



# **Residential Water Use in Northeastern Illinois**

**Estimating Water-use Effects of In-fill  
Growth versus Exurban Expansion**

**Prepared for the Chicago Metropolitan Agency for Planning**

**Benedykt Dziegielewski  
Southern Illinois University Carbondale  
August 25, 2009**

# RESIDENTIAL WATER USE IN NORTHEASTERN ILLINOIS:

## **Estimating Water-Use Effects of In-Fill Growth Versus Exurban Expansion**

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MEMORANDUM REPORT

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Prepared for:  
The Chicago Metropolitan Agency for Planning

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AUGUST 25, 2009

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# Residential Water Use in Northeastern Illinois:

## Estimating Water-Use Effects of In-Fill Growth versus Exurban Expansion

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### 1. PURPOSE

The purpose of this report is to determine the water-demand effects that would result from geographically differential patterns of population growth associated with different types of housing within the 11-county study area in Northeastern Illinois. This report supplements the evaluation of the intra-regional shifts in population growth which were assumed in the Less Resource Intensive (LRI) and More Resource Intensive (MRI) scenarios of the recently completed study – *Regional Water Demand Scenarios for Northeastern Illinois: 2005-2050*.

The assumptions about the geographical distribution of population growth in the study of demand scenarios were: (1) under the LRI scenario population growth would concentrate in the more densely urbanized counties of Cook and DuPage and less growth would occur in the collar counties of Kane, Kendall and McHenry; and (2) under the MRI scenario the population growth would be shifted from Cook and DuPage counties toward less densely urbanized areas of the three collar counties. In both scenarios, the assumption of differential growth shifted 30 percent of future population growth in Cook and DuPage counties toward Kane, Kendall and McHenry counties and vice versa.

Two expected outcomes of the different growth patterns are: (1) shift in water withdrawals between Lake Michigan, groundwater sources and Fox River sources, and (2) the different overall per capita water usage rates and thus total withdrawals. The methodology used in preparing water demand scenarios was capable of capturing the shifts between water supply sources but lacked the proper data resolution to accurately estimate the effect on per capita water usage caused by the shifts of population between high-density and low density residential areas.

It was expected that the differences in water usage between the scenarios would result primarily from the differences between residential per capita water usage rates in multifamily dwellings in densely urbanized areas relative to per capita usage in single-family homes in low density suburban settings. Because the methodology used in evaluating the scenarios used aggregate municipal water demand (including both the residential and nonresidential uses of water) the effect on residential water use could not be discerned. The analysis described in this report allows for determination of the effects

of differential geographical growth patterns on water usage in the residential sector within the 11-county study area.

## 2. DATA AND METHODS

### 2.1 Data Sources

The analysis of residential rates of water use in Northeastern Illinois utilized the existing data on residential water deliveries which are available from the Illinois Water Inventory Program (IWIP) of the Illinois State Water Survey. The IWIP data include the reported annual water withdrawals and purchases by public water systems as well as the annual quantities of water delivered by these systems to residential, commercial and industrial customers in their service areas. Figure 1 shows the structure of the IWIP data with respect to sources of supply and deliveries of water to user sectors.

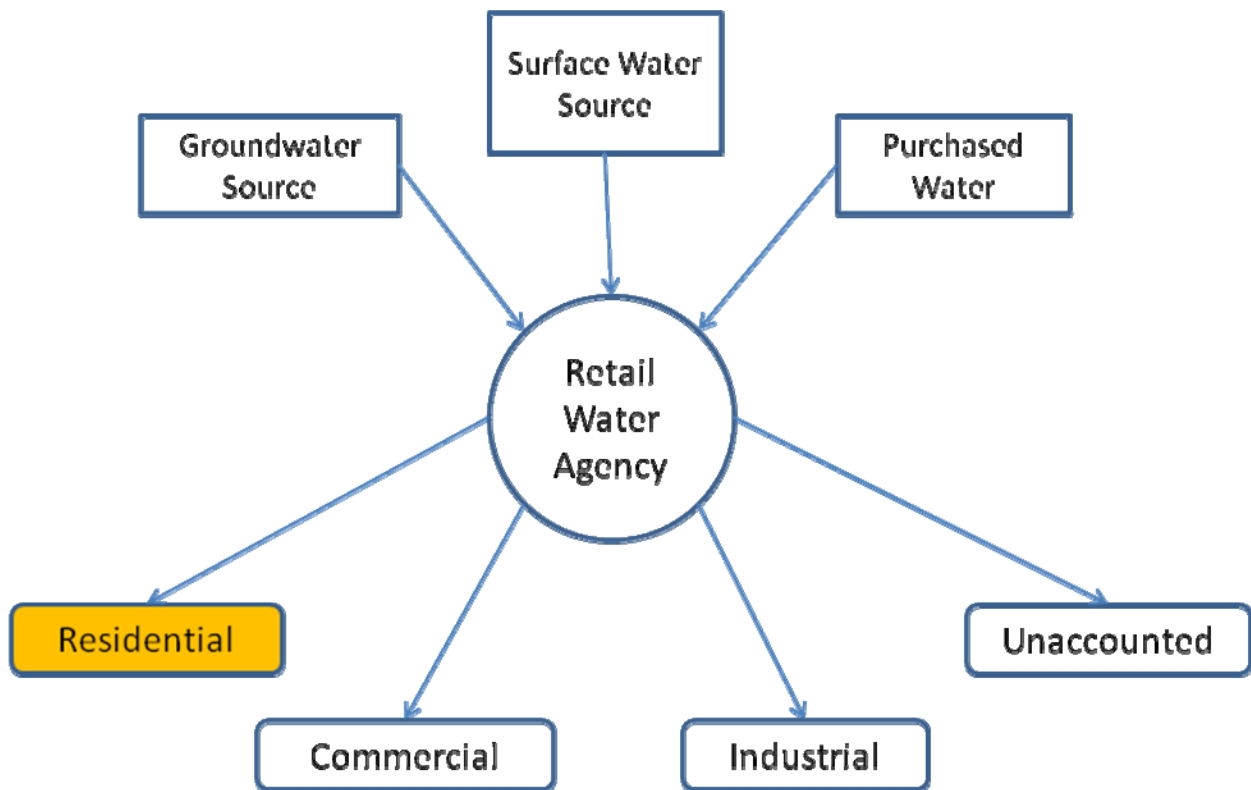


Figure 1. Water sources and deliveries in the IWIP data.

Accordingly, the main data elements obtained from the Illinois Water Information Program which were used in this study included:

- Annual “residential deliveries” (in gallons per year) by public water supply systems
- Number of residential services (connections)
- Population served (inside and outside city)

According to the IWIP data, for 2005, total annual volume of residential deliveries and total number of residential connections (services) was reported by 483 public water supply systems in the 11-county study area in Northeastern Illinois. However, the volumes of residential deliveries reported to IWIP were not always accurate and were not reported for all historical data years. Ideally, estimates should be based on the summation of all metered quantities of water for all residential accounts in the reporting community or water system. But often these quantities are estimated indirectly (by subtracting consumption for large meters or summing consumption for only small meter sizes). Also, population served is not known precisely and may not be updated on annual basis. Finally, metered accounts for apartment complexes or mobile home parks are sometimes classified as commercial users and therefore are not counted in residential deliveries. To address these problems, extensive data checking and verification were performed. Inconsistent values were corrected where possible or removed from the data. Nevertheless, it is possible that the estimates obtained from the IWIP data for some municipalities or systems for some data years and reported here are not accurate and would require additional data verification.

For selected municipalities, data on residential deliveries of water were supplemented with data from the U.S. Census and other data sources. These included: median household income, median home value, marginal price of water, housing units in structure (single family vs. multifamily), and gross housing density. Also included were distance of selected communities and travel time from downtown Chicago.

## **2.2. Data Analysis**

The annual data extending from the year 1990 to 2007 were first separated into five categories of water providers including: (1) community water supply systems (both public and private), (2) mobile home parks, (3) residential subdivisions, (4) homeowners associations, (5) apartment complexes. Data on residential water deliveries were analyzed separately for each of these five categories.

The analysis was performed in two steps. In the first step, the values of water use per capita were calculated for each calendar year (for which data were available) and the annual values and descriptive statistics (including 18-, 10- and 5-year averages) were tabulated for each water provider. The results of these tabulations are included in Appendix A and Appendix B. Also, average per capita rates of water use were calculated for all reporting systems in each of the 11 counties.

In the second step, a limited sample of water providers with the highest and lowest water usage rates per capita were selected for more detailed analysis. The purpose was to identify the reasons (i.e., characteristics of the demand areas) which contributed to either high or low values of residential per capita water use. The results of the two steps of data analysis are presented and discussed in the following sections of the report.

### 3. VARIABILITY OF RESIDENTIAL PER CAPITA USE

#### 3.1 Municipalities and Utilities

Aggregate residential per capita rates in the historical data from 1990 to 2007 in a sample of about 300 municipalities and water systems spanned a range of values from less than 50 gpcd to about 250 gpcd. The mean value of the total of 4,112 annual observations was 87 gpcd (see Figure 2). The highest frequency fell in the range of 70-80 gpcd. The higher mean water use is caused by a relatively small number of systems with high residential per capita water use (i.e., greater than 150 gpcd found in the right tail of the distribution).

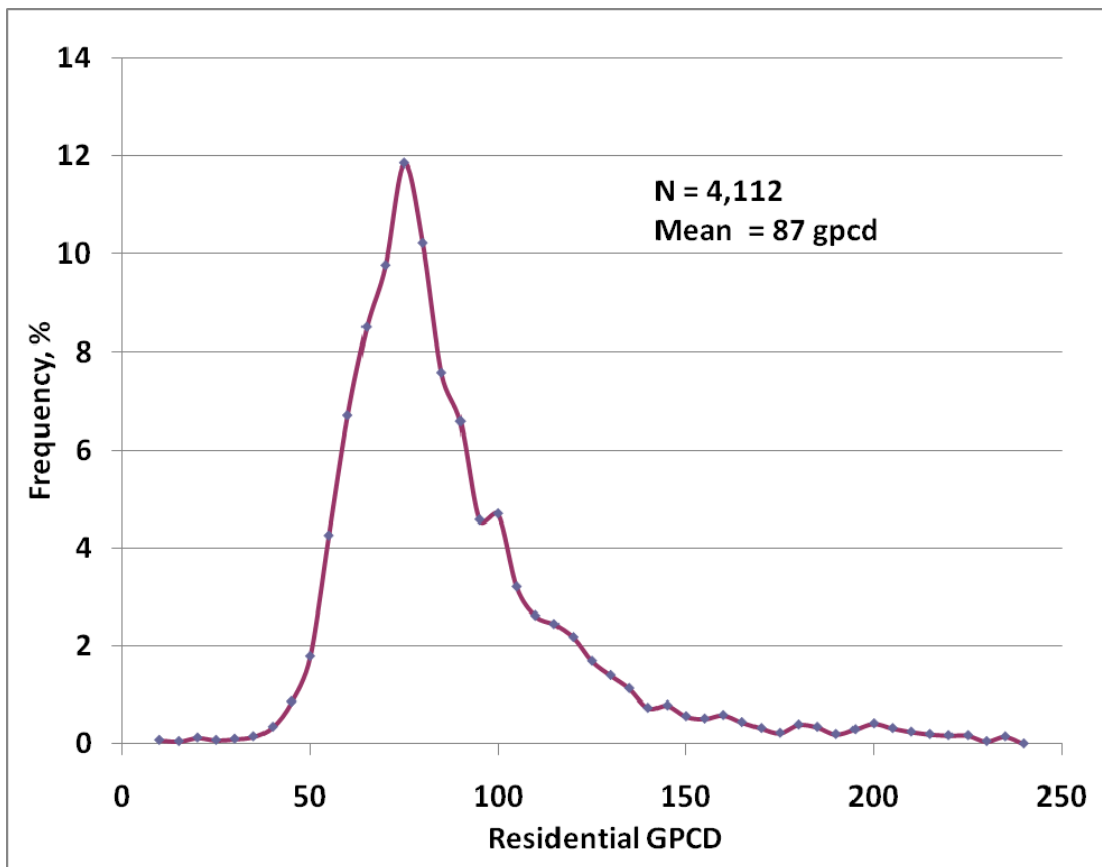


Figure 2. Distribution of Residential Per Capita Rates in 1990-2007 NE Illinois Data



The differences in per capita residential usage rates can be attributed primarily to housing type, housing density and other variables. For example, communities with a high proportion of housing in multifamily units would be expected to use less water per capita. Also, single-family residences on smaller lots would be expected to use less water per capita than those on larger lots. In both cases, the main factor is the outdoor use of water for landscape irrigation and/or swimming pools. Other factors such as household income and price of water will also affect water usage.

Despite the large variability of water use across different systems and data years, the historical data showed a statistically significant ( $t\text{-value} = 6.4 ; p < 0.0001$ ) declining trend of per capita use of 0.62 gallons per capita per year (Figure 3). At the average usage rate of 87 gpcd, this trend represents a reduction in use of approximately 0.7 percent per year.

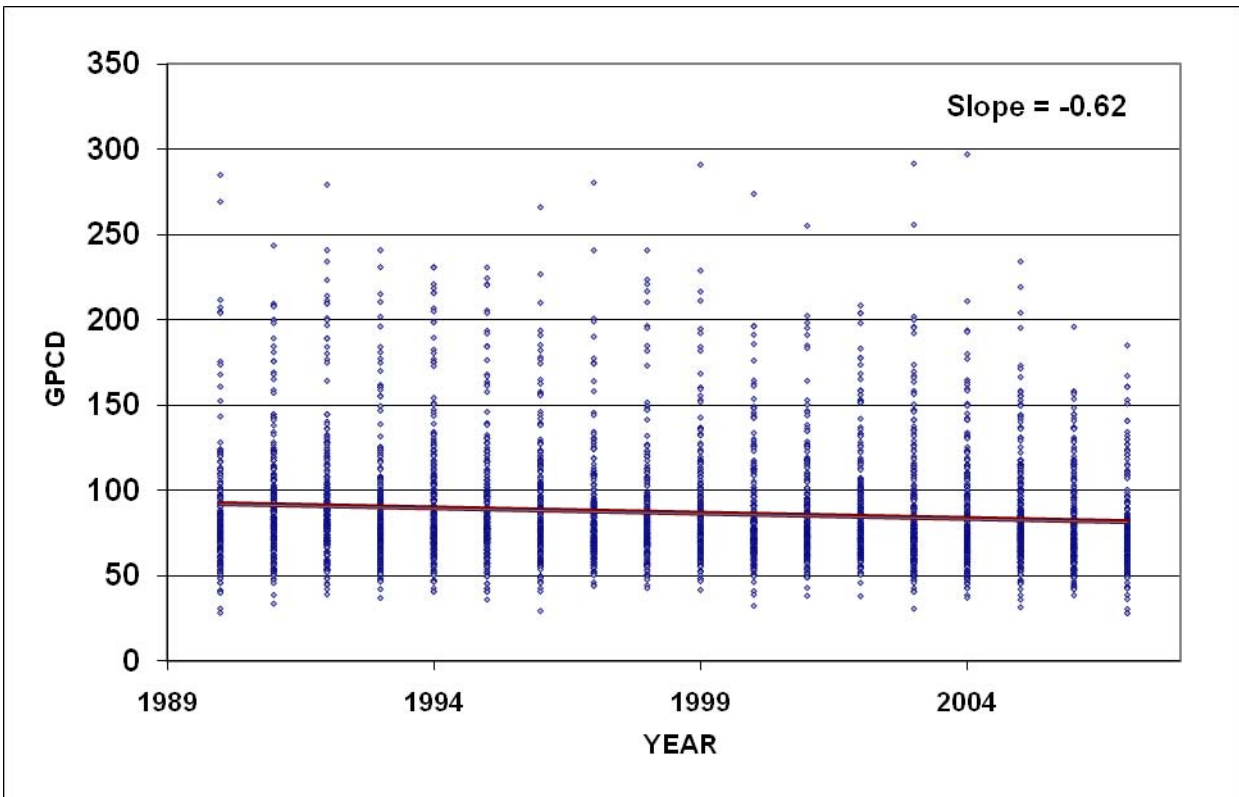


Figure 3. Annual Distribution and Historical Trend in Residential Per Capita Water Use

Table 1 compares the mean, median and standard deviation of residential per capita use (in gpcd) of all systems in the 11-county study area for each historical data year. The mean water use shows a gradual decline from about 92 gpcd during 1990-91 to about 81 gpcd during 2006-07 (about 12 percent total reduction during the 16 year time period, not

shown on the table). Similar declines can be seen in the median values and in the standard deviation. This trend is consistent with the estimated conservation trend from the municipal data in the scenario forecast report.

Table 1. Annual Summary Statistics of Residential Per Capita Water Use in Municipalities and Utilities in NE Illinois (in GPCD)

Year	No. of Observations	Mean GPCD	Median GPCD	Standard Dev.
1990	185	85.2	76.6	36.6
1991	228	93.2	84.3	38.0
1992	243	93.1	83.2	38.7
1993	228	88.5	78.0	39.5
1994	254	91.9	81.3	36.9
1995	242	91.1	80.9	38.6
1996	235	88.6	78.1	33.6
1997	214	85.6	76.7	32.9
1998	194	86.8	78.3	33.8
1999	207	89.2	79.7	34.4
2000	220	84.5	76.0	31.3
2001	211	85.1	76.1	30.5
2002	220	86.9	78.5	31.4
2003	262	84.3	74.7	35.4
2004	255	82.5	73.9	31.9
2005	260	85.5	77.7	29.7
2006	244	79.1	72.6	26.4
2007	210	76.1	70.8	25.1

GPCD = gallons per capita per day

Table 2 shows the county-wide average residential per capita use rates for three data years and two 10-year averages for all municipalities and system within each of the 11 counties. The two averages shown include a simple average of per capita rates and an average which is weighted by population served by individual systems in each county. The highest (weighted) average per capita water use rates are shown for Kankakee, Kendall, Boone and Grundy Counties. Lower rates are shown for Cook, DuPage and McHenry Counties. The lowest rates were obtained for the urbanized counties of Cook and DuPage and for the rapidly urbanizing county of McHenry.

The results in Table 2 confirm the expectation that average residential rates of water use tend to be somewhat lower in the highly urbanized counties and higher in the collar counties of the 11-county region. However, the per capita rates in individual systems within each county show significant variability. Accordingly, municipalities and systems with higher than average rates of per capita use, can be found in each of the 11 counties. The annual and average residential per capita use rates for all systems are listed in Table

A-1 of Appendix A. Table 3 shows population served and per capita use for 84 municipalities and systems for which the 5-year average (2003-2007) per capita use obtained from the IWIP data was equal or greater than 85 gpcd. The 85 gpcd value represent the top 30-percentile of all water systems.

Table 2. Residential Per Capita Rates of Water Use in Public Systems by County (Weighted by Population Served)

County	2005 GPCD	2006 GPCD	2007 GPCD	1998-2007 Simple Average GPCD	1998-2007 Weighted Average GPCD
Boone	74.8	90.7	93.7	81.2	85.9
Cook	93.8	73.8	73.6	78.8	78.9
DeKalb	93.3	76.6	70.3	80.0	81.1
DuPage	73.6	73.7	69.3	77.6	77.3
Grundy	75.6	95.9	86.2	85.0	85.4
Kane	89.4	80.5	69.4	81.2	80.7
Kankakee	112.6	90.2	101.3	104.2	105.1
Kendall	84.1	76.6	76.9	87.3	87.3
Lake	84.7	73.8	71.0	80.9	81.7
McHenry	77.5	77.4	64.9	73.2	73.2
Will	83.2	73.2	76.4	81.2	81.2

Table 3. Municipalities and Systems with Five-Year Average Residential Use Greater than 85 Gallons per Capita per Day (Top 30 Percentile).

Municipality/System	County	Population 1998-2007	2003-2007 GPCD
Oak Brook	DuPage	8,851	201
Glencoe	Cook	8,600	185
Lake Forest	Lake	20,355	171
Hampshire	Kane	3,050	170
Aq. Il. - Kankakee Division	Kankakee	71,861	157
St Anne	Kankakee	1,202	154
Kenilworth	Cook	2,448	154
Greene Road Water Supply	DuPage	367	144
Momence	Kankakee	3,512	134
Flossmoor	Cook	9,127	133
Wynstone Water Co	Lake	1,291	132
Malta	DeKalb	837	132
Barrington	Cook/Lake	10,721	132
Aq. Il. - Vaughndale Meadows	Kankakee	345	131

Municipality/System	County	Population 1998-2007	2003-2007 GPCD
Vernon Hills	Lake	17,321	131
Morris	Grundy	11,649	130
Grant Park	Kankakee	1,547	129
Burr Ridge	Cook/DuPage	10,554	129
Aqua Illinois - Ivanhoe	Lake	524	126
Riverwoods	Lake	2,051	125
Coal City	Grundy	4,830	122
Winnetka	Cook	17,406	118
Manteno	Kankakee	6,392	116
Sandwich	DeKalb	6,331	115
Union	McHenry	580	115
Joliet	Kendall/Will	119,868	113
Beecher	Will	2,293	112
Capron	Boone	900	112
Cabery	Kankakee	252	112
Sycamore	DeKalb	12,897	111
Central Lake Co JAWA	Lake	244,000	111
Manhattan	Will	3,476	110
Schwermanns 2&3 WB	Lake	285	109
Lcpw - Knollwood Pws	Lake	3,996	107
Chebance	Kankakee	1,150	107
Minooka	Grundy/Kendall/Will	5,565	106
Hinsdale	DuPage	15,413	106
Wasco Sanitary District	Kane	2,550	106
La Grange	Cook	15,534	104
Kinsman	Grundy	116	104
Aurora Community WA	Kane	158	102
Eastmoreland WSA- Lenox	Will	760	101
Lakewood	McHenry	1,904	101
River Forest	Cook	11,645	101
Lake Zurich	Lake	18,611	100
Cherry Valley	Boone	4,801	100
Saddlebrook Farms	Lake	1,478	98
Algonquin	Kane/McHenry	24,525	98
Eastmoreland W. Corp - Joliet	Will	134	98
Wilmington	Will	5,166	98
Frankfort	Cook/Will	24,957	98
Aqua Illinois - University Park	Will	8,810	97
Northbrook	Cook	35,072	97
Aqua Illinois - Oakview	Will	469	96
Tower Lakes	Lake	1,250	96
Riverside	Cook	8,919	96

Municipality/System	County	Population 1998-2007	2003-2007 GPCD
Orland Park	Cook	55,015	95
Ill. Am. - Marina Valley Div	Kendall	1,662	95
Elm-Oak Mutual WS	Lake	70	94
Plainfield	Will	20,350	94
Illinois American - Terra Cotta	McHenry	530	94
Montgomery	Kane	18,397	93
Libertyville	Lake	20,741	92
Carpentersville	Kane	31,050	92
Mill Creek Water Recl. D.	Kane	4,150	91
Lincolnshire	Lake	6,300	91
Johnsburg 1	McHenry	3,332	90
Glenview	Cook	55,782	90
Ill. Am. - Nettle Creek Div	Grundy	195	90
Aqua Ill. - Willowbrook Util.	Will	2,465	89
Lake Bluff	Lake	5,639	89
Mokena	Will	15,588	89
Waterman	DeKalb	1,194	89
Reddick	Kankakee	234	89
Util. Inc - Co. Line Water	Cook	394	88
Richton Park	Cook	12,636	88
Utilities Inc - Walkup Woods	McHenry	672	88
Diamond	Grundy/Will	1,784	88
Somonauk	DeKalb	1,310	88
Oak Forest	Cook	27,577	88
St Charles	Kane	30,266	87
Glen Ellyn	DuPage	26,825	87
La Grange Park	Cook	13,004	87
Southeast Joliet Sanitary Dist	Will	2,316	86

Table 3 shows that municipalities and systems from all 11 counties are found among the top 30 percent of residential per capita water use. The remaining 205 systems which fell into the bottom 70 percentile (with residential per capita rates ranging from 85 to 31 gpcd) are listed in Table A-1 in Appendix A.

### 3.2 Other Residential Areas

In addition to municipalities and water utilities, the IWIP data set also contains information on water withdrawals by other residential areas. Generally, these areas have their own sources of water supply and most likely do not meter the individual residences.

Table 4 summarized average per capita usage rates for homeowners associations, mobile home parks, apartment complexes and residential subdivisions. Detailed tables of water use data for these areas are included in Appendix B.

Table 4. Per Capita Residential Water Use in Different Types of Self-supplied Residential Developments in 1990-2007 Data

Type of Development	Number of Areas	No. of Obs.	Average GPCD	Median GPCD	Standard Dev.
Mobile Home Parks	46	525	78.6	72.0	44.0
Residential Subdivisions	43	602	96.9	79.8	60.4
Homeowners Assoc.	19	188	99.9	78.1	97.1
Apartment Complexes	10	83	71.6	66.7	23.3

Table 4 shows that 1990-2007 average residential water use per capita ranged from 71.6 gpcd in apartment complexes to 99.9 gpcd in self-supplied homeowners associations. The residential areas with higher than average rates of per capita water use are tabulated and discussed below. Because of smaller sample sizes a top 40-percentile of users are shown.

### 3.2.1 Mobile Home Parks

Table 5 lists 14 mobile home parks with higher than average rates of per capita water use. These 14 parks represent the top 40 percentile of all mobile home parks in the sample.

Table 5. Mobile Home Parks with Five-Year Average Residential Use Greater than 75 Gallons per Capita per Day (Top 40 Percentile)

Mobile Home Park	County	Population	2003-07 GPCD
Manteno	Kankakee	222	144
Park City	Lake	2,860	140
Chain O Lakes	Lake	98	136
Criswell Court	Will	124	104
Des Plaines	Cook	425	100
Barberry Acres	Kankakee	57	94
Vietzen	DuPage	140	90
Sunset	Cook	1,385	85
Rivercrest	Kankakee	36	84
Lakeview	Lake	574	82
Dearborn	Kane	21	80
Gateway	Will	509	79
West Shore Park HOA	Lake	540	79
Oasis MHP - Elgin	Cook	1,731	75

Telephone contacts with some of these parks confirmed that parks with their own wells usually do not meter water use by individual mobile homes and the cost of water supply is included in the lot rent. However, some of the parks which purchase city water submeter individual homes and charge for water separately. For example, in Manteno MHP with its own water wells, water supply is included in the rent, while in Park City MHP water is purchased from Park City and individual homes are submetered.

The remaining 31 mobile home parks which fell into the bottom 60 percentile (with residential per capita rates ranging from 75 to 26 gpcd) are listed in Table B-1 in Appendix B.

### 3.2.2 Residential Subdivisions

Table 6 lists population served and average per capita usage rates in 14 residential subdivisions for which the 5-year average (2003-2007) per capita use was equal or greater than 85 gpcd. The 85 gpcd value represents the top 40-percentile of all residential subdivisions in the sample. The highest per capita use is found in Glenstone Subdivision in Glen Ellyn, Illinois, which includes condominiums with average market value of about \$300,000. Hawthorn Estates is an upscale subdivision in Grundy County.

Table 6. Residential Subdivisions with Five-Year Average Residential Use Greater than 85 Gallons per Capita per Day (Top 40 Percentile)

Name of Subdivision	County	Population	2003-07 GPCD
Glenstone	DuPage	44	267
Hawthorn Estates	Grundy	34	202
Beckwith	Will	61	166
Countryside Lake	Lake	619	143
Fairhaven Estates	Lake	297	130
Towners	Lake	221	129
West Shoreland	Lake	164	116
Ogden Gardens	Kane	357	106
Tee And Green	DuPage	55	105
Donny Brook Estates	DeKalb	35	103
Valley View	DeKalb	138	93
Storybook Highlands	Kendall	100	90
Lake Shannon Inc	Kankakee	418	90
Ridgecrest North	Grundy	77	87

The remaining 29 subdivisions which fell into the bottom 60 percentile (with residential per capita rates ranging from 87 to 42 gpcd) are listed in Table B-2 in Appendix B.

### 3.2.3. Homeowner Associations

Table 7 lists population served and average per capita usage rates in six residential homeowner associations for which the 5-year average (2003-2007) per capita use was equal or greater than 90 gpcd. The 90 gpcd value represents the top 40-percentile of all homeowner associations. The Royal Melbourne serves 228 residents in a gated community of luxury homes near a golf course in Long Grove, Illinois.

Table 7. Homeowner Associations with Five-Year Average Residential Use Greater than 90 Gallons per Capita per Day (Top 40 Percentile)

Homeowner Association	County	Population	2003-07 GPCD
Briarcrest Subd. Homeowners Assn	Lake	207	236
Royal Melbourne Homeowner Assn	Lake	228	217
Prairie Ridge Assn	McHenry	117	124
Summit Homeowners Assn	Lake	33	106
Eastmoreland Water Service Assn - Lenox	Will	662	101
Liberty Park Homeowners Assn	DuPage	694	97

The remaining 13 subdivisions which fell into the bottom 60 percentile (with residential per capita rates ranging from 88 to 46 gpcd) are listed in Table B-3 in Appendix B.

### 3.2.4. Apartment Complexes

Table 8 lists population served and average per capita usage rates in seven apartment complexes. The 5-year average (2003-2007) per capita use in these apartment areas ranged from 30 to 100 gpcd.

Table 8. Five-Year Average Residential Water Use in Apartment Complexes

Homeowner Association	County	Population	2003-07 GPCD
Pine View Apartments	Lake	40	100
Plum Creek Condominiums	Cook	571	95
Bourbon Square Apartments	Cook	975	94
Terrace Oak Apartments	Lake	58	67
Heiden Gardens Condominiums	Lake	260	59
York Center Co-Op	DuPage	260	52
Plum Grove Condominiums	Cook	239	30

Data for all apartment complexes are included in Table B-4 in Appendix B.



#### 4. PLACES WITH HIGH AND LOW USAGE RATES

This section is focused on investigating community water supply systems which show either the highest or the lowest rates of residential per capita water use in the historical IWIP data. Table 9 and Table 10 show data for 13 systems with relatively high rates of residential use and 18 systems with relatively low rates.

Table 9. Selected High and Low Rates of Per Capita Residential Water Use

Municipality/System	County	2007 GPCD	2003- 2007 GPCD	2007 MHI \$1000s	M-Price Current \$/1000 g.	2007 MHV \$1000s
<b>HIGH USE SYSTEMS:</b>						
Oak Brook	Du Page	196	201	158.592	3.15	1,020.257
Aqua Illinois-Kankakee	Kankakee	185	157	34.054	2.98	105.205
Glencoe	Cook	161	185	188.215	2.69	1,173.223
Cherry Valley	Boone	151	100	65.621	2.67	183.150
Lake Forest	Lake	141	171	158.592	4.25	1,035.883
Vernon Hills	Lake	134	131	82.859	5.29	318.646
Morris	Grundy	130	130	51.088	5.28	209.720
Burr Ridge	Du Page	124	129	140.167	3.10	795.634
Barrington	Cook	121	132	95.102	2.37	597.569
Sandwich	DeKalb	119	115	60.149	2.22	196.426
Sycamore	DeKalb	113	111	62.192	3.19	196.426
Momence	Kankakee	112	134	42.356	1.15	139.109
Central Lake Co. JAWA	Lake	106	111	90.966	4.45	343.803
Average High GPCD		138	139	94.612	3.29	485.773
<b>LOW USE SYSTEMS:</b>						
South Elgin	Kane	89	81	77.683	2.64	240.119
Montgomery	Kane	84	93	58.880	3.05	211.374
Herscher	Kankakee	69	67	53.926	5.30	157.589
Sleepy Hollow	Kane	72	78	105.325	5.47	392.575
Richmond	McHenry	66	63	59.194	3.12	223.270
Cortland	DeKalb	61	64	63.185	2.50	206.072
Poplar Grove	Boone	60	64	72.637	2.00	202.769
Villa Park	Du Page	56	62	60.289	5.18	270.762
Chicago	Cook	60	69	45.505	1.53	286.800
Crest Hill	Will	56	61	51.972	2.50	172.429
Island Lake	McHenry	55	64	73.745	3.70	235.782
Mundelein	Lake	63	54	80.946	3.43	263.349
Wonder Lake Water C.	McHenry	53	51	67.505	3.50	225.306
Schaumburg	Cook	50	51	61.818	4.51	272.600
Chicago Heights	Cook	34	31	42.303	2.47	171.673
Lyons	Cook	46	49	50.714	6.85	237.603
Lombard	Du Page	43	45	64.952	4.04	282.730
Round Lake Heights	Lake	39	40	67.465	5.25	223.782
Average Low GPCD		59	60	64.336	3.72	237.588

The systems in Tables 9 and 10 were selected for more detailed investigation upon consultation with CMAP to determine the likely reasons for either high or low rates of residential per capita water use. All the selected systems, with higher than average per capita use, show the 5-year average use of more than 100 gpcd. The selected systems with low water use show 5-year average per capita rates ranging from 31 to 93 gpcd.

Table 10. Distance from Chicago (Union Station) and Housing Density of Locations with High and Low Rates of Per Capita Residential Water Use

Municipality/System	County	2003-2007 GPCD	Distance (miles)	Travel Time (min.)	Housing (1d+1a) %	Housing Density #/sq. mi.
<b>HIGH USE</b>						
Oak Brook	Du Page	201	19.2	27	87	399
Aqua Illinois-Kankakee	Kankakee	157	61.2	70	63	893
Glencoe	Cook	185	23.3	29	91	851
Cherry Valley	Boone	100	76.3	107	79	236
Lake Forest	Lake	171	29.8	36	85	415
Vernon Hills	Lake	131	35.9	44	67	1,052
Morris	Grundy	130	61.0	69	68	739
Burr Ridge	Du Page	129	19.9	25	90	573
Barrington	Cook	132	34.9	46	82	849
Sandwich	DeKalb	115	61.7	82	71	821
Sycamore	DeKalb	111	68.6	50	69	898
Momence	Kankakee	134	55.7	73	80	893
Central Lake Co. JAWA	Lake	111	34.1	43	79	904
Average High GPCD		139	44.7	54	78	733
<b>LOW USE</b>						
South Elgin	Kane	81	44.3	58	71	900
Montgomery	Kane	93	46.8	80	79	346
Herscher	Kankakee	67	77.8	100	85	321
Sleepy Hollow	Kane	78	43.1	52	91	600
Richmond	McHenry	63	67.6	84	82	324
Cortland	DeKalb	64	64.4	96	74	412
Poplar Grove	Boone	64	78.0	99	90	107
Chicago	Cook	69	1.0	5	28	5,076
Villa Park	Du Page	62	19.2	28	78	1,699
Crest Hill	Will	61	38.8	49	63	671
Island Lake	McHenry	64	46.6	67	96	1,014
Mundelein	Lake	54	39.8	51	81	1,179
Wonder Lake Water C.	McHenry	51	60.2	83	99	619
Schaumburg	Cook	51	30.1	39	57	1,742
Chicago Heights	Cook	31	31.5	42	65	1,196
Lyons	Cook	49	14.3	22	57	1,912
Lombard	Du Page	45	21.8	31	67	1,757
Round Lake Heights	Lake	40	51.8	65	94	740
Average Low GPCD		60	43.2	58	75	1,145

The usage rates are compared with the corresponding data on median household income (MHI), marginal price of water (M-Price), median home value (MHV), distance from downtown Chicago and travel time, percent of single-family housing (represented by 1-detached and 1-attached units) and gross housing density in terms of the number of housing units per square mile. The data in Tables 9 and 10 were analyzed to determine which factors contribute most to the difference in per capita rates between these two groups of communities and systems.

The data in Tables 9 and 10 for the sample of systems with high residential per capita rates (shown on the upper panel of Tables 9 and 10) indicate that the high rates tend to be associated with high median household income, high median home values, lower marginal prices of water, and low residential densities. However, these relationships are not consistent for all 13 systems with high rates of water use. In some cases, places with low income and low home values also show high rates of residential use. (e.g., Aqua Illinois – Kankakee, or Momence).

Systems with low per capita use (shown on the lower panel of Tables 9 and 10) appear to be associated with lower median household income, lower median home values, higher marginal prices of water, and higher residential densities. However, as in the case of systems with high use, these relationships are not consistent for all 18 systems with lower rates of water use.

Table 11 shows partial results of simple regressions of the average 2003-2007 per capita use on each of the seven explanatory variables from Tables 9 and 10. Because the sample is limited only to systems with high and low usage rates, the estimated regression coefficients may not apply to the entire population of systems in the study area. However, the regression results can be used to distinguish between variables which affect the per capita use rates.

Table 11. Effects of Individual Explanatory Variables on Residential Per Capita Water Use

Variable	Slope	T-value	R <sup>2</sup>
Median household income	0.770	4.35	0.395
Median home value	0.111	4.99	0.462
Marginal price of water	-6.169	-1.00	0.033
Percent single-family housing	0.556	-0.97	0.032
Housing density	-0.013	-1.47	0.069
Distance from Chicago Union Station	-0.195	-0.48	0.008
Travel time to Chicago Union Station	-0.281	-0.89	0.026

The results in Table 11 indicate that only median home value and median household income show statistically significant coefficients (i.e., slopes of the regression line). Marginal price is significant at the probability of 0.30 and housing density at 0.15. The

remaining three variables are not significant. The relationship between median home value and per capita use is shown on Figure 4.

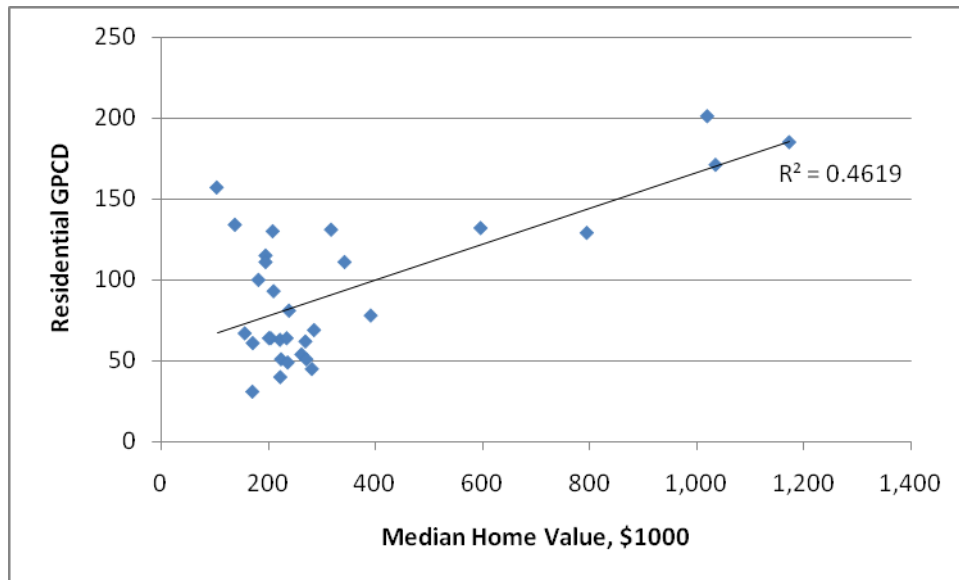


Figure 4. Effect of Median Home Value on Residential Water Use

The effects of individual variables suggest that the high and low usage rates in individual systems are explained by more than one variable. Table 12 below shows the results of two regressions, each with two explanatory variables. It shows that a significant portion of the variability in per capita usage rates in Tables 9 and 10 (i.e.,  $R^2 = 0.54$ ) is explained by median home value and distance to the Chicago Union Station. Similar regression results were obtained when housing density was used instead of distance from Chicago (Regression #2) because these two variables are inversely correlated.

Table 12. Regression of Per Capita Use on Three Explanatory Variables

Term	Estimate	t Ratio	Prob.>  t
<b>Regression #1</b>			
Intercept	15.674	0.77	0.4490
Median home value	0.136	5.70	0.0001
Distance to Union Station	0.711	2.19	0.0374
N = 31; $R^2 = 0.54$			
<b>Regression #2</b>			
Intercept	65.984	5.40	0.0001
Median home value	0.107	4.87	0.0001
Density of housing	-0.010	1.37	0.1808
N = 31; $R^2 = 0.50$			

Overall, the comparison of municipalities and systems with high and low rates of residential per capita water use shows a tendency of high usage rates to be associated with higher median home value (as well as higher median household income) and larger distance from downtown Chicago (and lower housing density). The opposite holds for places with lower per capita rates. Also, there are other (unknown) unique characteristics of the individual demand areas which contribute to either high or low rates of water usage.

## 5. IMPACTS OF LRI AND MRI ASSUMPTIONS

The analysis of residential per capita rates of water use in municipal systems of the 11-county area in Northeastern Illinois shows large variability of per capita use across the communities as well as significant fluctuations over time. Location is shown to be a factor, because lower housing densities are likely to be found in areas which are further away from downtown Chicago. The key question of this research project was to determine how different patterns of residential development to accommodate new population growth would affect total residential water demand in the 11-county planning area. The estimated residential water use under the three forecast scenarios are discussed below.

### 5.1 Estimated Residential Use in 2005

Table 13 shows the 2005 (base year) population and per capita rates (both municipal and residential) by county. The base year county-wide residential per capita usage rates were obtained from the residential use data presented in the previous sections.

Table 13. 2005 Population and Water Use Data in Northeastern Illinois

County	Resident Population	Water Use, MGD	2005 Gross M&I GPCD	2005 Residential GPCD	Residential Use, 2005 MGD
Boone	50,483	5.31	105.2	74.8	3.7
Cook	5,303,683	926.15	169.9	93.8	497.3
DeKalb	97,665	10.02	102.6	93.3	9.1
DuPage	929,113	100.55	120.8	73.6	68.4
Grundey	43,838	3.75	85.5	75.6	3.3
Kane	482,113	60.18	103.2	89.4	43.1
Kankakee	107,972	16.88	156.3	112.6	12.2
Kendall	79,514	6.93	87.2	84.1	6.7
Lake	702,682	81.68	116.2	84.7	59.5
McHenry	303,980	30.73	90.4	77.5	23.6
Will	642,813	48.86	107.3	83.2	53.5
NE Illinois	8,743,856	1,291.05	147.7	89.2	780.4

The residential usage rates in Table 13 were verified by subtracting commercial and industrial deliveries and unaccounted use (assumed at 10%) from total municipal withdrawals (and purchases) and dividing the result by total county population. The numbers in Table 13 show that in 2005 total water use (including self-supplied domestic) was 1,291.05 mgd and the weighted (by population) average municipal (gross municipal and industrial – M&I) per capita use was 147.7 gpcd. The estimated residential per capita rate in the entire study area was 89.2 gpcd, which implies total residential use in the study area of 780.4 mgd.

## 5.2 Residential Use under CT Scenario

Table 14 shows calculations of residential water use by county given the projected growth in total resident population of each county by the end of the forecast horizon in 2050. The residential per capita rates in individual counties in 2050 were calculated by adjusting the 2005 residential rates to reflect changes in gross municipal rates (including both residential and nonresidential users in each municipality). The adjustment is based on the assumption that all factors which affect municipal water use rates under the CT scenario will apply in the same proportion to residential per capita rates in 2050.

The results in Table 14 show that the estimated total residential use for 2050 would increase from the 2005 volume of 780.4 mgd to 1,024.3 mgd. This represents an increase of 243.9 mgd or 31 percent over the 2005 use. The average residential per capita use would decline under the CT scenario from 89.2 gpcd in 2005 (Table 13) to 80.3 in 2050.

Table 14. Residential Use under Current Trends (CT) Scenario

County	2005 Resident Population	2050 Resident Population	2050 Total Water Use, MGD	2050 Gross GPCD	2050 Residential GPCD	2050 Residential MGD
Boone	50,483	68,626	7.1	103.3	73.5	5.0
Cook	5,303,683	6,336,829	978.6	154.4	85.3	540.3
DeKalb	97,665	159,147	15.6	98.1	89.2	14.2
DuPage	929,113	1,070,063	118	110.2	67.2	71.9
Grundy	43,838	85,419	7.2	84.3	74.5	6.4
Kane	482,113	928,027	89.4	96.3	83.5	77.4
Kankakee	107,972	162,755	21.6	132.8	95.7	15.6
Kendall	79,514	280,552	25.3	90.1	86.9	24.4
Lake	702,682	973,458	105.7	108.6	79.1	77.0
McHenry	303,980	589,272	46.9	79.6	68.3	40.2
Will	642,813	1,459,021	195.9	134.3	104.1	151.9
NE Illinois	8,743,856	12,113,169	1,611.50	133.0	80.3	1,024.3

### 5.3 Residential Use under LRI Scenario

Table 15 shows the estimated residential per capita rates and total residential use in 2050 under the LRI scenario. The 2050 residential per capita rates were adjusted in proportion to changes in the municipal per capita rates between 2005 and 2050.

The estimated total residential use under the LRI scenario would increase from the 2005 volume of 780.4 mgd to 793.2 mgd. This represents an increase of 12.8 mgd or 1.6 percent over the 2005 volume. The average residential per capita use would decline under the CT scenario from 89.2 gpcd in 2005 (Table 13) to 62.6 in 2050.

Table 15. Residential Use under Less Resource Intensive (LRI) Scenario

County	2005 Resident Population	2050 Resident Population	Popul. Shift in 2050	2050 Total Water Use, MGD	2050 Gross GPCD	2050 Residential GPCD	Residential Use, 2050 MGD
Boone	50,483	68,626	0	5.7	83.1	59.1	4.1
Cook	5,303,683	6,476,665	139,836	770.1	118.9	65.6	425.2
DeKalb	97,665	159,147	0	12.4	77.9	70.9	11.3
DuPage	929,113	1,209,900	139,837	98.8	81.7	49.8	60.2
Grundey	43,838	85,419	0	5.7	66.7	59.0	5.0
Kane	482,113	794,253	-133,774	59.4	74.8	64.8	51.5
Kankakee	107,972	162,755	0	17.1	105.1	75.7	12.3
Kendall	79,514	220,241	-60,311	15.9	72.2	69.6	15.3
Lake	702,682	973,458	0	83.4	85.7	62.4	60.8
McHenry	303,980	503,684	-85,588	32.8	65.1	55.8	28.1
Will	642,813	1,459,021	0	154.1	105.6	81.9	119.5
NE Illinois	8,743,856	12,113,169	0	1,255.20	103.6	62.6	793.2

Without the population shifts, the total residential demand in 2050 would be 794.7 mgd (not shown on Table 15), only 1.5 mgd higher than the LRI scenario demand, although the demand in the counties affected by the shifts the differences in demand would range from +8.7 mgd for Kane County to -9.2 mgd for Cook County. Because the shifts would involve only 8 percent of the projected new population, the area wide impact on total residential use is very limited.

### 5.4 Residential Use under MRI Scenario

Table 16 shows the estimated residential per capita rates and total residential use in 2050 under the MRI scenario. Again, the 2050 residential per capita rates were adjusted in proportion to changes in the municipal per capita rates between 2005 and 2050.

The estimated total residential use under the MRI scenario would increase from the 2005 volume of 780.4 mgd to 1,210.1 mgd. This represents an increase of 429.7 mgd or 55



percent over the 2005 volume. The average residential per capita use would increase under the MRI scenario from 89.2 gpcd in 2005 (Table 13) to 94.1 in 2050.

Table 16. Residential Use under More Resource Intensive (MRI) Scenario

County	2005 Resident Population	2050 Resident Population	Popul. Shift in 2050	2050 Total Water Use, MGD	2050 Gross GPCD	2050 Residential GPCD	Residential Use, 2050 MGD
Boone	50,483	68,626	0	8.49	123.7	88.0	6.0
Cook	5,303,683	6,067,213	-269,616	1,112.42	183.3	101.2	614.2
DeKalb	97,665	159,147	0	18.66	117.3	106.6	17.0
DuPage	929,113	1,005,393	-64,670	134.34	133.6	81.4	81.8
Grundy	43,838	85,419	0	8.68	101.6	89.9	7.7
Kane	482,113	1,086,986	158,959	115.18	106.0	91.8	99.8
Kankakee	107,972	162,755	0	30.5	187.4	135.0	22.0
Kendall	79,514	329,469	48,917	35.37	107.4	103.5	34.1
Lake	702,682	973,458	0	126.08	129.5	94.4	91.9
McHenry	303,980	715,682	126,410	66.84	93.4	80.1	57.3
Will	642,813	1,459,021	0	229.96	157.6	122.2	178.3
NE Illinois	8,743,856	12,113,169	0	1,886.52	155.7	94.1	1,210.1

Without the population shifts, the total residential demand in 2050 would be 1,212.8 mgd (not shown on Table 16), only 2.8 mgd higher than the MRI scenario demand in Table 16, although the demand in the counties affected by the shifts the differences in demand would range from -14.6 mgd for Kane County to +27.3 mgd for Cook County. Because the shifts would involve only 10 percent of the projected new population, the area wide impact on total residential use is also very limited.

## 6. SUMMARY

The analysis of residential water use in the 11-county planning area in Northeastern Illinois revealed a large variability of per capita rates of water use among the municipalities, private water systems and different residential developments. Residential rates varied from 50 gpcd or less to about 250 gpcd. The population weighted average per capita use in the 11-county area is about 90 gpcd. Despite the high variability of per capita usage rates, the historical data showed a statistically significant decline of 0.7 percent per year in average per capita rates during the period from 1990 to 2007.

Residential per capita rates vary among communities because of differences in median home value and income as well as other factors such as housing density and price of water. These variables influence primarily the outdoor component of residential use (i.e., water used for irrigation of residential landscapes). Higher per capita residential water use rates tend to be found in affluent communities with low housing densities and homes



with residential landscapes. Lower per capita rates tend to be found in communities with average or low income, higher water prices and higher housing densities.

The wide range of per capita rates of residential water use indicates the presence of some potential for water conservation in the residential sector in the Northeastern Illinois study area. However, the actual potential cannot be quantified without additional studies of residential water use. Such studies should be based on samples of individual residential users drawn from different communities in the 11-county area. While a single region-wide study of residential water users is feasible and could provide valuable data, the best results can be obtained by conducting baseline studies of residential water use in individual communities.

The analysis of water demand scenarios in the 11-county area confirmed the effects of alternative growth patterns on residential water use. However, the assumed small shifts of population growth toward higher housing densities in the more urbanized counties of Cook and DuPage would have a very limited impact on total water use. The impacts of different patterns of population growth would be stronger if a greater percentage of new regional population growth was accommodated in higher density housing developments which are more prevalent in the urbanized counties of Cook, DuPage and Lake.

The wide range of the current per capita rates of residential water use across the communities in the 11-county area also suggests that the greatest reduction in total residential water use in the future could be achieved if both the existing and new housing developments adopted the best management water conservation practices. The communities with the current residential per capita rates above 90 gpcd may have the greatest potential for water conservation savings.

In summary, the overall recommendation of this study is that public water supply systems in Northeastern Illinois (both public and private) monitor both the system-wide (i.e., municipal) and residential rates of per capita water use and use these rates to compare their success in the implementation of water efficiency programs with other systems in the region. The Chicago Metropolitan Agency for Planning could facilitate such comparisons by conducting an annual survey of all public water supply systems to obtain the per capita water usage rates and make the reported numbers available to all participating agencies and the general public. The availability of information on per capita usage rates would increase public awareness of the quantities of water used and would likely have a positive impact on water conservation behavior of the residents of Northeastern Illinois.

## **References**

Dziegielewski Benedykt and Farhat Jahan Chowdhury and others 2008. Regional Water Demand Scenarios for Northeastern Illinois: 2005-2050. Project Completion Report. Prepared for the Chicago Metropolitan Agency for Planning, 233 S. Wacker Drive, Suite 800, Chicago, Illinois 60606. June 15, 2008.

## APPENDIX A - TABLES OF ANNUAL RESIDENTIAL WATER USE IN INDIVIDUAL SYSTEMS

Table A-1. 1995-2007 Per Capita Water Use in Community Water Supply Systems in Northeastern Illinois

Community/Utility	County	Population 1998-07	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	Average 1998-07
Aqua Illinois - Candlewick Division	Boone	5,701	.	58.2	59.9	.	57.8	62.6	64.1	58.8	58.8	.	.	56.9	52.9	58.8
Belvidere	Boone	21,000	73.6	101.2	86.8	70.2	74.8	67.2	65.5	69.7	65.6	66.6	69.3	66.5	71.0	68.6
Capron	Boone	900	85.4	67.1	.	103.0	.	.	138.5	173.9	173.9	122.1	70.0	83.1	.	123.5
Cherry Valley	Boone	4,801	99.8	99.2	97.8	97.9	73.0	69.3	123.8	75.5	122.9	139.2	83.3	78.2	75.2	93.8
Poplar Grove	Boone	1,250	62.8	62.8	72.1	.	.	76.4	61.4	70.1	70.1	60.3	60.3	.	.	66.4
Arlington Heights	Cook	75,929	.	75.4	75.4	72.5	75.4	71.5	72.3	75.0	82.0	68.7	68.7	69.6	67.0	72.3
Bellwood	Cook	20,685	57.2	56.8	56.7	58.6	62.2	.	62.2	62.2	60.5	66.7	57.4	57.4	63.6	61.2
Chicago	Cook	5,166,667	78.8	71.9	71.9	69.5	69.6	69.6	64.3	65.9	61.3	60.9	62.2	61.3	60.0	65.0
Chicago Heights	Cook	48,265	47.4	46.0	45.3	.	44.0	40.1	30.9	36.4	31.2	30.3	29.8	33.6	.	34.5
Country Club Hills	Cook	16,201	79.2	60.8	70.7	73.6	71.0	71.6	67.7	69.6	70.6	69.1	72.3	67.1	70.5	70.3
Crestwood	Cook	11,036	83.2	85.8	85.9	.	117.6	115.0	72.4	72.4	67.8	64.5	71.7	65.7	69.6	79.6
Des Plaines	Cook	56,467	84.9	75.8	69.8	81.1	86.6	79.9	74.0	70.9	73.3	64.5	64.8	89.0	67.0	75.1
Evanston	Cook	345,303	86.7	81.3	81.0	80.4	83.1	80.2	78.2	75.7	73.3	69.6	75.7	66.9	64.2	74.8
Flossmoor	Cook	9,127	120.7	123.2	126.3	108.1	136.3	130.2	136.7	142.2	146.9	130.6	129.3	129.1	130.2	132.0
Ford Heights	Cook	3,754	157.9	157.9	.	.	63.4	75.9	.	71.9	30.6	.	42.1	.	24.8	51.5
Glencoe	Cook	8,600	204.3	156.4	190.4	210.6	211.4	196.6	183.7	204.3	202.1	180.1	234.4	148.6	161.1	193.3
Glenview	Cook	55,782	.	.	68.3	80.3	79.7	81.6	60.0	84.6	86.2	90.7	83.8	88.5	98.9	83.4
Glenwood	Cook	9,289	66.0	64.9	60.1	61.2	61.7	62.7	65.2	70.8	61.9	65.2	88.2	71.6	82.6	69.1
Hanover Park	Cook	37,470	69.0	69.9	66.2	68.7	68.3	67.5	62.2	62.1	61.9	62.2	63.6	61.8	61.4	64.0
Hickory Hills	Cook	13,655	57.5	58.6	56.4	56.6	58.3	57.6	54.3	54.6	52.8	50.7	55.4	50.2	48.7	53.9
Hillside	Cook	7,994	72.8	70.7	70.6	71.7	72.6	69.3	67.0	66.9	65.3	57.3	78.9	79.0	.	69.8
Hoffman Estates	Cook	50,518	79.4	73.9	77.4	81.0	82.7	68.4	59.2	60.6	56.5	54.6	61.8	52.0	52.2	62.9
Homewood	Cook	27,778	45.4	.	43.6	43.3	43.8	44.0	44.8	44.1	49.6	48.5	51.0	42.2	40.9	45.2
Illinois American - Alpine Heights Div	Cook	732	94.1	95.7	89.8	96.9	95.8	87.6	87.9	89.3	73.3	65.4	79.0	85.8	80.5	84.1

Community/Utility	County	Population 1998-07	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	Average 1998-07
Illinois American - Chicago Suburb Util	Cook	22,776	73.9	74.7	72.1	68.6	70.8	64.7	69.4	71.5	59.3	73.9	73.9	60.0	56.2	66.8
Illinois American - Fernway Division	Cook	6,495	72.1	72.4	70.6	70.8	69.4	68.6	72.8	72.8	69.4	66.1	71.0	82.2	77.1	72.0
Illinois American - Midwest Palos	Cook	197	77.9	64.3	63.4	67.9	87.0	38.9	62.1	66.3	58.3	52.6	60.7	68.6	63.8	62.6
Illinois American - Waycinden Division	Cook	5,796	63.2	63.6	64.2	63.2	55.8	59.1	61.1	66.6	42.7	42.6	76.3	43.3	50.0	56.1
Indian Head Park	Cook	3,648	56.1	56.2	54.4	53.7	52.8	56.3	54.8	54.6	53.5	56.8	60.0	57.0	56.1	55.6
Kenilworth	Cook	2,448	191.0	181.6	163.2	215.7	.	175.2	163.4	182.2	166.4	157.8	172.2	140.1	131.5	167.2
La Grange	Cook	15,534	120.8	117.6	113.4	121.6	124.0	117.6	116.1	115.9	111.2	110.0	107.8	107.8	82.1	111.4
La Grange Park	Cook	13,004	92.8	89.8	93.0	112.6	100.9	100.1	.	91.9	101.1	84.8	74.2	.	.	95.1
Lemont	Cook	13,743	72.2	68.5	81.7	76.2	84.6	71.8	76.9	83.8	80.2	70.2	87.6	79.5	86.1	79.7
Lynwood	Cook	8,026	72.1	71.1	70.4	71.4	67.3	65.7	70.5	71.6	72.5	76.2	76.8	87.1	92.4	75.1
Lyons	Cook	9,857	45.3	46.2	44.6	47.7	48.1	50.8	49.3	52.1	50.4	48.5	53.5	48.9	45.7	49.5
Matteson	Cook	14,172	71.9	76.9	80.6	81.9	69.3	76.1	75.5	92.9	77.5	82.6	81.0	82.7	83.4	80.3
Mission Brook Sanitary District	Cook	3,015	99.2	100.0	89.6	88.9	.	80.7	83.7	.	79.0	85.7	74.6	78.3	70.5	80.2
Mount Prospect	Cook	40,814	83.2	81.1	85.1	87.4	89.4	82.8	80.8	80.2	76.4	77.6	81.1	78.1	81.6	81.5
North Maine Utility	Cook	36,700	60.2	63.0	75.6	76.0	74.0	.	86.3	87.3	81.8	79.2	81.5	63.1	61.7	76.8
Northbrook	Cook	35,072	105.6	98.7	93.8	101.6	111.5	97.5	123.2	125.8	98.8	97.2	106.9	90.0	89.6	104.2
Oak Forest	Cook	27,577	89.9	89.4	109.7	91.0	.	96.7	95.2	77.6	95.0	95.0	80.3	80.3	.	88.9
Olympia Fields	Cook	6,667	82.2	76.1	72.4	74.6	77.4	.	71.6	71.6	63.7	53.2	64.3	61.1	59.5	66.3
Orland Park	Cook	55,015	97.2	100.3	91.9	95.9	95.6	90.3	92.5	100.7	99.9	90.1	99.5	98.3	89.5	95.2
Palatine	Cook	66,400	98.1	99.4	97.2	95.6	94.4	93.7	93.6	93.5	89.5	85.3	91.4	82.1	75.5	89.5
Palos Heights	Cook	14,762	90.6	99.3	95.6	92.5	83.2	80.8	70.2	85.7	88.8	72.5	84.5	80.7	73.9	81.3
Park Forest	Cook	23,737	76.8	59.9	58.0	57.5	57.6	58.6	57.3	55.1	52.8	52.9	52.7	51.6	.	55.1
Prospect Heights	Cook	2,343	61.2	63.7	65.2	64.4	58.4	77.8	62.4	69.6	47.6	50.5	58.2	58.2	50.7	59.8
Richton Park	Cook	12,636	92.4	90.3	84.5	87.6	92.3	90.9	92.1	96.5	91.2	89.9	94.5	80.1	83.8	89.9
River Forest	Cook	11,645	99.5	97.1	85.6	99.0	98.4	100.0	97.7	98.8	98.9	96.1	114.3	102.3	92.2	99.8
Riverside	Cook	8,919	81.8	114.6	111.7	82.8	88.7	86.3	101.5	106.0	95.1	103.8	113.6	94.5	72.6	94.5
Rolling Meadows	Cook	24,166	75.5	75.5	75.1	74.9	76.5	76.6	73.5	71.0	69.4	64.7	68.5	65.3	64.5	70.5
Sauk Village	Cook	10,915	100.5	75.1	70.7	74.9	81.0	68.8	77.5	77.2	74.2	91.9	60.5	58.5	53.8	71.8

Community/Utility	County	Population 1998-07	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	Average 1998-07
Schaumburg	Cook	81,200	56.6	55.0	54.8	56.5	58.1	56.6	50.8	55.1	51.4	47.6	54.1	50.6	49.9	53.1
South Chicago Heights	Cook	3,915	.	.	.	70.2	73.8	.	.	51.3	62.6	72.5	66.9	66.3	81.1	68.1
Streamwood	Cook	37,186	62.4	63.2	63.1	66.7	68.6	65.2	64.7	65.8	62.5	61.8	64.8	63.8	75.3	65.9
Thornton	Cook	2,778	88.9	83.7	76.3	77.0	77.7	72.8	72.6	77.1	76.7	73.7	74.1	66.9	80.1	74.9
Tinley Park	Cook	71,095	70.6	98.0	85.7	83.8	111.9	70.2	73.2	44.1	44.4	43.9	43.9	.	83.7	66.6
Utilities Inc - County Line Water Co	Cook	394	88.9	93.6	88.5	96.6	100.6	99.3	107.4	107.4	107.4	91.4	91.4	61.6	.	95.9
Western Springs	Cook	12,357	83.5	94.0	74.0	79.7	79.7	79.0	83.5	80.5	77.7	77.7	77.7	.	.	79.4
Wheeling	Cook	35,889	87.2	100.7	.	.	.	.	78.6	78.7	79.7	80.0	76.0	80.5	66.7	77.2
Wilmette	Cook	103,900	38.7	34.8	32.7	32.7	34.4	33.4	34.9	35.2	34.9	30.9	35.5	30.5	31.8	33.4
Winnetka	Cook	17,406	122.9	130.0	111.8	141.6	136.7	119.0	118.0	109.9	118.7	115.5	135.0	109.9	109.4	121.4
Bartlett	Cook/DuPage	37,162	74.2	68.9	68.5	72.7	74.6	68.8	69.1	71.0	70.5	68.3	72.9	68.0	64.8	70.1
Burr Ridge	Cook/DuPage	10,554	117.0	122.7	109.7	123.2	110.1	113.0	126.2	133.5	135.8	123.0	144.3	117.2	124.0	125.0
Elk Grove Village	Cook/DuPage	34,761	81.6	81.0	84.3	77.4	77.3	76.4	77.8	74.0	72.0	69.4	75.0	69.8	66.3	73.5
Roselle	Cook/DuPage	22,850	60.2	64.6	63.8	80.2	73.4	.	.	.	.	67.6	77.9	65.8	63.8	71.4
Barrington	Cook/Lake	10,721	125.2	157.0	100.0	148.1	153.2	143.0	124.9	151.6	146.3	145.2	141.9	.	93.4	138.6
Buffalo Grove	Cook/Lake	44,380	82.9	81.0	80.0	82.0	85.5	81.2	80.7	102.2	77.5	74.7	84.5	75.9	73.5	81.8
Frankfort	Cook/Will	24,957	74.3	70.9	70.5	69.8	74.6	76.2	80.1	101.4	95.1	94.9	104.3	96.7	96.5	89.0
Steger	Cook/Will	9,540	77.3	79.8	79.8	86.2	87.8	63.7	63.7	63.7	70.5	56.7	59.4	58.0	59.5	66.9
Cortland	DeKalb	2,379	69.5	64.1	62.4	55.4	58.4	59.4	62.3	59.4	60.2	65.9	70.0	63.7	60.8	61.5
De Kalb	DeKalb	40,886	.	56.6	60.0	.	.	54.6	.	.	.	100.0	92.1	67.9	52.2	73.4
Genoa	DeKalb	4,949	51.3	60.8	60.7	61.0	56.0	48.0	58.3	53.5	50.2	49.8	63.8	65.9	64.0	57.1
Hinckley	DeKalb	1,760	93.4	102.2	109.4	96.0	85.8	86.5	.	94.0	86.9	85.4	74.9	62.0	86.8	103.9
Kingston	DeKalb	965	49.6	58.2	58.6	62.0	69.0	70.7	66.4	61.3	62.4	55.2	55.2	43.4	50.0	59.5
Kirkland	DeKalb	1,494	83.6	87.1	85.2	71.4	70.0	76.6	73.2	88.4	72.9	63.9	64.3	54.7	.	70.6
Lee	DeKalb	337	130.7	82.2	.	.	.	.	.	.	111.3	57.1	61.1	60.8	61.5	70.4
Malta	DeKalb	837	96.0	108.3	97.4	.	96.9	104.2	104.9	88.0	125.8	133.9	140.2	144.8	115.5	117.1
Sandwich	DeKalb	6,331	123.9	.	.	.	123.2	123.2	126.9	.	127.0	107.5	107.5	.	118.6	119.1
Shabbona	DeKalb	985	88.3	.	79.8	78.3	87.9	63.8	71.5	60.6	57.7	72.0	66.3	76.9	48.2	68.3
Somonauk	DeKalb	1,310	93.3	88.4	87.1	.	.	.	.	.	.	86.2	89.3	.	.	87.8

Community/Utility	County	Population 1998-07	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	Average 1998-07
Sycamore	DeKalb	12,897	122.7	116.9	124.8	110.3	107.7	111.1	116.6	117.3	114.9	103.8	113.4	113.4	.	112.1
Waterman	DeKalb	1,194	128.4	.	.	.	.	.	.	.	88.9	88.9	88.9	.	.	88.9
	DuPage	37,470	69.0	69.9	66.2	68.7	68.3	67.5	62.2	62.1	61.9	62.2	63.6	61.8	61.4	64.0
Addison	DuPage	35,302	70.7	.	.	72.3	72.6	72.5	69.4	75.4	77.7	64.1	91.5	84.3	59.3	73.9
Bensenville	DuPage	20,202	61.6	55.5	58.2	55.3	73.0	74.1	71.1	64.5	51.7	74.7	66.2	46.6	66.5	64.4
Bloomington	DuPage	22,435	.	75.7	76.3	76.7	74.0	77.1	74.2	75.6	74.6	68.3	68.3	88.2	71.8	74.9
Carol Stream	DuPage	40,788	73.5	73.4	71.6	74.5	78.4	76.4	73.3	71.5	67.9	66.7	69.2	63.4	64.3	70.6
Clarendon Hills	DuPage	8,138	75.4	75.0	76.3	82.8	86.2	82.2	79.4	78.0	67.4	68.2	89.9	72.1	80.7	78.7
Darien	DuPage	23,331	83.4	82.0	88.5	92.9	68.6	53.8	62.7	62.0	62.7	59.8	67.2	53.9	54.2	63.8
Downers Grove	DuPage	52,603	76.2	78.1	83.2	80.2	81.7	73.6	76.8	83.6	75.6	70.5	80.6	75.8	73.0	77.2
Elmhurst Water & Wastewater	DuPage	42,840	69.5	70.6	69.5	69.6	81.6	69.7	84.9	62.6	62.0	61.5	70.4	71.2	63.3	69.7
Glen Ellyn	DuPage	26,825	56.7	57.9	58.5	59.1	.	63.8	103.3	92.8	92.4	95.6	95.9	91.2	60.4	83.8
Glendale Heights	DuPage	30,718	87.9	.	69.0	71.7	68.9	70.5	.	.	65.5	60.1	.	60.3	64.8	66.0
Greene Road Water Supply	DuPage	367	161.5	139.6	144.3	147.3	168.7	142.6	145.9	137.1	137.6	118.3	195.5	101.6	167.3	146.2
Highland Hills Sanitary Dist	DuPage	1,479	83.3	.	.	.	.	83.0	72.7	77.1	74.2	68.2	70.2	60.8	.	72.3
Hinsdale	DuPage	15,413	.	.	.	.	.	.	.	.	.	106.4	105.6	117.8	95.5	106.3
Illinois American - Arrowhead Division	DuPage	1,790	48.2	43.7	43.2	84.0	85.2	83.3	76.7	102.6	80.6	94.0	90.0	85.8	76.1	85.8
Illinois American - Cntry Club Highlands	DuPage	1,333	34.4	34.3	32.2	63.1	70.3	63.1	61.8	63.1	58.1	50.4	63.5	71.1	68.6	63.3
Illinois American - DuPage Utilities Div	DuPage	7,832	76.7			49.2	50.2	50.2	51.8	64.3	64.3				67.6	56.8
Illinois American - Liberty Ridge East Div	DuPage	421	106.1	89.5	89.2	94.4	99.2	96.7	85.4	83.5	77.8	74.8	81.6	86.5	70.9	85.1
Illinois American - Liberty Ridge West Div	DuPage	3,373	93.3	87.4	87.7	90.2	105.9	81.8	73.7	84.4	79.1	85.1	88.4	72.2	72.6	83.3
Illinois American - Lombard Heights Div	DuPage	826	73.5	69.3	67.8	68.9	66.9	65.6	68.6	65.6	56.9	63.5	60.0	62.1	63.3	64.1
Illinois American - Valley View Division	DuPage	7,994	38.1	35.9	34.8	67.7	68.4	66.6	57.5	73.5	59.6	73.9	65.4	68.6	66.3	66.8
Itasca	DuPage	8,235	70.7	.	80.1	.	76.9	78.6	77.4	78.3	77.3	76.9	84.9	79.8	71.5	77.9
Lisle	DuPage	22,201	82.4	66.3	67.9	68.0	68.7	69.0	67.7	67.4	67.8	63.6	69.5	64.1	63.9	67.0
Lombard	DuPage	42,201	53.4	68.9	69.4	50.5	53.0	50.6	71.4	69.2	46.9	45.0	46.8	44.9	43.0	52.1

Community/Utility	County	Population 1998-07	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	Average 1998-07
North Regional Water Facility	DuPage	992	50.0	60.4	64.2	79.4	75.4	60.7	58.7	60.2	58.9	59.6	68.1	68.2	57.1	64.6
Oak Brook	DuPage	8,851	184.9	178.3	177.6	185.0	192.5	191.5	198.5	198.3	192.4	194.0	219.5	196.2	.	196.4
Southeast Region Water Facility	DuPage	14,908	117.8	113.9	73.6	73.8	85.9	70.0	70.8	67.7	.	51.2	50.9	57.7	43.6	63.5
St Charles Comm Well Fund 3	DuPage	28	72.0	.	.	.	.	.	.	77.6	80.0	75.0	75.0	75.0	.	76.5
Utilities Inc - Clarendon Water Co	DuPage	1,157	224.6	177.0	72.9	117.6	.	.	76.6	76.6	62.9	77.8	77.8	75.5	79.3	80.5
Villa Park	DuPage	22,313	65.1	59.3	54.5	56.4	64.1	63.9	65.4	64.5	64.4	59.9	62.0	62.2	55.7	61.8
Warrenville	DuPage	11,729	74.2	74.2	72.8	.	.	81.3	.	.	75.9	85.0	85.0	78.6	.	81.2
West Chicago	DuPage	21,594	.	64.0	.	81.8	96.4	93.6	94.8	69.0	63.8	60.1	65.3	65.3	59.3	74.9
Westmont	DuPage	24,417	81.4	80.3	93.0	98.4	.	96.1	.	45.7	40.8	42.9	45.0	89.3	42.3	62.6
Wheaton	DuPage	56,494	78.4	68.4	70.0	72.0	73.3	72.6	71.0	74.5	72.0	71.8	78.5	67.9	71.8	72.5
Willowbrook	DuPage	9,007	88.2	77.9	79.9	67.8	68.8	66.6	73.8	72.1	71.2	68.9	71.0	59.6	60.0	68.0
Winfield	DuPage	8,810	.	.	.	54.7	63.6	63.2	64.9	64.5	71.0	76.2	77.1	68.7	72.5	67.6
Wood Dale	DuPage	13,202	99.8	.	.	74.6	83.6	74.0	69.5	72.2	74.7	69.8	81.7	65.3	68.8	73.4
Woodridge	DuPage	33,465	71.8	71.2	74.6	65.2	87.8	76.4	74.5	76.2	74.1	69.0	76.1	71.2	70.3	74.1
Aurora	DuPage/Kane	149,250	94.5	90.2	90.9	92.2	95.6	81.8	87.1	85.7	.	74.7	60.9	56.2	56.8	76.8
Illinois American - Santa Fe Division	DuPage/Will	208	79.5	91.6	92.2	120.0	103.5	112.2	117.7	98.1	71.4	.	.	.	.	103.8
Illinois American - West Suburban Div	DuPage/Will	50,023	77.7	76.4	75.7	71.9	72.3	70.7	72.1	80.6	57.8	58.3	71.7	66.7	66.2	68.8
Naperville	DuPage/Will	140,453	80.8	73.3	49.7	66.8	74.6	67.4	71.9	74.3	73.3	68.4	82.6	64.7	72.4	71.6
Braceville	Grundy	902	72.6	.	.	.	.	58.6	60.3	78.3	71.8	75.0	72.1	58.2	78.4	69.1
Carbon Hill	Grundy	396	63.0	.	.	.	.	.	.	.	.	59.4	63.0	72.7	.	65.0
Coal City	Grundy	4,830	.	.	.	.	.	.	.	90.0	87.7	87.7	156.5	156.5	.	115.6
Gardner	Grundy	1,375	51.8	55.2	57.5	52.1	66.1	67.1	.	.	59.4	60.0	64.1	58.8	.	61.1
Illinois American - Nettle Creek Div	Grundy	195	156.0	92.2	82.2	87.7	92.4	86.5	73.5	92.1	80.2	.	103.6	91.1	83.4	87.8
Illinois American - Ridgcrest Div	Grundy	294	138.5	110.9	118.7	105.1	110.6	58.9	70.3	54.0	52.6	82.0	100.9	82.2	88.7	80.5
Kinsman	Grundy	116	139.6	174.6	158.3	114.8	132.4	146.0	.	.	.	.	100.5	105.8	104.3	117.3
Mazon	Grundy	931	91.7	94.5	102.2	102.9	96.9	85.5	72.1	66.1	95.6	63.6	77.8	59.9	73.4	79.4
Morris	Grundy	11,649	.	.	.	.	.	.	.	.	.	.	.	130.0	.	130.0

Community/Utility	County	Population 1998-07	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	Average 1998-07
South Wilmington	Grundy	621	106.3	111.5	127.9	.	.	.	.	.	.	.	.	.	.	.
Minooka	Grundy/Ken./ Will	5,565	.	.	.	.	.	.	.	.	97.6	97.6	115.4	115.4	.	106.5
Diamond	Grundy/Will	1,784	126.8	126.8	124.4	.	.	90.5	.	.	.	83.5	106.8	71.8	89.1	88.4
Aurora Community Water Association	Kane	158	.	88.1	92.5	82.7	.	133.8	88.5	94.5	95.8	96.7	94.3	112.6	110.7	101.1
Batavia	Kane	25,614	115.0	89.3	71.4	71.4	86.4	74.6	64.9	79.3	78.8	78.0	86.0	77.8	76.6	77.4
Burlington	Kane	468	73.2	68.4	67.0	75.8	52.3	74.7	62.7	71.5	76.2	76.8	79.1	73.4	77.8	72.0
Carpentersville	Kane	31,050	98.4	99.7	109.9	112.0	115.7	96.3	106.3	.	95.2	98.3	102.9	95.5	66.4	98.7
East Dundee	Kane	3,170	133.9	138.8	.	75.6	.	.	141.9	.	65.9	63.2	64.7	57.5	.	78.1
Elburn	Kane	3,813	67.5	67.5	.	.	.	91.1	93.9	.	.	.	.	66.2	66.6	79.5
Elgin	Kane	121,061	55.2	53.7	52.5	.	107.4	52.7	58.5	51.5	49.2	41.2	51.7	49.4	54.3	57.3
Fox River Wtr Reclamatn Dist - Skyline	Kane	838	77.6	57.7	93.6	42.7	48.3	41.0	38.2	52.1	52.6	110.1	100.4	100.4	38.7	62.4
Geneva	Kane	20,718	.	104.1	134.6	.	.	110.5	81.5	84.4	83.4	75.0	76.0	74.4	74.8	82.5
Gilberts	Kane	3,424	146.2	146.2	.	.	.	.	.	.	91.3	.	79.7	73.7	79.0	80.9
Hampshire	Kane	3,050	77.9	77.9	67.4	0.0	.	62.6	.	.	196.1	211.2	137.0	137.0	.	124.0
Huntley	Kane	14,214	.	.	.	.	.	.	67.8	67.8	69.4	65.8	84.5	83.5	93.1	76.0
Illinois American - River Grange Div	Kane	77	60.9	89.8	90.2	89.6	90.3	83.3	77.6	89.1	82.3	87.0	87.0	80.8	37.5	80.4
Illinois American - Rollins Swr & Wtr Div	Kane	293	67.4	68.4	69.2	70.6	70.0	75.2	67.4	83.4	76.2	77.8	79.4	69.0	65.5	73.4
Maple Park	Kane	910	.	111.9	69.4	.	.	64.6	78.1	176.8	88.5	80.8	56.1	50.5	55.8	81.4
Mill Creek Water Reclamation District	Kane	4,150	.	.	.	.	.	.	.	92.1	79.1	87.2	99.6	99.6	.	91.5
Moecherville Water District - Nfp	Kane	1,275	79.0	78.1	81.3	86.3	92.6	86.2	81.8	57.8	59.9	55.4	74.5	57.2	55.1	70.7
Montgomery	Kane	18,397	64.7	51.5	68.9	68.9	52.0	97.7	99.0	104.2	102.1	90.1	102.0	88.1	83.6	88.8
North Aurora	Kane	12,215	69.7	96.8	81.9	85.9	79.1	85.5	90.6	81.8	72.9	64.5	66.8	70.8	71.9	77.0
Otter Creek Wtr Reclam Dist	Kane	6,688	.	.	.	.	.	.	.	.	96.1	.	55.1	53.8	55.7	65.2
Park View Water Corp	Kane	150	.	.	.	.	.	.	.	.	40.6	.	35.9	.	.	38.2
Powers Water Co Inc	Kane	193	111.3	111.5	.	.	90.7	.	.	.	93.8	82.1	82.1	82.1	.	86.2
Sleepy Hollow	Kane	3,000	.	.	72.8	.	.	.	.	.	81.8	75.5	86.5	74.4	72.2	78.1
South Elgin	Kane	18,942	.	.	.	.	.	121.3	.	79.1	65.4	.	.	87.9	89.0	88.5

Community/Utility	County	Population 1998-07	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	Average 1998-07
St Charles	Kane	30,266	86.0	90.8	.	.	96.8	80.0	110.7	99.9	84.1	84.1	84.1	98.7	84.6	91.5
Sugar Grove	Kane	7,875	.	.	.	.	.	.	110.5	.	111.5	60.5	60.5	88.4	.	86.3
Utilities Inc - Ferson Creek Util Corp	Kane	1,178	89.6	108.2	76.3	87.3	91.4	93.9	.	83.5	83.5	.	83.6	71.6	81.9	84.6
Utilities Inc - Lake Marian Water Corp	Kane	928	55.1	59.0	56.6	59.8	58.6	60.4	.	.	63.7	63.7	63.7	58.4	.	61.2
Wasco Sanitary District	Kane	2,550	72.3	.	.	.	.	.	.	64.5	89.1	102.6	122.3	103.3	111.3	98.8
West Dundee	Kane	6,808	221.1	142.2	.	.	.	.	73.9	76.9	74.2	64.3	72.0	65.3	66.1	70.4
Algonquin	Kane/McHenry	24,525	96.6	114.7	.	.	.	114.7	78.8	78.8	71.1	110.5	110.5	136.9	61.2	95.3
Aqua Illinois - Highland Estates	Kankakee	151	39.4	38.5	38.6	.	88.9	77.3	74.5	74.1	61.8	62.8	73.9	76.1	65.8	72.8
Aqua Illinois - Kankakee Division	Kankakee	71,861	61.3	126.7	59.9	.	.	105.4	78.3	61.8	166.4	162.1	143.1	128.4	185.2	128.8
Aqua Illinois - Skyline	Kankakee	217	87.2	73.5	.	75.1	83.1	72.9	72.6	75.0	67.9	62.9	76.6	66.6	66.2	71.9
Aqua Illinois - Vaughndale Meadows	Kankakee	345	193.8	128.2	.	196.6	118.3	.	146.8	177.9	147.4	115.3	.	.	.	150.4
Aroma Park	Kankakee	1,890	167.0	69.1	72.8	.	48.5	.	.	.	.	.	.	.	.	48.5
Buckingham	Kankakee	349	77.7	80.5	87.7	80.1	142.9	.	73.9	82.8	71.4	65.7	70.9	70.9	.	82.3
Cabery	Kankakee	252	110.9	87.8	.	.	.	.	87.5	103.8	114.4	114.4	114.4	105.8	.	106.7
Chebanse	Kankakee	1,150	110.1	103.8	75.0	.	.	.	.	.	.	107.0	107.0	107.0	.	107.0
Grant Park	Kankakee	1,547	75.6	71.0	.	.	.	.	.	100.5	129.2	.	.	.	.	114.8
Herscher	Kankakee	1,671	60.5	58.9	58.9	60.3	60.0	57.2	71.7	.	71.9	75.0	73.4	65.2	69.3	67.1
Manteno	Kankakee	6,392	108.2	112.7	119.1	107.3	.	111.9	110.3	113.3	113.3	117.9	117.9	.	.	113.1
Momence	Kankakee	3,512	158.4	171.5	156.8	175.5	196.2	184.8	171.9	148.6	141.4	159.6	143.4	123.7	101.1	154.6
Reddick	Kankakee	234	95.7	71.4	77.9	.	64.1	69.3	77.1	86.6	84.7	99.6	86.0	92.2	80.2	82.2
St Anne	Kankakee	1,202	.	.	.	.	.	116.7	108.7	123.5	169.8	159.8	155.3	142.4	141.0	139.6
Illinois American - Hollis Park Division	Kendall	123	40.5	78.3	86.1	79.3	87.3	76.0	81.8	86.2	77.6	70.8	67.5	58.4	73.0	75.8
Illinois American - Marina Valley Div	Kendall	1,662	77.9	105.0	108.7	97.0	93.7	49.7	.	56.0	77.8	75.3	104.5	105.6	110.7	85.6
Newark	Kendall	1,022	55.1	55.2	60.4	.	110.7	124.8	76.1	86.7	75.3	69.8	71.2	54.4	61.2	81.1
Oswego	Kendall	17,967	112.5	86.3	.	94.2	.	98.9	95.7	128.4	71.6	.	71.6	71.2	68.8	87.5
Plano	Kendall	6,913	94.8	94.8	89.8	82.8	.	83.6	88.6	96.5	106.2	94.0	93.7	54.6	61.1	84.6
Yorkville	Kendall	6,189	98.7	98.7	.	.	.	.	.	.	.	.	.	.	.	.



Community/Utility	County	Population 1998-07	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	Average 1998-07
Joliet	Kendall/Will	119,868	.	.	.	.	.	.	.	.	141.5	141.5	83.8	.	86.2	113.3
Antioch	Lake	9,921	97.2	116.8	96.4	95.7	55.6	71.6	.	59.9	55.1	46.2	95.9	57.9	.	67.2
Aqua Illinois - Hawthorn Woods	Lake	120	.	.	.	.	.	.	.	.	.	45.7	45.7	45.7	.	45.7
Aqua Illinois - Ivanhoe	Lake	524	55.1	83.3	66.1	81.9	.	.	.	153.2	126.4	125.5	125.5	125.5	.	123.0
Aqua Illinois - Ravenna	Lake	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Central Lake Co Joint Act Water Agency	Lake	190,000	131.2	.	.	120.1	.	.	.	.	.	113.2	113.6	106.3	.	113.3
Elm-Oak Mutual Water System	Lake	70	.	81.7	66.0	78.7	63.8	53.0	94.1	90.9	77.5	114.8	100.7	83.9	.	84.1
Fox Lake	Lake	6,521	.	.	.	.	.	148.3	118.5	112.2	106.1	.	73.5	73.5	.	105.4
Fox Lake Plant 2	Lake	2,999	.	.	65.6	57.2	.	83.5	91.1	86.8	59.6	60.0	58.1	58.1	28.0	64.7
Grayslake	Lake	18,774	73.8	73.6	.	69.1	70.7	71.2	67.4	70.7	70.4	79.7	78.1	.	57.7	70.5
Gurnee	Lake	28,739	86.9	72.5	71.9	69.5	75.2	76.0	78.7	68.8	65.0	70.0	73.1	74.6	70.6	72.2
Hainesville	Lake	2,755	72.0	.	91.0	.	112.6	66.6	.	.	60.0	60.0	72.4	63.9	59.5	70.7
Hawthorn Woods	Lake	544	.	.	.	.	.	.	67.5	56.5	68.2	68.2	64.2	64.2	.	64.8
Highland Park	Lake	57,400	152.1	57.6	57.6	58.4	62.4	59.0	56.6	62.9	60.2	65.6	65.6	57.8	57.3	60.6
Highwood	Lake	5,604	116.7	.	.	88.7	83.6	.	118.4	81.4	50.0	50.7	54.0	52.2	53.3	70.3
Hilldale Manor Water Co	Lake	467	45.4	60.6	58.3	.	72.3	64.0	.	.	65.4	65.4	69.3	87.5	.	70.6
Lake Barrington	Lake	719	.	.	.	.	.	.	.	.	.	39.9	24.5	.	37.4	33.9
Lake Bluff	Lake	5,639	78.0	81.4	76.8	80.6	84.7	76.8	98.0	96.1	95.8	79.6	92.5	89.0	89.3	88.2
Lake Forest	Lake	20,355	132.7	193.9	.	221.2	229.1	196.4	185.2	204.1	200.2	.	200.6	153.7	130.6	191.2
Lake Villa	Lake	5,932	.	.	.	.	.	.	.	.	100.2	84.0	80.7	72.6	49.6	77.4
Lake Zurich	Lake	18,611	108.4	101.6	103.3	104.4	104.2	101.9	101.6	107.2	102.4	99.9	99.9	100.1	97.0	101.9
Lcpw - Knollwood Pws	Lake	3,996	.	.	124.8	.	.	.	.	.	.	.	117.4	95.9	108.4	107.2
Libertyville	Lake	20,741	66.9	77.8	76.2	127.1	133.0	125.8	122.9	126.7	109.3	131.8	78.5	73.8	68.9	109.8
Lincolnshire	Lake	6,300	102.0	84.0	93.1	92.9	98.9	100.4	91.2	94.6	97.7	92.0	96.2	.	76.7	93.4
Lindenhurst	Lake	12,941	62.8	58.3	55.9	71.6	84.3	71.0	89.8	70.3	70.2	61.9	71.3	76.6	76.3	74.3
Mundelein	Lake	30,548	.	.	56.5	56.8	59.3	58.7	54.8	53.0	53.3	53.2	57.2	52.7	.	55.4
North Chicago	Lake	19,020	70.0	75.3	52.7	55.3	58.9	54.8	65.6	59.4	59.4	57.7	57.1	60.4	56.7	58.5
Providence At Painted Lakes	Lake	1,679	.	.	.	.	.	.	.	.	67.5	71.3	76.7	60.1	58.8	66.9

Community/Utility	County	Population 1998-07	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	Average 1998-07
Riverwoods	Lake	2,051	.	.	.	.	.	.	.	.	75.3	142.6	149.7	131.0	127.3	125.2
Rockwell Utilities, Llc	Lake	1,022	96.9	106.8	108.1	102.6	112.1	.	.	.	.	68.3	68.3	68.3	.	84.0
Rosing Lakeview Water Assn	Lake	113	60.5	72.8	75.6	73.3	82.1	.	.	.	89.9	81.5	81.5	.	.	81.6
Round Lake	Lake	8,456	60.2	58.6	62.5	63.3	70.6	71.0	61.0	61.2	66.3	74.9	101.3	98.1	56.8	72.5
Round Lake Beach	Lake	27,799	64.5	64.3	60.3	55.3	58.3	60.2	55.5	51.2	55.3	54.7	61.5	48.2	56.2	55.6
Round Lake Heights	Lake	2,325	.	.	25.4	.	.	32.3	60.1	60.1	45.9	38.6	38.6	38.6	.	44.9
Round Lake Park	Lake	4,920	55.3	55.5	.	.	.	50.1	49.4	54.6	47.4	48.0	49.1	49.7	49.0	49.7
Saddlebrook Farms	Lake	1,478	99.3	99.3	.	.	.	.	86.8	104.0	87.4	107.6	98.9	98.9	.	97.3
Schwermanns 2nd And 3rd Wtr Brd	Lake	285	96.9	88.5	94.5	86.6	101.9	.	.	.	.	108.8	.	.	.	99.1
Tower Lakes	Lake	1,250	76.5	75.4	82.4	.	.	.	.	116.4	111.4	.	88.3	88.3	.	101.1
Utilities Inc - Char-Mar Water Co	Lake	168	52.2	49.2	52.4	50.1	56.7	63.7	.	71.3	64.1	64.1	64.1	58.9	.	61.6
Utilities Inc - Harbor Ridge Utilities Inc	Lake	877	62.5	56.3	51.2	50.8	48.4	46.3	.	.	.	.	.	44.1	.	47.4
Utilities Inc - Valentine Water Service	Lake	237	63.1	69.7	64.9	67.3	72.9	75.1	.	.	.	.	.	62.3	.	69.4
Vernon Hills	Lake	17,321	.	.	107.4	.	.	.	.	.	146.8	100.5	136.2	136.1	134.4	130.8
Volo	Lake	742	.	.	.	.	.	.	.	.	16.7	37.1	74.0	50.4	52.1	46.1
Wauconda	Lake	10,443	.	.	.	.	.	.	92.3	.	.	.	.	.	80.3	86.3
Waukegan	Lake	94,360	106.3	93.5	.	75.6	77.0	62.8	53.3	54.9	66.0	62.9	0.1	53.9	52.9	55.9
Whispering Lakes Water System Inc	Lake	290	72.1	89.3	174.5	182.0	216.8	.	0.0	0.0	72.8	72.6	70.7	70.7	.	85.7
Winthrop Harbor	Lake	6,914	205.7	182.3	200.9	50.1	52.1	55.6	52.4	58.4	51.0	52.9	61.4	50.0	55.0	53.9
Wynstone Water Co	Lake	1,291	163.9	155.9	130.8	151.8	160.6	153.8	135.1	158.9	132.1	133.0	150.4	116.2	130.1	142.2
Zion	Lake	23,386	74.4	73.4	73.6	77.8	63.7	67.5	50.3	57.5	51.6	60.0	62.6	63.0	56.4	61.0
Island Lake	Lake/McHenry	8,033	75.5	73.0	67.1	62.5	65.4	64.2	49.0	63.5	57.4	.	60.8	53.8	54.7	59.0
Lakemoor	Lake/McHenry	1,920	.	.	.	81.7	101.4	.	67.0	85.8	50.5	66.1	58.3	.	50.6	70.2
	MCHENRY	14,214	.	.	.	.	.	.	67.8	67.8	69.4	65.8	84.5	83.5	93.1	76.0
Cary	McHenry	16,858	83.7	79.4	78.5	74.7	72.9	74.5	74.7	83.2	73.2	70.8	75.2	69.1	67.9	73.6
Crystal Clear Water Co	McHenry	1,249	95.4	29.1	52.4	55.6	59.5	70.1	37.2	75.9	72.5	35.9	47.4	27.0	37.8	51.9
Crystal Lake	McHenry	37,982	21.3	77.4	73.7	67.0	79.6	74.1	59.4	58.5	62.2	72.3	77.2	.	70.7	69.0

Community/Utility	County	Population 1998-07	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	Average 1998-07
Eastwood Manor Water Co	McHenry	900	50.0	50.0	.	.	.	.	.	.	77.7	77.7	77.7	.	.	77.7
Fox River Grove	McHenry	4,738	99.2	71.2	76.9	78.2	79.8	71.5	94.9	95.3	85.7	82.9	87.8	91.1	71.6	83.9
Harvard	McHenry	8,033	.	86.8	108.5	58.8	92.0	.	53.5	99.5	54.7	55.1	96.7	120.0	100.5	81.2
Hebron	McHenry	1,101	99.5	78.4	85.9	.	74.9	60.1	69.8	78.2	65.0	73.8	77.4	73.2	68.2	71.2
Highland Shores Water Co	McHenry	2,661	29.5	19.6	90.4	.	41.7	26.6	29.5	101.2	97.8	35.5	109.6	.	.	63.1
Illinois American - Terra Cotta	McHenry	530	.	.	.	.	.	.	59.6	.	120.1	123.7	150.4	50.0	25.8	88.3
Island Lake Water Co	McHenry	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Johnsburg 1	McHenry	3,332	.	.	.	.	.	77.8	.	.	96.7	82.9	.	.	.	85.8
Johnsburg 2	McHenry	3,448	69.5	69.5	.	.	.	.	.	.	54.2	49.2	.	.	.	51.7
Lake In The Hills	McHenry	26,526	77.0	84.8	.	96.5	.	85.6	.	97.6	67.9	66.8	72.9	72.9	61.3	77.7
Lakewood	McHenry	1,904	.	.	.	.	.	97.8	91.6	101.6	133.1	96.7	111.9	81.3	81.5	99.5
Marengo	McHenry	7,031	101.8	72.0	95.3	.	.	.	81.6	80.3	64.8	73.2	79.0	79.5	77.1	76.5
Mc Henry Shores Water Co	McHenry	1,782	.	28.7	.	.	55.4	68.9	32.7	158.4	66.5	69.0	99.7	70.0	35.0	72.8
McHenry	McHenry	18,713	81.2	68.6	83.6	.	79.3	73.0	73.0	75.5	74.8	67.9	73.6	.	82.2	74.9
Northern Il Utilities Inc	McHenry	1,554	.	23.3	.	.	.	.	32.9	92.3	63.6	.	.	.	.	62.9
Nunda Utility Co	McHenry	465	70.7	70.7	.	.	.	.	.	.	.	.	.	.	.	.
Richmond	McHenry	1,220	42.5	49.3	55.6	.	.	.	.	.	55.8	66.0	66.0	66.0	.	63.4
Union	McHenry	580	42.6	42.6	.	.	.	.	.	.	115.0	115.0	115.0	.	.	115.0
Utilities Inc - Holiday Hills	McHenry	694	64.8	68.1	64.4	64.3	66.8	71.7	.	.	.	.	.	.	.	67.6
Utilities Inc - Killarney Water Co	McHenry	999	70.7	72.0	64.2	67.1	66.2	62.9	.	89.9	81.4	76.9	76.9	77.0	.	74.8
Utilities Inc - Walkup Woods Water Co	McHenry	672	69.9	67.7	75.7	73.0	77.2	77.4	.	90.6	90.6	90.6	82.4	.	.	83.1
Utilities Inc - Whispering Hills Water	McHenry	6,955	65.0	64.4	61.1	62.8	63.6	57.9	.	65.6	65.1	65.1	65.1	.	.	63.6
Wonder Lake Water Co	McHenry	1,417	49.8	27.3	44.0	44.3	46.8	54.0	61.7	56.0	59.0	33.1	53.1	.	.	51.0
Woodstock	McHenry	20,208	57.2	64.2	55.7	87.9	64.9	66.0	61.0	64.9	63.4	58.4	66.4	87.0	63.7	68.4
Aqua Illinois - Oakview	Will	469	44.3	44.3	46.9	69.9	.	78.9	150.4	152.4	97.8	193.1	33.1	.	60.6	104.5
Aqua Illinois - University Park	Will	8,810	85.6	53.5	.	.	84.6	52.9	55.3	.	112.1	149.9	76.4	49.7	.	83.0
Aqua Illinois - Village Woods	Will	696	132.6	123.7	.	.	104.2	88.3	97.5	38.0	72.1	83.8	75.3	61.9	71.2	76.9

Community/Utility	County	Population 1998-07	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	Average 1998-07
Aqua Illinois - Willowbrook Utilities	Will	2,465	.	123.0	.	.	119.8	68.5	75.1	94.8	90.3	84.6	.	.	93.3	89.5
Beecher	Will	2,293	103.2	105.1	69.6	65.2	79.1	64.6	.	118.9	118.9	105.8	.	.	.	92.1
Bolingbrook	Will	24,362	118.9	69.3	79.5	74.5	69.1	61.7	63.1	.	.	.	.	.	.	67.1
Bonnie Brae - Forest Manor San Dist	Will	4,650	80.1	66.4	65.4	.	72.2	.	.	.	.	.	.	.	.	72.2
Braidwood	Will	5,040	60.4	.	88.9	.	193.5	91.0	86.5	52.0	74.8	78.3	92.8	70.6	61.7	89.0
Channahon	Will	6,193	.	73.1	.	.	.	.	.	.	75.4	72.7	69.3	67.2	84.2	73.8
Crest Hill	Will	14,110	49.8	48.2	67.7	67.7	.	67.7	67.3	63.4	53.1	72.3	.	48.7	54.8	61.9
Crete	Will	8,349	.	75.6	67.9	77.9	76.9	.	.	.	.	.	.	.	73.0	75.9
Eastmoreland Water Corp - Joliet	Will	134	95.4	80.9	76.2	.	.	72.4	74.4	59.7	116.2	75.2	62.1	109.0	127.1	87.0
Eastmoreland Water Service Assn - Lenox	Will	760	85.4	.	.	.	84.4	108.7	.	0.0	.	82.4	104.6	124.0	93.9	85.4
Elwood	Will	1,430	.	.	50.3	.	137.0	80.6	106.5	.	.	.	.	.	.	108.0
Greenfield Community Well Co	Will		72.0	.	.	.	.	.	.	.	.	.	.	.	.	.
Illinois American - Arbury Hills Division	Will	1,302	76.6	75.2	73.3	68.0	72.7	71.4	76.0	76.7	58.1	56.1	57.9	62.2	63.6	66.3
Illinois American - Central States Div	Will	137	71.1	66.5	65.5	67.0	59.4	55.8	60.5	63.0	64.4	61.8	55.2	54.1	63.8	60.5
Illinois American - Homer Twp Division	Will	22,567	.	.	.	.	.	.	.	.	74.9	66.4	52.2	78.5	76.7	69.7
Lockport	Will	19,957	63.4	53.2	45.8	94.6	61.0	88.3	61.2	62.7	67.9	79.8	83.9	83.9	.	75.9
Lockport Heights Sanitary Dist	Will	1,313	81.6	78.1	68.2	78.4	75.3	81.5	79.0	.	.	.	.	.	.	78.6
Lockport Twp Water System	Will	2,665	40.8	40.8	.	.	.	.	.	.	47.7	58.3	46.3	41.9	43.0	47.4
Manhattan	Will	3,476	77.5	117.8	130.6	108.0	155.7	85.2	85.5	.	90.1	109.5	130.7	.	.	109.3
Mokena	Will	15,588	112.2	0.2	88.7	90.5	101.9	92.6	99.1	101.0	86.3	87.9	94.1	88.0	89.8	93.1
Monee	Will	4,140	117.1	.	60.0	.	79.8	109.5	.	73.6	60.5	.	54.3	66.2	77.9	74.5
New Lenox	Will	20,378	.	67.7	80.9	82.0	78.2	79.7	81.7	73.4	69.7	67.6	29.6	.	68.5	70.0
Park Road Water Assn	Will	70	72.0	.	.	.	108.5	.	50.3	52.2	.	.	.	.	.	70.3
Peotone	Will	3,447	.	120.8	.	.	113.8	.	.	106.2	.	.	.	95.8	70.2	96.5
Plainfield	Will	20,350	90.0	87.4	132.8	93.3	70.2	77.1	81.6	105.0	109.1	93.1	104.1	80.0	84.6	89.8
Rockdale	Will	1,903	51.3	45.8	70.5	.	.	.	.	.	52.5	66.3	68.3	42.4	.	57.4

Community/Utility	County	Population 1998-07	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	Average 1998-07
Romeoville	Will	45,823	.	.	.	.	76.0	85.3	64.0	73.3	64.5	61.8	69.5	57.5	60.8	68.1
Shorewood	Will	10,231	.	.	.	.	62.1	65.7	68.4	.	80.3	64.6	76.5	52.0	.	67.1
Southeast Joliet Sanitary Dist	Will	2,316	59.7	59.7	.	.	.	.	.	.	.	.	85.9	85.9	.	85.9
Utilities Inc - Camelot Utilities Inc	Will	711	83.8	127.3	53.0	84.9	.	.	.	.	67.0	67.0	67.0	61.4	89.5	72.8
Utilities Inc - Cherry Hill Water Co	Will	709	75.6	93.3	32.6	66.4	.	.	.	.	62.0	62.0	62.0	52.6	64.2	61.5
Utilities Unlimited	Will		81.7	.	.	.	.	.	.	.	.	.	.	.	.	
Wilmington	Will	5,166	103.5	102.0	114.8	106.2	.	126.5	113.2	116.6	106.7	98.6	102.5	99.8	81.2	105.7
Average			85.9	82.4	79.9	83.0	85.3	80.4	80.1	82.9	80.5	79.2	82.1	76.8	73.2	80.9

Note: Columns labeled with calendar years show GPCD values

## APPENDIX B - PER CAPITA WATER USE IN OTHER RESIDENTIAL AREAS

Table B-1. Per Capita Rates of Residential Water Use  
in Self-supplied Mobile Home Parks in Northeastern Illinois

Mobile Home Park	County	Population	Units	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	1998-2007 GPCD
Capron	Boone	99	40	181.4	95.2	98.7	87.1	90.9	95.0	81.7	72.7	.	90.0	90.0	90.0	.	87.2
Oak Lawn	Boone	441	189	72.0	93.2	.	72.0	72.0	72.0	72.0	.	.	.	38.2	.	.	65.2
Park Meadowland W.	Boone	117	34	117.6	101.8	86.3	.	133.3	95.8	124.4	119.1	99.3	140.7	167.9	167.9	.	131.1
Alpine Village	Cook	1,868	625	72.0	52.8	.	.	.	68.6	.	.	.	.	.	.	.	68.6
Candlelight Village	Cook	786	309	93.7	93.7	57.8	55.8	.	.	59.6	59.6	.	61.7	.	.	.	59.2
Des Plaines	Cook	425	155	99.6	.	.	.	.	.	78.7	.	78.8	78.8	78.8	.	.	78.8
Linway Estates	Cook	450	242	142.3	142.3	.	.	.	172.1	174.1	168.6	149.2	144.0	144.0	125.6	137.2	151.9
Oasis - Elgin	Cook	1,731	599	.	65.9	.	.	.	.	.	65.7	.	.	61.6	51.0	57.6	59.0
Paradise	Cook	700	277	.	51.7	48.0	.	66.9	70.5	.	.	77.0	71.3	77.4	83.6	101.3	78.3
Silo	Cook	29	30	72.0	102.0	72.0	.	72.0	72.0	.	.	.	.	.	.	.	72.0
Spring Lakes	Cook	971	480	62.7	62.0	68.4	97.6	94.5	98.3	96.7	96.1	87.5	81.0	80.2	88.5	84.5	90.5
Sunset	Cook	1,385	450	57.4	55.9	61.4	.	68.8	111.4	75.9	88.5	72.7	69.2	71.7	71.7	.	78.7
Touhy	Cook	1,089	435	87.7	87.7	87.7	87.7	87.7	75.3	79.9	79.9	79.9	79.9	79.9	79.9	79.9	81.0
Willoway Terrace	Cook	587	326	96.1	.	.	.	.	.	77.8	80.0	80.0	80.0	53.3	45.6	41.5	65.5
Evergreen Village	DeKalb	268	130	.	116.7	109.6	.	90.6	99.1	.	.	126.5	139.5	146.0	154.5	112.3	124.1
Pleasant Ridge	DuPage	350	142	56.2	48.8	47.6	.	51.2	54.5	55.9	48.7	48.3	49.4	46.2	44.5	47.1	49.5
Vietzen	DuPage	140	99	.	.	.	.	.	.	.	.	51.7	51.7	51.7	.	.	51.7
Bookwalter Woods	Grundy	374	168	128.1	114.0	95.2	.	91.6	107.3	103.6	101.0	106.6	135.0	108.1	82.3	87.9	102.6
Shady Oaks	Grundy	996	365	72.1	99.1	78.8	.	69.2	77.1	86.7	90.3	92.0	83.3	74.7	70.5	75.1	79.9
Dearborn	Kane	21	14	.	.	.	.	.	.	.	.	32.1	42.3	42.3	.	.	38.9
Margarets Hi-Acre	Kane	292	100	.	.	.	.	53.7	54.9	60.2	57.7	61.4	63.6	59.2	61.7	89.1	62.4
Patterson	Kane	26	15	26.6	27.4	38.4	.	48.3	30.7	44.5	.	47.3	59.2	.	.	.	46.0

Mobile Home Park	County	Population	Units	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	1998-2007 GPCD
Barberry Acres	Kankakee	57	22	72.0	72.0	72.0	.	.	72.0	.	72.0	.	90.0	112.0	45.4	52.1	73.9
Bills	Kankakee	49	30	47.5	46.6	44.9	47.3	46.1	45.6	45.4	53.3	50.6	56.6	56.3	59.0	64.5	52.5
Countryside Mobile Est.	Kankakee	210	88	.	.	.	.	.	.	.	78.0	78.0	78.0	78.0	60.0	60.0	72.0
Manteno	Kankakee	222	74	.	.	.	.	86.9	86.9	85.9	65.1	68.0	71.1	71.6	80.6	77.6	77.1
Rivercrest	Kankakee	36	17	.	75.0	72.0	75.0	.	70.0	70.0	60.0	60.0	.	68.5	68.5	68.5	67.6
Sunny Acres	Kankakee	507	190	.	121.4	90.9	76.0	69.4	69.4	.	207.4	130.9	86.3	106.6	80.4	63.9	98.9
Chain O Lakes	Lake	98	66	52.2	.	.	.	.	.	.	.	100.0	100.0	100.0	.	.	100.0
Diamond Lake	Lake	148	63	59.4	61.7	61.7	74.2	89.2	.	.	.	99.3	80.0	80.0	80.0	.	83.8
Holly Hock Hill	Lake	58	29	76.1	60.1	50.0	60.0	50.0	.	65.6	54.8	66.0	64.3	54.8	68.5	68.0	61.3
Lakeview	Lake	574	190	100.9	.	.	.	.	.	.	42.9	42.9	42.5	42.5	43.1	.	42.8
Park City	Lake	2,860	698	.	.	.	.	.	.	.	.	53.0	63.2	91.1	48.3	.	63.9
Pauls	Lake	48	16	43.8	79.0	54.5	54.7	108.7	.	.	.	64.7	54.8	54.8	54.8	.	65.4
Rockland Llc	Lake	86	66	.	43.1	41.8	43.3	43.3	44.8	46.4	.	41.1	53.3	70.9	70.9	114.0	58.7
Shoreline Terrace	Lake	426	149	.	41.8	.	.	.	.	.	57.5	60.0	60.0	60.0	60.0	.	59.5
West Shore Park	Lake	540	171	76.5	78.3	.	.	.	.	.	.	.	74.7	74.7	.	.	74.7
Oakbrook Estates	McHenry	315	220	65.0	65.0	57.6	.	69.4	60.0	66.8	65.0	64.5	79.4	103.4	110.5	58.6	75.3
Royal Oaks	McHenry	100	59	72.0	80.0	80.0	80.0	80.0	80.0	80.0	72.0	60.0	60.0	75.0	.	75.0	73.6
Busy Bee	Will	38	30	108.4	.	.	.	.	.	.	.	171.4	161.4	157.3	157.3	.	161.8
Busy Bee #2	Will	21	13	61.0	.	.	.	.	.	.	.	.	111.8	105.6	105.6	.	107.6
Criswell Court	Will	124	72	72.0	.	.	.	26.7	25.9	25.0	24.2	25.9	24.9	25.8	26.0	.	25.5
Gateway	Will	509	367	78.4	78.4	.	.	.	104.2	107.7	114.2	94.0	94.0	94.0	112.9	.	103.0
Giannis	Will	25	17	39.8	98.2	98.2	23.8	19.5	34.6	18.3	46.0	52.4	43.8	45.5	43.7	.	36.4
Pheasant Lake Estates	Will	1,044	590	69.9	.	.	.	.	.	.	.	.	74.5	84.0	54.9	53.9	66.8
Treasure Island	Will	296	145	69.8	69.1	.	.	.	.	79.5	.	.	.	.	.	.	79.5
Total/Average		21,537	8,606	78.9	77.5	69.7	66.8	71.2	75.9	75.5	79.3	76.4	78.6	80.1	77.9	75.9	76.2

Note: Columns labeled with calendar years show GPCD values

Table B-2. Per Capita Rates of Residential Water Use  
in Self-supplied Residential Subdivisions in Northeastern Illinois

Name of Subdivision	County	Population	Units	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	1998-2007 GPCD
Buck Lake Estates Subd	DeKalb	154	50	94.2	90.5	92.8	.	77.0	93.3	90.8	98.8	87.4	85.8	87.6	73.4	77.4	85.7
Donny Brook Estates Subd	DeKalb	35	12	126.3	124.9	122.8	.	89.7	87.5	101.6	116.7	105.6	84.4	147.9	84.7	92.6	101.2
Valley View Subd	DeKalb	138	48	118.3	70.7	122.0	.	178.6	231.8	196.2	140.2	123.8	101.1	73.5	73.5	.	139.9
Glen Ellyn Heights Subd	DuPage	1,558	346	141.0	123.6	114.0	149.9	142.0	106.3	94.5	51.4	52.0	57.6	.	68.0	59.1	86.8
Polo Drive & Saddle Road Subd	DuPage	94	31	72.0	.	.	.	153.5	104.2	134.3	134.3	85.7	81.6	102.3	69.7	72.4	104.2
Steeple Run Subd	DuPage	2,287	626	69.3	66.5	54.7	68.1	76.6	66.5	68.5	68.7	64.5	63.6	69.0	61.9	65.1	67.3
Tee And Green Subd	DuPage	55	17	138.7	79.7	81.3	90.1	108.7	109.6	128.6	109.9	99.4	.	118.9	112.6	90.8	107.6
Hawthorn Estates Subd	Grundy	34	11	190.6	190.6	274.0	.	110.0	147.9	181.1	222.8	203.8	194.7	258.4	151.8	.	183.8
Heatherfield Subd	Grundy	93	30	80.4	66.4	32.2	70.9	71.7	71.7	94.4	71.1	68.6	65.1	72.2	60.5	.	71.8
Ridgecrest North Subd	Grundy	77	28	80.0	80.0	80.0	80.0	79.5	82.7	.	80.9	122.9	117.7	73.1	60.6	60.6	84.2
Highland Subd	Kane	51	20	109.6	80.0	54.5	50.2	43.8	60.0	50.0	50.0	50.2	50.2	53.3	54.8	54.8	51.7
Ogden Gardens Subd	Kane	357	119	133.1	114.1	129.2	131.0	138.9	137.5	153.5	155.7	128.7	107.6	96.0	89.2	106.2	124.4
Lake Shannon Inc	Kankakee	418	152	132.5	132.4	72.0	.	69.3	84.1	96.4	89.4	79.9	95.4	117.2	81.4	73.9	87.4
Fox Lawn Subdivision	Kendall	255	85	.	.	.	46.2	.	55.3	55.3	.	.	.	.	.	.	52.3
Storybook Highlands Subd	Kendall	100	32	102.7	89.1	95.4	.	.	90.0	90.0	90.0	90.0	.	.	.	.	90.0
Acorn Acres Subd	Lake	286	95	42.5	43.0	28.7	45.0	45.5	38.4	40.0	88.8	55.9	.	.	.	.	52.2
Arden Shores Estates Subd	Lake	64	22	61.0	64.2	65.9	73.1	75.6	56.9	64.8	76.4	68.2	57.8	80.2	58.6	68.9	68.0
Brooks Farm Subdivision	Lake	1,566	521	.	.	.	.	.	.	.	.	.	.	79.0	62.4	65.2	68.9
Countryside Lake Subd	Lake	619	269	.	.	144.0	.	.	.	141.9	144.7	183.9	133.3	149.3	111.8	135.1	142.9
Fairhaven Estates	Lake	297	88	.	.	104.8	.	113.6	113.6	113.3	.	.	129.5	129.5	129.5	.	121.5
Fox Lake Hills Subd	Lake	2,499	843	50.2	78.9	68.8	71.9	71.4	71.4	69.9	69.9	67.0	61.6	72.5	70.2	78.2	70.4
Glenstone Subd	Lake	44	15	213.8	.	.	.	614.9	406.7	514.6	363.9	323.1	197.4	274.0	274.0	.	371.1
Grandwood Park Subd	Lake	4,013	1,443	59.4	64.9	62.9	77.3	74.6	70.9	74.5	79.5	82.1	76.3	86.0	66.7	66.3	75.4
Highland Lake Subd	Lake	299	98	57.4	71.5	63.6	73.2	79.1	82.3	79.2	.	64.3	57.1	67.4	60.6	62.1	69.5
Pekara Subd	Lake	2,626	1,204	69.3	.	.	.	.	.	73.9	73.9	67.2	64.9	65.6	68.2	69.6	69.0
Rand Estates Subd	Lake	63	32	72.0	.	.	72.0	.	80.0	80.0	80.0	80.0	.	.	.	.	78.4



Name of Subdivision	County	Population	Units	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	1998-2007 GPCD
Sturm Subd	Lake	47	18	.	.	.	.	.	.	.	74.8	.	.	.	.	.	74.8
Sylvan Lake 1st Subd	Lake	191	69	100.7	110.2	103.5	104.4	85.2	.	85.7	.	.	53.1	53.1	53.1	.	72.4
Towners Subd	Lake	221	69	218.5	143.2	199.6	257.8	215.5	163.2	.	145.8	145.8	145.8	.	94.0	.	166.9
Wadsworth Oaks Subd	Lake	156	62	47.3	.	.	.	88.8	73.2	.	.	76.1	49.2	74.9	75.3	72.7	72.9
West Shoreland Subd	Lake	164	63	91.0	.	.	138.7	122.8	114.2	.	116.4	116.4	116.4	.	.	.	120.8
Wildwood Subd	Lake	8,986	4,129	.	.	65.7	.	.	77.7	80.4	80.9	87.0	.	83.8	74.8	73.4	79.7
Deering Oaks Subd	McHenry	56	20	101.3	83.1	83.1	63.9	61.9	.	70.9	100.0	.	.	72.4	72.4	.	73.6
Balmoral Heights Subd	Will	356	128	47.9	49.2	44.8	50.7	52.2	49.0	46.4	.	.	48.2	49.1	47.7	45.0	48.5
Beckwith Subd	Will	61	23	.	.	121.9	.	.	.	142.9	220.2	245.3	179.4	155.8	154.4	96.8	170.7
Clearview Subd	Will	275	112	180.8	324.1	320.6	.	320.6	320.6	323.8	.	.	.	.	.	.	321.6
College View Subd	Will	542	189	45.9	.	63.3	.	57.7	54.6	66.0	63.2	54.6	55.3	64.6	64.6	.	60.1
Dixie Estates Subd	Will	150	57	52.1	59.4	.	49.4	45.5	48.6	52.2	63.2	.	53.4	47.3	46.3	56.5	51.4
Fair Acres Subd	Will	146	52	55.2	.	.	.	.	63.7	72.8	64.0	73.4	62.3	63.5	64.0	50.0	64.2
Hillview Subdivision	Will	88	33	70.6	.	58.9	65.8	64.4	66.6	67.6	67.3	99.4	55.2	68.9	68.9	51.9	67.6
Ingalls Park Subd	Will	729	249	81.2	70.7	69.5	.	.	.	83.4	75.0	80.6	80.6	80.6	.	.	80.1
Ridgewood Subd	Will	220	68	130.3	87.7	.	.	.	.	.	87.7	89.5	88.2	57.0	60.5	55.5	73.1
Sunnyland Subd	Will	313	104	55.7	57.6	50.3	.	58.7	45.0	35.3	35.6	35.6	44.2	44.9	40.9	43.8	42.7
Total/Average		30,781	11,682	97.0	96.9	98.2	87.1	115.7	103.7	108.7	104.3	101.7	88.3	93.8	81.7	70.9	99.2

Note: Columns labeled with calendar years show GPCD values

Table B-3. Per Capita Rates of Residential Water Use  
in Self-supplied Homeowners Associations in Northeastern Illinois

Homeowner Association	county	Popul	Units	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	1998-07 GPCD
Briarcrest Subd Homeowners Assn	Lake	125	44	299.9	329.8	.	.	.	252.2	252.2	.	.	211.4	211.4	286.6	.	242.8
Crystal Heights Assn	McHenry	77	37	78.2	78.2	78.2	.	.	.	80.0	145.6	.	.	.	.	.	112.8
Crystal Lawns Additional Improvement Assoc.	Will	1,303	410	30.4	37.4	58.9	51.3	50.7	55.6	53.8	.	93.8	48.8	.	.	52.9	58.1
DI Well Owners Assn	Lake	121	46	68.1	77.8	74.0	86.0	63.4	.	63.8	.	.	76.3	76.3	76.3	.	73.7
Eastmoreland Water Service Assn - Lenox	Will	662	222	85.4	.	.	.	84.4	108.7	.	86.2	.	82.4	104.6	124.0	93.9	97.7
Garden Street Improvement Assn	Will	43	18	72.0	.	.	.	.	.	.	74.1	70.8	74.7	74.7	58.2	.	70.5
Golf Greenwood Improvement Assn	Cook	201	69	86.4	.	.	.	.	.	.	68.9	68.9	55.8	94.4	50.4	62.4	66.8
Lakewood Shores Improvement Assn	Will	758	249	41.0	38.3	77.7	35.7	38.3	47.6	55.3	49.4	47.7	45.8	48.6	50.5	46.1	46.5
Liberty Park Homeowners Assn	DuPage	694	358	84.8	62.3	.	77.3	77.4	83.6	97.5	.	97.2	.	.	.	97.1	88.4
Ports Of Sullivan Lake Owners Assn	Lake	293	148	.	.	.	.	.	.	.	.	.	46.7	46.7	.	.	46.7
Prairie Oaks Estates Homeowners Assn	Grundy	77	32	116.8	.	.	138.9	114.8	90.3	104.2	71.5	79.2	74.6	93.8	66.2	.	92.6
Prairie Ridge Assn	McHenry	117	49	74.7	87.9	161.2	164.0	180.1	.	154.4	124.3	123.6	123.6	123.6	.	.	142.0
Royal Melbourne Homeowner Assn	Lake	228	83	196.0	.	168.7	209.7	265.9	227.2	.	.	.	211.2	211.2	227.2	.	225.4
Second Street Water Assn	Lake	25	11	.	.	.	.	.	400.0	.	100.0	.	.	.	.	.	250.0
Shadow Lakes li Association	Will	1,281	729	.	25.8	.	.	.	21.5	25.1	23.9	22.2	.	.	.	.	23.1
Shawnita Terrace Water Assn	Will	109	42	88.8	71.6	77.5	.	57.3	71.9	91.6	79.4	73.7	59.3	88.7	90.6	84.7	77.5
Summit Homeowners Assn	Lake	33	12	.	.	.	.	.	66.7	66.7	66.7	100.0	90.0	117.0	117.0	.	89.1
Tanneron Bay Homeowners Association	Lake	99	76	.	102.0	.	.	82.2	.	73.6	.	.	.	.	.	.	77.9
West Shore Park Home Owners Assn	Lake	416	154	76.5	78.3	.	.	.	.	85.2	.	.	74.7	74.7	.	.	78.2
Total/Average		6,663	2,789	99.9	89.9	99.5	109.0	101.5	129.6	92.6	80.9	77.7	91.1	105.1	114.7	72.8	103.1

Note: Columns labeled with calendar years show GPCD values

Table B-4. Per Capita Rates of Residential Water Use  
in Self-supplied Apartment Complexes in Northeastern Illinois

Apartment Complex	County	Popula- tion	Units	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	1998-07 GPCD
Bourbon Square Apartments	Cook	975	272	.	113.3	113.3	.	.	93.8	.	.	.	.	.	.	.	93.8
Colonial Park Apartments	Lake	600	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Heiden Gardens Condominiums	Lake	260	88	62.3	53.2	55.3	72.1	67.6	60.3	75.8	53.9	60.6	63.9	63.9	47.0	.	62.8
Melrose Rental Apts	Kane	39	19	72.0	.	.	.	.	.	.	.	.	.	.	.	.	.
Pine View Apartments	Lake	40	18	.	.	.	.	.	.	.	97.7	100.0	100.0	100.0	100.0	.	99.5
Plum Creek Condominiums	Cook	571	228	87.1	.	96.5	104.5	83.7	83.7	.	91.7	97.5	101.4	90.7	79.7	104.6	93.1
Plum Grove Condominiums	Cook	239	82	35.1	38.7	42.9	57.6	33.2	36.0	.	.	.	31.5	29.4	29.4	.	36.2
Strawberry 1 Condominium Devlp	Lake	357	156	.	.	.	.	47.1	.	.	.	.	.	.	.	.	47.1
Terrace Oak Apartments	Lake	58	30	.	.	.	.	.	.	.	.	.	.	66.7	66.7	.	66.7
York Center Co-Op	DuPage	260	79	52.3	85.0	33.2	47.4	53.0	47.1	50.0	49.6	46.0	46.6	55.7	67.1	45.1	50.8

Note: Columns labeled with calendar years show GPCD values