Alaska Fisheries Information Network

GENETIC_BSAI_SALMON_BYCATCH
Database Table

Date	Author	Change Comments	Version
12/10/2021	Ames		1.0

Introduction

The GENETIC_BSAI_SALMON_BYCATCH database table was created to support the Auke Bay Laboratories, Genetics Program. The table includes all salmon bycatch by BSAI pelagic trawl vessels, both hauls and offloads, as well as genetically sampled salmon by the North Pacific Observer program from 2011 to present. This database table is the source for the AKFIN Answers (OBIEE) report titled "Genetic BSAI Salmon Bycatch Report", which provides different views of the data, including summaries and maps.

Background

The GENETIC_BSAI_SALMON_BYCATCH table was developed in collaboration with the Auke Bay Laboratories, Genetics Program and with the North Pacific Observer Program. The original SQL code was created by Ren Narita with support from Julie Blair. These scripts were translated to use AKFIN database objects and included some enhancements and value-added information relevant to Genetics Program.

Data Sources

The GENETIC_BSAI_SALMON_BYCATCH table is updated weekly, and is comprised of the below list of database objects from the AKFIN database. The primary data sources are the North Pacific Observer and Alaska Regional Office. The database objects include:

- NORPAC.ATL_SALMON_MV: This object is the driving/primary object for the PL/SQL procedure and provides the counts of chinook, chum, and other salmon bycatch for all NMFS areas in the BSAI (i.e., NMFS_REPORTING_AREA < 600)
- NORPAC.DEBRIEFED_HAUL: This source provides haul level details from trawl vessels in the BSAI, which is inner joined to the NORPAC.ATL_SALMON_MV table. The inner join is on (a) cruise, (b) permit, and (c) haul_seq
- NORPAC.CURRENT_OFFLOAD: This source provides offload level details from trawl vessels in the BSAI, which is inner joined to the NORPAC.ATL_SALMON_MV table. The inner join is on (a) cruise, (b) permit, and (c) offload_seq
- NORPAC.DEBRIEFED_AGE: This object provides the counts of genetically sampled salmon for each cruise and haul/offload within the BSAI.
- COUNCIL.COMPREHENSIVE_OBS_HAUL: This table provides haul level details on trip target, as well as ADF&G statistical areas, etc.
- NORPAC.DEBRIEFED_OFFLOAD_MV: This source provides landing_report_id in order to join those offloads to AKRO's AKR.V_ELLR_PRODUCT table (i.e., elandings). This is necessary to obtain ADF&G statistical areas for each offload.
- AKR.V_ELLR_PRODUCT: This source provides the ADF&G statistical areas for shoreside offloads, etc.
- AKR.V_CAS_PSC_PRIMARY_POSTINGS: This source provides processing sector designations.
- NORPAC.ATL_LOV_VESSEL: vessel translations to obtain vessel ADF&G numbers
- NORPAC.OLS_OBS_CONTRACT_CRUISE_MV: This source provides the observers' first and last names to help match genetic samples.

- NORPAC.DEBRIEFED_SPCOMP: This source provides pollock catch by hauls for all at-sea observer trips
- NORPAC.ATL_OFFLOADS_WITH_TRIPS_FOR_AKFIN_MV: This source connects NORPAC.DEBRIEFED_HAUL to provide total duration of all hauls and count of haul by trip for catcher vessels.
- AFSC.GENETIC_BSAI_SEASONS: Used to stratify records into A and B seasons.
- OWB_REP_TARGET.AKFIN_DATE_D: AKFIN database time dimension.

GENETIC_BSAI_SALMON_BYCATCH Database table

Column Name	Description
FIRST_NAME	Primary observer's first name
LAST_NAME	Primary observer's Last name
CRUISE	Sequence generated by NORPAC and supplied to the observer as a unique identifier for an observer cruise record.
PERMIT	Unique Code identifying a Vessel or Processor - inherited from the NORPAC data set and created by the RAM division in Juneau.
SEASON	Pollock season, either A or B season.
HAUL_OFFLOAD_NUM	Number which is entered by the observer identifying a unique haul or offload depending on which was the ultimate data source.
YEAR	Year extracted from haul retrieval date or offload delivery end date.
HAUL_OR_DELIVERY_DATE	The haul date or the delivery end date depending on which was the ultimate data source.
WEEK_ENDING_DATE	The week ending date for the haul or delivery end date.
WEEK_NUMBER	Week number (or Agency week number), which is calculated Sunday to Saturday producing 53 or 54 weeks per calendar year.
PROCESSING_SECTOR	Code representing the processing sector for the fishing activity. 'CP' = Catcher/Processor, 'M' = Mothership, 'S' = Shoreside.
VESSEL_ADFG	The ADF&G number for the vessel
CATCHER_VESSEL_ADFG	The ADF&G number of the catcher vessel

SAMPLE_FROM	Either sampled from "at-sea" or " offload".
REPORT_ID	If the catch report is an eLandings report (ELLR or ELPR), the numeric identifier of the report in the eLandings system.
NMFS_AREA	Code used to identify a federal reporting area
PRIMARY_ADFG_STAT_AREA_CODE	The ADF&G statistical area as reported by observer in at-sea hauls or primary ADF&G statistical area in elandings from offloads. If offload, the ADF&G statistical area is determined by the plurality of pollock catch if there are more than one ADF&G statistical areas reported by the processor.
ADFG_STAT_AREA_CODES	All ADF&G statistical areas. This is SQL function "LISTAGG" to report all ADF&G statistical areas (if more than one) associated catch/offload.
SPECIAL_AREA_CODES	ADF&G management area codes of the special areas (if available)
LATDD_START	Latitude decimal degrees is computed from the deployment latitude (at-sea observations only)
LONDD_START	Longitude decimal degrees is computed from the deployment longitude (at-sea observations only)
LATDD_END	Latitude decimal degrees is computed from the retrieval latitude (at-sea observations only)
LONDD_END	Longitude decimal degrees is computed from the retrieval longitude (at-sea observations only)
GEAR	Numeric value from Norpac Domestic Gear or atl_lov_gear_type that combined with the Form defines the unique identifier for a gear record.
TRIP_TARGET_CODE	Code representing the target fishery calculated for the trip.
BOTTOM_DEPTH_FATHOMS	Average bottom depth recorded by the observer from the vessel log.
FISHING_DEPTH_FATHOMS	Average fishing depth recorded by the observer from the vessel log.
PERFORMANCE	1 No Problem, 2 Crab Pot In Haul, 3 Net Hung (backed down), 4 Net Ripped, 5 Other Problem, 6 Gear Lost, 7 Considerable Sea Lion Predat, 8

	Considerable Killer Whale Pr, 9 Fishing Duration Affected, 10 Considerable Sperm Whale Pr
SPECIMEN_TYPE	Specimen type code. Specimen_type 4 prior to 2008 = otolith and scale samples (for Pacific cod); 2008 and later = fin clip (for salmon).
SPECIMEN_TYPE_DESCRIPTION	Specimen type code description. This attribute is null for Domestic Table age records. See the table NORPAC.AGE_for Domestic Table specimen description. Prior to 2008, NORPAC.AGE_STRUCTURE_CODES is the list of values table for NORPAC.DOMESTIC_AGE specimen_type / specimen_description: 1 = otoliths; 2 = scales; 3 = length-weight sample; 4 = otoliths and scales; 5 = otoliths and fin rays; 6 = scales and fin rays; 7 = otoliths, scales and fin rays; 8 = maturity only, no otoliths; 9 = otoliths and maturity; 99 = structure type not recorded.
MALE_CHUM_FINCLIP	Number of male chum salmon fin clipped sampled
FEMALE_CHUM_FINCLIP	Number of female chum salmon fin clipped sampled
TOTAL_CHUM_FINCLIP	Total number of chum salmon fin clipped
MALE_CHINOOK_FINCLIP	Number of male chinook salmon fin clipped sampled
FEMALE_CHINOOK_FINCLIP	Number of female chinook salmon fin clipped sampled
TOTAL_CHINOOK_FINCLIP	Total number of chinook salmon fin clipped
NUMBER_CHINOOK	Number of chinook salmon
NUMBER_CHUM	Number of chum salmon
NUMBER_COHO	Number of coho salmon
NUMBER_PINK	Number of pink salmon
NUMBER_SOCKEYE	Number of sockeye salmon
NUMBER_OTHER	Number of other salmon
NUMBER_UNIDENTIFIED	Number of unidentified salmon
HAUL_JOIN	This is a uniquie identifier of a haul record composed by concatenation of cruise, permit and haul_seq. For domestic table records this is a sequence generated unique identifier for a haul.

HAUL_SEQ	Sequence generated unique identifier for a haul record
OFFLOAD_JOIN	Surrogate FK to offload if salmon record is so derived Composed of concatenation of cruise, permit and offloadl_seq.
OFFLOAD_SEQ	Sequence generated unique identifier for an offload record
ALL_SALMON_HAUL_PORT_JOIN	Combo of haul_join and port_join. SQL TO_CHAR ((CASE WHEN haul_join IS NOT NULL THEN haul_join WHEN port_join IS NOT NULL THEN port_join END))
AKFIN_LOAD_DATE	The data when the "NORPAC.ATL_SALMON_MV" table was loaded to the AKFIN database.
POLLOCK_CATCH_MTONS	Total pollock catch in metric tons by haul if "SAMPLE_FROM" = AT-SEA, or by offload if "SAMPLE_FROM" = OFFLOAD.
SEA_SURFACE_TEMPERATURE	Daily sea surface temperature product from the NOAA Coral Reef Watch program (Celsius). The data are accessed via the PacIOOS ERDDAP server (https://pae-paha.pacioos.hawaii.edu/erddap/griddap/dhw_5km)
DURATION_IN_MIN	Duration in minutes by individual haul if "SAMPLE_FROM" = AT-SEA, or duration in minutes by all hauls from trip if "SAMPLE_FROM" = OFFLOAD.
COUNT_HAUL	Count of individual haul (i.e., 1) if "SAMPLE_FROM" = AT-SEA, or count of all hauls on trip if "SAMPLE_FROM" = OFFLOAD.

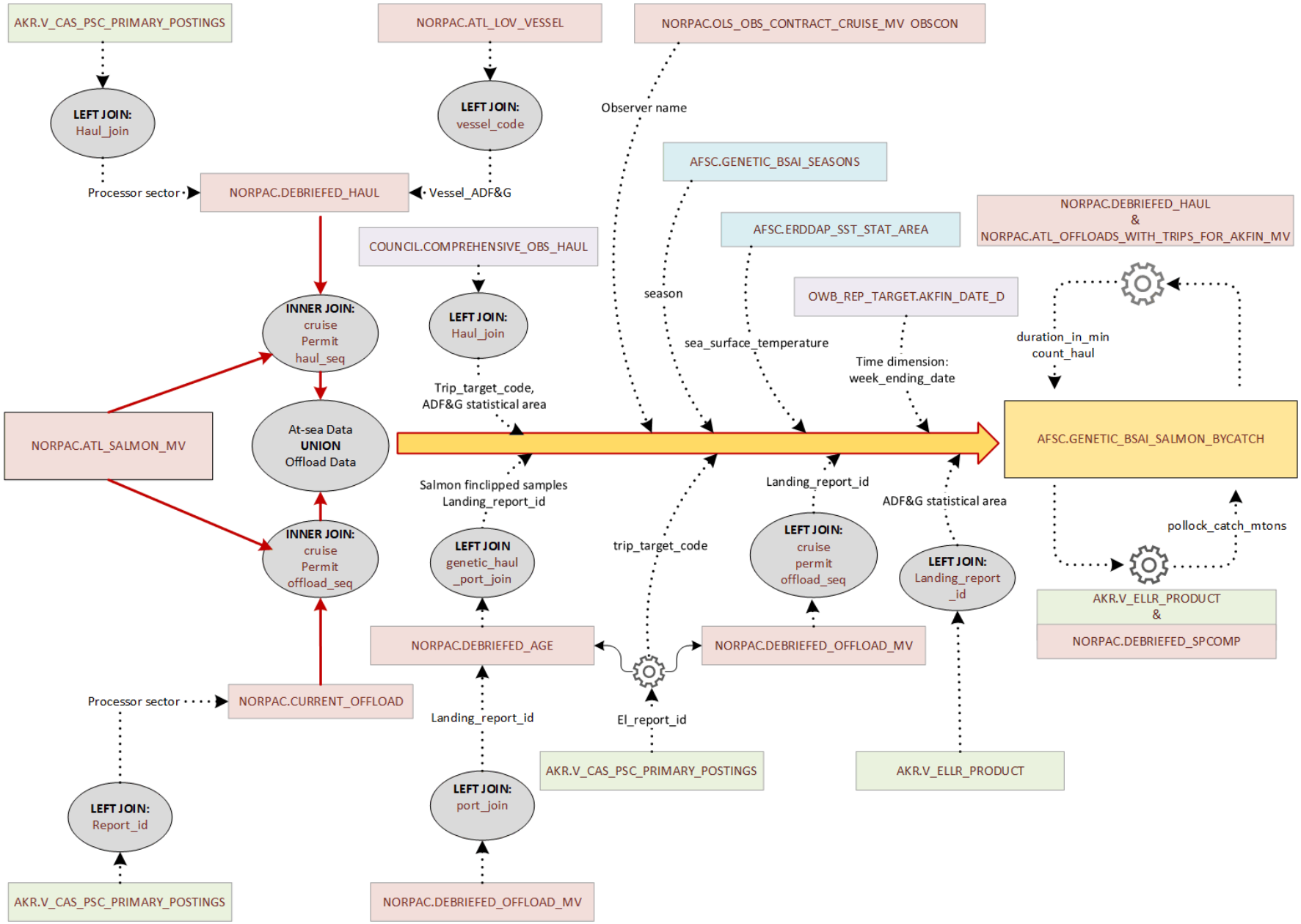

Figure 1. The data flow diagram of the database procedure that refreshes the data in the GENETIC_BSAI_SALMON_BYCATCH table.