

**This SAS program builds a preliminary version of the
Alaska Public Infrastructure Database (APID) to be used
by the ICICLE Model.**

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~June 2007~

```
options macrogen mlogic source source2 symbolgen sortsize = 80M;

libname final 'D:\NCEP\Model\SAS';

*****Created by P.H. Larsen, August 2006*****;
*****Creates Alaska Infrastructure Database (APID)*****;

%macro q ();

%let CHECK=YES; *****Tells SAS to remove or alter
records based on Meghans check of the DCCED DB;

%let Road_V=3000000; *****Replacement value ($2005) of roads
(paved) per mile;
%let Road2_V=1000000; *****Replacement value ($2005) of roads
(non-paved) per mile;
%let Rail_V=2795717; *****Replacement value ($2005) of railroad
per mile;
%let Emer_V =467110; *****Replacement value ($2005) of emergency
services;
%let Cour_V=16150618; *****Replacement value ($2005) of courts;
%let Def_V=305441; *****Replacement value ($2005) of
defense buildings;
%let Gbld_V=1030578; *****Replacement value ($2005) of misc.
government buildings;
%let Sch_V=2486167; *****Replacement value ($2005) of
school;
%let Law_V=3917245; *****Replacement value ($2005) of law
enforcement buildings;
%let Hosp_V=44772750; *****Replacement value ($2005) of hospitals;
%let PHbld_V=1631781; *****Replacement value ($2005) of public
health buildings;
%let En_V=31570; *****Replacement value ($2005) of energy
infrastructure;
%let Grid_V=100000; *****Replacement value ($2005) of power
lines per mile;
%let Sew_V=30000000; *****Replacement value ($2005) of sewage
treatment;
%let Telec_V=299576; *****Replacement value ($2005) of telecomm
equip;
%let Telep_V=50000; *****Replacement value ($2005) of telephone
line per mile;
%let Water_V=5000000; *****Replacement value ($2005) of water
delivery equip.;
%let Pipe_V=32225000; *****Replacement value ($2005) of pipeline
per mile;
%let Airp_V=20000000; *****Replacement value ($2005) of airports;
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%let Brg_V=10000;          *****Replacement value ($2005) of bridges
per foot;
%let Harb_V=10000000;     *****Replacement value ($2005) of harbors;

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%macro fromGIS (sheet, name);

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```

PROC IMPORT OUT= WORK.&name.
      DATAFILE= "D:\NCEP\Model\SAS\Petedatabase_Jul21_2006.xls"
      DBMS=EXCEL REPLACE;
      SHEET="&sheet.";
      GETNAMES=YES;
      MIXED=NO;
      SCANTEXT=YES;
      USEDATE=YES;
      SCANTIME=YES;

```

```

RUN;

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```

%mend;

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```

%fromGIS ('Power Lines$',POWER);
%fromGIS (Roads$,ROADS);
%fromGIS (Harbor$,HARBORS);
%fromGIS (Airports$,AIRPORTS);
%fromGIS (Railroad$,RAILROAD);
%fromGIS (Pipeline$,TAPS);
%fromGIS (Telephone$,TELEPHONE);
%fromGIS (Bridges$,BRIDGES);

```

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data GISdata;

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      set POWER ROADS HARBORS AIRPORTS RAILROAD TAPS TELEPHONE BRIDGES;
      if id eq 'XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX' then delete;
      if id = "" then delete;
      ORIGINAL_DB = "GIS Inputs";
      community=upcase(community);
      if class = "Public Utility" then class="Public Utilities";

```

```

run;

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data final.GISdata (drop=source class community subclass);

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      set GISdata;
      length class2 $20.;
      length subclass2 $20.;
      length community2 $28.;
      class2 = input(class,$20.);
      community2 = input(community,$28.);
      subclass2 = input(subclass,$20.);

```

```

run;

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```

data final.GISdata (drop=community2 class2 subclass2);

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```

      set final.GISdata;
      informat class $20.;
      informat subclass $20.;
      informat community $28.;
      Community = community2;
      Subclass = subclass2;
      Class = class2;

```

```

run;

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```

/*RISK DB*/

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PROC IMPORT OUT= WORK.InfraStructure_1
      DATAFILE= "D:\NCEP\Model\SAS\AK Dept of
Risk Management Database V2.xls"
      DBMS=EXCEL REPLACE;
      SHEET="'Property schedule$'";
      GETNAMES=YES;
      MIXED=NO;
      SCANTEXT=YES;
      USEDATE=YES;
      SCANTIME=YES;
RUN;

proc delete data=base;
      run;

data temp_1;
set infrastructure_1;
informat class $20.;
format class $20.;
length class $20.;
informat subclass $20.;
format subclass $20.;
length subclass $20.;
search="STORA";
Match=index(upcase(description|department),search);
id + 1;
if Community = "XXXXXXXXXXXXXXXXXXXXXXXXXX" then delete;
run;

data base;
set temp_1;
if Match > 0 then do;
      Class="Government";
      SubClass="MiscBuilding";
end;
if Class = "" then delete;
run;

/*CAP PROJ DB*/
PROC IMPORT OUT= WORK.InfraStructure_2
      DATAFILE= "D:\NCEP\Model\SAS\Capital Pr
ojects Database.xls"
      DBMS=EXCEL REPLACE;
      SHEET="MRARA_COMMPROJECTS";
      GETNAMES=YES;
      MIXED=NO;
      SCANTEXT=YES;
      USEDATE=YES;
      SCANTIME=YES;
RUN;

proc delete data=base2;
      run;

data temp_2;
set infrastructure_2;
informat class $20.;

```

```

format class $20.;
length class $20.;
informat subclass $20.;
format subclass $20.;
length subclass $20.;
search="STORA";
Match=index(upcase(project_description||comments),search);
id + 1;
if Rural_Community = "XXXXXXXXXXXXXXXXXXXXXXXXXX" then delete;
run;

data base2;
set temp_2;
if Match > 0 then do;
    Class="Government";
    SubClass="MiscBuilding";
end;
if Class = "" then delete;
run;

/*COMMUNITY FUNDING DB*/
PROC IMPORT OUT= WORK.INFRASTRUCTURE_3
    DATAFILE= "D:\NCEP\Model\SAS\CommunityFunding2.xls"
    DBMS=EXCEL REPLACE;
    SHEET="'Community Funding 2$'";
    GETNAMES=YES;
    MIXED=NO;
    SCANTEXT=YES;
    USEDATE=YES;
    SCANTIME=YES;
RUN;

proc delete data=base3;
    run;

data temp_3;
set infrastructure_3;
informat class $20.;
format class $20.;
length class $20.;
informat subclass $20.;
format subclass $20.;
length subclass $20.;
search="STORA";
Match=index(upcase(projecttitle),search);
id + 1;
if Grantcommunity = "XXXXXXXXXXXXXXXXXXXXXXXXXX" then delete;
run;

data communities (keep=community);
    set infrastructure_3;
    Community=upcase(grantcommunity);
run;

proc sort data=communities NODUPKEY;
    by community;
run;

```

```

data communities;
  set communities;
  if community = "" then delete;
  CommunityID + 1;
run;

data base3;
set temp_3;
if Match > 0 then do;
  Class="Government";
  SubClass="MiscBuilding";
end;
if Class = "" then delete;
run;

/*Denali Commission Database*/
PROC IMPORT OUT= WORK.INFRASTRUCTURE_4
  DATAFILE= "D:\NCEP\Model\SAS\denali_DB.xls"
  DBMS=EXCEL REPLACE;
  SHEET="index#cfm$";
  GETNAMES=YES;
  MIXED=NO;
  SCANTEXT=YES;
  USEDATE=YES;
  SCANTIME=YES;
RUN;

proc delete data=base4;
  run;

data temp_4;
set infrastructure_4;
informat class $20.;
format class $20.;
length class $20.;
informat subclass $20.;
format subclass $20.;
length subclass $20.;
search="CTR";
Match=index(uppercase(Project_Title||Project_Theme),search);
id + 1;
run;

data base4;
set temp_4;
if Match > 0 then do;
  Class="Government";
  SubClass="MiscBuilding";
end;
if Class = "" then delete;
run;

%macro gen (x,key,class,sclass);

data temp_&x.;
set infrastructure_1;

```

```

informat class $20.;
format class $20.;
length class $20.;
informat subclass $20.;
format subclass $20.;
length subclass $20.;
search="&key.";
Match=index(upcase(description||department),search);
id + 1;
run;

data temp_&x.;
set temp_&x.;
if Match > 0 then do;
    Class="&class.";
    SubClass="&sclass.";
end;
if Class = "" then delete;
run;

proc append base=base
    data=temp_&x. FORCE;
run;

data temp_cap_&x.;
set infrastructure_2;
informat class $20.;
format class $20.;
length class $20.;
informat subclass $20.;
format subclass $20.;
length subclass $20.;
search="&key.";
Match=index(upcase(project_description||comments),search);
id + 1;
run;

data temp_cap_&x.;
set temp_cap_&x.;
if Match > 0 then do;
    Class="&class.";
    SubClass="&sclass.";
end;
if Class = "" then delete;
run;

proc append base=base2
    data=temp_cap_&x. FORCE;
run;

data temp_comm_&x.;
set infrastructure_3;
informat class $20.;
format class $20.;
length class $20.;
informat subclass $20.;
format subclass $20.;

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```

length subclass $20.;
search="&key.";
Match=index(uppercase(projecttitle),search);
id + 1;
run;

data temp_comm_&x.;
set temp_comm_&x.;
if Match > 0 then do;
    Class="&class.";
    SubClass="&sclass.";
end;
if Class = "" then delete;
run;

proc append base=base3
    data=temp_comm_&x. FORCE;
run;

data temp_denali_&x.;
set infrastructure_4;
informat class $20.;
format class $20.;
length class $20.;
informat subclass $20.;
format subclass $20.;
length subclass $20.;
search="&key.";
Match=index(uppercase(Project_Title||Project_Theme),search);
id + 1;
run;

data temp_denali_&x.;
set temp_denali_&x.;
if Match > 0 then do;
    Class="&class.";
    SubClass="&sclass.";
end;
if Class = "" then delete;
run;

proc append base=base4
    data=temp_denali_&x. FORCE;
run;

/*Using "Economic Security and Public Health/Safety" infrastructure definitions
from homeland security*/
%mend;
%gen (2,FUEL,Public Utilities,Energy);
%gen (3,AIRP,Transportation,Airport);
%gen (4,BLD, Government,MiscBuilding);
%gen (5,BUILDING, Government,MiscBuilding);
%gen (6,TANK,Public Utilities,Energy);
%gen (7,SHED, Government,MiscBuilding);
%gen (8,CABIN, Government,MiscBuilding);
%gen (9,WATER,Public Utilities,Water);
%gen (10,ELEC, Public Utilities,Energy);

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%gen (11,SEWER, Public Utilities,Sewer);
%gen (12,LANDING,Transportation,Airport);
%gen (13,HOSP, Public Health,Hospital);
%gen (14,OFFICE, Government,MiscBuilding);
%gen (15,LEAS, Government,MiscBuilding);
%gen (16,HARB, Transportation,Harbor);
%gen (17,BRIDG, Transportation,Bridges);
%gen (18,HOME, Government,MiscBuilding);
%gen (19,STUD, Government,School);
%gen (20,SCHO, Government,School);
%gen (21,DORM, Government,School);
%gen (22,UNIV, Government,School);
%gen (23,MAIN, Government,MiscBuilding);
%gen (24,ARMOR, Government,Defense);
%gen (25,COURT, Government,Courts);
%gen (26,LATR, Government,MiscBuilding);
%gen (27,FERRY,Transportation,Harbor);
%gen (28,WARE, Government,MiscBuilding);
%gen (29,COMM,Public Utilities,Telecommunications);
%gen (30,SHOWER,Public Health,MiscBuilding);
%gen (31,LAUNDRY,Public Health,MiscBuilding);
%gen (32,MILIT, Government,Defense);
%gen (33,HEAL, Public Health,MiscBuilding);
%gen (34,AGR, Food,Agriculture);
%gen (35,ADMIN, Government,MiscBuilding);
%gen (36,SAFETY,Emergency Services,Emergency Services);
%gen (37,SHORE,Transportation,Harbor);
%gen (38,JUSTI, Law Enforcement, Law Enforcement);
%gen (39,TROOP, Law Enforcement, Law Enforcement);
%gen (40,CORRECT, Law Enforcement, Law Enforcement);
%gen (41,EDUC, Government, School);
%gen (42,PARKS, Government, MiscBuilding);
%gen (43,STRUC, Government, MiscBuilding);
%gen (44,POLIC, Law Enforcement, Law Enforcement);
%gen (45,FIRE, Emergency Services, Emergency Services);
%gen (46,PLANE, Transportation, Airport);
%gen (47,SHELT, Government, MiscBuilding);
%gen (48,PICN, Government, MiscBuilding);
%gen (49,UTIL, Public Utilities, Energy);
%gen (50,EMERG, Emergency Services, Emergency Services);

```

```

data denali_DB (keep=community project_budget id class subclass completion_date
match);

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```

    retain community class subclass project_budget completion_date;
    set base4;
    informat project_budget dollar20.;
    format project_budget dollar20.;
    community = upcase(community);
    Match=index((community), ", ");
run;

```

```

data denali_DB (drop = match);
    set denali_DB;
    if Match > 0 then delete;
    if community = "STATEWIDE" then delete;
run;

```

```

proc sort data=denali_DB out=denali_DB NODUPKEY;
  by id;
run;

data final.denali_DB (drop=id community class subclass);
  set denali_DB;
  informat class2 $20.;
  informat subclass2 $20.;
  informat community2 $28.;
  class2 = input(class,$20.);
  subclass2 = input(subclass,$20.);
  community2 = input(community,$28.);
run;

data final.denali_DB (drop=community2 class2 subclass2) ;
  set final.denali_DB;
  informat class $20.;
  informat subclass $20.;
  informat community $28.;
  community = community2;
  subclass = subclass2;
  class = class2;
  ORIGINAL_DB="Denali Commission";
run;

data risk_DB (keep=community replace_value class subclass acquired id);
  retain community class subclass replace_value acquired;
  set base;
  informat replace_value dollar20.;
  format replace_value dollar20.;
run;

proc sort data=risk_db out=risk_db NODUPKEY;
  by id;
run;

data final.risk_db (drop=id community);
  set risk_db;
  informat community2 $28.;
  community2 = input(community,$28.);
run;

data final.risk_db (drop=community2);
  set final.risk_db;
  informat community $28.;
  community = community2;
  ORIGINAL_DB="AK Div. of Risk Management";
run;

data capproj_DB (keep=rural_community total_cost class subclass fiscal_year id);
  retain rural_community class subclass total_cost fiscal_year;
  set base2;
  informat total_cost dollar20.;
  format total_cost dollar20.;
run;

proc sort data=capproj_DB NODUPKEY;

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```

        by id;
run;

data commfund_DB (keep=grantcommunity awardamount class subclass fiscalyear id);
    retain grantcommunity class subclass awardamount fiscalyear;
    set base3;
    informat awardamount dollar20.;
    format awardamount dollar20.;
run;

proc sort data=commfund_DB NODUPKEY;
    by id;
run;

proc sort data= capproj_db;
    by rural_community class subclass DESCENDING fiscal_year;
run;

data final.capproj_db (keep = community class subclass ORIGINAL_DB);
    set capproj_db;
    by rural_community class subclass DESCENDING fiscal_year;
    if first.fiscal_year = 1;
    if rural_community = "" then delete;
    if rural_community = "XXXXXXXXXXXXXXXXXXXXXXXXXXXX" then delete;
    label rural_community = "Community";
    rename rural_community = Community;
    ORIGINAL_DB = "Capital Projects DB 2006";
    rural_community = upcase(rural_community);
run;

proc sort data= commfund_db;
    by grantcommunity class subclass DESCENDING fiscalyear;
run;

data final.commfund_db (keep = community class subclass ORIGINAL_DB);
    set commfund_db;
    by grantcommunity class subclass DESCENDING fiscalyear;
    if first.fiscalyear = 1;
    if grantcommunity = "" then delete;
    label grantcommunity = "Community";
    rename grantcommunity = Community;
    ORIGINAL_DB = "Community Funding DB 2006";
    grantcommunity = upcase(grantcommunity);
run;

proc sort data=final.commfund_db;
    by community;
run;

proc sort data=final.capproj_db;
    by community;
run;

data infrastructure_x;
    merge communities final.commfund_db;
    by community;
run;

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```

data infrastructure_y;
  merge communities final.caproj_db;
  by community;
run;

data final.infrastructure;
  length community $41.;
  set infrastructure_x infrastructure_y;
  informat community $41.;
  format community $41.;
run;

proc sort data=final.infrastructure;
  by community class subclass;
run;

data final.infrastructure;
  set final.infrastructure;
  by community class subclass;
  if first.subclass = 1;
run;

data WORK.SCHOOLS
  infile 'D:\NCEP\Model\SAS\Schools_fromEED.csv' delimiter = ',' MISSOVER DSD
  lrecl=32767 firstobs=2 ;
  informat School_Name $54. ;
  informat Address $31. ;
  informat City $28. ;
  informat State $2. ;
  informat Zip $10. ;
  format School_Name $54. ;
  format Address $31. ;
  format City $28. ;
  format State $2. ;
  format Zip $10. ;
  input
    School_Name $
    Address $
    City $
    State $
    Zip $
  ;
run;

data schools (keep = School_Name Community class subclass Original_DB);
  set schools;
  subclass = "School";
  class="Government";
  Original_DB="AK Department of Education & Early Development";
  community =trim(uppercase(city));
run;

proc sort data=schools;
  by community;
run;

```

```

proc sort data=final.risk_db;
    by community class subclass;
run;

proc sort data=final.denali_db;
    by community class subclass;
run;

proc sort data=final.Gisdata;
    by community class subclass;
run;

data final.infrastructure (drop= id);
    merge final.infrastructure final.risk_db final.denali_DB final.GISdata
schools;
    by community class subclass;
    if Acquired = . then Acquired = "?";
    if class = "" then delete;
    if community = "" then delete;
run;

*Deleting places that are NOT communities;

data final.infrastructure;
    set final.infrastructure;
    if Community = "AKOLMIUT" then delete;
    if Community = "HAINES BOROUGH" then delete;
    if Community = "ALCANTRA" then delete;
    if Community = "ANCHOR RIVER" then delete;
    if Community = "BARANOF WARM SPRINGS" then delete;
    if Community = "BEAR CREEK" then delete;
    if Community = "BEAR RIVER" then delete;
    if Community = "BIRCH LAKE" then delete;
    if Community = "BYERS LAKE" then delete;
    if Community = "CASCADE" then delete;
    if Community = "CASWELL" then delete;
    if Community = "CHUGNIK BAY" then delete;
    if Community = "CHILKAT RIVER" then delete;
    if Community = "CHULITNA RIVER" then delete;
    if Community = "CHULONAWICK" then delete;
    if Community = "CIRCLE CITY /NEW/" then delete;
    if Community = "CIRCLE HOT SPRINGS" then delete;
    if Community = "CLARK'S POINT" then delete;
    if Community = "CLARKS BAY" then delete;
    if Community = "COGHILL LAKE" then delete;
    if Community = "COLDFOOT CAMP" then delete;
    if Community = "CRAIG CG" then delete;
    if Community = "CRYSTAL LAKE" then delete;
    if Community = "DALTON HWY" then delete;
    if Community = "DELTANA" then delete;
    if Community = "DESHKA RIVER" then delete;
    if Community = "DOG SALMON" then delete;
    if Community = "EGEGIK RIVER" then delete;
    if Community = "EKLUTNA RIVER" then delete;
    if Community = "ERNESTINE" then delete;
    if Community = "ESHAMY BAY" then delete;
    if Community = "EUREKA" then delete;

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if Community = "FOGGY BAY" then delete;
if Community = "FORT ABERCROMBIE" then delete;
if Community = "FORT GREEELY" then delete;
if Community = "FOUR MILE ROAD" then delete;
if Community = "FRAZER LAKE" then delete;
if Community = "FUNNY RIVER" then delete;
if Community = "FUNTER BAY" then delete;
if Community = "GALBRAITH LAKE" then delete;
if Community = "GLACIER VIEW" then delete;
if Community = "GOLDSTREAM" then delete;
if Community = "GUT ISLAND" then delete;
if Community = "HELM BAY" then delete;
if Community = "HOBART BAY" then delete;
if Community = "INDEPENDENCE MINE" then delete;
if Community = "INTERIOR" then delete;
if Community = "JIM RIVER" then delete;
if Community = "KAKWAN POINT" then delete;
if Community = "KALSIN BAY" then delete;
if Community = "KALSKAG" then delete;
if Community = "KING ISLAND" then delete;
if Community = "KUZITRIN" then delete;
if Community = "LAKE HOOD" then delete;
if Community = "LAKE LOUISE" then delete;
if Community = "LAZY BAY" then delete;
if Community = "LOWER TALERIK" then delete;
if Community = "MARINE HWY" then delete;
if Community = "MEYERS CHUCK" then delete;
if Community = "MILES LAKE" then delete;
if Community = "MORGAN'S LANDING" then delete;
if Community = "NAMED RECIPIENT" then delete;
if Community = "NUNAM IQUA" then delete;
if Community = "OBRIEN CREEK" then delete;
if Community = "PARKS HWY" then delete;
if Community = "PETERSVILLE" then delete;
if Community = "POINT MACKENZIE" then delete;
if Community = "POORMAN" then delete;
if Community = "QUARTZ CREEK" then delete;
if Community = "RAVEN CREEK" then delete;
if Community = "RED DOG MINE" then delete;
if Community = "RED SHIRT LAKE" then delete;
if Community = "REDOUBT LAKE" then delete;
if Community = "REGIONAL" then delete;
if Community = "SAG RIVER" then delete;
if Community = "SANDY RIVER" then delete;
if Community = "SAPSUK TOWER" then delete;
if Community = "SAXTON" then delete;
if Community = "SEATTLE" then delete;
if Community = "SEVEN MILE CAMP" then delete;
if Community = "SHEEP CREEK" then delete;
if Community = "SHEMYA STATION" then delete;
if Community = "SIKUSUILAQ" then delete;
if Community = "SILVER SPRINGS" then delete;
if Community = "SOUTH FORK" then delete;
if Community = "SOUTHEAST CONFERENCE" then delete;
if Community = "STATEWIDE" then delete;
if Community = "SWANSON HARBOR" then delete;
if Community = "TCC REGION" then delete;

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if Community = "THOMPSON PASS" then delete;
if Community = "TOLSONA" then delete;
if Community = "TRIMMS" then delete;
if Community = "TURNAGAIN ARM" then delete;
if Community = "TWIN BEARS" then delete;
if Community = "WHITESTONE COMMUNITY" then delete;
if Community = "YENTNA RIVER" then delete;
if Community = "ALEUTIANS EAST BOROUGH" then delete;
if Community = "BRISTOL BAY BOROUGH" then delete;
if Community = "DENALI BOROUGH" then delete;
if Community = "FAIRBANKS NORTH STAR BOROUGH" then delete;
if Community = "KENAI PENINSULA BOROUGH" then delete;
if Community = "KETCHIKAN GATEWAY BOROUGH" then delete;
if Community = "KODIAK ISLAND BOROUGH" then delete;
if Community = "LAKE AND PENINSULA BOROUGH" then delete;
if Community = "MATANUSKA-SUSITNA BOROUGH" then delete;
if Community = "NORTH SLOPE BOROUGH" then delete;
if Community = "NORTHWEST ARCTIC BOROUGH" then delete;
if Community="STE 100" then delete;
if Community="STE 202" then delete;
if Community="STE. 9" then delete;
if Community="SUITE 1" then delete;
if Community="SUITE 6" then delete;
if Community="SUITE A" then delete;

run;

*Merging duplicates;
data final.infrastructure;
    set final.infrastructure;
    if Community in ("AFOGNAK", "AFOGNAK LAKE") then Community = "AFOGNAK";
    if Community in ("ATQASUK", "ATQASUK (MEADE RIVER)") then Community =
"ATQASUK";
    if Community in ("AKIACHAK", "AKIAKCHAK") then Community = "AKIACHAK";
    if Community in ("ALEKHAGIK", "ALEKNAGIK") then Community = "ALEKNAGIK";
    if Community in ("BILL MOORE'S SLOUGH", "BILL MOORES (SLOUGH)") then
Community = "BILL MOORE'S SLOUGH";
    if Community in ("WASILLA", "FINGER LAKE", "COTTONWOOD", "GOOSE BAY",
"COTTONWOOD CAMP", "WASILLA/FINGER LAKE") then Community = "WASILLA";
    if Community in ("ANAKTUVAK PASS", "ANAKTUVUK PASS") then Community =
"ANAKTUVUK PASS";
    if Community in ("BETTLES", "BETTLES FIELD") then Community = "BETTLES";
    if Community in ("BUSKIN RIVER SRS", "KODIAK") then Community = "KODIAK";
    if Community in ("CHANDALAR", "CHANDALAR LAKE") then Community =
"CHANDALAR";
    if Community in ("CHAUTHBALUK", "RUSSIAN MISSION") then Community =
"CHUATHBALUK";    *****NOTE: Check this out -pl/cs;
    if Community in ("CHENA", "CHENA HOT SPRINGS", "CHENA REC AREA") then
Community = "CHENA HOT SPRINGS";
    if Community in ("CHILKOOT RIVER") then Community = "CHILKOOT";
    if Community in ("CRAIG", "CRAIG CG") then Community = "CRAIG";
    if Community in ("DELTA", "DELTA JUNCTION") then Community = "DELTA
JUNCTION";
    if Community in ("DOT LAKE", "DOT LAKE VILLAGE", "DOT LAKE SERVICES") then
Community = "DOT LAKE";
    if Community in ("ELFIN COE", "ELFIN COVE") then Community = "ELFIN COVE";
    if Community in ("EIELSEN AFB", "EIELSON AFB", "EIELSON AIR FORCE BASE")
then Community = "EIELSON AFB";

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    if Community in ("FORT WAINWRIGHT") then Community = "FAIRBANKS";
    if Community in ("GLENALLEN", "GLENNALLEN") then Community = "GLENALLEN";
    if Community in ("GOODNEWS", "GOODNEWS BAY") then Community = "GOODNEWS
BAY";
    if Community in ("IGIUGIG", "IGUGIG", "IGUIGIG") then Community =
"IGIUGIG";
    if Community in ("IGUSHIK RIVER","IGUSHIK (SITE)") then Community =
"IGUSHIK";
    if Community in ("JAKOLOF BAY", "SELDOVIA") then Community = "SELDOVIA";
    if Community in ("KACHEMAK", "KACHEMAK BAY", "KACHEMAK CITY") then
Community = "KACHEMAK";
    if Community in ("KALIFONSKY", "KALIFORNSKY") then Community =
"KALIFORNSKY";
    if Community in ("KIANA", "KIANA (FOR. PROP.)") then Community = "KIANA";
    if Community in ("KNIK", "KNIK RIVER", "KNIK-FAIRVIEW") then Community =
"KNIK";
    if Community in ("KODIAK", "KODIAK (AIRPORT)", "KODIAK (CITY)", "KODIAL")
then Community = "KODIAK";
    if Community in ("KONGIGANAK", "KONGIGANEK","KOKKHANOK BAY") then Community
= "KONGIGANEK";
    if Community in ("LARSEN BAY", "LARSON BAY", "UGANIK") then Community =
"LARSEN BAY";
    if Community in ("LITTLE DIOMEDE", "DIOMEDE") then Community = "DIOMEDE";
    if Community in ("LITNIK") then Community = "AFOGNAK";
    if Community in ("LOWELL POINT", "SEWARD") then Community = "SEWARD";
    if Community in ("MANLEY", "MANLEY H.S.", "MANLEY HOT SPRINGS") then
Community = "MANLEY HOT SPRINGS";
    if Community in ("MC GRATH", "MCGRATH","LIME VILLAGE-MCGRATH") then
Community = "MCGRATH";
    if Community in ("MCCARTHY", "McCARTHY") then Community = "MCCARTHY";
    if Community in ("MCGRATH", "McGRATH") then Community = "MCGRATH";
    if Community in ("MARSHALL (FORTUNA LEDGE PO)", "MARSHALL") then Community
= "MARSHALL";
    if Community in ("MARY'S IGLOO", "MARYS IGLOO") then Community = "MARY'S
IGLOO";
    if Community in ("MCKINELY PARK", "MCKINLEY PARK","McKINLEY PARK") then
Community = "MCKINLEY PARK";
    if Community in ("METLATA","METLAKATA", "METLAKATLA", "METLAKATLA
(UNINC)") then Community = "METLAKATLA";
    if Community in ("MONTANA CREEK", "MONTANA") then Community = "MONTANA
CREEK";
    if Community in ("MT. EDGECEUMBE", "MOUNT EDGECEUMBE") then Community = "MT.
EDGECEUMBE";
    if Community in ("NANCY", "NANCY LAKE") then Community = "NANCY LAKE";
    if Community in ("NAPAIMUTE", "NAPAIMIUT") then Community = "NAPAIMUTE";
    if Community in ("NANWALEK", "ENGLISH BAY","ENGLISH BAY (NANWALEK)") then
Community = "NANWALEK";
    if Community in ("NELCHINA", "NELCHINA/MENDELITNA") then Community =
"NELCHINA";
    if Community in ("NEBESNA", "NABESNA") then Community = "NABESNA";
    if Community in ("NINILCHIK", "NINILCHICK", "NINILCHIK") then Community =
"NINILCHIK";
    if Community in ("NORTHWAY VILLAGE", "NORTHWAY INDIAN VILLAGE") then
Community = "NORTHWAY VILLAGE";
    if Community in ("NORTH KENAI", "KENAI") then Community = "KENAI";
    if Community in ("NUIQSUT", "NUIGSUT") then Community = "NUIQSUT";

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        if Community in ("NUNAPICHUK", "NUNAPITCHUK") then Community =
"NUNAPITCHUK";
        if Community in ("PITKA'S POINT", "PITKAS POINT") then Community =
"PITKA'S POINT";
        if Community in ("PORT LIONS", "PORT LYONS") then Community = "PORT
LIONS";
        if Community in ("PORT PROTECTION", "PORT PROTECTION",
"KASAAN", "WHA", "PORT PROTECTION, KASAAN, WHA") then Community = "PORT
PROTECTION";
        if Community in ("PORT DICK") then Community = "SELDOVIA";
        if Community in ("PORTAGE", "PORTAGE CREEK") then Community = "PORTAGE
CREEK";
        if Community in ("PRUDHOE", "PRUDHOE BAY") then Community = "PRUDHOE BAY";
        if Community in ("SAINT GEORGE", "SAINT GEORGE ISLAND", "ST. GEORGE", "ST
GEORGE") then Community = "SAINT GEORGE";
        if Community in ("SALAMATOF", "SALMATOF") then Community = "SALAMATOF";
        if Community in ("SAND POINT", "SANDPOINT") then Community = "SAND POINT";
        if Community in ("SHUYAK ISLAND", "SHUYAK RADIO COMMUNICATION C", "SHUYAK
RADIO COMMUNICATION CENTER") then Community = "SHUYAK ISLAND";
        if Community in ("SKWENTNA", "SWETNA", "SKWETNA") then Community =
"SKWENTNA";
        if Community in ("SLANA", "SLANA LEAGUE") then Community = "SLANA";
        if Community in ("SNEETTISHAM", "SNETTISHAM") then Community =
"SNETTISHAM";
        if Community in ("ST MARY'S", "ST. MARY'S", "SAINT MARY'S", "ANDREAFSKY (ST
MARYS PO)") then Community = "SAINT MARY'S";
        if Community in ("SAINT MICHAEL", "ST.MICHAELS", "ST MICHAEL", "ST.
MICHAEL") then Community = "SAINT MICHAEL";
        if Community in ("SAINT PAUL", "ST PAUL ISLAND", "ST. PAUL ISLAND", "ST.
PAUL", "ST PAUL") then Community = "SAINT PAUL";
        if Community in ("STEVEN'S VILLAGE", "STEVENS VILLAGE") then Community =
"STEVENS VILLAGE";
        if Community in ("SUTTON", "SUTTON-ALPINE") then Community = "SUTTON";
        if Community in ("TETLIN", "TETLIN JUNCTION") then Community = "TETLIN";
        if Community in ("TRAPPER CREEK") then Community = "TALKEETNA";
        if Community in ("UGASHIK", "UGASHIK RIVER") then Community = "UGASHIK";
        if Community in ("UMKUMIUTE", "UMKUMIUT") then Community = "UMKUMIUTE";
        if Community in ("WILLOW", "WILLOW LAKE") then Community = "WILLOW";
        if Community in ("YAKATAT", "YAKUTAT") then Community = "YAKUTAT";
        if Community in ("MATANUSKA", "PALMER") then Community = "PALMER";
        if Community in ("SILVERTIP", "HOPE") then Community = "HOPE";
        if Community in ("CHENEGA", "CHENEGA (SITE)") then Community = "CHENEGA
BAY";
        if Community in ("CHIGNIK BAY", "CHIGNIK LAGOON", "CHIGNIK LAKE") then
Community = "CHIGNIK";
        if Community = "BIG LAKE" and subclass="Pipeline" then
Community="WISEMAN";      *****Per Meghan's suggestion...maps BIG LAKE NORTH to
WISEMAN;
run;

proc sort data=final.infrastructure;
    by community subclass original_db;
run;

data final.infrastructure;
    set final.infrastructure;
    AID_ID + 1;

```

```

run;

%if &CHECK.=YES %then %do;
*****The following contains a mapping DB that cleans the raw DB based on
Meghan's comparison to the DCCED DB*****;

data final.infrastructure;
    set final.infrastructure;
    if subclass="Roads" then delete;          *****Clears out original roads
to make way for updates from DOT Log files;
    if subclass="Bridges" then delete;
    if subclass="Airports" then delete;
run;

PROC IMPORT OUT= WORK.CHECKS
            DATAFILE= "D:\NCEP\Model\AID Checks\AIDCHECK_ALL_
JAN262007.xls"
            DBMS=EXCEL REPLACE;
            SHEET="Sheet1$";
            GETNAMES=YES;
            MIXED=NO;
            SCANTEXT=YES;
            USEDATE=YES;
            SCANTIME=YES;
RUN;

proc sort data=final.infrastructure;
    by AID_ID;
run;

proc sort data=checks;
    by AID_ID;
run;

data final.infrastructure;
    merge final.infrastructure work.checks;
    by AID_ID;
run;

data final.infrastructure;
    set final.infrastructure;
    if DCCED_EDIT = "DELETE" then delete;
run;
%end;

proc sort data=final.infrastructure;
    by class subclass;
run;

proc univariate noprint data = final.infrastructure;
    by class subclass;
    var replace_value;
    output out = avgs
    MEAN=Replace_Value_AVG ;
run;

data final.infrastructure (drop=Replace_Value_AVG communityid);

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merge final.infrastructure avgs;
by class subclass;
informat Replace_Value_AVG dollar20.;
format Replace_Value_AVG dollar20.;
if Replace_Value = . then Replace_Value = Replace_Value_AVG;
run;

proc univariate noprint data = final.infrastructure;
var replace_value;
output out = sums
SUM=Value_of_I;
run;

proc sort data=final.infrastructure;
by community;
run;

proc sort data=final.infrastructure out=final.communities NODUPKEY;
by community;
run;

data final.communities (keep= community ISER_ID);
set final.communities;
ISER_ID + 1;
run;

/*Entering topography info for each community being provided by Meghan Wilson*/;
PROC IMPORT OUT= WORK.TOPO
DATAFILE= "D:\NCEP\Model\SAS\Petedatabase_Part3.xls"
DBMS=EXCEL REPLACE;
SHEET="Sheet1$";
GETNAMES=YES;
MIXED=NO;
SCANTEXT=YES;
USEDATE=YES;
SCANTIME=YES;
RUN;

proc sort data=topo;
by community;
run;

data topo;
set topo;
if ISER_ID eq "" then delete;
run;

data infrastructure_topo;
set final.infrastructure;
run;

proc sql;
create table final.infrastructure_topo as
select *
from topo, infrastructure_topo
where topo.community = infrastructure_topo.community ;
quit;

```

```

run;

data final.infrastructure_topo;
  set final.infrastructure_topo;
  if subclass = "Bridges" then Length=Length;      *****Converting to miles
to be consistent;
  if Borough in ("Municipality of Anchorage", "Municipality of Anchorage")
then Borough = "Municipality of Anchorage";
  if Borough in ("North Slope", "North Slople") then Borough = "North
Slope";
run;

*****Adding 2005 population from AK Dept of Labor and Workforce Development
here*****;
PROC IMPORT OUT= WORK.BORO_POP
  DATAFILE= "D:\NCEP\Model\SAS\AK_DOLWD_Populations.xls"
  DBMS=EXCEL REPLACE;
  SHEET="Pop";
  GETNAMES=YES;
  MIXED=NO;
  SCANTEXT=YES;
  USEDATE=YES;
  SCANTIME=YES;
RUN;

proc sort data=final.infrastructure_topo;
  by borough;
run;

proc sort data=boro_pop;
  by borough;
run;

data final.infrastructure_topo;
  merge final.infrastructure_topo boro_pop;
  by borough;
run;

*****Defining VERY ROUGH replacement values here;
data final.infrastructure_topo;
  set final.infrastructure_topo;

  if class="Emergency Services" and subclass="Emergency Services" then
Replace_Value = &Emer_V.;

  if class="Government" and subclass="Courts" then Replace_Value = &Cour_V.;
  if class="Government" and subclass="Defense" then Replace_Value = &Def_V.;
  if class="Government" and subclass="MiscBuilding" then Replace_Value =
&Gbld_V.;
  if class="Government" and subclass="School" then Replace_Value = &Sch_V.;

  if class="Law Enforcement" and subclass="Law Enforcement" then
Replace_Value = &Law_V.;

  if class="Public Health" and subclass="Hospital" then Replace_Value =
&Hosp_V.;

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        if class="Public Health" and subclass="MiscBuilding" then Replace_Value =
&PHbld_V.;

        if class="Public Utilities" and subclass="Energy" then Replace_Value =
&En_V.;
        if class="Public Utilities" and subclass="Grid" then Replace_Value =
&Grid_V.*Length;
        if class="Public Utilities" and subclass="Sewer" then Replace_Value =
&Sew_V.;
        if class="Public Utilities" and subclass="Telecommunications" then
Replace_Value = &Telec_V.;
        if class="Public Utilities" and subclass="Telephone Line" then
Replace_Value = &Telep_V.*Length;
        if class="Public Utilities" and subclass="Water" then Replace_Value =
&Water_V.;

        if class="Transportation" and subclass="Roads" and Paved="YES" then
Replace_Value = &Road_V.*Length_2;          *****Computing total replacement value
of roads per segment/community;
        if class="Transportation" and subclass="Roads" and Paved="NO" then
Replace_Value = &Road2_V.*Length_2;          *****Computing total replacement value
of roads per segment/community;
        if class="Transportation" and subclass="Railroad" then Replace_Value =
&Rail_V.*Length; *****Computing total replacement value of rail roads per
segment/community;
        if class="Transportation" and subclass="Pipeline" then Replace_Value =
&Pipe_V.*Length; *****Computing total replacement value of pipeline per
segment/community;
        if class="Transportation" and subclass="Airport" then Replace_Value =
&Airp_V.; *****Computing total replacement value of
airports;
        if class="Transportation" and subclass="Bridges" then Replace_Value =
&Brg_V.*(Length_2*5280); *****Computing total replacement value of
bridge per segment/community;
        if class="Transportation" and subclass="Harbor" then Replace_Value =
&Harb_V.; *****Computing total replacement value of
harbor;
run;
/*
data final.infrastructure_topo;
    set final.infrastructure_topo;
    if Community in ("SHISHMAREF","KIVALINA","NEWTOK") then delete;
    *****Treating these seperate per the Army COE;
run;
*/
proc sort data=final.infrastructure_topo;
    by community subclass original_db;
run;

PROC EXPORT DATA= FINAL.COMMUNITIES
    OUTFILE= "D:\NCEP\Model\SAS\Community_LIST.xls"
    DBMS=EXCEL REPLACE;
    SHEET="Comm";
RUN;

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PROC EXPORT DATA= FINAL.INFRASTRUCTURE_TOPO
      OUTFILE= "D:\NCEP\Model\Infrastructure_DB_012707.xls"
      DBMS=EXCEL REPLACE;
      SHEET="infra";
RUN;

proc univariate noprint data = FINAL.INFRASTRUCTURE;
      by community;
      var replace_value;
      output out = communitytotals
      SUM=Replace_Value ;
run;

proc sort data=communitytotals out=COMMUNITY_INFRA_DOLLARS;
      by DESCENDING Replace_Value;
run;

data final.COMMUNITY_INFRA_DOLLARS;
      set COMMUNITY_INFRA_DOLLARS;
      informat Replace_Value dollar20.;
      format Replace_Value dollar20.;
      label Replace_Value = 'Replace Value';
run;

%mend q;
%q ();

```