PCensus DBX version 8.5

Resource Note #9 Community Social Profile Project September 2007

Preface

- * The Resource Note is intended to increase our understanding of and broaden our knowledge base on key subject areas that are fundamental in building our capacity in numeric and geographic analysis.
- * It is not an in-depth or comprehensive discussion of the subject matter.
- * It highlights certain relevant and important areas that deserve our attention and consideration.
- **≭** It is intended to be informal and informative.

Introduction

* This is the 9th Resource Note, previous notes include:

- #1-Census Geography
- #2-Census Data
- #3-PCensus Database
- #4-Geocoding,
- # 5 Cartographic Principles
- #6 Thematic Mapping
- #7-2006 Census
- #8 Population Pyramid
- * This is an update of Resource Note # 3 on using the PCensus Database Extractor (DBX) to build a datafile as input to ArcMap
- As part of our purchase agreement of the 2006 Census data from Tetrad Computer Applications Inc., a new version of PCensus Database Extractor (DBX) is provided. We have to use this version to extract data from the 2006 Census. It can also be used with our 2001 Census data package.

PCensus Database

- * PCensus Database groups census variables into different categories (e.g. population by age and sex, marital status, citizenship and place of birth...).
- Census variables with the exception of some income data are available at the Dissemination Area (DA), Census Tract (CT), Census Subdivision (CSD), Census Division (CD) and Census Metropolitan Area/Census Agglomeration (CMA/CA) levels.
- However, as mentioned in Resource Note 1 Census Geography, the census variables are not readily available at the Census Division (CD) level, one has to manually group the component CSDs, CTs or DAs together.

PCensus DBX 8.5

- * The major steps involved in the development of a datafile for input to ArcMap are very similar with the earlier version
- ***** It has a different template layout
- * New features include comparison among selected areas and also benchmarking
- * For more detailed description and instructions, please refer to PCensus DBX Version 8.5 – User's Guide

Seven Steps

(The City of Kingston is used as an example to illustrate the various steps)

- 1. Select Database/Template
- 2. Specify the Type of Area
- 3. Select the Area
- 4. Export Pointfile (optional)
- 5. Create the Profile
- 6. Compare with other Areas (optional)
- 7. Export a Pointfile

1. Select Database/Template



New Predefined Study Area

- Click I to initiate a new predefined study area
- Use the Demographic
 Database pull-down list
 to select 2006 Census
 Release 2 [Ontario]
- Use the Data Template (if required) pull-down list to select 2006 Census Release 2

2. Specify the Type of Area

Predefined Stud Select a datab		e type of predefined study area that you want to c	reate.
Abbeville County	SC	1. Select a Demographic Database:	
Acadia Parish Accomack County	LA VA	2006 Census: Release 2 [Ontario]	+ -
ida County	ID	2. Select a custom Data Template (if required)	
dair County	D KY	2006 Census: Belease 2	 +
dair County	MO	3. Select a Predefined Area Type:	
dair County	OK	Province	
dams County	CO ID	Metro Area (CMA/CA)	~
idams County	IL	Census Subdivision (CSD)	
idams County	IN	Designated Place (DPL) Census Tract (CT)	
uken County	SC	Postal FSA	
sitkin County	MN	Dissemination Area (DA)	
Jachua County	EL	Dissemination Block (DB)	*

The Predefined Area Type list shows the types of standard area available in the selected database

- Highlight Census
 Subdivision (CSD) for
 the City of Kingston and
 click Next>
- Or double-click CensusSubdivision (CSD)

Community Social Profile Project Resource Note 9

3.Select the Area



The Predefined Study Area dialog box is used for selecting geographic areas from a list – in this case a list of Census Subdivisions (or municipalities). The small text box above the list is used for locating names in a long list

- Start typing the name Kin...into this box, The list scrolls to display the first name matches the letters you have typed
- # Highlight Kingston and click Next>
- Or, you can enter the CSD code (3510010) and click Next>
- To make change, backspace on name or code

3.Select the Area (cont'd)

Study Area Wizard

Predefined Study Area

Run the Report Wizard to guide you through the steps of creating a demographics report.

Abbeville County SC Acadia Parish LA	Select one or more CSDs	or Load from File
Accomack County VA Ada County ID	Kingston 📀 CSD	C CSD Code
Adair County IA Adair County IA Adair County MD Adair County MD Adair County OK Adair County OK Adams County ID Adams County ID Adams County ID Adams County ID Adams County IN Aiken County SC Aitkin County MN Alachua County FL	Kingston (CY), DN Kingsville (T), DN Kirkland Lake (T), DN Kitchener (CY), DN Kitchenuhmaykoosib Aaki 84 (Big La Vallee (TP), DN Lac des Mille Lacs 22A1 (IRI), DN Lac Seul 28 (IRI), DN Laird (TP), DN Lake Helen 53A (IRI), DN	
< Back	Next > Finish	Cancel Help

Or you might load a list of geographic areas previously saved from your file

 See next page for saving a list of geographic areas (CSDs, CTs and DAs)

Community Social Profile Project Resource Note 9

3. Select the Area (Cont'd)

			99893 T II	
Abbeville County Acadia Parish Accomack County Ada County Adair County Adair County Adair County Adair County Adams County Adams County Adams County Adams County Adams County Adams County	SC LA VA ID IA KY MO OK CO ID IL IN SC	Kingston (CY), ON		Add Anoth Delet
Aitkin County Alachua County	MN FL	Load from File	Save to File	í.

This dialog box summarizes the areas selected for our study At this point we could click **Add Another** to return to the previous dialog box – for example, we might add the Township of South Frontenac to the list to create a profile for the total of two municipalities (CSDs)

 You could save a list of geographic areas to a file for future use (Save to File)

✗ Click Next>

Community Social Profile Project Resource Note 9

3. Select the Area (cont'd)

ielect one or more CTs Kingston © CMA Kingston, ON Kitchener, ON Kitimat, BC La Tuque, PQ Lachute, PQ Lachute, PQ Leamington, ON Lethbridge, AB Lloydminster, AB Lloydminster, SK London, ON	or Load from File
	Kingston CMA Kingston, ON Kitchener, ON Kitimat, BC La Tuque, PQ Lachute, PQ Lachute, PQ Leamington, ON Lethbridge, AB Lloydminster, AB Lloydminster, SK

One can also define a study area by grouping CTs or DAs

- For example, an area consists of four CTs in Kingston can be defined by:
- Return to Step 2 and highlightCT as Predefined Study Area

Enter Kingston

- The CMA/CA code for Kingston (35521) will appear in the box
- Click the CT button and the list of all CTs in Kingston will appear

3. Select the Area (cont'd)

Study Area Wizar	d	
	ou want to use in your predefined study area. Ingle area selected in the list.	Use the buttons on the
Abbeville County SC Acadia Parish LA Accomack County VA	Select one or more CTs	or Load from File
Ada County ID Adair County IA Adair County IA Adair County NY Adair County MD Adair County MK Adams County IN Adams County IL Adams County IL Adams County SC Aitkin County MN Alachua County FL	Image: Descente FN 00001:00 00003:00 00002:00 00004:00 00005:00 00006:00 00007:00 00008:00 00008:00 00008:00 00010:00 00010:00	
< Back	Next > Finish Cano	el Help

Predefined Study Area Selection

Study Area Wizard

Check the areas that you have selected to use in your predefined study area. Click on "Back" to add more areas to this list.

Abbeville County Acadia Parish Accomack County Ada County Adair County Adair County	SC LA VA ID IA KY	CMA 35521 35521 35521 35521 35521	CT 0001.00 0002.00 0003.00 0004.00	Add Another
Adair County Adair County Adams County Adams County Adams County Adams County Adams County	MO OK CD ID IL N SC			Delete Clear
Aitkin County Alachua County < Bac	MN FL	Load from File Next > Finist	Save to File	Help

- Highlight the CTs to be included
- Click the Next> button
- The four CT codes will appear in the box below
- Click the Save to File button and save the data to a Userfile

3. Select the Area (cont'd)

Save StudyAre	a as File			? 🛛
Save in:	🗀 User Files		- + E 💣 🖩] .
My Recent Documents Desktop	BurlingtonCT. Census Tract Halton_CT_P(HaltonCT.CT OakvilleCT.CT	List.CT Census.CT		
My Documents				
My Computer				
My Network Places	File name: Save as type:	Census Tract List	•	Save Cancel

 Enter a file name in the Save Study Area as File box

* Once saved, one can retrieve the geographic area (i.e. four census tracts) by loading and opening the file

4. Export Pointfile (Optional)

	pointfile, cl	xport dem ick on the	ogra box	phic data for each data "point" in your study area. To create a below and check the Categories that you want to export.
			ategi	bry to view/edit the export options.
	Xcoord		<u>P</u>	Check this box to export to one or more Pointfile Tables
AK	-151.647		E	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
AL		32.845		
AR		34.770		
AZ	-112.554			
CA	-119.765	37.220	348	
CO	-105.714	39.117	4:	
CT	-72.735	41.807	3	
DC	-77.016	.38,905	1	
DE	-75.503	39.097		
FL	-82.468	28.553	162	
GA	-83.426	32.666	84	
HI	-156.948	21.226	12	
IA	-93.466	42.037	2{	
15	1444.004	11000		

The Export Pointfile (Optional) dialog box controls the export data from PCensus for use in other applications # For now, clear the check-box to bypass this step ***** Click **Finish**

5. Create the Profile

Study Area Wizard	×
Search Study Area Click on the "Search Now" button to search the study area and display the results in your r	eport.
Study Title: Kingston (CY), ON	
You are now ready to search the study area. Click on "Search Now" to start the search.	
< Back Next > Search Now Cancel Help	

The Search Study Area dialog box is displayed when we are ready to create the profile The **Study Title** box can be used to change the name associated with the profile (e.g. City of Kingston)

Click Search Now to display the profile

5. Create the Profile

📅 🗁 🥠 🔶 🐔	*	
Study Area: Kingston (CY), ON	Benchmark:	
	- No Benchmark Selected -	_
Profile		
2006 Census Population and Dwelling Counts	Kingston (CY), ON	· · · · ·
2006 Population	117,207	
2001 Population*	114,196	
2001-2006 Population Change* Persons Percent	3,013 2.6%	
2006 Private Dwellings Occupied by Usual Residents*	53,838 48,864	
Land Area, sq km	450.4	
Persons per sq km Dwellings per sq km	260.2 119.5	
2006 Population and dwelling counts in this category represent actual (unsuppressed) data. In all other categories, data are subject to rounding or suppression by Statistics Canada.		
* Data is not available for dissemination areas, blocks and user-defined areas (circles, polygons and drive-times)		

Once you have defined a study area, you can view all of the available profile reports for the area without conducting another search

 Select the various reports using the Category Selector

	Category 1 of 4
Clic	k the up or down arrow
to c	cle through the reports

or click

Category 1 of 4

to select from a list

쏥

5. Create the Profile

🖪 💩 🦊 🖊 🐳	8 🚼 8		
Study Area:	Bench	mark:	
Kingston (CY), ON	▼ No	Benchmark Selected	
旝 Profile			
2006 Census Population by Age and Sex	Kingston (CY),	ON	<u> </u>
2006 Population by Sex	117,205	%	
Males	56,525	48%	
Females	60,680	52%	
2006 Population by Age	117,205		
0 to 4 years	5,610	5%	
5 to 9 years	5,865	5%	
10 to 14 years 15 to 19 years	7,010 7,785	6% 7%	
20 to 24 years	9,510	8%	
25 to 29 years	8,215	7%	
30 to 34 years	6,955	6%	
35 to 39 years	7,620	7% 8%	
40 to 44 years 45 to 49 years	9,200 9,070	8%	
50 to 54 years	8,255	7%	
55 to 59 years	7,545	6%	
60 to 64 years 65 to 69 years	5,975 4,780	5% 4%	
70 to 74 years	4,780	4%	
75 to 79 years	3,860	3%	
80 to 84 years	3,100	3%	
85 years and over	2,360	2%	
65 years and over	18,535	16%	
Average age Median age Dominant age group	40.1 40.0 20 to 24 years		

Category 3 shows a distribution of age groups for the City of Kingston Next, we will add a column to compare the age distribution of Kingston with that of a specific Census Tract in Kingston

Click the New Predefined
 Study Area

4

To start defining another area

6. Compare with another area

Abbeville County SC Acadia Parish LA	Select one or more CTs	or Load from File
Accomack County VA Ada County ID Adair County IA Adair County KY Adair County MC Adair County OK Adams County ID Adams County ID Adams County IL Adams County IN Aiken County SC Adatha County MIN Alachua County FL	Holocover Chi 0001.01 0001.02 0002.01 0002.02 0002.03 0002.04 0002.06 0002.07 0002.08 00002.08	

💥 Follow Step 3 to select a Census Tract in Kingston for comparison ***** Select CT 0001.00 # Click Next> 💥 Click **Finish** Click Search Now as before

6. Compare with another area (cont'd)

1 🚼 🖇				
Bench	mark:			
🔻 No E	Benchmar	k Selected		
Kingston (CY),	ON	35521 0001.00		
2		%		
117,205		2,855	ا <u>الأ</u>	
FO FOF	108/	1 200	110	
		1,260	44% 56%	
		135/250		
117,205		2,855		
5.610	5%	30	1%	
5,865	5%	25	1%	
7,010	6%	35	1%	
			4%	
9,510	8%	365	13%	
8,215	7%	435	15%	
6,955		190	7%	
			4%	
			5%	
9,070	8%	130	5%	
8,255	7%	180	6%	
7,545		180	6%	
		160	6%	
4,780	4%	125	4%	
4,435	4%	155	5%	
3,860	3%	145	5%	
3,100	3%	190	7%	
2,360	2%	130	5%	
18,535	16%	745	26%	
40.1		46.7		
40.0 20 to 24 years		43.9 25 to 29 years		
	Bench ■ ~ No E Kingston (CY), 117,205 56,525 60,680 117,205 5,610 5,865 7,010 7,785 9,510 8,215 6,955 7,520 9,255 9,570 8,215 6,955 7,520 9,255 9,070 8,215 6,955 7,520 9,255 9,070 8,215 6,955 7,520 9,255 9,070 8,215 6,955 7,520 9,255 9,070 8,215 6,955 7,520 9,255 9,070 8,215 6,955 7,525 9,070 8,215 8,955 7,525 9,070 8,215 8,955 7,525 9,070 8,215 8,955 7,525 9,070 8,215 8,955 7,525 9,070 8,215 8,955 7,525 9,070 8,215 8,955 7,525 9,070 8,215 8,955 7,525 9,750 8,215 8,955 7,525 9,070 8,215 8,955 7,525 9,070 8,215 8,955 7,525 9,070 8,215 8,955 7,525 9,070 8,215 8,955 7,525 9,070 8,255 7,785 9,785 9,700 8,255 7,545 5,975 4,780 3,100 2,360 11,720 1,785 1,780 1,835 1,835 1,835 1,835 1,835 1,800 1,855 1,800 1,855 1,000 1,855 1,000 1,855 1,000 1,855 1,000 1,855 1,000 1,855 1,000 1,855 1,000 1,855 1,000 1,855 1,000 1,855 1,000 1,855 1,000 1,0	Benchmark: - No Benchmark: - No Benchmark: - No Benchmark: 2 117.205 2 117.205 56,525 482 56,650 522 117.205 5,610 52 5,610 5,865 7,010 7,78 9,510 82 8,215 7,620 9,510 82 8,215 7,620 9,255 7,545 6,255 7,545 8,255 7,545 8,255 7,545 6,356 3,860 32 3,060 32 3,060 32 18,535 16%	Benchmark: ✓ No Benchmark Selected Kingstor (CY). 35521 0001.0 2 2.885 56.525 482 1.260 60.680 522 1.595 117.205 2.855 56.525 482 1.260 5.610 52 30 5.865 52 255 7.010 62 30 5.865 52 255 7.010 62 30 5.865 52 255 7.010 62 30 9.510 82 365 8.215 72 435 9.255 82 140 9.255 82 130 8.215 72 180 9.255 82 180 9.255 82 180 9.255 82 180 9.255 82 180 9.255 82 180 9	

The **Profile** tab now contains two columns for our two study areas (City of Kingston and CT0001.00 in Kingston)

Community Social Profile Project Resource Note 9

7. Export a Pointfile

	pointfile, cli	xport dem ick on the	iogra : box	d) aphic data for each data "point" in your study area. To create a below and check the Categories that you want to export. ory to view/edit the export options.
	Xcoord		P	Check this box to export to one or more Pointfile Tables
AK	-151.647		t	
AL		32.845	.45	
AR	-92.311		-28	
AZ	-112.554		52	
<u>CA</u>	-119.765		348	
CO	-105.714		40	
CT	-72.735	41.807	3	
DC 🚬	-77.016	.38,905	1	
DE	-75.503	39.097		
FL	-82.468	28.553	162	
GA	-83.426	32.666	82	
HI	-156.948	21.226	12	
IA		42.037	2{	
	1	11.000		

** As shown in Step 4, check Next> to advance to the Export Pointfile (Optional) dialog box

7. *Export a Pointfile (cont'd)*

F	^o ointfiles e oointfile, cl	lick on the	ogra box	J phic data for each data "point" in your study area. To create a below and check the Categories that you want to export. bry to view/edit the export options.
State	Xcoord	Ycoord	P	Check this box to export to one or more Pointfile Tables
AK	-151.647	65.286	F	Check this box to export to one or more Pointfile Tables
AL	-86.719	32.845	45	Database Type: dBASE
AR	92.311	34.770	28	
AZ	-112.554	34.595	52	Database Folder:\Kingston CY ON <dissemination area<="" td=""></dissemination>
CA	-119.765	37.220	348	Export Categories
CO	-105.714	39.117	4	2006 Census Population and Dwelling Counts
ĊT.	-72.735	41.807	3.	2006 Census Population by Age and Sex Comparison
DC	-77.016	38,905	2	2006 Census Population by Age and Sex
DE	-75.503	39.097	S.	Data Quality
FL	-82.468	28.553	162	
GA	-83.426	32.666	82	
HI	-156.948	21.226	12	
IA.	-93.466	42.037	2{	1 Table(s) will be created.
15	1+++00+	1 ++	20	

- Check the box to create aPointfile to display thepoinfile options
- The pointfile will be created with a default name and location as shown, If you want to change these:
- Click Database Folder
 box to specify a filename
 and location for the
 exported data

7. Export a Pointfile (cont'd)

	Export	Description	Field Name	Туре	Width	Dec.	-
8	V	2006 Population	POP06	Numeric	12	0	
	V	2001 Population*	POP01	Numeric	12	0	4
	V	Persons	PERSCHG	Numeric	12	0	2
	M	Percent	PCTCHG	Numeric	12	0	2
	M	2006 Private Dwellings	DWELL06	Numeric	12	0	2
	M	Occupied by Usual Resider	DWELL06UR	Numeric	12	0	2
	M	Land Area, sq km	AREA	Numeric	12	0	1
1	M	Persons per sq km	PERSQKM	Numeric	12	0	8
1	V	Dwellings per sg km	DWSQKM	Numeric	12	0	-

 Double-click a category to display the Export File Structure dialog box

> This dialog box allows us to modify the structure of the exported pointfile. For example, we could change the variable name . We can also clear selected check-boxes in the **Export** column to reduce the number of variables that are exported

💥 Click OK

ArcMap joins the pointfile and shapefile together to produce a map



September 2007

Resource Note 9

What Have We Learned?

Steps to extract data from PCensus Database, including:

- Define study area a census geographic area, grouping of Census Subdivisions and Census Tracts
- Select target type such as Census Tracts or Dissemination Areas
- Create a profile
- Compare with another area
- Export pointfile

Any questions or comments?

Please contact me at: Richard Lau GIS Project Coordinator Community Social Profile Project Email: <u>richard.lau@spno.ca</u> Phone: 905-632-1975, 878-0955 Fax: 905-632-0778

Thank You