Alaska Fisheries Information Network

Comprehensive Observer Electronic Monitoring

Version History

Date	Author	Change Comments	Version
2020	J. Lee	Initial	1.0
5/31/2021	M. Callahan	AKRO/AKFIN data flow	1.1
6/4/2021	M. Callahan	Clarification regarding longline pots	1.2
8/6/2021	M. Callahan	Addition of longline pot fields and descriptions	1.3
6/28/2022	M. Callahan	Added gear performance and gear name fields	1.4
10/5/2022	M. Callahan	Added gear performance metadata	1.5

Contents

Fixed Gear Electronic Monitoring (EM) Data

Overview

The AKFIN COMPREHENSIVE_OBS_EM data mart was developed to make fixed gear electronic monitoring (EM) data available to AKFIN users. COMPREHENSIVE_OBS_EM is sourced primarily from a set of NMFS Alaska Regional Office (AKRO) tables containing haul-level and species composition fixed gear EM data that have been processed by the Fisheries Monitoring and Analysis Division (FMA) at the Alaska Fisheries Science Center (AFSC) and further enhanced by AKRO.

In 2018, EM for fixed gear catcher vessels became a NMFS-regulated program in Alaskan waters. Vessels eligible to carry EM equipment are those that fish with longline and/or pot gear. These vessels are part of the partial coverage observed fleet, which is limited to vessels greater than or equal to 40 feet LOA (length overall). Vessels who wish to carry EM equipment in lieu of an observer must first make a request to NMFS to be considered for EM. Once NMFS approves a vessel to be in EM, the vessel will remain in the EM pool for a minimum of one calendar year. Vessels remain in the EM pool until they request to opt out. As part of the approval process, each vessel must submit a vessel monitoring plan (VMP) to NMFS that describes the specific layout of the EM system on board the vessel and outlines vessel responsibilities, such as catch handling, approved discard locations, and procedures if there is a problem with the EM system.

When a vessel wants to fish, the vessel operator must first log the EM trip into the Observer Declare and Deploy System (ODDS). ODDS will randomly choose if the vessel operator must turn on the EM system for this trip, thus making it an EM-selected trip. If the trip is randomly selected for EM coverage, the EM system will record all the fishing activity for the duration of the fishing trip. Once the fishing trip is complete, the vessel operator is responsible for removing the hard drive and mailing it to the Pacific States Marine Fisheries Commission, where the data is reviewed by an EM reviewer.

When the EM reviewer starts reviewing the trip, they first will come up with a random sampling number to determine which hauls/sets to sample. Due to time constraints and other factors not all hauls in an EM trip are reviewed (i.e., sampled). Sampled hauls are those where an EM reviewer counts and identifies all fish/organisms on all hooks or pots for the haul.

In general, an EM reviewer will record the following information during the review of the EM video and EM data.

	Trip	Sampled hauls	Unsampled hauls
Trip start and trip end	Y		
Gear type of a haul		Y	Y
Haul begin retrieval date/time and position		Y	Y
Haul end retrieval date/time and position		Y	Y
Count of fish/organisms		Y	N
ID of fish/organisms		Y	N
Disposition (retained/discarded) and fate (depredation) of fish/organisms		Y	N

Once a hard drive has been reviewed, the EM data are then imported to the AFSC Oracle database. FMA then transforms the data so that the EM-reviewed data can be fed into the catch accounting system (CAS) at AKRO. The following information is added by FMA during the transformation process.

- NMFS area
- Weights of fish/organisms (based on average weights of observer-collected data)
- Total hauls in trip
- Total sampled hauls in trip
- Vessel type (e.g., catcher vessel)
- Haul purpose code (for catch accounting)
- Whether the vessel operator requested EM coverage for the trip (there is an option for vessels to request to turn on the cameras, even if the trip wasn't selected – to comply with an IFQ enforcement provision)
- Whether EM coverage for the trip was inherited from a prior trip (because the prior selected trip was canceled)
- ODDS number
- ODDS random number used

AKRO adds the following values to the EM data processed by FMA to generate the base *V_OBS_EM_HAUL* and *V_OBS_EM_HAUL_SPECIES* tables.

- Additional area designations (ADF&G statistical area, special area, critical habitat area, fisheries management plan (FMP) area, and FMP sub-area)
- Total and retained groundfish weight for the haul
- Sectors (harvest and processing)
- Species group
- Target codes (trip and haul)

On a weekly basis, AKFIN sources the *V_OBS_EM_HAUL* and *V_OBS_EM_HAUL_SPECIES* data tables from AKRO to populate the *AKFIN_MARTS.COMPREHENSIVE_OBS_EM* datamart. In addition to fields from the base table, COMPREHENSIVE_OBS_EM includes auxiliary fields from other data sources or calculated by AKFIN. Full metadata for base and auxiliary data fields are provided in the Base Data Sources and Auxiliary Data Sources sections.

Data Usage Notes

Users of EM data should note that EM data are different from observer-collected data and may not necessarily be used in the same ways as observer-collected data. Below are main attributes that EM-reviewed data does not contain.

- Total gear (i.e., number of skates) deployed is not recorded
- Total hooks retrieved is not recorded
- Soak time of gear is not recorded
- Weights are not determined by the EM reviewer or the EM software

Weight data

Because weights are not determined by the EM reviewer or the EM software, FMA instead appends average weights sourced from observer-collected data. FMA initially uses the EM species code, EM gear type, and EM NMFS area for the previous year to determine the average weight for that specific grouping. Previous-year data is used because it is complete and finalized. If no average weight is found at this first level of aggregation, the transformation logic calculates and appends average weights at increasingly aggregated levels of stratification until a match is made. In order of application, the strata for calculating and applying average weights are as follows:

1) Previous year – species code, gear type, and NMFS area
2) Previous year – species code, gear type, and area (BSAI or GOA)
3) Previous year – species code and gear type (Alaska-wide)
4) Most recent year with available data – species code

Trip attributes

Trip start and end attributes (time and location) are usually determined by the EM reviewer from the vessel's onboard GPS unit. A trip usually begins when the GPS/speed sensor spikes upward at a port, and usually ends when the GPS/speed sensor ends at a port. However, in instances where the system wasn't powered on in port (e.g., the GPS unit was turned on shortly after leaving port), the trip may not start and/or end precisely at a port. In these cases, the trip may be determined by the EM reviewer to start and end where the GPS/speed sensor starts/ends. The EM reviewer may alternatively opt to use information from the vessel logbook to make a better determination of trip start and end attributes.

Depredation

Beginning in 2020, EM reviewers began flagging catch from sampled hauls for evidence of depredation. EM reviewers code for a combination of disposition (retained/discarded) and type of depredation, as shown below. With the exception of predation by sand fleas, reviewers are unable to determine the specific cause of depredation (such as predation by marine mammals).

FateID	Fate	Disposition	Description
18	DepredatedDiscarded	Discarded	Discarded - Depredated
19	DepredatedRetained	Retained	Retained - Depredated
20	SandFleasPredatedDiscarded	Discarded	Discarded - Sand Flea Predated
21	SandFleasPredatedRetained	Retained	Retained - Sand Flea Predated

Longline Pots

Longline (string) pots are multiple pots attached to a longline and are deployed and retrieved together. Pots, including longline pots, were approved to target sablefish Gulf of Alaska Sablefish in 2017, and have been authorized for Bering Sea and Aleutian Island Sablefish since 2008. EM reviewers do not count individual pots if they are tied/strung together. In cases where longline pots are used, an entire string of pots is counted as a single haul. Beginning in 2022 EM reviewers began collecting additional information on longline pot configuration and the em_gear_code and em_gear_name fields were updated accordingly.

EM_GEAR_CODE	EM_GEAR_NAME	3 letter code	2022 code update notes
6	SnapLongline	SNP	NO CHANGE
7	FixedHookLongline	FIX	NO CHANGE
10	StringPot	STR	Will be retired for 2022 and on data (will remain in 2021 and prior data)
11	SinglePot	SNG	Will be retired for 2022 and on data (will remain in 2021 and prior data)
16	SinglePotSlinky	SNS	NEW
17	SinglePotRigid	SNR	NEW
18	StringPotSlinky	LPS	NEW
19	StringPotRigid	LPR	NEW

Gear performance

Gear performance has been assessed by EM reviewers since as early as 2017. EM reviewers use the following guidelines when assigning gear performance:

1 - No Problem

2 - Pots in Catch

- Use whenever a pot is seen occupying a hook (longline)

5 - Other Problem

- Comment on the issue with gear (e.g. line broke, line tangles, etc.)

6 - Gear Lost

- Gear is seen to be lost

7 - Depredation by Sea Lion

- Evidence (during video review, reviewer clearly sees a Sea Lion/s at or near the surface of the water) of sea lion depredation. May include seeing depredation on rail camera view (longline)

8 - Depredation by Killer Whales

- Evidence (during video review, reviewer clearly sees a Killer Whale/s at or near the surface of the water) of killer whale depredation. May include seeing depredation on rail camera view (longline)

10 - Depredation by Sperm Whales

- Evidence (during video review, reviewer clearly sees a Sperm Whale/s at or near the surface of the water) of sperm whale depredation. May include seeing depredation on rail camera view (longline)

11 - Depredation by Unknown organisms

- Evidence of depredation by unknown organisms. May include seeing fish with bite marks, fish heads/lips on line (**Do not select if there is only sand flea predation**)

Base Data Sources

The following observer sources from AKRO are used as the basis for the COMPREHENSIVE_OBS_EM view.

1. V_OBS_EM_HAUL: Haul level information such as date, time, location, and gear type for years 2015 and later.
2. V_OBS_EM_HAUL_SPECIES: Species details for each haul including extrapolated weight and number for years 2015 and later.

COLUMN_NAME	TYPE	COL NO	DESCRIPTION	
EM_HAUL_PK	NUMBER(18)	1	Unique identifier of this EM haul version row. This value is used to locate related catch accounting transactions.	AKRO:V_OBS_EM_HAUL
VESSEL_ID	NUMBER(6)	2	Federal permit number of the vessel on which the EM gear is on board.	AKRO:V_OBS_EM_HAUL
ORIGINAL_EM_TRIP_NUMBER	VARCHAR2(50 CHAR)	3	EM trip number assigned to this haul the first time it was imported.	AKRO:V_OBS_EM_HAUL
EM_TRIP_NUMBER	NUMBER(6,2)	4	Unique trip identifier, used to aggregate hauls at the "trip" level.	AKRO:V_OBS_EM_HAUL
ODDS_TRIP_NUMBER	NUMBER(9)	5	Trip number assigned by the North Pacific Groundfish and Halibut Observer Program's Observer Declare and Deploy System (ODDS) to vessels greater than 40 feet length overall in partial coverage fisheries.	AKRO:V_OBS_EM_HAUL
TRIP_START_DATE	DATE	6	The date/time the vessel left port or a tender to start the fishing trip	AKRO:V_OBS_EM_HAUL
EM_HAUL_NUMBER	NUMBER(9)	7	Unique fishing event created by the EM reviewer.	AKRO:V_OBS_EM_HAUL
RETRIEVAL_START_DATE	DATE	8	Date and time that fishing gear started to be retrieved.	AKRO:V_OBS_EM_HAUL
RETRIEVAL_END_DATE	DATE	9	Date and time pot came out of the water or for longline gear the date/time of when the end anchor came out of the water.	AKRO:V_OBS_EM_HAUL
SAMPLED_FLAG	VARCHAR2(1 CHAR)	10	Indicates whether the EM reviewer did or did not review the haul or set. On 12/18/2017, sampled_flag was removed from the source data, so this column was changed to nullable.	AKRO:V_OBS_EM_HAUL
AGENCY_GEAR_ID	NUMBER(6)	11	Unique identifier of the AGENCY_GEAR record representing the three-character gear code used by the Alaska Region.	AKRO:V_OBS_EM_HAUL
AGENCY_GEAR_CODE	VARCHAR2(5)	12	The three-character gear code used by the Alaska Region.	AKRO:V_OBS_EM_HAUL
EM_GEAR_CODE	NUMBER(6)	13	Gear code used by the EM reviewer.	AKRO:V_OBS_EM_HAUL
EM_GEAR_NAME	VARCHAR2(40)	14	Name of the gear.	AKRO:V_OBS_EM_HAUL
OBS_VESSEL_TYPE	NUMBER(2)	15	One-digit numeric code that identifies the type of fishing operation performed by the vessel: 1 = catcher/processor; 2,4 = mothership; 3,5,6 = catcher vessel.	AKRO:V_OBS_EM_HAUL
HAUL_PURPOSE_CODE	VARCHAR2(3)	16	Code describing the function of this haul. Defaults to CA (catch accounting) but may contain codes specifying any special project. See OBS_HAUL_PURPOSE table for more information.	AKRO:V_OBS_EM_HAUL

COLUMN_NAME	TYPE	COL NO	DESCRIPTION	
FMP_AREA_ID	NUMBER(6)	17	Unique identifier of the aggregated Fishery Management Plan (FMP) area in which the haul took place: 22 = BSAI (Bering Sea Aleutian Islands), 31 = GOA (Gulf of Alaska).	AKRO:V_OBS_EM_HAUL_
FMP_SUB_AREA_ID	NUMBER(6)	18	Unique MANAGEMENT_AREA identifier of the specific Fishery Management Plan (FMP) area in which the haul took place: 20 = BS (Bering Sea), 21 = AI (Aleutian Islands), 31 = GOA (Gulf of Alaska).	AKRO:V_OBS_EM_HAUL_
FMP_SUB_AREA_CODE	VARCHAR2(6)	19	Code used by the Alaska Region to identify the Fishery Management Plan area in which the gear was retrieved.	AKRO:V_OBS_EM_HAUL_
REPORTING_AREA_ID	NUMBER(6)	20	Unique MANAGEMENT_AREA identifier of the federal reporting area code.	AKRO:V_OBS_EM_HAUL_
REPORTING_AREA_CODE	VARCHAR2(6)	21	Three-digit code used by the Alaska Region to identify the federal reporting area in which the gear was retrieved.	AKRO:V_OBS_EM_HAUL_
ADFG_STAT_AREA_ID	NUMBER(6)	22	Unique MANAGEMENT_AREA identifier of the ADFG state statistical area.	AKRO:V_OBS_EM_HAUL_
ADFG_STAT_AREA_CODE	VARCHAR2(6)	23	Six-digit code used by ADFG to identify the state statistical area in which the gear was retrieved.	AKRO:V_OBS_EM_HAUL_
CRITICAL_HABITAT_AREA_ID	NUMBER(6)	24	Unique MANAGEMENT_AREA identifier of the Atka mackerel critical habitat area in the Aleutian Islands. This value is based on the VMS datapoints that were transmitted during the haul.	AKRO:V_OBS_EM_HAUL_
CRITICAL_HABITAT_AREA_CODE	VARCHAR2(6)	25	Alphanumeric code used by the Alaska Region to identify the critical habitat area in which the gear was retrieved or through which the vessel passed, according to its VMS data.	AKRO:V_OBS_EM_HAUL_
SPECIAL_AREA_ID	NUMBER(6)	26	Unique MANAGEMENT_AREA identifier of the special regulatory area in which the gear was retrieved or through which the vessel passed, according to its VMS data. For fixed gear, value is null if vessel passed through COBLZ or CVOA.	AKRO:V_OBS_EM_HAUL_
SPECIAL_AREA_CODE	VARCHAR2(6)	27	Alphanumeric code of the special regulatory area in which the gear was retrieved or through which the vessel passed, according to its VMS data. For fixed gear, value is null if vessel passed through COBLZ or CVOA.	AKRO:V_OBS_EM_HAUL_
COBLZ_FLAG	CHAR(1)	28	Flag indicating whether or not the gear was retrieved (based on the retrieval lat/long) in the C.Opilio Crab Bycatch Limitation Zone.	AKRO:V_OBS_EM_HAUL_
RETRIEVAL_START_LATITUDE_DD	NUMBER(10,6)	29	Latitude (in decimal degrees) when the fishing gear starts getting retrieved.	AKRO:V_OBS_EM_HAUL_
RETRIEVAL_START_LONGITUDE_DD	NUMBER(11,6)	30	Longitude (in decimal degrees) when the fishing gear starts getting retrieved.	AKRO:V_OBS_EM_HAUL_
RETRIEVAL_END_LATITUDE_DD	NUMBER(10,6)	31	Latitude (in decimal degrees) at which pot came out of the water or for longline gear when the last anchor for the haul came out of the water.	AKRO:V_OBS_EM_HAUL_
RETRIEVAL_END_LONGITUDE_DD	NUMBER(11,6)	32	Longitude (in decimal degrees) at which pot came out of the water or for longline gear when the last anchor for the haul came out of the water.	AKRO:V_OBS_EM_HAUL_
PROCESSING_SECTOR	VARCHAR2(3)	33	Code representing the processing sector as defined for prohibited species rate creation: CP = Catcher/Processor, M = Mothership, S = Shoreside.	AKRO:V_OBS_EM_HAUL_
HARVEST_SECTOR	VARCHAR2(3)	34	Code indicating type of vessel that harvested the catch: CP = catcher/processor (if OBS_VESSEL_TYPE = 1), CV = catcher vessel (for all other OBS_VESSEL_TYPEs).	AKRO:V_OBS_EM_HAUL_

COLUMN_NAME	TYPE	COL NO	DESCRIPTION	
TOTAL_GROUNDFISH_WEIGHT	NUMBER(20,10)	35	Total weight (in metric tons) of the groundfish species (both retained and discarded) in the haul.	AKRO:V_OBS_EM_HAUL_
RETAINED_GROUNDFISH_WEIGHT	NUMBER(20,10)	36	Total number of metric tons of the groundfish species that were retained for this haul.	AKRO:V_OBS_EM_HAUL_
TARGET_FISHERY_CODE	VARCHAR2(1 CHAR)	37	Code representing the target fishery calculated for the HAUL.	AKRO:V_OBS_EM_HAUL_
TRIP_TARGET_CODE	VARCHAR2(1 CHAR)	38	Code representing the target fishery calculated for the week (for catcher/processors and motherships) or the trip (for catcher vessels).	AKRO:V_OBS_EM_HAUL_
TRIP_TARGET_DATE	DATE	39	Week end date for catcher/processors and motherships; fishing start date for catcher vessels delivering shoreside.	AKRO:V_OBS_EM_HAUL_
YEAR	NUMBER(6)	40	Four-digit calendar year in which the gear was retrieved.	AKRO:V_OBS_EM_HAUL_
GEAR_PERFORMANCE	NUMBER(22)	41	Numeric Gear Performance Code as Assigned by the EM Reviewer.	AKRO:V_OBS_EM_HAUL_
GEAR_PERFORMANCE_DESCRIPTION	VARCHAR2(255)	42	Description of the Gear Performance Code. Data is only available for sampled hauls, beginning in 2017.	AKRO: V_OBS_EM_HAUL_SPECI
FILE_IMPORT_DATE	DATE	43	The date this version of the haul was imported.	AKRO:V_OBS_EM_HAUL_
IMPORT_PROCESSED_DATE	TIMESTAMP(6)	44	Date and time the import processing was completed for this haul record.	AKRO:V_OBS_EM_HAUL_
LAST_MODIFIED_DATE_HAUL	TIMESTAMP(6)	45	Date the haul was last modified.	AKRO:V_OBS_EM_HAUL_
USER_REQUESTED_COVERAGE	VARCHAR2(1 CHAR)	46	Indicates the user wants EM coverage for this trip even if not randomly selected.	AKRO:V_OBS_EM_HAUL_
INHERIT_OBSERVER_COVERAGE	VARCHAR2(1 CHAR)	47	Indicates the trip will be EM covered due to a prior EM selected trip being cancelled.	AKRO:V_OBS_EM_HAUL_
RANDOM_NUMBER_USED	NUMBER(7,4)	48	ODDS generated random number; if less than or equal to effective rate then will be selected for EM coverage.	AKRO:V_OBS_EM_HAUL_
EFFECTIVE_RATE	NUMBER(7,4)	49	The current selection rate for EM coverage effective at the time of the trip.	AKRO:V_OBS_EM_HAUL_
TRIP_TOTAL_HAULS_POTS	NUMBER(6)	50	Indicates the total number of hauls or pots (both sampled and unsampled) that were retrieved for the associated EM trip. In cases where longline (or string) pots are used, an entire string of pots is counted as a single haul.	AKRO:V_OBS_EM_HAUL_
TRIP_SAMPLED_HAULS_POTS	NUMBER(6)	51	Indicates the total number of sampled hauls or pots that were retrieved for the associated EM trip. In cases where longline (or string) pots are used, an entire string of pots is counted as a single haul.	AKRO:V_OBS_EM_HAUL_
CATCH_REPORT_SPECIES_FACT_PK	NUMBER(18)	52	Unique identifier of this species composition row. This value is used to locate related catch accounting transactions.	AKRO:V_OBS_EM_HAUL_
OBS_SPECIES_CODE	NUMBER(4)	53	Code used by the Observer Program to represent the species.	AKRO:V_OBS_EM_HAUL_
AGENCY_SPECIES_ID	NUMBER(6)	54	Unique identifier of the AGENCY_SPECIE record representing the three-digit species code used by the Alaska Region.	AKRO:V_OBS_EM_HAUL_
AGENCY_SPECIES_CODE	VARCHAR2(5)	55	The three-digit species code used by the Alaska Region.	AKRO:V_OBS_EM_HAUL_

COLUMN_NAME	TYPE	COL NO	DESCRIPTION	
SPECIES_GROUP_ID	NUMBER(6)	56	Unique identifier of the SPECIES_GROUP record representing the four-character species group code used by the Alaska Region.	AKRO:V_OBS_EM_HAUL_
SPECIES_GROUP_CODE	VARCHAR2(5)	57	The four-character species group code used by the Alaska Region.	AKRO:V_OBS_EM_HAUL_
EXTRAPOLATED_WEIGHT_MT	NUMBER	58	Total weight in metric tons of the species in the haul, as extrapolated from the EM-reviewed sample(s).	AKRO:V_OBS_EM_HAUL_
EXTRAPOLATED_NUMBER	NUMBER(20,10)	60	Total number of animals of the species in the haul, as extrapolated from the EM-reviewed sample(s).	AKRO:V_OBS_EM_HAUL_
PERCENT_RETAINED	NUMBER(3)	61	Percentage of the total catch of the species that was retained on this haul.	AKRO:V_OBS_EM_HAUL_
LAST_MODIFIED_DATE_SPECIES	TIMESTAMP(6)	62	Date the species record was last modified.	AKRO:V_OBS_EM_HAUL_

Auxiliary Data Sources

In addition to base EM observer data, additional fields have been incorporated to augment this view.

1. AKRO- Additional fields from the following AKRO tables add information from other tables and define coded fields in the base data: V_VESSEL, OBS_HAUL_PURP... AGENCY_GEAR.
2. NORPAC- Fields are incorporated from the North Pacific Observer Program in cases where NORPAC may label data differently than AKRO and those translations n... information regarding depredation is also drawn from NORPAC
3. ADFG- The common species names used by the Alaska Department of Fish and Game (ADFG) are also included
4. AKFIN- Fields in the Alaska Fish Information Network database describing areas used by the North Pacific Fisheries Management Council are included. AKFIN also ca... base data.

COLUMN_NAME	TYPE	COL NO	DESCRIPTION	
EXTRPOLATED_WEIGHT_KG	NUMBER(20,10)	59	Total weight in kilograms of the species in the haul, as extrapolated from the EM-reviewed sample(s). Calculated from EXTRAPOLATED_WEIGHT	AKFIN (Calculated)
AKFIN_VDATE	DATE	63	Load date for load of the COMPREHENSIVE_OBS_EM datamart table, different from AKFIN_LOAD_DATE, which denotes the load date of the underlying AKR source data.	AKFIN (Calculated)
OBS_VESSEL_ID	VARCHAR2(6)	64	Observer program vessel ID	NORPAC: ATL_LOV_VE
ADFG_VESSEL_ID	VARCHAR2(6)	65	ADF&G vessel number	AKRO: V_VESSEL.ADFG
OBS_VESSEL_TYPE_DESC	VARCHAR2(50)	66	Observer program vessel type description, translated from OBS_VESSEL_TYPE	NORPAC: ATL_LOV_VE
OBS_GEAR_CODE	NUMBER	67	Observer program gear code. CASE AGENCY_GEAR_CODE WHEN 'HAL' THEN 8 WHEN 'POT' THEN 6 WHEN 'JIG' THEN 7 ELSE NULL END	AKFIN (Calculated)
OBS_GEAR_DESCRIPTION	VARCHAR2(11)	68	CASE AGENCY_GEAR_CODE WHEN 'HAL' THEN 'LONGLINER' WHEN 'POT' THEN 'POT OR TRAP' WHEN 'JIG' THEN 'JIG' ELSE NULL END	AKFIN (Calculated)
FMP_AREA	VARCHAR2(4)	69	FMP area, based on REPORTING_AREA_ID	AKFIN: COUNCIL.FMP_
FMP_SUBAREA	VARCHAR2(4)	70	FMP subarea, based on REPORTING_AREA_ID	AKFIN: COUNCIL.FMP_

COLUMN_NAME	TYPE	COL NO	DESCRIPTION	
OBS_SPECIES_NAME	VARCHAR2(30)	71	Observer program species name, translated from OBS_SPECIES_CODE	NORPAC:SPECIES_CODE
AGENCY_SPECIES_NAME	VARCHAR2(60)	72	Species name, translated from AGENCY_SPECIES_CODE	ADFG:SPECIES.SPECIES
HAUL_PURPOSE_DESCRIPTION	VARCHAR2(100)	73	Haul purpose description, translated from HAUL_PURPOSE_CODE	AKRO: OBS_HAUL_PURPOSE_
HAUL_TARGET_NAME	VARCHAR2(60)	74	Haul target name, translated from TARGET_FISHERY_CODE	AKRO:TARGET_FISHER
TRIP_TARGET_NAME	VARCHAR2(60)	75	Trip target name, translated from TRIP_TARGET_CODE	AKRO:TARGET_FISHER
TOTAL_SPECIES_DEPREDATED	NUMBER	76	Count of retained + discarded species from sampled haul flagged by EM reviewer as depredated (excluding predation by sand fleas). These counts are available beginning 2020.	NORPAC: EM_DEPRADATED_AK
EM_GEAR_NAME	VARCHAR2(40)	77	Name of EM gear, translated from EM_GEAR_CODE	AKRO:AGENCY_GEAR
NUMBER_OF_POTS_IN_SAMPLED_STRING	NUMBER	78	Total number of pots retrieved on the sampled string for that EM_HAUL_NUMBER	NORPAC:EM_STRING_ NUMBER_OF_POTS_IN
NUMBER_OF_SAMPLED_STRINGS	NUMBER	79	Total number of retrieved sampled strings for that TRIP_NUMBER	NORPAC:EM_STRING_ NUMBER_OF_SAMPLE
NUMBER_OF_NON_STRINGS	NUMBER	80	Total number of retrieved strings not sampled for that TRIP_NUMBER	NORPAC:EM_STRING_ NUMBER_OF_NON_ST
TOTAL_STRINGS_IN_TRIP	NUMBER	81	Total number of retrieved strings (both sampled and unsampled) for that TRIP_NUMBER	NORPAC:EM_STRING_ TOTAL_STRINGS_IN_T