

APPENDIX H
SEWER MODELING INPUT

Appendix H

InfoSewer Flow Distribution

	2012	2018	2032
Avg Annual Flow (gpd)	322,019	362,363	407,314
Peak Hour Flow (gpd)	1,944,000	2,022,429	2,109,814

	Basin 1	Basin 2	Basin 3	Basin 4	Basin 5	Basin 6
Nodes	112	1	61	58	12	79

Zoning Acreage per Basin

White Salmon Acreage									
Zone	Basin 1	Basin 2	Basin 3	Basin 4	Basin 5	Basin 6	SubTotal	Outside Basins	Total
R-1	104.64	49.23	28.79	50.13		0.40	233.19	88.44	321.62
R-2	64.69		65.34	51.52			181.55	27.35	208.91
R-3	12.78		6.87	1.10			20.75	0.82	21.57
C-2	39.96		23.73	9.12		9.60	82.41	2.85	85.26
MHR	7.82			1.73			9.55	3.34	12.89
RPD	0.06	0.06		59.85	72.71		132.68	17.58	150.26
P	3.60		13.29				16.89	0.01	16.90
SubTotal	233.55	49.29	138.01	173.46	72.71	10.00	677.02	140.38	817.40
Bingen Acreage									
Zone	Basin 1	Basin 2	Basin 3	Basin 4	Basin 5	Basin 6	SubTotal	Outside Basins	Total
R1	4.26					79.27	83.54	3.38	170.45
R2						15.19	15.19		30.38
R3				1.95		16.09	18.03	0.45	36.52
C				3.35		31.36	34.71		69.42
M1				29.28		7.03	36.31		72.63
M2				21.50		134.27	155.77	19.19	330.72
AR						9.70	9.70	1.51	20.92
WWTP						5.51	5.51	0.61	11.64
P						3.81	3.81		7.63
SubTotal	4.26	0.00	0.00	56.08	0.00	302.24	362.58	25.15	750.30
Klickitat County Acreage									
Zone	Basin 1	Basin 2	Basin 3	Basin 4	Basin 5	Basin 6	SubTotal	Outside Basins	Total
R	27.22						27.22	0.42	54.86
RR1	33.90						33.90	322.05	389.85
RR2	2.13						2.13		4.26
SR	85.94	113.03	30.19				229.16	481.96	940.28
GC	23.32						23.32		46.64
IP						6.66	6.66	130.57	143.89
P	30.99						30.99	18.82	80.80
OS	3.05	2.35				2.76	8.16	422.25	438.57
SubTotal	206.55	115.38	30.19	0.00	0.00	9.42	361.54	1376.07	2099.15
TOTAL	444.37	164.67	168.20	229.53	72.71	321.66	1401.14	1541.60	3666.86

2012 Flow Distribution per Basin

	2012 ERUs	ERU	gpd
White Salmon	1372	107.89	148,032
Bingen	794	130.47	103,596
Total	2166		251,627
I/I			70,391
WS I/I			41,411
Bingen I/I			28,980
2012 Average Annual Flow for Hydraulic Model			
White Salmon			189,443
Bingen			132,576
Total			322,019
2012 Peak Hourly Flow for Hydraulic Model			
White Salmon			1,143,650
Bingen			800,350
Total			1,944,000

2012 White Salmon Zoning Areas							
Zone	Basin 1	Basin 2	Basin 3	Basin 4	Basin 5	Basin 6	Total
SF Residential	45%	23%	18%	14%	0%	0%	100%
MF Residential	62%	0%	33%	5%	0%	0%	100%
Commercial	56%	0%	21%	8%	0%	14%	100%
Other	23%	1%	7%	31%	37%	1%	100%
2012 White Salmon ERUs per Basin							
SF Residential	512	261	200	163	0	1	1137
MF Residential	4	0	2	0	0	0	6
Commercial	123	0	46	18	0	32	219
Other	3	0	1	3	4	0	11
2012 White Salmon Average Annual Flows per Basin (gpd)							
SF Residential	55,254.67	28,147.28	21,565.18	17,634.40	-	69.41	122,670.93
MF Residential	398.77	-	214.36	34.21	-	-	647.34
Commercial	13,303.97	-	4,987.81	1,917.76	-	3,418.37	23,627.91
Other	272.46	14.45	79.57	368.61	435.18	16.52	1,186.79
I/I	14,285.64	3,014.96	8,441.83	10,609.76	4,447.21	611.67	41,411.07
Total	83,515.51	31,176.68	35,288.75	30,564.74	4,882.39	4,115.96	189,544.04
2012 White Salmon Peak Hour Flows per Basin (gpd)							
Flows	515,131	209,548	199,765	148,483	3,238	26,075	1,102,239
I/I	14,286	3,015	8,442	10,610	4,447	612	41,411
Total	529,417	212,563	208,206	159,092	7,685	26,687	1,143,650

2012 Bingen Zoning Areas							
Zone	Basin 1	Basin 2	Basin 3	Basin 4	Basin 5	Basin 6	Total
Residential	4%	0%	0%	2%	0%	95%	100%
Commercial	0%	0%	0%	6%	0%	94%	100%
Industrial	0%	0%	0%	26%	0%	74%	100%
2012 Bingen ERUs per Zone							
SF Residential	12	0	0	5	0	312	329
Commercial	0	0	0	7	0	105	112
Industrial	0	0	0	93	0	260	353
2012 Bingen Average Annual Flows per Zone (gpd)							
SF Residential	1,567	-	-	715	-	40,643	42,926
Commercial	-	-	-	911	-	13,702	14,613
Industrial	-	-	-	12,176	-	33,881	46,057
I/I	341	-	-	4,482	-	24,158	28,980
Total	1,908	-	-	18,284	-	112,384	132,576
2012 Bingen Peak Hour Flows per Basin (gpd)							
Flows	11,670	-	-	102,771	-	656,929	771,370
I/I	341	-	-	4,482	-	24,158	28,980
Total	12,011	-	-	107,253	-	681,086	800,350

2018 Flow Distribution per Basin

	2018 ERUs	ERU	gpd
White Salmon	1499	107.89	171,766
Bingen	1039	130.47	120,205
Total	2538		291,971
I/I			70,391
WS I/I			41,411
Bingen I/I			28,980
2018 Average Annual Flow for Hydraulic Model			
White Salmon			213,177
Bingen			149,186
Total			362,363
2018 Peak Hourly Flow for Hydraulic Model			
White Salmon			1,189,790
Bingen			832,639
Total			2,022,429

	Basin 1	Basin 2	Basin 3	Basin 4	Basin 5	Basin 6	Total
2018 White Salmon Average Annual Flows per Zone (gpd)							
Existing Basins	69,230	28,162	26,847	19,955	435	3,504	148,133
Additional Basins	4,076	860	2,409	3,027	1,269	175	11,817
Klickitat County	16,596	8,493	-	-	-	-	11,817
I/I	14,286	3,015	8,442	10,610	4,447	612	41,411
Total	104,188	40,530	37,698	33,592	6,151	4,291	213,177
2018 White Salmon Peak Hour Flows per Zone (gpd)							
Existing Basins (base)	515,131	209,548	199,765	148,483	3,238	26,075	1,102,239
Additional Basins	7,958	1,680	4,703	5,911	2,478	341	23,070
Klickitat County	15,260	7,809	-	-	-	-	23,070
I/I	14,286	3,015	8,442	10,610	4,447	612	41,411
Total	552,635	222,052	212,909	165,003	10,163	27,027	1,189,790

	Basin 1	Basin 2	Basin 3	Basin 4	Basin 5	Basin 6	Total
2018 Bingen Average Annual Flows per Zone (gpd)							
Existing Basins	1,567	-	-	13,802	-	88,226	103,596
Additional Basins	183	-	-	2,402	-	14,025	16,610
I/I	341	-	-	4,482	-	24,158	28,980
Total	2,091	-	-	20,686	-	126,409	149,186
2018 Bingen Peak Hour Flows per Zone (gpd)							
Existing Basins	11,670	-	-	102,771	-	656,929	771,370
Additional Basins	355	-	-	4,670	-	27,265	32,289
I/I	341	-	-	4,482	-	24,158	28,980
Total	12,366	-	-	111,923	-	708,351	832,639

2032 Flow Distribution per Basin

	2032 ERUs	ERU	gpd
White Salmon	1844	108.35	198,211
Bingen	1109	108.35	138,712
Total	2953		336,923
I/I			70,391
WS I/I			41,411
Bingen I/I			28,980
2032 Average Annual Flow for Hydraulic Model			
White Salmon			239,622
Bingen			167,692
Total			407,314
2018 Peak Hourly Flow for Hydraulic Model			
White Salmon			1,241,198
Bingen			868,616
Total			2,109,814

	Basin 1	Basin 2	Basin 3	Basin 4	Basin 5	Basin 6	Total
2032 White Salmon Average Annual Flows per Zone (gpd)							
Existing Basins	69,230	28,162	26,847	19,955	435	3,504	148,133
Additional Basins	8,638	1,823	5,104	6,415	2,689	370	25,039
Klickitat County	16,596	8,493	-	-	-	-	25,039
I/I	14,286	3,015	8,442	10,610	4,447	612	41,411
Total	108,750	41,493	40,393	36,980	7,571	4,486	239,622
2032 White Salmon Peak Hour Flows per Zone (gpd)							
Existing Basins (base)	515,131	209,548	199,765	148,483	3,238	26,075	1,102,239
Additional Basins	16,826	3,551	9,943	12,496	5,238	720	48,774
Klickitat County	32,263	16,511	-	-	-	-	48,774
I/I	14,286	3,015	8,442	10,610	4,447	612	41,411
Total	578,505	232,625	218,149	171,588	12,923	27,407	1,241,198

	Basin 1	Basin 2	Basin 3	Basin 4	Basin 5	Basin 6	Total
2032 Bingen Average Annual Flows per Zone (gpd)							
Existing Basins	1,567	-	-	13,802	-	88,226	103,596
Additional Basins	386	-	-	5,079	-	29,651	35,116
I/I	341	-	-	4,482	-	24,158	28,980
Total	2,294	-	-	23,363	-	142,035	167,692
2032 Bingen Peak Hour Flows per Zone (gpd)							
Existing Basins	11,670	-	-	102,771	-	656,929	771,370
Additional Basins	751	-	-	9,873	-	57,642	68,266
I/I	341	-	-	4,482	-	24,158	28,980
Total	12,761	-	-	117,126	-	738,729	868,616