

**KENTUCKY AMERICAN WATER COMPANY**

WATER DEMAND MODEL  
U of L PROJECTIONS & UNACCOUNTED-FOR of 13%

MODEL UPDATE MARCH, 1992  
RUN DATE 02/14/02  
DIRECTORY: \\home\linda  
FILENAME: 97DEMFOR.XLW  
SHEET: 96UPDTHI

ELAST. % OF USE  
SFR INDOOR 0.1 85.0%  
SFR OUTDOOR 0.5 15.0%  
COMMERCIAL 0.1 100.0%  
INDUSTRIAL 0 100.0%  
APARTMENT 0.1 100.0%

1996 Update with 1995 High Growth Population Series

Assumed Inflation Rate for the Year (CPI)			5.4%	4.21%	3.01%	2.99%	3.60%	2.50%	3.20%	1.40%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%		
Projected Water/Sewer Rate Increase for the Year			4.04%	5.51%	51.80%	0.00%	3.32%	6.65%	6.19%	3.10%	0.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	
Losses and Non-Revenue Uses for Year				13.0%	13.0%	13.0%	13.0%	13.0%	13.0%	13.0%	13.0%	13.0%	13.0%	13.0%	13.0%	13.0%	13.0%	13.0%	13.0%	13.0%	13.0%	13.0%
% GROWTH FOR YEAR - REFERENCE CASE			1.1%	1.1%	1.0%	1.0%	0.9%	0.8%	0.8%	0.7%	0.6%	0.6%	0.5%	0.5%	2.2%	1.9%	1.6%	1.1%	1.1%	1.1%	1.1%	13.0%
			1.1%	0.0%	1.1%	1.3%	0.5%	1.8%	1.7%	1.7%	1.6%	1.5%	1.5%	1.5%	5.6%	5.3%	4.7%	4.5%	4.5%	4.5%	4.5%	

Calendar Year	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2005	2010	2015	2020
Total Population (Fayette County)	217701	220526	222912	222904	225366	228334	229500	233576	237652	241728	245555	249381	253207	257034	260861	275431	290000	303516	317032
Apartment Population	70546	71462	72235	72232	75741	76738	77130	78500	79870	81240	82526	83812	85098	86384	87670	92567	97463	102006	106548
U of K Full Time Residents	8153	8200	8200	8200	8200	8200	8200	8200	8200	8200	8200	8200	8200	8200	8200	8200	8200	8200	8200
Inmates of Institutions	3793	4116	4439	4761	5084	5151	5177	5269	5361	5453	5539	5626	5712	5798	5885	6213	6542	6847	7152
Remaining Population Served (SFR, Fayette Co.)	135209	136748	138039	137710	136341	138245	138992	141607	144221	146835	149289	151743	154197	156652	159106	168451	177795	186463	195132
Outside County Population Served	4720	4979	5256	5491	5671	5835	6013	6163	6402	6699	7028	7616	7682	7748	7813	8065	8301	8485	8658
New Residents											2783	5824	8345	10866	13384	22981	32561	41414	50256
Actual Number of Customers																			
Usage Per Customer																			
Single Family Residential Per Capita Use (in gpd)	85.54	89.11	85.17	76.10	79.49	80.51	76.64	81.49	85.08	83.04	87.59	82.24	83.80	83.70	83.72	83.81	83.81	83.81	83.81
New Resident SFR Per Capita Use (in gpd)											78.83	74.01	75.42	75.33	75.34	75.42	75.42	75.42	75.42
Single Family Residential	11.97	12.63	12.21	10.90	11.29	11.60	11.11	12.04	12.82	12.75	13.69	13.11	13.50	13.67	13.86	14.60	15.32	15.99	16.66
Fayette Co. Residential use (in mgd).....	11.57	12.19	11.76	10.48	10.84	11.13	10.65	11.54	12.27	12.19	13.08	12.49	12.63	12.80	12.98	13.70	14.40	15.06	15.71
Apartment Population	70546	71462	72235	72232	75741	76738	77130	78500	79870	81240	82526	83812	85098	86384	87670	92567	97463	102006	106548
New Residents											1286	2572	3858	5144	6430	11327	16223	20766	25308
Number of Customers																			
Usage Per Customer																			
Existing Apartment Resident Per Capita Use (in gpd)	79.66	83.04	78.91	80.71	75.56	74.75	75.11	76.80	77.81	77.41	105.44	90.32	85.51	85.46	85.47	85.53	85.53	85.53	85.53
New Resident MFR Per Capita Use (in gpd)																			
Multi-Family Residential	1.37	1.41	1.39	1.33	1.40	1.40	1.42	1.49	1.57	1.45	1.71	1.49							
Garden Apartments	4.20	4.47	4.26	4.45	4.27	4.28	4.32	4.49	4.58	4.82	5.89	5.08							
High Rise Apartments	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.06	0.06	0.02	1.10	1.00							
Apartment use (in mgd).....	5.62	5.93	5.70	5.83	5.72	5.74	5.79	6.03	6.21	6.29	8.70	7.57	7.26	7.36	7.47	7.87	8.27	8.64	9.00
Outside Counties (see "Counties" pages)																			
Individual Cust. Use (in mgd).....	0.46	0.44	0.45	0.42	0.45	0.47	0.46	0.50	0.54	0.56	0.61	0.62	0.87	0.87	0.88	0.90	0.92	0.93	0.95
Bulk Sales Use (in mgd).....	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!

Commercial Use (mgd)	7.75	8.10	7.74	7.18	7.48	7.79	7.53	7.93	8.37	7.84	8.12	8.18	8.30	8.42	8.54	9.02	9.50	9.94	10.38
Toyota Usage (mgd)			0.41	0.74	0.89	0.94	1.09	1.05	1.25	1.40	1.37	1.61	1.61	1.61	1.61	1.61	1.61	1.61	1.61
Industrial Use (mgd,non-Toyota)	1.64	1.58	1.49	1.36	1.44	1.39	1.23	1.24	1.23	1.23	1.31	1.38	1.41	1.43	1.45	1.53	1.61	1.69	1.76
University of Kentucky U of K Base Demand including residences (Main Campus only)	1.20	1.31	1.30	1.50	1.46	1.55	1.47	1.57	1.73	1.63	1.45	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43
U of K Student Population	23696	22461	22879	23297	23081	24132	24197	24288	24217	24378	24200	24200	24200	24200	24200	24200	24200	24200	24200
U of K per student use (g/d)	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
U of K student usage on campus (mgd).....	0.24	0.22	0.23	0.23	0.23	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24
Total U of K Main Campus Usage (mgd)	1.44	1.53	1.53	1.73	1.69	1.79	1.71	1.81	1.97	1.88	1.69	1.67	1.67	1.67	1.67	1.67	1.67	1.67	1.67

Calendar Year	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2005	2010	2015	2020
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Other Public Use (in mgd).....	0.76	1.00	1.40	1.32	1.48	1.50	1.64	1.67	1.60	1.52	1.35	1.37	1.39	1.41	1.43	1.51	1.59	1.67	1.74
Total System Usage (mgd).....	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
Losses and Non-Revenue Use (%)	16.90%	17.60%	15.00%	12.30%	11.60%	15.40%	16.10%	17.64%	15.69%	16.01%	12.25%	14.90%	14.80%	14.80%	14.80%	14.80%	14.80%	14.80%	14.80%
Losses and Non-Revenue Use (mgd).....	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
Average Day Demand w/out Conservation (mgd)	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
Maximum Day w/out Conservation (mgd)	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
Actual Maximum Day (mgd)	57.47	54.89	63.91	47.72	58.52	56.42	47.22	59.49	58.36	63.77									
Conservation Impacts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.01	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
Total Average Day Demand (mgd).....	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
Max Day: 95% Exceedance (mgd).....	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
In Plant Usage (mgd)	1.617	2.37	1.91	1.77	1.36	1.40	1.42	1.55	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
Total Max Day Production (mgd)[95%excd]	59.087	57.26	65.82	49.49	59.88	57.82	48.64	61.04	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
previous forecast (1992 CPS)	59.087	57.26	65.82	49.49	59.88	57.82	63.53	63.87	64.67	65.44	65.71	65.79	65.88	65.97	65.81	65.91	65.81	66.81	66.64

\* NOTE: Revised to reflect actual 1986-1993 year-end billed usage & revised population projections per U of L Urban Studies Center.

FOR SAME CONDITIONS UNDER HOT, DRY SCENARIO:

TOTAL SYSTEM USAGE (mgd).....	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
LOSSES AND NON-REVENUE USE (%)	16.90%	17.60%	15.00%	12.30%	11.60%	15.40%	16.10%	17.64%	15.69%	16.01%	12.25%	14.90%	14.80%	14.80%	14.80%	14.80%	14.80%	14.80%	14.80%
LOSSES AND NON-REVENUE USE (mgd).....	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
TOTAL AVERAGE DAY DEMAND (mgd).....	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
MAX DAY: 95% EXCEEDANCE (mgd)	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
ACTUAL MAXIMUM DAY (mgd)	57.47	54.89	63.91	47.72	58.52	56.42	47.22	59.49	58.36	63.77									
CONSERVATION IMPACTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.01	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
TOTAL AVERAGE DAY DEMAND (mgd).....	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
DROUGHT AVG. DAY DEMAND: 95% EXCD. (mgd)	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
MAX DAY: 95% EXCEEDANCE (mgd).....	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
IN PLANT USE (mgd)	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
TOTAL MAX DAY PRODUCTION (mgd)[95%excd]	59.07	56.49	65.51	49.32	60.12	58.02	48.82	61.09	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!

SURROUNDING COUNTIES--INDIVIDUAL CUSTOMER

WATER DEMAND	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2005	2010	2015	2020
<b>WOODFORD COUNTY</b>																			
Population	18884	19076	19900	19928	19955	20270	20585	20934	21283	21632	21988	22344	22701	23057	23413	24703	25992	27019	28045
No. of resid. connections	138	137	142	139	141	142	145	149	151	152	153	155	157	160	162	171	180	187	195
Persons per household	2.80	2.80	2.81	2.79	2.76	2.74	2.72	2.69	2.67	2.65	2.63	2.61	2.60	2.58	2.56	2.50	2.43	2.38	2.33
Population Served	386	384	399	387	389	389	394	401	403	403	403	405	409	412	416	428	438	446	453
Existing Customer Per capita use (GPD)	85.54	89.11	85.17	76.10	79.49	80.51	76.64	81.49	85.08	83.04	87.59	82.24	83.80	83.70	83.72	83.81	83.81	83.81	83.81
New Customer Per Capita Use (GPD)											78.83	74.01	75.42	75.33	75.34	75.42	75.42	75.42	75.42
<b>WOODFORD CO. WATER DEMAND (in MGD).....</b>	<b>0.03</b>	<b>0.03</b>	<b>0.03</b>	<b>0.03</b>	<b>0.03</b>	<b>0.03</b>	<b>0.03</b>	<b>0.03</b>	<b>0.03</b>	<b>0.03</b>	<b>0.04</b>	<b>0.03</b>	<b>0.03</b>	<b>0.03</b>	<b>0.03</b>	<b>0.04</b>	<b>0.04</b>	<b>0.04</b>	<b>0.04</b>
<b>SCOTT COUNTY</b>																			
Population	22689	23501	22760	23314	23867	24135	24403	25360	26317	27274	27731	28188	28644	29101	29558	31287	33016	34436	35856
No. of resid. connections	1055	1149	1287	1373	1446	1507	1571	1628	1716	1799	1926	2142	2177	2211	2246	2377	2509	2617	2725
Persons per household	2.90	2.90	2.77	2.76	2.74	2.73	2.72	2.70	2.69	2.68	2.66	2.65	2.63	2.62	2.60	2.55	2.50	2.46	2.42
Population Served	3060	3332	3565	3783	3962	4111	4267	4402	4619	4821	5131	5672	5729	5785	5840	6063	6272	6437	6594
Existing Customer Per Capita Use (GPD)	85.54	89.11	85.17	76.10	79.49	80.51	76.64	81.49	85.08	83.04	87.59	82.24	83.80	83.70	83.72	83.81	83.81	83.81	83.81
New Customer Per Capita Use (GPD)											78.83	74.01	75.42	75.33	75.34	75.42	75.42	75.42	75.42
<b>SCOTT CO. WATER DEMAND (in MGD).....</b>	<b>0.26</b>	<b>0.30</b>	<b>0.30</b>	<b>0.29</b>	<b>0.31</b>	<b>0.33</b>	<b>0.33</b>	<b>0.36</b>	<b>0.39</b>	<b>0.40</b>	<b>0.45</b>	<b>0.46</b>	<b>0.47</b>	<b>0.48</b>	<b>0.48</b>	<b>0.50</b>	<b>0.51</b>	<b>0.53</b>	<b>0.54</b>
<b>BOURBON COUNTY</b>																			
Population	19188	19088	18978	19277	19236	19316	19397	19396	19395	19394	19576	19758	19939	20121	20303	20958	21612	22144	22676
No. of resid. connections	394	391	394	407	409	419	427	433	441	477	486	506	511	515	520	537	553	567	581
Persons per household	2.70	2.70	2.73	2.72	2.70	2.69	2.67	2.66	2.64	2.63	2.62	2.60	2.59	2.57	2.56	2.51	2.45	2.41	2.36
Population Served	1064	1056	1076	1105	1104	1125	1141	1151	1166	1255	1271	1317	1322	1326	1331	1344	1356	1364	1371
Existing Customer Per capita use (GPD)	85.54	89.11	85.17	76.10	79.49	80.51	76.64	81.49	85.08	83.04	87.59	82.24	83.80	83.70	83.72	83.81	83.81	83.81	83.81
New Customer Per Capita Use (GPD)											78.83	74.01	75.42	75.33	75.34	75.42	75.42	75.42	75.42
<b>BOURBON CO. WATER DEMAND (in MGD).....</b>	<b>0.09</b>	<b>0.09</b>	<b>0.09</b>	<b>0.08</b>	<b>0.09</b>	<b>0.09</b>	<b>0.09</b>	<b>0.09</b>	<b>0.10</b>	<b>0.10</b>	<b>0.11</b>	<b>0.11</b>	<b>0.11</b>	<b>0.11</b>	<b>0.11</b>	<b>0.11</b>	<b>0.11</b>	<b>0.11</b>	<b>0.11</b>
<b>HARRISON COUNTY</b>																			
Population	15722	15907	15887	16195	16248	16387	16526	16692	16857	17023	17200	17377	17554	17731	17908	18568	19227	19764	20300
No. of resid. connections	78	77	80	80	80	78	79	78	80	83	84	84	85	86	87	90	93	96	98
Persons per household	2.70	2.70	2.71	2.70	2.69	2.68	2.68	2.67	2.67	2.66	2.65	2.64	2.63	2.62	2.61	2.57	2.52	2.49	2.45
Population Served	211	208	217	216	215	209	212	208	213	221	223	222	223	225	226	230	234	237	240
Existing Customer Per capita use (GPD)	85.54	89.11	85.17	76.10	79.49	80.51	76.64	81.49	85.08	83.04	87.59	82.24	83.80	83.70	83.72	83.81	83.81	83.81	83.81
New Customer Per Capita Use (GPD)											78.83	74.01	75.42	75.33	75.34	75.42	75.42	75.42	75.42
<b>HARRISON CO. WATER DEMAND (in MGD).....</b>	<b>0.02</b>	<b>0.02</b>	<b>0.02</b>	<b>0.02</b>	<b>0.02</b>	<b>0.02</b>	<b>0.02</b>	<b>0.02</b>	<b>0.02</b>	<b>0.02</b>	<b>0.02</b>	<b>0.02</b>	<b>0.02</b>	<b>0.02</b>	<b>0.02</b>	<b>0.02</b>	<b>0.02</b>	<b>0.02</b>	<b>0.02</b>
<b>CLARK COUNTY</b>																			
Population					29496	29743	29990	30238	30485	30732	30945	31158	31372	31585	31798	32539	33279	33772	34264
No. of residential connections										1109	1180	1205	1213	1221	1230	1258	1287	1306	1325
Persons per household										2.55	2.54	2.53	2.53	2.52	2.51	2.47	2.43	2.40	2.37
Population Served										3000	3053	3065	3076	3087	3108	3127	3135	3140	
Existing Customer Per capita use (GPD)	85.54	89.11	85.17	76.10	79.49	80.51	76.64	81.49	85.08	83.04	87.59	82.24	83.80	83.70	83.72	83.81	83.81	83.81	83.81
New Customer Per Capita Use (GPD)											78.83	74.01	75.42	75.33	75.34	75.42	75.42	75.42	75.42
<b>CLARK CO. WATER DEMAND (in MGD)</b>														0.23	0.23	0.23	0.23	0.24	0.24
<b>INDIVIDUAL CUSTOMER</b>																			
<b>TOTAL WATER DEMAND OUTSIDE COUNTIES.</b>	<b>0.40</b>	<b>0.44</b>	<b>0.45</b>	<b>0.42</b>	<b>0.45</b>	<b>0.47</b>	<b>0.46</b>	<b>0.50</b>	<b>0.54</b>	<b>0.56</b>	<b>0.61</b>	<b>0.62</b>	<b>0.87</b>	<b>0.87</b>	<b>0.88</b>	<b>0.90</b>	<b>0.92</b>	<b>0.93</b>	<b>0.95</b>

RESIDENTIAL RETROFIT PROGRAM																			
SAVINGS PER HOUSEHOLD									22.40	22.40	22.40	22.40	22.40	22.40					
HOUSEHOLDS PARTICIPATING									300	1500	2000	2500	3000	3500	0	0	0	0	0
ANNUAL SAVINGS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.03	0.04	0.06	0.07	0.08	0.00	0.00	0.00	0.00	0.00
CUMULATIVE SAVINGS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.04	0.09	0.14	0.21	0.29	0.29	0.29	0.29	0.29	0.29
RESIDENTIAL LANDSCAPE/TURF SCHEDULE																			
SAVINGS PER HOUSEHOLD										3.80	3.80	3.80	3.80						
HOUSEHOLDS PARTICIPATING										500	3000	10000	12500						
ANNUAL SAVINGS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.04	0.05	0.00	0.00	0.00	0.00	0.00	0.00
CUMULATIVE SAVINGS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.05	0.10	0.10	0.10	0.10	0.10	0.10	0.10
INTERIOR HOME CONSULTATION																			
SAVINGS PER HOUSEHOLD											23.76	23.76	23.76	23.76	23.76	23.76			
HOUSEHOLDS PARTICIPATING											200	200	200	200	200	200			
ANNUAL SAVINGS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CUMULATIVE SAVINGS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.02	0.02	0.05	0.05	0.05	0.05
COMMERCIAL/INDUSTRIAL INTERNAL AUDIT																			
SAVINGS PER COMMERCIAL UNIT											523	523	523	523	523				
UNITS PARTICIPATING											50	150	150	200	200				
ANNUAL SAVINGS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.08	0.08	0.10	0.10	0.00	0.00	0.00	0.00
SAVINGS PER INDUSTRIAL UNIT											70824	70824	70824	70824					
UNITS PARTICIPATING											1	2	2	2					
ANNUAL SAVINGS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.14	0.14	0.14	0.00	0.00	0.00	0.00	0.00
CUMULATIVE SAVINGS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.32	0.54	0.78	0.89	0.89	0.89	0.89	0.89
INDUSTRIAL/UK EXTERIOR AUDIT																			
UNIVERSITY OF KENTUCKY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SAVINGS PER INDUSTRIAL UNIT											1127	1127	1127	1127					
UNITS PARTICIPATING											1	2	2	2					
ANNUAL SAVINGS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CUMULATIVE SAVINGS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0.04
INCREASED LEAK DETECTION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
TOTAL SAVINGS FROM CONSERVATION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!

|

PUBLIC SERVICE COMMISSION CASE NO. 93-434  
ATTACHMENT A  
REBUTTAL TESTIMONY OF LINDA BRIDWELL  
ITEM 1

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REBUTTAL TESTIMONY OF LINDA BRIDWELL  
ITEM 1  
KAW\_R\_AGKYDR1#1d\_SCH5\_021402 96updthi  
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SCHEDULE A  
UNIVERSITY OF LOUISVILLE MODERATE GROWTH SERIES POPULATION PROJECTIONS  
PAGE 2 OF 5

SCHEDULE A  
UNIVERSITY OF LOUISVILLE MODERATE GROWTH SERIES POPULATION PROJECTIONS  
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SCHEDULE A  
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SCHEDULE A  
UNIVERSITY OF LOUISVILLE MODERATE GROWTH SERIES POPULATION PROJECTIONS  
PAGE 5 OF 5

ADVANCED PLUMBING CODE EFFECTS CALCULATION

	1996	2006	
UNIT WATER SAVINGS, GDU			
TOILETS	21.12	20.20	
SHOWERHEADS	10.03	10.90	
FAUCETS	13.73	3.00	
ELIGIBLE POPULATION, %			
TOILETS	0.15	0.65	
SHOWERHEADS	0.25	0.9	
FAUCETS	0.25	0.9	
PARTICIPATION RATE			
LOW	0.75	0.75	
HIGH	0.90	0.90	
NUMBER OF CUSTOMERS CALC.			
WATER USE, MGD			
SINGLE FAMILY			
IN CTY	13.0791	13.7015	
OUT CTY	#REF!	#REF!	
MULTI	8.70121	7.86851	
SFR PER CAP USAGE	87.5897	83.8052	
MFR PER CAP USAGE	105.44	85.53	
SFR POPULATION	#REF!	#REF!	
MFR POPULATION	82526	92000	
PEOPLE/UNIT	2.64	2.52	
EQU.RESID.CUSTOMERS	#REF!	#REF!	
COMM & IND SAVINGS	0.15	0.44	FROM AMY
GOVT AND UK SAVINGS	0.08	0.15	FROM AMY
ESTIMATED APC SAVINGS, MGD			
HIGH	#REF!	#REF!	
LOW	#REF!	#REF!	
AVG.	#REF!	#REF!	













TOTAL U of K MAIN CAMPUS USAGE(mgd)	1.44	1.53	1.53	1.73	1.69	1.79	1.71	1.81	1.96	1.97	1.97	1.97	1.97	1.97	1.97	1.97	1.97
CALENDAR YEAR	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2005	2010
OTHER PUBLIC USE (in mgd).....	0.76	1.00	1.40	1.32	1.48	1.50	1.64	1.66	1.59	1.65	1.66	1.67	1.69	1.70	1.71	1.76	1.80
TOTAL SYSTEM USAGE (mgd).....	29.70	31.55	31.20	29.67	30.57	31.40	30.73	32.48	34.05	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
LOSSES AND NON-REVENUE USE (%)	16.90%	17.60%	15.00%	12.30%	11.60%	15.40%	16.10%	17.64%	15.69%	14.80%	14.80%	14.80%	14.80%	14.80%	14.80%	14.80%	14.80%
LOSSES AND NON-REVENUE USE (mgd).....	6.04	6.74	5.51	4.16	4.01	5.71	5.90	6.96	6.34	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
PLUMBING CODE IMPACTS	0.00	0.00	0.00	0.00	0.00	0.00	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
TOTAL AVERAGE DAY DEMAND (mgd).....	35.74	38.28	36.71	33.83	34.59	37.11	36.63	39.44	40.39	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
MAX DAY: 95% EXCEEDANCE (mgd)	60.05	64.32	61.67	56.84	58.10	62.34	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
ACTUAL MAXIMUM DAY (mgd)	57.47	54.89	63.91	47.72	58.52	56.42	47.22	59.49	58.36								
CONSERVATION IMPACTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.01	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
TOTAL AVERAGE DAY DEMAND (mgd).....	35.74	38.28	36.71	33.83	34.59	37.11	36.63	39.44	40.38	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
MAX DAY: 95% EXCEEDANCE (mgd).....	60.05	64.32	61.67	56.84	58.10	62.34	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
IN PLANT USE(mgd)	1.617	2.37	1.91	1.77	1.36	1.40	1.42	1.55	1.58	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
TOTAL MAX DAY PRODUCTION (mgd)[95%excd	59.087	57.26	65.82	49.49	59.88	57.82	48.64	61.04	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
previous forecast (1992 CPS)	59.087	57.26	65.82	49.49	59.88	57.82	63.53	63.87	64.67	65.44	65.71	65.79	65.88	65.97	65.81	65.91	65.81

\* NOTE: Revised to reflect actual 1986-1993 year-end billed usage & revised population projections per U of L Urban Studies Center.

FOR SAME CONDITIONS UNDER HOT, DRY SCENARIO:

TOTAL SYSTEM USAGE (mgd).....	31.48	33.44	33.07	31.45	32.41	33.28	32.58	34.43	36.09	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
LOSSES AND NON-REVENUE USE (%)	16.90%	17.60%	15.00%	12.30%	11.60%	15.40%	16.10%	17.64%	15.69%	14.80%	14.80%	14.80%	14.80%	14.80%	14.80%	14.80%	14.80%
LOSSES AND NON-REVENUE USE (mgd).....	6.40	7.14	5.84	4.41	4.25	6.06	6.25	7.38	6.72	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
PLUMBING CODE IMPACTS (mgd)	0.00	0.00	0.00	0.00	0.00	0.00	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
TOTAL AVERAGE DAY DEMAND (mgd).....	37.89	40.58	38.91	35.86	36.66	39.34	38.83	41.80	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
MAX DAY: 95% EXCEEDANCE (mgd)	63.65	68.18	65.37	60.25	61.59	66.09	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
ACTUAL MAXIMUM DAY (mgd)	57.47	54.89	63.91	47.72	58.52	56.42	47.22	59.49	58.36								
CONSERVATION IMPACTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.01	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
TOTAL AVERAGE DAY DEMAND (mgd).....	37.89	40.58	38.91	35.86	36.66	39.34	38.83	41.80	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
DROUGHT AVG. DAY DEMAND: 95% EXCD. (mgd)	45	48	46	42	43	46	46	49	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
MAX DAY: 95% EXCEEDANCE (mgd).....	63.65	68.18	65.37	60.25	61.59	66.09	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
IN PLANT USE(mgd)	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
TOTAL MAX DAY PRODUCTION (mgd)[95%excd	59.07	56.49	65.51	49.32	60.12	58.02	48.82	61.09	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!

KAW\_R\_AGKYDR1#1d\_SCH5\_021402 96updtmo

2/14/02

SURROUNDING COUNTIES--INDIVIDUAL CUSTOMER

WATER DEMAND	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2005	2010
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WOODFORD COUNTY

Population	18884	19076	19900	19928	19955	20270	20585	20900	21215	21531	21828	22125	22422	22719	23016	24129	25243
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No. of resid. connections	138	137	142	139	141	142	145	149	151	152	153	156	160	162	162	170	178
Per capita use (GPD)	85.54	89.11	85.17	76.10	79.49	80.51	76.64	81.98	86.33	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
Persons per household	2.80	2.80	2.81	2.79	2.76	2.74	2.72	2.69	2.67	2.65	2.63	2.61	2.60	2.58	2.56	2.50	2.43
WOODFORD CO. WATER DEMAND (in MGD).....	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
SCOTT COUNTY																	
Population	22689	23501	22760	23314	23867	24135	24403	24671	24939	25208	25458	25708	25958	26208	26460	27432	28405
No. of resid. connections	1055	1149	1287	1373	1446	1507	1571	1628	1716	1799	1817	1835	1853	1870	1888	1958	2027
Per capita use (GPD)	85.54	89.11	85.17	76.10	79.49	80.51	76.64	81.98	86.33	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
Persons per household	2.90	2.90	2.77	2.76	2.74	2.73	2.72	2.70	2.69	2.68	2.66	2.65	2.63	2.62	2.60	2.55	2.50
SCOTT CO. WATER DEMAND (in MGD).....	0.26	0.30	0.30	0.29	0.31	0.33	0.33	0.36	0.40	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
BOURBON COUNTY																	
Population	19188	19088	18978	19277	19236	19316	19397	19478	19558	19639	19706	19773	19840	19907	19976	20238	20500
No. of resid. connections	394	391	394	407	409	419	427	433	441	477	479	480	482	484	485	492	498
Per capita use (GPD)	85.54	89.11	85.17	76.10	79.49	80.51	76.64	81.98	86.33	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
Persons per household	2.70	2.70	2.73	2.72	2.70	2.69	2.67	2.66	2.64	2.63	2.62	2.60	2.59	2.57	2.56	2.51	2.45
BOURBON CO. WATER DEMAND (in MGD).....	0.09	0.09	0.09	0.08	0.09	0.09	0.09	0.09	0.10	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
HARRISON COUNTY																	
Population	15722	15907	15887	16195	16248	16387	16526	16665	16804	16943	17073	17204	17335	17465	17596	18110	18623
No. of resid. connections	78	77	80	80	80	78	79	78	80	83	81	82	81	83	86	89	91
Per capita use (GPD)	85.54	89.11	85.17	76.10	79.49	80.51	76.64	81.98	86.33	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
Persons per household	2.70	2.70	2.71	2.70	2.69	2.68	2.68	2.67	2.67	2.66	2.65	2.64	2.63	2.62	2.61	2.57	2.52
HARRISON CO. WATER DEMAND (in MGD).....	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
INDIVIDUAL CUSTOMER																	
TOTAL WATER DEMAND OUTSIDE COUNTIES.	0.40	0.44	0.45	0.42	0.45	0.47	0.46	0.51	0.55	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!

OUTSIDE COUNTIES--BULK SALES  
WATER DEMAND

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2005	2010
MIDWAY																	
Woodford Co. population projections	18884	19076	19900	19928	19955	20270	20585	20900	21215	21531	21828	22125	22422	22719	23016	24129	25243
Projected bulk consumption (mgd)	0.16	0.17	0.10	0.10	0.10	0.11	0.12	0.12	0.13	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
MIDWAY WATER DEMAND (in MGD).....	0.16	0.17	0.10	0.10	0.10	0.11	0.12	0.12	0.13	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
VERSAILLES																	
Woodford Co. population projections	18884	19076	19900	19928	19955	20270	20585	20900	21215	21531	21828	22125	22422	22719	23016	24129	25243
Versailles population	18884	19076	19900	19928	19955	20270	20585	20900	21215	21531	21828	22125	22422	22719	23016	24129	25243
Versailles projected tot. avg usage	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50
Versailles production capacity(mgd)	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50
Projected bulk consumption (mgd) (supplemental supply)											0.20	0.24	0.27	0.31	0.35	0.48	0.62

VERSAILLES WATER DEMAND (in MGD).....	0.00	0.13	0.07	0.03	0.05	0.07	0.02	0.13	0.02	#REF!	0.20	0.24	0.27	0.31	0.35	0.48	0.62
<b>SPEARS DISTRICT</b>																	
Jessamine Co.population projections	28911	29338	30610	30559	30508	31016	31524	32032	32540	33049	33495	33941	34387	34833	35277	37017	38756
Average bulk consumption (mgd)	0.12	0.15	0.15	0.11	0.11	0.12	0.14	0.13	0.11	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
SPEARS DISTRICT WATER DEMAND (in MGD).....	0.12	0.15	0.15	0.11	0.11	0.12	0.14	0.13	0.11	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
<b>SOUTH ELKHORN DISTRICT</b>																	
Jessamine Co.population projections	28911	29338	30610	30559	30508	31016	31524	32032	32540	33049	33495	33941	34387	34833	35277	37017	38756
Average bulk consumption (mgd)	0.25	0.33	0.41	0.37	0.32	0.35	0.36	0.40	0.39	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
SOUTH ELKHORN WATER DEMAND (in MGD).....	0.25	0.33	0.41	0.37	0.32	0.35	0.36	0.40	0.39	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
<b>NORTH MIDDLETOWN</b>																	
Bourbon Co. population projections	19188	19088	18978	19277	19236	19316	19397	19478	19558	19639	19706	19773	19840	19907	19976	20238	20500
Average bulk consumption (mgd)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
NORTH MIDDLETOWN WATER DEMAND (in MGD).....	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
<b>BULK SALES</b>																	
TOTAL WATER DEMAND OUTSIDE COUNTIES.....	0.53	0.77	0.73	0.61	0.58	0.64	0.63	0.78	0.75	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!

**CONSERVATION PROGRAM IMPACTS**

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2005	2010
<b>RESIDENTIAL RETROFIT PROGRAM</b>																	
SAVINGS PER HOUSEHOLD									22.40	22.40	22.40	22.40	22.40	22.40			
HOUSEHOLDS PARTICIPATING									300	1500	2000	2500	3000	3500	0	0	0
ANNUAL SAVINGS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.03	0.04	0.06	0.07	0.08	0.00	0.00	0.00
CUMULATIVE SAVINGS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.04	0.09	0.14	0.21	0.29	0.29	0.29	0.29
<b>RESIDENTIAL LANDSCAPE/TURF SCHEDULE</b>																	
SAVINGS PER HOUSEHOLD										3.80	3.80	3.80	3.80				
HOUSEHOLDS PARTICIPATING										500	3000	10000	12500				
ANNUAL SAVINGS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.04	0.05	0.00	0.00	0.00	0.00
CUMULATIVE SAVINGS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.05	0.10	0.10	0.10	0.10	0.10
<b>INTERIOR HOME CONSULTATION</b>																	
SAVINGS PER HOUSEHOLD											23.76	23.76	23.76	23.76	23.76	23.76	
HOUSEHOLDS PARTICIPATING											200	200	200	200	200	200	200
ANNUAL SAVINGS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CUMULATIVE SAVINGS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.02	0.02	0.05	0.05
<b>COMMERCIAL/INDUSTRIAL INTERNAL AUDIT</b>																	
SAVINGS PER COMMERCIAL UNIT											523	523	523	523	523		
UNITS PARTICIPATING											50	150	150	200	200		
ANNUAL SAVINGS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.08	0.08	0.10	0.10	0.00	0.00
SAVINGS PER INDUSTRIAL UNIT											70824	70824	70824	70824			

UNITS PARTICIPATING ANNUAL SAVINGS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.14	0.14	0.14	0.00	0.00	0.00
CUMULATIVE SAVINGS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.32	0.54	0.78	0.89	0.89	0.89
INDUSTRIAL/UK EXTERIOR AUDIT																		
UNIVERSITY OF KENTUCKY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00
SAVINGS PER INDUSTRIAL UNIT												1127	1127	1127	1127			
UNITS PARTICIPATING ANNUAL SAVINGS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CUMULATIVE SAVINGS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.03	0.04	0.04	0.04	0.04	0.04
INCREASED LEAK DETECTION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
TOTAL SAVINGS FROM CONSERVATION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!

PUBLIC SERVICE COMMISSION CASE NO. 93-434  
ATTACHMENT A  
REBUTTAL TESTIMONY OF LINDA BRIDWELL  
ITEM 1

SCHEDULE A  
UNIVERSITY OF LOUISVILLE MODERATE GROWTH SERIES POPULATION  
PAGE 1 OF 5

PUBLIC SERVICE COMMISSION CASE NO. 93-434  
ATTACHMENT A  
REBUTTAL TESTIMONY OF LINDA BRIDWELL  
ITEM 1

SCHEDULE A  
UNIVERSITY OF LOUISVILLE MODERATE GROWTH SERIES POPULATION  
PAGE 2 OF 5

PUBLIC SERVICE COMMISSION CASE NO. 93-434  
ATTACHMENT A  
REBUTTAL TESTIMONY OF LINDA BRIDWELL  
ITEM 1

SCHEDULE A  
UNIVERSITY OF LOUISVILLE MODERATE GROWTH SERIES POPULATION  
PAGE 3 OF 5

PUBLIC SERVICE COMMISSION CASE NO. 93-434  
ATTACHMENT A  
REBUTTAL TESTIMONY OF LINDA BRIDWELL  
ITEM 1

SCHEDULE A  
UNIVERSITY OF LOUISVILLE MODERATE GROWTH SERIES POPULATION  
PAGE 4 OF 5

PUBLIC SERVICE COMMISSION CASE NO. 93-434  
ATTACHMENT A  
REBUTTAL TESTIMONY OF LINDA BRIDWELL  
ITEM 1

SCHEDULE A  
UNIVERSITY OF LOUISVILLE MODERATE GROWTH SERIES POPULATION  
PAGE 5 OF 5

% OF USE	
85.0%	
15.0%	
100.0%	
100.0%	
100.0%	
5.00%	5.00%
13.0%	13.0%
1.6%	1.1%
0.8%	0.8%
2015	2020
259779	261936
87306	88031
8200	8200
5860	5909
158412	159796
6971	6988
#REF!	#REF!
#REF!	#REF!
#REF!	#REF!
#REF!	#REF!
87306	88031
#REF!	#REF!
#REF!	#REF!
#REF!	#REF!
#REF!	#REF!
#REF!	#REF!
#REF!	#REF!
#REF!	#REF!
9.26	9.34
1.54	1.54
1.37	1.39
1.74	1.74
23400	23400
10.00	10.00
0.23	0.23

ADVANCED PLUMBING CODE EFFECTS CALCULATION

	1996	2006	
UNIT WATER SAVINGS, GDU			
TOILETS	21.12	20.20	
SHOWERHEADS	10.03	10.90	
FAUCETS	13.73	3.00	
ELIGIBLE POPULATION,%			
TOILETS	0.15	0.65	13.0%
SHOWERHEADS	0.25	0.9	
FAUCETS	0.25	0.9	
PARTICIPATION RATE			
LOW	0.75	0.75	
HIGH	0.90	0.90	
NUMBER OF CUSTOMERS CALC.			
WATER USE,MGD			
SINGLE FAMILY			
IN CTY	#REF!	#REF!	
OUT CTY	#REF!	#REF!	
MULTI			
SFR PER CAP USAGE	#REF!	#REF!	
MFR PER CAP USAGE	#REF!	#REF!	
SFR POPULATION	#REF!	#REF!	
MFR POPULATION	#REF!	#REF!	
PEOPLE/UNIT			
EQU.RESID.CUSTOMERS	2.64	2.52	
COMM & IND SAVINGS	#REF!	#REF!	
GOVT AND UK SAVINGS	0.15	0.44	FROM AMY
ESTIMATED APC SAVINGS, MGD	0.08	0.15	FROM AMY
HIGH	#REF!	#REF!	
LOW	#REF!	#REF!	
AVG.	#REF!	#REF!	



1.97	1.97
------	------

2015	2020
------	------

1.82	1.83
#REF!	#REF!
14.80%	14.80%
#REF!	#REF!
#REF!	#REF!
#REF!	#REF!
#REF!	#REF!
#REF!	#REF!
#REF!	#REF!
#REF!	#REF!
66.81	66.64

#REF!	#REF!
-------	-------

14.80%	14.80%
#REF!	#REF!
#REF!	#REF!
#REF!	#REF!
#REF!	#REF!

#REF!	#REF!
#REF!	#REF!
#REF!	#REF!
#REF!	#REF!

1.6	1.6
#REF!	#REF!

2015	2020
------	------

25868	26493
-------	-------

183	187
#REF!	#REF!
2.38	2.33
#REF!	#REF!
29033.5	29662
2072	2117
#REF!	#REF!
2.46	2.42
#REF!	#REF!
20700	20900
503	508
#REF!	#REF!
2.41	2.36
#REF!	#REF!
18935	19246
93	94
#REF!	#REF!
2.49	2.45
#REF!	#REF!
#REF!	#REF!

2015	2020
25868	26493
#REF!	#REF!
#REF!	#REF!

KAW\_R\_AGKYDR1#1d\_SCH5\_021402 96updtm  
2/14/02  
Page 18 of 34

25868	26493
3.20	3.28
2.50	2.50
0.70	0.78

0.70	0.78
39792 #REF!	40828 #REF!
#REF!	#REF!
39792 #REF!	40828 #REF!
#REF!	#REF!
20700 #REF!	20900 #REF!
#REF!	#REF!
#REF!	#REF!

2015	2020
0 0.00	0 0.00
0.29	0.29
0.00	0.00
0.10	0.10
0.00	0.00
0.05	0.05

0.00 0.00

0.00	0.00
0.89	0.89
0.00	0.00
0.00	0.00
0.04	0.04
#REF!	#REF!
#REF!	#REF!

I PROJECTIONS

I PROJECTIONS

I PROJECTIONS

I PROJECTIONS

I PROJECTIONS



TOTAL U of K MAIN CAMPUS USAGE(mgd)	1.44	1.53	1.53	1.73	1.69	1.79	1.71	1.81	1.97	0.76	0.77	0.77	0.77	0.77	0.77	0.77	0.77
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CALENDAR YEAR	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2005	2010
OTHER PUBLIC USE (in mgd).....	0.76	1.00	1.40	1.32	1.48	1.50	1.64	1.66	1.59	1.65	1.66	1.68	1.69	1.70	1.72	1.78	1.84
TOTAL SYSTEM USAGE (mgd).....	29.70	31.55	31.20	29.67	30.57	31.40	30.73	32.48	34.06	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
LOSSES AND NON-REVENUE USE (%)	16.90%	17.60%	15.00%	12.30%	11.60%	15.40%	16.10%	17.64%	15.69%	14.80%	14.80%	14.80%	14.80%	14.80%	14.80%	14.80%	14.80%
LOSSES AND NON-REVENUE USE (mgd).....	6.04	6.74	5.51	4.16	4.01	5.71	5.90	6.96	6.34	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
PLUMBING CODE IMPACTS	0.00	0.00	0.00	0.00	0.00	0.00	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
TOTAL AVERAGE DAY DEMAND (mgd).....	35.74	38.28	36.71	33.83	34.59	37.11	36.63	39.44	40.39	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
MAX DAY: 95% EXCEEDANCE (mgd)	60.05	64.32	61.67	56.84	58.10	62.34	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
ACTUAL MAXIMUM DAY (mgd)	57.47	54.89	63.91	47.72	58.52	56.42	47.22	59.49	58.36								
CONSERVATION IMPACTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.01	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
TOTAL AVERAGE DAY DEMAND (mgd).....	35.74	38.28	36.71	33.83	34.59	37.11	36.63	39.44	40.39	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
MAX DAY: 95% EXCEEDANCE (mgd).....	60.05	64.32	61.67	56.84	58.10	62.34	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
IN PLANT USE(mgd)	1.617	2.37	1.91	1.77	1.36	1.40	1.42	1.55	1.58	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
TOTAL MAX DAY PRODUCTION (mgd)[95%excd	59.087	57.26	65.82	49.49	59.88	57.82	48.64	61.04	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
previous forecast (1992 CPS)	59.087	57.26	65.82	49.49	59.88	57.82	63.53	63.87	64.67	65.44	65.71	65.79	65.88	65.97	65.81	65.91	65.81

\* NOTE: Revised to reflect actual 1986-1993 year-end billed usage & revised population projections per U of L Urban Studies Center.

FOR SAME CONDITIONS UNDER HOT, DRY SCENARIO:

TOTAL SYSTEM USAGE (mgd).....	31.48	33.44	33.07	31.45	32.41	33.28	32.58	34.43	36.10	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
LOSSES AND NON-REVENUE USE (%)	16.90%	17.60%	15.00%	12.30%	11.60%	15.40%	16.10%	17.64%	15.69%	14.80%	14.80%	14.80%	14.80%	14.80%	14.80%	14.80%	14.80%
LOSSES AND NON-REVENUE USE (mgd).....	6.40	7.14	5.84	4.41	4.25	6.06	6.25	7.38	6.72	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
PLUMBING CODE IMPACTS (mgd)	0.00	0.00	0.00	0.00	0.00	0.00	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
TOTAL AVERAGE DAY DEMAND (mgd).....	37.89	40.58	38.91	35.86	36.66	39.34	38.83	41.80	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
MAX DAY: 95% EXCEEDANCE (mgd)	63.65	68.18	65.37	60.25	61.59	66.09	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
ACTUAL MAXIMUM DAY (mgd)	57.47	54.89	63.91	47.72	58.52	56.42	47.22	59.49	58.36								
CONSERVATION IMPACTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.01	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
TOTAL AVERAGE DAY DEMAND (mgd).....	37.89	40.58	38.91	35.86	36.66	39.34	38.83	41.80	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
DROUGHT AVG. DAY DEMAND: 95% EXCD. (mgd)	45	48	46	42	43	46	46	49	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
MAX DAY: 95% EXCEEDANCE (mgd).....	63.65	68.18	65.37	60.25	61.59	66.09	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
IN PLANT USE(mgd)	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
TOTAL MAX DAY PRODUCTION (mgd)[95%excd	59.07	56.49	65.51	49.32	60.12	58.02	48.82	61.09	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!

KAW\_R\_AGKYDR1#1d\_SCH5\_021402 96updtuc

2/14/02

SURROUNDING COUNTIES--INDIVIDUAL CUSTOMER

WATER DEMAND	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2005	2010
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WOODFORD COUNTY Population	18884	19076	19900	19928	19955	20270	20585	20900	21215	21531	21828	22125	22422	22719	23016	24129	25243
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No. of resid. connections	138	137	142	139	141	142	145	149	151	152	153	156	160	162	162	170	178
Per capita use (GPD)	85.54	89.11	85.17	76.10	79.49	80.86	76.68	82.05	86.42	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
Persons per household	2.80	2.80	2.81	2.79	2.76	2.74	2.72	2.69	2.67	2.65	2.63	2.61	2.60	2.58	2.56	2.50	2.43
WOODFORD CO. WATER DEMAND (in MGD).....	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
SCOTT COUNTY																	
Population	22689	23501	22760	23314	23867	24135	24403	24671	24939	25208	25458	25708	25958	26208	26460	27432	28405
No. of resid. connections	1055	1149	1287	1373	1446	1507	1571	1628	1716	1799	1817	1835	1853	1870	1888	1958	2027
Per capita use (GPD)	85.54	89.11	85.17	76.10	79.49	80.86	76.68	82.05	86.42	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
Persons per household	2.90	2.90	2.77	2.76	2.74	2.73	2.72	2.70	2.69	2.68	2.66	2.65	2.63	2.62	2.60	2.55	2.50
SCOTT CO. WATER DEMAND (in MGD).....	0.26	0.30	0.30	0.29	0.31	0.33	0.33	0.36	0.40	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
BOURBON COUNTY																	
Population	19188	19088	18978	19277	19236	19316	19397	19478	19558	19639	19706	19773	19840	19907	19976	20238	20500
No. of resid. connections	394	391	394	407	409	419	427	433	441	477	479	480	482	484	485	492	498
Per capita use (GPD)	85.54	89.11	85.17	76.10	79.49	80.86	76.68	82.05	86.42	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
Persons per household	2.70	2.70	2.73	2.72	2.70	2.69	2.67	2.66	2.64	2.63	2.62	2.60	2.59	2.57	2.56	2.51	2.45
BOURBON CO. WATER DEMAND (in MGD).....	0.09	0.09	0.09	0.08	0.09	0.09	0.09	0.09	0.10	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
HARRISON COUNTY																	
Population	15722	15907	15887	16195	16248	16387	16526	16665	16804	16943	17073	17204	17335	17465	17596	18110	18623
No. of resid. connections	78	77	80	80	80	78	79	78	80	83	81	82	81	83	86	89	91
Per capita use (GPD)	85.54	89.11	85.17	76.10	79.49	80.86	76.68	82.05	86.42	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
Persons per household	2.70	2.70	2.71	2.70	2.69	2.68	2.68	2.67	2.67	2.66	2.65	2.64	2.63	2.62	2.61	2.57	2.52
HARRISON CO. WATER DEMAND (in MGD).....	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
INDIVIDUAL CUSTOMER																	
TOTAL WATER DEMAND OUTSIDE COUNTIES.	0.40	0.44	0.45	0.42	0.45	0.47	0.46	0.51	0.55	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!

OUTSIDE COUNTIES--BULK SALES  
WATER DEMAND

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2005	2010
MIDWAY																	
Woodford Co. population projections	18884	19076	19900	19928	19955	20270	20585	20900	21215	21531	21828	22125	22422	22719	23016	24129	25243
Projected bulk consumption (mgd)	0.16	0.17	0.10	0.10	0.10	0.11	0.12	0.12	0.13	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
MIDWAY WATER DEMAND (in MGD).....	0.16	0.17	0.10	0.10	0.10	0.11	0.12	0.12	0.13	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
VERSAILLES																	
Woodford Co. population projections	18884	19076	19900	19928	19955	20270	20585	20900	21215	21531	21828	22125	22422	22719	23016	24129	25243
Versailles population projections	18884	19076	19900	19928	19955	20270	20585	20900	21215	21531	21828	22125	22422	22719	23016	24129	25243
Versailles production capacity(mgd)	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50
Projected bulk consumption (mgd) (supplemental supply)											0.20	0.24	0.27	0.31	0.35	0.48	0.62

VERSAILLES WATER DEMAND (in MGD).....	0.00	0.13	0.07	0.03	0.05	0.07	0.02	0.13	0.02	#REF!	0.20	0.24	0.27	0.31	0.35	0.48	0.62
SPEARS DISTRICT																	
Jessamine Co.population projections	28911	29338	30610	30559	30508	31016	31524	32032	32540	33049	33495	33941	34387	34833	35277	37017	38756
Average bulk consumption (mgd)	0.12	0.15	0.15	0.11	0.11	0.12	0.14	0.13	0.11	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
SPEARS DISTRICT WATER DEMAND (in MGD).	0.12	0.15	0.15	0.11	0.11	0.12	0.14	0.13	0.11	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
SOUTH ELKHORN DISTRICT																	
Jessamine Co.population projections	28911	29338	30610	30559	30508	31016	31524	32032	32540	33049	33495	33941	34387	34833	35277	37017	38756
Average bulk consumption (mgd)	0.25	0.33	0.41	0.37	0.32	0.35	0.36	0.40	0.39	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
SOUTH ELKHORN WATER DEMAND (in MGD)...	0.25	0.33	0.41	0.37	0.32	0.35	0.36	0.40	0.39	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
NORTH MIDDLETOWN																	
Bourbon Co. population projections	19188	19088	18978	19277	19236	19316	19397	19478	19558	19639	19706	19773	19840	19907	19976	20238	20500
Average bulk consumption (mgd)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
NORTH MIDDLETOWN WATER DEMAND (in MG	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
BULK SALES																	
TOTAL WATER DEMAND OUTSIDE COUNTIES.	0.53	0.77	0.73	0.61	0.58	0.64	0.63	0.78	0.75	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!

CONSERVATION PROGRAM IMPACTS

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2005	2010
RESIDENTIAL RETROFIT PROGRAM																	
SAVINGS PER HOUSEHOLD									22.40	22.40	22.40	22.40	22.40	22.40			
HOUSEHOLDS PARTICIPATING									300	1500	2000	2500	3000	3500	0	0	0
ANNUAL SAVINGS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.03	0.04	0.06	0.07	0.08	0.00	0.00	0.00
CUMULATIVE SAVINGS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.04	0.09	0.14	0.21	0.29	0.29	0.29	0.29
RESIDENTIAL LANDSCAPE/TURF SCHEDULE																	
SAVINGS PER HOUSEHOLD										3.80	3.80	3.80	3.80				
HOUSEHOLDS PARTICIPATING										500	3000	10000	12500				
ANNUAL SAVINGS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.04	0.05	0.00	0.00	0.00	0.00
CUMULATIVE SAVINGS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.05	0.10	0.10	0.10	0.10	0.10
INTERIOR HOME CONSULTATION																	
SAVINGS PER HOUSEHOLD											23.76	23.76	23.76	23.76	23.76	23.76	
HOUSEHOLDS PARTICIPATING											200	200	200	200	200	200	200
ANNUAL SAVINGS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CUMULATIVE SAVINGS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.02	0.02	0.05	0.05
COMMERCIAL/INDUSTRIAL INTERNAL AUDIT																	
SAVINGS PER COMMERCIAL UNIT											523	523	523	523	523		
UNITS PARTICIPATING											50	150	150	200	200		
ANNUAL SAVINGS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.08	0.08	0.10	0.10	0.00	0.00
SAVINGS PER INDUSTRIAL UNIT											70824	70824	70824	70824			



UNITS PARTICIPATING ANNUAL SAVINGS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.14	0.14	0.14	0.00	0.00	0.00
CUMULATIVE SAVINGS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.32	0.54	0.78	0.89	0.89	0.89
INDUSTRIAL/UK EXTERIOR AUDIT																		
UNIVERSITY OF KENTUCKY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00
SAVINGS PER INDUSTRIAL UNIT												1127	1127	1127	1127			
UNITS PARTICIPATING ANNUAL SAVINGS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CUMULATIVE SAVINGS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.03	0.04	0.04	0.04	0.04	0.04
INCREASED LEAK DETECTION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
TOTAL SAVINGS FROM CONSERVATION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!

PUBLIC SERVICE COMMISSION CASE NO. 93-434  
ATTACHMENT A  
REBUTTAL TESTIMONY OF LINDA BRIDWELL  
ITEM 1

SCHEDULE A  
UNIVERSITY OF LOUISVILLE MODERATE GROWTH SERIES POPULATION  
PAGE 1 OF 5

PUBLIC SERVICE COMMISSION CASE NO. 93-434  
ATTACHMENT A  
REBUTTAL TESTIMONY OF LINDA BRIDWELL  
ITEM 1

SCHEDULE A  
UNIVERSITY OF LOUISVILLE MODERATE GROWTH SERIES POPULATION  
PAGE 2 OF 5

PUBLIC SERVICE COMMISSION CASE NO. 93-434  
ATTACHMENT A  
REBUTTAL TESTIMONY OF LINDA BRIDWELL  
ITEM 1

SCHEDULE A  
UNIVERSITY OF LOUISVILLE MODERATE GROWTH SERIES POPULATION  
PAGE 3 OF 5

PUBLIC SERVICE COMMISSION CASE NO. 93-434  
ATTACHMENT A  
REBUTTAL TESTIMONY OF LINDA BRIDWELL  
ITEM 1

SCHEDULE A  
UNIVERSITY OF LOUISVILLE MODERATE GROWTH SERIES POPULATION  
PAGE 4 OF 5

PUBLIC SERVICE COMMISSION CASE NO. 93-434  
ATTACHMENT A  
REBUTTAL TESTIMONY OF LINDA BRIDWELL  
ITEM 1

SCHEDULE A  
UNIVERSITY OF LOUISVILLE MODERATE GROWTH SERIES POPULATION  
PAGE 5 OF 5

% OF USE	
85.0%	
15.0%	
100.0%	
100.0%	
100.0%	
5.00%	5.00%
13.0%	13.0%
1.6%	1.1%
2.0%	2.0%
2015	2020
267647	272954
89951	91734
8200	8200
6038	6158
163458	166862
6971	6988
#REF!	#REF!
79.23107	79.23107
0	0
#REF!	#REF!
#REF!	#REF!
89951	91734
#REF!	#REF!
#REF!	#REF!
#REF!	#REF!
#REF!	#REF!
#REF!	#REF!
#REF!	#REF!
#REF!	#REF!
9.55	9.74
1.54	1.54
1.42	1.45
0.54	0.54
23400	23400
10.00	10.00
0.23	0.23

ADVANCED PLUMBING CODE EFFECTS CALCULATION

	1996	2006	
UNIT WATER SAVINGS, GDU			
TOILETS	21.12	20.20	
SHOWERHEADS	10.03	10.90	
FAUCETS	13.73	3.00	
ELIGIBLE POPULATION,%			
TOILETS	0.15	0.65	13.0%
SHOWERHEADS	0.25	0.9	
FAUCETS	0.25	0.9	
PARTICIPATION RATE			
LOW	0.75	0.75	
HIGH	0.90	0.90	
NUMBER OF CUSTOMERS CALC.			
WATER USE,MGD			
SINGLE FAMILY			
IN CTY	#REF!	#REF!	
OUT CTY	#REF!	#REF!	
MULTI			
SFR PER CAP USAGE	#REF!	#REF!	
MFR PER CAP USAGE	#REF!	#REF!	
SFR POPULATION	#REF!	#REF!	
MFR POPULATION	#REF!	#REF!	
PEOPLE/UNIT			
EQU.RESID.CUSTOMERS	#REF!	#REF!	
COMM & IND SAVINGS	0.15	0.44	FROM AMY
GOVT AND UK SAVINGS	0.08	0.15	FROM AMY
ESTIMATED APC SAVINGS, MGD			
HIGH	#REF!	#REF!	
LOW	#REF!	#REF!	
AVG.	#REF!	#REF!	

0.77 0.77

2015	2020
1.87	1.91
#REF!	#REF!
14.80%	14.80%
#REF!	#REF!
#REF!	#REF!
#REF!	#REF!
#REF!	#REF!
#REF!	#REF!
#REF!	#REF!
#REF!	#REF!
66.81	66.64
#REF!	#REF!
14.80%	14.80%
#REF!	#REF!
#REF!	#REF!
#REF!	#REF!
#REF!	#REF!
1.6	1.6
#REF!	#REF!

2015	2020
25868	26493

183	187
#REF!	#REF!
2.38	2.33
#REF!	#REF!
29033.5	29662
2072	2117
#REF!	#REF!
2.46	2.42
#REF!	#REF!
20700	20900
503	508
#REF!	#REF!
2.41	2.36
#REF!	#REF!
18935	19246
93	94
#REF!	#REF!
2.49	2.45
#REF!	#REF!
#REF!	#REF!

2015	2020
25868	26493
#REF!	#REF!
#REF!	#REF!

KAW\_R\_AGKYDR1#1d\_SCH5\_021402 96update  
2/14/02  
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25868	26493
3.20	3.28
2.50	2.50
0.70	0.78

0.70	0.78
39792 #REF!	40828 #REF!
#REF!	#REF!
39792 #REF!	40828 #REF!
#REF!	#REF!
20700 #REF!	20900 #REF!
#REF!	#REF!
#REF!	#REF!

2015	2020
0 0.00	0 0.00
0.29	0.29
0.00	0.00
0.10	0.10
0.00	0.00
0.05	0.05

0.00 0.00

0.00	0.00
0.89	0.89
0.00	0.00
0.00	0.00
0.04	0.04
#REF!	#REF!
#REF!	#REF!

I PROJECTIONS

I PROJECTIONS

I PROJECTIONS

I PROJECTIONS

I PROJECTIONS

KENTUCKY-AMERICAN WATER COMPANY  
 HISTORIC CUSTOMER COUNT BY REVENUE CLASS & COUNTY

REVISED: 2/14/02

Directory: \Files\Excel  
 Filename: 97DEMFOR.XLW  
 Sheet: Cntycust

	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
TOTAL CUSTOMER BASE:																				
RESIDENTIAL	54543	55863	56284	56661	57249	58365	59735	60832	62020	63839	65536	66657	67950	69428	71054	72697	74674	76354	78426	80378
COMMERCIAL	4096	4411	5047	5918	5613	5646	5783	5989	6145	6351	6475	6593	6847	6963	7049	7085	7168	7236	7339	7437
INDUSTRIAL	51	54	51	45	42	38	23	20	21	16	17	17	20	21	18	17	17	17	14	14
O.P.A.	309	360	342	409	310	325	340	398	438	435	388	391	422	422	417	423	421	423	428	433
FIRE PROTECTION	442	492	532	571	638	656	701	763	813	859	932	995	1035	1037	1062	1079	1102	1150	1196	1229
SUBTOTAL	59441	61180	62256	63604	63852	65030	66582	68002	69437	71500	73348	74653	76274	77871	79600	81301	83382	85180	87403	89491
BOURBON COUNTY:																				
RESIDENTIAL	282	305	334	343	347	354	385	390	394	391	394	407	409	419	427	433	441	477	486	506
COMMERCIAL	15	16	18	18	18	19	20	21	21	21	21	22	24	24	26	26	27	26	26	27
INDUSTRIAL																				
O.P.A.														1	1	1	1	2	2	1
FIRE PROTECTION																			1	1
SUBTOTAL	297	321	352	361	365	373	405	411	415	412	415	429	433	444	454	460	469	505	515	535
HARRISON COUNTY:																				
RESIDENTIAL	60	61	66	67	68	70	76	77	78	77	80	80	80	78	79	78	80	83	84	84
COMMERCIAL	2	2	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4
INDUSTRIAL																				
O.P.A.																				
FIRE PROTECTION																				
SUBTOTAL	62	63	69	70	71	73	79	80	81	80	83	84	84	82	83	82	84	87	88	88
SCOTT COUNTY:																				
RESIDENTIAL	821	833	855	883	906	931	953	984	1055	1149	1287	1373	1446	1507	1571	1628	1716	1799	1926	2142
COMMERCIAL	69	70	72	74	76	78	80	82	88	96	108	125	129	137	159	159	163	172	180	196
INDUSTRIAL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	1	1
O.P.A.	2	2	3	3	3	3	3	3	3	3	4	5	5	5	4	6	6	4	4	6
FIRE PROTECTION	12	12	12	12	13	14	14	15	16	17	19	28	31	28	35	35	38	43	47	53
SUBTOTAL	905	918	943	973	999	1027	1051	1085	1163	1266	1419	1532	1612	1678	1771	1830	1925	2020	2158	2398
WOODFORD COUNTY:																				
RESIDENTIAL	99	107	117	120	121	124	135	136	138	137	142	139	141	142	145	149	151	152	153	155
COMMERCIAL	6	6	7	7	7	7	8	8	8	8	8	8	8	9	9	10	12	12	12	12
INDUSTRIAL																				
O.P.A.	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
FIRE PROTECTION	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
SUBTOTAL	108	117	128	131	133	136	148	149	151	150	155	152	154	156	159	164	168	169	170	172
FAYETTE COUNTY:																				
RESIDENTIAL	53281	54557	54912	55248	55807	56886	58186	59245	60355	62085	63633	64658	65874	67282	68832	70409	72286	73843	75777	77491
COMMERCIAL	4004	4317	4947	5816	5509	5539	5672	5875	6025	6223	6335	6434	6682	6789	6851	6886	6962	7022	7117	7198
INDUSTRIAL	50	53	50	44	41	37	22	19	20	15	16	16	19	20	16	15	15	15	13	13
O.P.A.	306	356	337	404	305	320	335	393	433	430	382	384	415	414	410	414	412	415	420	424
FIRE PROTECTION	428	478	518	557	622	639	684	745	794	839	910	964	1001	1006	1024	1041	1061	1104	1145	1172
SUBTOTAL	58069	59761	60764	62069	62284	63421	64899	66277	67627	69592	71276	72456	73991	75511	77133	78765	80736	82399	84472	86298

USAGE CLASS	USAGE CODE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEPT	OCT	NOV	DEC	TOTAL 100 CU FT	TOTAL 1000 GAL	AVG DAY
Single Family	A	476292	484477	443515	439567	491215	510980	572030	688394	630726	586026	543936	477523	6348661	4748798	13.01041
Multi-Family	B	53725	49875	49875	49862	541105	53880	66282	60511	59601	57281	57395	54614	672285	502869.2	1.377724
Garden Apt	C	27198	27936	25140	24468	27746	26186	28853	31260	31450	30489	29945	27164	337835	252700.6	0.69233
High Rise	D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Farms	F	1199	1190	1180	1254	1423	1382	1586	1499	2384	1874	1392	1473	17786	13903.93	0.036449
Golf Course	G	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hospital	H	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Industrial	I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Laundries	L	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Model/Hotel	M	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Water Authority	O	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hydrant Meter	P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Restaurant	R	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lawn Sprinkler/System	S	138	132	29	116	782	1552	2850	7642	6215	6217	2041	562	28276	21150.45	0.057946
University of Ky	U	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Car Wash	W	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fire Service	X	0	0	0	0	11	31	51	98	65	5	17	5	283	211.884	0.000568
Other	Z	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL 100 CU FT		558552	572889	519739	515267	575282	593961	671662	789404	730411	681892	634726	561341	7405126	5539034	15.17544
1000 GALLONS		417796.9	428921	388764.8	385419.7	430310.9	444282.8	502403.2	590474.2	546347.4	510055.2	474775	419883.1			

Directory: HomeLinda TR  
 Filename: 97DEMFOR.XLW WATER USAGE BY APARTMENT CLASS - 1997  
 Sheet: 97apurse 100 CU. FT. Page 2 of 6

USAGE CLASS	USAGE CODE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEPT	OCT	NOV	DEC	TOTAL 100 CU FT	TOTAL 1000 GAL	AVG DAY
Single Family	A	0	4474	3661	3986	3875	4443	4611	5108	4520	4481	4605	3689	52037	38923.68	0.10664
Multi-Family	B	4584	170210	146012	141843	157212	150491	149248	177272	161697	161317	161948	154055	1894859	1417355	3.883163
Garden Apt	C	163554	1001	904	1025	1372	978	1021	1070	1065	1048	865	821	12064	9023.872	0.024723
High Rise	D	1025	35950	37213	28252	27418	29497	32023	40886	37685	41279	34511	29157	402378	300978.7	0.824599
Farms	F	253	387	228	1367	2180	2498	1976	16985	10184	11456	3385	8283	59182	44268.14	0.121283
Golf Course	G	22308	18806	19963	18218	19473	21489	24116	27939	28808	24078	19833	17028	259859	194974.5	0.532533
Hospital	H	137	16	11	42	10	15	31	11	14	11	11	10	319	238.612	0.000654
Industrial	I	10505	8783	12843	10171	11964	13156	10400	11503	10671	10754	12939	10735	134424	100549.2	0.275477
Laundries	L	10505	26938	25585	27848	35904	31301	43318	41918	40686	32547	37465	27868	401531	300345.2	0.822864
Model/Hotel	M	30153	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Water Authority	O	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hydrant Meter	P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Restaurant	R	29066	27313	24985	24464	29199	29154	32598	36589	37004	30818	31517	25002	357709	267566.3	0.733058
Lawn Sprinkler/System	S	1129	9236	266	959	3413	4233	7838	13118	21034	23907	6449	1373	93015	69575.22	0.190617
University of Ky	U	5457	4929	5093	4656	5466	5706	6121	6482	6058	6743	5274	5699	67874	50620.15	0.138665
Car Wash	W	4212	5299	4041	5027	5889	4370	4534	4680	4529	4608	5398	4257	56864	42534.27	0.116532
Fire Service	X	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other	Z	166263	136304	123975	133147	147067	150562	155478	199694	184548	185240	163048	137984	1883310	1408716	3.859496
TOTAL 100 CU FT		474596	450709	395890	400050	452521	446963	473333	583255	546503	538287	487238	425961	5675225	4245068	11.63032
1000 GALLONS		354897.8	337130.3	296065.1	299237.4	338485.7	334328.3	354053.1	438274.7	408784.2	402638.7	364454	318618.8			



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 TOTAL INDUSTRIAL WATER USAGE BY APARTMENT CLASS - 1997  
 100 CU.FT.  
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USAGE CLASS	USAGE CODE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEPT	OCT	NOV	DEC	TOTAL 100 CU FT	TOTAL 1000 GAL	AVG DAY
Single Family	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Multi-Family	B	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Garden Apt	C	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
High Rise	D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Farms	F	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Golf Course	G	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hospital	H	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Industrial	I	105099	123160	97027	108523	123540	122406	124801	139205	141365	133385	133812	107204	1459527	1091726	2.991031
Laundries	L	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Motel/Hotel	M	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Water Authority	O	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hydrant Meter	P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Restaurant	R	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lawn Sprinkler System	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
University of Ky	U	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Car Wash	W	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fire Service	X	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other	Z	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL 100 CU FT		105099	123160	97027	108523	123540	122406	124801	139205	141365	133385	133812	107204	1459527	1091726	2.991031
TOTAL 1000 GALLONS		78614.05	92123.65	72576.2	81175.2	92407.92	91559.69	93351.15	104125.3	109741	99771.98	100091.4	80186.59			

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 TOTAL OTHER PUBLIC AUTHORITY WATER USAGE BY APARTMENT CLASS - 1997  
 100 CU.FT.  
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USAGE CLASS	USAGE CODE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEPT	OCT	NOV	DEC	TOTAL 100 CU FT	TOTAL 1000 GAL	AVG DAY
Single Family	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Multi-Family	B	141	177	138	152	149	130	140	128	152	125	286	156	1874	1401.752	0.00384
Garden Apt	C	22524	19935	18732	17894	19517	18980	18502	27205	21946	24659	20086	18139	248109	18585.5	0.508454
High Rise	D	31737	31461	32555	34050	34140	42733	49805	43861	58096	41539	42597	32960	474814	355160.9	0.973043
Farms	F	4216	4375	3266	3361	3097	1786	7019	3640	3942	1479	4878	2462	43521	3253.71	0.089188
Golf Course	G	51	50	2	170	4280	3491	2245	18437	11805	13336	5922	51	59840	44610.72	0.122221
Hospital	H	16089	11488	13079	11982	12671	14418	17804	16588	15862	14599	12990	12375	169945	127118.9	0.348271
Industrial	I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Laundries	L	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Motel/Hotel	M	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Water Authority	O	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hydrant Meter	P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Restaurant	R	27	78	5	61	51	48	302	46	42	534	120	105	1419	1061.412	0.002908
Lawn Sprinkler System	S	3	4	0	59	36	53	78	282	35	106	32	7	674	504.152	0.001381
University of Ky	U	18629	22357	24081	21787	25090	23560	23974	24765	29890	32156	30922	26504	303715	227178.8	0.622408
Car Wash	W	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fire Service	X	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other	Z	66965	63361	44032	44838	48570	50159	61631	62928	56660	59891	54585	44516	658136	492285.7	1.348728
TOTAL 100 CU FT		160382	153286	135890	134353	147601	155338	180780	197860	198230	188424	172428	137275	1961847	1467462	4.020443
TOTAL 1000 GALLONS		119965.7	114857.9	101645.7	100496	110405.5	116192.8	135223.4	147989.3	148276	140941.2	128976.1	102681.7			

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TOTAL OTHER WATER UTILITY  
 WATER USAGE BY APARTMENT CLASS - 1997  
 100 CU. FT.

USAGE CLASS	USAGE CODE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEPT	OCT	NOV	DEC	TOTAL 100 CU FT	TOTAL 1000 GAL	AVG DAY
Single Family	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Multi-Family	B	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Garden Apt	C	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
High Rise	D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Farms	F	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Golf Course	G	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hospital	H	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Industrial	I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Laundries	L	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Motel/Hotel	M	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Water Authority	O	38124	31724	28009	28848	31320	30208	40429	52131	40494	37721	34616	30555	424179	317285.9	0.869278
Hydrant Meter	P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Restaurant	R	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lawn Sprinkler System	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
University of Ky	U	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Car Wash	W	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fire Service	X	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other	Z	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL 100 CU FT		38124	31724	28009	28848	31320	30208	40429	52131	40494	37721	34616	30555	424179	317285.9	0.869278
1000 GALLONS		28516.75	23729.55	20950.73	21578.3	22427.36	22595.58	30240.89	38993.99	30289.51	28215.31	25692.77	22855.14			

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TOTAL SUMMARY  
 WATER USAGE BY APARTMENT CLASS - 1997  
 100 CU. FT.

USAGE CLASS	USAGE CODE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEPT	OCT	NOV	DEC	TOTAL 100 CU FT	TOTAL 1000 GAL	AVG DAY
Single Family	A	476292	484777	443515	439567	491215	510960	572030	688394	630726	586026	543936	477523	6348661	4748798	1301041
Multi-Family	B	58450	59805	53674	58129	58433	58433	71033	65747	64273	61887	62286	58459	726196	543194.6	1.488204
Garden Apt	C	213276	218081	189684	184205	204475	196637	196637	235737	215093	216465	211989	199358	2480803	1855641	5.083947
High Rise	D	32762	32462	33459	34954	35512	43711	50106	44931	59161	42587	43452	33781	486878	364184.7	0.997766
Farms	F	41365	42778	32698	32033	34017	31645	40638	46025	43981	44632	40781	33092	483685	346836.4	0.950237
Golf Course	G	304	437	230	1537	6460	5989	4221	35422	21789	24792	9307	8334	118822	88978.86	0.245304
Hospital	H	38397	30094	33042	30200	32144	36907	41920	44527	42670	38677	32823	29403	429804	321493.4	0.880804
Industrial	I	105236	123176	97038	108565	123350	122421	124832	139216	141379	133986	133823	107214	1459846	1091965	2.991884
Laundries	L	10505	8783	12843	10171	11964	13156	10400	11503	10671	10754	12939	10735	134424	100549.2	0.275477
Motel/Hotel	M	30153	26938	25585	27848	35904	31301	43318	41918	40686	32547	37465	27868	401531	300345.2	0.822864
Other Water Authority	O	38124	31724	28009	28848	31320	30208	40429	52131	40494	37721	34616	30555	424179	317285.9	0.869276
Hydrant Meter	P	0	548	331	2389	0	0	1623	89	2022	474	443	0	7919	5923.412	0.016229
Restaurant	R	29093	27391	24990	24525	29250	29202	32900	36635	37046	31352	31637	25107	359128	268627.7	0.735966
Lawn Sprinkler System	S	1270	9372	295	1133	4231	5898	10766	21022	27284	30230	8522	1942	121965	91229.82	0.249945
University of Ky	U	24086	27286	29164	26443	30566	29266	30095	31247	35948	38899	36196	32203	371389	277799	0.761093
Car Wash	W	4212	5299	4041	5027	5889	4370	4554	4680	4629	4608	5398	4257	56864	42534.27	0.116532
Fire Service	X	2724	15792	6044	1469	6798	200721	217109	49151	49633	1401	32542	1139	175548	131309.9	0.359753
Other	Z	233228	199665	168007	177985	195637	200721	217109	262622	24208	245131	217633	182500	2541446	1901002	5.208224
TOTAL 100 CU FT		1339477	1348108	1182849	1190899	1337051	1356514	1493763	1810997	1708593	1581579	1495788	1263470	17109088	12797598	35.06191
1000 GALLONS		1001929	1008385	884771.1	890792.5	1000114	1014672	1117335	1354626	1278028	1183021	1118849	945075.6			