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| **Feature name** | **Description** | **Availability** | **Source** |
| Total\_Returns | Total salmon returns in year y. | For each river over all years | Angler’s Atlas (Return tables by river and system) |
| AgeClass\_0.1, AgeClass\_0.2, AgeClass\_0.3, AgeClass\_0.4, AgeClass\_0.5, AgeClass\_1.1, AgeClass\_1.2, AgeClass\_1.3, AgeClass\_1.4, AgeClass\_1.5, AgeClass\_2.1, AgeClass\_2.2, AgeClass\_2.3, AgeClass\_2.4, AgeClass\_3.1, AgeClass\_3.2, AgeClass\_3.3, AgeClass\_3.4 | 18 different age classes of salmon returns in year y. | For each river over all years | Angler’s Atlas (Return tables by river and system) |
| total\_spawners\_y\_minus\_2,  total\_spawners\_y\_minus\_3,  total\_spawners\_y\_minus\_4,  total\_spawners\_y\_minus\_2\_to\_4 | Total number of spawners in brood years y−2, y-3, y-4 and the sum over years y-2 to y-4, respectively. | Not available for river Ugashik; years 1985 and 1986 at Columbia River and years 2023 and 2024 at Fraser River | Gottfried Pestal |
| Pacea\_ALPI\_Anomaly | Anomaly in the Alaska–Pacific Index from PACEA. | Each year, equal for every river system. | pacea R package (06/16/2025), see notebooks/get\_pacea\_data.R |
| npi\_mean\_NovMar | North Pacific Index mean over November–March. | Each year, equal for every river system. | pacea R package |
| oni\_mean\_DecFeb | Oceanic Niño Index mean over December–February. | Each year, equal for every river system. | pacea R package |
| mei\_mean\_AprSep | Multivariate ENSO Index mean over April–September. |  | pacea R package |
| npgo\_mean\_DecFeb | North Pacific Gyre Oscillation mean over December–February. | Each year, equal for every river system. | pacea R package |
| ao\_mean\_DecMar | Arctic Oscillation mean over Dec–March. | Each year, equal for every river system. | pacea R package |
| pdo\_mean\_DecMar | Pacific Decadal Oscillation mean over Dec–March. | Each year, equal for every river system. | pacea R package |
| pdo\_mean\_MaySep | Pacific Decadal Oscillation mean over May–September. | Each year, equal for every river system. | pacea R package |
| sst\_aprjul | Mean Sea Surface Temperature from April–July. | Not available for Fraser River before 1984. | NOAA ERSST V5 via notebooks/get\_SST\_v5.py from <https://psl.noaa.gov> |
| sst\_anom | Sea surface temperature anomaly. | Each year, equal for every river system. | NOAA ERSST V5 via notebooks/get\_SST\_v5.py from <https://psl.noaa.gov> |
| sss\_mayaug | Mean Sea Surface Salinity from May–August. | Each year, equal for every river system. | Fraser: PBS Lightstations; Columbia & Bristol Bay: Met Office EN4.2.2-C13 |
| River\_Alagnak, River\_Bonneville Lock & Dam, River\_Chilko, River\_Egegik, River\_Igushik, River\_Kvichak, River\_Late Stuart, River\_Naknek, River\_Nushagak, River\_Quesnel, River\_Raft, River\_Stellako, River\_Ugashik, River\_Wood | Dummy variables for the rivers | Static | - |