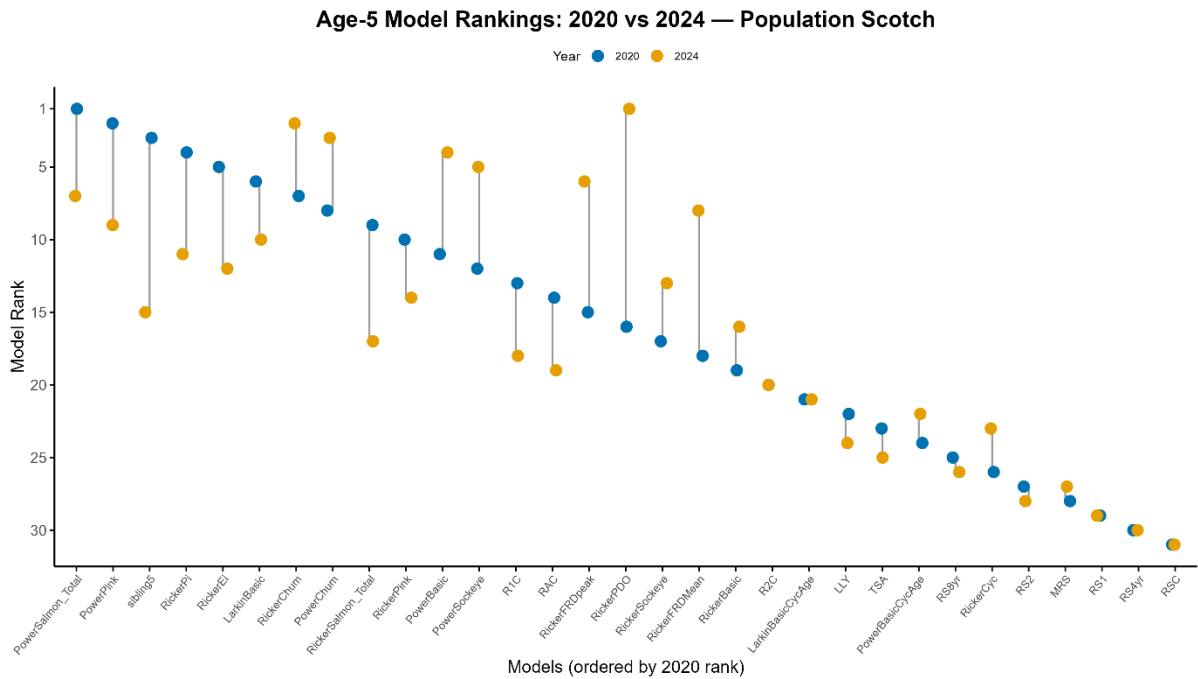
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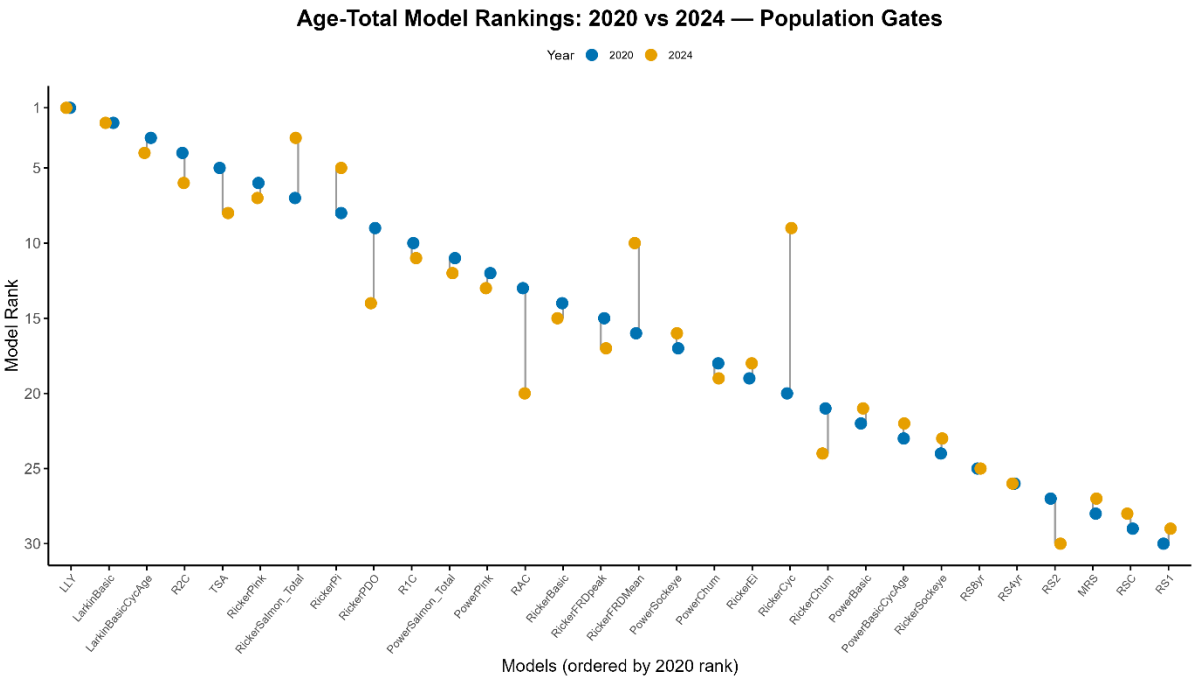


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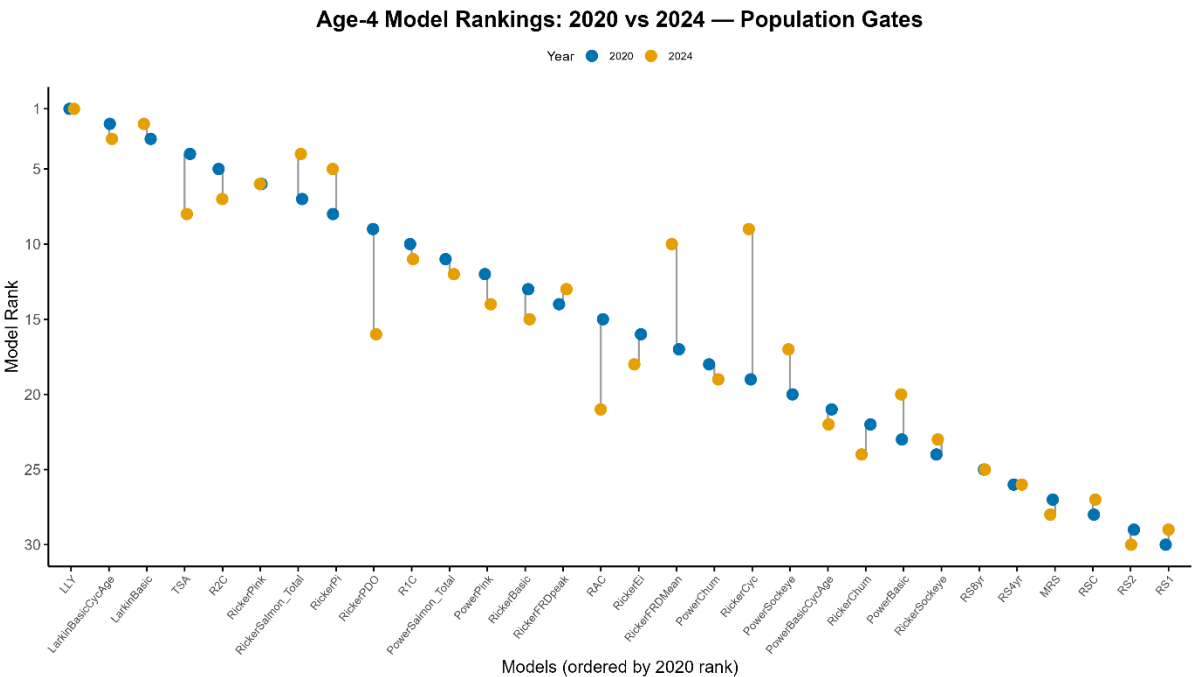


Gates

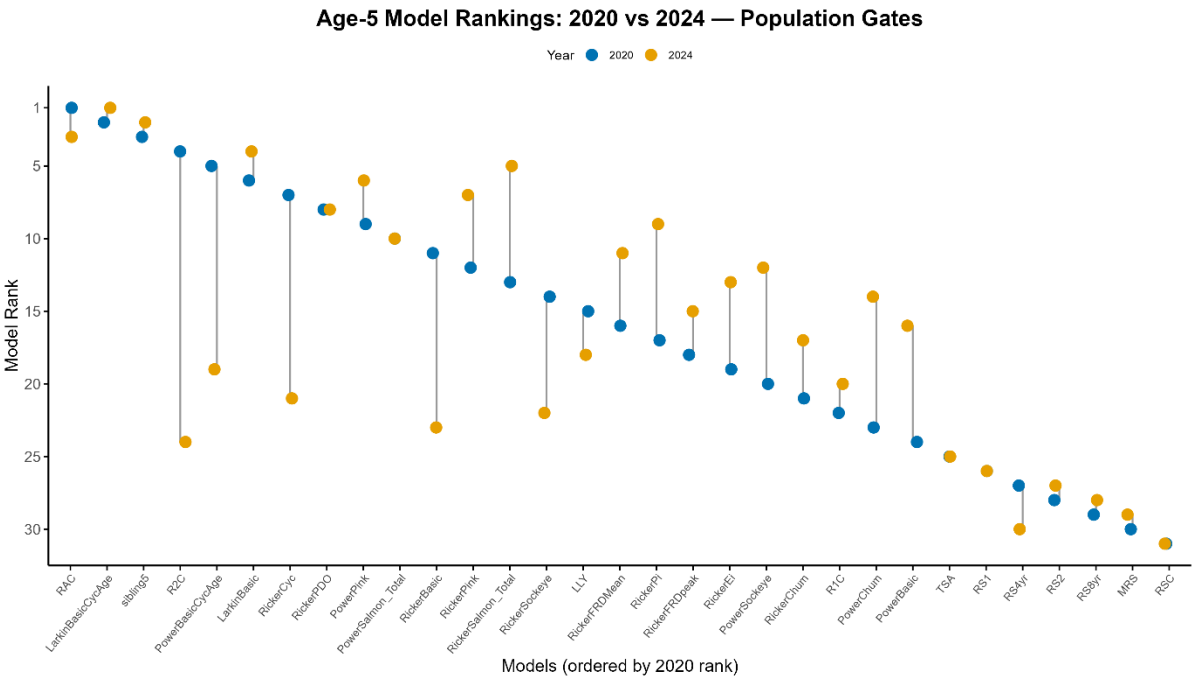
Total



Age4

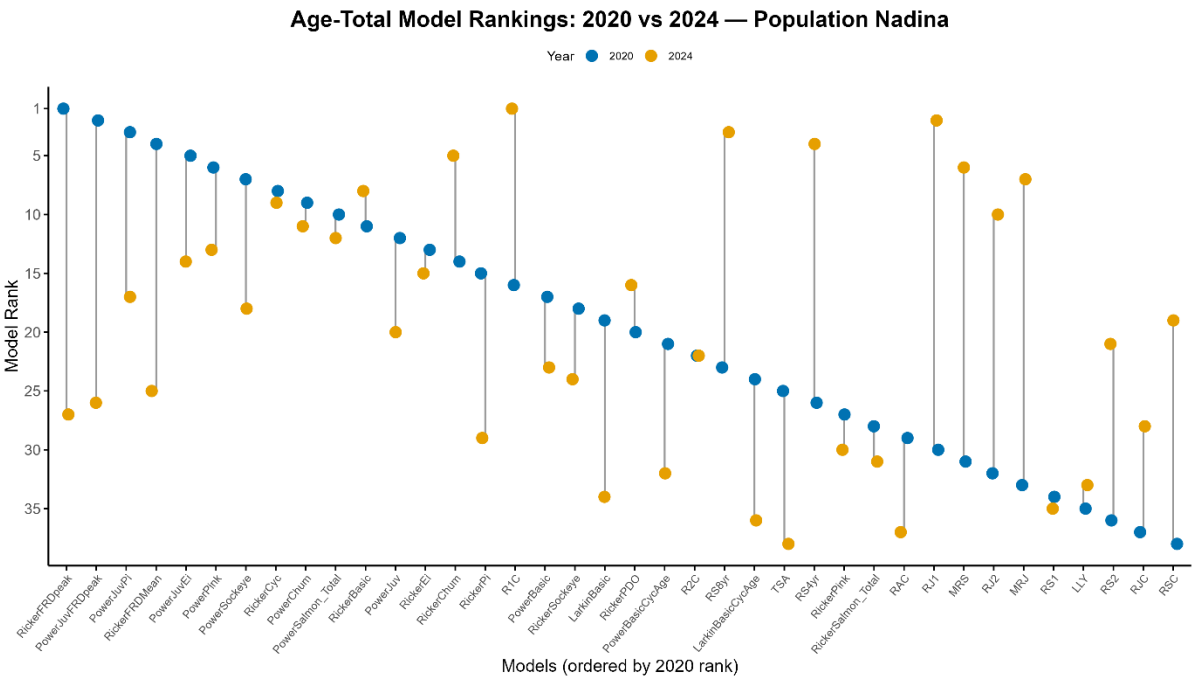


Age5

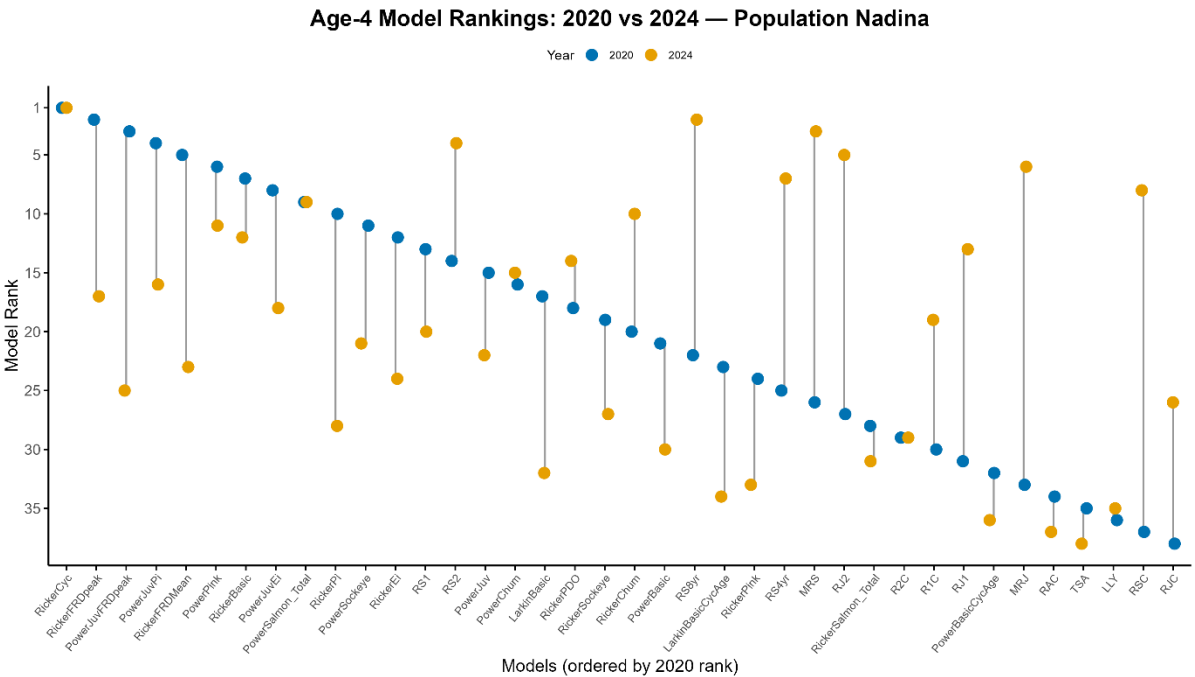


Nadina

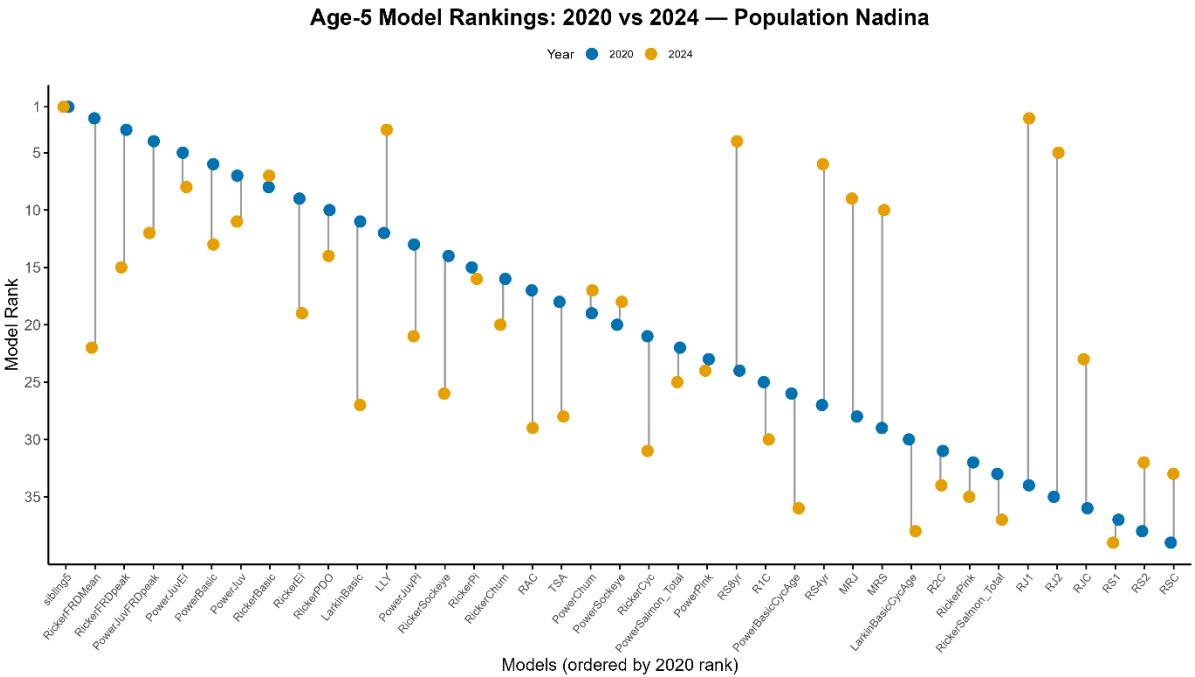
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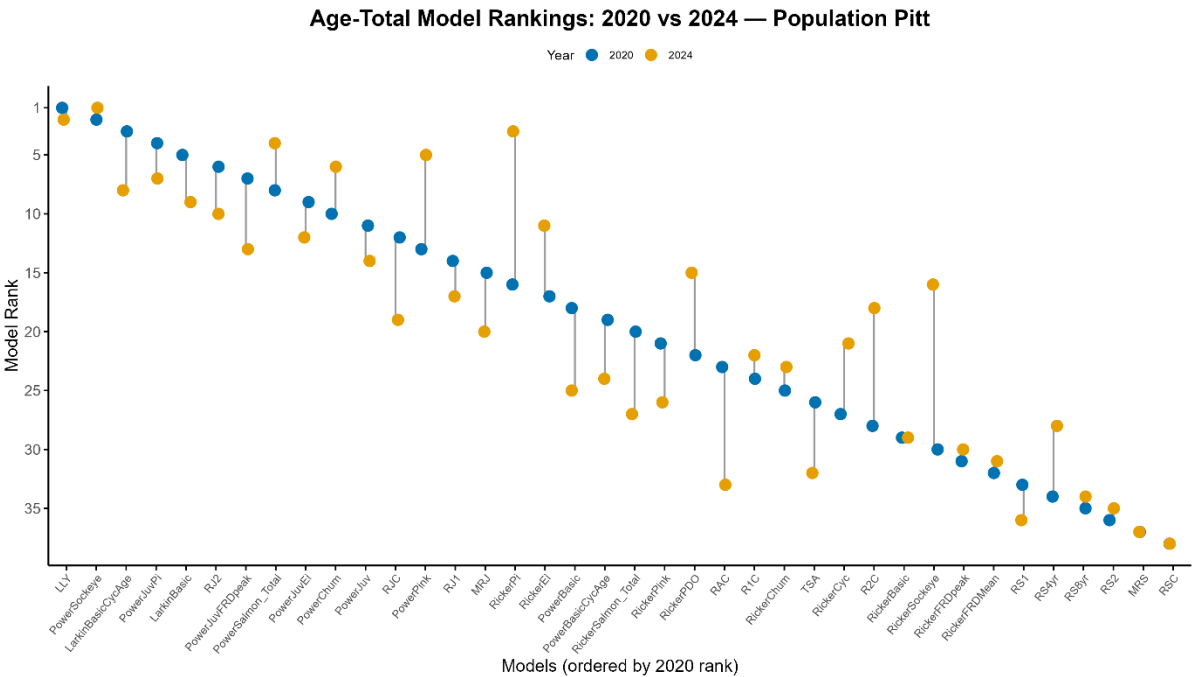


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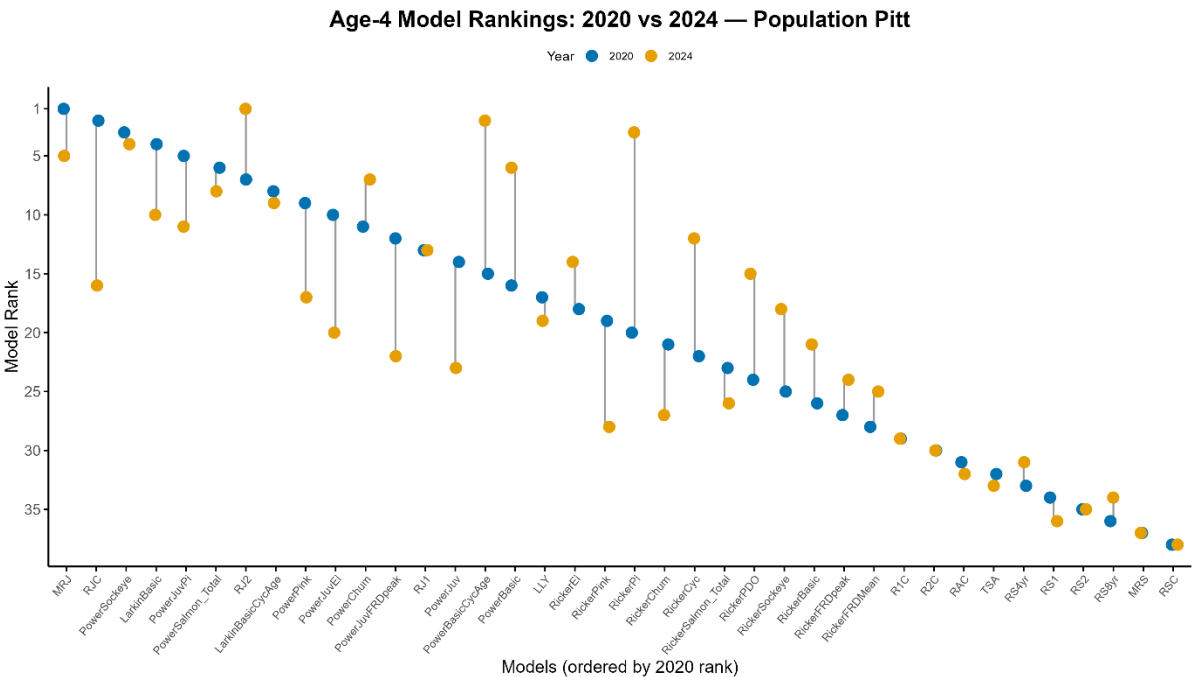


Pitt

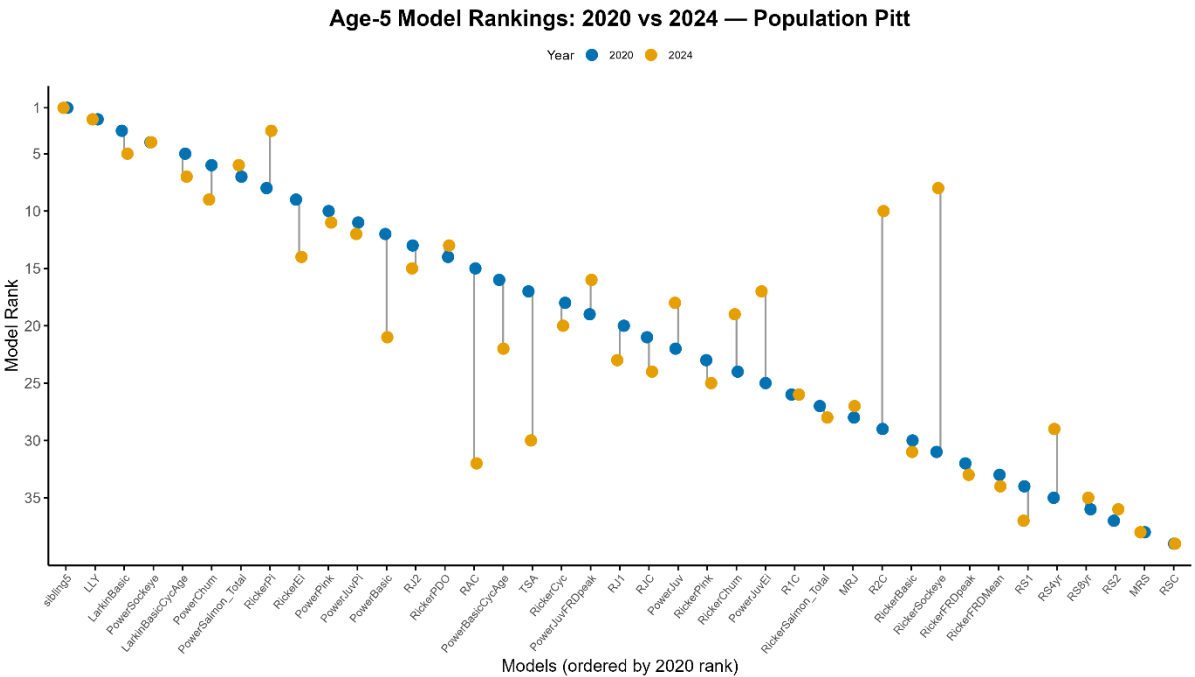
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Age4

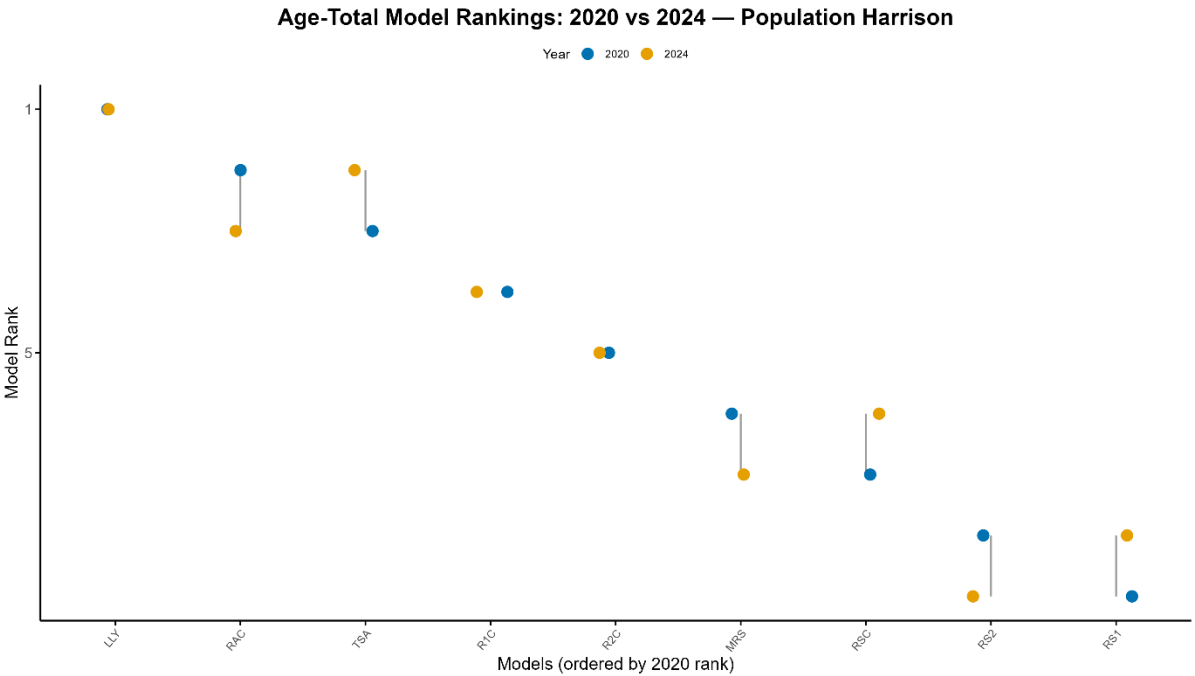


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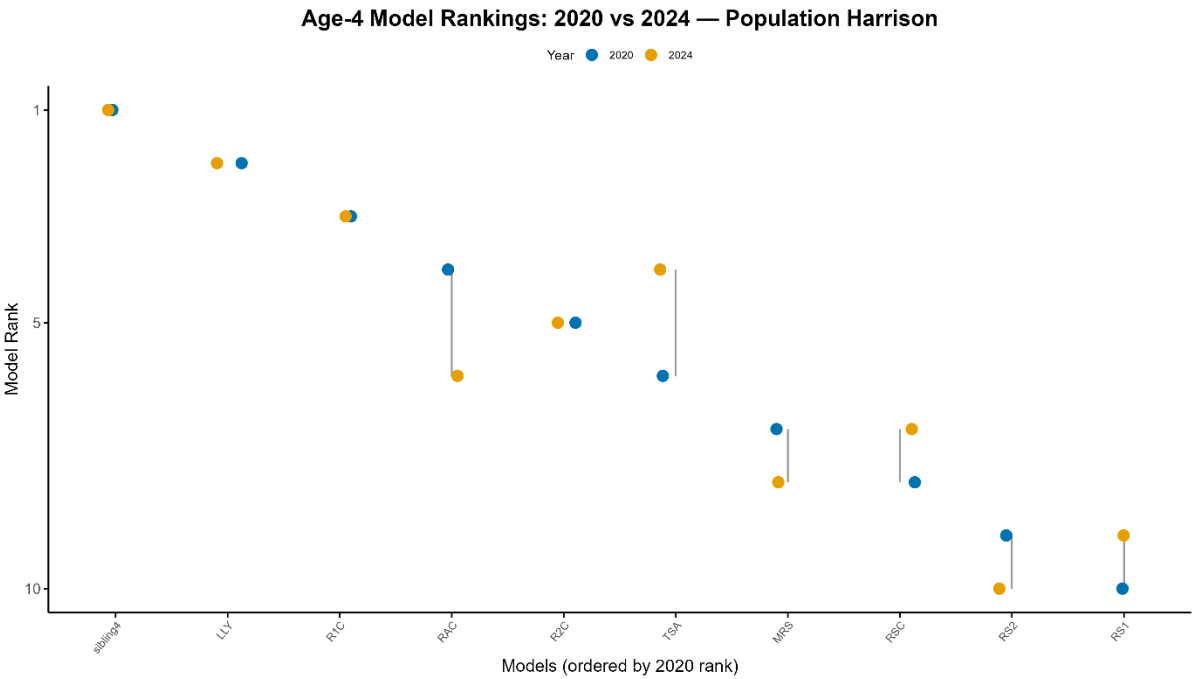


Harrison

Total



Age4



Age5

