

Updated Tables

The initial draft of the “Water Demand in the Rock River Water Supply Planning Region, 2010-2060” was completed in 2015. We now have more recent data that can be used to help with estimates of future demand in the region. In this document, we updated select tables from the public water systems, self-supplied power generation, and self-supplied water for industrial and commercial uses chapters. We have not modified any of the demand projections.

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Table 2.3 Historical Public-Supply Retail Water Demand (Mgd)

Study Area	1990	1995	2000	2005	2010	2013
Boone County						
Belvidere	3.527	3.134	3.240	3.656	2.986	3.058
Boone County Residual	0.254	0.442	0.585	0.656	0.739	0.716
Bureau County						
Depue	0.192	0.211	0.171	0.265	0.199	0.208
Princeton	1.170	1.260	1.260	1.065	0.951	0.937
Spring Valley	0.611	0.658	0.647	0.692	0.852	0.796
Walnut	0.221	0.223	0.174	0.163	0.150	0.194
Bureau County Residual	1.031	1.044	1.037	1.143	0.838	0.874
Carroll County						
Lanark	0.212	0.208	0.221	0.185	0.174	0.174
Mount Carroll	0.173	0.198	0.212	0.177	0.138	0.116
Savanna	0.638	0.671	0.494	0.456	0.423	0.367
Carroll County Residual	0.407	0.389	0.419	0.423	0.372	0.376
Henry County						
Cambridge	0.257	0.323	0.225	0.212	0.198	0.211
Colona East	0.151	0.149	0.145	0.210	0.193	0.221
Galva	0.454	0.270	0.289	0.383	0.260	0.253
Geneseo	0.646	0.651	0.657	0.705	0.647	0.633
Kewanee	1.470	1.631	1.573	1.553	1.894	1.877
Henry County Residual	1.024	1.106	1.081	1.086	0.924	0.932
Jo Daviess County						
East Dubuque	0.245	0.240	0.218	0.201	0.196	0.177
Galena	0.811	0.641	0.831	0.671	0.431	0.403
Stockton	0.519	0.604	0.467	0.329	0.365	0.759
Jo Daviess County Residual	0.905	1.057	1.006	1.141	0.983	1.057
Lee County						
Amboy	0.335	0.362	0.386	0.476	0.383	0.392
Ashton	0.245	0.266	0.285	0.138	0.158	0.115
Dixon	2.326	2.515	2.410	2.325	2.304	2.181*
Lee County Residual	0.952	1.183	1.233	1.411	1.240	1.288
Ogle County						
Byron	0.480	0.551	0.692	0.721	0.577	0.576
Mt Morris	0.303	0.318	0.325	0.346	0.295	0.294
Oregon	0.433	0.414	0.409	0.416	0.373	0.442
Polo	0.246	0.274	0.260	0.260	0.205	0.195
Rochelle	3.274	2.920	3.135	2.007	2.823	2.712
Ogle County Residual	0.768	0.805	0.814	0.963	0.848	0.863
Rock Island County						

Study Area	1990	1995	2000	2005	2010	2013
East Moline	3.703	3.658	4.615	4.292	4.415	4.238
Milan	0.780	0.914	0.518	0.557	0.514	0.560
Moline	5.307	5.493	5.367	5.296	5.371	5.193
Rock Island	4.727	5.129	5.213	5.493	5.415	5.145
Silvis	0.632	0.644	0.412	0.553	0.596	0.592
Rock Island County Residual	2.588	2.269	1.762	2.142	1.748	1.747
Stephenson County						
Cedarville	0.066	0.045	0.060	0.060	0.082	0.069
Freeport	4.504	4.220	3.220	3.219	2.920	3.136
Lena	226	0.242	0.254	0.280	0.271	0.253
Stephenson County Residual	0.428	0.467	0.465	0.480	0.366	0.447
Whiteside County						
Fulton	0.305	0.422	0.429	0.351	0.318	0.276*
IL American - Sterling	2.645	2.886	2.061	1.694	1.576	1.385
Morrison	0.849	0.739	0.575	0.543	0.498	0.482
Prophetstown	0.219	0.217	0.225	0.269	0.188	0.188
Rock Falls	1.081	1.136	1.298	1.138	0.970	1.046
Whiteside County Residual	0.345	377	0.372	0.395	0.308	0.339
Winnebago County						
IL American - South Beloit	0.684	0.616	0.569	0.607	0.765	0.613
Loves Park	3.112	3.157	2.223	3.424	3.182	3.708
North Park PWD	1.848	2.283	2.735	3.651	3.477	3.605
Rockford	27.190	26.323	24.575	25.639	20.221	18.942
Rockton	0.539	0.715	0.695	0.914	0.807	0.983
Winnebago County Residual	1.772	3.544	2.211	2.693	2.348	2.259
REGIONAL TOTAL	87.830	90.215	84.755	88.124	79.473	78.603

*Dixon 2013 value reported as 3.843 Mgd, but 2014 value was more consistent with historical reporting so is presented in the table

*Fulton 2013 value reported as 0.568 Mgd, but 2014 value was more consistent with historical reporting so is presented in the table

Table 4.2 Existing Large Thermoelectric Power Plants in Three Water-Supply Planning Regions

Power Plant	County	Nameplate Capacity (MW) ¹	Gross Generation (2016) (MWh) ²	Water Demand (2016) (Mgd)	Unit Use Water Demand (2016) (Gal/kWh) ³
Kankakee Sub-Region					
Gibson City (Natural Gas)	Ford	270	No data	No data	Not determined
Middle Illinois Region					
Exelon – La Salle Co Station (Nuclear)	La Salle	2,340	20,089,196	1,642.63	29.865
Ameren Cilco - Edwards Station (Coal)	Peoria	780	4,393,834	386.74	32.149
Dynegy Midwest Gen - Hennepin Power (Coal)	Putnam	306	2,439,832	197.26	29.531
Rock River Region⁴					
Lee Energy (Natural Gas)	Lee	814	No data	No data	Not determined
Exelon - Byron Station (Nuclear)	Ogle	2,450	20,329,730	55.6	0.998
Cordova Energy (Natural Gas)	Rock Island	611	58,500	0.17	1.062
Exelon - Quad Cities Station (Nuclear)	Rock Island	2,019	16,108,000	1044.8	23.675
NRG Rockford I & II (Natural Gas)	Winnebago	484	No data	No data	Not determined

*La Salle data is based on 2013 which is the most recent data

[†]Includes recycled cooling pond water. Consumptive water demand was 62.14 Mgd.

¹MW: megawatts

²MWh: megawatt-hours

³gal/kWh: gallons per kilowatt-hours

⁴Rock River Region data is based on 2014 which is the most recent data

Table 4.3 Existing Hydroelectric Power Plants in Three Water-Supply Planning Regions

Power Plant	County	Nameplate Capacity (MW)	Gross Generation (2013) (MWh)	Water Demand (2013) (Mgd)	Unit Use Water Demand (2013) (Gal/kWh)
Kankakee Sub-Region					
Kankakee Hydro Facility	Kankakee	1.20	2,587	No data	Not determined
Middle Illinois Region					
Marseilles Hydro Power Station (closed)	La Salle	No data	Not applicable	Not applicable	Not applicable
National Hydro Corp.	La Salle	No data	No data	No data	Not determined
North American Hydro – Dayton	La Salle	3.68	17,859	643.83	13,159
Peru Hydroelectric Power Station	La Salle	7.60	30,569	No data	Not determined
Rock River Region					
Dixon Hydroelectric Dam	Lee	3.00	12,578	No data	Not determined
Mid American Energy Co - Moline Hydro Plant	Rock Island	3.60	3,955	555.79	51,293
Sears Hydroelectric Plant	Rock Island	1.40	2,590	No data	Not determined
Rock Falls Hydroelectric	Whiteside	2.20	5,106	389.84	27,867
North American Hydro - Rockton	Winnebago	1.10	6,303	571.02	33,067

Table 5.1 Historical Self-Supplied IC Water Demand (Mgd) (United States Geological Survey, 2014)

County	Non-Mining						Mining					
	1990	1995	2000	2005	2010	2013	1990	1995	2000	2005	2010	2013
Boone	0.07	0.18	0.39	0.42	0.44	0.43	0	0	NE ¹	0.15	0.05	NE
Bureau	0.02	0.02	0.03	0.03	0.04	0.04	0	0.38	NE	0.94	2.05 ²	NE
Carroll	1.96	2.24	1.97	2.29	2.19	2.73	0	0	NE	0.07	0.01	NE
Henry	0.03	0.01	0.01	0.01	1.00	2.84	0	0	NE	0.02	0.03	NE
Jo Daviess	1.72	2.62	2.56	2.17	1.78	2.15	0	0	NE	0.21	0.13	NE
Lee	0.05	2.44	1.11	1.84	0.05	0.00	0	0	NE	0.38	0.04	NE
Ogle	0.68	0.44	0.64	0.53	1.86	0.07	0.35	0.01	NE	0.61	0.82	NE
Rock Island	48.99	6.37	3.57	11.78	11.22	5.27	0.34	0	NE	0.18	2.97	2.89
Stephenson	1.82	1.78	1.45	1.88	2.05	2.81	0	0	NE	0.08	0.07	NE
Whiteside	7.65	4.52	4.15	0.06	0.02	0.00	0	0	NE	0.18	0.15	NE
Winnebago	3.59	3.59	1.72	1.51	0.87	1.14	0.74	0.36	NE	0.49	0.60	NE
REGIONAL TOTAL	66.58	24.21	17.60	22.52	21.52		1.43	0.75	NE	3.31	6.92	

¹NE: not estimated

²Based on review of data reported to the IWIP, we revised upward the 2010 USGS estimate of water demand for mining uses in Bureau County from 0.14 Mgd to 2.05 Mgd.

Table 5.4 Self-Supplied IC Water Demand by SIC Code for Selected Facilities (2010 and 2013)

SIC Code	SIC Code Definition	2010 Demand (Mgd)	2013 Demand (Mgd)
1422	Construction Sand and Gravel	3.0	2.9
1446	Industrial Sand	<0.1	<0.1
2011	Meat Packing Plants	2.0	0.7
2023	Dry, Condensed, Evaporated Products	0.2	0.2
2024	Ice Cream and Frozen Desserts	0.1	<0.1
2026	Fluid Milk	0.3	0.4
2037	Frozen Fruits and Vegetables	0.4	0.4
2048	Prepared Feeds, NEC ²	<0.1	<0.1
2067	Chewing Gum	0.4	<0.1
2754	Commercial Printing, Gravure	0.3	<0.1
2869	Industrial Organic Chemicals, NEC	1.5	5.9
2873	Nitrogenous Fertilizers	1.8	1.6
2899	Chemical Preparations, NEC	<0.1	0.3
3011	Tires and Inner Tubes	1.5	1.4
3081	Unsupported Plastics Film and Sheet	<0.1	<0.1
3259	Structural Clay Products, NEC	<0.1	<0.1
3272	Concrete Products, NEC	<0.1	<0.1
3273	Ready-Mixed Concrete	<0.1	<0.1
3429	Hardware, NEC	<0.1	<0.1
3431	Metal Sanitary Ware	<0.1	<0.1
3452	Bolts, Nuts, Rivets, and Washers	0.1	<0.1
3462	Iron and Steel Forgings	<0.1	<0.1
3471	Plating and Polishing	0.1	0.1
3523	Farm Machinery and Equipment	3.5	3.5
3531	Construction Machinery	1.5	<0.1
3562	Ball and Roller Bearings	<0.1	<0.1
3564	Blowers and Fans	<0.1	<0.1
3567	Industrial Furnaces and Ovens	<0.1	<0.1
3585	Refrigeration and Heating Equipment	<0.1	<0.1
3594	Fluid Power Pumps and Motors	<0.1	<0.1
3724	Aircraft Engines and Engine Parts	0.7	0.5
3728	Aircraft Parts and Equipment, NEC	0.1	<0.1
3731	Shipbuilding and Repairing	<0.1	<0.1
4833	Television Broadcasting Stations	<0.1	<0.1
5032	Brick, Stone, and Related Material	1.9	1.0
5191	Farm Supplies	<0.1	<0.1
7011	Hotels and Motels	<0.1	0.2
7261	Funeral Service and Crematories	<0.1	<0.1

¹gped: gallons per employee-day

²NEC: not elsewhere classified