Appendix A. Public System Demand-Estimation Methodology and Supplemental Tables

A.1 Public System Demand Estimation Methodology

A regression equation was fitted to historical data on per-capita public system demand and the corresponding six explanatory variables (average of maximum-daily temperatures during the five-month May-September summer season, total precipitation during the summer season, ratio of local employment to resident population, median household income in 2010 dollars, marginal price of water in 2010 dollars, and an annual time [conservation] trend variable).

The data include 470 observations (5 data years times 94 water service areas) from three Illinois Department of Natural Resources-defined water-supply planning regions for which the Illinois State Water Service simulataneously estimated water demand during 2014 and 2015, the 11-county Northwestern Illinois region (this report), the 7-county Middle Illinois region (Meyer et al., In preparation-b), and the 3-county Kankakee Watershed region (Meyer et al., In preparation-a). However, data on the marginal price of water could be obtained for only 296 data points, and this smaller subset of observations was used to estimate the parameters of the regression model.

The estimation methodology initially employed a procedure known as *robust regression* (Yohai and Zamar, 1997), which allows for the reduction of the undue influence of specific "problematic" observations on estimated model parameters. Potentially problematic observations include outliers, whose values lie at the extremes, as well as leverage points, which have a strong influence on the overall fit and estimated parameters of a model. Note that an observation can be designated as a leverage point, but not a "bad" leverage point; it can confirm the underlying relationship, as opposed to changing it.

The robust regression procedures identified 18 problematic observations (out of 296), of which 4 were designated as potential outliers and 14 as potential leverage points (with one observation–the 2005 Putnam County residual–being both an outlier and a leverage point).

The final regression model of per-capita water use was estimated after excluding four outlier points (La Salle 2000, 2005, 2010; and Putnam Co. residual 2005) and six "undue/unjustifiable" leverage points (Colona East 2000, Peru 2010, Toluca 2010, Wyoming 2010, Stockton 2010, and East Moline 2010).

The regression equation was estimated as a log-linear model in which the dependent variable (per-capita water use) and four independent variables were converted to their natural logarithms. The ratio of employment to population and the time trend variable were left in their linear form. The resultant ordinary least squares (OLS) regression model is shown in Table A.1 below.

The regression equation explains about 35 percent of the variance in log-transformed per-capita water use. Two variables, employment-to-population ratio and marginal price, have highly significant regression coefficients ($p<0.0001$). The significance of the remaining four independent variables is marginal, but all four have t-statistics greater than 1. Despite the low statistical significance of the two weather variables (as well as the income and time trend variables), the sizes and signs of the estimated regression coefficients are near their expected values (in comparison to the literature and the coefficients obtained in three other regional water demand studies in Illinois).

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Table A.1 Estimated Log-Linear Equation of Per-Capita Water Demand – Regression Output

Description	Parameter	Parameter	Parameter	Parameter	Parameter
R Square	0.348869				
R Square Adj.	0.334866				
Root Mean Square Error	0.251919				
Mean of Response	4.781111				
Observations (or Sum Weights)	286				
	DF	**Sum of Squares**	**Mean Square**	**F Ratio**	**Prob. > F**
Model	6	9.48679	1.58113	24.9142	<.0001
Error	279	17.706218	0.06346		
C. Total	285	27.193008		0.03173	
Term	**Estimate**	**Std Error**	**t Ratio**	**Prob. >|t|**	
Intercept	-0.42031	4.22315	-0.10	0.9208	
Ln (Max. Summer Temperature)	1.13185	0.93504	1.21	0.2271	
Ln (Total Summer Precipitation)	-0.05946	0.05681	-1.05	0.2961	
Employment/Population Ratio	0.50331	0.06283	8.01	<.0001	
Ln (Median Household Income)	0.12183	0.09050	1.35	0.1793	
Ln (Marginal Price of Water)	-0.19770	0.03438	-5.75	<.0001	
Time Trend	-0.00412	0.00293	-1.40	0.1616	

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Table A.2 Active Public Water Systems in the Northwestern Illinois Region (2010)

Boone County

Aqua Illinois - Candlewick Division	Capron MHP	Park Meadowland West MHP
Belvidere	Maple Crest Care Center LLC	Poplar Grove
Capron	Oak Lawn MHP	

Bureau County

Arlington	Ladd	Spring Valley
Buda	Malden	The Grove MHP
Bureau Junction	Manlius	Tiskilwa
Dalzell	Ohio	Van Orin Water Co
Depue	Orchard View Rehab & Health Care Center	Walnut
Dover	Princeton	Wyanet
Hollowayville	Seatonville	
La Moille	Sheffield	

Carroll County

Century Pines Apartments	Milledgeville	Shannon
Chadwick	Mount Carroll	Thomson
Lanark	Savanna	

Henry County

Alpha	Galva	Ophiem Water Systems, Inc
Andover	Geneseo	Orion
Annawan	Geneseo Hills Subd	Osco Mutual Wtr Supply Co Inc
Atkinson	Hazelwood 4th Addn	Riverview MHP - Geneseo
Bishop Hill	Hazelwood Heights Subd	Rustic Homeowners & Wtr Assn
Black Hawk College - East Campus	Hazelwood West Subd	Sunny Hill Estates Subd
Buysse Subd	Hillcrest Home	Timber Brook Estates Subd
Cambridge	Kewanee	Timber Ridge Subd
Colona East	Lake Lynwood Water Assn	Windcrest Subd
Colona Park LLC	Lynn Water Association, Inc	Wolf Ridge Well Corp
Colona West System	North Hazelwood Subd	Woodhull
Country Club Estates Subd	Oak View Estates	
Country Estates Subd	Oakwood Place Subd	

Jo Daviess County

Apple River	Galena	Utilities Inc - Apple Canyon Utilities Co
Bahl Water Corporation	Hanover	Utilities Inc - Galena Territory
East Dubuque	Mt Vernon Homeowners Assn	Warren
Elizabeth	Scales Mound	Wienen Estates
Frentress Lake	Stockton	

Lee County

Amboy	Green Acres MHP	Steward

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Ashton	Harmon	Sublette
Compton	Lee	West Brooklyn
Dixon	Paw Paw	White Oak Estates
Dixon Correctional Center	Rock River Estates MHP	Woodhaven Utilities
Franklin Grove	Sauk Valley Student Housing	

Ogle County

Byron	Lost Lake Utility District	Rockvale Corporation
Creston	Mt Morris	Rolling Green Estates MHP
Davis Junction	Mt Morris Estates MHP	Rolling Meadows MHP
Forreston	Nordic Woods Subd	Stillman Valley
Hillcrest	Oregon	Woodlawn Utility Corp
Knolls Edge Subd	Polo	
Leaf River	Rochelle	

Rock Island County

Air View MHP	East Moline	Rapids City
Andalusia	Eberts 3rd Addition	Reynolds
Arrow Head Ranch	Edgington Water District	Ridgewood Ledges Water Assn
Candle Light Community MHP	Evergreen Village Subd	River Oaks MHP
Carbon Cliff	Fairacres Assn	Rock Island
Cedar Brook Estates Subd	Falcon Farms MHP	Rock Island Arsenal
Cherry Dale Subd	Hampton	Silvis
Chigakwa Park Estates Subd	Hidden Meadows	Silvis Heights Water Corp
Clover Leaf Village MHP	Hillsdale MHP	Suburban Heights Subd
Coal Valley	Milan	Tower Ridge Subd
Cordova	Moline	Whispering Hills MHP
Coyne Center Coop	Paradise Manor MHP	Winding Creek Estates
Croppers 1st, 4th, & 5th Addns	Port Byron	Woodland A&B MHP
East Lawn Water Assn	Rainbow Ridge	

Stephenson County

Cedarville	German Valley	Stephenson Mobile Estates MHP
Dakota	Lena	Timber Ridge MHP
Davis	Orangeville	Utilities Inc - Northern Hills Utilities Co
Freeport	Rock City	Winslow

Whiteside County

Albany	Illinois American - Sterling	Rock Falls
Country Acres MHP	Lyndon	Tampico
Erie	Morrison	
Fulton	Prophetstown	

Winnebago County

Anns MHP	Larchmont Subd	Riverview MHP
Bill Mar Heights MHP	Legend Lakes Water Assn	Rockford
Bradley Heights Subd	Loves Park	Rockton
Cherry Valley	Mancuso Village Park MHP	Sheridan Grove Water System
Clarks MHP	Maryville Farm Campus	Six Oaks MHP

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Durand	North Park PWD	Timber Creek MHP
Family Manufactured Home Community, LLC	Otter Creek Lake Utility Dist	Utilities Inc - Coventry Creek Subd
Forest View MHP	Pecatonica	Utilities Inc - Coventry Hills Utilities Inc
Great Oaks & Beacon Hills Apts	Phil-Aire Estates MHP	Utilities Inc - Westlake Utilities Inc.
Green Meadow Estates Of Rockford	Prairie Road Pump Company	Wildwood Utility Co
Illinois American - South Beloit	Rainbow Lane MHP	Winnebago

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Table A.3 Historical Values of Dependent and Independent Variables for Dominant Systems

Public Water System	Year	Demand (Mgd)	Demand (gpcd)	Max. Summer T (°F)[1]	Summer Precip. (inches)[2]	Employment-to-Population Ratio	Marginal Price (2010$)	Median Household Income (2010$)
Boone County								
Belvidere	1990	3.53	227.6	76.1	22.8	0.513	1.01	49,619
Belvidere	1995	3.13	177.1	79.6	18.2	0.521	1.19	50,877
Belvidere	2000	3.24	155.6	76.7	22.9	0.524	1.42	53,965
Belvidere	2005	3.66	155.6	80.4	12.4	0.415	1.42	50,048
Belvidere	2010	2.99	116.1	79.2	24.1	0.415	2.10	42,529
Bureau County								
Depue	1990	0.19	111.4	77.4	30.5	0.021		
Depue	1995	0.21	119.0	79.6	19.6	0.020		
Depue	2000	0.17	96.5	79.5	20.9	0.028		42,778
Depue	2005	0.27	149.6	82.7	10.9	0.020	4.33	39,480
Depue	2010	0.20	104.5	81.7	26.0	0.014	4.25	37,865
Princeton	1990	1.17	162.6	77.4	30.5	0.848	4.12	46,097
Princeton	1995	1.26	175.0	79.6	19.6	0.848	3.62	49,258
Princeton	2000	1.26	175.0	79.5	20.9	0.813	4.22	52,242
Princeton	2005	1.07	140.1	82.7	10.9	0.741	3.00	47,146
Princeton	2010	0.95	124.2	81.7	26.0	0.677	4.01	44,339
Spring Valley	1990	0.61	116.2	77.4	30.5	0.239		40,778
Spring Valley	1995	0.66	124.9	79.6	19.6	0.326		46,255
SpringValley	2000	0.65	119.8	79.5	20.9	0.362		51,038
Spring Valley	2005	0.69	128.1	82.7	10.9	0.576	1.62	47,625
Spring Valley	2010	0.85	157.8	81.7	26.0	0.522	2.45	46,107
Walnut	1990	0.22	143.4	77.4	30.5	0.414		
Walnut	1995	0.22	149.3	79.6	19.6	0.414		
Walnut	2000	0.17	116.2	79.5	20.9	0.349		52,949
Walnut	2005	0.16	109.1	82.7	10.9	0.365		51,644
Walnut	2010	0.15	100.4	81.7	26.0	0.300	2.67	51,818
Carroll County								
Lanark	1990	0.21	146.8	77.7	26.8	0.524		
Lanark	1995	0.21	142.2	80.4	20.7	0.499		
Lanark	2000	0.22	144.2	78.8	30.1	0.438		46,727
Lanark	2005	0.19	114.3	82.2	12.4	0.401		44,760
Lanark	2010	0.17	108.9	81.0	32.3	0.498	6.00	44,276
Mount Carroll	1990	0.17	88.1	77.7	26.8	0.292		
Mount Carroll	1995	0.20	112.9	80.4	20.7	0.288		
Mount Carroll	2000	0.21	114.7	78.8	30.1	0.350	3.36	45,886
Mount Carroll	2005	0.18	95.4	82.2	12.4	0.279	2.86	43,694
Mount Carroll	2010	0.14	79.3	81.0	32.3	0.262	4.80	43,015
Savanna	1990	0.64	140.0	77.7	26.8	0.306		31,392
Savanna	1995	0.67	184.8	80.4	20.7	0.318		33,655
Savanna	2000	0.49	139.5	78.8	30.1	0.370		35,776
Savanna	2005	0.46	127.5	82.2	12.4	0.471		35,528
Savanna	2010	0.42	135.6	81.0	32.3	0.429	2.07	36,141

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Public Water System	Year	Demand (Mgd)	Demand (gpcd)	Max. Summer T (°F)[1]	Summer Precip. (inches)[2]	Employment-to-Population Ratio	Marginal Price (2010$)	Median Household Income (2010$)
Henry County								
Cambridge	1990	0.26	118.9	78.3	29.8	0.171		
Cambridge	1995	0.32	149.0	80.1	21.7	0.169	2.91	
Cambridge	2000	0.23	100.9	79.5	20.2	0.183	2.62	50,855
Cambridge	2005	0.21	100.5	82.8	10.9	0.190	2.87	50,862
Cambridge	2010	0.20	94.1	81.5	27.7	0.152	2.56	52,016
Colona East	1990	0.15	67.4	78.3	29.8	0.063	2.08	
Colona East	1995	0.15	66.7	80.1	21.7	0.076	1.83	
Colona East	2000	0.14	55.8	79.5	20.2	0.092	1.65	54,593
Colona East	2005	0.21	87.3	82.8	10.9	0.096	1.40	50,398
Colona East	2010	0.19	78.1	81.5	27.7	0.122	1.25	48,348
Galva	1990	0.45	149.6	78.3	29.8	0.274		34,590
Galva	1995	0.27	98.7	80.1	21.7	0.255		40,830
Galva	2000	0.29	98.6	79.5	20.2	0.292		46,162
Galva	2005	0.38	137.3	82.8	10.9	0.261	2.02	43,102
Galva	2010	0.26	93.7	81.5	27.7	0.281	1.80	41,750
Geneseo	1990	0.65	105.8	78.3	29.8	0.847	3.93	46,950
Geneseo	1995	0.65	107.3	80.1	21.7	0.815	3.45	50,415
Geneseo	2000	0.66	106.7	79.5	20.2	0.886	3.11	53,650
Geneseo	2005	0.71	108.5	82.8	10.9	0.944	2.84	53,494
Geneseo	2010	0.65	101.1	81.5	27.7	0.893	3.19	54,583
Kewanee	1990	1.47	102.8	78.3	29.8	0.399	2.67	31,973
Kewanee	1995	1.63	113.3	80.1	21.7	0.399	3.13	35,896
Kewanee	2000	1.57	108.5	79.5	20.2	0.444	2.82	39,349
Kewanee	2005	1.55	107.5	82.8	10.9	0.345	4.88	37,989
Kewanee	2010	1.89	132.0	81.5	27.7	0.267	6.55	37,813
Jo Daviess County								
East Dubuque	1990	0.25	122.7	76.4	20.0	0.724	2.83	
East Dubuque	1995	0.24	124.7	79.1	17.7	0.771	2.49	
East Dubuque	2000	0.22	109.1	77.0	21.1	0.809	3.86	46,199
East Dubuque	2005	0.20	100.4	80.1	17.4	0.600	3.62	42,737
East Dubuque	2010	0.20	99.3	79.5	32.8	0.718	3.74	41,071
Galena	1990	0.81	208.4	76.4	20.0	0.821		37,405
Galena	1995	0.64	165.3	79.1	17.7	0.836		42,820
Galena	2000	0.83	240.1	77.0	21.1	1.033		47,521
Galena	2005	0.67	194.0	80.1	17.4	1.136	4.04	47,173
Galena	2010	0.43	124.6	79.5	32.8	1.033	4.72	47,974
Stockton	1990	0.52	274.4	76.4	20.0	0.790	0.75	
Stockton	1995	0.60	314.4	79.1	17.7	0.754	0.66	
Stockton	2000	0.47	242.0	77.0	21.1	0.592	1.90	47,281
Stockton	2005	0.33	169.9	80.1	17.4	0.563	2.47	40,977
Stockton	2010	0.36	195.8	79.5	32.8	0.562	4.00	37,113
Lee County								
Amboy	1990	0.33	138.9	75.6	24.7	0.200		
Amboy	1995	0.36	144.6	77.5	19.4	0.202		

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Public Water System	Year	Demand (Mgd)	Demand (gpcd)	Max. Summer T (°F)[1]	Summer Precip. (inches)[2]	Employment-to-Population Ratio	Marginal Price (2010$)	Median Household Income (2010$)
Amboy	2000	0.39	145.8	75.2	25.7	0.241		47,714
Amboy	2005	0.48	183.2	80.2	10.7	0.220	7.20	44,677
Amboy	2010	0.38	147.1	78.4	23.3	0.222	8.45	43,378
Ashton	1990	0.24	222.4	75.6	24.7	0.442	2.42	
Ashton	1995	0.27	240.9	77.5	19.4	0.473	2.12	
Ashton	2000	0.28	249.7	75.2	25.7	0.541	1.91	52,513
Ashton	2005	0.14	120.2	80.2	10.7	0.550	2.03	47,741
Ashton	2010	0.16	143.4	78.4	23.3	0.669	2.35	45,192
Dixon	1990	2.33	153.0	75.6	24.7	0.550		42,040
Dixon	1995	2.52	163.5	77.5	19.4	0.551		44,620
Dixon	2000	2.41	148.4	75.2	25.7	0.561		47,099
Dixon	2005	2.33	141.0	80.2	10.7	0.602		42,477
Dixon	2010	2.30	142.2	78.4	23.3	0.518	2.94	39,924
Ogle County								
Byron	1990	0.48	154.9	76.7	21.2	0.922		
Byron	1995	0.55	210.1	78.6	20.2	0.922		
Byron	2000	0.69	168.8	77.5	24.0	0.879	1.38	48,737
Byron	2005	0.72	175.8	80.5	12.5	0.730	4.49	50,711
Byron	2010	0.58	144.2	78.6	20.2	0.726	5.00	53,355
Mt Morris	1990	0.30	97.9	76.7	21.2	0.761		43,852
Mt Morris	1995	0.32	105.0	78.6	20.2	0.761	2.66	49,474
Mt Morris	2000	0.32	108.2	77.5	24.0	0.706	3.07	54,405
Mt Morris	2005	0.35	104.9	80.5	12.5	0.735	2.64	50,456
Mt Morris	2010	0.30	95.2	78.6	20.2	0.397	3.77	48,594
Oregon	1990	0.43	119.0	76.7	21.2	0.590		43,215
Oregon	1995	0.41	106.3	78.6	20.2	0.592		44,447
Oregon	2000	0.41	132.8	77.5	24.0	0.725	2.50	45,861
Oregon	2005	0.42	101.4	80.5	12.5	0.652	2.13	46,373
Oregon	2010	0.37	90.9	78.6	20.2	0.576	2.51	47,808
Polo	1990	0.25	97.6	76.7	21.2	0.370	1.32	41,940
Polo	1995	0.27	108.8	78.6	20.2	0.374	1.15	46,807
Polo	2000	0.26	103.2	77.5	24.0	0.327	1.04	51,114
Polo	2005	0.26	105.2	80.5	12.5	0.290	2.63	49,572
Polo	2010	0.20	82.3	78.6	20.2	0.280	3.34	49,519
Rochelle	1990	3.27	371.2	76.7	21.2	0.580		45,775
Rochelle	1995	2.92	317.4	78.6	20.2	0.581		47,849
Rochelle	2000	3.14	323.2	77.5	24.0	0.579		49,961
Rochelle	2005	2.01	209.0	80.5	12.5	0.553		47,246
Rochelle	2010	2.82	291.1	78.6	20.2	0.514	1.93	46,250
Rock Island County								
East Moline	1990	3.70	176.8	78.9	28.3	0.468		41,243
East Moline	1995	3.66	177.6	80.7	17.4	0.468		44,309
East Moline	2000	4.61	225.6	80.0	22.8	0.454		47,169
East Moline	2005	4.29	208.3	83.4	9.5	0.412		44,253
East Moline	2010	4.41	205.0	81.4	29.6	0.336	4.89	43,037
Milan	1990	0.78	120.0	78.9	28.3	0.884	2.25	41,707

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Public Water System	Year	Demand (Mgd)	Demand (gpcd)	Max. Summer T (°F)[1]	Summer Precip. (inches)[2]	Employment-to-Population Ratio	Marginal Price (2010$)	Median Household Income (2010$)
Milan	1995	0.91	157.7	80.7	17.4	0.884	2.14	43,525
Milan	2000	0.52	86.3	80.0	22.8	0.838	2.09	45,392
Milan	2005	0.56	111.3	83.4	9.5	0.946	1.99	41,720
Milan	2010	0.51	102.9	81.4	29.6	1.054	2.12	39,872
Moline	1990	5.31	122.0	78.9	28.3	0.556	3.08	45,853
Moline	1995	5.49	120.6	80.7	17.4	0.556	4.05	46,935
Moline	2000	5.37	118.5	80.0	22.8	0.596	3.55	48,254
Moline	2005	5.30	120.4	83.4	9.5	0.573	4.26	48,319
Moline	2010	5.37	120.7	81.4	29.6	0.580	3.80	49,459
Rock Island	1990	4.73	99.5	78.9	28.3	0.419	3.03	40,218
Rock Island	1995	5.13	126.2	80.7	17.4	0.422	3.17	37,387
Rock Island	2000	5.21	130.8	80.0	22.8	0.409	3.17	35,520
Rock Island	2005	5.49	141.9	83.4	9.5	0.492	2.90	39,050
Rock Island	2010	5.41	142.2	81.4	29.6	0.462	3.77	42,613
Silvis	1990	0.63	103.7	78.9	28.3	0.275		37,257
Silvis	1995	0.64	106.4	80.7	17.4	0.271		41,983
Silvis	2000	0.41	59.5	80.0	22.8	0.264		46,131
Silvis	2005	0.55	92.1	83.4	9.5	0.283	2.30	42,400
Silvis	2010	0.60	82.0	81.4	29.6	0.336	4.02	40,522
Stephenson County								
Cedarville	1990	0.07	88.2	76.4	20.0	0.099		
Cedarville	1995	0.04	59.4	79.1	17.7	0.101		
Cedarville	2000	0.06	83.1	77.0	21.1	0.102	2.50	58,717
Cedarville	2005	0.06	80.4	80.1	17.4	0.088	2.13	58,027
Cedarville	2010	0.08	114.2	79.5	32.8	0.104	2.05	58,813
Freeport	1990	4.50	172.4	76.4	20.0	0.655		41,263
Freeport	1995	4.22	162.9	79.1	17.7	0.708	1.94	43,998
Freeport	2000	3.22	117.1	77.0	21.1	0.655	2.08	46,594
Freeport	2005	3.22	121.7	80.1	17.4	0.597	1.96	40,891
Freeport	2010	2.92	113.2	79.5	32.8	0.500	2.01	37,481
Lena	1990	0.23	90.2	76.4	20.0	0.295	2.67	47,327
Lena	1995	0.24	84.8	79.1	17.7	0.295	2.34	50,469
Lena	2000	0.25	87.7	77.0	21.1	0.345	2.24	53,450
Lena	2005	0.28	107.8	80.1	17.4	0.346	2.02	49,378
Lena	2010	0.27	96.7	79.5	32.8	0.373	2.60	47,399
Whiteside County								
Fulton	1990	0.30	77.9	77.9	15.4	0.354		42,977
Fulton	1995	0.42	111.5	80.3	21.3	0.354		45,971
Fulton	2000	0.43	106.9	79.8	24.4	0.390		48,791
Fulton	2005	0.35	87.7	83.2	13.2	0.385	3.93	49,589
Fulton	2010	0.32	79.5	79.9	24.6	0.418	3.34	51,314
IL Amer - Sterling	1990	2.64	176.3	77.9	15.4	0.665		42,727
IL Amer - Sterling	1995	2.89	179.3	80.3	21.3	0.766		46,282
IL Amer - Sterling	2000	2.06	137.4	79.8	24.4	0.771	2.87	49,549
IL Amer - Sterling	2005	1.69	103.3	83.2	13.2	0.665	3.83	43,423
IL Amer - Sterling	2010	1.58	102.0	79.9	24.6	0.570	4.82	39,749

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Public Water System	Year	Demand (Mgd)	Demand (gpcd)	Max. Summer T (°F)[1]	Summer Precip. (inches)[2]	Employment-to-Population Ratio	Marginal Price (2010$)	Median Household Income (2010$)
Morrison	1990	0.85	194.6	77.9	15.4	0.570		46,175
Morrison	1995	0.74	165.1	80.3	21.3	0.570		49,633
Morrison	2000	0.57	127.7	79.8	24.4	0.551		52,855
Morrison	2005	0.54	123.1	83.2	13.2	0.480		48,496
Morrison	2010	0.50	111.9	79.9	24.6	0.397	4.29	46,279
Prophetstown	1990	0.22	104.4	77.9	15.4	0.515		
Prophetstown	1995	0.22	120.9	80.3	21.3	0.515		
Prophetstown	2000	0.22	112.4	79.8	24.4	0.571		49,296
Prophetstown	2005	0.27	123.9	83.2	13.2	0.495	1.68	46,636
Prophetstown	2010	0.19	87.3	79.9	24.6	0.374	2.00	45,667
Rock Falls	1990	1.08	112.0	77.9	15.4	0.353		36,012
Rock Falls	1995	1.14	126.2	80.3	21.3	0.353		40,994
Rock Falls	2000	1.30	133.8	79.8	24.4	0.419		45,334
Rock Falls	2005	1.14	117.7	83.2	13.2	0.411	2.08	39,204
Rock Falls	2010	0.97	100.0	79.9	24.6	0.336	2.85	35,432
Winnebago County								
IL Amer - S Beloit	1990	0.68	166.7	77.0	26.9	0.747		43,885
IL Amer - S Beloit	1995	0.62	146.7	79.2	18.1	0.747		49,657
IL Amer - S Beloit	2000	0.57	94.8	77.2	30.8	0.699	3.34	54,707
IL Amer - S Beloit	2005	0.61	129.2	80.9	12.6	0.706		51,077
IL Amer - S Beloit	2010	0.77	98.1	79.6	25.2	0.364	3.43	49,472
Loves Park	1990	3.11	198.8	77.0	26.9	0.762	1.38	51,912
Loves Park	1995	3.16	180.9	79.2	18.1	0.762	1.61	55,867
Loves Park	2000	2.22	110.9	77.2	30.8	0.793	1.65	59,544
Loves Park	2005	3.42	150.4	80.9	12.6	0.515	2.08	53,941
Loves Park	2010	3.18	128.8	79.6	25.2	0.429	3.88	50,901
North Park PWD	1990	1.85	83.1	77.0	26.9	0.636		
North Park PWD	1995	2.28	95.1	79.2	18.1	0.482		
North Park PWD	2000	2.74	105.2	77.2	30.8	0.410		
North Park PWD	2005	3.65	121.7	80.9	12.6	0.321		
North Park PWD	2010	3.48	100.1	79.6	25.2	0.204	3.59	37,886
Rockford	1990	27.19	194.2	77.0	26.9	1.000	1.45	47,137
Rockford	1995	26.32	176.7	79.2	18.1	1.000	1.60	47,956
Rockford	2000	24.57	158.5	77.2	30.8	1.169	1.67	49,078
Rockford	2005	25.64	164.4	80.9	12.6	1.008	1.80	42,329
Rockford	2010	20.22	124.6	79.6	25.2	0.939	2.11	38,157
Rockton	1990	0.54	184.2	77.0	26.9	0.636	2.40	58,463
Rockton	1995	0.71	166.2	79.2	18.1	0.482	2.11	67,559
Rockton	2000	0.69	141.8	77.2	30.8	0.410	1.90	75,411
Rockton	2005	0.91	116.1	80.9	12.6	0.321	1.62	75,922
Rockton	2010	0.81	108.4	79.6	25.2	0.204	1.67	78,023

[1]Average of monthly maximum summer (May-September) T (°F)
[2]Total summer (May-September) precipitation (inches)

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Table A.4 Allocation of Future Population Served to Water Supply Systems (CT, LRI, and MRI Scenarios)

Public Water System	2010	2015	2020	2025	2030	2035	2040	2045	2050	2055	2060
Boone County											
Belvidere	25,720	27,802	29,883	31,965	34,046	36,128	38,210	40,291	42,373	44,454	46,536
Boone County Residual	9,597	10,230	10,902	11,218	11,560	11,903	12,245	12,588	12,930	13,273	13,615
Boone County Total	*35,317*	*38,031*	*40,785*	*43,182*	*45,607*	*48,031*	*50,455*	*52,879*	*55,303*	*57,727*	*60,151*
Bureau County											
Depue	1,905	1,905	1,905	1,905	1,905	1,905	1,905	1,905	1,905	1,905	1,905
Princeton	7,660	7,714	7,768	7,822	7,876	7,930	7,984	8,038	8,092	8,146	8,200
Spring Valley	5,398	5,425	5,453	5,480	5,508	5,535	5,562	5,590	5,617	5,645	5,672
Walnut	1,491	1,491	1,491	1,491	1,491	1,491	1,491	1,491	1,491	1,491	1,491
Bureau County Residual	8,943	8,943	8,943	8,943	8,943	8,943	8,943	8,943	8,943	8,943	8,943
Bureau County Total	*25,397*	*25,478*	*25,560*	*25,641*	*25,723*	*25,804*	*25,885*	*25,967*	*26,048*	*26,130*	*26,211*
Carroll County											
Lanark	1,598	1,598	1,598	1,598	1,598	1,598	1,598	1,598	1,598	1,598	1,598
Mount Carroll	1,742	1,742	1,742	1,742	1,742	1,742	1,742	1,742	1,742	1,742	1,742
Savanna	3,122	3,122	3,122	3,122	3,122	3,122	3,122	3,122	3,122	3,122	3,122
Carroll County Residual	3,024	3,024	3,024	3,024	3,024	3,024	3,024	3,024	3,024	3,024	3,024
Carroll County Total	*9,486*	*9,486*	*9,486*	*9,486*	*9,486*	*9,486*	*9,486*	*9,486*	*9,486*	*9,486*	*9,486*
Henry County											
Cambridge	2,108	2,108	2,108	2,108	2,108	2,108	2,108	2,108	2,108	2,108	2,108
Colona East	2,473	2,473	2,473	2,473	2,473	2,473	2,473	2,473	2,473	2,473	2,473
Galva	2,779	2,779	2,779	2,779	2,779	2,779	2,779	2,779	2,779	2,779	2,779
Geneseo	6,400	6,500	6,601	6,701	6,801	6,902	7,002	7,102	7,202	7,303	7,403
Kewanee	14,350	14,350	14,350	14,350	14,350	14,350	14,350	14,350	14,350	14,350	14,350
Henry County Residual	12,437	12,437	12,437	12,437	12,437	12,437	12,437	12,437	12,437	12,437	12,437
Henry County Total	*40,547*	*40,647*	*40,748*	*40,848*	*40,948*	*41,049*	*41,149*	*41,249*	*41,349*	*41,450*	*41,550*
Jo Daviess County											
East Dubuque	1,970	1,970	1,970	1,970	1,970	1,970	1,970	1,970	1,970	1,970	1,970
Galena	3,461	3,461	3,461	3,461	3,461	3,461	3,461	3,461	3,461	3,461	3,461
Stockton	1,862	1,862	1,862	1,862	1,862	1,862	1,862	1,862	1,862	1,862	1,862
Jo Daviess County Residual	10,376	10,376	10,376	10,376	10,376	10,376	10,376	10,376	10,376	10,376	10,376

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Public Water System	2010	2015	2020	2025	2030	2035	2040	2045	2050	2055	2060
Jo Daviess County Total	*17,669*	*17,669*	*17,669*	*17,669*	*17,669*	*17,669*	*17,669*	*17,669*	*17,669*	*17,669*	*17,669*
Lee County											
Amboy	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600
Ashton	1,100	1,100	1,100	1,100	1,100	1,100	1,100	1,100	1,100	1,100	1,100
Dixon	16,200	16,200	16,200	16,200	16,200	16,200	16,200	16,200	16,200	16,200	16,200
Lee County Residual	11,293	11,501	11,708	11,916	12,123	12,331	12,538	12,746	12,953	13,161	13,368
Lee County Total	*31,193*	*31,401*	*31,608*	*31,816*	*32,023*	*32,231*	*32,438*	*32,646*	*32,853*	*33,061*	*33,268*
Ogle County											
Byron	4,000	4,293	4,586	4,878	5,171	5,464	5,757	6,050	6,342	6,635	6,928
Mt Morris	3,100	3,100	3,100	3,100	3,100	3,100	3,100	3,100	3,100	3,100	3,100
Oregon	4,100	4,100	4,100	4,100	4,100	4,100	4,100	4,100	4,100	4,100	4,100
Polo	2,485	2,485	2,485	2,485	2,485	2,485	2,485	2,485	2,485	2,485	2,485
Rochelle	9,700	9,805	9,910	10,016	10,121	10,226	10,331	10,436	10,542	10,647	10,752
Ogle County Residual	10,049	10,112	10,212	10,310	10,409	10,508	10,607	10,706	10,805	10,904	11,003
Ogle County Total	*33,434*	*33,895*	*34,393*	*34,889*	*35,386*	*35,883*	*36,380*	*36,877*	*37,374*	*37,871*	*38,368*
Rock Island County											
East Moline	21,531	21,705	21,879	22,052	22,226	22,400	22,574	22,748	22,921	23,095	23,269
Milan	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000
Moline	44,483	44,483	44,483	44,483	44,483	44,483	44,483	44,483	44,483	44,483	44,483
Rock Island	38,084	38,084	38,084	38,084	38,084	38,084	38,084	38,084	38,084	38,084	38,084
Silvis	7,269	7,269	7,269	7,269	7,269	7,269	7,269	7,269	7,269	7,269	7,269
Rock Island County Residual	19,578	20,027	20,477	20,926	21,375	21,825	22,274	22,723	23,172	23,622	24,072
Rock Island County Total	*135,945*	*136,568*	*137,191*	*137,814*	*138,437*	*139,061*	*139,684*	*140,307*	*140,930*	*141,553*	*142,177*
Stephenson County											
Cedarville	719	719	719	719	719	719	719	719	719	719	719
Freeport	25,800	25,800	25,800	25,800	25,800	25,800	25,800	25,800	25,800	25,800	25,800
Lena	2,800	2,800	2,800	2,800	2,800	2,800	2,800	2,800	2,800	2,800	2,800
Stephenson County Residual	3,955	6,512	6,739	6,967	7,195	7,423	7,650	7,878	8,106	8,333	8,561
Stephenson County Total	*33,274*	*35,831*	*36,058*	*36,286*	*36,514*	*36,742*	*36,969*	*37,197*	*37,425*	*37,652*	*37,880*
Whiteside County											
Fulton	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000
IL Amer - Sterling	15,451	15,451	15,451	15,451	15,451	15,451	15,451	15,451	15,451	15,451	15,451

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Public Water System	2010	2015	2020	2025	2030	2035	2040	2045	2050	2055	2060
Morrison	4,447	4,447	4,447	4,447	4,447	4,447	4,447	4,447	4,447	4,447	4,447
Prophetstown	2,150	2,204	2,257	2,311	2,364	2,418	2,472	2,525	2,579	2,632	2,686
Rock Falls	9,700	9,700	9,700	9,700	9,700	9,700	9,700	9,700	9,700	9,700	9,700
Whiteside County Residual	4,463	4,463	4,463	4,463	4,463	4,463	4,463	4,463	4,463	4,463	4,463
Whiteside County Total	*40,211*	*40,265*	*40,318*	*40,372*	*40,425*	*40,479*	*40,533*	*40,586*	*40,640*	*40,693*	*40,747*
Winnebago County											
IL Amer - South Beloit	7,800	7,882	7,988	8,089	8,110	8,173	8,237	8,300	8,364	8,427	8,491
Loves Park	24,700	24,960	25,295	25,615	25,682	25,883	26,084	26,285	26,486	26,687	26,888
North Park PWD	34,737	35,103	35,573	36,024	36,118	36,400	36,683	36,966	37,249	37,531	37,814
Rockford	162,296	164,006	166,204	168,310	168,746	170,067	171,389	172,710	174,031	175,352	176,673
Rockton	7,440	7,518	7,619	7,716	7,736	7,796	7,857	7,917	7,978	8,039	8,099
Winnebago County Residual	39,300	39,714	40,246	40,756	40,862	41,182	41,502	41,822	42,142	42,462	42,781
Winnebago County Total	*276,273*	*279,183*	*282,925*	*286,510*	*287,253*	*289,502*	*291,751*	*294,000*	*296,249*	*298,498*	*300,747*
REGIONAL TOTAL	**678,746**	**688,454**	**696,742**	**704,514**	**709,471**	**715,935**	**722,399**	**728,862**	**735,326**	**741,789**	**748,254**

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Table A.5 Total Public System Demand by Study Area and County, Current Trends (CT) Scenario (Mgd)

Public Water System	2010 Reported[1]	2010 Normal[2]	2015	2020	2025	2030	2035	2040	2045	2050	2055	2060
Boone County												
Belvidere	2.986	2.957	3.29	3.49	3.69	3.89	4.07	4.26	4.43	4.61	4.78	4.94
Boone County Residual	0.739	0.732	0.80	0.85	0.86	0.88	0.89	0.91	0.92	0.93	0.95	0.96
Boone County Total	*3.725*	*3.689*	*4.09*	*4.34*	*4.55*	*4.76*	*4.96*	*5.16*	*5.35*	*5.54*	*5.72*	*5.90*
Bureau County												
Depue	0.199	0.196	0.20	0.20	0.20	0.19	0.19	0.19	0.19	0.19	0.18	0.18
Princeton	0.951	0.935	0.97	0.96	0.96	0.95	0.95	0.94	0.94	0.93	0.93	0.92
Spring Valley	0.852	0.837	0.87	0.86	0.85	0.85	0.84	0.84	0.83	0.82	0.82	0.81
Walnut	0.150	0.147	0.15	0.15	0.15	0.15	0.14	0.14	0.14	0.14	0.14	0.14
Bureau County Residual	0.838	0.824	0.85	0.84	0.83	0.82	0.81	0.80	0.79	0.78	0.77	0.76
Bureau County Total	*2.990*	*2.938*	*3.04*	*3.01*	*2.98*	*2.96*	*2.93*	*2.91*	*2.89*	*2.86*	*2.84*	*2.81*
Carroll County												
Lanark	0.174	0.174	0.18	0.18	0.17	0.17	0.17	0.17	0.17	0.16	0.16	0.16
Mount Carroll	0.138	0.138	0.14	0.14	0.14	0.14	0.14	0.13	0.13	0.13	0.13	0.13
Savanna	0.423	0.423	0.44	0.43	0.42	0.42	0.41	0.41	0.40	0.40	0.39	0.39
Carroll County Residual	0.372	0.371	0.38	0.38	0.37	0.37	0.36	0.36	0.36	0.35	0.35	0.34
Carroll County Total	*1.107*	*1.105*	*1.14*	*1.12*	*1.11*	*1.10*	*1.08*	*1.07*	*1.06*	*1.05*	*1.03*	*1.02*
Henry County												
Cambridge	0.198	0.198	0.20	0.20	0.20	0.20	0.19	0.19	0.19	0.19	0.18	0.18
Colona East	0.193	0.192	0.20	0.20	0.19	0.19	0.19	0.19	0.18	0.18	0.18	0.18
Galva	0.260	0.259	0.29	0.26	0.26	0.26	0.25	0.25	0.25	0.25	0.24	0.24
Geneseo	0.647	0.645	0.67	0.68	0.68	0.68	0.68	0.68	0.69	0.69	0.69	0.69
Kewanee	1.894	1.888	1.94	1.92	1.90	1.87	1.85	1.83	1.81	1.79	1.76	1.74
Henry County Residual	0.924	0.921	0.95	0.94	0.93	0.91	0.90	0.89	0.88	0.87	0.86	0.85
Henry County Total	*4.116*	*4.104*	*4.27*	*4.19*	*4.15*	*4.11*	*4.07*	*4.04*	*4.00*	*3.96*	*3.92*	*3.88*
Jo Daviess County												
East Dubuque	0.196	0.196	0.20	0.20	0.20	0.19	0.19	0.19	0.19	0.19	0.18	0.18
Galena	0.431	0.433	0.45	0.44	0.43	0.43	0.42	0.42	0.41	0.41	0.40	0.40
Stockton	0.365	0.366	0.38	0.37	0.37	0.36	0.36	0.35	0.35	0.35	0.34	0.34
Jo Daviess County Residual	0.983	0.986	1.02	1.00	0.99	0.98	0.97	0.96	0.94	0.93	0.92	0.91

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Public Water System	2010 Reported[1]	2010 Normal[2]	2015	2020	2025	2030	2035	2040	2045	2050	2055	2060
Jo Daviess County Total	*1.974*	*1.981*	*2.04*	*2.01*	*1.99*	*1.97*	*1.94*	*1.92*	*1.90*	*1.87*	*1.85*	*1.83*
Lee County												
Amboy	0.383	0.375	0.39	0.38	0.38	0.37	0.37	0.36	0.36	0.36	0.35	0.35
Ashton	0.158	0.155	0.16	0.16	0.16	0.15	0.15	0.15	0.15	0.15	0.14	0.14
Dixon	2.304	2.261	2.33	2.30	2.27	2.24	2.22	2.19	2.16	2.14	2.11	2.09
Lee County Residual	1.240	1.217	1.28	1.28	1.29	1.30	1.30	1.31	1.32	1.32	1.33	1.33
Lee County Total	*4.084*	*4.009*	*4.15*	*4.12*	*4.10*	*4.07*	*4.04*	*4.01*	*3.99*	*3.96*	*3.93*	*3.91*
Ogle County												
Byron	0.577	0.569	0.63	0.66	0.70	0.73	0.76	0.79	0.82	0.85	0.88	0.91
Mt Morris	0.295	0.291	0.30	0.30	0.29	0.29	0.29	0.28	0.28	0.28	0.27	0.27
Oregon	0.373	0.368	0.38	0.29	0.28	0.28	0.28	0.27	0.27	0.27	0.26	0.26
Polo	0.205	0.202	0.21	0.21	0.20	0.20	0.20	0.20	0.19	0.19	0.19	0.19
Rochelle	2.823	2.786	2.90	2.90	2.89	2.89	2.88	2.88	2.87	2.86	2.86	2.85
Ogle County Residual	0.848	0.837	0.87	0.87	0.86	0.86	0.86	0.86	0.85	0.85	0.85	0.85
Ogle County Total	*5.120*	*5.053*	*5.28*	*5.21*	*5.23*	*5.25*	*5.26*	*5.28*	*5.29*	*5.30*	*5.31*	*5.32*
Rock Island County												
East Moline	4.415	4.442	4.61	4.59	4.57	4.55	4.53	4.51	4.49	4.47	4.45	4.43
Milan	0.514	0.518	0.53	0.53	0.52	0.51	0.51	0.50	0.50	0.49	0.48	0.48
Moline	5.371	5.404	5.56	5.50	5.43	5.36	5.30	5.24	5.17	5.11	5.05	4.99
Rock Island	5.415	5.449	5.61	5.54	5.48	5.41	5.34	5.28	5.22	5.15	5.09	5.03
Silvis	0.596	0.600	0.62	0.61	0.60	0.60	0.59	0.58	0.57	0.57	0.56	0.55
Rock Island County Residual	1.748	1.758	1.85	1.87	1.89	1.91	1.92	1.94	1.95	1.97	1.98	2.00
Rock Island County Total	*18.059*	*18.170*	*18.78*	*18.64*	*18.49*	*18.34*	*18.20*	*18.05*	*17.91*	*17.76*	*17.62*	*17.48*
Stephenson County												
Cedarville	0.082	0.082	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
Freeport	2.920	2.930	3.02	2.98	2.94	2.91	2.87	2.84	2.81	2.77	2.74	2.71
Lena	0.271	0.272	0.28	0.28	0.27	0.27	0.27	0.26	0.26	0.26	0.25	0.25
Stephenson County Residual	0.366	0.368	0.62	0.64	0.65	0.66	0.68	0.69	0.70	0.71	0.72	0.73
Stephenson County Total	*3.639*	*3.652*	*4.00*	*3.98*	*3.95*	*3.92*	*3.90*	*3.87*	*3.85*	*3.82*	*3.79*	*3.77*
Whiteside County												
Fulton	0.318	0.322	0.33	0.33	0.32	0.32	0.32	0.31	0.31	0.30	0.30	0.30
IL Amer - Sterling	1.576	1.594	1.64	1.62	1.60	1.58	1.56	1.54	1.53	1.51	1.49	1.47

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Public Water System	2010 Reported[1]	2010 Normal[2]	2015	2020	2025	2030	2035	2040	2045	2050	2055	2060
Morrison	0.498	0.504	0.52	0.51	0.51	0.50	0.49	0.49	0.48	0.48	0.47	0.46
Prophetstown	0.188	0.190	0.20	0.20	0.21	0.21	0.21	0.21	0.21	0.22	0.22	0.22
Rock Falls	0.970	0.982	1.01	1.00	0.99	0.97	0.96	0.95	0.94	0.93	0.92	0.91
Whiteside County Residual	0.308	0.311	0.32	0.32	0.31	0.31	0.31	0.30	0.30	0.29	0.29	0.29
Whiteside County Total	*3.857*	*3.902*	*4.02*	*3.98*	*3.94*	*3.89*	*3.85*	*3.81*	*3.77*	*3.73*	*3.69*	*3.65*
Winnebago County												
IL Amer - South Beloit	0.765	0.768	0.80	0.80	0.80	0.79	0.79	0.79	0.78	0.78	0.78	0.77
Loves Park	3.182	3.193	3.32	3.33	3.33	3.30	3.28	3.27	3.25	3.24	3.22	3.21
North Park PWD	3.477	3.490	3.63	3.64	3.64	3.60	3.59	3.57	3.56	3.54	3.52	3.51
Rockford	20.221	20.301	21.12	21.15	21.16	20.96	20.87	20.77	20.68	20.59	20.50	20.40
Rockton	0.807	0.810	0.84	0.84	0.84	0.84	0.83	0.83	0.82	0.82	0.82	0.81
Winnebago County Residual	2.348	2.357	2.45	2.45	2.46	2.43	2.42	2.41	2.40	2.39	2.38	2.37
Winnebago County Total	*30.800*	*30.920*	*32.17*	*32.21*	*32.22*	*31.92*	*31.78*	*31.64*	*31.50*	*31.36*	*31.22*	*31.07*
REGIONAL TOTAL	**79.473**	**79.522**	**82.98**	**82.82**	**82.72**	**82.29**	**82.03**	**81.76**	**81.48**	**81.21**	**80.92**	**80.63**

[1]2010 (Reported): computed from reported total demand in 2010
[2]2010 (Normal): computed from weather-normalized total demand in 2010(obtained by substituting normal weather conditions into the regression model)

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Table A.6 Total Public System Demand by Study Area and County, Less Resource Intensive (LRI) Scenario (Mgd)

Public Water System	2010 Reported[1]	2010 Normal[2]	2015	2020	2025	2030	2035	2040	2045	2050	2055	2060
Boone County												
Belvidere	2.986	2.957	3.10	3.22	3.34	3.44	3.54	3.62	3.70	3.77	3.83	3.88
Boone County Residual	0.739	0.732	0.76	0.78	0.78	0.78	0.77	0.77	0.77	0.76	0.76	0.75
Boone County Total	*3.725*	*3.689*	*3.85*	*4.00*	*4.12*	*4.22*	*4.31*	*4.40*	*4.47*	*4.53*	*4.59*	*4.64*
Bureau County												
Depue	0.199	0.196	0.19	0.18	0.18	0.17	0.17	0.16	0.16	0.15	0.15	0.14
Princeton	0.951	0.935	0.91	0.89	0.87	0.85	0.82	0.80	0.78	0.76	0.74	0.73
Spring Valley	0.852	0.837	0.81	0.79	0.77	0.75	0.73	0.71	0.69	0.67	0.66	0.64
Walnut	0.150	0.147	0.14	0.14	0.13	0.13	0.13	0.12	0.12	0.11	0.11	0.11
Bureau County Residual	0.838	0.824	0.80	0.77	0.75	0.72	0.70	0.68	0.66	0.64	0.62	0.60
Bureau County Total	*2.990*	*2.938*	*2.86*	*2.78*	*2.70*	*2.62*	*2.55*	*2.48*	*2.41*	*2.34*	*2.27*	*2.21*
Carroll County												
Lanark	0.174	0.174	0.17	0.16	0.16	0.15	0.15	0.14	0.14	0.13	0.13	0.13
Mount Carroll	0.138	0.138	0.13	0.13	0.13	0.12	0.12	0.11	0.11	0.11	0.10	0.10
Savanna	0.423	0.423	0.41	0.40	0.38	0.37	0.36	0.35	0.34	0.33	0.32	0.31
Carroll County Residual	0.372	0.371	0.36	0.35	0.34	0.33	0.32	0.31	0.30	0.29	0.28	0.27
Carroll County Total	*1.107*	*1.105*	*1.07*	*1.04*	*1.00*	*0.97*	*0.94*	*0.91*	*0.88*	*0.86*	*0.83*	*0.80*
Henry County												
Cambridge	0.198	0.198	0.19	0.19	0.18	0.17	0.17	0.16	0.16	0.15	0.15	0.14
Colona East	0.193	0.192	0.19	0.18	0.17	0.17	0.16	0.16	0.15	0.15	0.14	0.14
Galva	0.260	0.259	0.28	0.24	0.24	0.23	0.22	0.21	0.21	0.20	0.19	0.19
Geneseo	0.647	0.645	0.63	0.62	0.61	0.60	0.59	0.58	0.57	0.56	0.55	0.54
Kewanee	1.894	1.888	1.83	1.77	1.71	1.66	1.61	1.56	1.51	1.46	1.42	1.37
Henry County Residual	0.924	0.921	0.89	0.86	0.84	0.81	0.78	0.76	0.74	0.71	0.69	0.67
Henry County Total	*4.116*	*4.104*	*4.02*	*3.87*	*3.76*	*3.65*	*3.54*	*3.44*	*3.34*	*3.24*	*3.14*	*3.05*
Jo Daviess County												
East Dubuque	0.196	0.196	0.19	0.18	0.18	0.17	0.17	0.16	0.16	0.15	0.15	0.14
Galena	0.431	0.433	0.42	0.41	0.39	0.38	0.37	0.36	0.35	0.33	0.32	0.31
Stockton	0.365	0.366	0.35	0.34	0.33	0.32	0.31	0.30	0.29	0.28	0.27	0.27
Jo Daviess County Residual	0.983	0.986	0.95	0.92	0.90	0.87	0.84	0.81	0.79	0.76	0.74	0.72

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Public Water System	2010 Reported[1]	2010 Normal[2]	2015	2020	2025	2030	2035	2040	2045	2050	2055	2060
Jo Daviess County Total	*1.974*	*1.981*	*1.92*	*1.86*	*1.80*	*1.74*	*1.69*	*1.63*	*1.58*	*1.53*	*1.48*	*1.44*
Lee County												
Amboy	0.383	0.375	0.36	0.35	0.34	0.33	0.32	0.31	0.30	0.29	0.28	0.27
Ashton	0.158	0.155	0.15	0.15	0.14	0.14	0.13	0.13	0.12	0.12	0.12	0.11
Dixon	2.304	2.261	2.19	2.12	2.05	1.99	1.93	1.87	1.81	1.75	1.69	1.64
Lee County Residual	1.240	1.217	1.20	1.18	1.17	1.15	1.13	1.12	1.10	1.08	1.06	1.05
Lee County Total	*4.084*	*4.009*	*3.90*	*3.80*	*3.70*	*3.61*	*3.51*	*3.42*	*3.33*	*3.24*	*3.16*	*3.07*
Ogle County												
Byron	0.577	0.569	0.59	0.61	0.63	0.65	0.66	0.68	0.69	0.70	0.71	0.72
Mt Morris	0.295	0.291	0.28	0.27	0.26	0.26	0.25	0.24	0.23	0.23	0.22	0.21
Oregon	0.373	0.368	0.36	0.27	0.26	0.25	0.24	0.23	0.23	0.22	0.21	0.21
Polo	0.205	0.202	0.20	0.19	0.18	0.18	0.17	0.17	0.16	0.16	0.15	0.15
Rochelle	2.823	2.786	2.73	2.67	2.61	2.56	2.50	2.45	2.40	2.34	2.29	2.24
Ogle County Residual	0.848	0.837	0.82	0.80	0.78	0.76	0.75	0.73	0.71	0.70	0.68	0.67
Ogle County Total	*5.120*	*5.053*	*4.97*	*4.81*	*4.73*	*4.65*	*4.57*	*4.49*	*4.42*	*4.34*	*4.26*	*4.19*
Rock Island County												
East Moline	4.415	4.442	4.34	4.23	4.13	4.03	3.94	3.84	3.75	3.66	3.57	3.48
Milan	0.514	0.518	0.50	0.49	0.47	0.46	0.44	0.43	0.41	0.40	0.39	0.38
Moline	5.371	5.404	5.23	5.07	4.91	4.75	4.60	4.46	4.32	4.18	4.05	3.92
Rock Island	5.415	5.449	5.28	5.11	4.95	4.79	4.64	4.50	4.35	4.22	4.08	3.96
Silvis	0.596	0.600	0.58	0.56	0.54	0.53	0.51	0.49	0.48	0.46	0.45	0.44
Rock Island County Residual	1.748	1.758	1.74	1.72	1.71	1.69	1.67	1.65	1.63	1.61	1.59	1.57
Rock Island County Total	*18.059*	*18.170*	*17.67*	*17.19*	*16.71*	*16.25*	*15.80*	*15.37*	*14.95*	*14.53*	*14.13*	*13.74*
Stephenson County												
Cedarville	0.082	0.082	0.08	0.08	0.07	0.07	0.07	0.07	0.07	0.06	0.06	0.06
Freeport	2.920	2.930	2.84	2.75	2.66	2.58	2.50	2.42	2.34	2.27	2.20	2.13
Lena	0.271	0.272	0.26	0.25	0.25	0.24	0.23	0.22	0.22	0.21	0.20	0.20
Stephenson County Residual	0.366	0.368	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.58	0.58	0.58
Stephenson County Total	*3.639*	*3.652*	*3.77*	*3.67*	*3.57*	*3.48*	*3.39*	*3.30*	*3.21*	*3.12*	*3.04*	*2.96*
Whiteside County												
Fulton	0.318	0.322	0.31	0.30	0.29	0.28	0.27	0.27	0.26	0.25	0.24	0.23
IL Amer - Sterling	1.576	1.594	1.54	1.50	1.45	1.40	1.36	1.32	1.27	1.23	1.19	1.16

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Public Water System	2010 Reported[1]	2010 Normal[2]	2015	2020	2025	2030	2035	2040	2045	2050	2055	2060
Morrison	0.498	0.504	0.49	0.47	0.46	0.44	0.43	0.42	0.40	0.39	0.38	0.37
Prophetstown	0.188	0.190	0.19	0.19	0.19	0.18	0.18	0.18	0.18	0.18	0.17	0.17
Rock Falls	0.970	0.982	0.95	0.92	0.89	0.86	0.84	0.81	0.78	0.76	0.74	0.71
Whiteside County Residual	0.308	0.311	0.30	0.29	0.28	0.27	0.27	0.26	0.25	0.24	0.23	0.23
Whiteside County Total	*3.857*	*3.902*	*3.78*	*3.67*	*3.56*	*3.45*	*3.34*	*3.24*	*3.14*	*3.05*	*2.96*	*2.87*
Winnebago County												
IL Amer - South Beloit	0.765	0.768	0.75	0.74	0.72	0.70	0.69	0.67	0.65	0.64	0.62	0.61
Loves Park	3.182	3.193	3.13	3.07	3.01	2.92	2.85	2.78	2.72	2.65	2.59	2.52
North Park PWD	3.477	3.490	3.42	3.35	3.29	3.19	3.12	3.04	2.97	2.90	2.83	2.76
Rockford	20.221	20.301	19.87	19.50	19.12	18.57	18.12	17.69	17.26	16.85	16.44	16.04
Rockton	0.807	0.810	0.79	0.78	0.76	0.74	0.72	0.71	0.69	0.67	0.66	0.64
Winnebago County Residual	2.348	2.357	2.31	2.26	2.22	2.16	2.10	2.05	2.00	1.96	1.91	1.86
Winnebago County Total	*30.800*	*30.920*	*30.26*	*29.70*	*29.13*	*28.28*	*27.60*	*26.94*	*26.29*	*25.66*	*25.04*	*24.43*
REGIONAL TOTAL	**79.473**	**79.522**	**78.07**	**76.37**	**74.77**	**72.92**	**71.25**	**69.62**	**68.02**	**66.45**	**64.91**	**63.40**

[1]2010 (Reported): computed from reported total demand in 2010
[2]2010 (Normal): computed from weather-normalized total demand in 2010 (obtained by substituting normal weather conditions into the regression model)

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Table A.7 Total Public System Demand by Study Area and County, More Resource Intensive (MRI) Scenario (Mgd)

Public Water System	2010 Reported[1]	2010 Normal[2]	2015	2020	2025	2030	2035	2040	2045	2050	2055	2060
Boone County												
Belvidere	2.986	2.957	3.50	3.79	4.08	4.38	4.68	4.98	5.29	5.61	5.93	6.25
Boone County Residual	0.739	0.732	0.85	0.92	0.95	0.99	1.02	1.06	1.10	1.14	1.17	1.21
Boone County Total	*3.725*	*3.689*	*4.35*	*4.70*	*5.03*	*5.36*	*5.70*	*6.04*	*6.39*	*6.74*	*7.10*	*7.46*
Bureau County												
Depue	0.199	0.196	0.21	0.22	0.22	0.22	0.22	0.22	0.22	0.23	0.23	0.23
Princeton	0.951	0.935	1.03	1.04	1.06	1.07	1.09	1.11	1.12	1.14	1.15	1.17
Spring Valley	0.852	0.837	0.92	0.93	0.94	0.95	0.97	0.98	0.99	1.00	1.01	1.03
Walnut	0.150	0.147	0.16	0.16	0.16	0.16	0.17	0.17	0.17	0.17	0.17	0.17
Bureau County Residual	0.838	0.824	0.90	0.91	0.91	0.92	0.93	0.93	0.94	0.95	0.95	0.96
Bureau County Total	*2.990*	*2.938*	*3.23*	*3.26*	*3.30*	*3.33*	*3.37*	*3.41*	*3.44*	*3.48*	*3.52*	*3.56*
Carroll County												
Lanark	0.174	0.174	0.19	0.19	0.19	0.19	0.20	0.20	0.20	0.20	0.20	0.20
Mount Carroll	0.138	0.138	0.15	0.15	0.15	0.15	0.16	0.16	0.16	0.16	0.16	0.16
Savanna	0.423	0.423	0.46	0.47	0.47	0.47	0.48	0.48	0.48	0.49	0.49	0.49
Carroll County Residual	0.372	0.371	0.41	0.41	0.41	0.41	0.42	0.42	0.42	0.43	0.43	0.43
Carroll County Total	*1.107*	*1.105*	*1.21*	*1.22*	*1.23*	*1.24*	*1.24*	*1.25*	*1.26*	*1.27*	*1.28*	*1.29*
Henry County												
Cambridge	0.198	0.198	0.22	0.22	0.22	0.22	0.22	0.22	0.23	0.23	0.23	0.23
Colona East	0.193	0.192	0.21	0.21	0.21	0.22	0.22	0.22	0.22	0.22	0.22	0.22
Galva	0.260	0.259	0.31	0.29	0.29	0.29	0.29	0.29	0.30	0.30	0.30	0.30
Geneseo	0.647	0.645	0.72	0.73	0.75	0.77	0.78	0.80	0.82	0.84	0.85	0.87
Kewanee	1.894	1.888	2.07	2.08	2.10	2.11	2.13	2.14	2.16	2.17	2.19	2.20
Henry County Residual	0.924	0.921	1.01	1.01	1.02	1.03	1.04	1.04	1.05	1.06	1.07	1.08
Henry County Total	*4.116*	*4.104*	*4.53*	*4.54*	*4.59*	*4.63*	*4.68*	*4.72*	*4.77*	*4.82*	*4.86*	*4.91*
Jo Daviess County												
East Dubuque	0.196	0.196	0.21	0.22	0.22	0.22	0.22	0.22	0.22	0.23	0.23	0.23
Galena	0.431	0.433	0.47	0.48	0.48	0.48	0.49	0.49	0.49	0.50	0.50	0.51
Stockton	0.365	0.366	0.40	0.40	0.41	0.41	0.41	0.42	0.42	0.42	0.42	0.43
Jo Daviess County Residual	0.983	0.986	1.08	1.09	1.09	1.10	1.11	1.12	1.13	1.13	1.14	1.15

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Public Water System	2010 Reported[1]	2010 Normal[2]	2015	2020	2025	2030	2035	2040	2045	2050	2055	2060
Jo Daviess County Total	*1.974*	*1.981*	*2.17*	*2.18*	*2.20*	*2.21*	*2.23*	*2.25*	*2.26*	*2.28*	*2.30*	*2.31*
Lee County												
Amboy	0.383	0.375	0.41	0.41	0.42	0.42	0.42	0.43	0.43	0.43	0.44	0.44
Ashton	0.158	0.155	0.17	0.17	0.17	0.17	0.17	0.18	0.18	0.18	0.18	0.18
Dixon	2.304	2.261	2.47	2.49	2.51	2.53	2.55	2.56	2.58	2.60	2.62	2.64
Lee County Residual	1.240	1.217	1.36	1.39	1.43	1.46	1.50	1.53	1.57	1.61	1.64	1.68
Lee County Total	*4.084*	*4.009*	*4.41*	*4.47*	*4.52*	*4.58*	*4.64*	*4.70*	*4.76*	*4.82*	*4.88*	*4.94*
Ogle County												
Byron	0.577	0.569	0.67	0.72	0.77	0.82	0.88	0.93	0.98	1.04	1.09	1.15
Mt Morris	0.295	0.291	0.32	0.32	0.32	0.33	0.33	0.33	0.33	0.34	0.34	0.34
Oregon	0.373	0.368	0.40	0.31	0.31	0.32	0.32	0.32	0.32	0.33	0.33	0.33
Polo	0.205	0.202	0.22	0.22	0.22	0.23	0.23	0.23	0.23	0.23	0.23	0.24
Rochelle	2.823	2.786	3.08	3.14	3.19	3.25	3.31	3.37	3.42	3.48	3.55	3.61
Ogle County Residual	0.848	0.837	0.92	0.94	0.95	0.97	0.99	1.00	1.02	1.04	1.05	1.07
Ogle County Total	*5.120*	*5.053*	*5.61*	*5.65*	*5.78*	*5.91*	*6.04*	*6.18*	*6.31*	*6.45*	*6.59*	*6.73*
Rock Island County												
East Moline	4.415	4.442	4.90	4.97	5.05	5.13	5.20	5.28	5.36	5.44	5.52	5.61
Milan	0.514	0.518	0.57	0.57	0.57	0.58	0.58	0.59	0.59	0.60	0.60	0.60
Moline	5.371	5.404	5.91	5.95	6.00	6.04	6.08	6.13	6.17	6.22	6.26	6.31
Rock Island	5.415	5.449	5.96	6.00	6.05	6.09	6.14	6.18	6.23	6.27	6.32	6.36
Silvis	0.596	0.600	0.66	0.66	0.67	0.67	0.68	0.68	0.69	0.69	0.70	0.70
Rock Island County Residual	1.748	1.758	1.97	2.03	2.09	2.15	2.21	2.27	2.33	2.39	2.46	2.52
Rock Island County Total	*18.059*	*18.170*	*19.96*	*20.19*	*20.42*	*20.65*	*20.89*	*21.13*	*21.37*	*21.61*	*21.86*	*22.11*
Stephenson County												
Cedarville	0.082	0.082	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.10	0.10
Freeport	2.920	2.930	3.21	3.23	3.25	3.28	3.30	3.32	3.35	3.37	3.40	3.42
Lena	0.271	0.272	0.30	0.30	0.30	0.30	0.31	0.31	0.31	0.31	0.32	0.32
Stephenson County Residual	0.366	0.368	0.66	0.69	0.72	0.75	0.78	0.81	0.84	0.87	0.90	0.93
Stephenson County Total	*3.639*	*3.652*	*4.25*	*4.31*	*4.36*	*4.42*	*4.48*	*4.53*	*4.59*	*4.65*	*4.71*	*4.76*
Whiteside County												
Fulton	0.318	0.322	0.35	0.35	0.36	0.36	0.36	0.36	0.37	0.37	0.37	0.38
IL Amer - Sterling	1.576	1.594	1.74	1.76	1.77	1.78	1.80	1.81	1.82	1.83	1.85	1.86

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Public Water System	2010 Reported[1]	2010 Normal[2]	2015	2020	2025	2030	2035	2040	2045	2050	2055	2060
Morrison	0.498	0.504	0.55	0.55	0.56	0.56	0.57	0.57	0.58	0.58	0.58	0.59
Prophetstown	0.188	0.190	0.21	0.22	0.23	0.23	0.24	0.25	0.25	0.26	0.27	0.28
Rock Falls	0.970	0.982	1.07	1.08	1.09	1.10	1.11	1.11	1.12	1.13	1.14	1.15
Whiteside County Residual	0.308	0.311	0.34	0.34	0.35	0.35	0.35	0.35	0.36	0.36	0.36	0.36
Whiteside County Total	*3.857*	*3.902*	*4.27*	*4.31*	*4.35*	*4.38*	*4.42*	*4.46*	*4.50*	*4.53*	*4.57*	*4.61*
Winnebago County												
IL Amer - South Beloit	0.765	0.768	0.85	0.87	0.88	0.89	0.91	0.92	0.93	0.95	0.96	0.98
Loves Park	3.182	3.193	3.53	3.60	3.68	3.71	3.77	3.83	3.88	3.94	4.00	4.06
North Park PWD	3.477	3.490	3.86	3.94	4.02	4.06	4.12	4.18	4.24	4.31	4.37	4.44
Rockford	20.221	20.301	22.44	22.91	23.37	23.60	23.96	24.32	24.68	25.05	25.43	25.81
Rockton	0.807	0.810	0.90	0.91	0.93	0.94	0.96	0.97	0.98	1.00	1.01	1.03
Winnebago County Residual	2.348	2.357	2.60	2.66	2.71	2.74	2.78	2.82	2.87	2.91	2.95	3.00
Winnebago County Total	*30.800*	*30.920*	*34.18*	*34.89*	*35.59*	*35.94*	*36.48*	*37.04*	*37.59*	*38.16*	*38.73*	*39.30*
REGIONAL TOTAL	**79.473**	**79.522**	**88.16**	**89.71**	**91.35**	**92.66**	**94.17**	**95.70**	**97.25**	**98.81**	**100.40**	**102.00**

[1]2010 (Reported): computed from reported total demand in 2010
[2]2010 (Normal): computed from weather-normalized total demand in 2010(obtained by substituting normal weather conditions into the regression model)

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Table A.8 Per-Capita Public System Demand by Study Area and County, Current Trends (CT) Scenario (gpcd)

Public Water System	2010 Reported[1]	2010 Normal[2]	2015	2020	2025	2030	2035	2040	2045	2050	2055	2060
Boone County												
Belvidere	116.1	115.0	118.4	116.9	115.5	114.1	112.8	111.4	110.1	108.7	107.4	106.1
Boone County Residual	77.0	76.3	78.5	77.6	76.6	75.7	74.8	73.9	73.0	72.1	71.3	70.4
Boone County Total	*105.5*	*104.5*	*107.7*	*106.4*	*105.4*	*104.4*	*103.4*	*102.3*	*101.3*	*100.2*	*99.1*	*98.1*
Bureau County												
Depue	104.5	102.7	105.7	104.5	103.2	102.0	100.7	99.5	98.3	97.1	96.0	94.8
Princeton	124.2	122.0	125.6	124.1	122.6	121.1	119.7	118.2	116.8	115.4	114.0	112.6
Spring Valley	157.8	155.0	159.6	157.7	155.8	153.9	152.0	150.2	148.4	146.6	144.8	143.1
Walnut	100.4	98.7	101.6	100.3	99.1	97.9	96.8	95.6	94.4	93.3	92.2	91.1
Bureau County Residual	93.8	92.1	94.8	93.7	92.6	91.4	90.3	89.2	88.2	87.1	86.1	85.0
Bureau County Total	*117.7*	*115.7*	*119.1*	*117.8*	*116.4*	*115.1*	*113.7*	*112.4*	*111.1*	*109.8*	*108.5*	*107.3*
Carroll County												
Lanark	108.9	108.8	112.0	110.7	109.3	108.0	106.7	105.4	104.2	102.9	101.7	100.4
Mount Carroll	79.3	79.2	81.6	80.6	79.6	78.7	77.7	76.8	75.8	74.9	74.0	73.1
Savanna	135.6	135.4	139.3	137.7	136.0	134.4	132.8	131.2	129.6	128.0	126.5	125.0
Carroll County Residual	122.9	122.7	126.3	124.8	123.3	121.8	120.3	118.9	117.4	116.0	114.6	113.3
Carroll County Total	*116.7*	*116.5*	*120.0*	*118.5*	*117.1*	*115.7*	*114.3*	*112.9*	*111.6*	*110.2*	*108.9*	*107.6*
Henry County												
Cambridge	94.1	93.9	96.6	95.5	94.3	93.2	92.1	90.9	89.8	88.8	87.7	86.6
Colona East	78.1	77.8	81.8	79.2	78.2	77.3	76.3	75.4	74.5	73.6	72.7	71.8
Galva	93.7	93.4	105.5	95.0	93.8	92.7	91.6	90.5	89.4	88.3	87.2	86.2
Geneseo	101.1	100.8	103.8	102.5	101.3	100.1	98.9	97.7	96.5	95.3	94.2	93.0
Kewanee	132.0	131.6	135.4	133.8	132.2	130.6	129.0	127.5	126.0	124.4	122.9	121.5
Henry County Residual	74.3	74.1	76.2	75.3	74.4	73.5	72.6	71.8	70.9	70.0	69.2	68.4
Henry County Total	*101.5*	*101.2*	*104.9*	*102.9*	*101.7*	*100.5*	*99.3*	*98.1*	*96.9*	*95.7*	*94.6*	*93.4*
Jo Daviess County												
East Dubuque	99.3	99.7	102.6	101.4	100.2	99.0	97.8	96.6	95.4	94.3	93.2	92.0
Galena	124.6	125.0	128.7	127.2	125.6	124.1	122.6	121.2	119.7	118.3	116.8	115.4
Stockton	195.8	196.6	202.4	199.9	197.5	195.1	192.8	190.5	188.2	185.9	183.7	181.4
Jo Daviess County Residual	94.7	95.0	97.8	96.6	95.5	94.3	93.2	92.1	91.0	89.9	88.8	87.7

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Public Water System	2010 Reported[1]	2010 Normal[2]	2015	2020	2025	2030	2035	2040	2045	2050	2055	2060
Jo Daviess County Total	*111.7*	*112.1*	*115.4*	*114.0*	*112.7*	*111.3*	*110.0*	*108.6*	*107.3*	*106.0*	*104.8*	*103.5*
Lee County												
Amboy	147.1	144.4	148.7	146.9	145.1	143.3	141.6	139.9	138.2	136.6	134.9	133.3
Ashton	143.4	140.8	144.9	143.2	141.4	139.7	138.1	136.4	134.7	133.1	131.5	129.9
Dixon	142.2	139.6	143.7	142.0	140.2	138.6	136.9	135.2	133.6	132.0	130.4	128.8
Lee County Residual	109.8	107.8	111.0	109.6	108.3	107.0	105.7	104.4	103.2	101.9	100.7	99.5
Lee County Total	*130.9*	*128.5*	*132.2*	*130.4*	*128.7*	*127.0*	*125.4*	*123.8*	*122.1*	*120.6*	*119.0*	*117.4*
Ogle County												
Byron	144.2	142.3	146.5	144.7	143.0	141.2	139.5	137.9	136.2	134.6	132.9	131.3
Mt Morris	95.2	93.9	96.7	95.5	94.4	93.2	92.1	91.0	89.9	88.8	87.7	86.7
Oregon	90.9	89.7	92.4	70.1	69.3	68.4	67.6	66.8	66.0	65.2	64.4	63.6
Polo	82.3	81.2	83.6	82.6	81.6	80.6	79.7	78.7	77.8	76.8	75.9	75.0
Rochelle	291.1	287.2	295.7	292.1	288.6	285.1	281.7	278.3	275.0	271.7	268.4	265.2
Ogle County Residual	84.4	83.3	85.7	84.7	83.7	82.7	81.7	80.7	79.7	78.8	77.8	76.9
Ogle County Total	*153.1*	*151.1*	*155.8*	*151.6*	*149.9*	*148.3*	*146.7*	*145.0*	*143.4*	*141.9*	*140.3*	*138.7*
Rock Island County												
East Moline	205.0	206.3	212.4	209.8	207.3	204.8	202.4	199.9	197.5	195.1	192.8	190.5
Milan	102.9	103.5	106.6	105.3	104.0	102.8	101.5	100.3	99.1	97.9	96.7	95.5
Moline	120.7	121.5	125.1	123.6	122.1	120.6	119.1	117.7	116.3	114.9	113.5	112.1
Rock Island	142.2	143.1	147.3	145.5	143.8	142.0	140.3	138.6	137.0	135.3	133.7	132.1
Silvis	82.0	82.5	84.9	83.9	82.9	81.9	80.9	79.9	79.0	78.0	77.1	76.1
Rock Island County Residual	89.3	89.8	92.5	91.3	90.2	89.2	88.1	87.0	86.0	84.9	83.9	82.9
Rock Island County Total	*132.8*	*133.7*	*137.5*	*135.8*	*134.2*	*132.5*	*130.8*	*129.2*	*127.6*	*126.0*	*124.5*	*122.9*
Stephenson County												
Cedarville	114.2	114.6	118.0	116.6	115.2	113.8	112.4	111.0	109.7	108.4	107.1	105.8
Freeport	113.2	113.6	116.9	115.5	114.1	112.8	111.4	110.1	108.7	107.4	106.1	104.8
Lena	96.7	97.1	99.9	98.7	97.5	96.4	95.2	94.0	92.9	91.8	90.7	89.6
Stephenson County Residual	92.6	92.9	95.7	94.5	93.4	92.3	91.2	90.1	89.0	87.9	86.8	85.8
Stephenson County Total	*109.4*	*109.8*	*111.8*	*110.3*	*108.9*	*107.5*	*106.1*	*104.7*	*103.4*	*102.0*	*100.7*	*99.4*
Whiteside County												
Fulton	79.5	80.4	82.8	81.8	80.8	79.8	78.9	77.9	77.0	76.0	75.1	74.2
IL Amer - Sterling	102.0	103.2	106.2	104.9	103.7	102.4	101.2	100.0	98.8	97.6	96.4	95.2

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Public Water System	2010 Reported[1]	2010 Normal[2]	2015	2020	2025	2030	2035	2040	2045	2050	2055	2060
Morrison	111.9	113.2	116.6	115.2	113.8	112.4	111.1	109.7	108.4	107.1	105.8	104.5
Prophetstown	87.3	88.3	90.9	89.8	88.8	87.7	86.6	85.6	84.6	83.5	82.5	81.5
Rock Falls	100.0	101.2	104.2	102.9	101.7	100.5	99.2	98.1	96.9	95.7	94.6	93.4
Whiteside County Residual	68.9	69.7	71.8	70.9	70.1	69.2	68.4	67.6	66.8	66.0	65.2	64.4
Whiteside County Total	*95.9*	*97.0*	*99.9*	*98.7*	*97.5*	*96.3*	*95.1*	*94.0*	*92.8*	*91.7*	*90.6*	*89.5*
Winnebago County												
IL Amer - South Beloit	98.1	98.5	101.4	100.2	99.0	97.8	96.6	95.4	94.3	93.1	92.0	90.9
Loves Park	128.8	129.3	133.1	131.5	129.9	128.4	126.8	125.3	123.8	122.3	120.8	119.4
North Park PWD	100.1	100.5	103.4	102.2	101.0	99.8	98.6	97.4	96.2	95.0	93.9	92.8
Rockford	124.6	125.1	128.8	127.2	125.7	124.2	122.7	121.2	119.8	118.3	116.9	115.5
Rockton	108.4	108.8	112.1	110.7	109.4	108.1	106.8	105.5	104.2	102.9	101.7	100.5
Winnebago County Residual	59.7	60.0	61.7	61.0	60.3	59.5	58.8	58.1	57.4	56.7	56.0	55.4
Winnebago County Total	*111.5*	*111.9*	*115.2*	*113.8*	*112.5*	*111.1*	*109.8*	*108.4*	*107.1*	*105.9*	*104.6*	*103.3*
REGIONAL TOTAL	**117.1**	**117.2**	**120.5**	**118.9**	**117.4**	**116.0**	**114.6**	**113.2**	**111.8**	**110.4**	**109.1**	**107.8**

[1]2010 (Reported): computed from reported total demand in 2010
[2]2010 (Normal): computed from weather-normalized total demand in 2010(obtained by substituting normal weather conditions into the regression model)

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Table A.9 Per-Capita Public System Demand by Study Area and County, Less Resource Intensive (LRI) Scenario (gpcd)

Public Water System	2010 Reported[1]	2010 Normal[2]	2015	2020	2025	2030	2035	2040	2045	2050	2055	2060
Boone County												
Belvidere	116.1	115.0	111.4	107.8	104.4	101.1	98.0	94.9	91.9	89.0	86.2	83.5
Boone County Residual	77.0	76.3	73.9	71.5	69.3	67.1	65.0	62.9	60.9	59.0	57.2	55.4
Boone County Total	*105.5*	*104.5*	*101.3*	*98.1*	*95.3*	*92.5*	*89.8*	*87.1*	*84.5*	*82.0*	*79.5*	*77.1*
Bureau County												
Depue	104.5	102.7	99.5	96.3	93.3	90.3	87.5	84.7	82.1	79.5	77.0	74.5
Princeton	124.2	122.0	118.2	114.5	110.8	107.3	104.0	100.7	97.5	94.4	91.5	88.6
Spring Valley	157.8	155.0	150.1	145.4	140.8	136.4	132.1	127.9	123.9	120.0	116.2	112.5
Walnut	100.4	98.7	95.5	92.5	89.6	86.8	84.1	81.4	78.8	76.3	73.9	71.6
Bureau County Residual	93.8	92.1	89.2	86.4	83.7	81.0	78.5	76.0	73.6	71.3	69.0	66.9
Bureau County Total	*117.7*	*115.7*	*112.1*	*108.6*	*105.2*	*102.0*	*98.8*	*95.7*	*92.7*	*89.9*	*87.1*	*84.4*
Carroll County												
Lanark	108.9	108.8	105.4	102.0	98.8	95.7	92.7	89.8	86.9	84.2	81.5	79.0
Mount Carroll	79.3	79.2	76.7	74.3	72.0	69.7	67.5	65.4	63.3	61.3	59.4	57.5
Savanna	135.6	135.4	131.1	127.0	122.9	119.1	115.3	111.7	108.2	104.7	101.4	98.2
Carroll County Residual	122.9	122.7	118.8	115.1	111.4	107.9	104.5	101.2	98.0	94.9	91.9	89.0
Carroll County Total	*116.7*	*116.5*	*112.9*	*109.3*	*105.9*	*102.5*	*99.3*	*96.2*	*93.1*	*90.2*	*87.3*	*84.6*
Henry County												
Cambridge	94.1	93.9	90.9	88.0	85.3	82.6	80.0	77.4	75.0	72.6	70.3	68.1
Colona East	78.1	77.8	77.6	73.0	70.7	68.5	66.3	64.2	62.2	60.2	58.3	56.5
Galva	93.7	93.4	100.0	87.6	84.8	82.1	79.5	77.0	74.6	72.3	70.0	67.8
Geneseo	101.1	100.8	97.6	94.5	91.6	88.7	85.9	83.2	80.5	78.0	75.5	73.2
Kewanee	132.0	131.6	127.4	123.4	119.5	115.7	112.1	108.6	105.1	101.8	98.6	95.5
Henry County Residual	74.3	74.1	71.7	69.5	67.3	65.2	63.1	61.1	59.2	57.3	55.5	53.8
Henry County Total	*101.5*	*101.2*	*98.8*	*94.9*	*91.9*	*89.0*	*86.2*	*83.5*	*80.9*	*78.3*	*75.9*	*73.5*
Jo Daviess County												
East Dubuque	99.3	99.7	96.5	93.5	90.6	87.7	84.9	82.3	79.7	77.1	74.7	72.4
Galena	124.6	125.0	121.1	117.3	113.6	110.0	106.5	103.2	99.9	96.8	93.7	90.8
Stockton	195.8	196.6	190.4	184.3	178.5	172.9	167.5	162.2	157.1	152.1	147.3	142.7
Jo Daviess County Residual	94.7	95.0	92.0	89.1	86.3	83.6	81.0	78.4	75.9	73.5	71.2	69.0

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Public Water System	2010 Reported[1]	2010 Normal[2]	2015	2020	2025	2030	2035	2040	2045	2050	2055	2060
Jo Daviess County Total	*111.7*	*112.1*	*108.6*	*105.2*	*101.8*	*98.6*	*95.5*	*92.5*	*89.6*	*86.8*	*84.0*	*81.4*
Lee County												
Amboy	147.1	144.4	139.8	135.4	131.2	127.0	123.0	119.1	115.4	111.7	108.2	104.8
Ashton	143.4	140.8	136.3	132.0	127.9	123.8	119.9	116.1	112.5	108.9	105.5	102.2
Dixon	142.2	139.6	135.2	130.9	126.8	122.8	118.9	115.2	111.5	108.0	104.6	101.3
Lee County Residual	109.8	107.8	104.4	101.1	97.9	94.8	91.8	88.9	86.1	83.4	80.8	78.2
Lee County Total	*130.9*	*128.5*	*124.3*	*120.3*	*116.4*	*112.6*	*108.9*	*105.4*	*102.0*	*98.6*	*95.4*	*92.3*
Ogle County												
Byron	144.2	142.3	137.8	133.4	129.2	125.1	121.2	117.4	113.7	110.1	106.6	103.3
Mt Morris	95.2	93.9	90.9	88.1	85.3	82.6	80.0	77.5	75.0	72.7	70.4	68.2
Oregon	90.9	89.7	86.9	64.7	62.6	60.7	58.7	56.9	55.1	53.4	51.7	50.0
Polo	82.3	81.2	78.7	76.2	73.8	71.5	69.2	67.0	64.9	62.9	60.9	59.0
Rochelle	291.1	287.2	278.2	269.4	260.9	252.7	244.7	237.0	229.5	222.3	215.3	208.5
Ogle County Residual	84.4	83.3	80.7	78.1	75.7	73.3	71.0	68.7	66.6	64.5	62.4	60.5
Ogle County Total	*153.1*	*151.1*	*146.6*	*139.8*	*135.5*	*131.4*	*127.4*	*123.5*	*119.7*	*116.1*	*112.5*	*109.1*
Rock Island County												
East Moline	205.0	206.3	199.8	193.5	187.4	181.5	175.8	170.2	164.9	159.7	154.6	149.8
Milan	102.9	103.5	100.2	97.1	94.0	91.1	88.2	85.4	82.7	80.1	77.6	75.1
Moline	120.7	121.5	117.6	113.9	110.3	106.9	103.5	100.2	97.1	94.0	91.0	88.2
Rock Island	142.2	143.1	138.6	134.2	130.0	125.9	121.9	118.1	114.3	110.7	107.2	103.9
Silvis	82.0	82.5	79.9	77.4	74.9	72.6	70.3	68.1	65.9	63.8	61.8	59.9
Rock Island County Residual	89.3	89.8	87.0	84.2	81.6	79.0	76.5	74.1	71.8	69.5	67.3	65.2
Rock Island County Total	*132.8*	*133.7*	*129.4*	*125.3*	*121.3*	*117.4*	*113.7*	*110.0*	*106.5*	*103.1*	*99.8*	*96.7*
Stephenson County												
Cedarville	114.2	114.6	111.0	107.5	104.1	100.8	97.6	94.6	91.6	88.7	85.9	83.2
Freeport	113.2	113.6	110.0	106.5	103.2	99.9	96.8	93.7	90.8	87.9	85.1	82.4
Lena	96.7	97.1	94.0	91.0	88.2	85.4	82.7	80.1	77.6	75.1	72.7	70.4
Stephenson County Residual	92.6	92.9	90.0	87.2	84.4	81.8	79.2	76.7	74.3	71.9	69.7	67.5
Stephenson County Total	*109.4*	*109.8*	*105.1*	*101.7*	*98.4*	*95.2*	*92.2*	*89.2*	*86.3*	*83.5*	*80.8*	*78.2*
Whiteside County												
Fulton	79.5	80.4	77.9	75.4	73.0	70.7	68.5	66.3	64.2	62.2	60.3	58.4
IL Amer - Sterling	102.0	103.2	99.9	96.8	93.7	90.8	87.9	85.1	82.4	79.8	77.3	74.9

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Public Water System	2010 Reported[1]	2010 Normal[2]	2015	2020	2025	2030	2035	2040	2045	2050	2055	2060
Morrison	111.9	113.2	109.7	106.2	102.8	99.6	96.5	93.4	90.5	87.6	84.9	82.2
Prophetstown	87.3	88.3	85.5	82.8	80.2	77.7	75.3	72.9	70.6	68.4	66.2	64.1
Rock Falls	100.0	101.2	98.0	94.9	91.9	89.0	86.2	83.5	80.9	78.3	75.8	73.4
Whiteside County Residual	68.9	69.7	67.5	65.4	63.3	61.3	59.4	57.5	55.7	54.0	52.3	50.6
Whiteside County Total	*95.9*	*97.0*	*94.0*	*91.0*	*88.1*	*85.3*	*82.6*	*80.0*	*77.5*	*75.0*	*72.6*	*70.3*
Winnebago County												
IL Amer - South Beloit	98.1	98.5	95.4	92.4	89.5	86.6	83.9	81.3	78.7	76.2	73.8	71.5
Loves Park	128.8	129.3	125.2	121.3	117.4	113.7	110.1	106.7	103.3	100.1	96.9	93.8
North Park PWD	100.1	100.5	97.3	94.2	91.3	88.4	85.6	82.9	80.3	77.8	75.3	72.9
Rockford	124.6	125.1	121.1	117.3	113.6	110.0	106.6	103.2	100.0	96.8	93.8	90.8
Rockton	108.4	108.8	105.4	102.1	98.9	95.7	92.7	89.8	87.0	84.2	81.6	79.0
Winnebago County Residual	59.7	60.0	58.1	56.2	54.5	52.8	51.1	49.5	47.9	46.4	44.9	43.5
Winnebago County Total	*111.5*	*111.9*	*108.4*	*105.0*	*101.7*	*98.5*	*95.3*	*92.3*	*89.4*	*86.6*	*83.9*	*81.2*
REGIONAL TOTAL	**117.1**	**117.2**	**113.4**	**109.6**	**106.1**	**102.8**	**99.5**	**96.4**	**93.3**	**90.4**	**87.5**	**84.7**

[1]2010 (Reported): computed from reported total demand in 2010
[2]2010 (Normal): computed from weather-normalized total demand in 2010(obtained by substituting normal weather conditions into the regression model)

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Table A.10 Per-Capita Public System Demand by Study Area and County, More Resource Intensive (MRI) Scenario (gpcd)

Public Water System	2010 Reported[1]	2010 Normal[2]	2015	2020	2025	2030	2035	2040	2045	2050	2055	2060
Boone County												
Belvidere	227.6	115.0	155.6	155.6	116.1	124.9	125.8	126.7	127.6	128.5	129.5	130.4
Boone County Residual	77.2	76.3	95.1	68.4	77.0	82.8	83.4	84.0	84.7	85.3	85.9	86.5
Boone County Total	*201.2*	*104.5*	*141.8*	*130.3*	*105.5*	*113.4*	*114.4*	*115.3*	*116.4*	*117.6*	*118.7*	*119.8*
Bureau County												
Depue	104.5	102.7	112.3	113.2	114.0	114.8	115.7	116.5	117.3	118.2	119.1	119.9
Princeton	124.2	122.0	133.5	134.4	135.4	136.4	137.4	138.4	139.4	140.4	141.5	142.5
Spring Valley	157.8	155.0	169.5	170.8	172.0	173.3	174.5	175.8	177.1	178.4	179.7	181.0
Walnut	100.4	98.7	107.9	108.7	109.5	110.3	111.1	111.9	112.7	113.5	114.4	115.2
Bureau County Residual	93.8	92.1	100.7	101.5	102.2	103.0	103.7	104.5	105.2	106.0	106.8	107.6
Bureau County Total	*117.7*	*115.7*	*126.6*	*127.6*	*128.6*	*129.6*	*130.6*	*131.6*	*132.6*	*133.6*	*134.7*	*135.7*
Carroll County												
Lanark	108.9	108.8	119.0	119.9	120.7	121.6	122.5	123.4	124.3	125.2	126.1	127.0
Mount Carroll	79.3	79.2	86.7	87.3	87.9	88.6	89.2	89.9	90.5	91.2	91.8	92.5
Savanna	135.6	135.4	148.1	149.1	150.2	151.3	152.4	153.5	154.7	155.8	156.9	158.1
Carroll County Residual	122.9	122.7	134.2	135.2	136.2	137.1	138.1	139.2	140.2	141.2	142.2	143.3
Carroll County Total	*116.7*	*116.5*	*127.5*	*128.4*	*129.3*	*130.3*	*131.2*	*132.2*	*133.1*	*134.1*	*135.1*	*136.1*
Henry County												
Cambridge	94.1	93.9	102.7	103.4	104.2	104.9	105.7	106.5	107.2	108.0	108.8	109.6
Colona East	78.1	77.8	86.2	85.7	86.4	87.0	87.6	88.3	88.9	89.6	90.2	90.9
Galva	93.7	93.4	111.2	102.9	103.6	104.4	105.1	105.9	106.7	107.5	108.2	109.0
Geneseo	101.1	100.8	110.2	111.0	111.9	112.7	113.5	114.3	115.2	116.0	116.8	117.7
Kewanee	132.0	131.6	143.9	145.0	146.0	147.1	148.2	149.2	150.3	151.4	152.5	153.6
Henry County Residual	74.3	74.1	81.0	81.6	82.2	82.8	83.4	84.0	84.6	85.2	85.9	86.5
Henry County Total	*101.5*	*101.2*	*111.4*	*111.5*	*112.3*	*113.1*	*114.0*	*114.8*	*115.6*	*116.5*	*117.3*	*118.2*
Jo Daviess County												
East Dubuque	99.3	99.7	109.0	109.8	110.6	111.4	112.3	113.1	113.9	114.7	115.6	116.4
Galena	124.6	125.0	136.8	137.8	138.8	139.8	140.8	141.8	142.8	143.9	144.9	146.0
Stockton	195.8	196.6	215.0	216.6	218.1	219.7	221.3	222.9	224.6	226.2	227.9	229.5
Jo Daviess County Residual	94.7	95.0	103.9	104.7	105.5	106.2	107.0	107.8	108.6	109.4	110.2	111.0

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Public Water System	2010 Reported[1]	2010 Normal[2]	2015	2020	2025	2030	2035	2040	2045	2050	2055	2060
Jo Daviess County Total	*111.7*	*112.1*	*122.6*	*123.5*	*124.4*	*125.3*	*126.3*	*127.2*	*128.1*	*129.0*	*130.0*	*130.9*
Lee County												
Amboy	147.1	144.4	157.9	159.1	160.2	161.4	162.6	163.8	165.0	166.2	167.4	168.6
Ashton	143.4	140.8	154.0	155.1	156.2	157.4	158.5	159.7	160.8	162.0	163.2	164.4
Dixon	142.2	139.6	152.7	153.8	154.9	156.0	157.2	158.3	159.5	160.6	161.8	163.0
Lee County Residual	109.8	107.8	117.9	118.8	119.6	120.5	121.4	122.3	123.2	124.1	125.0	125.9
Lee County Total	*130.9*	*128.5*	*140.4*	*141.3*	*142.2*	*143.1*	*144.0*	*144.9*	*145.8*	*146.7*	*147.6*	*148.6*
Ogle County												
Byron	144.2	142.3	155.6	156.7	157.9	159.0	160.2	161.4	162.5	163.7	164.9	166.1
Mt Morris	95.2	93.9	102.7	103.5	104.2	105.0	105.7	106.5	107.3	108.1	108.9	109.7
Oregon	90.9	89.7	98.1	76.0	76.5	77.1	77.6	78.2	78.8	79.3	79.9	80.5
Polo	82.3	81.2	88.8	89.5	90.1	90.8	91.5	92.1	92.8	93.5	94.2	94.9
Rochelle	291.1	287.2	314.2	316.5	318.8	321.1	323.4	325.8	328.2	330.6	333.0	335.4
Ogle County Residual	84.4	83.3	91.1	91.8	92.4	93.1	93.8	94.5	95.2	95.9	96.6	97.3
Ogle County Total	*153.1*	*151.1*	*165.5*	*164.2*	*165.6*	*167.0*	*168.4*	*169.8*	*171.2*	*172.6*	*174.0*	*175.5*
Rock Island County												
East Moline	205.0	206.3	225.7	227.3	229.0	230.6	232.3	234.0	235.7	237.4	239.2	240.9
Milan	102.9	103.5	113.2	114.0	114.9	115.7	116.6	117.4	118.3	119.1	120.0	120.9
Moline	120.7	121.5	132.9	133.8	134.8	135.8	136.8	137.8	138.8	139.8	140.8	141.9
Rock Island	142.2	143.1	156.5	157.6	158.8	160.0	161.1	162.3	163.5	164.7	165.9	167.1
Silvis	82.0	82.5	90.2	90.9	91.5	92.2	92.9	93.6	94.2	94.9	95.6	96.3
Rock Island County Residual	89.3	89.8	98.2	98.9	99.7	100.4	101.1	101.9	102.6	103.4	104.1	104.9
Rock Island County Total	*132.8*	*133.7*	*146.1*	*147.1*	*148.2*	*149.2*	*150.2*	*151.3*	*152.3*	*153.4*	*154.4*	*155.5*
Stephenson County												
Cedarville	114.2	114.6	125.4	126.3	127.2	128.1	129.0	130.0	130.9	131.9	132.9	133.8
Freeport	113.2	113.6	124.2	125.1	126.0	127.0	127.9	128.8	129.8	130.7	131.7	132.6
Lena	96.7	97.1	106.2	106.9	107.7	108.5	109.3	110.1	110.9	111.7	112.5	113.3
Stephenson County Residual	92.6	92.9	101.7	102.4	103.1	103.9	104.7	105.4	106.2	107.0	107.7	108.5
Stephenson County Total	*109.4*	*109.8*	*118.7*	*119.5*	*120.3*	*121.0*	*121.8*	*122.6*	*123.4*	*124.2*	*125.0*	*125.8*
Whiteside County												
Fulton	79.5	80.4	87.9	88.6	89.2	89.9	90.5	91.2	91.9	92.5	93.2	93.9
IL Amer - Sterling	102.0	103.2	112.8	113.7	114.5	115.3	116.2	117.0	117.9	118.7	119.6	120.5

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Public Water System	2010 Reported[1]	2010 Normal[2]	2015	2020	2025	2030	2035	2040	2045	2050	2055	2060
Morrison	111.9	113.2	123.8	124.7	125.7	126.6	127.5	128.4	129.4	130.3	131.3	132.2
Prophetstown	87.3	88.3	96.6	97.3	98.0	98.7	99.5	100.2	100.9	101.7	102.4	103.1
Rock Falls	100.0	101.2	110.7	111.5	112.3	113.1	113.9	114.8	115.6	116.5	117.3	118.2
Whiteside County Residual	68.9	69.7	76.3	76.8	77.4	78.0	78.5	79.1	79.7	80.3	80.8	81.4
Whiteside County Total	*95.9*	*97.0*	*106.1*	*106.9*	*107.7*	*108.4*	*109.2*	*110.0*	*110.8*	*111.6*	*112.4*	*113.2*
Winnebago County												
IL Amer - South Beloit	98.1	98.5	107.7	108.5	109.3	110.1	110.9	111.7	112.5	113.3	114.2	115.0
Loves Park	128.8	129.3	141.4	142.4	143.5	144.5	145.6	146.6	147.7	148.8	149.9	151.0
North Park PWD	100.1	100.5	109.9	110.7	111.5	112.3	113.1	114.0	114.8	115.6	116.5	117.3
Rockford	124.6	125.1	136.8	137.8	138.8	139.8	140.9	141.9	142.9	144.0	145.0	146.1
Rockton	108.4	108.8	119.0	119.9	120.8	121.7	122.6	123.5	124.4	125.3	126.2	127.1
Winnebago County Residual	59.7	60.0	65.6	66.1	66.6	67.0	67.5	68.0	68.5	69.0	69.5	70.0
Winnebago County Total	*111.5*	*111.9*	*122.4*	*123.3*	*124.2*	*125.1*	*126.0*	*126.9*	*127.9*	*128.8*	*129.7*	*130.7*
REGIONAL TOTAL	**117.1**	**117.2**	**128.1**	**128.8**	**129.7**	**130.6**	**131.5**	**132.5**	**133.4**	**134.4**	**135.3**	**136.3**

[1]2010 (Reported): computed from reported total demand in 2010
[2]2010 (Normal): computed from weather-normalized total demand in 2010(obtained by substituting normal weather conditions into the regression model)

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Appendix B. Estimation of Future Population

B.1 Methodology

In the absence of existing estimates, we have estimated the resident population from 2030 to 2060 for each county in the study region (Figure B.1 to Figure B.12, Table B.1). To develop these estimates, we used historical county-level population counts (1920-2000) and estimates of the 2010-2014 population on July 1 of each year (Table B.2), as well as available projections of the future county population.

Historical population counts for the years 1920 to 1990 were obtained from the United States Census Bureau (1995), as was the count for 2000 (United States Census Bureau, 2004). Estimates of 2010-2014 population were obtained using the Advanced Search feature provided within the United States Census Bureau's *American FactFinder* (United States Census Bureau, 2015). Projections of county-level population–covering the years 2015, 2020, and 2025–were developed by the Illinois Department of Public Health (IDPH) and were obtained from the State of Illinois Data Portal (Data.Illinois.gov State of Illinois Data Portal, 2015). For this study, the IDPH projections were extended for an additional 35 years (2030-2060) using straightforward trend extension techniques that were fitted to historical population data and IDPH projections.

We employed estimates of the 2010 population on July 1, rather than census counts on April 1 (United States Census Bureau, 2014) because, as will be discussed, we frequently used the 2010 data in conjunction with the 2014 estimates, also estimated for July 1, and with the IDPH estimates, which are based on the July 1, 2010 Census Bureau estimates (Data.Illinois.gov State of Illinois Data Portal, 2015). The April 1 counts and July 1 estimates for the counties of the Northwestern Illinois region differ by small amounts ranging from 0.04 percent (Boone, Whiteside, and Winnebago Counties) to 0.21 percent (Bureau County), with a median difference of 0.08 percent.

For each of the study region counties, we plotted census population counts for the years 1920 to 2000, estimates for 2010 and 2014, and the IDPH population projections from 2015 to 2025. We used the resulting plots to explore the population data for long-term trends, employing the Census Bureau's 2014 population estimate to validate the IDPH 2015 projection.

Among the 11 counties of the study region, the IDPH projections for 7 counties show a decreasing population during the 2015-2025 period. IDPH projects slight or moderate increases in county population for only 4 counties during this period (Boone, Lee, Ogle, and Winnebago). When comparing the IDPH projections with the historical trends (including the Census Bureau's 2014 estimate), we decided to use the following methods and assumptions to extend the IDPH population projections to the 2030-2060 period:

1. For Bureau (Figure B.3), Carroll (Figure B.4), Henry (Figure B.5), Jo Daviess (Figure B.6), Stephenson (Figure B.10), and Whiteside Counties (Figure B.11), IDPH projections suggest a declining population from 2015 to 2025, a trend that is plausible based on historical data. In projecting the population in these counties from 2030 to 2060, however, we assumed that population in these counties will stabilize at the IDPH estimate for 2020.
2. For Lee (Figure B.7) and Ogle Counties (Figure B.8), we assumed that the population during the 2030-2060 period follows a linear trend that is based on the upward-trending IDPH 2015-2025 projections. We generated our 2030-2060 population estimates using interpolation results generated with the *Fill/Series …* utility of Microsoft Excel 2013

(Microsoft Corporation, 2013), accessed via Excel's *Home* ribbon, selecting the *Linear* option under the *Type* menu, checking the *Trend* box. We adapted this approach for Boone, Rock Island, and Winnebago Counties as discussed below.

3. For Boone County (Figure B.2), the equation describing a long-term linear trend based on 1920-2000 census counts, 2010 estimate, and the 2015-2025 IDPH projections forecasts a 2060 population of 76,347. This is a plausible approximation based on inspection of the plotted data, but strict adherence to the equation would require a sharp decline in population from 2025 to 2030. We therefore generated 2030-2060 population estimates using interpolation results generated with the *Fill/Series …* utility of Microsoft Excel 2013 (Microsoft Corporation, 2013), accessed via the *Home* ribbon, selecting the *Linear* option under the *Type* menu, checking the *Trend* box, and using as input the IDPH estimates for the years 2015, 2020, and 2025, together with a preliminary value of 76,347 for 2060. From this computation we employed the 2030-2060 values as estimates of future county population (note that, for 2060, we substituted the value of 76,814, derived through the second interpolation, for the preliminary value of 76,347). Additionally, we used as our population estimate for 2025 the Excel-computed value of 63,242, rather than the IDPH estimate of 65,314, in order to avoid a decline in the projected population from 2025 to 2030.
4. For Rock Island County (Figure B.9), the IDPH estimates for 2015 to 2025 trend downward, faithfully honoring a slight post-2000 population decline documented by the 2000 census count and 2010 estimate (United States Census Bureau, 2014, 2015), as well as a more abrupt post-1970 decline documented by the 1970, 1980, and 1990 censuses (United States Census Bureau, 1995). Still, the downward trend predicted by the IDPH estimates conflicts with a long-term upward population trend documented by the 1920-2010 census counts and estimate, so we have substituted our own 2015-2025 estimates for those of the IDPH and have employed these estimates in generating the 2030-2060 population estimates we used in this report for predicting water demand. We first explored the long-term census data as a basis for justifying a plausible long-term trend in population change from 2010 to 2060. We found that the equation describing a line interpolated to the 1950-2010 census data suggests a slight upward trend, with the population in 2060 approximately 158,035. This trend is to the authors a more plausible reflection of long-term county population change than is the downward trend suggested by the IDPH estimates for 2015-2025. Thus we have assumed a population in 2060 of 158,035. We then employed a shorter-term record of county population to estimate the 2015 population. As input to this computation, we used the Census Bureau estimates of 2010, 2011, 2012, 2013, and 2014 population obtained using the Advanced Search feature provided within the United States Census Bureau's *American FactFinder* (United States Census Bureau, 2015). We developed our 2015 estimate using the *Fill/Series …* utility of Microsoft Excel 2013 (Microsoft Corporation, 2013), accessed via Excel's *Home* ribbon, selecting the *Linear* option under the *Type* menu and checking the *Trend* box. We then employed our 2015 population estimate of 145,921, together with our estimated 2060 population of 158,034, to develop estimates for 2020-2055. This was also accomplished using the *Fill/Series …* utility of Microsoft Excel 2013 (Microsoft Corporation, 2013), selecting the *Linear* option under the *Type* menu and checking the *Trend* box.

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5. For Winnebago County (Figure B.12), a second-order polynomial function that is fit to the 1920-2010 census counts and estimate and IDPH 2015-2025 estimates suggests an approximate 2060 population of 320,919. We employed this value as a preliminary estimate of 2060 population, together with the IDPH 2015-2025 estimates, to develop the 2030-2060 population estimates we used in estimating water demand. To develop these estimates, we used the *Fill/Series* … utility of Microsoft Excel 2013 (Microsoft Corporation, 2013), selecting the *Linear* option under the *Type* menu and checking the *Trend* box. Our final estimate of 2060 population is 321,297, derived through the second interpolation, and not the preliminary 2060 value of 320,919. We employed the IDPH projections as our final estimates of population in 2015, 2020, and 2025.

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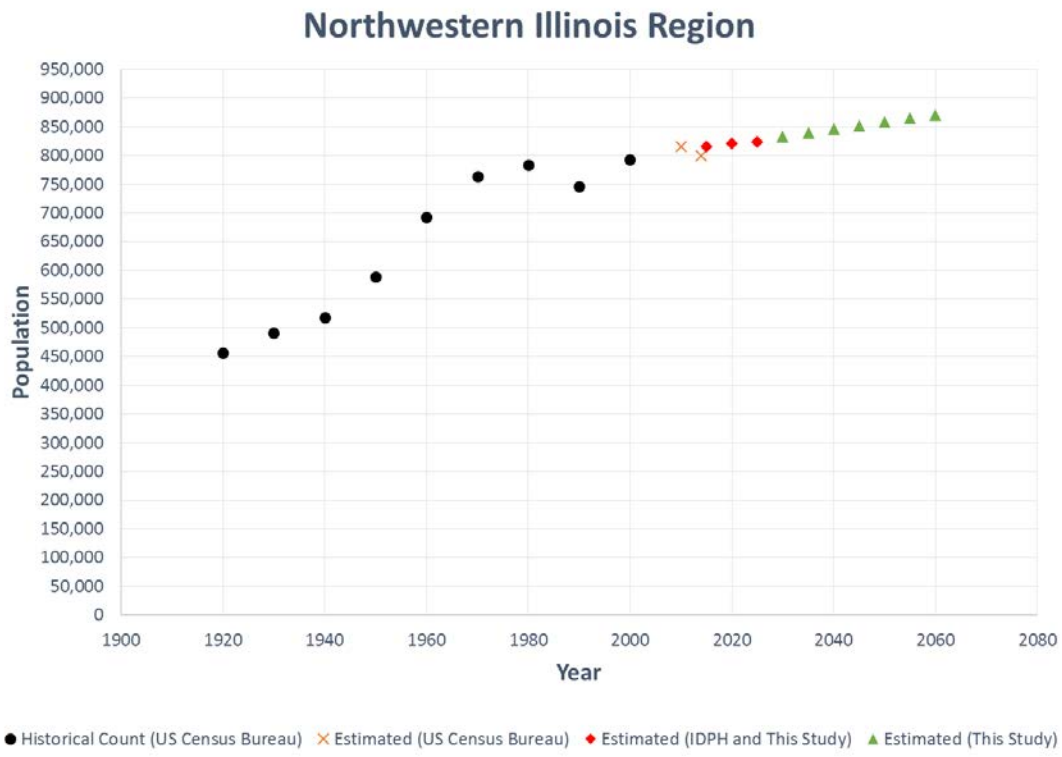

Figure B.1 Historical and projected population, Northwestern Illinois region

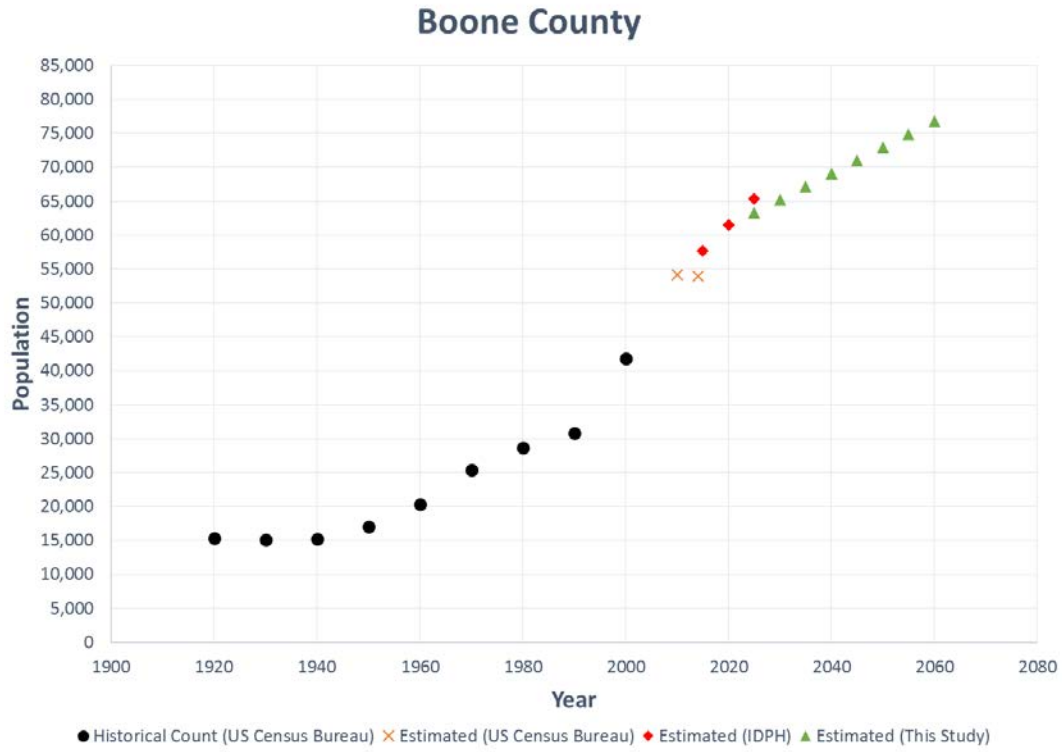

Figure B.2 Historical and projected population, Boone County

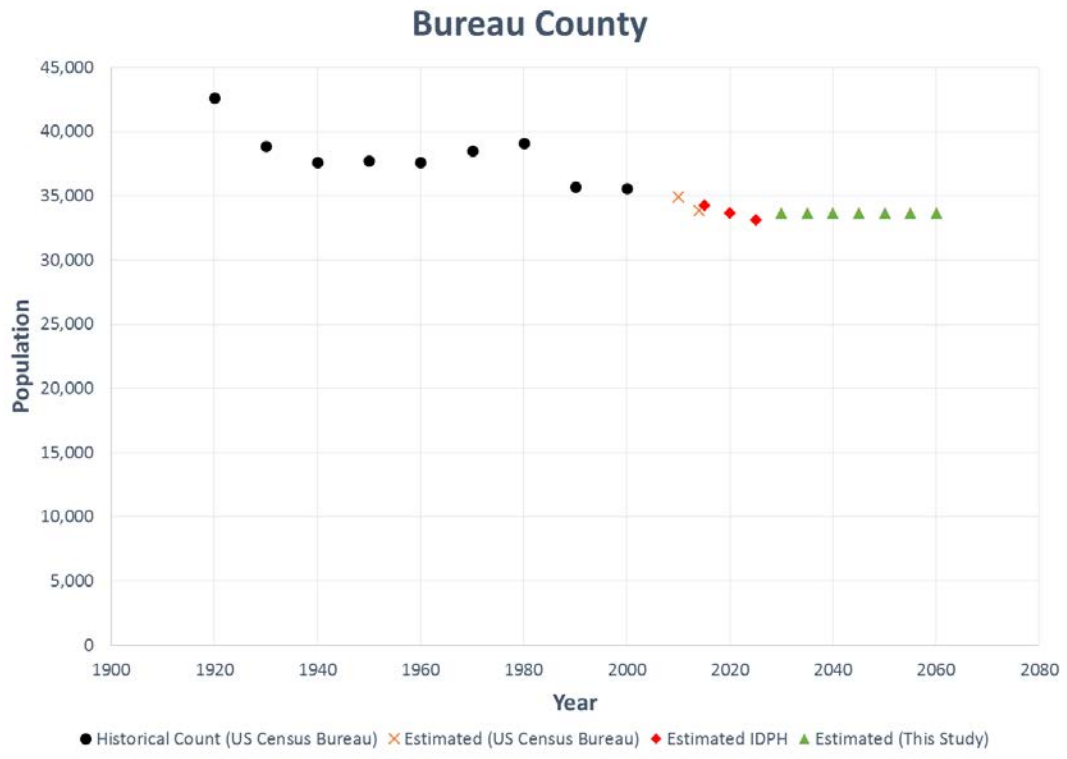

Figure B.3 Historical and projected population, Bureau County

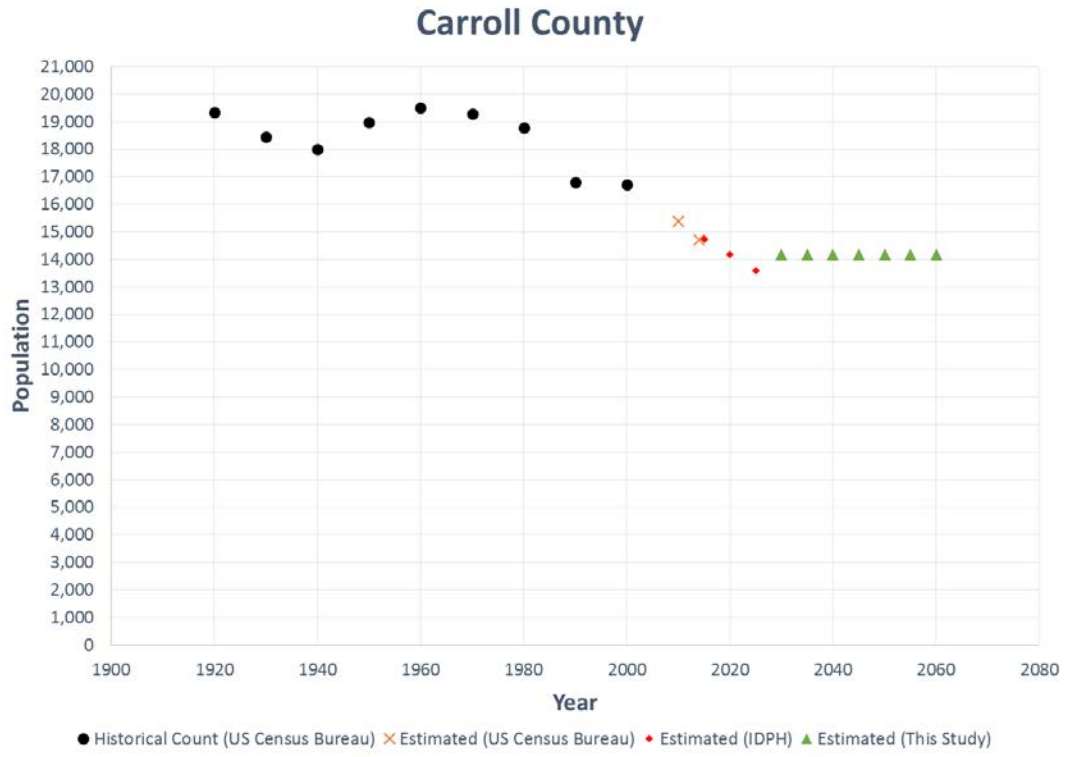

Figure B.4 Historical and projected population, Carroll County

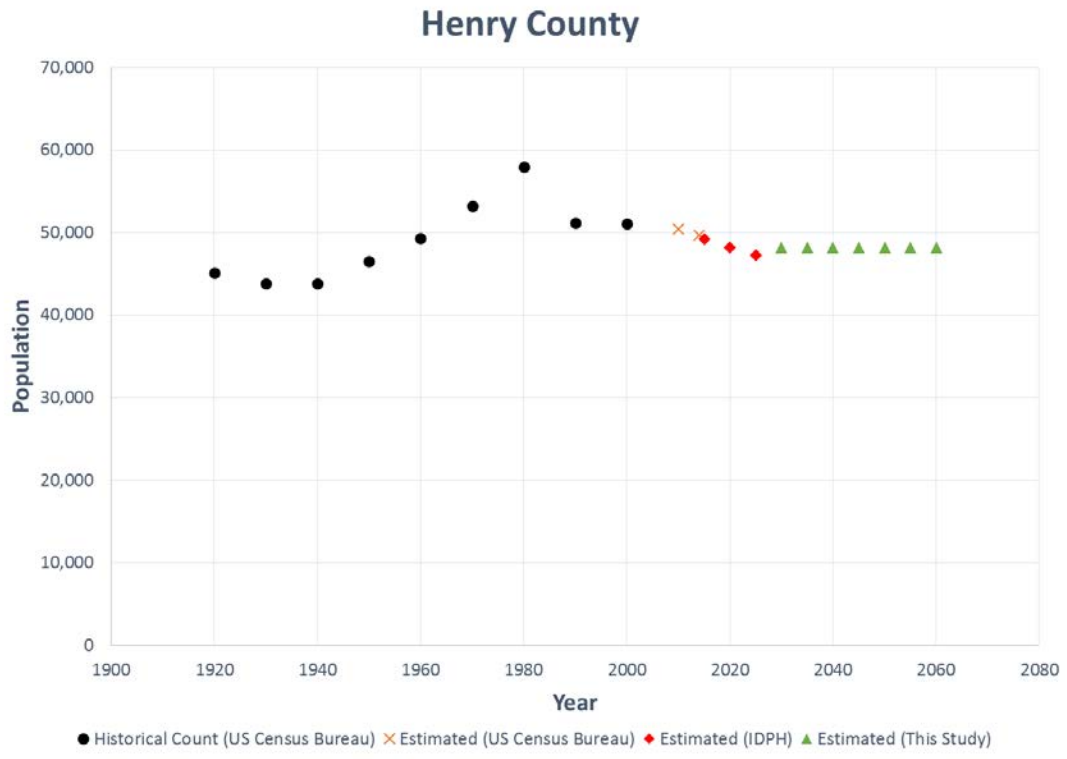

Figure B.5 Historical and projected population, Henry County

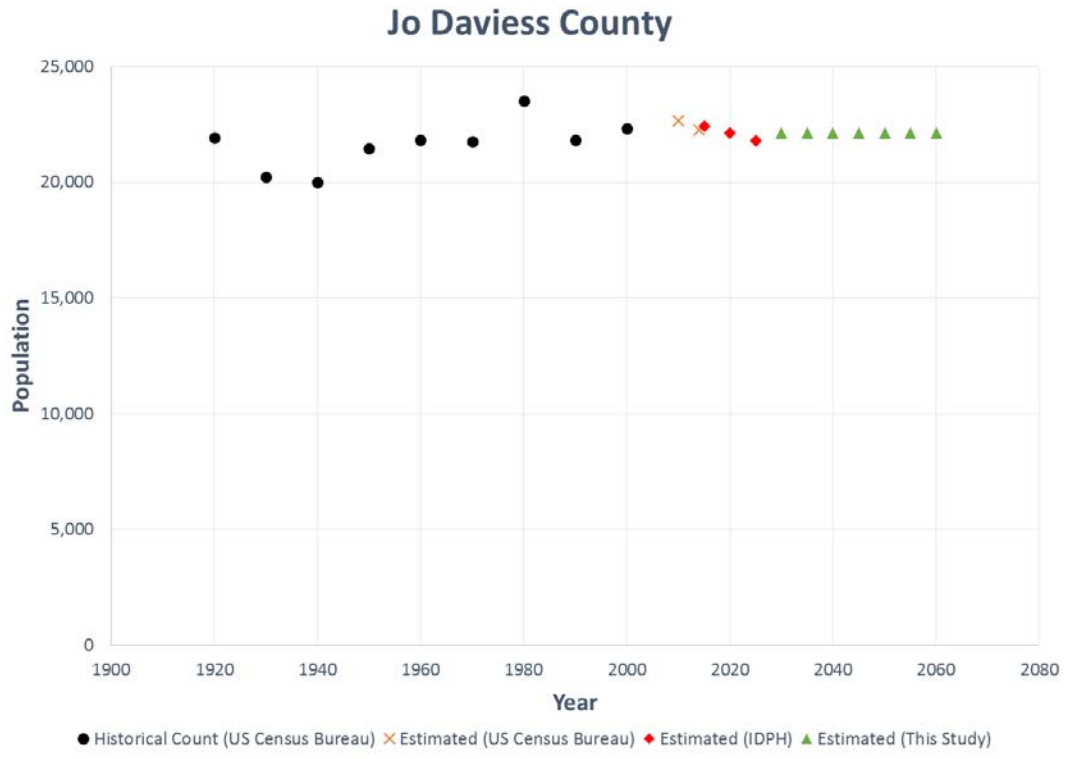

Figure B.6 Historical and projected population, Jo Daviess County

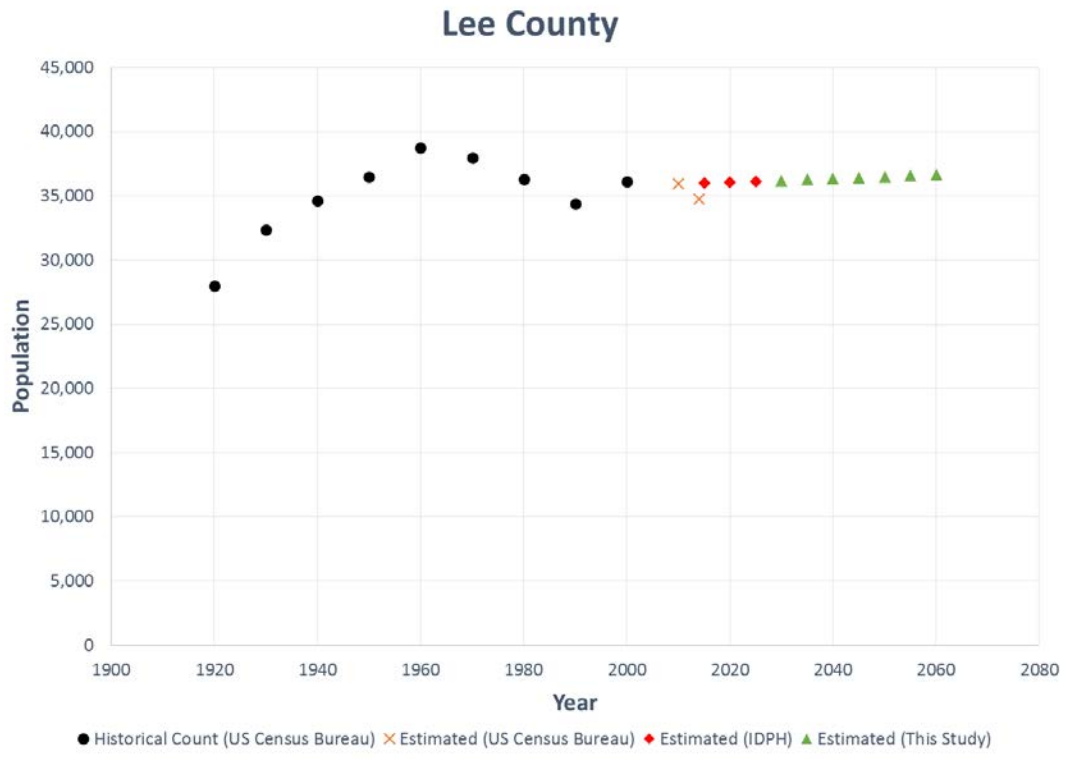

Figure B.7 Historical and projected population, Lee County

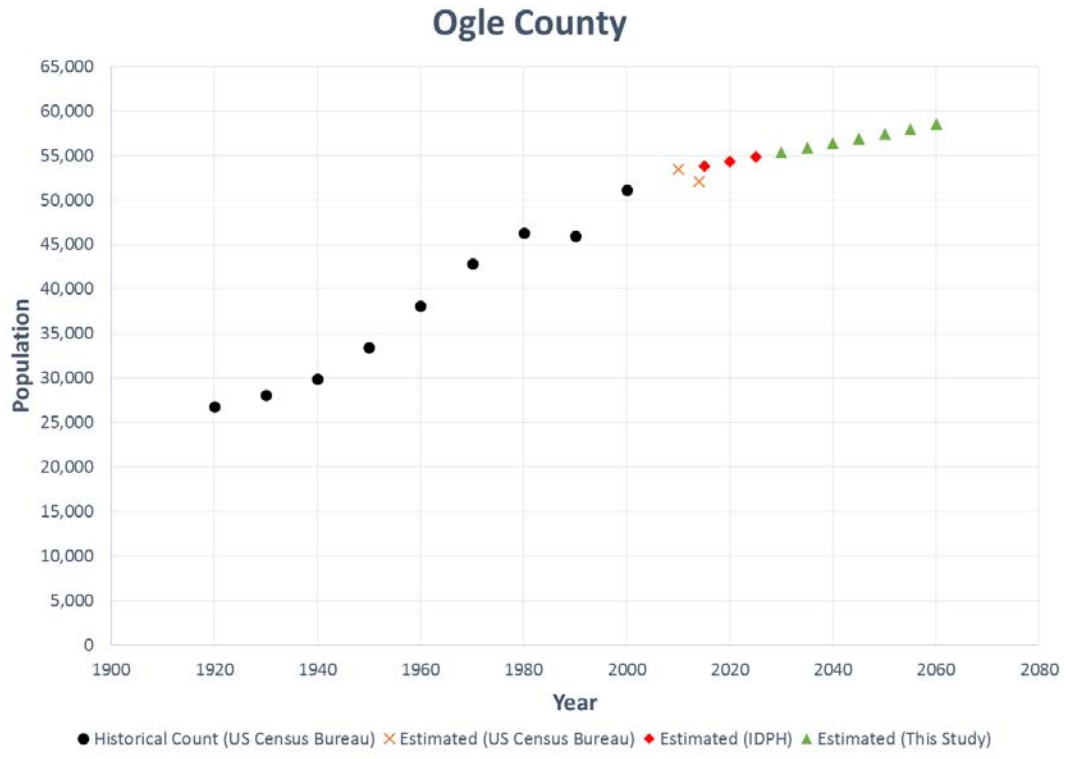

Figure B.8 Historical and projected population, Ogle County

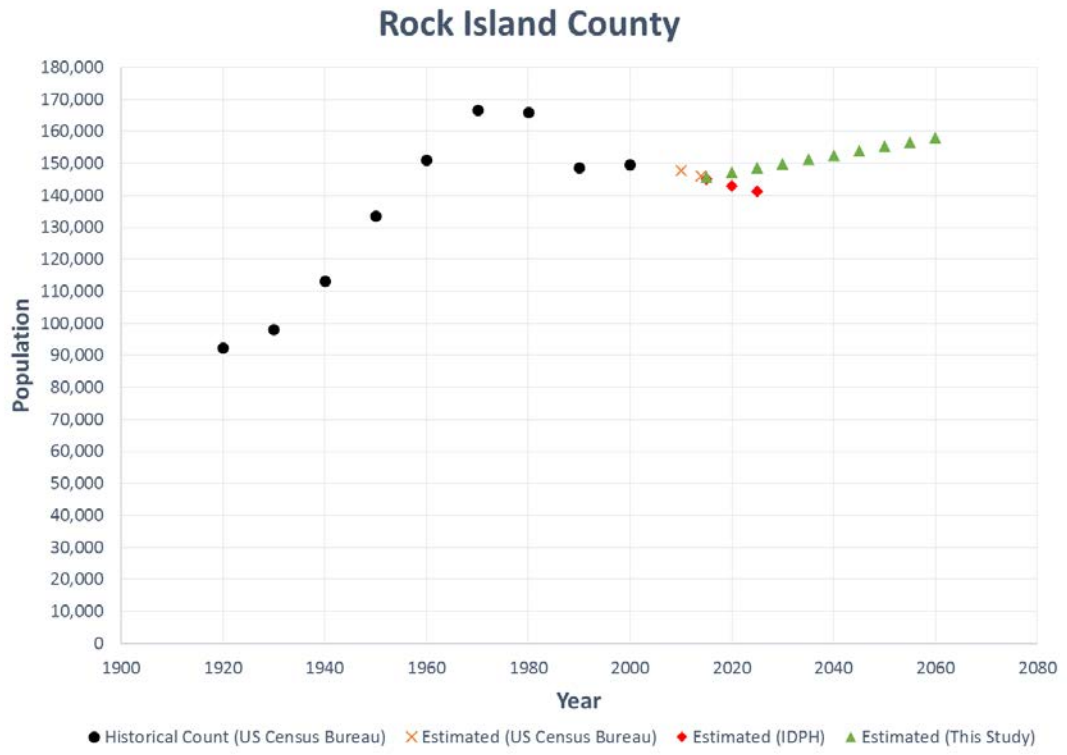

Figure B.9 Historical and projected population, Rock Island County

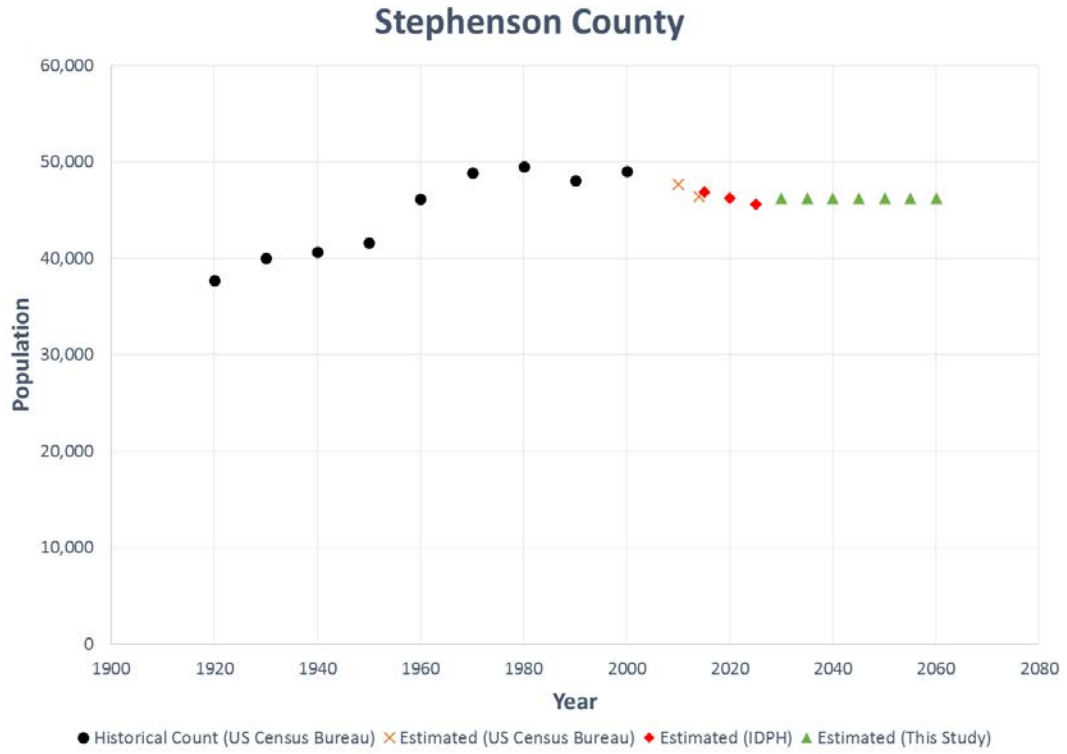

Figure B.10 Historical and projected population, Stephenson County

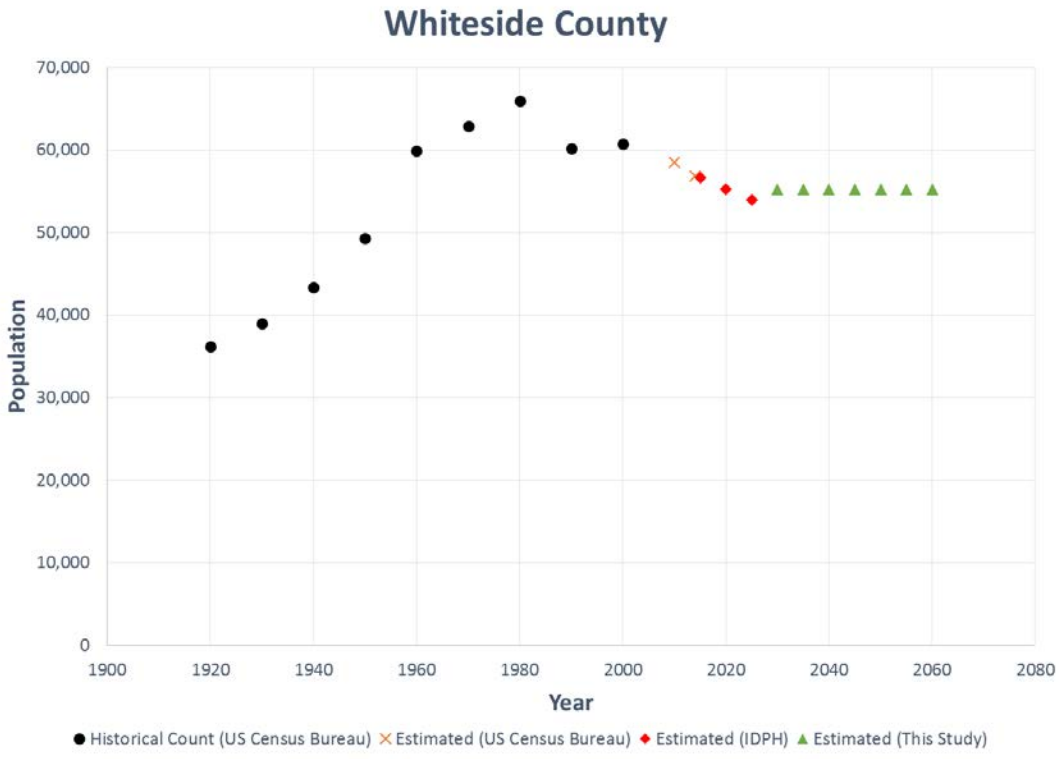

Figure B.11 Historical and projected population, Whiteside County

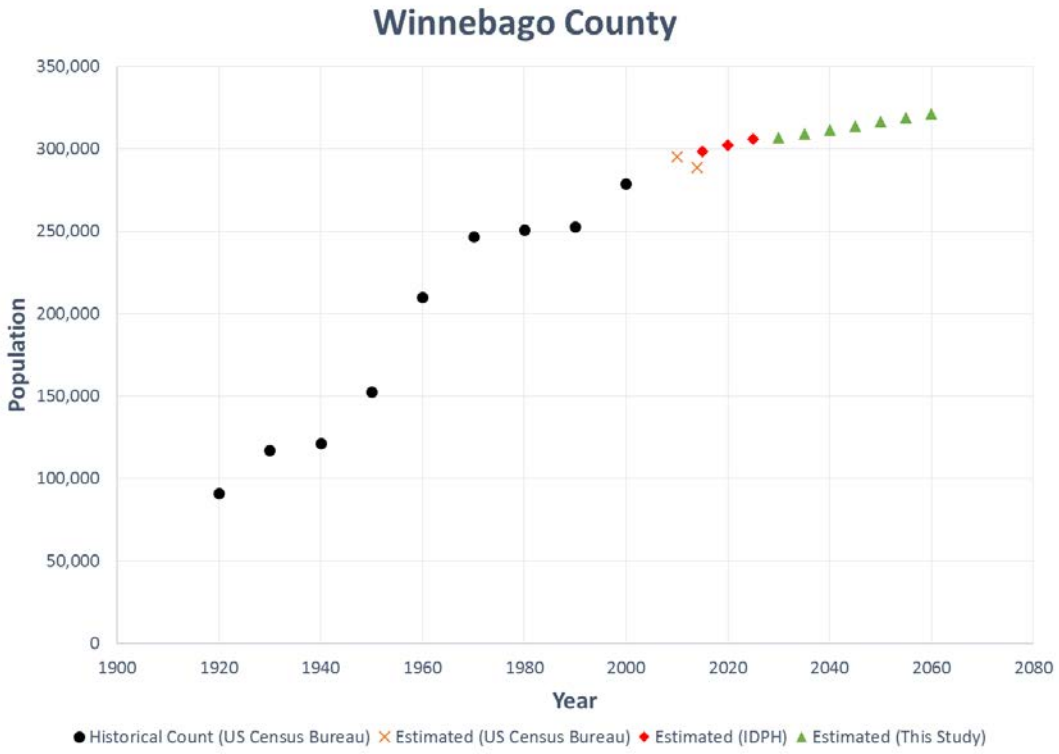

Figure B.12 Historical and projected population, Winnebago County

Table B.1 Projected County and Regional Population, 2015-2060

County	2015[1]	2020[1]	2025[1]	2030[2]	2035[2]	2040[2]	2045[2]	2050[2]	2055[2]	2060[2]
Boone	57,714	61,504	63,287*	65,220	67,152	69,084	71,017	72,949	74,882	76,814
Bureau	34,252	33,681	33,145	33,681	33,681	33,681	33,681	33,681	33,681	33,681
Carroll	14,737	14,169	13,600	14,169	14,169	14,169	14,169	14,169	14,169	14,169
Henry	49,243	48,233	47,249	48,233	48,233	48,233	48,233	48,233	48,233	48,233
Jo Daviess	22,409	22,137	21,807	22,137	22,137	22,137	22,137	22,137	22,137	22,137
Lee	35,972	36,066	36,120	36,201	36,275	36,349	36,423	36,497	36,571	36,645
Ogle	53,785	54,316	54,837	55,365	55,891	56,417	56,943	57,469	57,995	58,521
Rock Island	145,921*	147,267*	148,613*	149,959	151,305	152,651	153,997	155,343	156,689	158,035
Stephenson	46,887	46,242	45,590	46,242	46,242	46,242	46,242	46,242	46,242	46,242
Whiteside	56,690	55,267	53,922	55,267	55,267	55,267	55,267	55,267	55,267	55,267
Winnebago	298,260	302,258	306,088	306,881	309,284	311,687	314,089	316,492	318,895	321,297
REGIONAL TOTAL	**815,870**	**821,140**	**824,259**	**833,355**	**839,636**	**845,916**	**852,197**	**858,478**	**864,759**	**871,040**

[1]Estimated by Illinois Department of Public Health and available from Data.Illinois.gov State of Illinois Data Portal (2015) unless noted with asterisk, which are estimated for this study as described in the text.

[2]This study

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Table B.2 Historical County and Regional Population, 1920-2014

County	1920[1]	1930[1]	1940[1]	1950[1]	1960[1]	1970[1]	1980[1]	1990[1]	2000[2]	2010[3]	2014[3]
Boone	15,322	15,078	15,202	17,070	20,326	25,440	28,630	30,806	41,852	54,144	53,869
Bureau	42,648	38,845	37,600	37,711	37,594	38,541	39,114	35,688	35,561	34,905	33,840
Carroll	19,345	18,433	17,987	18,976	19,507	19,276	18,779	16,805	16,705	15,364	14,715
Henry	45,162	43,851	43,798	46,492	49,317	53,217	57,968	51,159	51,107	50,432	49,635
Jo Daviess	21,917	20,235	19,989	21,459	21,821	21,766	23,520	21,821	22,324	22,660	22,254
Lee	28,004	32,329	34,604	36,451	38,749	37,947	36,328	34,392	36,118	35,970	34,735
Ogle	26,830	28,118	29,869	33,429	38,106	42,867	46,338	45,957	51,119	53,448	52,085
Rock Island	92,297	98,191	113,323	133,558	150,991	166,734	165,968	148,723	149,637	147,632	146,063
Stephenson	37,743	40,064	40,646	41,595	46,207	48,861	49,536	48,052	49,058	47,680	46,435
Whiteside	36,174	39,019	43,338	49,336	59,887	62,877	65,970	60,186	60,755	58,472	56,876
Winnebago	90,929	117,373	121,178	152,385	209,765	246,623	250,884	252,913	278,902	295,151	288,542
REGIONAL TOTAL	**456,371**	**491,536**	**517,534**	**588,462**	**692,270**	**764,149**	**783,035**	**746,502**	**793,138**	**815,858**	**799,049**

[1]United States Census Bureau (1995)
[2]United States Census Bureau (2004)
[3]Estimated by United States Census Bureau, available from United States Census Bureau *American FactFinder* Advanced Search (United States Census Bureau, 2015)

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Appendix C. Self-Supplied Domestic Demand – Supplemental Tables

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Table C.2 Total Self-Supplied Domestic Demand by County, Less Resource Intensive (LRI) Scenario (Kgd) C-49
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Table C.1 Total Self-Supplied Domestic Demand by County, Current Trends (CT) Scenario (Kgd)

County	2010	2015	2020	2025	2030	2035	2040	2045	2050	2055	2060
Boone County	1,506	1,568	1,644	1,588	1,543	1,498	1,453	1,409	1,365	1,321	1,278
Bureau County	761	699	644	593	626	617	608	599	590	581	573
Carroll County	470	418	371	325	368	367	365	364	362	361	359
Henry County	791	685	594	506	573	563	552	542	532	522	512
Jo Daviess County	399	378	354	327	351	350	348	347	345	344	343
Lee County	382	364	354	340	329	317	305	293	282	270	259
Ogle County	1,601	1,584	1,580	1,576	1,571	1,567	1,563	1,558	1,554	1,550	1,545
Rock Island County	935	745	799	853	906	959	1,011	1,063	1,115	1,165	1,216
Stephenson County	1,152	881	808	735	765	744	723	702	682	661	641
Whiteside County	1,461	1,308	1,186	1,070	1,167	1,158	1,149	1,140	1,131	1,122	1,113
Winnebago County	1,510	1,520	1,534	1,546	1,544	1,549	1,555	1,560	1,565	1,571	1,576
REGIONAL TOTAL	**10,969**	**10,150**	**9,868**	**9,458**	**9,744**	**9,688**	**9,633**	**9,578**	**9,523**	**9,468**	**9,414**

[1]United States Geological Survey (2014)

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Table C.2 Total Self-Supplied Domestic Demand by County, Less Resource Intensive (LRI) Scenario (Kgd)

County	2010	2015	2020	2025	2030	2035	2040	2045	2050	2055	2060
Boone County	1,506	1,549	1,604	1,531	1,469	1,409	1,351	1,294	1,238	1,184	1,131
Bureau County	761	690	629	571	596	581	565	550	536	521	507
Carroll County	470	413	363	313	351	345	340	334	329	323	318
Henry County	791	676	580	488	546	530	514	498	483	468	454
Jo Daviess County	399	373	346	315	335	329	324	319	314	308	303
Lee County	382	360	345	328	313	298	284	269	256	242	229
Ogle County	1,601	1,565	1,542	1,519	1,497	1,475	1,453	1,431	1,410	1,389	1,368
Rock Island County	935	736	780	822	863	902	940	976	1,011	1,045	1,077
Stephenson County	1,152	870	788	709	729	700	672	645	619	593	568
Whiteside County	1,461	1,293	1,157	1,032	1,112	1,090	1,068	1,047	1,026	1,006	986
Winnebago County	1,510	1,501	1,497	1,491	1,471	1,458	1,445	1,433	1,420	1,408	1,395
REGIONAL TOTAL	**10,969**	**10,106**	**9,708**	**9,196**	**9,357**	**9,191**	**9,028**	**8,868**	**8,711**	**8,557**	**8,406**

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Table C.3 Total Self-Supplied Domestic Demand by County, More Resource Intensive (MRI) Scenario (Kgd)

County	2010	2015	2020	2025	2030	2035	2040	2045	2050	2055	2060
Boone County	1,506	1,586	1,682	1,644	1,615	1,586	1,557	1,527	1,496	1,465	1,433
Bureau County	761	707	659	614	655	653	651	649	647	645	643
Carroll County	470	423	380	336	386	389	391	394	397	400	403
Henry County	791	693	608	523	600	596	592	588	584	579	575
Jo Daviess County	399	382	363	338	368	371	373	376	379	382	384
Lee County	382	368	362	352	344	336	327	318	309	300	290
Ogle County	1,601	1,603	1,617	1,631	1,645	1,660	1,674	1,689	1,704	1,719	1,734
Rock Island County	935	754	818	883	949	1,016	1,084	1,152	1,222	1,293	1,364
Stephenson County	1,152	891	827	761	801	788	775	761	748	734	719
Whiteside County	1,461	1,324	1,213	1,108	1,222	1,227	1,231	1,236	1,240	1,245	1,249
Winnebago County	1,510	1,537	1,569	1,601	1,617	1,641	1,666	1,691	1,716	1,742	1,768
REGIONAL TOTAL	**10,969**	**10,348**	**10,179**	**9,872**	**10,285**	**10,345**	**10,405**	**10,466**	**10,527**	**10,588**	**10,649**

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Appendix D. Theoretical Cooling Water Requirements for Thermoelectric Power Generation

In once-through cooling systems, theoretical water requirements are a function of the amount of "waste" heat that has to be removed in the process of condensing steam. According to Backus and Brown (1975), the amount of water for one megawatt (MW) of electric generation capacity can be calculated as:

$$L = \frac{6823(1-e)}{Te} \quad \text{(D.1)}$$

where:

L = amount of water flow in gallons per minute per MW of generating capacity;
T = temperature rise of the cooling water in °F; and
e = thermodynamic efficiency of the power plant, expressed as decimal fraction.

For example, in a coal-fired plant with thermal efficiency of 40 percent and the condenser temperature rise of 20 °F, the water flow rate obtained from Equation 5.1 would be 512 gallons per minute (gpm) per MW. For a typical 650 MW plant, operating at 90 percent of capacity, the theoretical flow rate would be nearly 300,000 gpm, or 431.3 million gallons per day. The daily volume of cooling water is equivalent to approximately 31 gallons per 1 kWh of generation.

According to Croley et al. (1975), in recirculating systems with cooling towers, theoretical make-up water requirements are determined using the following relationship:

$$W = E \cdot \frac{1}{\frac{c}{c_o} - 1} \quad \text{(D.2)}$$

where:

c/c_0 is the concentration ratio; and
E = evaporative water loss which for a typical mean water temperature of 80 °F can be calculated as:

$$E = (1.91145 \cdot 10^{-6}) \cdot aQ \quad \text{(D.3)}$$

where:

a = the fraction of heat dissipated as latent heat of evaporation (for evaporative towers a = 75% to 85%); and
Q = rate of heat rejection by the plant in Btu/hr, which can be calculated as:

$$Q = 3414426 \cdot P \cdot \frac{1-e}{e} \quad \text{(D.4)}$$

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where:

P = the rated capacity of the plant in MW; and
e is thermodynamic efficiency of plant expressed as a fraction.

Again, for a typical 650 MW coal-fired plant with 40 percent efficiency, the heat rejection would be 3,329 million Btu/hour and the evaporative water loss would be 5,091 gpm. At the concentration ratio c/c_o of 0.25 the make-up water flow would be 6,788 gpm or 0.63 gallons per 1 kWh of generation.

While the theoretical (or minimum) water requirements for energy generation are similar for plants of the same type, the actual unit amounts of water withdrawn per kilowatt-hour of gross generation vary from plant to plant even when the same type of cooling is used and at the same level of thermal efficiency of the plant. Significant differences in unit water use per kilowatt-hour of electricity generation among different types of cooling systems were reported in previous studies (Baum et al., 2003, Gleick, 1993, Harte and El-Gasseir, 1978).

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Appendix E. Power Generation Facilities in the Kankakee Watershed, Middle Illinois, and Northwestern Illinois Study Regions (U.S. Department of Energy, Energy Information Administration (EIA) 2010 EIA-906/920 Monthly Time Series File and EIA-860)

Plant Name	Prime Mover[1]	Energy Source[2]	Number of Units	Nameplate Capacity (MW[3])	Source of Water
KANKAKEE WATERSHED REGION					
Ford County					
Gibson City	GT	NG	2	270.0	
Kankakee County					
Bunge Oil	GT	NG	1	3.5	
CSL Behring LLC	GT	NG	1	4.2	Municipality
Kankakee Gas Recovery	IC	LFG	2	1.6	
Kankakee Hydro Facility	HY	WAT	3	1.2	Kankakee R
MIDDLE ILLINOIS REGION					
La Salle County					
Blackstone Wind Farm II LLC	WT	WND	1	200.0	na[4]
Blackstone Wind Farm LLC	WT	WND	1	102.0	na
North American Hydro - Dayton	HY	WAT	3	3.6	Fox R
Grand Ridge Wind Energy Center	WT	WND	4	261.0	
LaSalle Generating Station	ST	NUC	2	2,340.0	Illinois R./Cooling L.
Oglesby	GT	NG	4	70.0	
Peru	GT	JF	1	10.0	Illinois R
Peru Hydroelectric Power Station	HY	WAT	4	7.6	Illinois R
Peru	IC	DFO	8	19.5	Illinois R
Streator Energy Partners LLC	IC	LFG	1	1.1	
Livingston County					
Biodyne Pontiac	GT	LFG	3	15.0	
Streator Cayuga Ridge South	WT	WND	1	150.0	
Peoria County					
Archer Daniels Midland Peoria	GT	NG	3	49.0	Illinois R
Archer Daniels Midland Peoria	ST	BIT	5	15.0	Illinois R
Biodyne Peoria	IC	LFG	5	4.0	
E D Edwards	ST	SUB	3	780.3	Illinois R
Putnam County					
Hennepin Power Station	ST	SUB	2	306.3	Illinois R
Stark County					
Camp Grove Wind Farm	WT	WND	1	150.0	na

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Plant Name	Prime Mover[1]	Energy Source[2]	Number of Units	Nameplate Capacity (MW[3])	Source of Water
NORTHWESTERN ILLINOIS REGION					
Bureau County					
Agriwind LLC	WT	WND	1	8.4	
Crescent Ridge	WT	WND	1	53.0	
Princeton	IC	NG	8	37.9	Municipality
Providence Heights Wind LLC	WT	WND	1	72.0	
Henry County					
Geneseo	IC	DFO	1	4.8	Municipality
Geneseo		NG	7	24.6	Municipality
Geneseo	WT	WND	2	3.0	Municipality
Lee County					
Dixon Hydroelectric Dam	HY	WAT	5	3.0	Rock R
Dixon/Lee Energy Partners LLC	IC	LFG	4	4.4	
GSG LLC	WT	WND	1	80.0	na
Lee Energy Facility	GT	NG	8	814.4	Wells
Mendota Hills, LLC	WT	WND	1	50.4	na
Ogle County					
1515 S Caron Road	GT	NG	1	4.2	Municipality
Byron Generating Station	ST	NUC	2	2,449.8	Rock R/Cool. T
North Ninth Street	IC	DFO	3	2.9	Municipality
North Ninth Street		NG	5	14.8	Municipality
South Main Street	IC	NG	2	5.0	Municipality
Rock Island County					
Cordova Energy	CA	NG	1	191.2	Wells
Cordova Energy	CT	NG	2	420.0	Wells
John Deere Harvester Works	ST	BIT	4	10.0	Mississippi R
Moline	GT	NG	4	72.0	Mississippi R
Mid American Energy Co - Moline Hydro Plant	HY	WAT	4	3.6	Mississippi R
Quad Cities Generating Station	ST	NUC	2	2,018.6	Mississippi R
Sears Hydroelectric Plant	HY	WAT	4	1.4	Rock R
Upper Rock Energy Partners LLC	IC	LFG	4	4.4	
Stephenson County					
EcoGrove Wind LLC	WT	WND	1	100.5	na
Whiteside County					
Avenue A Generator Sets	GT	DFO	2	3.6	
Industrial Park	GT	DFO	5	9.0	
Upper Sterling Hydro Power Plant	HY	WAT	2	2.2	Municipal Wells

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Plant Name	Prime Mover[1]	Energy Source[2]	Number of Units	Nameplate Capacity (MW[3])	Source of Water
Winnebago County					
Cadbury Adams - Rockford	GT	NG	1	4.7	Municipality
Ingersoll Milling Machine	GT	NG	7	4.6	Municipality
NRG Rockford I	GT	NG	2	316.0	
NRG Rockford II Energy Center	GT	NG	1	168.0	
North American Hydro - Rockton	HY	WAT	2	1.1	Rock R
Winnebago Energy Center LLC	IC	LFG	4	6.4	
ALL REGIONS					
TOTAL			166	11,734.8	

[1]Prime Mover: GT=gas turbine, HY= hydropower, IC=internal combustion, ST=steam turbine WT=wind turbine
[2]Energy Source: BIT=bituminous coal, DFO= distillate fuel oil, JF=jet fuel, LFG=landfill gas, NG=natural gas, NUC=nuclear, SUB=subbituminous coal, WAT=water, WND=wind
[3]MW: megawatts
[4]na: not applicable

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Appendix F. Self-Supplied Industrial and Commercial Demand – Supplemental Tables

Table F.1 Self-Supplied IC Facilities in the Northwestern Illinois Region (2010) E-57
Table F.2 Total Self-Supplied IC Demand by County, Current Trends (CT) Scenario (Mgd) .E-60
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Table F.4 Total Self-Supplied IC Demand by County, More Resource Intensive (MRI) Scenario (Mgd) E-62

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Table F.1 Self-Supplied IC Facilities in the Northwestern Illinois Region (2010)

Facility Name	Demand (gallons)			Employees	gped
	Self-Supplied	Purchased	Total		
Boone County					
Dean Foods Company - Belvidere	27,616,800	1,497,000	29,113,800	100	797.1
General Mills Green Giant Packing Co	130,247,000	3,683,644	133,930,644	750	488.9
Ipsen International Inc	2,050,000	0	2,050,000	100	56.1
US Chrome of Illinois	172,825	0	172,825	5	94.6
Bureau County					
Crop Production Services - Walnut Plant	1,377,555	0	1,377,555	nr[1]	nd[2]
Tee Group Films	13,140,000	82,300	13,222,300	28	1,292.9
Tri-Con Materials	748,836,000	0	748,836,000	nr	nd
Carroll County					
Danisco Sweeteners	773,204,000	0	773,204,000	nr	nd
Metform Corporation	20,656,500	0	20,656,500	220	257.1
Metform Corporation - Extrusion	4,664,496	0	4,664,496	nr	nd
Henry County					
Big River Resources	272,057,000	1,024,760	273,081,760	58	12,890.6
Edwards Ready Mix	2,900,000	0	2,900,000	20	397.0
Patriot Renewable Fuels LLC	263,496,864	0	263,496,864	55	13,116.6
Jo Daviess County					
IEI Barge Services	7,167,400	0	7,167,400	18	1,090.2
Rentech Energy Midwest Corporation	641,096,648	0	641,096,648	148	11,859.6
Lee County					
Agview FS	453,000	65	453,065	9	137.8
Green River Industrial Park	13,088,027	0	13,088,027	nr	nd
Henkel Seeds	5,000	0	5,000	nr	nd
Tate and Lyle Custom Ingredients	3,000	0	3,000	nr	nd
Ogle County					
ED Etnyre & Co	2,140,400	0	2,140,400	313	18.7
HA International	1,400,000	0	1,400,000	60	63.9
Ogle County Hospice Association	26,600	0	26,600	nr	nd
Quad/Graphics	111,147,800	0	111,147,800	545	558.4
Supermix	472,198	0	472,198	nr	nd
Swenson Spreader & Mfg Co	563,000,000	0	563,000,000	100	15,414.1
Unimin Corp - Oregon	521,000	0	521,000	40	35.7

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Facility Name	Demand (gallons)			Employees	gped
	Self-Supplied	Purchased	Total		
Rock Island County					
3M Company Cordova Plant	2,640,379,700	0	2,640,379,700	nr	nd
Allied Stone	676,464,000	0	676,464,000	15	123,470.5
CF Industries Sales LLC - Albany Terminal	4,334,576	0	4,334,576	6	1,977.9
Cleveland Quarry Inc	543,334,000	0	543,334,000	15	99,171.2
Collinson Stone Co	996,000	0	996,000	nr	nd
John Deere Harvester Works	1,195,442,200	65,717,036	1,261,159,236	2100	1,644.2
Midway Stone Co Inc	538,740,000	0	538,740,000	10	147,499.0
Modern Woodmen of America	554,400	0	554,400	nr	nd
QC Pickling Company	4,160,000	0	4,160,000	15	759.3
Tyson Fresh Meats	255,050,923	486,566,000	741,616,923	2300	882.8
Stephenson County					
Adkins Energy LLC	119,100,000	0	119,100,000	nr	nd
Berner Cheese Corporation	35,100,000	0	35,100,000	nr	nd
Kolb-Lena Cheese Co Inc	18,250,000	0	18,250,000	nr	nd
Modern Plating Corp	28,293,000	5,821,658	34,114,658	57	1,638.6
Sauer-Danfoss	2,250,000	5,341,420	7,591,420	300	69.3
Tate & Lyle Custom Ingredients, LLC	2,524,173	0	2,524,173	10	691.1
Titan Tire Corporation of Freeport	545,931,000	0	545,931,000	575	2,599.4
Whiteside County					
Illinois Forge Company	244,000	0	244,000	14	47.7
National Manufacturing Co	16,498,090	0	16,498,090	329	137.3
Rock River Lumber & Grain	3,000,000	0	3,000,000	nr	nd
Sterling Steel Ball Co	4,000,000	450	4,000,450	30	365.1
Tyco Valves & Controls LP	3,681,000	156,137	3,837,137	71	148.0
Winnebago County					
ABC Television WTVO	200,250	280	200,530	80	6.9
Aqua Aerobic Systems Inc	695,000	745,000	1,440,000	160	24.6
Arlington Memorial Park Assoc	60,000	0	60,000	5	32.9
Bay Valley Foods - Pecatonica	63,212,512	7,253,700	70,466,212	110	1,753.9
Cinetic Landis Grinding Corp	354,227	482,525	836,752	nr	nd
Dean Foods Company	89,064,000	0	89,064,000	85	2,868.8

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Facility Name	Demand (gallons)			Employees	gped
	Self-Supplied	Purchased	Total		
Diocese of Rockford - offices	1,947,927	0	1,947,927	nr	nd
Hamilton Sundstrand Corporation	23,945,782	28,267,668	52,213,450	2200	65.0
Hanson Pressure Pipe Inc	622,000	0	622,000	107	15.9
Kent Nutrition Group Inc - Rockford Plant	225,170	0	225,170	11	56.0
Marathon Petroleum Co Lp	465,000	0	465,000	nr	nd
Mid-States Concrete Prod Co	130,000	1,611,750	1,741,750	50	95.4
Mondelez Global LLC	72,657,800	58,140,000	130,797,800	610	587.1
Muller Pinehurst Dairy Inc	32,143,780	0	32,143,780	125	704.0
Rowald Refrigeration Systems	53,000	56,848	109,848	5	60.1
Woodward Inc	175,878,000	89,162,650	265,040,650	1500	483.8

[1]nr: not reported
[2]nd: not determined

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Table F.2 Total Self-Supplied IC Demand by County, Current Trends (CT) Scenario (Mgd)

County	2010 Reported[1]	2015	2020	2025	2030	2035	2040	2045	2050	2055	2060
Boone County	0.49	0.54	0.57	0.59	0.61	0.64	0.66	0.68	0.70	0.72	0.74
Bureau County	2.09[2]	2.14	2.19	2.22	2.25	2.29	2.32	2.35	2.38	2.40	2.43
Carroll County	2.20	2.34	2.39	2.42	2.46	2.50	2.54	2.57	2.59	2.62	2.65
Henry County	1.03	1.10	1.13	1.15	1.17	1.19	1.21	1.23	1.24	1.26	1.27
Jo Daviess County	1.91	2.03	2.07	2.10	2.14	2.17	2.20	2.23	2.25	2.28	2.30
Lee County	0.09	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.11	0.11	0.11
Ogle County	2.68	2.84	2.90	2.95	3.00	3.04	3.09	3.12	3.16	3.19	3.23
Rock Island County	14.19	15.12	15.52	15.80	16.09	16.39	16.69	16.90	17.13	17.35	17.58
Stephenson County	2.12	2.32	2.45	2.55	2.65	2.75	2.86	2.94	3.02	3.10	3.19
Whiteside County	0.17	0.18	0.18	0.19	0.19	0.19	0.20	0.20	0.20	0.20	0.21
Winnebago County	1.47	1.61	1.69	1.76	1.83	1.90	1.97	2.03	2.08	2.14	2.20
REGIONAL TOTAL	**28.44**	**30.30**	**31.19**	**31.83**	**32.48**	**33.15**	**33.84**	**34.34**	**34.85**	**35.37**	**35.89**

[1]United States Geological Survey (2014), except for Bureau County.
[2]Based on review of data reported to the IWIP, we revised upward the 2010 USGS estimate of self-supplied IC demand in Bureau County from 0.18 to 2.09 Mgd.

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Table F.3 Total Self-Supplied IC Demand by County, Less Resource Intensive (LRI) Scenario (Mgd)

County	2010 Reported[1]	2015	2020	2025	2030	2035	2040	2045	2050	2055	2060
Boone County	0.49	0.51	0.53	0.54	0.55	0.56	0.57	0.58	0.59	0.60	0.61
Bureau County	2.09[2]	2.13	2.16	2.15	2.21	2.24	2.26	2.29	2.31	2.33	2.36
Carroll County	2.20	2.24	2.27	2.23	2.38	2.43	2.48	2.53	2.57	2.62	2.66
Henry County	1.03	1.06	1.09	1.08	1.11	1.12	1.13	1.14	1.15	1.16	1.17
Jo Daviess County	1.91	1.94	1.97	1.98	2.04	2.08	2.11	2.14	2.17	2.20	2.23
Lee County	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
Ogle County	2.68	2.72	2.77	2.77	2.76	2.76	2.76	2.76	2.76	2.75	2.75
Rock Island County	14.19	14.60	15.02	15.01	14.99	14.98	14.96	14.94	14.92	14.90	14.88
Stephenson County	2.12	2.21	2.30	2.24	2.25	2.23	2.21	2.19	2.17	2.14	2.12
Whiteside County	0.17	0.17	0.18	0.17	0.17	0.17	0.17	0.17	0.17	0.16	0.16
Winnebago County	1.47	1.52	1.59	1.59	1.58	1.58	1.57	1.57	1.57	1.56	1.56
REGIONAL TOTAL	**28.44**	**29.19**	**29.97**	**29.86**	**30.15**	**30.24**	**30.32**	**30.40**	**30.47**	**30.54**	**30.60**

[1]United States Geological Survey (2014)
[2]Based on review of data reported to the IWIP, we revised upward the 2010 USGS estimate of self-supplied IC demand in Bureau County from 0.18 to 2.09 Mgd.

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Table F.4 Total Self-Supplied IC Demand by County, More Resource Intensive (MRI) Scenario (Mgd)

County	2010 Reported[1]	2015	2020	2025	2030	2035	2040	2045	2050	2055	2060
Boone County	0.49	0.54	0.60	0.65	0.70	0.76	0.82	0.89	0.96	1.03	1.11
Bureau County	2.09[2]	2.26	2.44	2.58	2.81	3.02	3.24	3.48	3.73	4.00	4.28
Carroll County	2.20	2.37	2.56	2.67	3.02	3.27	3.55	3.84	4.15	4.48	4.84
Henry County	1.03	1.12	1.23	1.29	1.41	1.51	1.62	1.74	1.86	1.99	2.13
Jo Daviess County	1.91	2.06	2.22	2.37	2.60	2.80	3.02	3.25	3.51	3.77	4.06
Lee County	0.09	0.10	0.10	0.11	0.12	0.13	0.13	0.14	0.15	0.16	0.17
Ogle County	2.68	2.89	3.12	3.31	3.51	3.73	3.95	4.19	4.45	4.72	5.00
Rock Island County	14.19	15.50	16.93	17.95	19.04	20.19	21.41	22.70	24.07	25.51	27.04
Stephenson County	2.12	2.34	2.59	2.68	2.86	3.01	3.16	3.32	3.49	3.67	3.86
Whiteside County	0.17	0.18	0.20	0.20	0.22	0.23	0.24	0.25	0.27	0.28	0.29
Winnebago County	1.47	1.62	1.79	1.90	2.01	2.13	2.25	2.38	2.52	2.67	2.83
REGIONAL TOTAL	**28.44**	**30.99**	**33.78**	**35.72**	**38.30**	**40.77**	**43.40**	**46.19**	**49.15**	**52.29**	**55.62**

[1]United States Geological Survey (2014)
[2]Based on review of data reported to the IWIP, we revised upward the 2010 USGS estimate of self-supplied IC demand in Bureau County from 0.18 to 2.09 Mgd.

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Reference Cited

United States Geological Survey. 2014. Water Use in the United States: Water-Use Data Available from USGS. http://water.usgs.gov/watuse/data/ (accessed January 12, 2015).

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Appendix G. Self-Supplied Irrigation, Livestock, and Environmental Demand – Supplemental Tables

Table G.1 ILE Demand by County, Current Trends (CT) Scenario (Mgd).....E-65
Table G.2 ILE Demand by County, Less Resource Intensive (LRI) Scenario (Mgd).....E-68
Table G.2 ILE Demand by County, More Resource Intensive (MRI) Scenario (Mgd) E-71

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Table G.1 ILE Demand by County, Current Trends (CT) Scenario (Mgd)

County	2010 Reported[1]	2010 Normal[2]	2015	2020	2025	2030	2035	2040	2045	2050	2055	2060
Boone County												
Irrigation	0.30	0.87	0.92	0.97	1.02	1.08	1.11	1.14	1.17	1.20	1.24	1.27
Livestock	0.15	0.15	0.15	0.16	0.17	0.17	0.18	0.19	0.20	0.21	0.21	0.22
Environmental	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Boone County Total	*0.45*	*1.02*	*1.07*	*1.13*	*1.19*	*1.25*	*1.29*	*1.33*	*1.37*	*1.41*	*1.45*	*1.50*
Bureau County												
Irrigation	3.26	6.62	6.98	7.37	7.78	8.22	8.45	8.68	8.92	9.17	9.43	9.69
Livestock	0.57	0.57	0.60	0.63	0.66	0.70	0.74	0.78	0.82	0.87	0.92	0.97
Environmental	2.46	2.46	2.59	2.72	2.86	3.00	3.15	3.32	3.48	3.66	3.85	4.05
Bureau County Total	*6.28*	*9.64*	*10.17*	*10.72*	*11.30*	*11.92*	*12.34*	*12.78*	*13.23*	*13.71*	*14.20*	*14.71*
Carroll County												
Irrigation	2.33	6.76	7.14	7.54	7.96	8.41	8.64	8.88	9.13	9.39	9.65	9.92
Livestock	0.83	0.83	0.86	0.90	0.94	0.98	1.02	1.07	1.11	1.16	1.21	1.27
Environmental	0.69	0.69	0.72	0.76	0.80	0.84	0.88	0.93	0.98	1.03	1.08	1.13
Carroll County Total	*3.84*	*8.28*	*8.73*	*9.20*	*9.70*	*10.23*	*10.55*	*10.88*	*11.22*	*11.57*	*11.94*	*12.32*
Henry County												
Irrigation	2.53	5.61	5.92	6.25	6.60	6.97	7.16	7.36	7.56	7.78	7.99	8.22
Livestock	1.29	1.29	1.36	1.43	1.51	1.59	1.67	1.76	1.86	1.96	2.07	2.18
Environmental	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Henry County Total	*3.82*	*6.91*	*7.29*	*7.69*	*8.11*	*8.56*	*8.84*	*9.12*	*9.43*	*9.74*	*10.06*	*10.40*
Jo Daviess County												
Irrigation	0.10	0.33	0.35	0.36	0.37	0.39	0.40	0.41	0.42	0.43	0.45	0.46
Livestock	0.91	0.91	0.94	0.97	1.00	1.04	1.07	1.11	1.15	1.19	1.23	1.27
Environmental	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jo Daviess County Total	*1.01*	*1.24*	*1.29*	*1.33*	*1.38*	*1.42*	*1.47*	*1.52*	*1.57*	*1.62*	*1.68*	*1.73*
Lee County												
Irrigation	10.28	16.24	17.15	18.11	19.12	20.20	20.76	21.33	21.93	22.54	23.17	23.81

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County	2010 Reported[1]	2010 Normal[2]	2015	2020	2025	2030	2035	2040	2045	2050	2055	2060
Livestock	0.45	0.45	0.48	0.50	0.53	0.56	0.59	0.62	0.65	0.69	0.72	0.76
Environmental	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lee County Total	*10.74*	*16.69*	*17.62*	*18.61*	*19.65*	*20.75*	*21.34*	*21.95*	*22.58*	*23.23*	*23.89*	*24.57*
Ogle County												
Irrigation	0.76	1.00	1.05	1.11	1.17	1.23	1.26	1.30	1.33	1.37	1.41	1.45
Livestock	1.14	1.14	1.19	1.25	1.32	1.38	1.45	1.53	1.61	1.69	1.78	1.87
Environmental	0.09	0.09	0.10	0.10	0.11	0.11	0.12	0.12	0.13	0.14	0.14	0.15
Ogle County Total	*1.99*	*2.23*	*2.35*	*2.46*	*2.59*	*2.72*	*2.83*	*2.95*	*3.07*	*3.20*	*3.33*	*3.47*
Rock Island County												
Irrigation	0.75	2.58	2.72	2.86	3.02	3.18	3.27	3.36	3.46	3.55	3.65	3.75
Livestock	0.24	0.24	0.25	0.26	0.27	0.28	0.30	0.31	0.32	0.33	0.35	0.36
Environmental	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rock Island County Total	*1.00*	*2.82*	*2.97*	*3.13*	*3.29*	*3.47*	*3.57*	*3.67*	*3.78*	*3.89*	*4.00*	*4.12*
Stephenson County												
Irrigation	0.08	0.17	0.18	0.18	0.19	0.20	0.20	0.21	0.21	0.22	0.23	0.23
Livestock	1.32	1.32	1.38	1.44	1.50	1.56	1.63	1.70	1.78	1.86	1.94	2.03
Environmental	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stephenson County Total	*1.40*	*1.49*	*1.55*	*1.62*	*1.69*	*1.76*	*1.84*	*1.91*	*2.00*	*2.08*	*2.17*	*2.27*
Whiteside County												
Irrigation	19.92	38.78	40.95	43.25	45.68	48.24	49.58	50.96	52.38	53.83	55.33	56.87
Livestock	1.24	1.24	1.30	1.37	1.44	1.52	1.59	1.68	1.76	1.86	1.96	2.06
Environmental	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Whiteside County Total	*21.17*	*40.02*	*42.26*	*44.62*	*47.12*	*49.76*	*51.18*	*52.64*	*54.15*	*55.70*	*57.29*	*58.93*
Winnebago County												
Irrigation	0.38	0.63	0.66	0.69	0.72	0.75	0.77	0.79	0.81	0.84	0.86	0.89
Livestock	0.22	0.22	0.23	0.24	0.25	0.25	0.26	0.27	0.28	0.29	0.30	0.31
Environmental	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Winnebago County Total	*0.61*	*0.86*	*0.89*	*0.93*	*0.96*	*1.00*	*1.03*	*1.07*	*1.10*	*1.13*	*1.17*	*1.20*

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County	2010 Reported[1]	2010 Normal[2]	2015	2020	2025	2030	2035	2040	2045	2050	2055	2060
REGIONAL TOTAL	**52.31**	**91.20**	**96.18**	**101.44**	**106.99**	**112.85**	**116.28**	**119.83**	**123.49**	**127.27**	**131.18**	**135.22**

[1]Reported values of irrigation and livestock demand are from the United States Geological Survey (2014). Reported values of environmental demand are county-level sums of values reported by facilities to the IWIP.
[2]Irrigation demand computed for 1981-2010 normal weather conditions.

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Table G.2 ILE Demand by County, Less Resource Intensive (LRI) Scenario (Mgd)

County	2010 Reported[1]	2010 Normal[2]	2015	2020	2025	2030	2035	2040	2045	2050	2055	2060
Boone County												
Irrigation	0.30	0.87	0.90	0.92	0.95	0.97	1.00	1.02	1.05	1.07	1.10	1.13
Livestock	0.15	0.15	0.15	0.16	0.16	0.16	0.17	0.17	0.17	0.18	0.18	0.19
Environmental	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Boone County Total	*0.45*	*1.02*	*1.05*	*1.08*	*1.11*	*1.14*	*1.17*	*1.20*	*1.22*	*1.25*	*1.28*	*1.31*
Bureau County												
Irrigation	3.26	6.62	6.63	6.64	6.65	6.66	6.68	6.69	6.70	6.71	6.72	6.74
Livestock	0.57	0.57	0.58	0.60	0.61	0.63	0.65	0.66	0.68	0.69	0.71	0.73
Environmental	2.46	2.46	2.46	2.46	2.46	2.46	2.46	2.46	2.46	2.46	2.46	2.46
Bureau County Total	*6.28*	*9.64*	*9.67*	*9.70*	*9.73*	*9.75*	*9.78*	*9.81*	*9.84*	*9.87*	*9.89*	*9.92*
Carroll County												
Irrigation	2.33	6.76	6.84	6.92	7.00	7.08	7.16	7.23	7.31	7.39	7.47	7.55
Livestock	0.83	0.83	0.84	0.85	0.87	0.88	0.90	0.91	0.93	0.94	0.95	0.97
Environmental	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69
Carroll County Total	*3.84*	*8.28*	*8.37*	*8.46*	*8.56*	*8.65*	*8.74*	*8.84*	*8.93*	*9.02*	*9.11*	*9.21*
Henry County												
Irrigation	2.53	5.61	5.66	5.71	5.76	5.81	5.86	5.91	5.97	6.02	6.07	6.12
Livestock	1.29	1.29	1.32	1.35	1.38	1.42	1.45	1.48	1.51	1.54	1.57	1.60
Environmental	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Henry County Total	*3.82*	*6.91*	*6.99*	*7.07*	*7.15*	*7.23*	*7.31*	*7.40*	*7.48*	*7.56*	*7.64*	*7.72*
Jo Daviess County												
Irrigation	0.10	0.33	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34
Livestock	0.91	0.91	0.92	0.92	0.93	0.94	0.94	0.95	0.96	0.96	0.97	0.97
Environmental	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jo Daviess County Total	*1.01*	*1.24*	*1.25*	*1.26*	*1.27*	*1.27*	*1.28*	*1.29*	*1.29*	*1.30*	*1.31*	*1.31*
Lee County												
Irrigation	10.28	16.24	16.36	16.49	16.62	16.75	16.88	17.00	17.13	17.26	17.39	17.52

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County	2010 Reported[1]	2010 Normal[2]	2015	2020	2025	2030	2035	2040	2045	2050	2055	2060
Livestock	0.45	0.45	0.46	0.46	0.47	0.47	0.48	0.48	0.48	0.49	0.49	0.50
Environmental	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lee County Total	*10.74*	*16.69*	*16.82*	*16.96*	*17.09*	*17.22*	*17.35*	*17.49*	*17.62*	*17.75*	*17.88*	*18.02*
Ogle County												
Irrigation	0.76	1.00	1.18	1.36	1.54	1.72	1.90	2.09	2.27	2.45	2.63	2.81
Livestock	1.14	1.14	1.15	1.15	1.16	1.17	1.17	1.18	1.19	1.20	1.20	1.21
Environmental	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
Ogle County Total	*1.99*	*2.23*	*2.42*	*2.61*	*2.80*	*2.98*	*3.17*	*3.36*	*3.55*	*3.74*	*3.92*	*4.11*
Rock Island County												
Irrigation	0.75	2.58	2.61	2.63	2.66	2.69	2.71	2.74	2.77	2.80	2.82	2.85
Livestock	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24
Environmental	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rock Island Co. Total	*1.00*	*2.82*	*2.85*	*2.88*	*2.90*	*2.93*	*2.96*	*2.98*	*3.01*	*3.04*	*3.07*	*3.09*
Stephenson County												
Irrigation	0.08	0.17	0.20	0.22	0.25	0.27	0.30	0.33	0.35	0.38	0.41	0.43
Livestock	1.32	1.32	1.32	1.32	1.32	1.32	1.32	1.32	1.33	1.33	1.33	1.33
Environmental	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stephenson County Total	*1.40*	*1.49*	*1.52*	*1.55*	*1.57*	*1.60*	*1.63*	*1.65*	*1.68*	*1.71*	*1.73*	*1.76*
Whiteside County												
Irrigation	19.92	38.78	38.79	38.80	38.82	38.83	38.84	38.85	38.87	38.88	38.89	38.91
Livestock	1.24	1.24	1.25	1.25	1.26	1.26	1.27	1.27	1.28	1.28	1.29	1.29
Environmental	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Whiteside County Total	*21.17*	*40.02*	*40.04*	*40.06*	*40.08*	*40.09*	*40.11*	*40.13*	*40.15*	*40.17*	*40.19*	*40.20*
Winnebago County												
Irrigation	0.38	0.63	0.71	0.78	0.86	0.93	1.00	1.08	1.15	1.23	1.30	1.38
Livestock	0.22	0.22	0.23	0.23	0.24	0.25	0.25	0.26	0.26	0.27	0.27	0.28
Environmental	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Winnebago County Total	*0.61*	*0.86*	*0.94*	*1.02*	*1.10*	*1.18*	*1.26*	*1.34*	*1.42*	*1.50*	*1.58*	*1.66*
REGIONAL TOTAL	**52.31**	**91.20**	**91.92**	**92.63**	**93.34**	**94.05**	**94.76**	**95.47**	**96.18**	**96.90**	**97.61**	**98.32**

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[1]Reported values of irrigation and livestock demand are from the United States Geological Survey (2014). Reported values of environmental demand are county-level sums of values reported by facilities to the IWIP.
[2]Irrigation demand computed for 1981-2010 normal weather conditions.

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Table G.3 ILE Demand by County, More Resource Intensive (MRI) Scenario (Mgd)

County	2010 Reported[1]	2010 Normal[2]	2015	2020	2025	2030	2035	2040	2045	2050	2055	2060
Boone County												
Irrigation	0.30	0.87	0.96	1.06	1.16	1.28	1.34	1.41	1.48	1.56	1.64	1.72
Livestock	0.15	0.15	0.15	0.16	0.17	0.17	0.18	0.19	0.20	0.21	0.21	0.22
Environmental	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Boone County Total	*0.45*	*1.02*	*1.11*	*1.22*	*1.33*	*1.45*	*1.52*	*1.60*	*1.68*	*1.76*	*1.85*	*1.95*
Bureau County												
Irrigation	3.26	6.62	7.30	8.05	8.88	9.80	10.30	10.82	11.38	11.96	12.57	13.21
Livestock	0.57	0.57	0.60	0.63	0.66	0.70	0.74	0.78	0.82	0.87	0.92	0.97
Environmental	2.46	2.46	2.78	3.15	3.56	4.03	4.56	5.16	5.84	6.61	7.47	8.46
Bureau County Total	*6.28*	*9.64*	*10.68*	*11.83*	*13.11*	*14.53*	*15.60*	*16.76*	*18.04*	*19.43*	*20.96*	*22.63*
Carroll County												
Irrigation	2.33	6.76	7.46	8.24	9.09	10.03	10.54	11.08	11.65	12.24	12.87	13.52
Livestock	0.83	0.83	0.86	0.90	0.94	0.98	1.02	1.07	1.11	1.16	1.21	1.27
Environmental	0.69	0.69	0.78	0.88	1.00	1.13	1.28	1.45	1.64	1.85	2.09	2.37
Carroll County Total	*3.84*	*8.28*	*9.11*	*10.02*	*11.03*	*12.14*	*12.84*	*13.59*	*14.40*	*15.25*	*16.17*	*17.16*
Henry County												
Irrigation	2.53	5.61	6.19	6.82	7.52	8.29	8.72	9.16	9.63	10.12	10.64	11.18
Livestock	1.29	1.29	1.36	1.43	1.51	1.59	1.67	1.76	1.86	1.96	2.07	2.18
Environmental	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01
Henry County Total	*3.82*	*6.91*	*7.55*	*8.26*	*9.03*	*9.88*	*10.39*	*10.93*	*11.49*	*12.09*	*12.71*	*13.37*
Jo Daviess County												
Irrigation	0.10	0.33	0.36	0.38	0.40	0.43	0.45	0.47	0.50	0.52	0.55	0.58
Livestock	0.91	0.91	0.94	0.97	1.00	1.04	1.07	1.11	1.15	1.19	1.23	1.27
Environmental	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jo Daviess County Total	*1.01*	*1.24*	*1.30*	*1.35*	*1.41*	*1.47*	*1.52*	*1.58*	*1.65*	*1.71*	*1.78*	*1.85*
Lee County												
Irrigation	10.28	16.24	17.92	19.78	21.83	24.10	25.33	26.62	27.98	29.41	30.91	32.48

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County	2010 Reported[1]	2010 Normal[2]	2015	2020	2025	2030	2035	2040	2045	2050	2055	2060
Livestock	0.45	0.45	0.48	0.50	0.53	0.56	0.59	0.62	0.65	0.69	0.72	0.76
Environmental	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lee County Total	*10.74*	*16.69*	*18.40*	*20.28*	*22.36*	*24.66*	*25.92*	*27.24*	*28.63*	*30.09*	*31.63*	*33.25*
Ogle County												
Irrigation	0.76	1.00	1.10	1.20	1.32	1.45	1.52	1.60	1.68	1.76	1.85	1.95
Livestock	1.14	1.14	1.19	1.25	1.32	1.38	1.45	1.53	1.61	1.69	1.78	1.87
Environmental	0.09	0.09	0.10	0.12	0.13	0.15	0.17	0.19	0.22	0.25	0.28	0.32
Ogle County Total	*1.99*	*2.23*	*2.40*	*2.57*	*2.77*	*2.98*	*3.14*	*3.32*	*3.50*	*3.70*	*3.91*	*4.14*
Rock Island County												
Irrigation	0.75	2.58	2.83	3.12	3.43	3.77	3.96	4.16	4.37	4.60	4.83	5.08
Livestock	0.24	0.24	0.25	0.26	0.27	0.28	0.30	0.31	0.32	0.33	0.35	0.36
Environmental	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rock Island Co. Total	*1.00*	*2.82*	*3.09*	*3.38*	*3.70*	*4.05*	*4.26*	*4.47*	*4.70*	*4.93*	*5.18*	*5.44*
Stephenson County												
Irrigation	0.08	0.17	0.18	0.19	0.20	0.22	0.23	0.24	0.25	0.27	0.28	0.29
Livestock	1.32	1.32	1.38	1.44	1.50	1.56	1.63	1.70	1.78	1.86	1.94	2.03
Environmental	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stephenson County Total	*1.40*	*1.49*	*1.56*	*1.63*	*1.70*	*1.78*	*1.86*	*1.95*	*2.03*	*2.13*	*2.22*	*2.33*
Whiteside County												
Irrigation	19.92	38.78	42.80	47.25	52.15	57.57	60.51	63.59	66.84	70.25	73.83	77.60
Livestock	1.24	1.24	1.30	1.37	1.44	1.52	1.59	1.68	1.76	1.86	1.96	2.06
Environmental	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01
Whiteside County Total	*21.17*	*40.02*	*44.11*	*48.62*	*53.60*	*59.09*	*62.11*	*65.28*	*68.61*	*72.11*	*75.80*	*79.67*
Winnebago County												
Irrigation	0.38	0.63	0.68	0.73	0.79	0.85	0.89	0.94	0.99	1.04	1.09	1.15
Livestock	0.22	0.22	0.23	0.24	0.25	0.25	0.26	0.27	0.28	0.29	0.30	0.31
Environmental	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01
Winnebago County Total	*0.61*	*0.86*	*0.91*	*0.97*	*1.04*	*1.11*	*1.16*	*1.21*	*1.27*	*1.33*	*1.40*	*1.46*
REGIONAL TOTAL	**52.31**	**91.20**	**100.20**	**110.13**	**121.07**	**133.14**	**140.33**	**147.94**	**156.00**	**164.55**	**173.62**	**183.24**

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[1]Reported values of irrigation and livestock demand are from the United States Geological Survey (2014). Reported values of environmental demand are county-level sums of values reported by facilities to the IWIP.
[2]Irrigation demand computed for 1981-2010 normal weather conditions.

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A.1 Reference Cited

United States Geological Survey. 2014. Water Use in the United States: Water-Use Data Available from USGS. http://water.usgs.gov/watuse/data/ (accessed January 12, 2015).

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