proc printto log ="&drive.\Coastal and Ocean Socioeconomics\ENOW\Data\_Production\ACS\_BlockGroup\ACS\_Output\Estimates.log" new;

run;

\* This is the file that contains the fields we want to keep for output;

data cols;

infile "&geo\_ref/COLUMNS.txt";

input col $10.;

run;

proc sort;

by col;

run;

\* This is the ACS Reference file which lists the Table ID, Sequence Number, Line Number for appropriate measures of data;

\* Example Below;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

\* B00001\_001 ;

\* B01001\_002 ;

\* B01001\_020 ;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

\* These are the values in Columns Text File ;

\* When we read the SequenceNumberTable below we ;

\* select those rows where the TABLEID and the Line ;

\* Number (ORDER) Concatenation is in the one of the;

\* values of the Columns Text File so we limit the ;

\* number of rows we need ;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

data table (keep=col seq);

set ref.SequenceNumberTable&y;

col=left(trim(tblid))||'\_'||put(order,z3.);

run;

proc sort;

by col;

run;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

\* Select those values in the Reference File that ;

\* are in the COLUMNS Text File ;

\* Create SEQNUM - No Leading Zeros in value of SEQ ;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

data col\_seq;

merge cols (in=a) table (in=b);

by col;

if a;

seqnum = seq \* 1;

run;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

\* Select Non-Duplicate SEQ variable from Reference ;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

proc sql noprint;

create table seqs\_x as select distinct seq from col\_seq order by seq;

quit;

run;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

\* Put Total Count of NON-Duplicate SEQ values into ;

\* a Macro Variable - SNOBS this will be the number ;

\* of observations in the table from above SEQ\_X ;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

data \_null\_;

set seqs\_x nobs=cnt;

call symput('snobs',compress(cnt));

run;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

\* Create Macro Variables from SS1 TO SS (whatever ;

\* is in the Count Value above (SNOBS)) ;

\* EX. B00001\_001 is the first value selected from;

\* the Reference File we create COL\_SEQ - it has a ;

\* SEQ value of 0001, so the Macro Variable SS1 will;

\* contain a value of 0001 ;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

proc sql noprint;

select distinct seq into :ss1 - :ss&snobs from seqs\_x;

quit;

run;

%macro seqtest;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

\* In the SAS Program that runs before this one ;

\* there is a Macro Variable that gets created LZ ;

\* if substr(memname,4,1) = '0' then LZ else NZ ;

\* So if the file name has leading zeros use SEQ ;

\* - which has leading zeros ;

\* - else use SEQNUM which is numeric no leading ;

\* zeros ;

\* LEADING ZERO Below: ;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

%if &leadz = LZ %then %do;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* THIS SHOULD BE FOR YEARS WHERE THE SEQUENCE FILES HAVE LEADING ZEROS IN NAME \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

proc sql noprint;

create table seqs as select distinct seq from col\_seq order by seq;

quit;

run;

data \_null\_;

set seqs nobs=cnt;

call symput('seqsnobs',compress(cnt));

run;

proc sql noprint;

select distinct seq into :s1 - :s&seqsnobs from seqs;

quit;

run;

%end;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

\* In the SAS Program that runs before this one ;

\* there is a Macro Variable that gets created LZ ;

\* if substr(memname,4,1) = '0' then LZ else NZ ;

\* So if the file name has leading zeros use SEQ ;

\* - which has leading zeros ;

\* - else use SEQNUM which is numeric no leading ;

\* zeros ;

\* NO LEADING ZERO Below: ;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

%else %do;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* THIS SHOULD BE FOR YEARS WHERE THE SEQUENCE FILES DO NOT HAVE LEADING ZEROS IN NAME \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

proc sql noprint;

create table seqs as select distinct seqnum from col\_seq order by seqnum;

quit;

run;

data \_null\_;

set seqs nobs=cnt;

call symput('seqsnobs',compress(cnt));

run;

proc sql noprint;

select distinct seqnum into :s1 - :s&seqsnobs from seqs;

quit;

run;

%end;

%mend seqtest;

%seqtest;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

\* Create table - COLS that contains all the unique ;

\* values of the COL ex B00001\_001 ;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

proc sql noprint;

create table cols as select distinct col from col\_seq order by col;

quit;

run;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

\* Create MACRO VARIBLE COLS that contains all the ;

\* unique values of COL ex B00001\_001 separated by ;

\* a blank ;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

proc sql noprint;

select col into :cols separated by ' ' from cols;

quit;

run;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

\* OUTER LOOP ;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

\* In the macro GEOFILE - Loop through this macro x ;

\* number of times bases on value of END\_ST Macro ;

\* which is set in the DRIVER Program should be 52 ;

\* for all states - so 1 time for each state select ;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

\* INNER LOOP ;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

\* In the macro GEOFILE - Loop through this macro x ;

\* number of times bases on value of SEQSNOBS ;

\* Macro Variable is the unique number of SEQ ;

\* - so for 52 states would loop X number of times ;

\* X 52, so for 4 count of SEQ would be 208 total ;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

%macro geofile;

%do j=1 %to &end\_st;

%do r=1 %to &seqsnobs;

%if &leadz = LZ %then %do;

proc sql noprint;

select col into :seqcols separated by ' ' from col\_seq

where seq = "&&s&r";

quit;

run;

%end;

%else %do;

proc sql noprint;

select col into :seqcols separated by ' ' from col\_seq

where seq = "&&ss&r";

quit;

run;

%end;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

\* The Dataset below ALLSTATES is created in the SAS;

\* Program GEODATA.SAS - The STATE Variable contains;

\* all of the states, such as ak, al, ar, az, etc. ;

\* - so for 52 states would select the state based ;

\* on the value of the N Macro Variable, ;

\* The N Macro variable is created in the DRIVER PGM;

\* So N1 Macro variable = ak, N2 = al, N3 = ar, etc.;

\* The Value of STATERANGE within each state is the ;

\* same for each line in the State, so we de-dupe to;

\* get the one value vs. duplicate values ;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

proc sort data=outfile.allstates (where=(state="&&n&j")) out=lrecno nodupkey;

by state;

run;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

\* The Datasteps below create Formats - LOOK-UP ;

\* Tables - which will contain START - the values of;

\* the STATE, i.e., ak, the LABEL - the value of the;

\* STARTRANGE for that state - i.e. for ak it is 633;

\* ENDRANGE for that state - i.e. for ak it is 1166 ;

\* This is created for a look up so when a state is ;

\* encountered in a SAS Dataset with the value of ak;

\* the STARTRANGE and ENDRANGE are appended to the ;

\* SAS dataset as a ;

\* new variable ;

\* This is done by using the FORMAT SRANGE & ERANGE ;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

data lmin;

set lrecno;

start = state;

label = startrange;

fmtname = "$srange";

run;

proc format cntlin=lmin;

run;

data lmax;

set lrecno;

start = state;

label = endrange;

fmtname = "$erange";

run;

proc format cntlin=lmax;

run;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

\* The IMPORT Procedure reads in an EXCEL file and ;

\* creates a SAS Dataset - in some years the EXCEL ;

\* File has leading zeros in file name, in other ;

\* years it doesn't, just the number of the file - ;

\* The SEQ NUMBER ;

\* The MACRO Variable s below is based on the above ;

\* code for LZ or NZ - see above ;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

proc import file="&geo\_seq\seq&&s&r...xls" out=seq dbms=xls replace;

namerow=1;

getnames=yes;

run;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

\* The CONTENTS Procedure below will create a SAS ;

\* Dataset that contains the Name of each Variable &;

\* the VARNUM - the order the Variable as it is in ;

\* the EXCEL file ;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

proc contents noprint data=seq varnum out=seq (keep=name varnum);

run;

proc sort;

by varnum;

run;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

\* Get the total number of variables in the dataset ;

\* put in the Macro Variable NOBS ;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

data \_null\_;

set seq nobs=cnt;

call symput('nobs',compress(cnt));

run;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

\* Put the name of the variable in VARNUM order into;

\* Macro Variables INPUT1 - INPUTx ;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

proc sql noprint;

select compress(name) into :input1 - :input&nobs from seq;

quit;

run;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

\* Use the INPUT Macro Variables above as the value ;

\* of the name of the column in the E text file ;

\* ;

\* This is a Text Delimited File and a comma is the ;

\* Delimiter YDATE in the filename is the 4 digit ;

\* Year specified in the Driver File ;

\* The Macro Variable N is the two letter state ab.,;

\* i.e. - ak for Alaska, ;

\* The Macro Variable SS is the SEQ Number ;

\* The first 6 columns in the data are in every file;

\* and are TEXT Values - The remainder of the fields;

\* in the EXCEL file are numeric and correspond to ;

\* the names in the COLS Dataset above, i.e. ;

\* B01001\_001, B01001\_002, etc ;

\* STUSAB is the 2 letter AB for the STATE, ie, ak ;

\* so the FORMATS created above SRANGE and ERANGE ;

\* are used here to get the begin and end range, so ;

\* based on the range of these 2 that is the value ;

\* of the LOGRECNO ;

\* Each row in this TXT File below has a LOGRECNO ;

\* which is simply a Sequential Number by 1 from ;

\* one number low to the highest value at the end of;

\* the file, so all rows between the start and end ;

\* will be selected based on if that row has LOGREC;

\* that fits into that range of values ;

\* There will be Number of States \* Number of Seq ;

\* files selected SAS Datasets produced here ;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

data e\_&&n&j..\_seq&&s&r (rename=(lrec=logrecno));

length &seqcols 3;

infile "&geo\_est\e&ydate.5&&n&j..&&ss&r..000.txt" dlm=',' dsd truncover missover;

input

%do k = 1 %to 6;

&&input&k :$200.

%end;

%do l = 7 %to &nobs;

&&input&l

%end;;

lrec = logrecno \* 1;

beg = put(STUSAB,$srange.) \* 1;

end = put(STUSAB,$erange.) \* 1;

if logrecno >= beg and logrecno <= end;

drop logrecno;

keep lrec &seqcols;

run;

proc sort;

by logrecno;

run;

%end;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

\* The ALLSTATES SAS Dataset below contains the GEO ;

\* information about each state by LOGRECNO ;

\* It has BLOCKGROUP Information only based on the ;

\* selection critera "If blockgrp ne Missing" ;

\* The Dataset also contains these fields: ;

\* BG and AREAKEY ;

\* BG=state||county||tract||blkgrp ;

\* AREAKEY = 'x'||BG ;

\* ;

\* Merge the GEO Information with the B Data in the ;

\* TEXT files above by LOGRECNO ;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

proc sort data=outfile.allstates (where=(state="&&n&j")) out=&&n&j;

by logrecno;

run;

data e\_&&n&j (keep=logrecno geoid &cols state);

merge &&n&j (in=a)

%do m=1 %to &seqsnobs;

e\_&&n&j..\_seq&&s&m

%end;;

by logrecno;

if a;

state = left(compress(upcase("&&n&j")));

run;

proc datasets lib=work nolist;

delete %do x=1 %to &seqsnobs;

e\_&&n&j..\_seq&&s&x

%end;;

run;

%end;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

\* Concatenate all the STATES files together to get ;

\* 1 Total Dataset E\_ALLSTATES ;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

data outfile.e\_allstates (rename=(geoid1=geoid));

length geoid1 $12;

set %do i = 1 %to &end\_st;

e\_&&n&i

%end;;

county = substr(geoid,8,5);

geoid1 = substr(geoid,8,12);

fipsx = substr(county,1,2);

drop geoid;

YEARRANGE = "&yrange";

run;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

\* Summarize the Dataset above to get SUMMED totals ;

\* for all the Numeric Variables in the dataset by ;

\* COUNTY and YEARRANGE ;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

proc summary data=outfile.e\_allstates nway missing;

class county YEARRANGE;

var \_numeric\_ ;

output out=outfile.acs\_e\_all\_county (drop=\_freq\_ \_type\_ logrecno rename=(county = GEOID)) sum=;

run;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

\* Summarize the Dataset above to get SUMMED totals ;

\* for all the Numeric Variables in the dataset by ;

\* FIPS and YEARRANGE ;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

proc summary data=outfile.e\_allstates nway missing;

class fipsx YEARRANGE;

var \_numeric\_;

output out=outfile.acs\_e\_all\_states (drop=\_freq\_ \_type\_ logrecno rename=(fipsx = GEOID)) sum=;

run;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

\* EXPORT to EXCEL all the data from the STATE FILE ;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

proc export data=outfile.acs\_e\_all\_states

outfile="&geo\_fnl\acs\_&ydate.\_e\_all\_states.csv"

dbms=csv

replace;

run;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

\* EXPORT to EXCEL all the data from the CNTY FILE ;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

proc export data=outfile.acs\_e\_all\_county

outfile="&geo\_fnl\acs\_&ydate.\_e\_all\_county.csv"

dbms=csv

replace;

run;

proc sort data=outfile.e\_allstates;

by geoid;

run;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

\* MERGE the E\_ALLSTATES File created above with all;

\* the GEO Files 1 - 10 below: ;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

\* %let geo1 = bg2010\_in\_50mi\_Buffer ;

\* %let geo2 = bg2010\_in\_cz ;

\* %let geo3 = bg2010\_in\_hurricane ;

\* %let geo4 = bg2010\_in\_usgshuc ;

\* %let geo5 = bg2010\_in\_sfha2010\_100yr ;

\* %let geo6 = bg2010\_in\_nerrs\_targets ;

\* %let geo7 = bg2010\_in\_nerrs2Large ;

\* %let geo8 = bg2010\_in\_nepwatersheds ;

\* %let geo9 = bg2010\_in\_nepstdyareas ;

\* %let geo10= bg2010\_ccap\_watersheds ;

\* ;

\* Then Summarize the results by the Class Variables;

\* indicated here for each of the 10 ;

\* ;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

\* %let var1 = FIPSX YEARRANGE ;

\* %let var2 = FIPSX YEARRANGE ;

\* %let var3 = FIPSX YEARRANGE ;

\* %let var4 = HHUC YEARRANGE ;

\* %let var5 = FEMAFIPS YEARRANGE ;

\* %let var6 = WSHD\_CODE YEARRANGE ;

\* %let var7 = WSHD\_CODE YEARRANGE ;

\* %let var8 = NEPID YEARRANGE ;

\* %let var9 = NEPID YEARRANGE ;

\* %let var10= HHUC YEARRANGE ;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

%do b=1 %to 10;

data e1\_&&geo&b (drop=m bg\_ratio logrecno rename=(landsqmi\_c=landsqmi));

format landsqmi\_c $20.;

merge outfile.e\_allstates (in=a) &&geo&b (in=b);

by geoid;

if a and b;

landsqmi\_c = put(landsqmi,8.);

array \_x (\*) \_numeric\_;

do m = 1 to dim(\_x);

\_x(m) = bg\_ratio \* \_x(m);

end;

drop landsqmi;

run;

proc summary data=e1\_&&geo&b nway missing;

class &&var&b;

var \_numeric\_;

output out=e3\_&&geo&b (drop=\_freq\_ \_type\_) sum=;

run;

%let newvar&b = %qscan(&&var&b,1);

%put &&newvar&b;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

\* RENAME all the 1st Variables in the 10 Datasets ;

\* to GEOID ;

\* ROUND all the Numeric values to whole number ;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

data outfile.acs\_e\_&&geo&b (drop=m rename=(&&newvar&b = GEOID));

set e3\_&&geo&b;

array \_x (\*) \_numeric\_;

do m = 1 to dim(\_x);

\_x(m) = round(\_x(m));

end;

run;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

\* EXPORT to EXCEL the Dataset created above 1 time ;

\* for each of the 10 Datasets ;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

proc export data=outfile.acs\_e\_&&geo&b

outfile="&geo\_fnl\acs\_&ydate.\_e\_&&geo&b...csv"

dbms=csv

replace;

run;

%end;

%mend geofile;

%geofile;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

\* Read in the EXCEL file that contains the ;

\* WATERSHED GEO Data ;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

\* DSD Means read in Comma Delimited CSV file and ;

\* DOUBLE QUOTE the column values with quotes in ;

\* Them. ;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

data watershed (rename=(nfips=fips nstfip=statefips));

infile "&GEO\_path\&WATERREF" dsd firstobs=2;

input fips countyname :$200. statefips countyfips stateabbr :$200. statename :$200.;

nfips = put(fips,z5.);

nstfip= put(statefips,z2.);

drop fips statefips;

run;

proc sort data=watershed nodupkey out=watershed (keep=stateabbr fips statename);

by fips;

run;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

\* Read in the EXCEL file that contains the ;

\* SHORELINE GEO Data ;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

\* DSD Means read in Comma Delimited CSV file and ;

\* DOUBLE QUOTE the column values with quotes in ;

\* Them. ;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

data shoreline (rename=(nfips=fips nstfip=statefips));

infile "&GEO\_path\&SHOREREF" dsd firstobs=2;

input fips countyname :$200. statefips countyfips stateabbr :$200. statename :$200. region :$200. shore;

nfips = put(fips,z5.);

nstfip= put(statefips,z2.);

drop fips statefips;

run;

proc sort data=shoreline nodupkey out=shoreline (keep=statefips stateabbr fips countyname);

by fips;

run;

proc sort data=outfile.acs\_e\_all\_county out=county;

by geoid;

run;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

\* Combine the SHORELINE and COUNTY Data to get ;

\* SHORELINE GEO Data for ACS ;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

data outfile.shoreline (rename=(yearrange1=YEARRANGE));

merge shoreline (in=a) county (in=b rename=(geoid=fips));

by fips;

if a;

Geo\_ref = 'National';

yearrange1=yearrange;

drop yearrange;

run;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

\* SUM the SHORELINE NUMERIC DATA by STATEFIPS ;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

proc summary data=outfile.shoreline nway missing;

class statefips YEARRANGE;

var \_numeric\_;

output out=outfile.acs\_shoreline\_state (drop=\_freq\_ \_type\_ rename=(statefips = GEOID)) sum=;

run;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

\* Write SHORELINE DATA to EXCEL ;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

proc export data=outfile.acs\_shoreline\_state

outfile="&geo\_fnl\acs\_&ydate.\_shoreline\_state.csv"

dbms=csv

replace;

run;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

\* SUM the SHORELINE NUMERIC DATA by NATIONAL LEVEL ;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

proc summary data=outfile.shoreline nway missing;

class geo\_ref YEARRANGE;

var \_numeric\_;

output out=outfile.acs\_shoreline\_natl (drop=\_freq\_ \_type\_ rename=(geo\_ref = GEOID)) sum=;

where geo\_ref ne ' ' and YEARRANGE ne ' ';

run;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

\* Write SHORELINE DATA to EXCEL ;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

proc export data=outfile.acs\_shoreline\_natl

outfile="&geo\_fnl\acs\_&ydate.\_shoreline\_national.csv"

dbms=csv

replace;

run;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

\* SUM the SHORELINE NUMERIC DATA by FIPS LEVEL ;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

proc summary data=outfile.shoreline nway missing;

class fips YEARRANGE;

var \_numeric\_;

output out=outfile.acs\_shoreline\_cty (drop=\_freq\_ \_type\_ rename=(fips = GEOID)) sum=;

run;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

\* Write SHORELINE DATA to EXCEL ;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

proc export data=outfile.acs\_shoreline\_cty

outfile="&geo\_fnl\acs\_&ydate.\_shoreline\_county.csv"

dbms=csv

replace;

run;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

\* Combine the WATERSHED and COUNTY Data to get ;

\* WATERSHED GEO Data for ACS ;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

data outfile.watershed(rename=(yearrange1=YEARRANGE));

merge watershed (in=a) county (in=b rename=(geoid=fips));

by fips;

if a;

Geo\_ref = 'National';

stfips = substr(fips,1,2);

yearrange1 = yearrange;

drop yearrange;

run;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

\* SUM the SHORELINE NUMERIC DATA by STATEFIPS ;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

proc summary data=outfile.watershed nway missing;

class stfips YEARRANGE;

var \_numeric\_;

output out=outfile.acs\_watershed\_state (drop=\_freq\_ \_type\_ rename=(stfips = GEOID)) sum=;

run;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

\* Write WATERSHED DATA to EXCEL ;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

proc export data=outfile.acs\_watershed\_state

outfile="&geo\_fnl\acs\_&ydate.\_watershed\_state.csv"

dbms=csv

replace;

run;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

\* SUM the WATERSHED NUMERIC DATA by FIPS LEVEL ;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

proc summary data=outfile.watershed nway missing;

class fips YEARRANGE;

var \_numeric\_;

output out=outfile.acs\_watershed\_cty (drop=\_freq\_ \_type\_ rename=(fips = GEOID)) sum=;

run;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

\* Write WATERSHED DATA to EXCEL ;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

proc export data=outfile.acs\_watershed\_cty

outfile="&geo\_fnl\acs\_&ydate.\_watershed\_county.csv"

dbms=csv

replace;

run;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

\* SUM the WATERSHED NUMERIC DATA by NATIONAL LEVEL ;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

proc summary data=outfile.watershed nway missing;

class geo\_ref YEARRANGE;

var \_numeric\_;

output out=outfile.acs\_watershed\_natl (drop=\_freq\_ \_type\_ rename=(geo\_ref = GEOID)) sum=;

where geo\_ref ne ' ' and YEARRANGE ne ' ';

run;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

\* Write WATERSHED DATA to EXCEL ;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

proc export data=outfile.acs\_watershed\_natl

outfile="&geo\_fnl\acs\_&ydate.\_watershed\_national.csv"

dbms=csv

replace;

run;

proc printto;

run;