Division of Commercial Fisheries
Forrest R. Bowers, Acting Director

Cordova Area Office
401 Railroad Ave.
Cordova, AK 99574

Alaska Department of Fish and Game
Doug Vincent-Lang, Commissioner

PO Box 115526
Juneau, AK 99811-5526
www.adfg.alaska.gov

Advisory Announcement

For Immediate Release: **January 23, 2026**

CONTACTS: Jenni Morella
Finfish Area Research Biologist
(907) 424-4009

2026 Prince William Sound and Copper River Salmon Forecast

Forecasts of total run were calculated for Copper River Chinook salmon, Copper River wild sockeye salmon, Gulkana Hatchery sockeye salmon, Coghill Lake sockeye salmon, and for wild Prince William Sound (PWS) pink and chum salmon. Prince William Sound Aquaculture Corporation and Valdez Fisheries Development Association provide additional forecasts for hatchery-specific stocks. The categorical ranges of total run strength (Table 1) were formulated for each stock from the 20th, 40th, 60th, and 80th percentiles of the recent 10 years (2016–2025 for Chinook, chum, and sockeye salmon and 2006-2024 even years for pink salmon) and are shown in Table 2. Salmon forecasts are inherently uncertain and are primarily used to gauge the general magnitude of expected runs and set early-season harvest management strategies. In 2026, the department will manage PWS and Copper River area commercial salmon fisheries inseason based on the strength of salmon abundance indices, including sonar counts, weir passage, aerial escapement surveys, and fishery performance data.

Table 1. Categorical ranges of total run.

Category	Percentile
Poor	Less than 20th
Weak	20th to 40th
Average	40th to 60th
Strong	60th to 80th
Excellent	Greater than 80th

Table 2. 2026 Prince William Sound Area salmon run forecasts (thousands of fish), historical comparisons, and total run strength category.

Area/Run Type	Species	Forecast Point Estimate	Forecast Range 80% Prediction Interval	% Above/Below 10-yr Average	Total Run 10-yr Average	Run Strength Category
Copper River						
Wild	Chinook salmon	33	22–47	27% Below	45	Weak
Wild	Sockeye salmon	1,413	1,030–1,796	8% Below	1,528	Average
Gulkana Hatchery	Sockeye salmon	42	31–53	58% Below	99	Weak
Total Run	Sockeye salmon	1,455	1,060–1,849	11% Below	1,628	Average
Coghill Lake						
Wild	Sockeye salmon	104	0–240	53% Below	223	Weak
Prince William Sound						
Wild	Pink salmon	4,726	1,737–12,857	14% Above	4,150	Strong
Wild	Chum salmon	586	258–914	14% Above	514	Strong

2026 COPPER RIVER CHINOOK SALMON FORECAST SUMMARY

The 2026 Copper River Chinook salmon total run forecast point estimate is **Weak at 33,000 fish (80% prediction interval: 22,000–47,000 fish;** Table 2**)**. This is 27% below the recent 10-year average (2016–2025) total run of 45,000 fish. As the sustainable escapement goal (SEG) for Copper River Chinook salmon is 21,000 to 31,000 fish, this forecast supports conservative management for the 2026 season.

FORECAST METHODS

For 2026, the Copper River Chinook salmon state-space model was chosen as the forecast method. This model simultaneously reconstructs runs and fits a spawner-recruit model to estimate total return, escapement, and recruitment of Copper River Chinook salmon from 1999 to 2025. Methods and details of this analysis are covered in separate reports (Joy et al. 2021, Savereide et al. 2018). The model uses harvest, age composition, and direct measures of inriver run abundance to estimate parameters that describe the spawner-recruit relationship for this stock. Uncertainty from the run reconstruction is passed through to the spawner-recruit analysis, and all relevant data are considered and weighted by their precision. The model accommodates missing data, measurement error in the data, and changes in age at maturity.

Several forecast methods were examined for the 2026 Copper River Chinook salmon total run forecast, including exponential smoothing, 2-, 3-, and 5-year running averages of total run, and projections from the Copper River Chinook salmon state-space model. The state-space model outperformed the exponential and average-based models by having a lower mean arctangent absolute percentage error (MAAPE) and mean percentage error (MPE) when compared retrospectively (Table 3) and used more biological information to predict future runs. Total run size in prior years was calculated as the sum of commercial and subsistence harvests of Chinook salmon below Miles Lake and the mark-recapture point estimate of Chinook salmon inriver abundance. There are currently 26 years (1999–2025) of inriver mark-recapture abundance estimates and 47 years (1980–2025) of harvest, escapement and age composition data available for this analysis. The final 2025 mark-recapture inriver abundance estimate was not yet available therefore a preliminary estimate was used. The 80% prediction intervals were calculated from the posterior distributions of the model parameters, including the predicted run size for 2026.

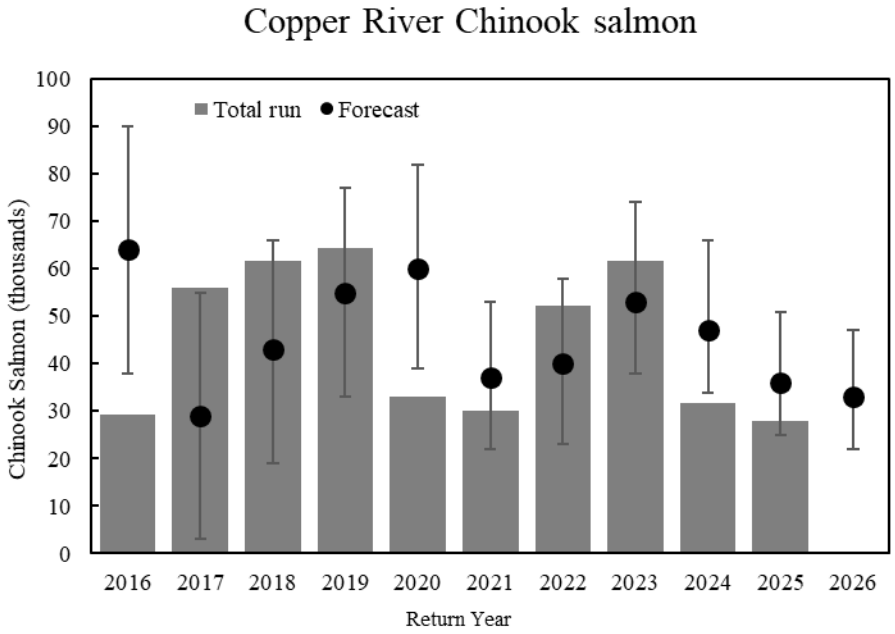

Figure 1. Total run of Copper River Chinook salmon compared to preseason total run forecasts, 2016–2025, and the 2026 forecast. Error bars represent 80% prediction intervals of forecasts.

Savereide, J. W., M. Tyers, and S. J. Fleischman. 2018. Run reconstruction, spawner-recruit analysis, and escapement goal

recommendation for Chinook salmon in the Copper River. Alaska Department of Fish and Game, Fishery Manuscript No. 18-07, Anchorage.
Joy, P., J. W. Savereide, M. Tyers, and S. J. Fleischman. 2021. Run reconstruction, spawner–recruit analysis, and escapement goal recommendation for Chinook salmon in the Copper River. Alaska Department of Fish and Game, Fishery Manuscript No. 21-01, Anchorage.

2026 COPPER RIVER SOCKEYE SALMON FORECAST SUMMARY

The 2026 wild Copper River sockeye salmon total run forecast point estimate is **Average at 1,413,000 fish (80% prediction interval: 1,030,000–1,796,000 fish;** Table 2**)**. Gulkana Hatchery sockeye salmon total run forecast is **Weak** at **42,000 fish** (**80% prediction interval: 31,000–53,000 fish;** Table 2**),** for an **Average** total Copper River sockeye salmon run (wild + hatchery production) forecast of **1,455,000 fish (80% prediction interval: 1,060,000–1,849,000 fish**; Table 2**)**. This is 11% below the recent 10-year average (2016–2025) total run of 1,628,000 fish. Total Copper River sockeye salmon harvest estimate (all fisheries) is predicted to be **954,000 (80% prediction interval: 603,000–1,306,000 fish)** with a commercial harvest of **728,000 fish (80% prediction interval: 377,000–1,080,000 fish)**.

FORECAST METHODS

The 2026 forecast of wild sockeye salmon to the Copper River is the sum of individual forecasts for six age classes. Linear regression models with log-transformed data were used to forecast returns for age-1.2, -1.3, -2.2, and -2.3 sockeye salmon. Forecasts of these four age classes were developed from the relationship between returns of each age class and returns of the age class one year younger from the same brood year (sibling model, Table 4). The forecast return of age-1.1, and -0.3, sockeye salmon were calculated as the 5-year (2021–2025) mean return of these age classes. The 2026 run to Gulkana Hatchery was estimated as the recent 3-year weighted average fry-to-adult survival estimate (1.11%).

The total harvest point estimate (all fisheries) was calculated by subtracting the Gulkana Hatchery broodstock, hatchery surplus, and wild stock escapement goal needs (upriver and Copper River Delta) from the total run forecast. The commercial harvest estimate was calculated by subtracting Copper River inriver goal categories (5 AAC 24.360(b)) and the lower bound of the Copper River Delta spawning escapement goal, from the total run forecast. An estimated exploitation rate of 70% was used to project the total harvest of Gulkana Hatchery stocks in 2026. There are currently 61 years (1965–2025) of harvest, escapement, and age composition data available for this analysis. Total run 80% prediction intervals were calculated from the mean squared error of the retrospective forecast predictions.

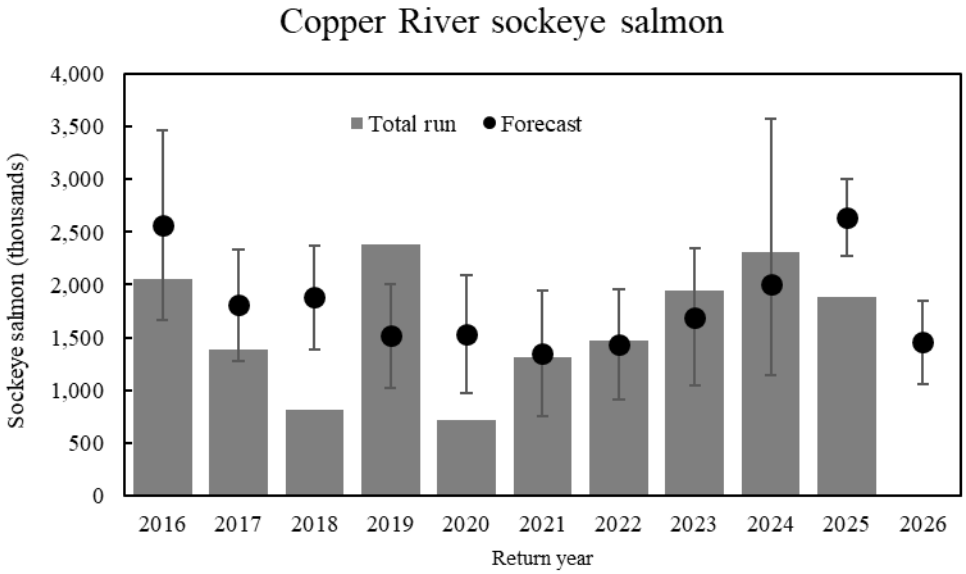

Figure 2. Total run of Copper River sockeye salmon compared to preseason total run forecasts, 2015–2024, and the 2026 forecast. Error bars represent 80% prediction intervals of forecasts.

2026 COGHILL LAKE SOCKEYE SALMON FORECAST SUMMARY

The 2026 Coghill Lake sockeye salmon total run forecast point estimate is **Weak at 104,000 fish (80% prediction interval: 0–240,000 fish;** Table 2**)**. This is 53% below the 10-year average (2016–2025) total run of 223,000 fish. Subtracting the escapement target of 30,000 fish from the total run forecast results in a harvest point estimate (all fisheries) of **74,000 fish (range: 0–210,000 fish)**.

FORECAST METHODS

The 2026 sockeye salmon run forecast to Coghill Lake is the total of estimates for five age classes. Linear regression models with log-transformed data were used to predict returns of age-1.3 and -1.2 sockeye salmon (Table 4). These linear regression models were parameterized using the historical relationship between returns of age-1.3 sockeye salmon and returns of age-1.2 fish one year previous and returns of age-1.2 sockeye salmon and returns of the age-1.1 fish one year previous (sibling models). For example, the model chosen to forecast the return of age-1.3 sockeye salmon in 2026 used the return of age-1.2 fish in 2025 as the input parameter. Forecast returns of age-1.1, -2.2, and -2.3 sockeye salmon were calculated as the 2016–2025 mean return of that age class.

Harvest, escapement, and age composition data are available for Coghill Lake sockeye salmon runs since 1962; however, inclusion of escapements prior to the installation of a full weir in 1974 reduces forecast reliability. Therefore, only data collected since 1974 were used. Total run by year was estimated as the total commercial harvest contribution combined with the Coghill River weir escapement count. The 80% prediction intervals for the Coghill Lake sockeye salmon total run were calculated using the squared deviations between the 2016–2025 forecasts and actual runs as the forecast variance.

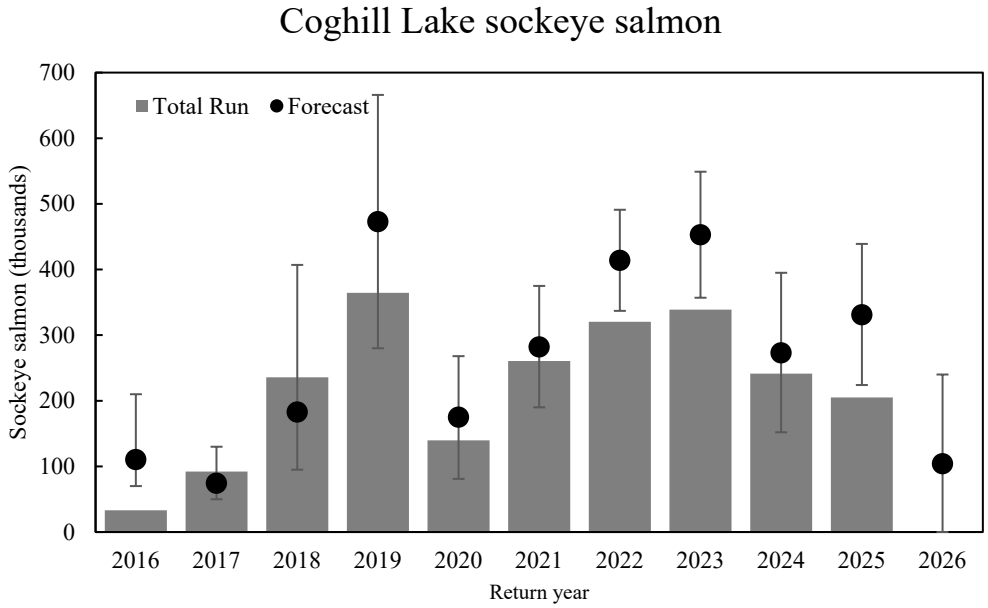

Figure 3. Total run of Coghill Lake sockeye salmon compared to preseason total run forecasts, 2016–2025, and the 2026 forecast. Error bars represent 80% prediction intervals of forecasts.

2026 PWS EVEN-YEAR WILD PINK SALMON FORECAST SUMMARY

The 2026 PWS wild pink salmon total run forecast point estimate is **Strong at 4,726,000 fish (80% prediction interval: 1,737,000–12,857,000 fish;** Table 2**)**. This is 14% above the recent 10-even-year average (2006–2024) PWS wild pink salmon total run of 4,150,000 fish. Subtracting the mid-point of the even-year sustainable escapement goal, 784,000, from the total run forecast results in a harvest point estimate of **3,942,000 fish (range: 953,000 to 12,073,000)**.

FORECAST METHODS

Several models were examined for the 2026 PWS wild pink salmon total run forecast, including exponential smoothing and 2-, 3-, and 5-year running averages of past even-year total runs. The 5-year running average forecast was selected for 2026 because it outperformed other forecast models by having the lowest MAAPE (Table 5). The 80% prediction intervals were calculated from the mean squared error of the retrospective forecast predictions.

Total wild run of pink salmon by year was estimated as the total wild (non-hatchery) contribution to commercial harvests combined with stream escapement index. The stream escapement index is calculated as the area under the curve of weekly aerial escapement surveys, adjusted for estimates of stream life. Hatchery and wild stock contributions were determined from thermal marked otolith recoveries (1997–2024), coded wire tag recoveries (1985–1996), or average fry-to-adult survival estimates multiplied by fry release numbers and estimated exploitation rates (1977–1984).

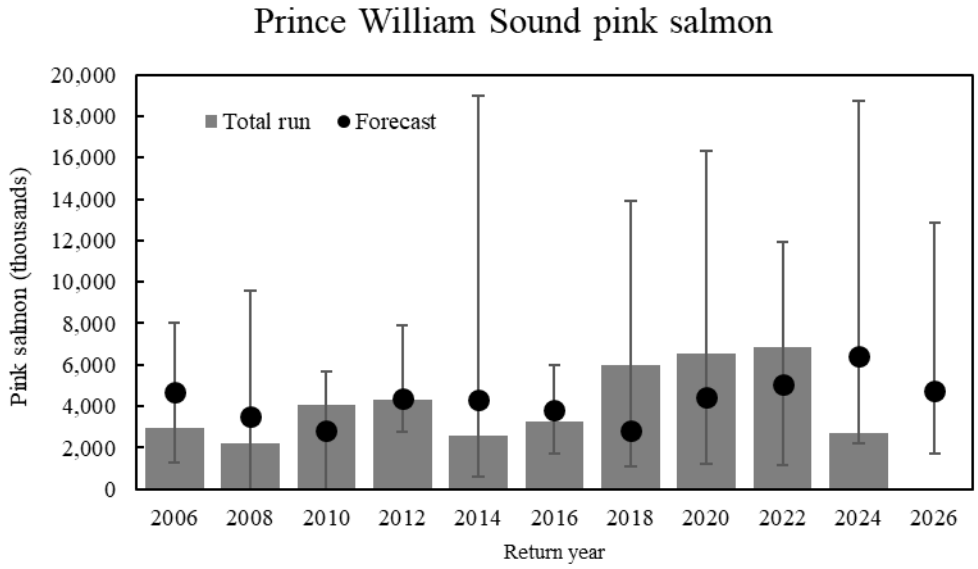

Figure 4. Total run of Prince William Sound wild pink salmon compared to preseason total run forecasts, 2006–2024, and the 2026 forecast. Error bars represent 80% prediction intervals of forecasts.

2026 PWS WILD CHUM SALMON FORECAST SUMMARY

The 2026 PWS wild chum salmon total run forecast point estimate is **Strong at 586,000 fish (80% prediction interval: 258,000–914,000 fish;** Table 2**)**. This is 14% above the recent 10-year average (2016–2025) PWS wild chum salmon total run of 514,000 fish. Subtracting the 10-year average escapement, 173,000 from the total run forecast results in a harvest point estimate of **413,000 fish (range: 85,000 to 741,000 fish)**.

FORECAST METHODS

The 2026 PWS wild chum salmon total run forecast uses the 3-year running average method. Several models were examined for the 2026 PWS wild chum total run forecast, including exponential smoothing and 2-, 3-, and 5-year running averages of past total runs (Table 5). For 2026, the 3-year running average outperformed the other models by having the lowest MAAPE. The 80% prediction intervals were calculated from the mean squared error of the retrospective forecast predictions.

Total wild run of chum salmon by year was estimated as the total wild (non-hatchery) contribution to commercial harvests combined with the stream escapement index. The stream escapement index is calculated as the area under the curve of weekly aerial escapement surveys adjusted for estimates of stream life. Hatchery and wild stock contributions were estimated using pre-hatchery average natural runs (1998–2003) or thermally marked otolith estimates (2004–2025) for each district in PWS.

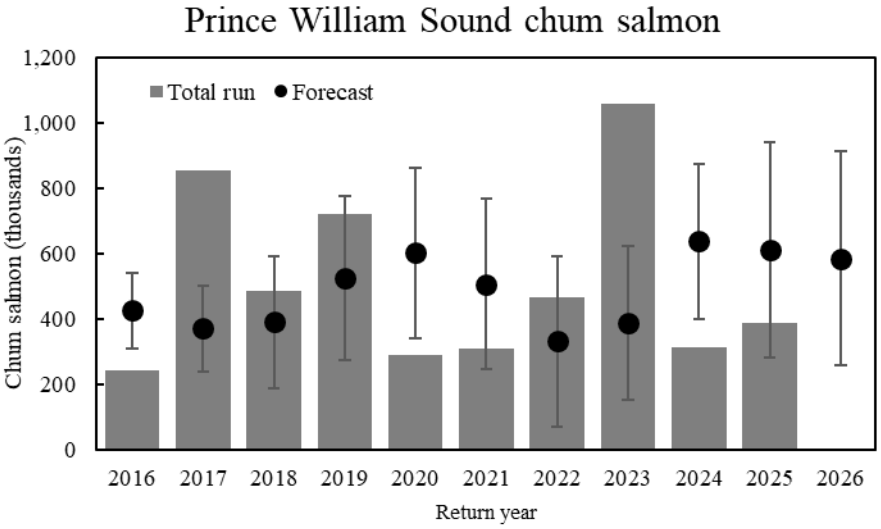

Figure 5. Total run of Prince William Sound wild chum salmon compared to preseason total run forecasts, 2016–2025, and the 2026 forecast. Error bars represent 80% prediction intervals of forecasts.

Table 3. 2026 Copper River Chinook salmon forecast model performance summary. Model selected as the run forecast (lowest MAAPE) is shaded.

Stock/model	Forecast Point Estimate	80% Prediction Interval	MAAPE
State-space	32,515	22,479-46,824	33%
Exponential	37,335	20,766-53,903	39%
2-year	31,807	5,054-58,559	42%
3-year	41,716	16,191-67,240	41%
5-year	41,424	19,996-62,852	35%

Table 4. 2026 Prince William Sound wild sockeye salmon forecast model summary. Models selected for inclusion in the run forecast (lowest MAAPE) are shaded.

Stock/Age Class		Brood Year	Model	Forecast[a]	MAAPE
Copper River wild sockeye					
	0.3	2022	5-year mean	59,963	
	1.1	2023	5-year mean	3,433	
	1.2	2022	log 1.2 R/S x BYE	255,218	42%
			log 1.2 x log 1.1	68,719	44%
	1.3	2021	1.3 x BYE	1,122,979	37%
			log 1.3R/S x BYE	1,050,588	38%
			log 1.3 x log 1.2	948,858	30%
			log 1.3 x log 0.3	1,003,074	36%
			1.3 x 1.2	991,439	34%
	2.2	2021	log 2.2 x BYE	29,220	50%
			log 2.2 x log 1.2	25,048	48%
	2.3	2020	log 2.3 x log 2.2	120,234	42%
			log 2.3 x log 1.3	119,188	47%
	Total			1,412,753	
Coghill Lake sockeye					
	1.1	2023	10-year mean	7,418	
	1.2	2022	log 1.2 R/S x BYE	24,143	71%
			log 1.2 x log 1.1	32,050	61%
	1.3	2021	log R/S 1.3 x BYE	107,295	61%
			log 1.3 x log 1.2	33,693	48%
	2.2	2021	10-year mean	12,475	
	2.3	2020	10-year mean	18,851	
	Total			104,487	

Note: R/S = Return per spawner; BYE = Brood year escapement

[a] Age class forecasts do not always sum to total run forecast due to rounding error.

Table 5. 2026 Prince William Sound wild pink and chum salmon forecast model performance summary. Models selected as the run forecast (lowest MAAPE) are shaded. Pink salmon MAAPEs are from log transformed total run values.

Run		Forecast	MAAPE
PWS wild pink			
	Exponential	3,559,360	4.67%
	2-year	4,295,917	4.63%
	3-year	4,940,675	3.79%
	5-year	4,725,661	3.70%
PWS wild chum			
	Exponential	396,628	33%
	2-year	349,477	33%
	3-year	586,027	32%
	5-year	507,257	34%