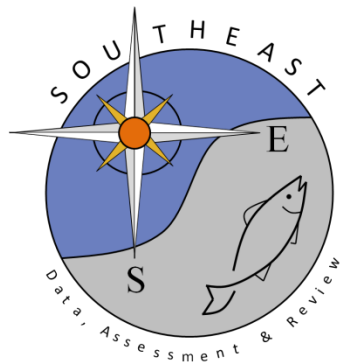


Methods Used to Compile South Atlantic Shrimp Effort Used in the Estimation of King Mackerel
Bycatch in the South Atlantic Shrimp Fishery

David Gloeckner

SEDAR-PW6-RD61

7 August 2014



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April 25, 2014

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Trip ticket data exist in ACCSP for FL from 1986-present, NC from 1994 to the present, SC from 2004 to the present, and GA from 2001 to the present. Data for years from 1978 to the period covered by trip tickets are available from the South Atlantic Shrimp (SAS) database at the SEFSC. The SAS system covers 1978-1991 for NC, 1978-2000 for GA, 1978-2003 for SC and 1981-1992 for FL (Table 1). A description of the SAS database is presented in Appendix A and a copy of the ACCSP commercial data collection standards is located at: http://www.accsp.org/documents/programdesign/2012/ACCSPStandards_Commercial.pdf. An entity relation diagram for the tables used in this extraction from ACCSP is presented in appendix B.

Trip ticket for NC-FL were extracted from the ACCSP consolidated reports and consolidated landings table for the years where trip ticket data are available for NC-FL and imported into Statistical Analysis Software. Where information was available in the additional effort tables (trips, efforts, catches), that information was linked with the trip ticket data during the extraction. The fields extracted from ACCSP included: report identifier, trip identifier, data supplier, unload year, unload month, unload day, state code, county code, dealer license number, state dealer id, vessel coast guard number, vessel state registration number, gear code, gear name, area code, sub area code, distance from shore, species code, common name, disposition code, market code, grade code, live pounds, value, start of trip year, start of trip month, start of trip day, trip number, was trip split, days at sea, hours fishing, soak time, county code from effort tables, state code from effort tables, area code from effort tables, sub area code from effort tables, distance code from effort tables, and gear code from effort tables. The trips extracted from ACCSP were limited to those that had shrimp landings.

After the data were imported into the Statistical Analysis Software, trips landing in FL west coast counties were removed and bait records were removed. The data were then sorted by trip identifier and pounds to identify the target species. The record with highest pounds landed was then retained for each trip. Trips with non-shrimp targets were then removed. Each trip record was counted as 1 trip, unless identified as a split trip, in which case it was counted as ½ trip. These records were then inserted into a table into which the SAS data would be added to complete the years before trip tickets are available.

Shrimp effort data were extracted from the South Atlantic Shrimp System for years before trip ticket data are available. The fields extracted included: schedule number, trip identifier, unload year, unload month, unload day, state code, county code, state dealer id, vessel id, gear code, gear name, area code, sub area code, species code, common name, disposition, landed pounds, value, calendar days fished, boat trips and vessel trips. SAS system codes were converted to FIN codes and boat and vessel trips added together and then the SAS data was inserted into the table housing the trip ticket data. Trips were then summarized by year, state and month and exported into a CSV file for use by analysts. NC data are incomplete for 1992 and missing for 1993, so these years must be interpolated to complete the dataset. The code used for this data pull is presented in appendix C.

Table 1. Source of shrimp effort data by year and state.

YEAR	STATE			
	FL	GA	NC	SC
1978		SAS	SAS	
1979		SAS	SAS	SAS
1980		SAS	SAS	SAS
1981	SAS	SAS	SAS	SAS
1982	SAS	SAS	SAS	SAS
1983	SAS	SAS	SAS	SAS
1984	SAS	SAS	SAS	SAS
1985	SAS	SAS	SAS	SAS
1986	SAS	SAS	SAS	SAS
1987	SAS	SAS	SAS	SAS
1988	SAS	SAS	SAS	SAS
1989	SAS	SAS	SAS	SAS
1990	SAS	SAS	SAS	SAS
1991	SAS	SAS	SAS	SAS
1992	SAS	SAS		SAS
1993	ACCSP	SAS		SAS
1994	ACCSP	SAS	ACCSP	SAS
1995	ACCSP	SAS	ACCSP	SAS
1996	ACCSP	SAS	ACCSP	SAS
1997	ACCSP	SAS	ACCSP	SAS
1998	ACCSP	SAS	ACCSP	SAS
1999	ACCSP	SAS	ACCSP	SAS
2000	ACCSP	SAS	ACCSP	SAS
2001	ACCSP	ACCSP	ACCSP	SAS
2002	ACCSP	ACCSP	ACCSP	SAS
2003	ACCSP	ACCSP	ACCSP	SAS
2004	ACCSP	ACCSP	ACCSP	ACCSP
2005	ACCSP	ACCSP	ACCSP	ACCSP
2006	ACCSP	ACCSP	ACCSP	ACCSP
2007	ACCSP	ACCSP	ACCSP	ACCSP
2008	ACCSP	ACCSP	ACCSP	ACCSP
2009	ACCSP	ACCSP	ACCSP	ACCSP
2010	ACCSP	ACCSP	ACCSP	ACCSP
2011	ACCSP	ACCSP	ACCSP	ACCSP
2012	ACCSP	ACCSP	ACCSP	ACCSP
2013	ACCSP	ACCSP	ACCSP	ACCSP

SOUTH ATLANTIC SHRIMP SYSTEM

OVERVIEW

DATE THIS DOCUMENT WAS LAST UPDATED:

January 31, 1995
November 29, 1995 by Linda Hardy
December 5, 1995 by Susan Gold
May 8, 2012 by David Gloeckner
April 24, 2014 by David Gloeckner

PURPOSE:

This document is an adaptation of a document originally written in June of 1990. It is intended as an overview of the data collection program.

INTRODUCTION:

The Southeast Fisheries Science Center SEFSC, in cooperation with the South Atlantic states, collects South Atlantic shrimp data from dealers and fishermen and archives these data on the SECPR server. These data are collected to provide catch, value, area caught, and effort data for individual commercial fishing trips. It should be noted that some states are not providing effort data. Although this objective is never totally achieved, the SEFSC's data do provide a near-census of the commercial catches, the majority of which are for consolidated trips. This documentation has been prepared to describe the structure of the computer files in which these data are stored.

HISTORY

The historical South Atlantic shrimp data collection dates back to 1956 when hard copy reports were published reporting commercial catches by state, port, month, species, size, pounds (heads-on), and value of shrimp landed. These reports are published and available through 1978. Starting with 1962, these reports were computerized; however, the computerized reports do not contain species or size compositions. Beginning in 1978 for the states of North Carolina and Georgia, 1979 for South Carolina, and the Florida East Coast in 1981, the detailed shrimp statistics data collection system became operative. This system was designed by the Shrimp Technical Committee of the South Atlantic States Marine Fisheries Commission and was oriented towards individual trip data collection. Beginning in 1982, the SEFSC and the four coastal states in the South Atlantic established a cooperative program for the collection and processing of shrimp statistics. Although the data collection and processing were shared by the SEFSC and the State Cooperators, it was agreed that the data would be maintained on a mainframe computer owned by the NMFS, but accessible by

all partners. Currently, these data are stored on the NMFS SECPR Oracle server in Miami, Florida.

After 1992, North Carolina and Florida quit collecting detailed shrimp information. The Florida data does not include Monroe County or bait shrimp. South Carolina data includes mariculture shrimp and Georgia includes bait shrimp.

Data Base Description and Record Format

=====

As established by the Shrimp Technical Committee, data for this data base are collected for individual trips. A trip is defined as the time when a vessel (or boat) departs to conduct fishing activities until the vessel (or boat) returns and unloads its catch. Port samplers that collect the data from seafood processors and dealers are instructed to prepare a separate data entry form or schedule for each trip that the dealer has sales information for.

The organization of the data in the data base also follows the trip concept. However, because the data base uses a fixed-record format, it is likely that more than one record exists for a single trip. The reason for multiple records per trip is that a single record is used for each species, size and area/subarea where the shrimp were reportedly caught. Thus, if both pink and brown shrimp were caught in two separate areas, then there would be four records associated with this fishing trip. The user must be aware of this organization when using the data base. It is recommended that when users need information about individual fishing trips, the data be sorted by schedule number, port, date and dealer number. Sorting the data with these parameters (fields) will assure that all of the records associated with a single trip will be physically located together in the (sorted) data file. For trip effort information, the file needs to be indexed on state, year, month, day, county, dealer, schedule unique.

It should also be noted that the number of trips is recorded in one of two fields. If the trip was made by a vessel (i.e., a craft that is five net tons or greater), the number of trips is recorded in the Vessel Trip field, i.e., the 10th field in the record (note, the record format and field names are provided in the Appendix). If the trip (or trips) was (were) made by a boat, then the number of trips is recorded in the Boat Trip field, i.e., 11th field in the record. Thus, if the user wants the total number of trips, then the values in both of these fields must be summed. For the majority of the records, the value in either of these two fields is 1; however, port samplers do combine information from more than one trip on a single schedule in some situations. For example, if the identification numbers for several vessels are not known, then the port agents are instructed to consolidate the data from these trips into one schedule for the same date of return. Trip consolidation is also used when the trips are made by boats because they do not have a registration number that has been issued by the U.S. Coast Guard, and the data collection policy is not to record data by state registration number. In addition, port agents in Georgia have been instructed not to record vessel identification number, either Coast Guard or State registration numbers.

Beginning in 1991 for South Carolina, the number in the vessel field is total trips of vessels and boats - not total trips for vessels.

The U.S. Coast Guard registration number is provided in the 14th field, Vessel ID Number. If the trip is for a single vessel and the U.S. Coast Guard number is unknown, a value of 999999 is entered in the ID Number field. For consolidated schedules and the records for fishing that occurred in Georgia, this field is filled with zeroes.

Calendar Days Fished is a record of the trip duration, described as the number of days spent fishing on a particular trip. Days, in this case, are defined as any part of a day (12:01 A.M. to midnight) in which a craft actually catches or tries to catch shrimp. When more than one area or subarea is fished during a trip, the calendar days are prorated according to the percentage of time spent fishing in each area for that trip. In this case the calendar days fished may include decimals and would give the total trip duration only when added to calendar days of other listings with the same schedule number, port number, date, and dealer number.

South Carolina has two sources of Calendar Days Fished data. Forty percent of the data is reported by shrimp dealers, with the remaining data calculated by port agents. Prior to 1986, Calendar Days Fished was assigned by the agent based only on the amount of the catch and size of the vessel. Since 1986, all data not supplied by dealers is assigned by comparing trip tickets with the last date of unloading, along with the amount of the catch and the agent's fishery knowledge. Beginning in 1991, South Carolina stopped collecting effort data.

The Tenths of Days Fished field is a number obtained by dividing the actual number of hours that the net was in the water while fishing in a particular area by 24. This result is given in decimal form. (For example 090 would be 9 days fished and 003 would be .3 days fished.) In South Carolina this field shows the actual tenths of days fished only for those trips in which an interview was conducted - about five percent. For all other trips, a value of 7.5 is assigned to this field.

The point of landing is listed by state and county in the first two fields. In South Carolina, however, the state and county listed are for the first point of purchase, rather than the point of landing.

The shrimp data includes a grading code which gives information about whether the shrimp size listed is based on the actual size after sorting (code 2) or on an average catch size (code 1). Georgia and South Carolina do not follow this coding system. Instead, Georgia codes all shrimp as 1 whether they have been sorted and graded or not. For South Carolina, a coding of 1 means that either no grading occurred or that only one grade was recorded for the trip. Code 2 signifies that the catch was graded and that more than one grade was landed.

The distance from shore a catch was taken is given in the Subarea field for all offshore areas. An offshore area is generally described as being a geographic location extending from any point of land on the coast line out to the open ocean excluding sounds, inlets, rivers, bays, intercoastal waterways, etc. These offshore areas are further divided by subareas

which are in three distinct groups according to distance from the shore line; i.e. 0-3 miles, 3-12 miles, and 12-200 miles. Inshore areas are generally described as bodies of saltwater other than offshore areas including sounds, inlets, bays, tidal portions of rivers, estuaries and other salt or brackish water.

Area and subarea fields may show the following irregularities. The subarea code 00 is given by Georgia port agents when the subarea is unknown. In South Carolina, the county code 64 is used for both Jasper and Beaufort counties.

Pounds: The quantity for each species and size. The quantity is the actual weight of the shrimp in pounds, heads-off.

Unit Cost is the average ex-vessel price per pound paid to the fisherman for heads-off shrimp for each species and size reported. The ex-vessel price does not include charges for unloading, grading, icing, packing, cartage, etc. The unit cost is obtained from dealers' records, personal observation, and from information acquired through interviews. For landings in South Carolina, ex-vessel price data have been assigned by computer algorithm based on monthly dealer prices and known packing and heading costs.

Identification of commonly co-occurring shrimp species in South Carolina is carried out by applying the results of independent state surveys to all commercial catches. These surveys are conducted in the following way: Prior to 1985, species composition was determined by counting the proportion of each species in a sample of fifty shrimp and applying that result to the entire catch. The current procedure uses samples weighing two to three pounds that contain at least 50 shrimp each. These samples are sorted by species and are then weighed, giving an estimate of the species make-up for that trip and grade.

The Date of Landing field gives the unloading date for a trip by month, date and year. South Carolina gives the exact unloading date only for those landings which are recorded by trip specific weigh-outs; about 70 percent. Information for the remaining landing dates is reported via monthly dealer reports which give the landing date as the 15th of the month, unless the trawling season was not open for the entire month for that area fished. In this case the date is coded with the modal day. In 1991 South Carolina started coding the date of landings as 7, 14, 21 and 28 (first week, second week etc.) Day 29 would represent days 29, 30 and 31, and Day 15 would represent a monthly report. North Carolina dates most of its consolidated schedules on the Friday of each week because nearly all buyers calculate weekly catch totals and settle accounts with the fishermen on Friday.

SOUTH ATLANTIC SHRIMP FORMAT
of the Flat files as
they were stored on the A10

=====

COLUMN	FIELD
1 - 2	State Landed
3 - 4	County Landed
5 - 8	Area Caught
9 - 10	Distance From Shore
11 - 13	Dealer Number
14 - 19	Date Landed(mmddy)
20 - 22	Schedule Number
23	Grading
24	Gear Code
25 - 30	Vessel Trip
31 - 36	Boat Trips
37 - 39	Calendar Days Fished
40 - 44	Tenth Of Days Fished
45 - 50	Vessel ID Number
51	Species Code
52 - 53	Size
54 - 58	Pounds Caught (heads off)
59 - 62	Unit Cost (price per pound)
63 - 65	Filler

STATE CODES

=====

STATE CODE	STATE
=====	=====
36	North Carolina
43	South Carolina
13	Georgia
10	Florida (east coast)

COUNTY CODES

=====

NORTH CAROLINA	SOUTH CAROLINA	GEORGIA	FLORIDA
=====	=====	=====	=====
Dare (90)	Horry (60)	Chatham (33)	Nassau (22)
Hyde (91)	Georgetown (61)	Bryan (34)	Duval (23)
Beaufort (92)	Charleston (62)	Liberty (35)	St.Johns (24)
Pamlico (93)	Colleton (63)	McIntosh (36)	Volusia (25)
Carteret (94)	Beaufort (64)	Glynn (37)	Brevard (26)
Onslow (95)		Camden (38)	St.Lucia (27)
New Hanover (96)			
Brunswick (97)			
Pender (98)			
Craven (99)			

AREA AND SUBAREA CODE FORMATS

=====

AREA	SUBAREA CODE	DESCRIPTION
=====	=====	=====
XXX0	X1	Offshore location of 0 to 3 miles
XXX0	X2	Offshore location of 3+ to 12 miles
XXX0	X3	Offshore location of 12+ miles
XXXZ	XX	Inshore location

(X is any digit 0 to 9, Z is any digit 1 to 9)

GEAR TYPE

=====

Shrimp Trawl (A)
 Channel Net (B)
 Butterfly Net (C)
 Other [prior to 6/84] (D)
 Pound Net [after 6/84] (D)
 Crab Trawl (E)
 Fish Trawl (F)
 Cast Net (G)
 Seine (H)
 Skimmer Trawl (I)
 Other (Z)

GRADING CODE

=====

1 - Average Size Caught
 2 - Actual Size

SPECIES

=====

- 1 - Brown
- 2 - Pink
- 3 - White
- 4 - Sea Bobs
- 5 - Royal Red
- 6, 7, & 9 - Aquaculture
- 8 - Rock
- B - Bait

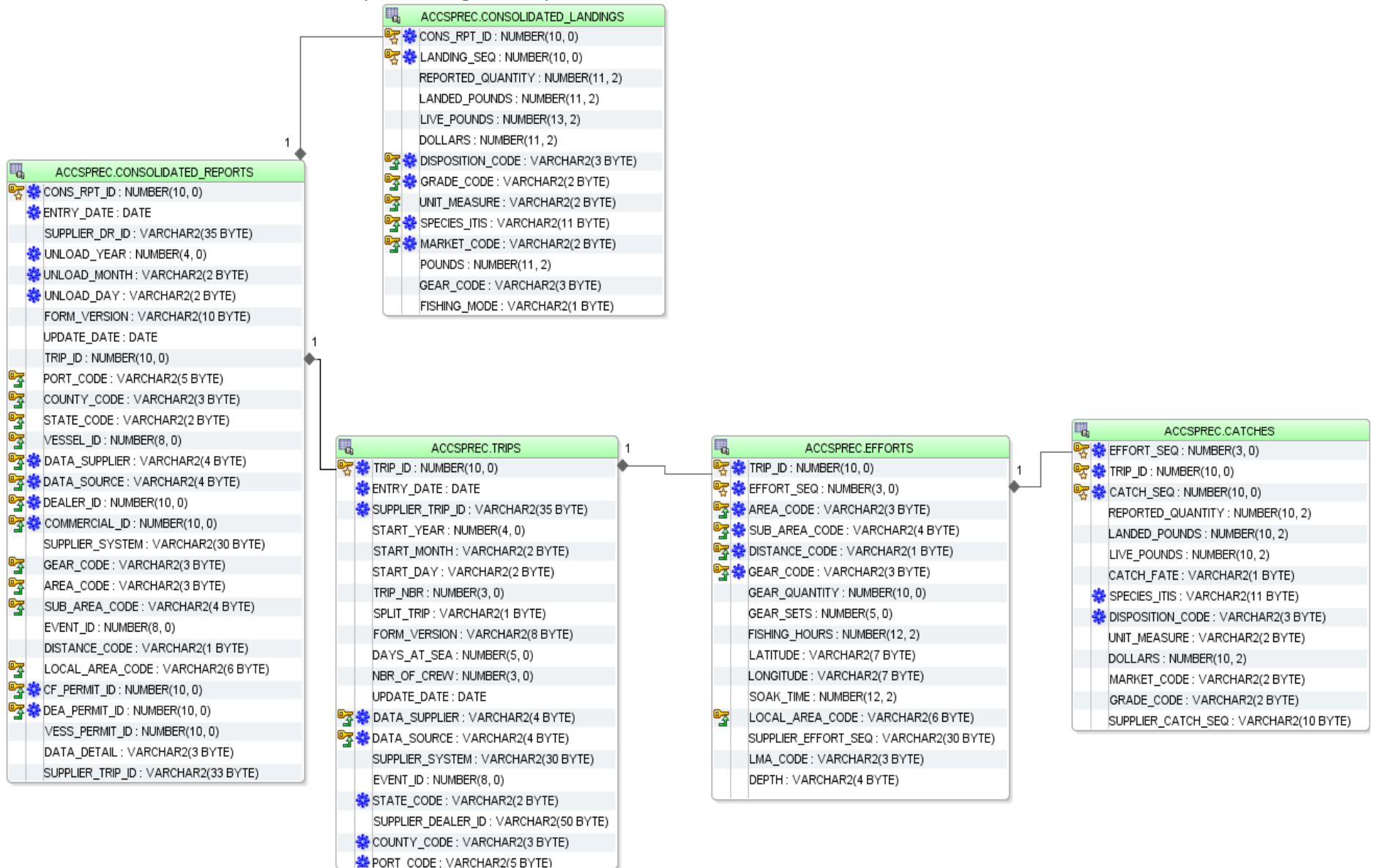
SIZE - NUMBER OF SHRIMP PER POUND

=====

- 11 - Under 15
- 21 - 15 - 20
- 31 - 21 to 25
- 41 - 26 to 30
- 51 - 31 to 35
- 52 - 36 to 40
- 61 - 41 to 45
- 62 - 46 to 50
- 71 - 51 to 55
- 72 - 56 to 60
- 81 - 61 to 70
- 91 - Over 70

Appendix B

Entity Relation Diagram for trip ticket data housed at ACCSP in the ACCSPREC schema



Appendix C

Statistical Analysis Software code used to extract and summarize shrimp effort

```
/******Data for shrimp effort******/
libname SASDATA V8 "O:\dglOCKner\SEFSC\SHRIMP\STANDARD EXTRACT";
/****** output directory and year requested ******/

/*****/

PROC SQL ;
  connect to oracle (user=xxxxxx orapw="xxxxxx" path="SECPR")
  ;
  create table sasdata.ACCSP_TRIPS_SHRIMP_TEMP as

  select * from connection to oracle
  (SELECT A.CONSP_RPT_ID, A.TRIP_ID, A.DATA_SUPPLIER, 'ACCSP' as FORM_VERSION,
A.UNLOAD_YEAR, A.UNLOAD_MONTH, A.UNLOAD_DAY, A.STATE_CODE, A.COUNTY_CODE,
C.IDENT, C.SUPPLIER_PA_ID, D.COAST_GUARD_NBR, D.STATE_REG_NBR,
A.GEAR_CODE, E.GEAR_NAME, A.AREA_CODE, A.SUB_AREA_CODE, A.DISTANCE_CODE,
B.SPECIES_ITIS, G.COMMON_NAME, B.DISPOSITION_CODE, B.MARKET_CODE, B.GRADE_CODE,
B.LIVE_POUNDS, B.DOLLARS, F.START_YEAR, F.START_MONTH, F.START_DAY,
F.TRIP_NBR, F.SPLIT_TRIP, F.DAYS_AT_SEA, F.FISHING_HOURS, F.SOAK_TIME,
F.COUNTY_CODE AS COUNTY_CODE2,
F.STATE_CODE AS STATE_CODE2, F.AREA_CODE AS AREA_CODE2, F.SUB_AREA_CODE AS
SUB_AREA_CODE2, F.DISTANCE_CODE AS DISTANCE_CODE2, F.GEAR_CODE AS GEAR_CODE2
FROM ACCSPREC.CONOLIDATED_REPORTS@ACCSP_DBLK A
LEFT JOIN ACCSPREC.CONOLIDATED_LANDINGS@ACCSP_DBLK B ON (A.CONSP_RPT_ID =
B.CONSP_RPT_ID)
LEFT JOIN ACCSPREC.PARTICIPANTS@ACCSP_DBLK C ON (A.DEALER_ID =
C.PARTICIPANT_ID)
LEFT JOIN ACCSPREC.VESSELS@ACCSP_DBLK D ON (A.VESSEL_ID = D.VESSEL_ID)
LEFT JOIN ACCSPREC.GEARS@ACCSP_DBLK E ON (A.GEAR_CODE = E.GEAR_CODE)
LEFT JOIN ACCSPREC.SPECIES@ACCSP_DBLK G ON (B.SPECIES_ITIS = G.SPECIES_ITIS)
LEFT JOIN (SELECT *
FROM (SELECT A.CONSP_RPT_ID, A.DATA_SUPPLIER, B.START_YEAR, B.START_MONTH,
B.START_DAY, B.TRIP_NBR, B.SPLIT_TRIP,
B.DAYS_AT_SEA, C.FISHING_HOURS, C.SOAK_TIME, B.COUNTY_CODE, B.STATE_CODE,
C.AREA_CODE, C.SUB_AREA_CODE,
C.DISTANCE_CODE, C.GEAR_CODE, ROW_NUMBER() OVER (PARTITION BY A.TRIP_ID,
A.DATA_SUPPLIER ORDER BY A.TRIP_ID, A.DATA_SUPPLIER,
B.TRIP_NBR DESC NULLS LAST, B.DAYS_AT_SEA DESC NULLS LAST, C.FISHING_HOURS DESC
NULLS LAST, D.LIVE_POUNDS DESC NULLS LAST) AS COUNTS
FROM ACCSPREC.CONOLIDATED_REPORTS@ACCSP_DBLK A
LEFT JOIN ACCSPREC.TRIPS@ACCSP_DBLK B ON (A.TRIP_ID = B.TRIP_ID)
LEFT JOIN ACCSPREC.EFFORTS@ACCSP_DBLK C ON (A.TRIP_ID = C.TRIP_ID)
LEFT JOIN ACCSPREC.CATCHES@ACCSP_DBLK D ON (A.TRIP_ID = D.TRIP_ID AND
C.EFFORT_SEQ = D.EFFORT_SEQ)) E WHERE E.COUNTS = 1) F ON (A.CONSP_RPT_ID =
F.CONSP_RPT_ID)
WHERE (A.DATA_SUPPLIER = '0013' and a.unload_year >= 2004 or A.DATA_SUPPLIER =
'0014' and a.unload_year >= 2001 or A.DATA_SUPPLIER = '0015' and a.unload_year
> 1992)
AND B.CONSP_RPT_ID IN (SELECT CONSP_RPT_ID FROM
ACCSPREC.CONOLIDATED_LANDINGS@ACCSP_DBLK WHERE SPECIES_ITIS IN
(SELECT SPECIES_ITIS
```

```

        FROM ACCSPREC.SPECIES@ACCSP_DBLK
        WHERE COMMON_NAME LIKE '%SHRIMP%')));
disconnect from oracle ;
QUIT ;
/*ACCSP reloading NC data, so have to use view for NC*/
PROC SQL ;
    connect to oracle (user=xxxxxx orapw="xxxxxx" path="SECPR")
    ;
    create table sasdata.ACCSP_TRIPS_SHRIMP_TEMP_NC as

    select * from connection to oracle
    (
        SELECT A.CONNS_RPT_ID, A.CONNS_RPT_ID AS TRIP_ID,
A.DATA_SUPPLIER_ID AS DATA_SUPPLIER, 'ACCSP' as FORM_VERSION,
A.YEAR AS UNLOAD_YEAR, A.MONTH_IN_YEAR AS UNLOAD_MONTH, A.DAY_IN_MONTH AS
UNLOAD_DAY, A.STATE_CODE, A.COUNTY_CODE,
(A.DATA_SOURCE||A.DEALER_ID) AS IDENT, A.CF_LICENSE_NBR AS
SUPPLIER_PA_ID, A.VESSEL_CG_OR_ST_REG AS COAST_GUARD_NBR, A.VESSEL_CG_OR_ST_REG
AS STATE_REG_NBR,
A.GEAR_CODE, E.GEAR_NAME, A.AREA_CODE, A.SUB_AREA_CODE, A.DISTANCE_CODE,
A.SPECIES_ITIS, G.COMMON_NAME, A.DISPOSITION_CODE, A.MARKET_CODE, A.GRADE_CODE,
A.LIVE_POUNDS, A.DOLLARS
FROM accsp_inf2.mv_landings@accsp_dblk A
LEFT JOIN ACCSPREC.GEARS@ACCSP_DBLK E ON (A.GEAR_CODE = E.GEAR_CODE)
LEFT JOIN ACCSPREC.SPECIES@ACCSP_DBLK G ON (A.SPECIES_ITIS = G.SPECIES_ITIS)
WHERE A.DATA_SUPPLIER_ID = '0012' and a.year > 1993 AND A.CONNS_RPT_ID IN
(SELECT CONNS_RPT_ID FROM accsp_inf2.mv_landings@accsp_dblk WHERE SPECIES_ITIS
IN
        (SELECT SPECIES_ITIS
        FROM ACCSPREC.SPECIES@ACCSP_DBLK
        WHERE COMMON_NAME LIKE '%SHRIMP%')));
disconnect from oracle ;
QUIT ;

PROC APPEND BASE = sasdata.ACCSP_TRIPS_SHRIMP_TEMP DATA =
sasdata.ACCSP_TRIPS_SHRIMP_TEMP_NC FORCE;
RUN;
proc sql;
delete
from sasdata.ACCSP_TRIPS_SHRIMP_TEMP
where STATE_CODE = '12' and county_code not in ('107',
'127',
'035',
'069',
'097',
'007',
'111',
'109',
'095',
'085',
'031',
'011',
'009',
'061',
'099',
'089',
'003',
'093',

```

```

'125',
'117',
'025',
'019');
quit;
/* Extract look-up tables used to translate codes and identify bait species

libname SASDATA V8 "O:\dgloeckner\SEFSC\SHRIMP\STANDARD EXTRACT";
PROC SQL;

connect to oracle (user=XXXXX orapw="XXXXXX" path="SECPR") ;
      create table sasdata.ACCSP_SPECIES_TEMP AS
select * from connection to oracle
(SELECT * FROM ACCSPREC.SPECIES@ACCSP_DBLK);
disconnect from oracle;
QUIT;

PROC SQL;
connect to oracle (user=dgloeckn orapw="gadus6674" path="SECPR")
      ;
      create table sasdata.ACCSP_GEARS_TEMP AS
select * from connection to oracle
(SELECT * FROM ACCSPREC.GEARS@ACCSP_DBLK);
disconnect from oracle ;
QUIT;
PROC SQL;
connect to oracle (user= XXXXXX orapw="XXXXXX" path="SECPR") ;
CREATE TABLE sasdata.ACCSP_PARTICIPANTS_TEMP AS
select * from connection to oracle
(SELECT * FROM ACCSPREC.PARTICIPANTS@ACCSP_DBLK);
disconnect from oracle ;
QUIT;

PROC SQL;
connect to oracle (user=XXXXXX orapw="XXXXXX" path="SECPR") ;
      create table sasdata.ACCSP_VESSELS_TEMP AS
select * from connection to oracle
(SELECT * FROM ACCSPREC.VESSELS@ACCSP_DBLK);
disconnect from oracle ;
QUIT;

PROC SQL;
connect to oracle (user= XXXXXX orapw="XXXXXX" path="SECPR") ;
      create table sasdata.ACCSP_SHRIMP_DROP_SPECIES_XREF AS
select * from connection to oracle
(SELECT * FROM
DGLOECKN.ACCSP_SHRIMP_DROP_SPECIES_XREF);
disconnect from oracle ;

QUIT;*/
proc sql;
DELETE FROM sasdata.ACCSP_TRIPS_SHRIMP_TEMP
WHERE SPECIES_ITIS IN (SELECT SPECIES_ITIS FROM
sasdata.ACCSP_SHRIMP_DROP_SPECIES_XREF);
quit;

```

```

data sasdata.ACCSP_TRIPS_SHRIMP_TEMP;
set sasdata.ACCSP_TRIPS_SHRIMP_TEMP;
format disposition $20.0;
run;
proc sql;

UPDATE sasdata.ACCSP_TRIPS_SHRIMP_TEMP
SET disposition = 'BAIT'
WHERE DISPOSITION_CODE = '008' OR MARKET_CODE = 'BT' OR GRADE_CODE = '02' or
species_itis = '095603';

UPDATE sasdata.ACCSP_TRIPS_SHRIMP_TEMP
SET DISPOSITION = 'FOOD'
WHERE disposition IS NULL;

UPDATE sasdata.ACCSP_TRIPS_SHRIMP_TEMP
SET TRIP_ID = CONS_RPT_ID WHERE TRIP_ID IS NULL;
quit;

DATA ACCSP_TRIPS_SHRIMP_TEMP1;
SET sasdata.ACCSP_TRIPS_SHRIMP_TEMP;
RUN;
PROC SORT DATA = ACCSP_TRIPS_SHRIMP_TEMP1;
BY CONS_RPT_ID IDENT SUPPLIER_PA_ID TRIP_ID UNLOAD_YEAR UNLOAD_DAY UNLOAD_MONTH
STATE_CODE COUNTY_CODE DATA_SUPPLIER DESCENDING LIVE_POUNDS;
RUN;
PROC SORT IN=ACCSP_TRIPS_SHRIMP_TEMP1 OUT=ACCSP_TRIPS_SHRIMP_TEMP2 NODUPKEY ;
BY UNLOAD_YEAR UNLOAD_DAY UNLOAD_MONTH SUPPLIER_PA_ID IDENT TRIP_ID CONS_RPT_ID
STATE_CODE COUNTY_CODE DATA_SUPPLIER;
RUN ;
PROC SQL;
DELETE FROM ACCSP_TRIPS_SHRIMP_TEMP2
WHERE SPECIES_ITIS NOT IN (SELECT SPECIES_ITIS FROM sasdata.ACCSP_SPECIES_TEMP
WHERE COMMON_NAME LIKE '%SHRIMP%');
QUIT;
DATA ACCSP_TRIPS_SHRIMP_TEMP3;
SET ACCSP_TRIPS_SHRIMP_TEMP2;
FORMAT TRIPS 10.0;
FORMAT TIME_FISHED 10.0;
FORMAT TIME_UNITS $1.0;
FORMAT DAYS_FISHED 10.2;
IF STATE_CODE = '12' AND GEAR_CODE = '110' THEN GEAR_NAME = 'SHRIMP TRAWL';
IF STATE_CODE = '12' AND GEAR_CODE = '000' THEN GEAR_NAME = 'SHRIMP TRAWL';
IF START_DAY = '00' THEN START_DAY = '01';
IF UNLOAD_DAY = '00' THEN UNLOAD_DAY = '01';
IF UNLOAD_MONTH = '00' THEN UNLOAD_MONTH= '01';
IF START_MONTH = '00' AND UNLOAD_MONTH > '00' THEN START_MONTH = UNLOAD_MONTH;
FORMAT START_DATE MMDDYY10.;
FORMAT UNLOAD_DATE MMDDYY10.;
START_DATE = mdy(START_month, START_DAY, START_year);
UNLOAD_DATE = mdy(UNLOAD_month, UNLOAD_DAY, UNLOAD_year);
TRIPS = 1;
IF SPLIT_TRIP = 'Y' THEN TRIPS = TRIPS/2;
IF SOAK_TIME NE . THEN TIME_UNITS = 'H';
IF SOAK_TIME NE . THEN TIME_FISHED = SOAK_TIME;

```



```

IF FISHING_HOURS > 0 AND TIME_FISHED = . THEN TIME_UNITS = 'H';
IF FISHING_HOURS > 0 AND TIME_FISHED = . OR FISHING_HOURS > 0 AND TIME_FISHED =
0 THEN TIME_FISHED = FISHING_HOURS;

IF DAYS_AT_SEA = . AND LIVE_POUNDS > 0 AND unload_date-start_date > 0 THEN
DAYS_AT_SEA = unload_date-start_date;
IF DAYS_AT_SEA = . AND LIVE_POUNDS > 0 AND unload_date-start_date =< 0 THEN
DAYS_AT_SEA = 1;
IF DAYS_AT_SEA = 0 AND LIVE_POUNDS > 0 AND unload_date-start_date =< 0 THEN
DAYS_AT_SEA = 1;
IF DAYS_AT_SEA = 0 AND LIVE_POUNDS > 0 AND TRIPS > 0 THEN DAYS_AT_SEA = 1;

IF DAYS_AT_SEA > 0 AND TIME_FISHED = . THEN TIME_UNITS = 'D';
IF DAYS_AT_SEA > 0 AND TIME_FISHED = . THEN TIME_FISHED = DAYS_AT_SEA;
IF DAYS_AT_SEA > 0 AND TIME_FISHED = 0 THEN TIME_UNITS = 'D';
IF DAYS_AT_SEA > 0 AND TIME_FISHED = 0 THEN TIME_FISHED = DAYS_AT_SEA;
IF DAYS_AT_SEA > 0 AND DAYS_FISHED = . THEN TIME_UNITS = 'D';
IF DAYS_AT_SEA > 0 AND DAYS_FISHED = . THEN DAYS_FISHED = DAYS_AT_SEA;
IF DAYS_AT_SEA > 0 AND DAYS_FISHED = 0 THEN TIME_UNITS = 'D';
IF DAYS_AT_SEA > 0 AND DAYS_FISHED = 0 THEN DAYS_FISHED = DAYS_AT_SEA;

IF gear_code = '000' AND GEAR_CODE2 > '000' THEN gear_code = GEAR_CODE2;
IF area_code = '000' AND AREA_CODE2 > '000' THEN area_code = AREA_CODE2;
IF SUB_area_code = '0000' AND SUB_AREA_CODE2 > '0000' THEN SUB_area_code =
SUB_AREA_CODE2;
IF TIME_UNITS = 'D' THEN DAYS_FISHED = TIME_FISHED;
IF TIME_UNITS = 'H' THEN DAYS_FISHED = TIME_FISHED/24;
IF DAYS_FISHED = . AND TIME_FISHED = . AND TRIPS > 0 THEN DAYS_FISHED = TRIPS
and TIME_UNITS = 'D';
IF DISPOSITION = 'BAIT' THEN DELETE;
RUN;

```

proc sql;

```

CREATE TABLE ACCSP_LANDINGS_SHRIMP
(DEALER_RPT_ID NUM,
TRIP_ID NUM,
DATA_SUPPLIER CHAR(4),
FORM_VERSION CHAR(10),
UNLOAD_YEAR NUM,
UNLOAD_MONTH CHAR(2),
UNLOAD_DAY CHAR(2),
STATE_CODE CHAR(2),
COUNTY_CODE CHAR(3),
IDENT CHAR(15),
SUPPLIER_PA_ID CHAR(30),
VESSEL_ID CHAR(11),
STATE_REG_NBR CHAR(11),
GEAR_CODE CHAR(3),
GEAR_NAME CHAR(50),
AREA_CODE CHAR(3),
SUB_AREA_CODE CHAR(4),
DISTANCE_CODE CHAR(1),
SPECIES_ITIS CHAR(11),
COMMON_NAME CHAR(50),
LANDED_LBS NUM,
DOLLARS NUM,
TIME_FISHED NUM,

```

```

TIME_UNITS CHAR(1),
TRIP_START_DATE DATE,
SEASON CHAR(10),
INSHORE_OFFSHORE CHAR(10),
SHRIMP_ZONE CHAR(2),
GEAR_CATEGORY CHAR(50),
START_YEAR NUM,
START_MONTH CHAR(2),
START_DAY CHAR(2),
START_DATE DATE,
UNLOAD_DATE DATE,
DAYS_FISHED NUM,
DAYS_FISHED_CALC NUM,
TRIPS NUM,
ZONE CHAR(10),
INSHORE_OFFSHORE2 CHAR(10),
DISPOSITION CHAR(10));
quit;
proc sql;
INSERT INTO ACCSP_LANDINGS_SHRIMP
select a.CONSP_RPT_ID,
a.TRIP_ID,
a.DATA_SUPPLIER,
a.FORM_VERSION,
a.UNLOAD_YEAR ,
a.UNLOAD_MONTH,
a.UNLOAD_DAY,
a.STATE_CODE,
a.COUNTY_CODE,
a.IDENT ,
a.SUPPLIER_PA_ID,
a.COAST_GUARD_NBR ,
a.STATE_REG_NBR ,
a.GEAR_CODE,
a.GEAR_NAME ,
a.AREA_CODE ,
a.SUB_AREA_CODE,
a.DISTANCE_CODE ,
a.SPECIES_ITIS,
a.COMMON_NAME,
a.LIVE_POUNDS ,
a.DOLLARS,
A.TIME_FISHED,
A.TIME_UNITS,
a.START_DATE,
'' ,
'' ,
'' ,
'' ,
B.CATEGORY_CODE ,
a.START_YEAR,
a.START_MONTH,
a.START_DAY ,
a.START_DATE,
a.UNLOAD_DATE,
A.DAYS_FISHED ,
. ,
a.TRIPS,

```

```
''',  
''',
```

```
a.DISPOSITION
```

```
from ACCSP_TRIPS_SHRIMP_TEMP3 a LEFT JOIN sasdata.ACCSP_GEARS_TEMP B ON
```

```
(A.GEAR_CODE = B.GEAR_CODE);
```

```
quit;
```

```
PROC SQL;
```

```
connect to oracle (user=xxxxxx orapw="xxxxxx" path="SECPR")
```

```
;
```

```
CREATE TABLE SASDATA.SAS_MAIN_DATA_EFFORT AS
```

```
select * from connection to oracle
```

```
(SELECT TO_NUMBER((A.DATE_LANDED||A.DEALER_NUMBER||A.SCHEDULE_NUMBER)) AS  
TEMPID1,
```

```
TO_NUMBER((A.DATE_LANDED||A.DEALER_NUMBER||A.SCHEDULE_NUMBER)) AS TEMPID2,
```

```
DECODE(A.STATE_LANDED,43,'0013',13,'0014',36,'0012',10,'0015','NONE') AS  
DATA_SUPPLIER,
```

```
'SAS' AS FORM_VERSION,
```

```
TO_NUMBER(SUBSTR(A.DATE_LANDED,1,4)) AS UNLOAD_YEAR,
```

```
SUBSTR(A.DATE_LANDED,5,2) AS UNLOAD_MONTH,
```

```
SUBSTR(A.DATE_LANDED,7,2) AS UNLOAD_DAY,
```

```
LPAD(LTRIM(SUBSTR(TO_CHAR(A.STATE_LANDED,'99'),2)),2,'0') AS STATE_LANDED,
```

```
LPAD(LTRIM(SUBSTR(TO_CHAR(A.COUNTY_LANDED,'99'),2)),2,'0') AS COUNTY_LANDED,
```

```
LPAD(LTRIM(SUBSTR(TO_CHAR(A.COUNTY_LANDED,'999'),2)),3,'0')||TRIM(dealer_number  
) AS IDENT,
```

```
A.SCHEDULE_NUMBER,
```

```
TRIM(A.dealer_number) AS DEALER_NUMBER,
```

```
A.VESSEL_ID_NUMBER AS VESSEL_ID,
```

```
A.VESSEL_ID_NUMBER AS BOAT_ID,
```

```
A.GEAR_CODE,
```

```
UPPER(B.DESCRPTION) AS GEAR_NAME,
```

```
A.AREA_FISHED,
```

```
A.SUBAREA_FISHED AS SUB_AREA,
```

```
NULL AS DISTANCE_CODE,
```

```
A.SPECIES_CODE,
```

```
UPPER(C.COMMON_NAME) AS SPECIES_NAME,
```

```
A.POUNDS_CAUGHT AS LANDED_LBS,
```

```
TO_NUMBER((A.UNIT_COST/100)) AS DOLLARS,
```

```
NULL AS SEASON,
```

```
NULL AS INSHORE_OFFSHORE,
```

```
NULL AS SHRIMP_ZONE,
```

```
NULL AS GEAR_CATEGORY,
```

```
TO_NUMBER(SUBSTR(A.DATE_LANDED,1,4)) AS START_YEAR,
```

```
SUBSTR(A.DATE_LANDED,5,2) AS START_MONTH,
```

```
SUBSTR(A.DATE_LANDED,7,2) AS START_DAY,
```

```
A.CALENDAR_DAYS_FISHED AS DAYS_FISHED,
```

```
0 AS DAYS_FISHED_CALC,
```

```
((nvl(boat_trips, 0) + nvl(vessel_trips, 0))/10) AS SAS_TRIPS,
```

```
DECODE(STATE_LANDED,'36','37','43','45','13','13','10','12','00') AS
```

```
STATE_LANDED2,
```

```
LPAD(LTRIM(E.FIPS_COUNTY_CODE,'0'),3,'0') AS COUNTY_LANDED2,
```

```
DECODE(A.GEAR_CODE,'A','090','B','075','C','118','D','110',
```

```
'E','110','F','110','G','750','H','020','I','116','J','143','Z','801','000') AS
```

```
GEAR_CODE2,
```

```

LPAD(LTRIM(F.accsp_area,'0'),3,'0') AS AREA_FISHED2,
LPAD(LTRIM(F.accsp_SUBarea,'0'),4,'0') AS SUBAREA_FISHED2,
C.SPECIES_ITIS AS SPECIES_CODE2,
DECODE(nvl(A.SPECIES_CODE,'0'),'0','NONE','B','BAIT','FOOD') AS DISPOSITION
FROM SAS.SAS_MAIN_DATA A
LEFT JOIN SAS.SAS_GEAR_CODE B ON (A.GEAR_CODE = B.GEAR_CODE)
LEFT JOIN SAS.SPECIES_CODE_SAS C ON (A.SPECIES_CODE = C.SAS_CODE)
LEFT JOIN SAS.SAS_ALS_FIPS_COUNTY_XREF E ON (E.ALSSTATE= A.STATE_LANDED
AND LPAD(E.SASCOUNTY, 2, '0') = LPAD(A.COUNTY_LANDED, 2, '0'))
LEFT JOIN SAS.SAS_AREA_code F ON (to_number(F.area_code) =
TO_NUMBER(a.area_fished)
and to_number(F.subarea_code)= TO_NUMBER(a.SUBAREA_FISHED));
disconnect from oracle ;
QUIT;

/* still need to estimate effort for NC from 1992-1993 using ALS data
PROC SQL;
connect to oracle (user=xxxxxx orapw="xxxxxx" path="SECPR")
;
create table sasdata.NC_92_93 as
select * from connection to oracle
(select alsstate, nmfscounty, waterbody, distance, dealer,
monthland||'01'||yearland as date_landed, ' ' as schedule_number, '2' as
grading,
nmfsgear, 0 as vessel_trip, 0 as boat_trips, 0 as calendar_days_fished, 0 as
tenth_of_days_fished, ' ' as vessid, nmfs_code, ' ' as shrimp_size, sum(pounds)
as pounds, sum(price) as price
from als.als_landings
where alsstate = '36' and nmfs_code between '7300' and '7400' and yearland =
'1993'
group by alsstate, nmfscounty, waterbody, distance, dealer,
monthland||'01'||yearland, ' ', '2',
nmfsgear, 0 , 0 , 0 , 0 , ' ', nmfs_code, ' ');
disconnect from oracle ;
QUIT;*/
proc sql;
create table SAS_sums_trips as
select distinct state_landed as state, county_landed, dealer_number,
unload_year, unload_month, unload_day, unload_year as year, schedule_number,
sas_trips as all_trips
from sasdata.sas_main_data_effort
/*WHERE GEAR_CODE = 'A' and substr(area_fished, 4, 1) = '0' or GEAR_CODE = 'A'
and substr(area_fished, 4, 1) = '9'*/;
quit;
proc sql;
select state, year, sum(all_trips) as trips
from SAS_sums_trips
group by state, year;
quit;

DATA SAS_MAIN_DATA_EFFORT;
SET SASDATA.SAS_MAIN_DATA_EFFORT;
FORMAT START_DATE MMDDYY10.;
FORMAT UNLOAD_DATE MMDDYY10.;
START_DATE = mdy(START_month, START_DAY, START_year);
UNLOAD_DATE = mdy(UNLOAD_month, UNLOAD_DAY, UNLOAD_year);
IF SPECIES_CODE = '6' THEN DELETE;

```

```

IF DISPOSITION = 'BAIT' THEN DELETE;
IF BOAT_ID NE '000000' THEN BOAT_ID = '';
IF BOAT_ID NE '000000' THEN VESSEL_ID = '';
IF STATE_LANDED = '43' AND UNLOAD_YEAR > 2003 THEN DELETE;
IF STATE_LANDED = '13' AND UNLOAD_YEAR > 2000 THEN DELETE;
RUN;

```

```

PROC SORT DATA = SAS_MAIN_DATA_EFFORT;
BY TEMPID1 SAS_TRIPS DESCENDING DAYS_FISHED DESCENDING LANDED_LBS DESCENDING
UNLOAD_YEAR UNLOAD_MONTH UNLOAD_DAY IDENT DATA_SUPPLIER SCHEDULE_NUMBER;
RUN;

```

```

PROC SORT IN=SAS_MAIN_DATA_EFFORT OUT=SAS_MAIN_DATA_EFFORT2 NODUPKEY ;
BY TEMPID1 UNLOAD_YEAR UNLOAD_MONTH UNLOAD_DAY IDENT DATA_SUPPLIER
SCHEDULE_NUMBER;

```

```

RUN ;

```

```

DATA ACCSP_LANDINGS_SHRIMP2;

```

```

SET ACCSP_LANDINGS_SHRIMP;

```

```

IF STATE_CODE = '12' AND 1980 < UNLOAD_YEAR < 1993 THEN DELETE;

```

```

IF STATE_CODE = '37' AND 1977 < UNLOAD_YEAR < 1993 THEN DELETE;

```

```

IF STATE_CODE = '13' AND 1977 < UNLOAD_YEAR < 2001 THEN DELETE;

```

```

IF STATE_CODE = '45' AND 1977 < UNLOAD_YEAR < 2003 THEN DELETE;

```

```

RUN;

```

```

PROC SQL;

```

```

INSERT INTO ACCSP_LANDINGS_SHRIMP2

```

```

SELECT

```

```

TEMPID1,

```

```

TEMPID2,

```

```

DATA_SUPPLIER,

```

```

FORM_VERSION,

```

```

UNLOAD_YEAR,

```

```

UNLOAD_MONTH,

```

```

UNLOAD_DAY,

```

```

STATE_LANDED2,

```

```

COUNTY_LANDED2,

```

```

IDENT,

```

```

DEALER_NUMBER,

```

```

VESSEL_ID,

```

```

BOAT_ID,

```

```

GEAR_CODE2,

```

```

GEAR_NAME,

```

```

AREA_FISHED2,

```

```

SUBAREA_FISHED2,

```

```

DISTANCE_CODE,

```

```

SPECIES_CODE2,

```

```

SPECIES_NAME,

```

```

LANDED_LBS,

```

```

DOLLARS,

```

```

.,

```

```

.,

```

```

.,

```

```

SEASON,

```

```

INSHORE_OFFSHORE,

```

```

SHRIMP_ZONE,

```

```

GEAR_CATEGORY,

```

```

START_YEAR,

```

```

START_MONTH,

```

```

START_DAY,
START_DATE,
UNLOAD_DATE,
DAYS_FISHED,
DAYS_FISHED_CALC,
SAS_TRIPS,
'',
'',
DISPOSITION
FROM SAS_MAIN_DATA_EFFORT2;
QUIT;
DATA ACCSP_LANDINGS_SHRIMP2;
SET ACCSP_LANDINGS_SHRIMP2;
FORMAT STATE_POSTAL $2.0;
STATE_POSTAL = 'UN';
IF STATE_CODE = '37' THEN STATE_POSTAL = 'NC';
IF STATE_CODE = '45' THEN STATE_POSTAL = 'SC';
IF STATE_CODE = '13' THEN STATE_POSTAL = 'GA';
IF STATE_CODE = '12' THEN STATE_POSTAL = 'FL';
RUN;

```

```

proc sql;
select form_version, unload_year, STATE_POSTAL, sum(trips) as trips
from ACCSP_LANDINGS_SHRIMP2
group by form_version, unload_year, STATE_POSTAL;
quit;
proc sql;
select unload_year, STATE_POSTAL, gear_name, sum(trips) as trips
from ACCSP_LANDINGS_SHRIMP2
group by unload_year, STATE_POSTAL, gear_name;
quit;
PROC SQL;
CREATE TABLE SA_SHRIMP_EFFORT_MONTH AS
SELECT UNLOAD_YEAR, UNLOAD_MONTH, STATE_POSTAL, GEAR_NAME, SUM(TRIPS) AS TRIPS,
COUNT(DISTINCT SUPPLIER_PA_ID) AS DEALERS
FROM ACCSP_LANDINGS_SHRIMP2
GROUP BY UNLOAD_YEAR, UNLOAD_MONTH, STATE_POSTAL, GEAR_NAME;
QUIT;

```

```

PROC EXPORT DATA= SA_SHRIMP_EFFORT_MONTH
OUTFILE= "O:\dglueckner\SEFSC\SHRIMP\STANDARD
EXTRACT\SA_SHRIMP_EFFORT_MONTH.csv"
DBMS=csv REPLACE;

```

```

run;
PROC SQL;
CREATE TABLE SA_SHRIMP_EFFORT_ANNUAL AS
SELECT UNLOAD_YEAR, STATE_POSTAL, GEAR_NAME, SUM(TRIPS) AS TRIPS,
COUNT(DISTINCT SUPPLIER_PA_ID) AS DEALERS
FROM ACCSP_LANDINGS_SHRIMP2
GROUP BY UNLOAD_YEAR, UNLOAD_MONTH, STATE_POSTAL, GEAR_NAME;
QUIT;

```

```

PROC EXPORT DATA= SA_SHRIMP_EFFORT_ANNUAL

```

```
        OUTFILE= "O:\dglloeckner\SEFSC\SHRIMP\STANDARD  
EXTRACT\SA_SHRIMP_EFFORT_ANNUAL.csv"  
        DBMS=csv REPLACE;
```

```
run;
```