

Exhibit No. ____ (CTM-7)
Dockets UE-120436 et al.
Witness: Christopher T. Mickelson

BEFORE THE WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

**WASHINGTON UTILITIES AND
TRANSPORTATION COMMISSION,**

Complainant,

v.

**AVISTA CORPORATION, d/b/a
AVISTA UTILITIES,**

Respondent.

**DOCKETS UE-120436/UG-120437
(consolidated)**

**WASHINGTON UTILITIES AND
TRANSPORTATION COMMISSION,**

Complainant,

v.

**AVISTA CORPORATION d/b/a AVISTA
UTILITIES,**

Respondent.

**DOCKETS UE-110876/UG-110877
(consolidated)**

EXHIBIT TO TESTIMONY OF

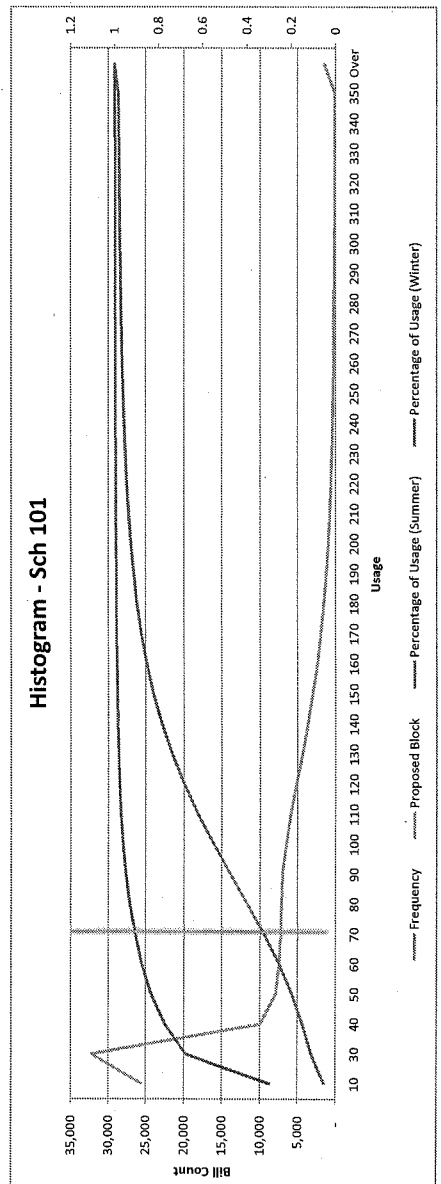
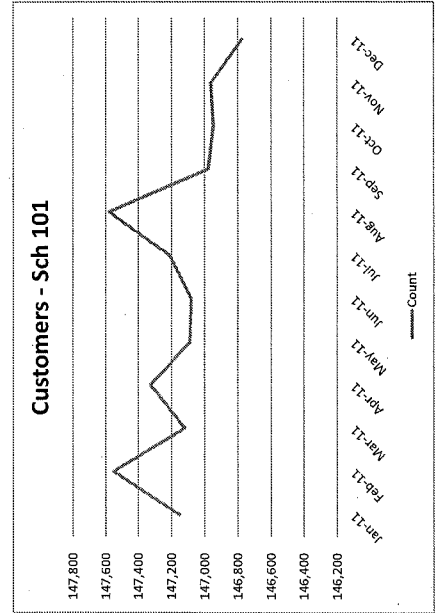
CHRISTOPHER T. MICKELSON

**STAFF OF
WASHINGTON UTILITIES AND
TRANSPORTATION COMMISSION**

Natural Gas Bill Frequency and Histogram Analysis

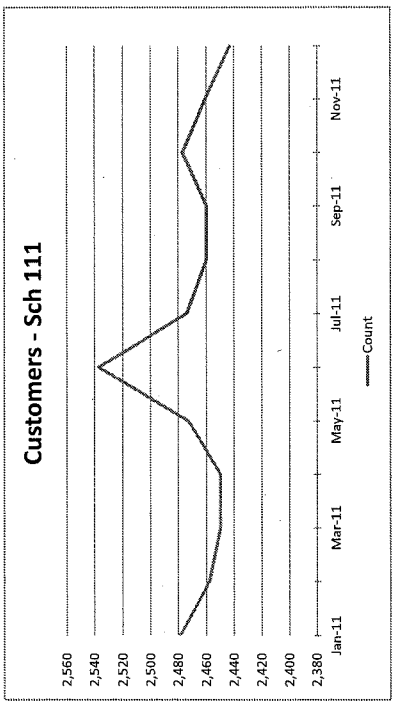
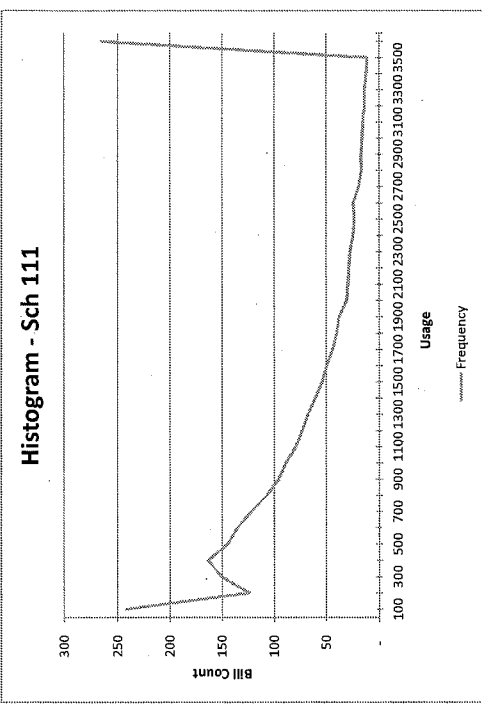
September 19, 2012

Line No.	Sch	Usage Blocks		Month												Percentage of Usage (Total)		Percentage of Usage (Winter)		Percentage of Usage (Summer)		
		Lower	Upper	Jan-11	Feb-11	Mar-11	Apr-11	May-11	Jun-11	Jul-11	Aug-11	Sep-11	Oct-11	Nov-11	Dec-11	Accum. %	Avg. Count	Accum. %	Avg. Count	Accum. %	Avg. Count	
1																						
2	101	0	10	5,844	6,152	5,961	7,673	9,647	23,604	50,299	66,187	67,417	44,595	12,331	6,550	25,522	17.94%	7,419	5.04%	43,625	29.65%	29.65%
3	101	21	30	4,268	5,203	5,145	9,883	15,298	48,922	71,716	67,541	66,860	65,298	21,185	5,674	32,249	21.92%	8,560	5.82%	55,959	38.07%	67.66%
4	101	31	40	2,491	3,218	3,906	8,099	12,691	25,186	13,444	7,575	6,883	17,816	14,837	3,591	9,928	6.75%	5,924	4.03%	13,933	9.47%	77.13%
5	101	41	50	3,089	4,263	4,373	10,565	15,263	18,761	8,761	2,357	2,274	8,705	15,376	4,541	7,918	5.38%	7,068	4.80%	19,699	13.69%	83.09%
6	101	51	60	4,029	5,692	5,914	13,884	17,708	11,932	2,164	1,046	905	4,231	15,734	4,341	7,472	5.08%	8,612	5.85%	25,544	17.34%	87.39%
7	101	61	70	5,480	8,365	8,558	15,295	16,496	6,751	1,079	575	519	2,049	14,092	7,932	7,266	4.94%	9,954	6.76%	32,300	22.30%	90.50%
8	101	71	80	7,037	9,978	10,314	15,239	14,532	3,857	608	379	296	1,159	12,236	10,037	7,139	4.85%	10,807	7.34%	45,778	31.11%	92.86%
9	101	81	90	8,950	11,670	12,292	14,396	11,893	2,269	441	324	252	703	9,619	11,422	7,019	4.77%	11,039	7.74%	47,399	33.60%	94.66%
10	101	91	100	10,090	12,539	12,615	11,770	8,901	1,407	324	202	193	456	7,558	11,795	6,492	4.41%	75,447	54.91%	1,914	1.30%	95.96%
11	101	101	110	11,005	12,984	12,084	9,796	6,512	944	225	158	157	548	11,889	15,899	5,909	4.02%	79,445	58.45%	1,914	1.30%	96.91%
12	101	111	120	11,274	11,412	11,412	7,055	4,478	586	164	125	102	208	4,216	10,732	5,148	3.50%	82,955	62.00%	1,914	1.30%	98.19%
13	101	121	130	10,216	9,624	9,624	3,205	2,066	449	152	102	112	182	3,024	9,663	4,329	2.94%	85,899	73.76%	700	0.48%	98.03%
14	101	131	140	9,609	8,478	8,472	3,852	2,066	354	152	102	109	154	2,211	8,064	3,634	2.47%	88,569	78.37%	490	0.33%	98.36%
15	101	141	150	8,355	7,023	6,789	2,803	1,532	275	128	111	96	124	1,659	6,900	2,983	2.03%	90,599	82.17%	378	0.26%	98.61%
16	101	151	160	7,114	5,581	5,472	2,059	1,146	172	99	87	58	106	1,149	5,492	2,378	1.62%	92,011	85.21%	278	0.19%	98.80%
17	101	161	170	6,255	4,469	4,449	1,517	880	165	105	79	85	906	4,427	1,950	1,950	1.33%	93,333	87.70%	230	0.16%	98.96%
18	101	171	180	5,447	3,535	3,363	1,173	697	159	95	67	65	704	3,647	1,560	1,560	1.06%	94,399	89.69%	193	0.13%	99.09%
19	101	181	190	4,092	2,829	2,866	891	534	140	68	46	61	524	2,792	1,225	1,225	0.83%	95,233	91.26%	151	0.10%	99.19%
20	101	191	200	3,359	2,297	2,079	675	409	118	78	57	60	57	448	2,329	997	0.68%	95,900	92.52%	130	0.09%	99.28%
21	101	201	210	2,715	1,771	1,605	580	332	104	58	41	41	70	339	1,791	787	0.54%	96,449	93.52%	108	0.07%	99.35%
22	101	211	220	2,263	1,435	1,311	460	280	91	62	35	40	42	300	1,440	647	0.44%	96,888	94.34%	92	0.06%	99.42%
23	101	221	230	1,805	1,176	1,084	367	253	83	55	36	36	47	224	1,106	523	0.36%	97,233	95.94%	85	0.06%	99.48%
24	101	231	240	1,523	938	915	310	177	77	77	33	33	208	932	438	438	0.30%	97,539	95.54%	72	0.05%	99.52%
25	101	241	250	1,257	835	734	256	166	55	42	19	27	27	778	364	364	0.25%	97,788	95.99%	57	0.04%	99.56%
26	101	251	260	961	629	584	250	138	39	35	21	29	25	666	295	295	0.20%	97,988	96.36%	51	0.03%	99.60%
27	101	261	270	847	520	487	200	156	63	23	23	23	23	543	255	255	0.17%	98,155	96.67%	53	0.04%	99.64%
28	101	271	280	739	468	431	180	126	50	27	21	13	22	435	218	218	0.15%	98,300	96.94%	43	0.03%	99.66%
29	101	281	290	631	391	382	144	107	30	18	13	17	13	375	187	187	0.13%	98,433	97.17%	34	0.02%	99.69%
30	101	291	300	574	339	325	154	111	54	13	15	19	21	350	172	172	0.12%	98,549	97.37%	39	0.03%	99.71%
31	101	301	310	452	293	281	140	83	36	16	12	17	9	276	143	143	0.10%	98,649	97.55%	29	0.02%	99.73%
32	101	311	320	366	281	237	118	65	28	21	13	18	13	302	128	128	0.09%	98,738	97.70%	27	0.02%	99.75%
33	101	321	330	326	254	179	117	67	30	14	12	8	77	198	109	109	0.07%	98,800	97.83%	26	0.02%	99.77%
34	101	331	340	287	194	183	105	67	20	8	14	6	15	214	99	99	0.07%	98,877	97.95%	22	0.01%	99.78%
35	101	341	350	270	180	167	86	68	23	13	8	14	8	52	189	91	0.06%	98,938	98.06%	22	0.02%	99.80%
36	101	350	350	4,433	3,529	3,284	1,679	949	231	179	152	138	134	921	3,274	1,575	1.07%	100.00%	100.00%	297	0.20%	100.00%
37	Totals			147,153	147,550	147,120	147,325	147,090	147,082	147,210	147,579	146,977	146,947	146,962	146,775	147,148	147,148			147,148		



Line

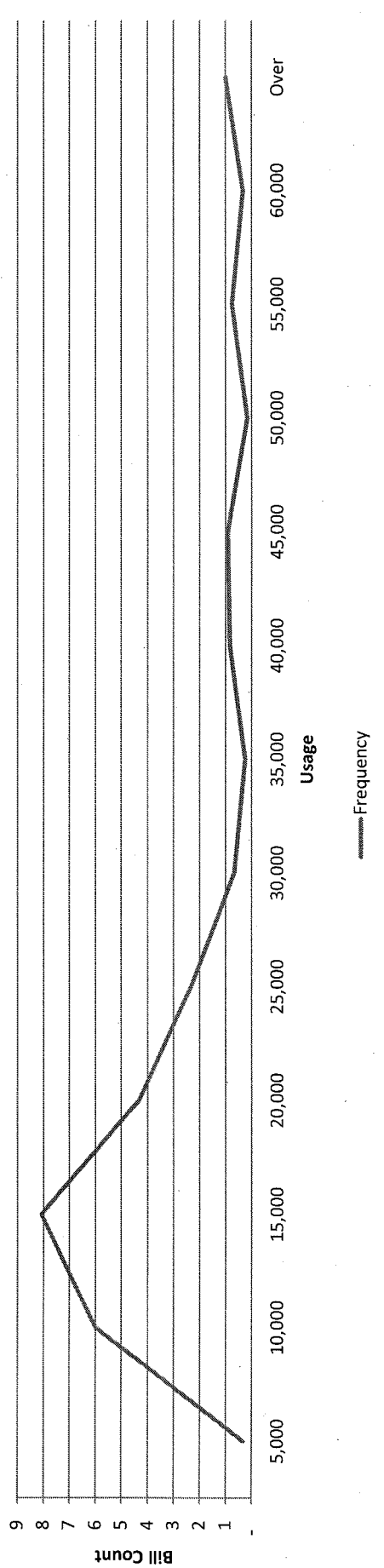
No.	Sch	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	Month												(p)	(q)	(r)
										Jan-11	Feb-11	Mar-11	Apr-11	May-11	Jun-11	Jul-11	Aug-11	Sep-11	Oct-11	Nov-11	Dec-11			
1	111	0	100	32	29	29	30	36	143	525	884	804	404	404	58	19	243	9.83%	9.83%					
2	111	101	200	11	8	4	8	17	148	336	305	305	275	59	8	124	5.01%	14.84%						
3	111	201	300	40	40	39	67	85	240	311	270	270	297	120	31	151	6.11%	20.95%						
4	111	301	400	52	60	69	96	139	297	274	227	227	269	197	60	164	6.64%	27.59%						
5	111	401	500	70	75	75	133	171	261	176	151	151	151	165	76	145	5.85%	33.45%						
6	111	501	600	78	89	85	136	214	196	148	126	126	170	155	96	135	5.47%	38.91%						
7	111	601	700	76	93	103	146	189	155	112	89	89	126	181	98	121	4.92%	43.83%						
8	111	701	800	96	101	143	151	135	67	72	72	72	96	164	104	107	4.33%	48.17%						
9	111	801	900	81	100	115	147	143	112	75	47	47	76	117	90	96	3.88%	52.05%						
10	111	901	1000	99	93	97	128	124	96	52	47	47	68	109	107	89	3.60%	55.65%						
11	111	1001	1100	80	103	97	108	116	85	44	29	29	50	117	97	80	3.22%	58.88%						
12	111	1101	1200	94	92	109	105	88	52	41	31	31	31	28	115	73	2.97%	61.84%						
13	111	1201	1300	75	98	75	89	87	56	32	35	35	48	79	105	68	2.75%	64.59%						
14	111	1301	1400	87	84	109	95	62	49	24	26	26	28	55	83	61	2.46%	67.05%						
15	111	1401	1500	74	92	90	82	59	43	27	14	14	14	23	49	54	2.18%	69.23%						
16	111	1501	1600	67	76	71	63	55	40	18	17	17	17	27	64	50	2.01%	71.24%						
17	111	1601	1700	63	63	64	51	42	37	16	16	16	16	23	44	44	1.77%	73.01%						
18	111	1701	1800	63	69	68	40	51	26	15	16	16	19	31	66	40	1.62%	74.63%						
19	111	1801	1900	62	69	65	50	37	26	16	10	10	14	41	52	38	1.53%	76.16%						
20	111	1901	2000	47	41	43	41	40	18	15	14	14	14	30	46	30	1.23%	77.39%						
21	111	2001	2100	56	47	45	34	22	20	9	8	8	14	27	59	29	1.18%	78.56%						
22	111	2101	2200	55	46	40	21	26	25	14	12	12	18	29	41	28	1.11%	79.71%						
23	111	2201	2300	49	38	48	37	30	19	7	7	7	7	15	37	25	1.00%	81.82%						
24	111	2301	2400	43	40	35	35	29	27	12	5	5	11	24	41	24	0.95%	82.77%						
25	111	2401	2500	43	30	39	27	26	19	12	5	4	10	23	44	24	0.98%	83.75%						
26	111	2501	2600	37	44	36	34	29	18	7	4	4	4	10	23	17	0.68%	85.21%						
27	111	2601	2700	30	41	36	24	19	10	9	4	4	6	13	36	19	0.78%	86.54%						
28	111	2701	2800	28	30	27	20	14	7	9	6	6	12	16	33	17	0.69%	88.50%						
29	111	2801	2900	28	31	41	20	15	10	8	2	2	7	14	25	16	0.64%	86.54%						
30	111	2901	3000	39	29	18	26	17	10	3	2	2	2	7	15	15	0.62%	87.16%						
31	111	3001	3100	33	21	19	16	19	9	1	5	5	6	23	28	15	0.55%	87.71%						
32	111	3101	3200	31	23	17	15	20	4	6	1	1	4	15	29	14	0.56%	88.27%						
33	111	3201	3300	32	23	20	11	14	12	3	3	3	5	20	19	12	0.50%	88.76%						
34	111	3301	3400	29	21	23	7	8	7	3	3	3	4	15	27	11	0.45%	89.21%						
35	111	3401	3500	27	20	17	13	13	9	1	3	3	2	11	15	11	0.45%	89.21%						
36	111	Over	575	504	451	347	266	116	54	42	42	58	241	469	266	256	10.79%	100.00%						
37	Totals		2,479	2,458	2,450	2,450	2,473	2,537	2,474	2,460	2,460	2,460	2,477	2,461	2,443	2,469								



Line

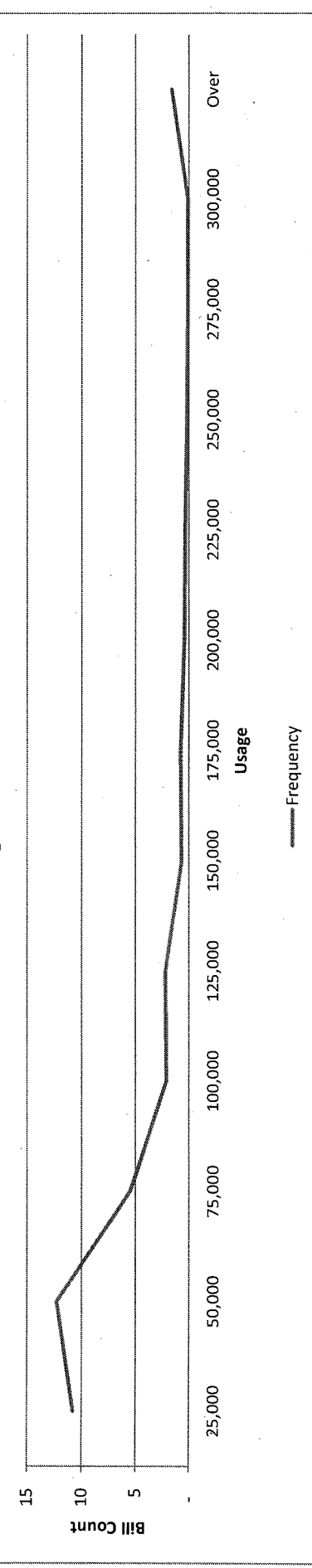
No.	(a)	(b)	(c)	Month												(p)		(r)
				(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	Avg. Count	%	
	Sch	Lower	Upper	Jan-11	Feb-11	Mar-11	Apr-11	May-11	Jun-11	Jul-11	Aug-11	Sep-11	Oct-11	Nov-11	Dec-11			
1	121	0	5,000	-	-	-	-	-	1	1	1	1	-	-	-	0	1.3%	1.28%
2	121	5,000	10,000	2	3	3	5	4	8	8	11	10	11	4	3	6	23.1%	24.36%
3	121	10,000	15,000	4	7	5	9	9	8	10	8	9	8	12	8	8	31.1%	55.45%
4	121	15,000	20,000	11	8	9	3	5	2	2	1	1	2	3	5	4	16.7%	72.12%
5	121	20,000	25,000	2	2	2	3	2	3	2	2	2	2	3	3	2	9.0%	81.09%
6	121	25,000	30,000	2	-	2	1	1	-	-	-	-	-	-	2	1	2.6%	83.65%
7	121	30,000	35,000	-	-	-	-	-	1	-	-	1	-	1	-	0	1.0%	84.62%
8	121	35,000	40,000	-	1	-	1	1	-	2	3	1	-	1	-	1	3.2%	87.82%
9	121	40,000	45,000	-	1	-	2	2	1	1	-	1	3	-	-	1	3.5%	91.35%
10	121	45,000	50,000	-	-	-	-	-	2	-	-	-	-	-	-	0	0.6%	91.99%
11	121	50,000	55,000	2	2	1	-	1	-	-	-	-	-	-	3	1	2.9%	94.87%
12	121	55,000	60,000	1	-	1	-	1	-	-	-	-	-	1	-	0	1.3%	96.15%
13	121	60,000	Over	2	2	3	2	2	-	-	-	-	-	1	2	1	3.8%	100.00%
14	Totals			26	26	26	26	26	26	26	26	26	26	26	26	26		

Histogram - Sch 121



Line No.	(a)	(b)	(c)	Month												(o)	(p)		(q)	(r)
				(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)		Avg. Count	% Accum.		
1	Sch	Lower	Upper	Jan-11	Feb-11	Mar-11	Apr-11	May-11	Jun-11	Jul-11	Aug-11	Sep-11	Oct-11	Nov-11	Dec-11	7	11	29.3%	29.28%	
2	146	0	25,000	9	8	7	7	8	12	15	16	16	16	9	7	12	12	33.3%	62.61%	
3	146	25,000	50,000	8	8	10	13	16	17	11	12	12	12	17	12	6	6	14.9%	77.48%	
4	146	50,000	75,000	8	6	9	9	6	1	6	3	3	3	4	8	2	2	5.6%	83.11%	
5	146	75,000	100,000	5	5	4	1	1	1	-	1	2	1	1	3	2	2	5.9%	88.96%	
6	146	100,000	125,000	2	4	1	2	1	2	3	3	2	3	1	2	1	1	1.8%	90.77%	
7	146	125,000	150,000	1	-	1	-	-	1	1	1	1	1	1	-	1	1	2.0%	92.79%	
8	146	150,000	175,000	-	2	1	-	2	2	-	-	-	-	1	1	0	0	1.1%	93.92%	
9	146	175,000	200,000	-	-	-	2	-	-	-	-	-	-	2	1	0	0	0.9%	94.82%	
10	146	200,000	225,000	1	1	1	-	1	-	-	-	-	-	-	-	0	0	0.5%	95.27%	
11	146	225,000	250,000	-	-	-	1	1	-	-	-	-	-	-	-	0	0	0.2%	95.50%	
12	146	250,000	275,000	-	-	-	-	-	-	-	-	-	-	-	1	0	0	0.2%	95.72%	
13	146	275,000	300,000	-	-	1	-	-	-	-	-	-	-	-	-	2	2	4.3%	100.00%	
14	146	300,000	Over	3	3	2	2	2	1	1	1	1	1	1	2	2	2			
15	Totals			37	37	37	37	37	37	37	37	37	37	37	37	37	37			

Histogram - Sch 146



Line

Line No.	A	B	C		D		E		F
			2 Unit	2.5 Unit	Lower-End	2 Unit	2.5 Unit	Upper-End	
1									
2									
3	I. Electricity								
4	a. Lighting and Refrigeration	KWH	225	250	360	400			
5	b. Cooking	KWH	99	110	99	110			
6	c. Domestic Hot Water	KWH	306	340	306	340			
7	First Block / Sub-Total		630	700	765	850			
8	d. Space Heating	KWH	612	680	612	680			
9	e. Air Conditioning	KWH	162	180	162	180			
10	Total		1,404	1,560	1,539	1,710			
11	Second Block / Sub-Total		1,242	1,380	1,377	1,530			

Line No.	A	B	C		D		E		F
			2 Unit	2.5 Unit	Lower-End	2 Unit	2.5 Unit	Upper-End	
14	II. Natural Gas and Bottled Gas								
15	a. Cooking	Therms	7	8	7	8			
16	b. Domestic Hot Water	Therms	19	21	19	21			
17	First Block / Sub-Total		26	29	26	29			
18									
19	c. Space Heating	Therms	43	48	43	48			
20	Second Block / Total		69	77	69	77			

Unit Size	Factor
0-BR	0.5
1-BR	0.7
2-BR	0.9
3-BR	1.1
4-BR	1.4
5-BR	1.6

32 <http://www.hud.gov/offices/adm/hudclips/guidebooks/7420.10G/7420g18GUID.pdf>