POPULATION FORECAST AND PROJECTED WATER DEMAND

Population Forecast for 2030

Predictions for future populations are difficult. Generally, the smaller the population, the less accurate the projection. The most straightforward method for projecting population is to make use of current trends with the assumption that what has been happening will continue to happen. Of course, there is no guarantee that current trends will continue. Growth in Sandusky County has generally slowed in the last few years. This trend may continue for a few years, but it is expected that the rate will return to levels similar to those seen in the recent past.

The Ohio Department of Development, as part of the development of a regional growth strategy, has completed population projections for Sandusky County. Table 5 lists the 2010 Census and 2030 population projections based on a 20 year adjusted -.059% rate of change.

TABLE 5
SANDUSKY COUNTY JURISDICTIONAL POPULATION PROJECTIONS

Jurisdiction	2010 Census Population	Projected Population 2030
Ballville Township	5,985	5,632
City of Bellevue	8,202 (4,527)*	7,718 (4,260)
Village of Burgoon	172	162
City of Clyde	6,325	5,952
City of Fremont	16,734	15,747
Village of Gibsonburg	2,581	2,429
Green Creek Township	3,646	3,431
Village of Green Springs	1,368 (738)*	1,287 (694)
Village of Helena	224	221
Jackson Township	1,303	1,226
Village of Lindsey	446	420
Madison Township	1,273	1,198
Rice Township	1,370	1,289

TABLE 5 SANDUSKY COUNTY JURISDICTIONAL POPULATION PROJECTIONS		
Jurisdiction	2010 Census Population	Projected Population 2030
Riley Township	1,226	1,154
Sandusky Township	3,619	3,405
Scott Township	1,437	1,352
Townsend Township	1,620	1,524
Washington Township	1,795	1,689
Woodville Township	1,256	1,182
Village of Woodville	2,135	2,009
York Township	2,532	2,383
* Part of the community that is in Sandusky County Note: Ohio Department of Development - Sandusky County Projected Rate of Change - .059% to 2030		

Projected Water Demand

Many factors must be considered when estimating and developing water flow projections. Present and future water needs are dependent on population served by the system's residential, commercial, and industrial users. Water use trends based on user groups must include average daily flows and peak hourly demands. Water demands tend to be high when flow projections are based on projected land use and available areas as listed in Table 6. Each area under consideration must be carefully analyzed and evaluated.

There are four basic categories of water usage for consideration: residential, commercial, industrial, and open space/institutional. These categories are briefly discussed in the following paragraphs:

Residential

Residential water use is the water furnished to houses for sanitary, cooking, drinking, washing, bathing, and other purposes. It varies according to living standards of the consumers, with the

national average at 67 gallons per capita per day, versus Ohio EPA's design standards of 100 gallons per capita per day.

Commercial and Industrial

Water in this category is furnished to commercial establishments and industrial facilities. The daily demand will depend upon local conditions, such as the existence of large industry, and whether or not the industry utilities the public water supply for production. Water use estimating for commercial and industrial establishments is normally considered to be a function of developed acres. The estimated average for commercial is 2,000 gallons per acre and industrial is 2,500 gallons per acre.

Open Space/Institutional

This category includes recreational use associated with parks, sports complexes, campgrounds, and other recreational activities for both publicly and privately owned. Institutional water usage is associated with churches, libraries, schools, hospitals, and municipally owned and operated facilities. The estimated water usage for this category is 2,000 gallons per acre.

Besides the four non-residential categories as discussed, consideration has to be given to unaccounted for water which includes water main leaks, distribution, maintenance, and inaccurate metering along with weather and pricing. These additional factors can have a significant impact on water demand.

TABLE 6
LAND USE WATER FLOWS GALLONS PER DAY/ACRE

Land Use Category	GPD/Acre
Commercial	2,000
Industrial	2,500
Open Space	2,000
Institutional	2,000

The prominent need for water and wastewater facilities in Sandusky County's service areas is residential in predominately agricultural areas. Ohio EPA has established a standard design

criteria of 100 gallons per capita per day (gpcd) for residential water and sanitary flows. Based on the 2010 census data, ODOD's population projections, and Ohio EPA's design criteria for water usage, Table 7 lists projected average daily water and sewer demand for a twenty year planning period.

TABLE 7
PROJECTED RESIDENTIAL WATER AND SEWER DEMAND - 2030
(OHIO EPA 100 GPCD CRITERIA)

Jurisdiction	2030 Population	Projected Water/Sewer Demand (gpd)
Ballville Township	5,632	563,200
City of Bellevue	7,718	771,800
Village of Burgoon	162	16,200
City of Clyde	5,952	595,200
City of Fremont	15,747	1,574,700
Village of Gibsonburg	2,429	242,900
Green Creek Township	3,431	343,100
Village of Green Springs	1,287	128,700
Village of Helena	211	21,100
Jackson Township	1,226	122,600
Village of Lindsey	420	420,000
Madison Township	1,198	119,800
Rice Township	1,289	128,900
Riley Township	1,154	115,400
Sandusky Township	3,405	340,500
Scott Township	1,352	135,200
Townsend Township	1,524	152,400
Washington Township	1,689	168,900
Woodville Township	1,182	118,200
Village of Woodville	2,009	200,900
York Township	2,383	238,300