Supplementary Appendix

A statistical approach to characterizing water age in premise plumbing systems

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The following is included as a supplementary appendix for this paper:

Table S1. EPANET nodes and elevations

ID	ELEVATION
1	-0.5
2	2
3	2.65
4	2.9
5	2
6	2
7	2
8	2
BRTAP_1	0.8
WC_1	0.75
10	2.65
11	2.65
12	1
13	1
KTAP	0.8
15	1
DW	0.5
KTAP_H	0.8
18	1.15
19	1.15
20	2.65
21	2.65
22	2.65

23	2.9
24	3.65
25	4
WC_2	3.65
28	4
29	4
BRTAP_2	3.7
31	4
SHOWER	3.9
33	4.15
34	4.15
35	4.15
36	4.15
SHOWER_H	3.9
BRTAP_2_H	3.7
40	5.58
41	5.58
43	6.28
WM	6.28
45	7.28
46	7.28
14	5.78
16	5.78
17	-1

Table S2. EPANET reservoirs
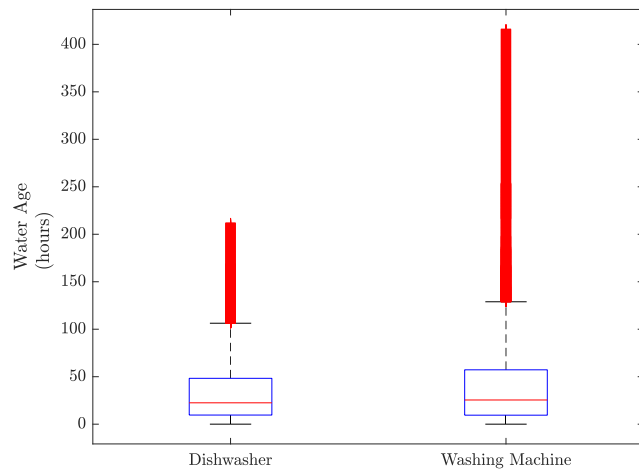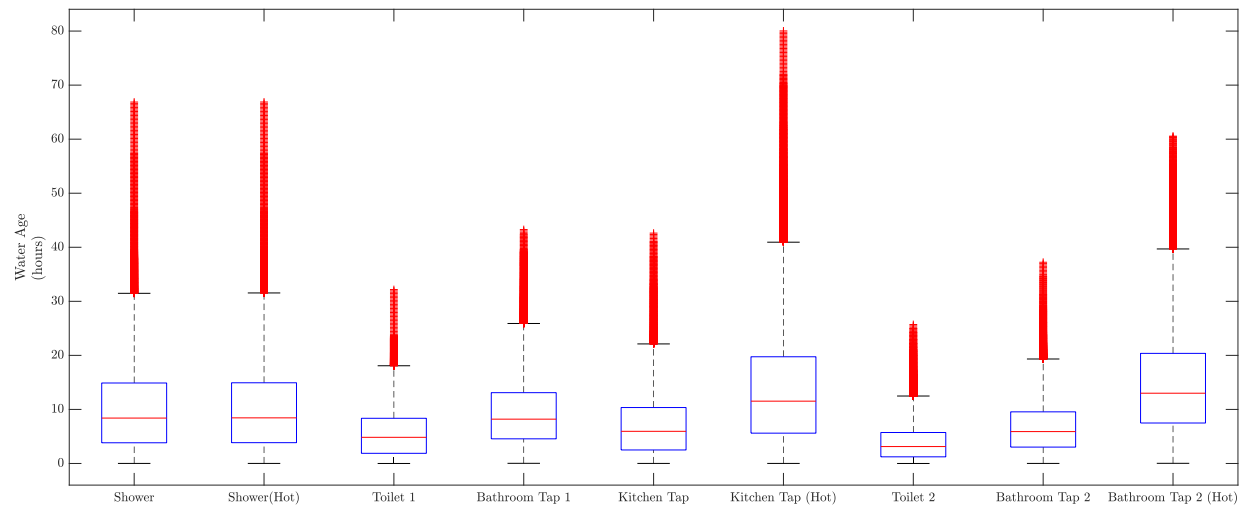
ID	HEAD
9	30

Table S3. EPANET pipe information. The roughness was 0.05 and the minor loss was 0 for all pipes

;ID	NODE1	NODE2	LENGTH	DIAMETER
1	1	2	1	25.6
2	3	2	1.65	25.6
3	4	3	0.2	19.8
4	2	6	0.235	10
5	6	5	1.079	10
6	6	7	0.264	10
7	7	WC_1	0.25	10
8	5	8	0.262	10
9	8	Brtap_1	0.2	10
10	3	10	2.337	13

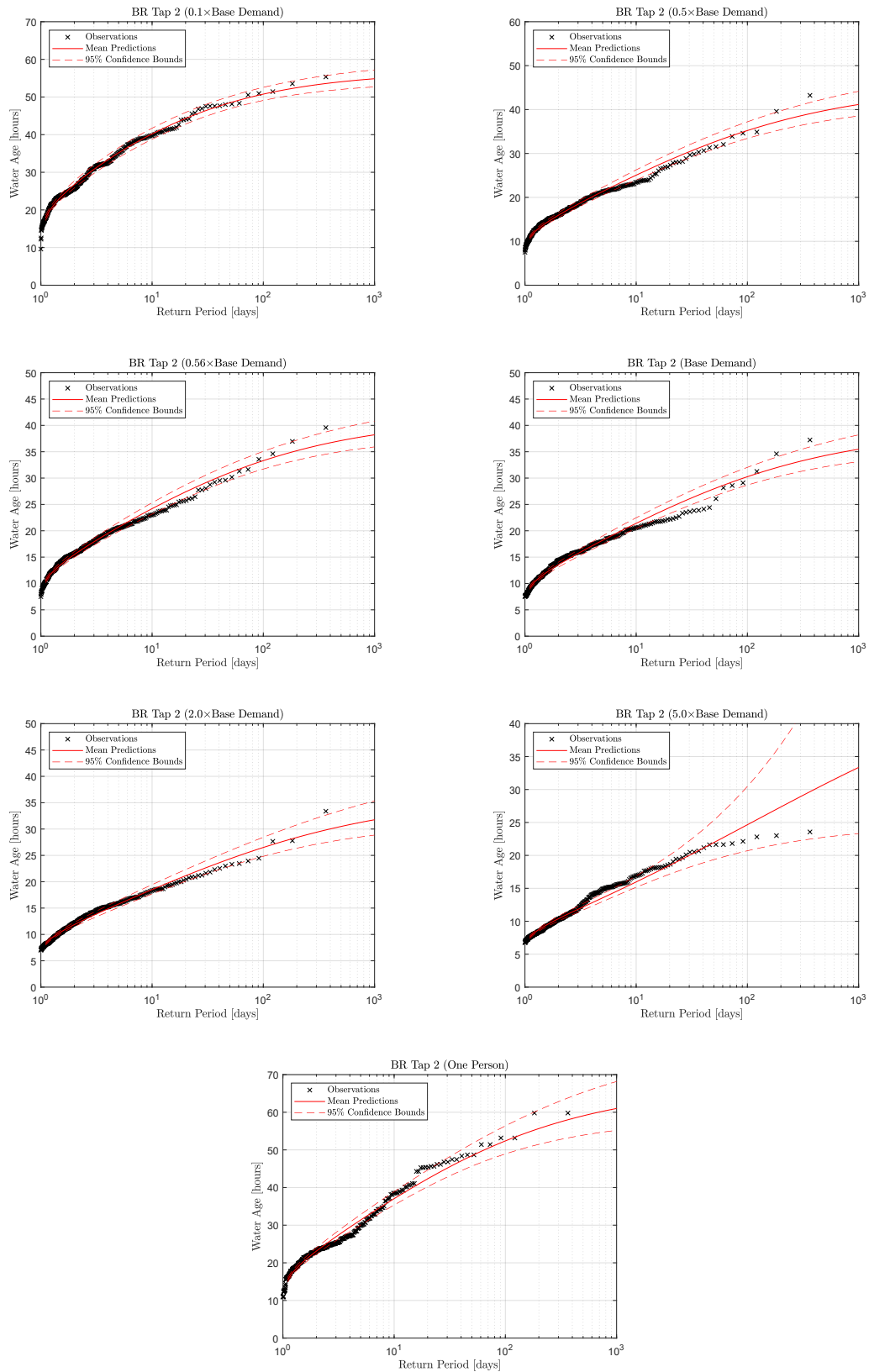|				
11	10	11	1.332	13
12	11	12	1.575	13
13	12	13	0.725	13
14	13	15	0.31	10
15	13	Ktap	0.2	10
16	15	DW	0.5	10
17	Ktap_H	18	0.35	13
18	18	19	0.413	13
19	19	20	1.44	13
20	20	21	1.447	13
21	21	22	2.49	13
22	22	23	0.2	13
23	4	24	0.75	19.8
24	24	25	0.35	19.8
26	WC_2	24	0.747	10
27	25	28	1.358	13
28	28	31	0.64	13
29	31	29	0.76	10
30	31	Shower	0.1	10
31	29	Brtap_2	0.3	10
32	33	23	1.25	13
34	33	34	1.465	13
35	34	35	0.479	13
36	35	Shower_H	0.25	10
37	35	36	0.761	10
38	36	Brtap_2_H	0.45	10
41	43	45	1	19.8
42	45	46	0.1	19.8
48	41	33	1.43	19.8
49	40	25	1.58	19.8
50	WM	43	0.479	13
51	16	41	0.2	19.8
52	16	46	1.5	19.8
53	43	14	0.5	19.8
54	14	40	0.2	19.8
33	17	9	1	32
25	17	1	2	25

Figure S1. Water age for the fixtures at a two-person house. Note the different axes on the bottom plot. For each result, the red horizontal line is the median water age, the bottom and top edges of the box indicate the 25th and 75th percentiles, the upper and lower black horizontal lines are the most extreme data points, not including outliers which are the red points.
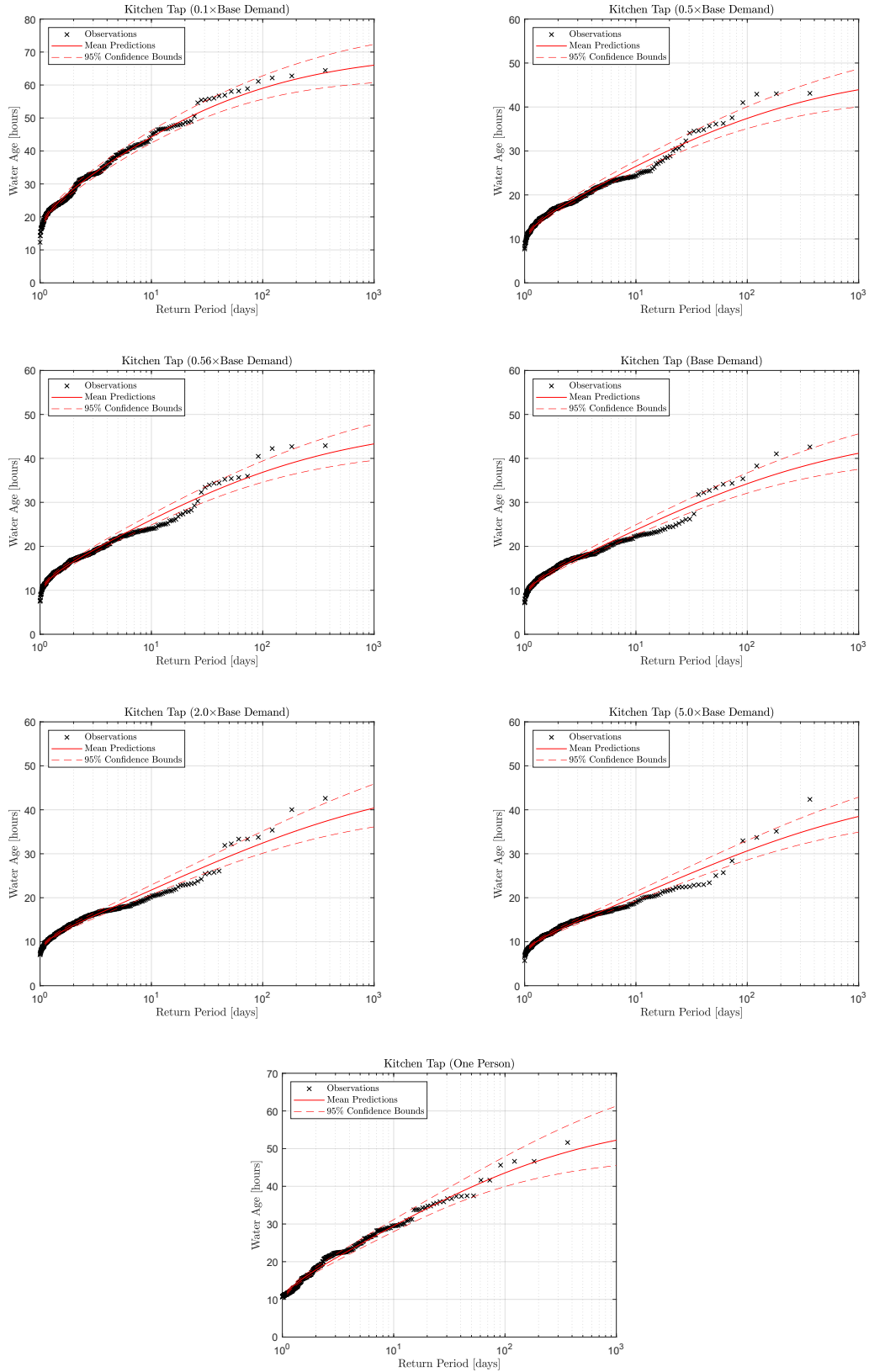
Figure S2. Return period analysis for the shower 0.1x, 0.5x, 0.56x, 1x, 2x, and 5x demand for two people and return period for one person

Figure S3. Return period analysis for the bathroom tap 2 0.1x, 0.5x, 0.56x, 1x, 2x, and 5x demand for two people and return period for one person

Figure S4. Return period analysis for the kitchen tap 0.1x, 0.5x, 0.56x, 1x, 2x, and 5x demand for two people and return period for one person

Figure S5. Return period analysis for the kitchen tap hot water 0.1x, 0.5x, 0.56x, 1x, 2x, and 5x demand for two people and return period for one person