

Appendix B Population Data and Projections

Instructions for completing tables (remove these instructions for the solid waste management plan)

The tables in this appendix are linked to Excel spreadsheets to simplify entering data and performing calculations. To use a spreadsheet:

- Activate the table as a spreadsheet by moving the mouse pointer inside the table and double clicking the left mouse button. The spreadsheet will open.
- Enter information and data.
- Add or subtract rows as needed.
- The tables have been populated with formulas that calculate totals. [*NOTE: If you add or subtract rows or columns, you may need to update the formulas to make sure they include all rows and columns.*]
- When finished entering data, scroll to the top of the table. [*NOTE: If you do not scroll to the top of the table before you leave the spreadsheet, the full table will not appear in the Word document.*]
- To return to the Word document, move the mouse pointer outside the table and click once using the left mouse button.

Where indicated after each table, provide the following as appropriate:

- a) Citations for source(s) of data.

If information was obtained from the web, indicate the web site url, the document name and date (if provided), and the date that the information was accessed from the web.

For example:

“Ohio 2010 Population For Counties”, undated, Office of Policy, Research, and Strategic Planning, Ohio Department of Development.

<http://www.development.ohio.gov/research/documents/correctedCounties2010.pdf>, 4/25/2011

- b) Explanations for assumptions used to generate projections.
c) Sample calculations for math.

Table B.1 – Population Adjustments

Ohio law requires the entire population of a municipality or village located in more than one SWMD to be added to the SWMD containing the largest portion of the municipality’s or village’s population.

Information needed to complete Table B.1 is available on the Ohio Development Services Agency’s website.

The main page for information based on the 2010 Census is

http://www.development.ohio.gov/reports/reports_census2010_map.htm (main page for information based on the 2010 Census).

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Specific documents to consult include:

- For the most current community populations, "[Population Estimates by County, City, Village & Township](#)". This document provides community populations organized by county. It also indicates the communities that are located in more than one county.
- The document titled "[2010 Census of Population for Cities and Villages](#)" provides an alphabetic list of communities in Ohio.
<http://www.development.ohio.gov/files/research/P1004.pdf>
- For community populations as reported in the 2010 Census, consult the document titled "[2010 Census of Population for Cities and Villages](#)" dated March 2011
- For county populations as reported in the 2010 Census, consult the document titled [Census 2010 Population Counts for Counties](#)

Table B-1 will be completed using an Excel spreadsheet. In Excel:

- a) The table is set up for a SWMD with 6 counties.
- b) Enter the name of each county in the SWMD in the cells labeled "County A, County B, etc."
 - a. If the SWMD has less than 6 counties, to avoid altering the embedded formulas, it is safest not to delete columns
 - b. To delete columns, highlight columns you wish to delete, right click and select delete.
- c) Enter the population of each county, before any adjustment is made, in the cell directly to the right of the cell labeled "Before Adjustment".
- d) If the majority of a community's population resides in your SWMD, then under the "Additions" column, replace 'Community 1' with the name of the community. Enter the population of the community that resides in another SWMD in the cell directly to the right of the community name. If there are multiple communities to be added, then do the same for 'Community 2' and/or 'Community 3'.
 - a. To add rows for additional communities, right click on entire row labeled "Subtractions" and select insert
 - b. To delete a community (row), right click on appropriate row and select delete
- e) If the majority of the community's population resides in another SWMD, then under the "Subtractions" column, replace 'Community 1' and 'Community 2' with the name of the community of that community and then enter the portion of the community that is located in your SWMD in the cell directly to the right of that community.
 - a. To add additional community's, right click on entire row labeled "After Adjustment" and select insert
 - b. To delete a community, right click on appropriate row and select delete
- f) After all data is entered, in the cells labeled 'Adjusted Population', perform all calculations by adding and/or subtracting each community's population from each County's 'Before Adjustment' population.
- g) Add each County's adjusted population in the cell directly to the right of "Total District Population" to obtain SWMDs reference year population to be used for the remainder of this plan.

Table B.2 – Population Projections

Project population for each year in the planning period. The default method for projection population is to use data published by the Ohio Development Services Agency.

The main page on the Development Services Agency’s website is for population projections is http://www.development.ohio.gov/reports/reports_pop_proj_map.htm.

The main page on the Development Services Agency’s website for current population estimates is http://www.development.ohio.gov/reports/reports_pop_est.htm.

Projecting County Population:

Method 1: The Ohio Development Services Agency typically provides projections for county populations in 5 year increments. To calculate populations for the years in-between the increments use a “straight line” projection. Divide the difference in the populations for two consecutive five-year projections by five. This will give the annual increase or decrease in the number of people for the years between the five-year projections.

Specific documents to consult include on the Ohio Development Services Agency’s website include:

- For the most current county populations, consult the document titled [Ohio Counties Population Estimates - Current](#).
- For county population projections based on five year intervals, consult the document titled [Development Services Agency Population Projections: County Totals](#)

Here is an example of a straight-line calculation for a county:

Projected population in 2015 = 113,000
Projected population in 2020 = 120,000

$$\begin{aligned} \text{Annual population change} &= (120,000 - 113,000) \div 5 \\ &= 1,400 \text{ people} \end{aligned}$$

$$\begin{aligned} \text{Projected population in 2016} &= 2015 \text{ population} + 1,400 \\ &= 113,000 + 1,400 \\ &= 114,400 \end{aligned}$$

The policy committee can use data from another source, such as a planning commissioner, instead of the data published by the Ohio Development Services Agency. If a different source is used, site the source of the data and show all applicable sample calculations and explain any assumptions used to develop the projections.

[Placeholder for other possible methods]:

Projecting Adjusted Community Populations:

To project the populations of the communities that straddle the SWMD's boundaries, here are some recommended methods:

- Assume adjusted population amounts will be constant (most appropriate if the adjustments are small or populations do not change significantly)
- Assume total number of people added or subtracted for reference year will change at the same rate as the county's population
- Calculate population change for a community based on ODSA projections (most appropriate for a community with rapid population change or a SWMD with large population adjustments) . (See Ohio EPA's example for how to perform these calculations)
 - For subtracted communities, use population change of the portion of community within the SWMD
 - For added communities, use population change of the portion of community located in other solid waste management district.

For the rate of population change for individual communities, the Ohio Development Services Agency publishes two documents that provide the average rate of change since 2010 by community:

- the document titled [Population Estimates by County, City, Village & Township](#) is organized alphabetically by county and provides the populations of all jurisdictions within each county.
- The document titled "[Population Estimates: Cities & Villages](#)" is organized alphabetically by community name.

If the SWMD uses data to calculate population projections from a different source, such as from a local or regional planning commission or similar organization, cite the source of the data and explain the methodology used to projection populations.

Complete Table B.2 as follows:

- 1) The table, as displayed, is set up for a SWMD with six counties. For a SWMD with less than six counties, to delete the extra columns: select/highlight all of the extra columns; with the cursor in the highlighted area, right click your mouse; and select "delete".
- 3) Enter information as follows:
 - a) Enter reference year directly under cell labeled "Year". All remaining years will automatically populate.
 - b) Provide the name of each county in the SWMD in cells labeled "County A, B, C"...
 - c) Enter the adjusted populations for each county for the reference year from Table B-1)
 - d) Enter the projected populations for each county for each year of the planning period based on the calculation performed as instructed earlier in these instructions.
 - e) Sum the populations of all counties and enter the quantities in the column labeled "Total District Population" for each year of the planning period.

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4) If necessary, delete rows for the years that fall outside the planning period.

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Table B-1: Population Adjustments and Total Population

	County A		County B		County C
Before Adjustment		Before Adjustment		Before Adjustment	
Additions		Additions		Additions	
Community 1		Community 1		Community 1	
Community 2		Community 2		Community 2	
Community 3		Community 3		Community 3	
Subtractions		Subtractions		Subtractions	
Community 1		Community 1		Community 1	
Community 2		Community 2		Community 2	
Community 3		Community 3		Community 3	
After Adjustment	0	After Adjustment		After Adjustment	

	County D		County E		County F
Before Adjustment		Before Adjustment		Before Adjustment	
Additions		Additions		Additions	
Community 1		Community 1		Community 1	
Community 2		Community 2		Community 2	
Community 3		Community 3		Community 3	
Subtractions		Subtractions		Subtractions	
Community 1		Community 1		Community 1	
Community 2		Community 2		Community 2	
Community 3		Community 3		Community 3	
After Adjustment	0	After Adjustment		After Adjustment	

Total District Population	
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Source(s) of Information:

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Sample Calculations:

Assumptions:

Table B-2 Population Projections

Year	County A	County B	County C	County D	County E	County F	Total District Population
							-
1							-
2							-
3							-
4							-
5							-
6							-
7							-
8							-
9							-
10							-
11							-
12							-
13							-
14							-
15							-
16							-
17							-
18							-
19							-
20							-

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Sample Calculations:

Assumptions: