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**BEFORE THE PUBLIC UTILITIES COMMISSION OF NEVADA**

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In the Matter of:

Docket No. 24-\_\_\_\_\_

Application of Great Basin Water Co.,  
Pahrump, Spring Creek, Cold Springs,  
Pahrump, and Spanish Springs Divisions for  
Approval of its 2024 Integrated Resource  
Plan and to designate certain system  
improvement projects as eligible projects for  
which a system improvement rate may be  
established, and for relief properly related  
thereto.

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GBWC 2024 IRP - Spring Creek Division - Housing Section  
 Action Plan PHD 2027 Distribution System Pipe Report  
 PHD-PIPES - Time: 0.00 hours

Label	Length (Scaled) (ft)	Diameter (in)	Material	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Hazen-Williams C
P-32	1,657	6	Ductile Iron	-178.9	2.03	5.07	130.0
L420	1,104	6	PVC	-303.8	3.45	9.02	130.0
L381	767	6	PVC	-349.9	3.97	8.13	130.0
L212	548	8	PVC	-149.8	0.96	0.30	130.0
L363	792	3	PVC	-160.0	7.26	57.74	130.0
L410	905	6	PVC	-280.2	3.18	6.36	130.0
L375	614	6	PVC	-321.6	3.65	5.57	130.0
L399	680	6	PVC	-266.1	3.02	4.34	130.0
L573	1,283	6	PVC	-293.2	3.33	9.81	130.0
L276	806	8	PVC	-154.9	0.99	0.47	130.0
L326	293	6	PVC	-256.8	2.91	1.75	130.0
L277	200	8	PVC	-148.6	0.95	0.11	130.0
L390	247	6	PVC	-250.3	2.84	1.41	130.0
L314	626	6	PVC	-245.7	2.79	3.45	130.0
L387	495	6	PVC	-239.3	2.72	2.60	130.0
L570	2,748	4	PVC	-235.0	6.00	100.48	130.0
L516	1,340	6	PVC	-232.4	2.64	6.66	130.0
P-29	957	6	Ductile Iron	-215.0	2.44	4.12	130.0
L483	1,038	4	PVC	-211.9	5.41	31.36	130.0
L561	637	6	PVC	-211.4	2.40	2.66	130.0
L385	652	6	PVC	-211.0	2.39	2.71	130.0
L122(2)	971	8	PVC	-155.8	0.99	0.57	130.0
L490	392	6	PVC	-199.3	2.26	1.47	130.0
L122(1)	253	8	PVC	-153.0	0.98	0.14	130.0
L552	1,002	6	PVC	-197.2	2.24	3.68	130.0
L110	2,015	8	PVC	-196.5	1.25	1.81	130.0
L286	467	6	PVC	-188.9	2.14	1.58	130.0
L533	1,170	6	PVC	-176.8	2.01	3.50	130.0
L462	1,843	4	PVC	-172.3	4.40	37.93	130.0
L289	335	8	PVC	-113.0	0.72	0.11	130.0
L284	566	8	PVC	-111.4	0.71	0.18	130.0
L511	715	6	PVC	-169.5	1.92	1.98	130.0
L374	306	6	PVC	-193.6	2.20	1.08	130.0
L486	1,343	6	PVC	-160.1	1.82	3.35	130.0
L478	1,155	6	PVC	-158.1	1.79	2.81	130.0
L594	280	6	PVC	283.9	3.22	1.40	130.0
L383	420	6	PVC	-149.8	1.70	0.93	130.0
L503	7,827	12	PVC	-584.6	1.66	7.34	130.0
L466	1,227	6	PVC	-147.1	1.67	2.61	130.0
L370	547	6	PVC	-161.1	1.83	1.38	130.0
L336	1,210	6	PVC	-146.3	1.66	2.55	130.0
P-9	301	8	PVC	-426.1	1.21	0.16	130.0
P-8	463	8	PVC	-409.1	1.16	0.22	130.0
L234	1,452	4	PVC	-75.8	1.93	6.53	130.0
L333	302	4	PVC	-102.2	2.61	2.36	130.0
L365	824	6	PVC	-120.1	1.36	1.21	130.0
L195	1,805	4	PVC	-65.2	1.66	6.14	130.0

**GBWC 2024 IRP - Spring Creek Division - Housing Section**  
**Action Plan PHD 2027 Distribution System Pipe Report**  
 PHD-PIPES - Time: 0.00 hours

Label	Length (Scaled) (ft)	Diamete r (in)	Material	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Hazen- Williams C
L124	960	8	PVC	-52.7	0.34	0.08	130.0
L258	502	6	PVC	3.3	0.04	0.00	130.0
L307	1,115	4	PVC	-89.6	2.29	6.83	130.0
L126	592	8	PVC	-46.4	0.30	0.04	130.0
L443	310	8	PVC	289.8	1.85	0.57	130.0
L106	525	4	PVC	-79.0	2.02	2.55	130.0
L226	1,276	4	PVC	-45.9	1.17	2.27	130.0
L229	656	4	PVC	-42.5	1.09	1.01	130.0
L193	1,137	4	PVC	-41.6	1.06	1.68	130.0
L458	245	4	PVC	-74.0	1.89	1.05	130.0
L127	791	8	PVC	-27.5	0.18	0.02	130.0
L448	1,369	4	PVC	-70.9	1.81	5.44	130.0
L358	487	4	PVC	-80.6	2.06	2.45	130.0
L230	2,343	4	PVC	-53.7	1.37	5.56	130.0
L176	3,530	4	PVC	-67.1	1.71	12.66	130.0
L129	253	8	PVC	-16.5	0.11	0.00	130.0
L170	813	4	PVC	-65.8	1.68	2.81	130.0
L351	2,905	3	PVC	-49.8	2.26	24.37	130.0
L449	715	6	PVC	-56.7	0.64	0.26	130.0
L247	1,729	4	PVC	-53.2	1.36	4.04	130.0
L395	512	4	PVC	-53.3	1.36	1.20	130.0
L295	1,076	4	PVC	-49.9	1.27	2.23	130.0
L130	343	8	PVC	-7.1	0.05	0.00	130.0
L477	617	6	PVC	-48.8	0.55	0.17	130.0
L199	1,494	4	PVC	-22.2	0.57	0.69	130.0
L464	1,424	4	PVC	-47.2	1.21	2.67	130.0
L305	772	4	PVC	-50.6	1.29	1.64	130.0
L261	433	6	PVC	52.7	0.60	0.14	130.0
L450	685	6	PVC	-44.2	0.50	0.16	130.0
L131	412	8	PVC	2.4	0.02	0.00	130.0
L293	2,593	4	PVC	-53.8	1.37	6.18	130.0
L473	589	6	PVC	-39.3	0.45	0.11	130.0
L162	2,364	4	PVC	-43.7	1.12	3.84	130.0
L309	2,155	4	PVC	-62.3	1.59	6.74	130.0
L413	1,295	4	PVC	-39.2	1.00	1.71	130.0
L232	2,208	3	PVC	-28.6	1.30	6.64	130.0
L315	1,486	4	PVC	-50.7	1.29	3.17	130.0
L246	214	4	PVC	-34.4	0.88	0.22	130.0
L430	3,390	4	PVC	-34.7	0.89	3.58	130.0
L273	683	4	PVC	-60.4	1.54	2.02	130.0
L447	1,664	4	PVC	-59.1	1.51	4.72	130.0
L236	283	4	PVC	21.2	0.54	0.12	130.0
L454	985	6	PVC	-30.0	0.34	0.11	130.0
L372	2,934	3	PVC	-26.2	1.19	7.47	130.0
L104	3,303	4	PVC	-29.7	0.76	2.63	130.0
L541	1,155	4	PVC	-35.8	0.91	1.29	130.0
L367	540	6	PVC	-31.0	0.35	0.06	130.0
L364	489	6	PVC	-31.0	0.35	0.06	130.0

GBWC 2024 IRP - Spring Creek Division - Housing Section  
 Action Plan PHD 2027 Distribution System Pipe Report  
 PHD-PIPES - Time: 0.00 hours

Label	Length (Scaled) (ft)	Diameter (in)	Material	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Hazen-Williams C
L267	1,989	4	PVC	-24.7	0.63	1.12	130.0
L103	1,170	4	PVC	-26.1	0.67	0.73	130.0
L251	634	3	PVC	-24.2	1.10	1.40	130.0
L183	3,902	4	PVC	-1.8	0.05	0.02	130.0
L275	786	6	PVC	30.3	0.34	0.09	130.0
L132	605	8	PVC	21.3	0.14	0.01	130.0
L207	964	4	PVC	3.0	0.08	0.01	130.0
L297	478	6	PVC	-45.1	0.51	0.11	130.0
L204	591	6	PVC	-54.1	0.61	0.20	130.0
L400	1,314	4	PVC	-20.8	0.53	0.54	130.0
L310	1,507	3	PVC	-20.7	0.94	2.50	130.0
L227	1,007	4	PVC	-17.1	0.44	0.29	130.0
L134	362	8	PVC	27.6	0.08	0.00	130.0
L446	493	6	PVC	-43.3	0.49	0.11	130.0
L292	684	4	PVC	-30.2	0.77	0.56	130.0
L256	1,128	4	PVC	-43.1	1.10	1.78	130.0
L231	550	4	PVC	27.8	0.71	0.38	130.0
L100	3,578	4	PVC	-15.4	0.39	0.84	130.0
L425	1,084	3	PVC	-21.2	0.96	1.87	130.0
L468	689	6	PVC	-14.3	0.16	0.02	130.0
L259	1,783	4	PVC	-17.3	0.44	0.52	130.0
L290	383	6	PVC	42.3	0.48	0.08	130.0
L487	4,290	4	PVC	-13.1	0.33	0.75	130.0
L526	1,384	4	PVC	-20.0	0.51	0.53	130.0
L303	990	4	PVC	-10.2	0.26	0.11	130.0
L272	514	6	PVC	-66.4	0.75	0.25	130.0
L213	949	6	PVC	-43.1	0.49	0.21	130.0
L102	263	4	PVC	-9.7	0.25	0.03	130.0
L564	1,191	4	PVC	1.7	0.04	0.00	130.0
L174	2,111	4	PVC	-11.8	0.30	0.30	130.0
L260	1,789	3	PVC	-8.1	0.37	0.52	130.0
L467	978	4	PVC	-6.4	0.16	0.05	130.0
L270	2,369	4	PVC	47.9	1.22	4.56	130.0
L185	421	4	PVC	18.6	0.48	0.14	130.0
L423	1,550	6	PVC	-30.7	0.35	0.18	130.0
P-12	658	6	PVC	-57.0	0.65	0.24	130.0
L556	964	4	PVC	-32.9	0.84	0.93	130.0
L137	373	8	PVC	43.3	0.12	0.00	130.0
L113	3,660	4	PVC	-0.9	0.02	0.00	130.0
L224	1,590	4	PVC	19.5	0.50	0.58	130.0
P-78	120	4	PVC	0.0	0.00	0.00	130.0
P-35	437	6	PVC	0.0	0.00	0.00	130.0
P-88	527	6	Ductile Iron	0.0	0.00	0.00	130.0
P-74	881	3	PVC	0.0	0.00	0.00	130.0
P-82	967	3	PVC	0.0	0.00	0.00	130.0
P-45	387	2	Ductile Iron	0.0	0.00	0.00	130.0
P-43	764	2	PVC	0.0	0.00	0.00	130.0
P-67	2,834	4	PVC	0.0	0.00	0.00	130.0

**GBWC 2024 IRP - Spring Creek Division - Housing Section**  
**Action Plan PHD 2027 Distribution System Pipe Report**  
 PHD-PIPES - Time: 0.00 hours

Label	Length (Scaled) (ft)	Diamete r (in)	Material	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Hazen- Williams C
P-63	2,065	6	PVC	0.0	0.00	0.00	130.0
L471	263	6	PVC	0.0	0.00	0.00	130.0
P-49	136	3	PVC	0.0	0.00	0.00	130.0
P-52	86	4	PVC	0.0	0.00	0.00	130.0
P-54	96	3	PVC	0.0	0.00	0.00	130.0
P-56	83	3	PVC	0.0	0.00	0.00	130.0
P-57	127	3	PVC	0.0	0.00	0.00	130.0
P-62	172	6	PVC	0.0	0.00	0.00	130.0
P-64	167	6	PVC	0.0	0.00	0.00	130.0
P-65	173	4	PVC	0.0	0.00	0.00	130.0
P-68	266	4	PVC	0.0	0.00	0.00	130.0
P-66	2,873	4	PVC	0.0	0.00	0.00	130.0
P-50	2,158	3	PVC	0.0	0.00	0.00	130.0
P-51	624	4	PVC	0.0	0.00	0.00	130.0
P-53	2,032	3	PVC	0.0	0.00	0.00	130.0
P-58	2,412	3	PVC	0.0	0.00	0.00	130.0
P-55	3,981	3	PVC	0.0	0.00	0.00	130.0
P-4	146	8	PVC	0.0	0.00	0.00	130.0
L249	1,720	3	PVC	0.0	0.00	0.00	130.0
P-85	421	3	PVC	0.0	0.00	0.00	130.0
P-40	611	2	PVC	0.0	0.00	0.00	130.0
P-83	915	3	PVC	0.0	0.00	0.00	130.0
L341	505	8	PVC	0.0	0.00	0.00	130.0
P-7	201	8	Ductile Iron	0.0	0.00	0.00	130.0
P-79	1,912	6	Ductile Iron	0.0	0.00	0.00	130.0
P-75	500	3	PVC	0.0	0.00	0.00	130.0
L133	2,080	3	PVC	0.0	0.00	0.00	130.0
P-48	806	3	PVC	0.0	0.00	0.00	130.0
P-69	852	3	PVC	0.0	0.00	0.00	130.0
P-71	546	3	PVC	0.0	0.00	0.00	130.0
L583	1,347	8	PVC	0.0	0.00	0.00	130.0
L504	1,625	6	PVC	0.0	0.00	0.00	130.0
L112	2,126	3	PVC	0.2	0.01	0.00	130.0
L111	1,079	4	PVC	0.4	0.01	0.00	130.0
L312	316	3	PVC	1.3	0.06	0.00	130.0
L506	1,091	4	PVC	1.4	0.04	0.00	130.0
L125	505	8	PVC	1.6	0.01	0.00	130.0
P-90	1,627	3	PVC	1.6	0.07	0.02	130.0
P-61	938	6	PVC	1.6	0.02	0.00	130.0
L148	252	8	PVC	46.4	0.13	0.00	130.0
P-91	1,029	3	PVC	2.7	0.12	0.04	130.0
P-92	1,375	6	Ductile Iron	2.7	0.03	0.00	130.0
L497	890	3	PVC	3.1	0.14	0.04	130.0
L101	1,000	4	PVC	3.1	0.08	0.01	130.0
L593	7,523	6	PVC	3.2	0.04	0.01	130.0
L586	362	6	PVC	3.2	0.04	0.00	130.0
L547	1,589	4	PVC	14.3	0.37	0.33	130.0
L222	364	6	PVC	4.7	0.05	0.00	130.0

**GBWC 2024 IRP - Spring Creek Division - Housing Section**  
**Action Plan PHD 2027 Distribution System Pipe Report**  
 PHD-PIPES - Time: 0.00 hours

Label	Length (Scaled) (ft)	Diamete r (in)	Material	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Hazen- Williams C
L128	86	6	PVC	4.7	0.05	0.00	130.0
L116	463	4	PVC	4.7	0.12	0.01	130.0
L554	827	3	PVC	4.7	0.21	0.09	130.0
L135	2,391	4	PVC	4.7	0.12	0.06	130.0
L274	1,610	2	PVC	5.7	0.58	1.74	130.0
P-11	188	6	PVC	-47.9	0.54	0.05	130.0
L223	624	6	PVC	6.3	0.07	0.00	130.0
L579	1,281	3	PVC	6.3	0.29	0.23	130.0
L574	1,949	6	PVC	6.3	0.07	0.01	130.0
L509	865	6	PVC	7.9	0.09	0.01	130.0
L495	950	6	PVC	7.9	0.09	0.01	130.0
L334	235	4	PVC	7.9	0.20	0.02	130.0
L553	944	3	PVC	7.9	0.36	0.26	130.0
L451	1,752	3	PVC	2.0	0.09	0.04	130.0
L178	1,201	4	PVC	6.9	0.18	0.06	130.0
P-13	154	6	Ductile Iron	9.1	0.10	0.00	130.0
L253	1,515	4	PVC	4.5	0.11	0.04	130.0
L546	1,635	3	PVC	9.4	0.43	0.63	130.0
L499	1,734	3	PVC	9.4	0.43	0.67	130.0
L484	819	3	PVC	9.4	0.43	0.32	130.0
L359	751	6	PVC	9.4	0.11	0.01	130.0
L323	1,026	4	PVC	9.4	0.24	0.10	130.0
L322	774	4	PVC	9.4	0.24	0.07	130.0
L316	1,400	4	PVC	9.4	0.24	0.13	130.0
L301	2,457	3	PVC	9.4	0.43	0.95	130.0
L191	1,480	2	PVC	10.7	1.09	5.16	130.0
L156	1,546	4	PVC	7.1	0.18	0.09	130.0
L530	1,858	3	PVC	11.0	0.50	0.95	130.0
L510	1,107	3	PVC	11.0	0.50	0.57	130.0
L507	1,720	4	PVC	11.0	0.28	0.22	130.0
L417	1,485	3	PVC	11.0	0.50	0.76	130.0
L255	747	6	PVC	11.0	0.13	0.01	130.0
L233	697	3	PVC	11.0	0.50	0.36	130.0
L268	614	6	PVC	-31.4	0.36	0.07	130.0
L245	853	4	PVC	-14.8	0.38	0.19	130.0
L460	1,057	3	PVC	12.6	0.57	0.69	130.0
L282	291	6	PVC	12.6	0.14	0.01	130.0
L563	1,142	3	PVC	12.6	0.57	0.75	130.0
L415	2,495	4	PVC	12.8	0.33	0.42	130.0
L118	756	4	PVC	13.6	0.35	0.14	130.0
L175	41	4	PVC	12.9	0.33	0.01	130.0
L517	898	4	PVC	6.0	0.15	0.04	130.0
L349	1,322	3	PVC	14.2	0.64	1.08	130.0
L306	2,083	4	PVC	14.5	0.37	0.44	130.0
L262	444	6	PVC	-28.2	0.32	0.04	130.0
L439	2,065	4	PVC	15.8	0.40	0.51	130.0
P-10	348	8	PVC	17.0	0.11	0.00	130.0
L531	1,076	4	PVC	17.3	0.44	0.31	130.0

**GBWC 2024 IRP - Spring Creek Division - Housing Section**  
**Action Plan PHD 2027 Distribution System Pipe Report**  
 PHD-PIPES - Time: 0.00 hours

Label	Length (Scaled) (ft)	Diamete r (in)	Material	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Hazen- Williams C
L398	599	2	PVC	17.3	1.77	5.12	130.0
L557	480	3	PVC	17.3	0.79	0.57	130.0
L551	757	4	PVC	17.3	0.44	0.22	130.0
L389	922	3	PVC	18.9	0.86	1.28	130.0
L581	321	8	PVC	18.9	0.12	0.00	130.0
L313	149	3	PVC	20.2	0.92	0.23	130.0
L528	1,893	4	PVC	20.3	0.52	0.74	130.0
L488	914	8	PVC	20.5	0.13	0.01	130.0
L475	431	12	PVC	20.5	0.06	0.00	130.0
L474	325	3	PVC	20.5	0.93	0.53	130.0
L396	2,935	3	PVC	20.5	0.93	4.74	130.0
L379	3,485	4	PVC	20.5	0.52	1.39	130.0
L242	276	4	PVC	20.5	0.52	0.11	130.0
L565	1,551	4	PVC	20.5	0.52	0.62	130.0
L220	576	4	PVC	20.5	0.52	0.23	130.0
L431	3,226	4	PVC	21.9	0.56	1.46	130.0
L429	1,021	3	PVC	22.0	1.00	1.89	130.0
L422	2,022	2	PVC	22.0	2.25	26.99	130.0
L237	423	6	PVC	22.0	0.25	0.03	130.0
L105	1,167	8	PVC	23.2	0.15	0.02	130.0
L240	408	6	PVC	23.6	0.27	0.03	130.0
L543	1,260	4	PVC	25.2	0.64	0.74	130.0
L512	1,080	4	PVC	25.2	0.64	0.63	130.0
L525	735	4	PVC	18.6	0.48	0.25	130.0
L520	3,578	4	PVC	26.7	0.68	2.34	130.0
L491	1,090	4	PVC	26.7	0.68	0.71	130.0
P-59	1,562	6	PVC	26.7	0.30	0.14	130.0
L508	1,731	4	PVC	26.8	0.68	1.13	130.0
L522	720	6	PVC	34.9	0.40	0.11	130.0
L117	811	4	PVC	27.3	0.70	0.55	130.0
L139	708	8	PVC	27.9	0.18	0.02	130.0
L472	1,023	4	PVC	28.3	0.72	0.74	130.0
L513	613	6	PVC	28.3	0.32	0.06	130.0
L177	1,352	4	PVC	28.3	0.72	0.98	130.0
L440	2,683	4	PVC	28.7	0.73	2.00	130.0
L352	1,509	3	PVC	29.6	1.34	4.84	130.0
L380	763	4	PVC	29.9	0.76	0.61	130.0
L538	1,254	4	PVC	15.9	0.41	0.31	130.0
L515	1,579	4	PVC	31.5	0.80	1.39	130.0
L566	3,370	3	PVC	30.4	1.38	11.33	130.0
L107	2,125	4	PVC	32.5	0.83	1.99	130.0
L250	345	6	PVC	32.1	0.36	0.04	130.0
L221	1,814	4	PVC	33.0	0.84	1.75	130.0
L549	985	4	PVC	19.1	0.49	0.34	130.0
L181	2,045	3	PVC	22.8	1.03	4.04	130.0
L493	1,524	4	PVC	34.2	0.87	1.57	130.0
L317	670	3	PVC	34.6	1.57	2.86	130.0
L534	1,686	4	PVC	34.6	0.88	1.78	130.0

**GBWC 2024 IRP - Spring Creek Division - Housing Section**  
**Action Plan PHD 2027 Distribution System Pipe Report**  
 PHD-PIPES - Time: 0.00 hours

Label	Length (Scaled) (ft)	Diameter (in)	Material	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Hazen-Williams C
L575	1,013	8	PVC	34.6	0.22	0.04	130.0
L529	1,708	4	PVC	45.8	1.17	3.02	130.0
L214	1,136	3	PVC	20.8	0.94	1.89	130.0
L536	602	4	PVC	37.8	0.96	0.75	130.0
L558	1,218	4	PVC	37.8	0.96	1.51	130.0
L325	539	6	PVC	37.8	0.43	0.09	130.0
L434	815	4	PVC	39.3	1.00	1.09	130.0
L257	388	6	PVC	39.9	0.45	0.07	130.0
L539	2,069	6	PVC	49.0	0.56	0.58	130.0
L294	242	8	PVC	-56.0	0.36	0.02	130.0
L524	1,740	4	PVC	45.6	1.16	3.06	130.0
L244	626	4	PVC	45.6	1.16	1.10	130.0
L418	1,308	2	PVC	19.6	2.00	14.09	130.0
L535	205	4	PVC	56.8	1.45	0.54	130.0
L494	1,232	4	PVC	47.2	1.21	2.31	130.0
L441	797	4	PVC	47.2	1.21	1.49	130.0
L353	1,283	4	PVC	49.0	1.25	2.58	130.0
L188	628	4	PVC	28.5	0.73	0.46	130.0
L285	438	8	PVC	-49.7	0.32	0.03	130.0
L568	630	8	PVC	51.9	0.33	0.05	130.0
L161	1,801	4	PVC	57.4	1.47	4.84	130.0
L571	2,153	4	PVC	69.3	1.77	8.20	130.0
L324	649	4	PVC	55.1	1.41	1.62	130.0
L215	644	4	PVC	56.6	1.45	1.69	130.0
L408	962	4	PVC	57.2	1.46	2.57	130.0
L414	770	6	PVC	58.2	0.66	0.29	130.0
L217	540	4	PVC	42.8	1.09	0.84	130.0
L559	1,279	8	PVC	62.9	0.40	0.14	130.0
L114	1,817	4	PVC	63.0	1.61	5.80	130.0
L203	826	4	PVC	32.0	0.82	0.75	130.0
L361	1,321	4	PVC	64.8	1.66	4.45	130.0
L540	882	6	PVC	64.8	0.74	0.41	130.0
L228	1,215	4	PVC	43.4	1.11	1.95	130.0
L189	1,928	4	PVC	38.3	0.98	2.45	130.0
L544	1,460	4	PVC	76.1	1.94	6.62	130.0
L205	358	6	PVC	-10.7	0.12	0.01	130.0
L421	921	6	PVC	77.6	0.88	0.60	130.0
L144	370	8	PVC	334.3	2.13	0.89	130.0
L108	958	8	PVC	78.1	0.50	0.16	130.0
L432	1,364	6	PVC	82.5	0.94	1.00	130.0
L555	940	4	PVC	98.4	2.51	6.85	130.0
L542	1,311	4	PVC	99.3	2.53	9.73	130.0
L461	1,015	4	PVC	90.5	2.31	6.34	130.0
L560	414	4	PVC	73.3	1.87	1.75	130.0
P-28	866	6	PVC	76.2	0.86	0.55	130.0
L141	325	8	PVC	351.6	2.24	0.86	130.0
L567	596	4	PVC	76.5	1.95	2.73	130.0
L109	2,039	8	PVC	95.4	0.61	0.48	130.0



**GBWC 2024 IRP - Spring Creek Division - Housing Section**  
**Action Plan PHD 2027 Distribution System Pipe Report**  
 PHD-PIPES - Time: 0.00 hours

Label	Length (Scaled) (ft)	Diameter (in)	Material	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Hazen-Williams C
L354	883	4	PVC	-27.3	0.70	0.60	130.0
L190	2,402	4	PVC	52.3	1.34	5.44	130.0
L485	480	4	PVC	100.3	2.56	3.63	130.0
L123	486	8	PVC	100.3	0.64	0.13	130.0
L300	1,929	6	PVC	100.7	1.14	2.04	130.0
L136	153	8	PVC	357.9	2.28	0.42	130.0
L368	575	4	PVC	103.8	2.65	4.63	130.0
L149	760	8	PVC	361.1	2.30	2.11	130.0
L147	724	8	PVC	361.1	2.30	2.00	130.0
L142	684	8	PVC	361.1	2.30	1.89	130.0
L194	1,076	4	PVC	51.2	1.31	2.34	130.0
L562	2,472	3	PVC	106.0	4.81	84.07	130.0
P-93	226	8	PVC	106.2	0.68	0.06	130.0
L331	530	4	PVC	21.0	0.54	0.22	130.0
L299	489	6	PVC	119.6	1.36	0.71	130.0
L416	1,917	8	PVC	-257.2	1.64	2.83	130.0
L548	919	12	PVC	125.9	0.36	0.05	130.0
L252	39	6	PVC	-24.5	0.28	0.00	130.0
L173	1,725	4	PVC	85.3	2.18	9.65	130.0
L382	1,647	4	PVC	129.4	3.30	19.94	130.0
L550	756	6	PVC	137.5	1.56	1.42	130.0
L302	326	6	PVC	130.6	1.48	0.56	130.0
L537	942	12	PVC	130.6	0.37	0.05	130.0
L298	807	12	PVC	133.7	0.38	0.05	130.0
L304	295	6	PVC	138.5	1.57	0.56	130.0
L409	514	8	PVC	-235.1	1.50	0.64	130.0
L580	1,261	4	PVC	125.7	3.21	14.49	130.0
L184	1,210	4	PVC	92.0	2.35	7.79	130.0
L348	769	6	PVC	126.2	1.43	1.23	130.0
L576	1,255	4	PVC	148.5	3.79	19.63	130.0
L350	189	4	PVC	50.7	1.29	0.40	130.0
L406	296	8	PVC	-224.1	1.43	0.34	130.0
L356	1,990	6	PVC	159.7	1.81	4.94	130.0
L321	2,038	6	PVC	159.7	1.81	5.06	130.0
L343	448	6	PVC	137.2	1.56	0.84	130.0
L248	360	6	PVC	3.6	0.04	0.00	130.0
L463	1,471	6	PVC	165.9	1.88	3.92	130.0
L523	1,177	12	PVC	174.6	0.50	0.12	130.0
L180	1,158	4	PVC	106.0	2.71	9.69	130.0
L238	657	6	PVC	24.1	0.27	0.05	130.0
L572	1,740	6	PVC	207.9	2.36	7.04	130.0
L169	1,397	6	PVC	115.7	1.31	1.91	130.0
L165	601	6	PVC	125.1	1.42	0.95	130.0
L164	1,594	6	PVC	133.0	1.51	2.82	130.0
L521	461	12	PVC	229.7	0.65	0.08	130.0
L168	1,951	6	PVC	91.6	1.04	1.73	130.0
L166	1,012	6	PVC	156.6	1.78	2.42	130.0
L167	539	6	PVC	177.0	2.01	1.62	130.0

**GBWC 2024 IRP - Spring Creek Division - Housing Section**  
**Action Plan PHD 2027 Distribution System Pipe Report**  
 PHD-PIPES - Time: 0.00 hours

Label	Length (Scaled) (ft)	Diamete r (in)	Material	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Hazen- Williams C
L514	494	12	PVC	275.3	0.78	0.12	130.0
L115	25	8	PVC	278.3	1.78	0.04	130.0
L505	867	12	PVC	280.1	0.79	0.21	130.0
L489	806	12	PVC	284.8	0.81	0.20	130.0
L121	1,486	8	PVC	300.4	1.92	2.93	130.0
P-27	959	6	PVC	291.2	3.30	7.24	130.0
L198	934	6	PVC	184.9	2.10	3.04	130.0
L476	765	12	PVC	311.5	0.88	0.22	130.0
L225	582	6	PVC	126.6	1.44	0.94	130.0
L196	500	6	PVC	195.9	2.22	1.81	130.0
L218	629	6	PVC	168.1	1.91	1.71	130.0
L208	766	6	PVC	183.8	2.09	2.47	130.0
L384	874	8	PVC	237.1	1.51	1.11	130.0
L362	343	4	PVC	122.1	3.12	3.73	130.0
L366	1,622	8	PVC	265.7	1.70	2.55	130.0
L360	366	8	PVC	284.6	1.82	0.65	130.0
L328	1,452	12	PVC	320.6	0.91	0.39	140.0
L357	345	6	PVC	357.3	4.05	3.80	130.0
L373	541	12	PVC	341.0	0.97	0.19	130.0
L119	762	8	PVC	457.7	2.92	3.27	130.0
L271	453	8	PVC	129.9	0.83	0.19	130.0
L151	1,652	8	PVC	282.8	1.81	2.91	130.0
L140	233	8	PVC	282.8	1.81	0.41	130.0
L411	2,546	12	PVC	382.5	1.09	1.09	130.0
L263	382	8	PVC	203.0	1.30	0.36	130.0
L239	1,384	8	PVC	225.0	1.44	1.60	130.0
P-23	178	12	PVC	409.6	1.16	0.09	130.0
L143	140	8	PVC	324.9	2.07	0.32	130.0
L426	699	12	PVC	433.2	1.23	0.38	130.0
L433	786	12	PVC	473.3	1.34	0.50	130.0
L241	779	8	PVC	283.5	1.81	1.38	130.0
L438	351	6	PVC	151.1	1.71	0.79	130.0
L345	470	8	PVC	531.2	3.39	2.66	130.0
L235	534	8	PVC	310.3	1.98	1.12	130.0
L444	456	12	PVC	525.2	1.49	0.35	130.0
L219	677	8	PVC	330.7	2.11	1.59	130.0
L427	808	6	PVC	224.3	2.54	3.76	130.0
L457	632	12	PVC	548.8	1.56	0.53	130.0
L459	249	12	PVC	551.9	1.57	0.21	130.0
L419	962	6	PVC	246.3	2.79	5.32	130.0
L210	704	8	PVC	359.1	2.29	1.93	130.0
L456	567	12	PVC	575.5	1.63	0.52	130.0
L187	815	8	PVC	452.6	2.89	3.43	130.0
L393	1,626	6	PVC	284.8	3.23	11.78	130.0
L596	354	6	PVC	414.2	4.70	7.16	130.0
L171	132	8	PVC	612.7	3.91	0.97	130.0
P-6	314	8	PVC	625.3	3.99	2.40	130.0
P-5	1,377	8	PVC	625.3	3.99	10.54	130.0

GBWC 2024 IRP - Spring Creek Division - Housing Section  
 Action Plan PHD 2027 Distribution System Pipe Report  
 PHD-PIPES - Time: 0.00 hours

Label	Length (Scaled) (ft)	Diamete r (in)	Material	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Hazen- Williams C
P-3	196	8	PVC	536.7	3.43	1.13	130.0
P-2	187	8	PVC	538.3	3.44	1.09	130.0
L182	358	8	PVC	561.6	3.58	2.25	130.0
L172	780	8	PVC	604.9	3.86	5.61	130.0
L588	467	12	PVC	998.8	2.83	0.58	130.0
L584	448	8	PVC	568.7	3.63	2.88	130.0
L405	1,158	8	PVC	521.4	3.33	6.33	130.0
L401	287	8	PVC	702.4	4.48	2.73	130.0
L404	756	8	PVC	716.5	4.57	7.45	130.0
L480	976	12	PVC	1,051.0	2.98	2.71	130.0
L469	795	12	PVC	1,051.0	2.98	2.21	130.0
L342	47	8	PVC	138.9	0.89	0.02	130.0
L335	317	8	PVC	142.0	0.91	0.16	130.0
L319	553	8	PVC	248.7	1.59	0.77	130.0
L283	908	8	PVC	248.7	1.59	1.26	130.0
L280	147	8	PVC	267.5	1.71	0.23	130.0
L346	307	8	PVC	209.0	1.33	0.31	130.0

GBWC 2024 IRP - Spring Creek Division - Housing Section  
Preferred Plan MDD 2044 Distribution System Junction Report  
MDD - Time: 0.00 hours

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
267	N288	5,495.00	100 Tract NW Zone	0.0	5,727.96	100.8
300	N369 - IRRG	5,459.48	100 Tract NW Zone	60.6	5,755.96	128.3
304	N338	5,534.00	100 Tract NW Zone	13.5	5,813.63	121.0
315	N235	5,474.50	100 Tract NW Zone	7.9	5,732.23	111.5
316	N227	5,478.30	100 Tract NW Zone	14.6	5,731.81	109.7
318	N203	5,453.00	100 Tract NW Zone	3.4	5,731.62	120.5
395	N399	5,478.20	100 Tract NW Zone	10.1	5,727.34	107.8
396	N404	5,480.00	100 Tract NW Zone	3.4	5,735.82	110.7
397	N374	5,466.60	100 Tract NW Zone	7.9	5,742.53	119.4
398	N302(IRR G)	5,604.00	100 Tract NW Zone	59.5	5,727.33	53.4
400	N292	5,636.20	100 Tract NW Zone	0.0	5,727.14	39.3
401	N308	5,602.60	100 Tract NW Zone	2.2	5,727.14	53.9
402	N312	5,602.60	100 Tract NW Zone	4.5	5,727.11	53.9
403	N318	5,540.00	100 Tract NW Zone	10.1	5,731.43	82.8
404	N330	5,525.10	100 Tract NW Zone	21.3	5,734.67	90.7
405	N325	5,505.50	100 Tract NW Zone	7.3	5,737.60	100.4
406	N317	5,468.40	100 Tract NW Zone	11.2	5,734.05	114.9
408	N309	5,444.60	100 Tract NW Zone	6.7	5,735.11	125.7
409	N343	5,459.00	100 Tract NW Zone	18.0	5,738.95	121.1
410	N370	5,463.00	100 Tract NW Zone	11.2	5,743.35	121.3
411	N360	5,492.10	100 Tract NW Zone	13.5	5,749.56	111.4
412	N357	5,499.30	100 Tract NW Zone	11.2	5,748.38	107.8
413	N355	5,495.00	100 Tract NW Zone	3.4	5,745.07	108.2
415	N240	5,429.80	100 Tract NW Zone	21.3	5,731.93	130.7
416	N277	5,467.20	100 Tract NW Zone	18.0	5,732.07	114.6
417	N260	5,491.50	100 Tract NW Zone	13.5	5,729.00	102.8
418	N256	5,479.40	100 Tract NW Zone	4.5	5,729.26	108.1
419	N225	5,451.80	100 Tract NW Zone	12.3	5,727.78	119.4
420	N229	5,453.30	100 Tract NW Zone	13.5	5,727.86	118.8
421	N249	5,474.20	100 Tract NW Zone	9.4	5,729.61	110.5
423	N257	5,463.10	100 Tract NW Zone	11.2	5,731.17	116.0
424	N253	5,451.40	100 Tract NW Zone	4.5	5,731.97	121.4
425	N239	5,444.80	100 Tract NW Zone	6.7	5,731.97	124.2
426	N236	5,435.60	100 Tract NW Zone	16.8	5,732.06	128.3
427	N262	5,447.40	100 Tract NW Zone	6.7	5,732.12	123.2
429	N304	5,444.60	100 Tract NW Zone	11.2	5,734.70	125.5
430	N326	5,442.20	100 Tract NW Zone	3.4	5,736.31	127.2
431	N337	5,481.70	100 Tract NW Zone	5.6	5,736.97	110.4
432	N331	5,490.90	100 Tract NW Zone	19.1	5,735.81	106.0
433	N285	5,453.50	100 Tract NW Zone	14.6	5,733.47	121.1
434	N267	5,435.90	100 Tract NW Zone	16.8	5,733.30	128.7
435	N252	5,470.10	100 Tract NW Zone	12.3	5,732.66	113.6
436	N208	5,454.50	100 Tract NW Zone	7.9	5,731.62	119.9

GBWC 2024 IRP - Spring Creek Division - Housing Section  
 Preferred Plan MDD 2044 Distribution System Junction Report  
 MDD - Time: 0.00 hours

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
437	N221	5,453.60	100 Tract NW Zone	15.7	5,731.65	120.3
438	N224	5,451.90	100 Tract NW Zone	9.0	5,732.24	121.3
439	N179	5,441.80	100 Tract NW Zone	22.5	5,740.29	129.1
440	N199	5,460.40	100 Tract NW Zone	15.7	5,739.08	120.6
441	N194	5,471.60	100 Tract NW Zone	13.5	5,738.66	115.5
442	N219	5,446.10	100 Tract NW Zone	19.1	5,732.72	124.0
443	N215	5,459.80	100 Tract NW Zone	21.3	5,729.03	116.5
444	N210	5,469.96	100 Tract NW Zone	14.6	5,727.71	111.5
446	N212(IRR G)	5,453.50	100 Tract NW Zone	77.4	5,727.25	118.4
447	N213	5,461.40	100 Tract NW Zone	15.7	5,727.38	115.1
448	N217	5,458.90	100 Tract NW Zone	19.1	5,727.42	116.2
449	N258	5,483.50	100 Tract NW Zone	3.4	5,729.19	106.3
450	N250	5,480.90	100 Tract NW Zone	18.0	5,729.38	107.5
451	N216	5,468.60	100 Tract NW Zone	14.6	5,732.64	114.2
452	N204	5,460.70	100 Tract NW Zone	20.2	5,733.74	118.1
453	N234	5,443.20	100 Tract NW Zone	21.3	5,731.14	124.6
454	N193	5,470.28	100 Tract NW Zone	6.7	5,740.54	116.9
455	N183	5,442.30	100 Tract NW Zone	8.4	5,743.19	130.2
456	N158	5,411.80	100 Tract NW Zone	5.6	5,754.34	148.2
461	N207	5,431.70	100 Tract NW Zone	4.5	5,731.62	129.8
462	N172	5,457.51	100 Tract NW Zone	14.6	5,753.02	127.9
463	N173	5,455.61	100 Tract NW Zone	14.6	5,750.40	127.5
464	N175	5,458.80	100 Tract NW Zone	3.4	5,750.40	126.2
465	N181	5,476.70	100 Tract NW Zone	13.5	5,739.29	113.6
466	N192	5,472.00	100 Tract NW Zone	5.6	5,735.12	113.8
467	N205	5,565.50	100 Tract NW Zone	9.0	5,733.24	72.6
468	N206	5,552.80	100 Tract NW Zone	16.8	5,734.18	78.5
469	N190	5,498.50	100 Tract NW Zone	4.5	5,736.36	102.9
470	N165	5,453.90	100 Tract NW Zone	10.1	5,759.37	132.2
494	N214	5,570.70	100 Tract NW Zone	6.7	5,733.12	70.3
497	N359	5,462.70	100 Tract NW Zone	15.7	5,710.49	107.2
498	N336	5,485.50	100 Tract NW Zone	6.7	5,734.71	107.8
587	N305	5,615.00	100 Tract NW Zone	6.7	5,726.75	48.4
605	N280	5,475.26	100 Tract NW Zone	11.1	5,730.39	110.4
606	N301	5,574.00	100 Tract NW Zone	5.6	5,727.32	66.3
607	N222	5,468.25	100 Tract NW Zone	4.5	5,731.87	114.1
608	N220	5,462.94	100 Tract NW Zone	21.3	5,730.88	115.9
609	N254	5,476.65	100 Tract NW Zone	4.5	5,729.33	109.3
610	N242	5,478.49	100 Tract NW Zone	15.7	5,729.67	108.7
611	N270	5,468.35	100 Tract NW Zone	15.7	5,730.33	113.3
612	N259	5,463.50	100 Tract NW Zone	12.3	5,730.88	115.7
613	N276	5,458.60	100 Tract NW Zone	9.0	5,730.88	117.8
614	N315	5,460.17	100 Tract NW Zone	14.0	5,734.01	118.5
615	N402	5,475.00	100 Tract NW Zone	21.3	5,736.49	113.1

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ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
616	N379	5,472.60	100 Tract NW Zone	15.7	5,741.17	116.2
617	N366	5,479.50	100 Tract NW Zone	10.1	5,751.28	117.6
618	N352	5,472.50	100 Tract NW Zone	4.5	5,740.84	116.1
619	N332	5,447.88	100 Tract NW Zone	24.7	5,736.73	125.0
620	N313	5,440.02	100 Tract NW Zone	7.9	5,734.93	127.6
621	N306	5,447.79	100 Tract NW Zone	6.7	5,734.62	124.1
622	N298	5,457.52	100 Tract NW Zone	16.8	5,733.67	119.5
623	N268	5,451.41	100 Tract NW Zone	4.5	5,731.98	121.4
624	N265	5,447.51	100 Tract NW Zone	1.1	5,732.07	123.1
625	N261	5,458.15	100 Tract NW Zone	16.8	5,731.98	118.5
626	N248	5,462.54	100 Tract NW Zone	2.2	5,731.97	116.6
627	N232	5,452.42	100 Tract NW Zone	5.6	5,731.91	120.9
628	N233	5,450.70	100 Tract NW Zone	5.6	5,731.93	121.7
629	N241	5,445.42	100 Tract NW Zone	3.9	5,731.97	124.0
630	N266	5,454.11	100 Tract NW Zone	15.5	5,731.98	120.2
631	N201	5,467.99	100 Tract NW Zone	12.3	5,739.39	117.4
632	N196	5,452.70	100 Tract NW Zone	10.1	5,737.58	123.3
633	N197	5,459.48	100 Tract NW Zone	12.3	5,736.72	120.0
634	N195	5,462.91	100 Tract NW Zone	9.0	5,735.04	117.7
635	N191	5,484.66	100 Tract NW Zone	7.9	5,735.10	108.4
636	N223	5,576.50	100 Tract NW Zone	7.9	5,732.92	67.7
637	N198	5,508.50	100 Tract NW Zone	12.9	5,735.08	98.0
638	N182	5,470.64	100 Tract NW Zone	16.8	5,741.52	117.2
639	N177	5,476.83	100 Tract NW Zone	18.0	5,739.97	113.8
640	N174	5,473.42	100 Tract NW Zone	10.6	5,749.09	119.3
651	N294	5,441.67	100 Tract NW Zone	7.9	5,734.03	126.5
652	N251	5,445.34	100 Tract NW Zone	6.7	5,732.08	124.1
653	Com284	5,451.94	100 Tract NW Zone	4.5	5,732.71	121.5
654	N237	5,437.00	100 Tract NW Zone	19.1	5,732.05	127.7
655	Com230	5,430.43	100 Tract NW Zone	14.6	5,732.24	130.6
656	N209	5,465.89	100 Tract NW Zone	15.7	5,734.12	116.0
657	N202	5,478.02	100 Tract NW Zone	11.2	5,736.04	111.6
658	N186	5,459.00	100 Tract NW Zone	18.0	5,738.87	121.1
659	N184	5,457.01	100 Tract NW Zone	7.9	5,742.27	123.4
660	N185	5,451.02	100 Tract NW Zone	7.9	5,741.53	125.7
661	N176	5,457.36	100 Tract NW Zone	13.5	5,747.67	125.6
664	N403	5,493.40	100 Tract NW Zone	6.7	5,726.51	100.9
665	N386	5,489.80	100 Tract NW Zone	20.2	5,724.94	101.7
666	Com407	5,501.00	100 Tract NW Zone	9.0	5,725.02	96.9
667	N408	5,494.70	100 Tract NW Zone	11.2	5,725.07	99.7
668	N390	5,471.70	100 Tract NW Zone	15.7	5,730.54	112.0
669	N383	5,496.50	100 Tract NW Zone	13.5	5,734.91	103.1
670	N356	5,491.20	100 Tract NW Zone	20.2	5,744.23	109.5
671	N328	5,453.75	100 Tract NW Zone	0.0	5,736.36	122.3
672	N345	5,480.70	100 Tract NW Zone	20.2	5,739.92	112.2

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ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
673	N335	5,491.00	100 Tract NW Zone	1.1	5,736.42	106.2
674	N323	5,494.53	100 Tract NW Zone	14.6	5,734.72	103.9
675	N238	5,440.10	100 Tract NW Zone	12.3	5,732.24	126.4
676	N218	5,446.07	100 Tract NW Zone	1.1	5,731.63	123.5
677	N211	5,440.32	100 Tract NW Zone	20.2	5,734.06	127.1
678	N171	5,443.02	100 Tract NW Zone	5.6	5,750.93	133.2
679	N161	5,436.18	100 Tract NW Zone	6.7	5,753.25	137.2
680	N157	5,426.57	100 Tract NW Zone	16.8	5,757.48	143.2
681	N159	5,428.85	100 Tract NW Zone	14.6	5,759.93	143.2
682	N160	5,433.29	100 Tract NW Zone	10.1	5,761.47	142.0
1713	J-1	5,458.10	100 Tract NW Zone	1.1	5,749.06	125.9
1716	Church-LDS	5,458.00	100 Tract NW Zone	0.0	5,749.06	125.9
1728	J-7	5,438.85	100 Tract NW Zone	0.0	5,732.05	126.9
1731	J-8	5,439.00	100 Tract NW Zone	6.6	5,732.05	126.8
1765	N543	5,436.00	100 Tract NW Zone	0.0	5,732.23	128.2
1773	N544	5,591.44	100 Tract NW Zone	0.0	5,734.18	61.8
1779	N546	5,589.55	100 Tract NW Zone	0.0	5,732.92	62.0
1851	N567	5,594.00	100 Tract NW Zone	1.1	5,734.66	60.9
1856	J-43	5,559.00	100 Tract NW Zone	1.6	5,736.49	76.8
1880	Liberty Peak Elementary	5,458.15	100 Tract NW Zone	63.9	5,731.95	118.5
274	N444	5,584.00	100 Tract NE Zone	2.2	5,948.86	157.9
275	N531	5,732.00	100 Tract NE Zone	4.5	5,948.71	93.8
276	N505	5,728.00	100 Tract NE Zone	3.4	5,949.62	95.9
277	N507	5,763.00	100 Tract NE Zone	3.4	5,949.67	80.8
278	N495	5,739.00	100 Tract NE Zone	5.6	5,949.53	91.1
279	N480	5,737.00	100 Tract NE Zone	6.7	5,947.73	91.2
282	N526	5,773.00	100 Tract NE Zone	0.0	5,949.85	76.5
283	N434	5,742.00	100 Tract NE Zone	0.0	5,950.54	90.2
340	N456	5,572.10	100 Tract NE Zone	16.8	5,948.89	163.0
341	N487	5,769.40	100 Tract NE Zone	6.7	5,949.63	78.0
342	N530	5,761.80	100 Tract NE Zone	13.5	5,949.85	81.4
343	N511	5,668.00	100 Tract NE Zone	4.5	5,949.87	122.0
344	N497	5,735.30	100 Tract NE Zone	14.6	5,948.46	92.2
345	N476	5,736.20	100 Tract NE Zone	13.5	5,950.14	92.6
346	N436	5,715.00	100 Tract NE Zone	2.2	5,950.54	101.9
588	N528	5,764.60	100 Tract NE Zone	11.2	5,949.86	80.2
589	N521	5,746.10	100 Tract NE Zone	7.9	5,949.88	88.2
590	N518	5,739.50	100 Tract NE Zone	7.9	5,949.90	91.0
591	N482	5,749.00	100 Tract NE Zone	12.3	5,949.47	86.7
592	N472	5,737.40	100 Tract NE Zone	7.9	5,949.12	91.6
593	N525	5,744.00	100 Tract NE Zone	10.1	5,948.84	88.6

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ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
594	N516	5,743.30	100 Tract NE Zone	12.3	5,949.17	89.1
595	N510	5,753.40	100 Tract NE Zone	5.6	5,949.98	85.0
596	N501	5,724.90	100 Tract NE Zone	3.4	5,950.00	97.4
597	N491	5,754.40	100 Tract NE Zone	4.5	5,950.03	84.6
598	N445	5,739.90	100 Tract NE Zone	14.6	5,950.41	91.1
599	N429	5,732.10	100 Tract NE Zone	14.6	5,950.25	94.4
600	N499	5,726.20	100 Tract NE Zone	11.2	5,948.07	96.0
601	N479	5,757.10	100 Tract NE Zone	6.7	5,950.10	83.5
602	N470	5,736.80	100 Tract NE Zone	3.4	5,950.20	92.3
603	N461	5,755.10	100 Tract NE Zone	3.4	5,950.31	84.5
604	N451	5,725.20	100 Tract NE Zone	4.5	5,950.42	97.4
269	N289	5,641.00	100 Tract SE Zone	0.0	5,914.16	118.2
270	N228	5,605.00	100 Tract SE Zone	0.0	5,913.43	133.4
273	N339	5,662.00	100 Tract SE Zone	10.1	5,909.90	107.3
301	N362	5,712.00	100 Tract SE Zone	0.0	5,819.82	46.6
303	N371	5,733.00	100 Tract SE Zone	12.3	5,817.08	36.4
388	N314	5,628.10	100 Tract SE Zone	4.5	5,910.48	122.2
389	N353	5,730.70	100 Tract SE Zone	7.9	5,910.89	78.0
390	N389	5,558.60	100 Tract SE Zone	14.6	5,906.78	150.6
391	N322	5,703.80	100 Tract SE Zone	10.1	5,916.70	92.1
392	N269	5,685.10	100 Tract SE Zone	18.0	5,912.34	98.3
393	N231	5,653.00	100 Tract SE Zone	9.4	5,913.43	112.7
394	N311	5,702.60	100 Tract SE Zone	2.2	5,918.63	93.5
493	N271	5,598.80	100 Tract SE Zone	3.4	5,911.25	135.2
577	N300	5,702.60	100 Tract SE Zone	9.0	5,917.34	92.9
578	N279	5,699.27	100 Tract SE Zone	18.0	5,913.63	92.7
579	N246	5,629.58	100 Tract SE Zone	9.4	5,911.65	122.0
580	N275	5,603.74	100 Tract SE Zone	22.5	5,911.55	133.2
581	N351	5,707.90	100 Tract SE Zone	13.5	5,910.20	87.5
582	N344	5,708.20	100 Tract SE Zone	9.4	5,911.22	87.8
583	N361	5,651.90	100 Tract SE Zone	14.6	5,909.32	111.4
584	N347	5,594.10	100 Tract SE Zone	17.9	5,910.46	136.9
585	N327	5,664.40	100 Tract SE Zone	13.5	5,912.91	107.5
586	N324	5,703.00	100 Tract SE Zone	5.6	5,913.52	91.1
1776	N545	5,604.14	100 Tract SE Zone	0.0	5,913.43	133.8
1854	N568	5,644.00	100 Tract SE Zone	1.6	5,910.45	115.3
314	N116	5,393.00	300 Tract WEST Zone	0.0	5,653.92	112.9
363	N120	5,398.80	300 Tract WEST Zone	60.6	5,651.41	109.3
478	N124	5,408.20	300 Tract WEST Zone	0.0	5,651.13	105.1
479	N131	5,423.80	300 Tract WEST Zone	3.4	5,651.13	98.4
480	N132	5,408.50	300 Tract WEST Zone	7.9	5,651.16	105.0
481	N129	5,405.70	300 Tract WEST Zone	13.5	5,651.17	106.2
482	N126	5,398.30	300 Tract WEST Zone	4.5	5,651.21	109.4
483	N119	5,394.80	300 Tract WEST Zone	0.0	5,651.46	111.0
484	N114	5,453.60	300 Tract WEST Zone	3.4	5,650.45	85.2



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ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
485	N112	5,444.50	300 Tract WEST Zone	13.5	5,650.43	89.1
486	N110	5,480.00	300 Tract WEST Zone	19.1	5,647.13	72.3
487	N115	5,479.10	300 Tract WEST Zone	15.7	5,647.43	72.8
488	N100	5,331.20	300 Tract WEST Zone	2.2	5,647.77	137.0
489	N102	5,361.40	300 Tract WEST Zone	12.3	5,647.78	123.9
490	N106	5,422.90	300 Tract WEST Zone	14.6	5,648.16	97.5
499	N107	5,421.00	300 Tract WEST Zone	12.3	5,649.23	98.7
500	N108	5,445.17	300 Tract WEST Zone	15.7	5,649.48	88.4
501	N103	5,360.43	300 Tract WEST Zone	14.0	5,647.80	124.3
502	N101	5,361.92	300 Tract WEST Zone	9.4	5,647.38	123.5
503	N109	5,451.40	300 Tract WEST Zone	23.6	5,647.12	84.7
504	N111	5,484.73	300 Tract WEST Zone	9.4	5,647.37	70.4
505	N113	5,443.93	300 Tract WEST Zone	12.3	5,650.45	89.4
506	N118	5,397.74	300 Tract WEST Zone	1.1	5,651.99	110.0
507	N122	5,393.47	300 Tract WEST Zone	1.1	5,651.34	111.6
508	N121	5,393.47	300 Tract WEST Zone	3.4	5,651.34	111.6
509	N123	5,395.75	300 Tract WEST Zone	13.5	5,651.27	110.6
510	N125	5,397.50	300 Tract WEST Zone	3.4	5,651.21	109.8
511	N127	5,399.13	300 Tract WEST Zone	6.7	5,651.19	109.1
512	N128	5,402.12	300 Tract WEST Zone	6.7	5,651.18	107.8
513	N130	5,408.59	300 Tract WEST Zone	4.5	5,651.16	104.9
514	N135	5,407.46	300 Tract WEST Zone	1.1	5,651.16	105.4
687	N104	5,414.62	300 Tract WEST Zone	16.2	5,649.14	101.5
688	N105	5,414.00	300 Tract WEST Zone	18.0	5,649.15	101.7
1938	N569 (B&G Club)	5,395.41	300 Tract WEST Zone	1.6	5,651.57	110.8
266	N144	5,410.00	300 Tract NW Zone	0.0	5,764.41	153.3
296	N244	5,574.00	300 Tract NW Zone	0.0	5,823.41	107.9
457	N145	5,404.10	300 Tract NW Zone	0.0	5,770.58	158.6
458	N139	5,403.30	300 Tract NW Zone	0.0	5,768.78	158.1
459	N134	5,396.60	300 Tract NW Zone	2.2	5,767.09	160.3
460	N140	5,397.10	300 Tract NW Zone	6.7	5,765.12	159.2
471	N178	5,499.90	300 Tract NW Zone	20.2	5,780.84	121.6
472	N168	5,503.00	300 Tract NW Zone	10.1	5,799.79	128.4
473	N162	5,491.60	300 Tract NW Zone	15.7	5,797.57	132.4
474	N155	5,449.00	300 Tract NW Zone	7.9	5,785.16	145.4
475	N151	5,451.00	300 Tract NW Zone	11.2	5,780.69	142.6
477	N138	5,407.20	300 Tract NW Zone	1.1	5,772.46	158.0
496	N187	5,523.50	300 Tract NW Zone	10.1	5,810.44	124.1
515	N146	5,409.52	300 Tract NW Zone	1.1	5,772.46	157.0
641	N166	5,475.82	300 Tract NW Zone	13.5	5,780.72	131.9
642	N169	5,482.80	300 Tract NW Zone	12.3	5,781.37	129.2
643	N170	5,491.47	300 Tract NW Zone	14.0	5,799.80	133.4
644	N167	5,501.81	300 Tract NW Zone	3.4	5,799.79	128.9

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ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
645	N180	5,507.20	300 Tract NW Zone	10.1	5,804.12	128.5
646	N156	5,465.12	300 Tract NW Zone	12.3	5,793.99	142.3
647	N154	5,456.58	300 Tract NW Zone	3.4	5,789.20	143.9
648	N150	5,451.57	300 Tract NW Zone	5.6	5,784.29	144.0
649	N152	5,441.65	300 Tract NW Zone	2.2	5,779.46	146.2
650	N153	5,436.78	300 Tract NW Zone	12.3	5,777.03	147.2
662	N164	5,450.85	300 Tract NW Zone	9.0	5,760.43	133.9
663	N148	5,441.71	300 Tract NW Zone	4.5	5,774.42	143.9
683	N133	5,393.91	300 Tract NW Zone	19.6	5,764.81	160.5
684	Com136	5,396.17	300 Tract NW Zone	10.1	5,764.82	159.5
685	N141	5,397.55	300 Tract NW Zone	12.3	5,765.94	159.4
686	N137	5,397.03	300 Tract NW Zone	4.5	5,766.72	159.9
1718	J-3	5,449.16	300 Tract NW Zone	0.0	5,763.02	135.8
1721	Bawcom RE	5,449.00	300 Tract NW Zone	0.0	5,763.02	135.9
1723	J-5	5,429.02	300 Tract NW Zone	0.0	5,773.62	149.1
1726	Spring Creek Elementary	5,429.00	300 Tract NW Zone	10.2	5,773.62	149.1
1782	J-17	5,528.15	300 Tract NW Zone	0.0	5,811.63	122.6
268	N319	5,670.00	400 Tract LOWER Zone	0.0	5,852.86	79.1
272	N380	5,759.30	400 Tract LOWER Zone	0.0	5,860.93	44.0
280	N477	5,787.00	400 Tract LOWER Zone	7.9	5,840.15	23.0
281	N466	5,758.00	400 Tract LOWER Zone	11.2	5,840.46	35.7
295	N243	5,577.00	400 Tract LOWER Zone	0.0	5,848.54	117.5
339	N441	5,799.70	400 Tract LOWER Zone	0.0	5,876.65	33.3
353	N425	5,683.00	400 Tract LOWER Zone	20.2	5,827.44	62.5
354	N378	5,718.50	400 Tract LOWER Zone	16.8	5,827.70	47.2
355	N365	5,714.40	400 Tract LOWER Zone	39.0	5,825.97	48.3
356	N418	5,728.40	400 Tract LOWER Zone	19.1	5,838.26	47.5
357	N358	5,665.10	400 Tract LOWER Zone	10.1	5,833.87	73.0
358	N401	5,724.60	400 Tract LOWER Zone	9.4	5,833.81	47.2
359	N420	5,735.70	400 Tract LOWER Zone	5.6	5,838.98	44.7
360	N387	5,708.80	400 Tract LOWER Zone	16.2	5,863.25	66.8
361	N416	5,779.10	400 Tract LOWER Zone	2.2	5,869.09	38.9
362	N415	5,779.10	400 Tract LOWER Zone	1.1	5,867.41	38.2
364	N413	5,773.00	400 Tract LOWER Zone	15.1	5,867.28	40.8
365	N391	5,741.50	400 Tract LOWER Zone	14.6	5,855.17	49.2
366	N372	5,738.30	400 Tract LOWER Zone	10.1	5,843.80	45.6
367	N354	5,740.30	400 Tract LOWER Zone	7.9	5,839.39	42.9
368	N350	5,719.50	400 Tract LOWER Zone	20.2	5,837.34	51.0
369	N428	5,782.10	400 Tract LOWER Zone	9.0	5,867.36	36.9
370	N419	5,796.10	400 Tract LOWER Zone	7.9	5,867.73	31.0
371	N405	5,778.70	400 Tract LOWER Zone	16.8	5,865.70	37.6

**GBWC 2024 IRP - Spring Creek Division - Housing Section**  
**Preferred Plan MDD 2044 Distribution System Junction Report**  
MDD - Time: 0.00 hours

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
372	N392	5,758.40	400 Tract LOWER Zone	12.3	5,864.11	45.7
373	N388	5,764.20	400 Tract LOWER Zone	13.5	5,863.06	42.8
374	N364	5,733.00	400 Tract LOWER Zone	7.9	5,861.23	55.5
375	N376	5,710.40	400 Tract LOWER Zone	43.5	5,859.55	64.5
376	N342	5,645.40	400 Tract LOWER Zone	15.0	5,855.00	90.7
377	N333	5,677.10	400 Tract LOWER Zone	17.4	5,853.76	76.4
378	N297	5,634.50	400 Tract LOWER Zone	14.6	5,851.74	94.0
379	N281	5,593.00	400 Tract LOWER Zone	15.7	5,812.76	95.1
380	N255	5,590.70	400 Tract LOWER Zone	19.1	5,849.71	112.1
381	N282	5,594.00	400 Tract LOWER Zone	13.5	5,812.77	94.6
382	N316	5,617.60	400 Tract LOWER Zone	18.0	5,815.48	85.6
383	N346	5,652.70	400 Tract LOWER Zone	14.6	5,834.37	78.6
399	N438	5,798.30	400 Tract LOWER Zone	0.0	5,931.30	57.5
422	N459	5,811.00	400 Tract LOWER Zone	0.0	5,885.16	32.1
428	N460	5,811.00	400 Tract LOWER Zone	2.2	5,931.30	52.0
517	N430	5,771.70	400 Tract LOWER Zone	0.0	5,872.48	43.6
541	N435	5,760.00	400 Tract LOWER Zone	2.2	5,865.62	45.7
542	N443	5,761.00	400 Tract LOWER Zone	9.0	5,841.97	35.0
543	N452	5,758.60	400 Tract LOWER Zone	9.4	5,840.84	35.6
544	N439	5,733.10	400 Tract LOWER Zone	7.9	5,838.46	45.6
546	N377	5,682.60	400 Tract LOWER Zone	42.4	5,831.77	64.5
547	N400	5,711.90	400 Tract LOWER Zone	22.5	5,832.57	52.2
548	N422	5,719.60	400 Tract LOWER Zone	20.2	5,836.18	50.4
552	N373	5,679.50	400 Tract LOWER Zone	14.6	5,830.92	65.5
553	N385	5,664.50	400 Tract LOWER Zone	20.2	5,831.54	72.3
554	N394	5,692.40	400 Tract LOWER Zone	9.0	5,832.62	60.7
555	N409	5,765.30	400 Tract LOWER Zone	10.1	5,828.27	27.2
556	N410	5,734.90	400 Tract LOWER Zone	9.0	5,828.04	40.3
557	N411	5,720.60	400 Tract LOWER Zone	10.1	5,827.89	46.4
558	N414	5,692.10	400 Tract LOWER Zone	11.2	5,827.75	58.7
559	N426	5,703.90	400 Tract LOWER Zone	5.6	5,827.71	53.6
560	N393	5,686.00	400 Tract LOWER Zone	42.4	5,827.49	61.2
561	N382	5,739.00	400 Tract LOWER Zone	15.7	5,863.09	53.7
562	N395	5,777.90	400 Tract LOWER Zone	9.0	5,864.69	37.5
563	N417	5,798.50	400 Tract LOWER Zone	2.2	5,867.16	29.7
564	N381	5,759.30	400 Tract LOWER Zone	9.0	5,861.64	44.3
565	N412	5,776.30	400 Tract LOWER Zone	4.5	5,866.57	39.1
566	N396	5,772.00	400 Tract LOWER Zone	14.6	5,858.77	37.5
567	N384	5,749.50	400 Tract LOWER Zone	16.8	5,848.57	42.9
568	N363	5,734.00	400 Tract LOWER Zone	11.2	5,840.49	46.1
569	N349	5,673.40	400 Tract LOWER Zone	5.6	5,835.09	70.0
570	N299	5,617.26	400 Tract LOWER Zone	20.2	5,814.10	85.2
571	N283	5,597.10	400 Tract LOWER Zone	6.7	5,812.89	93.4
572	N329	5,628.94	400 Tract LOWER Zone	42.4	5,817.96	81.8
1755	J-10	5,788.87	400 Tract LOWER Zone	0.0	5,868.71	34.5

GBWC 2024 IRP - Spring Creek Division - Housing Section  
 Preferred Plan MDD 2044 Distribution System Junction Report  
 MDD - Time: 0.00 hours

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
1789	N549	5,593.80	400 Tract LOWER Zone	0.0	5,849.71	110.7
1792	N551	5,632.42	400 Tract LOWER Zone	0.0	5,814.10	78.6
1795	N552	5,668.14	400 Tract LOWER Zone	0.0	5,817.96	64.8
1798	N553	5,646.69	400 Tract LOWER Zone	0.0	5,863.25	93.7
1801	N550	5,717.38	400 Tract LOWER Zone	0.0	5,853.76	59.0
1810	N555	5,658.49	400 Tract LOWER Zone	0.0	5,830.92	74.6
1813	N556	5,668.83	400 Tract LOWER Zone	0.0	5,825.97	68.0
1834	N563	5,803.47	400 Tract LOWER Zone	0.0	5,840.84	16.2
287	N532	5,888.00	400 Tract UPPER Zone	11.2	6,062.60	75.5
321	N529	5,908.20	400 Tract UPPER Zone	3.4	6,072.88	71.2
322	N503	5,874.10	400 Tract UPPER Zone	12.3	6,061.47	81.1
323	N465	5,812.90	400 Tract UPPER Zone	14.6	6,059.83	106.8
324	N469	5,804.70	400 Tract UPPER Zone	9.0	6,059.86	110.4
325	N474	5,810.50	400 Tract UPPER Zone	9.0	6,059.79	107.9
326	N481	5,832.90	400 Tract UPPER Zone	12.3	6,059.79	98.2
327	N509	5,851.80	400 Tract UPPER Zone	5.6	6,057.26	88.9
328	N517	5,873.00	400 Tract UPPER Zone	13.5	6,058.15	80.1
329	N442	5,793.20	400 Tract UPPER Zone	6.7	6,044.56	108.8
330	N458	5,813.40	400 Tract UPPER Zone	11.2	6,044.92	100.2
331	N468	5,815.50	400 Tract UPPER Zone	6.7	6,045.26	99.4
332	N489	5,825.80	400 Tract UPPER Zone	5.6	6,046.21	95.4
333	N486	5,824.10	400 Tract UPPER Zone	7.9	6,045.80	95.9
334	N500	5,802.50	400 Tract UPPER Zone	22.5	6,043.31	104.2
335	N506	5,798.10	400 Tract UPPER Zone	9.0	5,985.51	81.1
336	N519	5,793.40	400 Tract UPPER Zone	16.8	5,942.74	64.6
337	N498	5,778.30	400 Tract UPPER Zone	21.3	5,941.02	70.4
516	N454	5,809.90	400 Tract UPPER Zone	0.0	6,059.82	108.1
518	N440	5,799.80	400 Tract UPPER Zone	5.6	6,059.82	112.5
519	N478	5,821.50	400 Tract UPPER Zone	10.1	6,059.98	103.2
520	N508	5,882.00	400 Tract UPPER Zone	12.3	6,061.35	77.6
523	N513	5,785.40	400 Tract UPPER Zone	10.1	5,941.32	67.5
524	N504	5,769.70	400 Tract UPPER Zone	14.6	5,939.36	73.4
525	N488	5,756.90	400 Tract UPPER Zone	4.5	5,937.49	78.1
526	N514	5,817.00	400 Tract UPPER Zone	21.3	5,985.92	73.1
527	N523	5,838.40	400 Tract UPPER Zone	10.1	5,996.40	68.4
528	N524	5,848.00	400 Tract UPPER Zone	12.3	6,042.65	84.2
529	N515	5,835.10	400 Tract UPPER Zone	9.0	6,042.77	89.9
530	N496	5,835.80	400 Tract UPPER Zone	20.7	6,052.64	93.8
531	N512	5,860.00	400 Tract UPPER Zone	2.2	6,057.60	85.5
532	N527	5,896.60	400 Tract UPPER Zone	11.2	6,062.61	71.8
533	N450	5,799.00	400 Tract UPPER Zone	9.4	6,059.95	112.9
534	N463	5,819.00	400 Tract UPPER Zone	13.5	6,059.95	104.2
535	N484	5,864.10	400 Tract UPPER Zone	22.5	6,060.32	84.9
536	N493	5,865.50	400 Tract UPPER Zone	16.8	6,060.53	84.4
537	N494	5,860.00	400 Tract UPPER Zone	11.2	6,060.38	86.7

**GBWC 2024 IRP - Spring Creek Division - Housing Section**  
**Preferred Plan MDD 2044 Distribution System Junction Report**  
MDD - Time: 0.00 hours

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
538	N492	5,820.70	400 Tract UPPER Zone	2.2	6,059.69	103.4
539	N502	5,842.50	400 Tract UPPER Zone	12.3	6,059.65	94.0
540	N520	5,896.10	400 Tract UPPER Zone	10.6	6,066.17	73.6
1819	N558	5,807.46	400 Tract UPPER Zone	0.0	6,044.92	102.7
1825	N560	5,804.27	400 Tract UPPER Zone	0.0	6,045.80	104.5
1828	N561	5,791.09	400 Tract UPPER Zone	0.0	6,059.79	116.3
1831	N562	5,808.06	400 Tract UPPER Zone	0.0	6,059.79	108.9
1837	N565	5,785.17	400 Tract UPPER Zone	0.0	6,043.31	111.7
1843	N566	5,788.09	400 Tract UPPER Zone	0.0	5,941.02	66.2
1846	J-38	5,794.14	400 Tract UPPER Zone	0.0	6,059.95	115.0
305	N278	5,617.00	400 Tract SE Zone	6.7	5,907.02	125.5
306	N320	5,636.50	400 Tract SE Zone	6.7	5,907.00	117.0
384	N290	5,625.20	400 Tract SE Zone	11.2	5,907.06	121.9
385	N287	5,634.80	400 Tract SE Zone	7.9	5,908.59	118.5
386	N291	5,624.90	400 Tract SE Zone	5.6	5,909.46	123.1
387	N273	5,571.20	400 Tract SE Zone	6.7	5,910.55	146.8
491	N334	5,593.50	400 Tract SE Zone	6.7	5,910.04	137.0
492	N274	5,586.50	400 Tract SE Zone	2.2	5,911.22	140.5
573	N340	5,656.80	400 Tract SE Zone	18.0	5,909.33	109.3
574	N307	5,666.00	400 Tract SE Zone	7.9	5,909.41	105.3
575	N247	5,588.64	400 Tract SE Zone	6.7	5,908.52	138.4
576	N272	5,578.80	400 Tract SE Zone	7.9	5,910.93	143.7
1785	N548	5,574.00	400 Tract SE Zone	0.0	5,910.93	145.8
1807	N554	5,653.33	400 Tract SE Zone	1.1	5,909.33	110.8
338	N467	5,728.30	400 Tract MID Zone	6.7	5,889.96	69.9
348	N462	5,805.00	400 Tract MID Zone	7.9	5,884.90	34.6
349	N464	5,756.90	400 Tract MID Zone	6.7	5,885.01	55.4
350	N446	5,793.70	400 Tract MID Zone	6.7	5,885.26	39.6
351	N453	5,734.30	400 Tract MID Zone	13.5	5,886.25	65.7
352	N433	5,706.90	400 Tract MID Zone	7.9	5,888.02	78.4
445	N485	5,755.10	400 Tract MID Zone	10.1	5,894.56	60.3
476	N447	5,770.60	400 Tract MID Zone	17.4	5,885.43	49.7
521	N483	5,765.00	400 Tract MID Zone	22.5	5,890.26	54.2
522	N473	5,738.70	400 Tract MID Zone	22.5	5,891.01	65.9
545	N475	5,780.90	400 Tract MID Zone	19.1	5,884.41	44.8
549	N432	5,725.80	400 Tract MID Zone	20.2	5,887.63	70.0
550	N449	5,720.30	400 Tract MID Zone	7.9	5,888.17	72.6
551	N437	5,716.00	400 Tract MID Zone	6.7	5,888.08	74.5
1816	N557	5,720.13	400 Tract MID Zone	0.0	5,887.63	72.5
1822	N559	5,793.19	400 Tract MID Zone	0.0	5,884.41	39.5
1840	N564	5,781.39	400 Tract MID Zone	0.0	5,890.26	47.1

**GBWC 2024 IRP - Spring Creek Division - Housing Section**  
**Preferred Plan MDD + Fire 2044 Distribution System Junction Report**  
 Fire Flow - Time: 0.00 hours

Label	Zone	Satisfies Fire Flow Constraints?	Fire Flow (Needed) (gpm)	MDD (gpm)	Total Flow Needed (MDD+Fire) (gpm)	Available Flow @ 20psi Residual (gpm)	Pressure (Calculated Residual @ Total Flow Needed) (psi)
N144	300 Tract NW Zone	True	1,000.0	0.0	1,000.0	2,481.7	-1.8
N288	100 Tract NW Zone	True	1,000.0	0.0	1,000.0	4,000.0	13.6
N319	400 Tract LOWER Zone	True	1,000.0	0.0	1,000.0	2,539.0	-10.7
N380	400 Tract LOWER Zone	True	1,000.0	0.0	1,000.0	2,158.3	2.8
N434	100 Tract NE Zone	True	1,000.0	0.0	1,000.0	1,397.2	7.2
N532	400 Tract UPPER Zone	True	1,000.0	11.2	1,011.2	1,796.6	14.4
N243	400 Tract LOWER Zone	True	1,000.0	0.0	1,000.0	2,897.2	-25.0
N244	300 Tract NW Zone	True	1,000.0	0.0	1,000.0	1,649.8	19.7
N369 - IRRG	100 Tract NW Zone	True	1,000.0	60.4	1,060.4	4,060.4	38.1
N227	100 Tract NW Zone	True	1,000.0	14.5	1,014.5	1,154.7	40.4
N529	400 Tract UPPER Zone	True	1,000.0	3.4	1,003.4	2,789.0	20.4
N441	400 Tract LOWER Zone	True	1,000.0	0.0	1,000.0	1,944.1	5.1
N476	100 Tract NE Zone	True	1,000.0	13.4	1,013.4	1,372.1	4.0
N436	100 Tract NE Zone	True	1,000.0	2.2	1,002.2	1,514.1	-5.4
N416	400 Tract LOWER Zone	True	1,000.0	2.2	1,002.2	1,950.1	-1.4
N415	400 Tract LOWER Zone	True	1,000.0	1.1	1,001.1	1,495.6	0.2
N120	300 Tract WEST Zone	True	1,500.0	60.4	1,560.4	1,802.4	-6.0
N413	400 Tract LOWER Zone	True	1,000.0	15.1	1,015.1	1,635.7	-1.8
N419	400 Tract LOWER Zone	True	1,000.0	7.8	1,007.8	1,717.4	7.3
N405	400 Tract LOWER Zone	True	1,000.0	16.8	1,016.8	1,838.3	3.4
N388	400 Tract LOWER Zone	True	1,000.0	13.4	1,013.4	1,880.6	1.6
N376	400 Tract LOWER Zone	True	1,000.0	43.3	1,043.3	2,551.7	-10.3

**GBWC 2024 IRP - Spring Creek Division - Housing Section**  
**Preferred Plan MDD + Fire 2044 Distribution System Junction Report**  
 Fire Flow - Time: 0.00 hours

Label	Zone	Satisfies Fire Flow Constraints?	Fire Flow (Needed) (gpm)	MDD (gpm)	Total Flow Needed (MDD+Fire) (gpm)	Available Flow @ 20psi Residual (gpm)	Pressure (Calculated Residual @ Total Flow Needed) (psi)
N342	400 Tract LOWER Zone	True	1,000.0	14.9	1,014.9	2,782.3	-20.4
N333	400 Tract LOWER Zone	True	1,000.0	17.3	1,017.3	2,542.6	-10.3
N297	400 Tract LOWER Zone	True	1,000.0	14.5	1,014.5	2,723.4	-17.5
N255	400 Tract LOWER Zone	True	1,000.0	19.0	1,019.0	2,888.6	-24.0
N399	100 Tract NW Zone	True	1,500.0	10.1	1,510.1	3,391.4	10.1
N404	100 Tract NW Zone	True	1,000.0	3.4	1,003.4	4,003.4	24.0
N374	100 Tract NW Zone	True	1,000.0	7.8	1,007.8	4,007.8	38.4
N302(IRRG)	100 Tract NW Zone	True	1,500.0	59.2	1,559.2	3,639.9	15.9
N292	100 Tract NW Zone	True	1,000.0	0.0	1,000.0	2,036.7	45.7
N308	100 Tract NW Zone	True	1,000.0	2.2	1,002.2	3,986.1	5.5
N312	100 Tract NW Zone	True	1,000.0	4.5	1,004.5	4,004.5	7.4
N330	100 Tract NW Zone	True	1,000.0	21.2	1,021.2	1,023.5	-9.8
N325	100 Tract NW Zone	True	1,000.0	7.2	1,007.2	1,183.7	-6.1
N317	100 Tract NW Zone	True	1,000.0	11.2	1,011.2	1,694.9	23.5
N309	100 Tract NW Zone	True	1,000.0	6.7	1,006.7	4,006.7	33.5
N343	100 Tract NW Zone	True	1,000.0	17.9	1,017.9	4,017.9	36.1
N370	100 Tract NW Zone	True	1,000.0	11.2	1,011.2	4,011.2	38.1
N360	100 Tract NW Zone	True	1,000.0	13.4	1,013.4	3,871.3	19.6
N357	100 Tract NW Zone	True	1,000.0	11.2	1,011.2	3,724.4	30.1
N355	100 Tract NW Zone	True	1,000.0	3.4	1,003.4	3,604.3	24.2
N240	100 Tract NW Zone	True	1,000.0	21.2	1,021.2	1,044.2	41.6
N277	100 Tract NW Zone	True	1,000.0	17.9	1,017.9	1,076.7	41.4

**GBWC 2024 IRP - Spring Creek Division - Housing Section**  
**Preferred Plan MDD + Fire 2044 Distribution System Junction Report**  
 Fire Flow - Time: 0.00 hours

Label	Zone	Satisfies Fire Flow Constraints?	Fire Flow (Needed) (gpm)	MDD (gpm)	Total Flow Needed (MDD+Fire) (gpm)	Available Flow @ 20psi Residual (gpm)	Pressure (Calculated Residual @ Total Flow Needed) (psi)
N260	100 Tract NW Zone	True	1,000.0	13.4	1,013.4	4,013.4	20.4
N256	100 Tract NW Zone	True	1,000.0	4.5	1,004.5	4,004.5	22.3
N249	100 Tract NW Zone	True	1,000.0	9.4	1,009.4	4,009.4	25.0
N459	400 Tract LOWER Zone	True	1,000.0	0.0	1,000.0	1,812.0	7.2
N257	100 Tract NW Zone	True	1,000.0	11.2	1,011.2	4,011.2	28.6
N253	100 Tract NW Zone	True	1,000.0	4.5	1,004.5	3,297.2	34.6
N239	100 Tract NW Zone	True	1,000.0	6.7	1,006.7	3,146.1	16.7
N236	100 Tract NW Zone	True	1,500.0	16.8	1,516.8	3,420.4	24.7
N262	100 Tract NW Zone	True	1,000.0	6.7	1,006.7	3,781.7	29.0
N304	100 Tract NW Zone	True	1,000.0	11.2	1,011.2	3,471.9	34.0
N326	100 Tract NW Zone	True	1,000.0	3.4	1,003.4	2,753.9	12.2
N337	100 Tract NW Zone	True	1,000.0	5.6	1,005.6	2,532.7	19.1
N331	100 Tract NW Zone	True	1,000.0	19.0	1,019.0	1,723.0	19.1
N179	100 Tract NW Zone	True	1,000.0	22.4	1,022.4	1,234.2	40.5
N199	100 Tract NW Zone	True	1,000.0	15.7	1,015.7	1,129.2	40.8
N194	100 Tract NW Zone	True	1,000.0	13.4	1,013.4	2,434.3	32.0
N219	100 Tract NW Zone	True	1,000.0	19.0	1,019.0	2,774.4	34.0
N210	100 Tract NW Zone	True	1,000.0	14.5	1,014.5	1,186.0	40.4
N212(IRRG)	100 Tract NW Zone	True	1,000.0	77.1	1,077.1	1,352.3	39.9
N213	100 Tract NW Zone	True	1,000.0	15.7	1,015.7	1,122.2	30.8
N217	100 Tract NW Zone	True	1,000.0	19.0	1,019.0	1,033.2	41.0
N258	100 Tract NW Zone	True	1,000.0	3.4	1,003.4	4,003.4	21.4



**GBWC 2024 IRP - Spring Creek Division - Housing Section**  
**Preferred Plan MDD + Fire 2044 Distribution System Junction Report**  
 Fire Flow - Time: 0.00 hours

Label	Zone	Satisfies Fire Flow Constraints?	Fire Flow (Needed) (gpm)	MDD (gpm)	Total Flow Needed (MDD+Fire) (gpm)	Available Flow @ 20psi Residual (gpm)	Pressure (Calculated Residual @ Total Flow Needed) (psi)
N250	100 Tract NW Zone	True	1,000.0	17.9	1,017.9	4,017.9	9.3
N216	100 Tract NW Zone	True	1,000.0	14.5	1,014.5	3,038.9	-14.3
N204	100 Tract NW Zone	True	1,000.0	20.1	1,020.1	3,027.2	-25.1
N193	100 Tract NW Zone	True	1,000.0	6.7	1,006.7	2,741.3	-1.0
N183	100 Tract NW Zone	True	1,000.0	8.4	1,008.4	2,973.6	-10.6
N158	100 Tract NW Zone	True	1,000.0	5.6	1,005.6	1,568.0	17.3
N145	300 Tract NW Zone	True	1,000.0	0.0	1,000.0	2,538.9	-18.8
N139	300 Tract NW Zone	True	1,000.0	0.0	1,000.0	2,517.4	-12.8
N134	300 Tract NW Zone	True	1,000.0	2.2	1,002.2	2,538.7	-11.2
N140	300 Tract NW Zone	True	1,000.0	6.7	1,006.7	2,558.1	-8.6
N172	100 Tract NW Zone	True	1,000.0	14.5	1,014.5	2,720.0	3.2
N173	100 Tract NW Zone	True	1,000.0	14.5	1,014.5	1,256.4	40.3
N175	100 Tract NW Zone	True	1,000.0	3.4	1,003.4	2,744.7	1.2
N181	100 Tract NW Zone	True	1,000.0	13.4	1,013.4	1,319.0	40.0
N192	100 Tract NW Zone	True	1,000.0	5.6	1,005.6	2,336.9	-31.3
N165	100 Tract NW Zone	True	1,000.0	10.1	1,010.1	2,662.2	6.5
N168	300 Tract NW Zone	True	1,000.0	10.1	1,010.1	1,099.0	23.7
N155	300 Tract NW Zone	True	1,000.0	7.8	1,007.8	2,378.4	-26.8
N151	300 Tract NW Zone	True	1,000.0	11.2	1,011.2	2,417.3	-25.1
N138	300 Tract NW Zone	True	1,000.0	1.1	1,001.1	2,480.8	-17.7
N132	300 Tract WEST Zone	True	1,500.0	7.8	1,507.8	2,604.5	-9.3
N129	300 Tract WEST Zone	True	1,000.0	13.4	1,013.4	2,366.9	-11.1

**GBWC 2024 IRP - Spring Creek Division - Housing Section**  
**Preferred Plan MDD + Fire 2044 Distribution System Junction Report**  
 Fire Flow - Time: 0.00 hours

Label	Zone	Satisfies Fire Flow Constraints?	Fire Flow (Needed) (gpm)	MDD (gpm)	Total Flow Needed (MDD+Fire) (gpm)	Available Flow @ 20psi Residual (gpm)	Pressure (Calculated Residual @ Total Flow Needed) (psi)
N126	300 Tract WEST Zone	True	1,000.0	4.5	1,004.5	2,189.6	-15.1
N119	300 Tract WEST Zone	True	1,000.0	0.0	1,000.0	1,890.8	-19.0
N187	300 Tract NW Zone	True	1,000.0	10.1	1,010.1	1,929.5	0.5
N122	300 Tract WEST Zone	True	1,000.0	1.1	1,001.1	1,896.0	-5.7
N121	300 Tract WEST Zone	True	1,000.0	3.4	1,003.4	2,003.8	-18.4
N123	300 Tract WEST Zone	True	1,000.0	13.4	1,013.4	2,083.5	-16.9
N125	300 Tract WEST Zone	True	1,000.0	3.4	1,003.4	2,095.7	-5.0
N127	300 Tract WEST Zone	True	1,000.0	6.7	1,006.7	2,233.5	-14.5
N128	300 Tract WEST Zone	True	1,000.0	6.7	1,006.7	2,287.7	-13.0
N130	300 Tract WEST Zone	True	1,000.0	4.5	1,004.5	2,495.9	-9.5
N135	300 Tract WEST Zone	True	1,000.0	1.1	1,001.1	2,725.6	-9.5
N146	300 Tract NW Zone	True	1,000.0	1.1	1,001.1	2,568.2	-26.6
N430	400 Tract LOWER Zone	True	1,000.0	0.0	1,000.0	2,120.5	-5.3
N527	400 Tract UPPER Zone	True	1,000.0	11.2	1,011.2	1,780.9	14.4
N520	400 Tract UPPER Zone	True	1,000.0	10.5	1,010.5	1,156.2	25.8
N395	400 Tract LOWER Zone	True	1,000.0	8.9	1,008.9	1,804.0	4.4
N417	400 Tract LOWER Zone	True	1,000.0	2.2	1,002.2	1,665.2	7.3
N381	400 Tract LOWER Zone	True	1,000.0	8.9	1,008.9	1,869.1	1.9
N412	400 Tract LOWER Zone	True	1,000.0	4.5	1,004.5	1,233.0	2.5
N305	100 Tract NW Zone	True	1,000.0	6.7	1,006.7	4,006.7	21.5
N521	100 Tract NE Zone	True	1,000.0	7.8	1,007.8	1,078.2	8.4
N518	100 Tract NE Zone	True	1,000.0	7.8	1,007.8	1,154.1	5.5

**GBWC 2024 IRP - Spring Creek Division - Housing Section**  
**Preferred Plan MDD + Fire 2044 Distribution System Junction Report**  
 Fire Flow - Time: 0.00 hours

Label	Zone	Satisfies Fire Flow Constraints?	Fire Flow (Needed) (gpm)	MDD (gpm)	Total Flow Needed (MDD+Fire) (gpm)	Available Flow @ 20psi Residual (gpm)	Pressure (Calculated Residual @ Total Flow Needed) (psi)
N510	100 Tract NE Zone	True	1,000.0	5.6	1,005.6	1,229.0	11.5
N501	100 Tract NE Zone	True	1,000.0	3.4	1,003.4	1,353.9	-0.9
N491	100 Tract NE Zone	True	1,000.0	4.5	1,004.5	1,256.4	11.9
N445	100 Tract NE Zone	True	1,000.0	14.5	1,014.5	1,294.6	17.1
N479	100 Tract NE Zone	True	1,000.0	6.7	1,006.7	1,270.0	13.1
N470	100 Tract NE Zone	True	1,000.0	3.4	1,003.4	1,370.9	4.2
N461	100 Tract NE Zone	True	1,000.0	3.4	1,003.4	1,315.9	12.1
N451	100 Tract NE Zone	True	1,000.0	4.5	1,004.5	1,457.5	-0.9
N280	100 Tract NW Zone	True	1,000.0	11.0	1,011.0	2,491.1	37.1
N222	100 Tract NW Zone	True	1,000.0	4.5	1,004.5	3,114.5	-9.6
N220	100 Tract NW Zone	True	1,000.0	21.2	1,021.2	3,364.4	-6.2
N254	100 Tract NW Zone	True	1,000.0	4.5	1,004.5	4,004.5	22.9
N242	100 Tract NW Zone	True	1,000.0	15.7	1,015.7	3,859.3	3.8
N270	100 Tract NW Zone	True	1,000.0	15.7	1,015.7	4,015.7	21.7
N259	100 Tract NW Zone	True	1,000.0	12.3	1,012.3	4,006.3	22.1
N276	100 Tract NW Zone	True	1,000.0	8.9	1,008.9	2,669.1	36.6
N315	100 Tract NW Zone	True	1,000.0	13.9	1,013.9	1,781.7	32.8
N402	100 Tract NW Zone	True	1,000.0	21.2	1,021.2	4,021.2	12.5
N379	100 Tract NW Zone	True	1,000.0	15.7	1,015.7	4,015.7	38.8
N366	100 Tract NW Zone	True	1,000.0	10.1	1,010.1	4,010.1	22.7
N352	100 Tract NW Zone	True	1,000.0	4.5	1,004.5	4,004.5	37.0
N332	100 Tract NW Zone	True	1,000.0	24.6	1,024.6	4,024.6	34.7

**GBWC 2024 IRP - Spring Creek Division - Housing Section**  
**Preferred Plan MDD + Fire 2044 Distribution System Junction Report**  
 Fire Flow - Time: 0.00 hours

Label	Zone	Satisfies Fire Flow Constraints?	Fire Flow (Needed) (gpm)	MDD (gpm)	Total Flow Needed (MDD+Fire) (gpm)	Available Flow @ 20psi Residual (gpm)	Pressure (Calculated Residual @ Total Flow Needed) (psi)
N313	100 Tract NW Zone	True	1,000.0	7.8	1,007.8	3,429.7	35.8
N306	100 Tract NW Zone	True	1,000.0	6.7	1,006.7	4,006.7	33.0
N298	100 Tract NW Zone	True	1,000.0	16.8	1,016.8	4,016.8	32.0
N268	100 Tract NW Zone	True	1,000.0	4.5	1,004.5	4,004.5	30.6
N265	100 Tract NW Zone	True	1,000.0	1.1	1,001.1	3,815.7	26.5
N261	100 Tract NW Zone	True	1,000.0	16.8	1,016.8	3,972.0	20.0
N248	100 Tract NW Zone	True	1,000.0	2.2	1,002.2	3,049.2	35.8
N232	100 Tract NW Zone	True	1,000.0	5.6	1,005.6	1,804.8	26.3
N233	100 Tract NW Zone	True	1,000.0	5.6	1,005.6	2,189.7	19.3
N241	100 Tract NW Zone	True	1,000.0	3.9	1,003.9	3,410.7	30.9
N266	100 Tract NW Zone	True	1,000.0	15.4	1,015.4	4,015.4	30.5
N201	100 Tract NW Zone	True	1,000.0	12.3	1,012.3	2,764.6	-3.3
N196	100 Tract NW Zone	True	1,000.0	10.1	1,010.1	2,877.4	-14.3
N197	100 Tract NW Zone	True	1,000.0	12.3	1,012.3	2,902.7	-19.2
N195	100 Tract NW Zone	True	1,000.0	8.9	1,008.9	2,971.5	-34.7
N191	100 Tract NW Zone	True	1,000.0	7.8	1,007.8	1,711.8	-25.2
N198	100 Tract NW Zone	True	1,000.0	12.8	1,012.8	1,283.3	-16.3
N177	100 Tract NW Zone	True	1,000.0	17.9	1,017.9	1,239.7	40.3
N174	100 Tract NW Zone	True	1,000.0	10.5	1,010.5	1,094.6	41.0
N170	300 Tract NW Zone	True	1,000.0	13.9	1,013.9	2,113.3	-11.1
N167	300 Tract NW Zone	True	1,000.0	3.4	1,003.4	1,095.6	22.5
N180	300 Tract NW Zone	True	1,000.0	10.1	1,010.1	2,023.5	-5.1

**GBWC 2024 IRP - Spring Creek Division - Housing Section**  
**Preferred Plan MDD + Fire 2044 Distribution System Junction Report**  
 Fire Flow - Time: 0.00 hours

Label	Zone	Satisfies Fire Flow Constraints?	Fire Flow (Needed) (gpm)	MDD (gpm)	Total Flow Needed (MDD+Fire) (gpm)	Available Flow @ 20psi Residual (gpm)	Pressure (Calculated Residual @ Total Flow Needed) (psi)
N156	300 Tract NW Zone	True	1,000.0	12.3	1,012.3	2,251.9	-21.5
N154	300 Tract NW Zone	True	1,000.0	3.4	1,003.4	2,311.6	-24.3
N150	300 Tract NW Zone	True	1,000.0	5.6	1,005.6	2,374.0	-25.5
N152	300 Tract NW Zone	True	1,000.0	2.2	1,002.2	2,459.5	-28.9
N153	300 Tract NW Zone	True	1,000.0	12.3	1,012.3	2,518.0	-30.6
N294	100 Tract NW Zone	True	1,000.0	7.8	1,007.8	3,234.1	36.5
N251	100 Tract NW Zone	True	1,000.0	6.7	1,006.7	3,052.1	35.9
Com284	100 Tract NW Zone	True	1,500.0	4.5	1,504.5	3,238.4	23.9
N237	100 Tract NW Zone	True	1,500.0	19.0	1,519.0	3,458.4	22.4
Com230	100 Tract NW Zone	True	1,500.0	14.5	1,514.5	3,055.8	35.1
N209	100 Tract NW Zone	True	1,000.0	15.7	1,015.7	2,519.1	34.1
N202	100 Tract NW Zone	True	1,000.0	11.2	1,011.2	2,304.7	37.9
N186	100 Tract NW Zone	True	1,000.0	17.9	1,017.9	1,047.5	41.4
N184	100 Tract NW Zone	True	1,000.0	7.8	1,007.8	2,852.8	-5.1
N185	100 Tract NW Zone	True	1,000.0	7.8	1,007.8	2,582.0	16.2
N176	100 Tract NW Zone	True	1,000.0	13.4	1,013.4	2,806.7	-1.8
N164	300 Tract NW Zone	True	1,000.0	8.9	1,008.9	2,646.4	-14.6
N148	300 Tract NW Zone	True	1,000.0	4.5	1,004.5	2,524.3	-28.0
N403	100 Tract NW Zone	True	1,000.0	6.7	1,006.7	4,006.7	42.8
N390	100 Tract NW Zone	True	1,000.0	15.7	1,015.7	2,580.8	42.9
N383	100 Tract NW Zone	True	1,000.0	13.4	1,013.4	2,328.2	42.4
N356	100 Tract NW Zone	True	1,000.0	20.1	1,020.1	3,632.3	23.0

**GBWC 2024 IRP - Spring Creek Division - Housing Section**  
**Preferred Plan MDD + Fire 2044 Distribution System Junction Report**  
 Fire Flow - Time: 0.00 hours

Label	Zone	Satisfies Fire Flow Constraints?	Fire Flow (Needed) (gpm)	MDD (gpm)	Total Flow Needed (MDD+Fire) (gpm)	Available Flow @ 20psi Residual (gpm)	Pressure (Calculated Residual @ Total Flow Needed) (psi)
N328	100 Tract NW Zone	True	1,000.0	0.0	1,000.0	2,388.4	22.6
N345	100 Tract NW Zone	True	1,000.0	20.1	1,020.1	2,677.8	38.4
N335	100 Tract NW Zone	True	1,000.0	1.1	1,001.1	2,273.3	19.5
N211	100 Tract NW Zone	True	1,000.0	20.1	1,020.1	1,111.2	33.5
N171	100 Tract NW Zone	True	1,000.0	5.6	1,005.6	1,417.2	39.7
N161	100 Tract NW Zone	True	1,000.0	6.7	1,006.7	1,465.7	35.8
N157	100 Tract NW Zone	True	1,000.0	16.8	1,016.8	1,739.6	36.7
N159	100 Tract NW Zone	True	1,000.0	14.5	1,014.5	2,049.5	28.1
N160	100 Tract NW Zone	True	1,000.0	10.1	1,010.1	2,369.2	22.7
N133	300 Tract NW Zone	True	1,000.0	19.5	1,019.5	2,329.6	11.7
Com136	300 Tract NW Zone	True	1,500.0	10.1	1,510.1	2,556.0	-7.8
N141	300 Tract NW Zone	True	1,000.0	12.3	1,012.3	2,551.1	-9.2
N137	300 Tract NW Zone	True	1,500.0	4.5	1,504.5	2,540.2	-10.4
J-1	100 Tract NW Zone	True	1,000.0	1.1	1,001.1	2,766.3	-0.2
Church-LDS	100 Tract NW Zone	True	1,500.0	0.0	1,500.0	2,679.4	4.3
J-3	300 Tract NW Zone	True	1,000.0	0.0	1,000.0	2,590.7	-15.2
Bawcom RE	300 Tract NW Zone	True	1,500.0	0.0	1,500.0	2,500.4	-7.0
J-5	300 Tract NW Zone	True	1,000.0	0.0	1,000.0	2,534.9	-26.8
Spring Creek Elementary	300 Tract NW Zone	True	1,500.0	10.2	1,510.2	2,412.2	-13.4
J-7	100 Tract NW Zone	True	1,500.0	0.0	1,500.0	3,197.4	20.0
J-8	100 Tract NW Zone	True	1,500.0	6.5	1,506.5	2,690.0	37.1

**GBWC 2024 IRP - Spring Creek Division - Housing Section**  
**Preferred Plan MDD + Fire 2044 Distribution System Junction Report**  
 Fire Flow - Time: 0.00 hours

Label	Zone	Satisfies Fire Flow Constraints?	Fire Flow (Needed) (gpm)	MDD (gpm)	Total Flow Needed (MDD+Fire) (gpm)	Available Flow @ 20psi Residual (gpm)	Pressure (Calculated Residual @ Total Flow Needed) (psi)
J-10	400 Tract LOWER Zone	True	1,000.0	0.0	1,000.0	1,078.2	5.6
J-17	300 Tract NW Zone	True	1,000.0	0.0	1,000.0	1,895.0	2.3
J-43	100 Tract NW Zone	True	1,000.0	1.6	1,001.6	1,181.6	43.5
Liberty Peak Elementary	100 Tract NW Zone	True	3,250.0	63.7	3,313.7	3,609.7	33.4
N289	100 Tract SE Zone	False	1,000.0	0.0	1,000.0	654.1	8.7
N228	100 Tract SE Zone	False	1,000.0	0.0	1,000.0	180.1	39.6
N339	100 Tract SE Zone	False	1,000.0	10.1	1,010.1	151.9	41.0
N444	100 Tract NE Zone	False	1,000.0	2.2	1,002.2	250.6	74.6
N531	100 Tract NE Zone	False	1,000.0	4.5	1,004.5	170.4	60.3
N505	100 Tract NE Zone	False	1,000.0	3.4	1,003.4	216.8	50.7
N507	100 Tract NE Zone	False	1,000.0	3.4	1,003.4	317.0	30.4
N495	100 Tract NE Zone	False	1,000.0	5.6	1,005.6	201.3	55.1
N480	100 Tract NE Zone	False	1,000.0	6.7	1,006.7	150.6	70.9
N477	400 Tract LOWER Zone	False	1,000.0	7.8	1,007.8	97.8	7.4
N466	400 Tract LOWER Zone	False	1,000.0	11.2	1,011.2	234.4	7.4
N526	100 Tract NE Zone	False	1,000.0	0.0	1,000.0	823.5	32.4
N362	100 Tract SE Zone	False	1,000.0	0.0	1,000.0	260.6	9.8
N371	100 Tract SE Zone	False	1,000.0	12.3	1,012.3	57.5	49.9
N338	100 Tract NW Zone	False	1,000.0	13.4	1,013.4	630.0	43.9
N278	400 Tract SE Zone	False	1,000.0	6.7	1,006.7	224.2	23.2
N320	400 Tract SE Zone	False	1,000.0	6.7	1,006.7	208.6	38.3

**GBWC 2024 IRP - Spring Creek Division - Housing Section**  
**Preferred Plan MDD + Fire 2044 Distribution System Junction Report**  
 Fire Flow - Time: 0.00 hours

Label	Zone	Satisfies Fire Flow Constraints?	Fire Flow (Needed) (gpm)	MDD (gpm)	Total Flow Needed (MDD+Fire) (gpm)	Available Flow @ 20psi Residual (gpm)	Pressure (Calculated Residual @ Total Flow Needed) (psi)
N116	300 Tract WEST Zone	False	1,000.0	0.0	1,000.0	291.0	70.4
N235	100 Tract NW Zone	False	1,000.0	7.8	1,007.8	657.6	36.7
N203	100 Tract NW Zone	False	1,000.0	3.4	1,003.4	511.5	22.9
N503	400 Tract UPPER Zone	False	1,000.0	12.3	1,012.3	831.9	16.6
N465	400 Tract UPPER Zone	False	1,000.0	14.5	1,014.5	712.6	21.4
N469	400 Tract UPPER Zone	False	1,000.0	8.9	1,008.9	780.3	16.5
N474	400 Tract UPPER Zone	False	1,000.0	8.9	1,008.9	710.7	21.1
N481	400 Tract UPPER Zone	False	1,000.0	12.3	1,012.3	738.2	28.2
N509	400 Tract UPPER Zone	False	1,000.0	5.6	1,005.6	798.6	26.5
N517	400 Tract UPPER Zone	False	1,000.0	13.4	1,013.4	747.2	36.2
N442	400 Tract UPPER Zone	False	1,000.0	6.7	1,006.7	163.4	67.5
N458	400 Tract UPPER Zone	False	1,000.0	11.2	1,011.2	267.4	22.6
N468	400 Tract UPPER Zone	False	1,000.0	6.7	1,006.7	311.4	21.1
N489	400 Tract UPPER Zone	False	1,000.0	5.6	1,005.6	507.8	22.9
N486	400 Tract UPPER Zone	False	1,000.0	7.8	1,007.8	503.8	24.7
N500	400 Tract UPPER Zone	False	1,000.0	22.4	1,022.4	531.5	27.5
N506	400 Tract UPPER Zone	False	1,000.0	8.9	1,008.9	141.2	40.6
N519	400 Tract UPPER Zone	False	1,000.0	16.8	1,016.8	141.0	23.1
N498	400 Tract UPPER Zone	False	1,000.0	21.2	1,021.2	151.7	15.9
N467	400 Tract MID Zone	False	1,000.0	6.7	1,006.7	160.2	-14.9
N456	100 Tract NE Zone	False	1,000.0	16.8	1,016.8	378.8	14.8
N487	100 Tract NE Zone	False	1,000.0	6.7	1,006.7	532.4	28.9



**GBWC 2024 IRP - Spring Creek Division - Housing Section**  
**Preferred Plan MDD + Fire 2044 Distribution System Junction Report**  
 Fire Flow - Time: 0.00 hours

Label	Zone	Satisfies Fire Flow Constraints?	Fire Flow (Needed) (gpm)	MDD (gpm)	Total Flow Needed (MDD+Fire) (gpm)	Available Flow @ 20psi Residual (gpm)	Pressure (Calculated Residual @ Total Flow Needed) (psi)
N530	100 Tract NE Zone	False	1,000.0	13.4	1,013.4	941.1	15.2
N511	100 Tract NE Zone	False	1,000.0	4.5	1,004.5	909.1	27.2
N497	100 Tract NE Zone	False	1,000.0	14.5	1,014.5	365.4	19.0
N462	400 Tract MID Zone	False	1,000.0	7.8	1,007.8	78.7	28.6
N464	400 Tract MID Zone	False	1,000.0	6.7	1,006.7	113.4	-0.5
N446	400 Tract MID Zone	False	1,000.0	6.7	1,006.7	79.0	26.7
N453	400 Tract MID Zone	False	1,000.0	13.4	1,013.4	147.2	-10.8
N433	400 Tract MID Zone	False	1,000.0	7.8	1,007.8	167.2	-21.6
N425	400 Tract LOWER Zone	False	1,000.0	20.1	1,020.1	333.2	-0.6
N378	400 Tract LOWER Zone	False	1,000.0	16.8	1,016.8	322.3	7.4
N365	400 Tract LOWER Zone	False	1,000.0	38.9	1,038.9	243.6	7.4
N418	400 Tract LOWER Zone	False	1,000.0	19.0	1,019.0	453.2	3.9
N358	400 Tract LOWER Zone	False	1,000.0	10.1	1,010.1	590.1	-0.9
N401	400 Tract LOWER Zone	False	1,000.0	9.4	1,009.4	408.7	7.4
N420	400 Tract LOWER Zone	False	1,000.0	5.6	1,005.6	452.4	3.7
N387	400 Tract LOWER Zone	False	1,000.0	16.2	1,016.2	395.0	7.4
N391	400 Tract LOWER Zone	False	1,000.0	14.5	1,014.5	723.3	7.3
N372	400 Tract LOWER Zone	False	1,000.0	10.1	1,010.1	525.8	7.3
N354	400 Tract LOWER Zone	False	1,000.0	7.8	1,007.8	468.6	7.4
N350	400 Tract LOWER Zone	False	1,000.0	20.1	1,020.1	525.6	7.3
N428	400 Tract LOWER Zone	False	1,000.0	8.9	1,008.9	170.3	7.4
N392	400 Tract LOWER Zone	False	1,000.0	12.3	1,012.3	422.3	7.4

**GBWC 2024 IRP - Spring Creek Division - Housing Section**  
**Preferred Plan MDD + Fire 2044 Distribution System Junction Report**  
 Fire Flow - Time: 0.00 hours

Label	Zone	Satisfies Fire Flow Constraints?	Fire Flow (Needed) (gpm)	MDD (gpm)	Total Flow Needed (MDD+Fire) (gpm)	Available Flow @ 20psi Residual (gpm)	Pressure (Calculated Residual @ Total Flow Needed) (psi)
N364	400 Tract LOWER Zone	False	1,000.0	7.8	1,007.8	177.7	7.4
N281	400 Tract LOWER Zone	False	1,000.0	15.7	1,015.7	211.6	7.4
N282	400 Tract LOWER Zone	False	1,000.0	13.4	1,013.4	209.6	7.4
N316	400 Tract LOWER Zone	False	1,000.0	17.9	1,017.9	260.9	7.4
N346	400 Tract LOWER Zone	False	1,000.0	14.5	1,014.5	628.7	2.3
N290	400 Tract SE Zone	False	1,000.0	11.2	1,011.2	239.9	15.5
N287	400 Tract SE Zone	False	1,000.0	7.8	1,007.8	357.1	18.8
N291	400 Tract SE Zone	False	1,000.0	5.6	1,005.6	452.3	2.2
N273	400 Tract SE Zone	False	1,000.0	6.7	1,006.7	607.6	-21.5
N314	100 Tract SE Zone	False	1,000.0	4.5	1,004.5	227.8	5.4
N353	100 Tract SE Zone	False	1,000.0	7.8	1,007.8	229.1	29.7
N389	100 Tract SE Zone	False	1,000.0	14.5	1,014.5	181.6	38.5
N322	100 Tract SE Zone	False	1,000.0	10.1	1,010.1	687.2	6.5
N269	100 Tract SE Zone	False	1,000.0	17.9	1,017.9	403.6	26.7
N231	100 Tract SE Zone	False	1,000.0	9.4	1,009.4	289.4	33.6
N311	100 Tract SE Zone	False	1,000.0	2.2	1,002.2	698.3	5.9
N438	400 Tract LOWER Zone	False	1,000.0	0.0	1,000.0	318.9	5.3
N318	100 Tract NW Zone	False	1,000.0	10.1	1,010.1	952.3	28.7
N225	100 Tract NW Zone	False	1,000.0	12.3	1,012.3	952.7	30.5
N229	100 Tract NW Zone	False	1,000.0	13.4	1,013.4	946.6	32.4
N460	400 Tract LOWER Zone	False	1,000.0	2.2	1,002.2	325.2	5.3
N285	100 Tract NW Zone	False	1,000.0	14.5	1,014.5	870.5	42.9

**GBWC 2024 IRP - Spring Creek Division - Housing Section**  
**Preferred Plan MDD + Fire 2044 Distribution System Junction Report**  
 Fire Flow - Time: 0.00 hours

Label	Zone	Satisfies Fire Flow Constraints?	Fire Flow (Needed) (gpm)	MDD (gpm)	Total Flow Needed (MDD+Fire) (gpm)	Available Flow @ 20psi Residual (gpm)	Pressure (Calculated Residual @ Total Flow Needed) (psi)
N267	100 Tract NW Zone	False	1,000.0	16.8	1,016.8	985.1	18.6
N252	100 Tract NW Zone	False	1,000.0	12.3	1,012.3	772.7	42.8
N208	100 Tract NW Zone	False	1,000.0	7.8	1,007.8	523.4	20.6
N221	100 Tract NW Zone	False	1,000.0	15.7	1,015.7	554.5	19.6
N224	100 Tract NW Zone	False	1,000.0	8.9	1,008.9	763.6	18.7
N215	100 Tract NW Zone	False	1,000.0	21.2	1,021.2	971.6	41.6
N485	400 Tract MID Zone	False	1,000.0	10.1	1,010.1	155.9	-5.4
N234	100 Tract NW Zone	False	1,000.0	21.2	1,021.2	494.5	44.5
N207	100 Tract NW Zone	False	1,000.0	4.5	1,004.5	528.9	16.5
N205	100 Tract NW Zone	False	1,000.0	8.9	1,008.9	289.9	9.8
N206	100 Tract NW Zone	False	1,000.0	16.8	1,016.8	555.1	3.3
N190	100 Tract NW Zone	False	1,000.0	4.5	1,004.5	897.0	39.0
N178	300 Tract NW Zone	False	1,000.0	20.1	1,020.1	426.2	92.2
N162	300 Tract NW Zone	False	1,000.0	15.7	1,015.7	891.7	70.9
N447	400 Tract MID Zone	False	1,000.0	17.3	1,017.3	114.8	10.3
N124	300 Tract WEST Zone	False	1,000.0	0.0	1,000.0	140.6	70.4
N131	300 Tract WEST Zone	False	1,000.0	3.4	1,003.4	336.6	27.0
N114	300 Tract WEST Zone	False	1,000.0	3.4	1,003.4	224.5	68.6
N112	300 Tract WEST Zone	False	1,000.0	13.4	1,013.4	254.3	68.3
N110	300 Tract WEST Zone	False	1,000.0	19.0	1,019.0	207.3	61.9
N115	300 Tract WEST Zone	False	1,000.0	15.7	1,015.7	208.9	60.1
N100	300 Tract WEST Zone	False	1,000.0	2.2	1,002.2	268.4	61.4

**GBWC 2024 IRP - Spring Creek Division - Housing Section**  
**Preferred Plan MDD + Fire 2044 Distribution System Junction Report**  
 Fire Flow - Time: 0.00 hours

Label	Zone	Satisfies Fire Flow Constraints?	Fire Flow (Needed) (gpm)	MDD (gpm)	Total Flow Needed (MDD+Fire) (gpm)	Available Flow @ 20psi Residual (gpm)	Pressure (Calculated Residual @ Total Flow Needed) (psi)
N102	300 Tract WEST Zone	False	1,000.0	12.3	1,012.3	289.6	60.8
N106	300 Tract WEST Zone	False	1,000.0	14.5	1,014.5	257.9	63.1
N334	400 Tract SE Zone	False	1,000.0	6.7	1,006.7	177.1	82.7
N274	400 Tract SE Zone	False	1,000.0	2.2	1,002.2	632.7	-15.1
N271	100 Tract SE Zone	False	1,000.0	3.4	1,003.4	611.4	9.6
N214	100 Tract NW Zone	False	1,000.0	6.7	1,006.7	255.8	12.2
N359	100 Tract NW Zone	False	1,000.0	15.7	1,015.7	70.6	47.3
N336	100 Tract NW Zone	False	1,000.0	6.7	1,006.7	889.4	35.5
N107	300 Tract WEST Zone	False	1,000.0	12.3	1,012.3	264.3	66.3
N108	300 Tract WEST Zone	False	1,000.0	15.7	1,015.7	251.7	67.0
N103	300 Tract WEST Zone	False	1,000.0	13.9	1,013.9	289.7	61.3
N101	300 Tract WEST Zone	False	1,000.0	9.4	1,009.4	259.8	56.1
N109	300 Tract WEST Zone	False	1,000.0	23.5	1,023.5	230.9	59.3
N111	300 Tract WEST Zone	False	1,000.0	9.4	1,009.4	192.2	63.9
N113	300 Tract WEST Zone	False	1,000.0	12.3	1,012.3	253.7	68.3
N118	300 Tract WEST Zone	False	1,000.0	1.1	1,001.1	283.9	70.4
N454	400 Tract UPPER Zone	False	1,000.0	0.0	1,000.0	643.9	24.5
N440	400 Tract UPPER Zone	False	1,000.0	5.6	1,005.6	615.5	28.0
N478	400 Tract UPPER Zone	False	1,000.0	10.1	1,010.1	767.6	23.3
N508	400 Tract UPPER Zone	False	1,000.0	12.3	1,012.3	437.3	61.4
N483	400 Tract MID Zone	False	1,000.0	22.4	1,022.4	135.7	9.4
N473	400 Tract MID Zone	False	1,000.0	22.4	1,022.4	172.0	-11.0

**GBWC 2024 IRP - Spring Creek Division - Housing Section**  
**Preferred Plan MDD + Fire 2044 Distribution System Junction Report**  
 Fire Flow - Time: 0.00 hours

Label	Zone	Satisfies Fire Flow Constraints?	Fire Flow (Needed) (gpm)	MDD (gpm)	Total Flow Needed (MDD+Fire) (gpm)	Available Flow @ 20psi Residual (gpm)	Pressure (Calculated Residual @ Total Flow Needed) (psi)
N513	400 Tract UPPER Zone	False	1,000.0	10.1	1,010.1	138.9	18.0
N504	400 Tract UPPER Zone	False	1,000.0	14.5	1,014.5	153.2	13.5
N488	400 Tract UPPER Zone	False	1,000.0	4.5	1,004.5	150.2	10.4
N514	400 Tract UPPER Zone	False	1,000.0	21.2	1,021.2	205.5	24.1
N523	400 Tract UPPER Zone	False	1,000.0	10.1	1,010.1	247.5	16.6
N524	400 Tract UPPER Zone	False	1,000.0	12.3	1,012.3	748.0	0.7
N515	400 Tract UPPER Zone	False	1,000.0	8.9	1,008.9	535.7	36.7
N496	400 Tract UPPER Zone	False	1,000.0	20.7	1,020.7	650.4	31.8
N512	400 Tract UPPER Zone	False	1,000.0	2.2	1,002.2	724.1	34.1
N450	400 Tract UPPER Zone	False	1,000.0	9.4	1,009.4	467.4	22.4
N463	400 Tract UPPER Zone	False	1,000.0	13.4	1,013.4	472.7	37.8
N484	400 Tract UPPER Zone	False	1,000.0	22.4	1,022.4	674.7	34.0
N493	400 Tract UPPER Zone	False	1,000.0	16.8	1,016.8	771.3	20.6
N494	400 Tract UPPER Zone	False	1,000.0	11.2	1,011.2	597.4	45.6
N492	400 Tract UPPER Zone	False	1,000.0	2.2	1,002.2	722.0	47.2
N502	400 Tract UPPER Zone	False	1,000.0	12.3	1,012.3	864.1	44.0
N435	400 Tract LOWER Zone	False	1,500.0	2.2	1,502.2	840.6	0.3
N443	400 Tract LOWER Zone	False	1,000.0	8.9	1,008.9	393.1	1.6
N452	400 Tract LOWER Zone	False	1,000.0	9.4	1,009.4	395.1	0.7
N439	400 Tract LOWER Zone	False	1,000.0	7.8	1,007.8	465.2	-5.5
N475	400 Tract MID Zone	False	1,000.0	19.0	1,019.0	102.6	14.7
N377	400 Tract LOWER Zone	False	1,000.0	42.2	1,042.2	595.2	-13.4

**GBWC 2024 IRP - Spring Creek Division - Housing Section**  
**Preferred Plan MDD + Fire 2044 Distribution System Junction Report**  
 Fire Flow - Time: 0.00 hours

Label	Zone	Satisfies Fire Flow Constraints?	Fire Flow (Needed) (gpm)	MDD (gpm)	Total Flow Needed (MDD+Fire) (gpm)	Available Flow @ 20psi Residual (gpm)	Pressure (Calculated Residual @ Total Flow Needed) (psi)
N400	400 Tract LOWER Zone	False	1,000.0	22.4	1,022.4	398.6	7.4
N422	400 Tract LOWER Zone	False	1,000.0	20.1	1,020.1	509.3	-6.3
N432	400 Tract MID Zone	False	1,000.0	20.1	1,020.1	155.2	-6.5
N449	400 Tract MID Zone	False	1,000.0	7.8	1,007.8	160.8	-17.6
N437	400 Tract MID Zone	False	1,000.0	6.7	1,006.7	161.2	-18.5
N373	400 Tract LOWER Zone	False	1,000.0	14.5	1,014.5	516.8	-9.5
N385	400 Tract LOWER Zone	False	1,000.0	20.1	1,020.1	611.3	-21.8
N394	400 Tract LOWER Zone	False	1,000.0	8.9	1,008.9	539.0	-12.6
N409	400 Tract LOWER Zone	False	1,000.0	10.1	1,010.1	203.5	7.4
N410	400 Tract LOWER Zone	False	1,000.0	8.9	1,008.9	260.4	7.4
N411	400 Tract LOWER Zone	False	1,000.0	10.1	1,010.1	284.5	3.4
N414	400 Tract LOWER Zone	False	1,000.0	11.2	1,011.2	329.2	-6.3
N426	400 Tract LOWER Zone	False	1,000.0	5.6	1,005.6	301.6	-0.6
N393	400 Tract LOWER Zone	False	1,000.0	42.2	1,042.2	401.8	3.2
N382	400 Tract LOWER Zone	False	1,000.0	15.7	1,015.7	191.7	7.4
N396	400 Tract LOWER Zone	False	1,000.0	14.5	1,014.5	685.2	7.3
N384	400 Tract LOWER Zone	False	1,000.0	16.8	1,016.8	557.7	7.3
N363	400 Tract LOWER Zone	False	1,000.0	11.2	1,011.2	503.9	7.3
N349	400 Tract LOWER Zone	False	1,000.0	5.6	1,005.6	612.9	2.7
N299	400 Tract LOWER Zone	False	1,000.0	20.1	1,020.1	233.0	7.4
N283	400 Tract LOWER Zone	False	1,000.0	6.7	1,006.7	202.3	7.4
N329	400 Tract LOWER Zone	False	1,000.0	42.2	1,042.2	310.6	3.3

**GBWC 2024 IRP - Spring Creek Division - Housing Section**  
**Preferred Plan MDD + Fire 2044 Distribution System Junction Report**  
 Fire Flow - Time: 0.00 hours

Label	Zone	Satisfies Fire Flow Constraints?	Fire Flow (Needed) (gpm)	MDD (gpm)	Total Flow Needed (MDD+Fire) (gpm)	Available Flow @ 20psi Residual (gpm)	Pressure (Calculated Residual @ Total Flow Needed) (psi)
N340	400 Tract SE Zone	False	1,000.0	17.9	1,017.9	383.8	21.7
N307	400 Tract SE Zone	False	1,000.0	7.8	1,007.8	388.0	24.1
N247	400 Tract SE Zone	False	1,000.0	6.7	1,006.7	312.2	36.5
N272	400 Tract SE Zone	False	1,000.0	7.8	1,007.8	627.9	-18.3
N300	100 Tract SE Zone	False	1,000.0	8.9	1,008.9	528.5	17.6
N279	100 Tract SE Zone	False	1,000.0	17.9	1,017.9	412.7	26.1
N246	100 Tract SE Zone	False	1,000.0	9.4	1,009.4	494.0	16.1
N275	100 Tract SE Zone	False	1,000.0	22.4	1,022.4	644.5	7.5
N351	100 Tract SE Zone	False	1,000.0	13.4	1,013.4	171.0	40.1
N344	100 Tract SE Zone	False	1,000.0	9.4	1,009.4	300.3	10.1
N361	100 Tract SE Zone	False	1,000.0	14.5	1,014.5	772.3	-8.9
N347	100 Tract SE Zone	False	1,000.0	17.8	1,017.8	920.2	-29.2
N327	100 Tract SE Zone	False	1,000.0	13.4	1,013.4	777.8	-8.0
N324	100 Tract SE Zone	False	1,000.0	5.6	1,005.6	657.3	6.3
N528	100 Tract NE Zone	False	1,000.0	11.2	1,011.2	947.3	16.4
N482	100 Tract NE Zone	False	1,000.0	12.3	1,012.3	365.6	49.8
N472	100 Tract NE Zone	False	1,000.0	7.8	1,007.8	169.8	71.5
N525	100 Tract NE Zone	False	1,000.0	10.1	1,010.1	283.2	25.2
N516	100 Tract NE Zone	False	1,000.0	12.3	1,012.3	425.9	19.6
N429	100 Tract NE Zone	False	1,000.0	14.5	1,014.5	444.9	70.5
N499	100 Tract NE Zone	False	1,000.0	11.2	1,011.2	283.8	15.3
N301	100 Tract NW Zone	False	1,000.0	5.6	1,005.6	922.9	39.9

**GBWC 2024 IRP - Spring Creek Division - Housing Section**  
**Preferred Plan MDD + Fire 2044 Distribution System Junction Report**  
 Fire Flow - Time: 0.00 hours

Label	Zone	Satisfies Fire Flow Constraints?	Fire Flow (Needed) (gpm)	MDD (gpm)	Total Flow Needed (MDD+Fire) (gpm)	Available Flow @ 20psi Residual (gpm)	Pressure (Calculated Residual @ Total Flow Needed) (psi)
N223	100 Tract NW Zone	False	1,000.0	7.8	1,007.8	185.9	14.4
N182	100 Tract NW Zone	False	1,000.0	16.8	1,016.8	954.8	41.6
N166	300 Tract NW Zone	False	1,000.0	13.4	1,013.4	785.7	57.9
N169	300 Tract NW Zone	False	1,000.0	12.3	1,012.3	739.1	12.5
N386	100 Tract NW Zone	False	1,000.0	20.1	1,020.1	464.5	24.0
Com407	100 Tract NW Zone	False	1,500.0	8.9	1,508.9	461.1	25.2
N408	100 Tract NW Zone	False	1,000.0	11.2	1,011.2	480.6	17.5
N323	100 Tract NW Zone	False	1,000.0	14.5	1,014.5	986.1	23.9
N238	100 Tract NW Zone	False	1,000.0	12.3	1,012.3	756.9	5.2
N218	100 Tract NW Zone	False	1,000.0	1.1	1,001.1	536.5	16.6
N104	300 Tract WEST Zone	False	1,000.0	16.2	1,016.2	270.5	66.1
N105	300 Tract WEST Zone	False	1,000.0	17.9	1,017.9	274.1	66.0
N543	100 Tract NW Zone	False	1,000.0	0.0	1,000.0	682.7	10.3
N544	100 Tract NW Zone	False	1,000.0	0.0	1,000.0	100.9	46.7
N545	100 Tract SE Zone	False	1,000.0	0.0	1,000.0	113.2	43.1
N546	100 Tract NW Zone	False	1,000.0	0.0	1,000.0	101.0	46.7
N548	400 Tract SE Zone	False	1,000.0	0.0	1,000.0	296.2	59.5
N549	400 Tract LOWER Zone	False	1,000.0	0.0	1,000.0	185.4	7.4
N551	400 Tract LOWER Zone	False	1,000.0	0.0	1,000.0	189.3	7.4
N552	400 Tract LOWER Zone	False	1,000.0	0.0	1,000.0	119.8	7.4
N553	400 Tract LOWER Zone	False	1,000.0	0.0	1,000.0	130.1	7.4
N550	400 Tract LOWER Zone	False	1,000.0	0.0	1,000.0	107.8	7.4



**GBWC 2024 IRP - Spring Creek Division - Housing Section**  
**Preferred Plan MDD + Fire 2044 Distribution System Junction Report**  
 Fire Flow - Time: 0.00 hours

Label	Zone	Satisfies Fire Flow Constraints?	Fire Flow (Needed) (gpm)	MDD (gpm)	Total Flow Needed (MDD+Fire) (gpm)	Available Flow @ 20psi Residual (gpm)	Pressure (Calculated Residual @ Total Flow Needed) (psi)
N554	400 Tract SE Zone	False	1,000.0	1.1	1,001.1	359.0	23.0
N555	400 Tract LOWER Zone	False	1,000.0	0.0	1,000.0	464.0	-3.6
N556	400 Tract LOWER Zone	False	1,000.0	0.0	1,000.0	180.5	7.4
N557	400 Tract MID Zone	False	1,000.0	0.0	1,000.0	120.0	2.4
N558	400 Tract UPPER Zone	False	1,000.0	0.0	1,000.0	188.8	54.6
N559	400 Tract MID Zone	False	1,000.0	0.0	1,000.0	70.8	23.7
N560	400 Tract UPPER Zone	False	1,000.0	0.0	1,000.0	250.9	63.4
N561	400 Tract UPPER Zone	False	1,000.0	0.0	1,000.0	357.1	65.1
N562	400 Tract UPPER Zone	False	1,000.0	0.0	1,000.0	647.8	31.5
N563	400 Tract LOWER Zone	False	1,000.0	0.0	1,000.0	182.5	7.4
N565	400 Tract UPPER Zone	False	1,000.0	0.0	1,000.0	250.0	61.4
N564	400 Tract MID Zone	False	1,000.0	0.0	1,000.0	87.2	23.2
N566	400 Tract UPPER Zone	False	1,000.0	0.0	1,000.0	110.0	29.4
J-38	400 Tract UPPER Zone	False	1,000.0	0.0	1,000.0	453.2	22.0
N567	100 Tract NW Zone	False	1,000.0	1.1	1,001.1	155.6	46.2
N568	100 Tract SE Zone	False	1,000.0	1.6	1,001.6	244.5	33.7
N569 (B&G Club)	300 Tract WEST Zone	False	1,875.0	1.6	1,876.6	1,859.7	-19.1

GBWC 2024 IRP - Spring Creek Division - Housing Section  
Preferred Plan PHD 2044 Distribution System Junction Report  
PHD-NODES - Time: 0.00 hours

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
266	N144	5,410.00	300 Tract NW Zone	0.0	5,700.55	125.7
267	N288	5,495.00	100 Tract NW Zone	0.0	5,713.26	94.4
268	N319	5,670.00	400 Tract LOWER Zone	0.0	5,849.06	77.5
269	N289	5,641.00	100 Tract SE Zone	0.0	5,849.29	90.1
270	N228	5,605.00	100 Tract SE Zone	0.0	5,846.24	104.4
272	N380	5,759.30	400 Tract LOWER Zone	0.0	5,851.65	40.0
273	N339	5,662.00	100 Tract SE Zone	17.6	5,842.08	77.9
274	N444	5,584.00	100 Tract NE Zone	3.9	5,925.78	147.9
275	N531	5,732.00	100 Tract NE Zone	7.8	5,925.37	83.7
276	N505	5,728.00	100 Tract NE Zone	5.9	5,927.92	86.5
277	N507	5,763.00	100 Tract NE Zone	5.9	5,928.05	71.4
278	N495	5,739.00	100 Tract NE Zone	9.8	5,927.66	81.6
279	N480	5,737.00	100 Tract NE Zone	11.7	5,922.61	80.3
280	N477	5,787.00	400 Tract LOWER Zone	13.7	5,809.53	9.7
281	N466	5,758.00	400 Tract LOWER Zone	19.6	5,810.38	22.7
282	N526	5,773.00	100 Tract NE Zone	0.0	5,928.56	67.3
283	N434	5,742.00	100 Tract NE Zone	0.0	5,930.47	81.5
287	N532	5,888.00	400 Tract UPPER Zone	19.6	6,077.42	82.0
295	N243	5,577.00	400 Tract LOWER Zone	0.0	5,847.96	117.2
296	N244	5,574.00	300 Tract NW Zone	0.0	5,721.18	63.7
300	N369 - IRRG	5,459.48	100 Tract NW Zone	105.6	5,760.63	130.3
301	N362	5,712.00	100 Tract SE Zone	0.0	5,773.24	26.5
303	N371	5,733.00	100 Tract SE Zone	21.5	5,765.57	14.1
304	N338	5,534.00	100 Tract NW Zone	23.5	5,768.63	101.5

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ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
305	N278	5,617.00	400 Tract SE Zone	11.7	5,829.07	91.8
306	N320	5,636.50	400 Tract SE Zone	11.7	5,829.04	83.3
314	N116	5,393.00	300 Tract WEST Zone	0.0	5,481.45	38.3
315	N235	5,474.50	100 Tract NW Zone	13.7	5,695.78	95.7
316	N227	5,478.30	100 Tract NW Zone	25.4	5,702.29	96.9
318	N203	5,453.00	100 Tract NW Zone	5.9	5,693.02	103.8
321	N529	5,908.20	400 Tract UPPER Zone	5.9	6,075.63	72.4
322	N503	5,874.10	400 Tract UPPER Zone	21.5	6,050.43	76.3
323	N465	5,812.90	400 Tract UPPER Zone	25.4	6,047.15	101.3
324	N469	5,804.70	400 Tract UPPER Zone	15.7	6,047.24	104.9
325	N474	5,810.50	400 Tract UPPER Zone	15.7	6,047.28	102.4
326	N481	5,832.90	400 Tract UPPER Zone	21.5	6,047.62	92.9
327	N509	5,851.80	400 Tract UPPER Zone	9.8	6,046.91	84.4
328	N517	5,873.00	400 Tract UPPER Zone	23.5	6,053.36	78.0
329	N442	5,793.20	400 Tract UPPER Zone	11.7	6,017.17	96.9
330	N458	5,813.40	400 Tract UPPER Zone	19.6	6,018.17	88.6
331	N468	5,815.50	400 Tract UPPER Zone	11.7	6,019.11	88.1
332	N489	5,825.80	400 Tract UPPER Zone	9.8	6,021.77	84.8
333	N486	5,824.10	400 Tract UPPER Zone	13.7	6,020.95	85.2
334	N500	5,802.50	400 Tract UPPER Zone	39.1	6,016.28	92.5
335	N506	5,798.10	400 Tract UPPER Zone	15.7	5,855.81	25.0
336	N519	5,793.40	400 Tract UPPER Zone	29.4	5,736.10	-24.8
337	N498	5,778.30	400 Tract UPPER Zone	37.2	5,731.29	-20.3
338	N467	5,728.30	400 Tract MID Zone	11.7	5,707.55	-9.0

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ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
339	N441	5,799.70	400 Tract LOWER Zone	0.0	5,901.77	44.2
340	N456	5,572.10	100 Tract NE Zone	29.4	5,925.85	153.1
341	N487	5,769.40	100 Tract NE Zone	11.7	5,927.95	68.6
342	N530	5,761.80	100 Tract NE Zone	23.5	5,928.56	72.2
343	N511	5,668.00	100 Tract NE Zone	7.8	5,928.61	112.8
344	N497	5,735.30	100 Tract NE Zone	25.4	5,924.66	81.9
345	N476	5,736.20	100 Tract NE Zone	23.5	5,929.35	83.6
346	N436	5,715.00	100 Tract NE Zone	3.9	5,930.47	93.2
348	N462	5,805.00	400 Tract MID Zone	13.7	5,693.39	-48.3
349	N464	5,756.90	400 Tract MID Zone	11.7	5,693.71	-27.3
350	N446	5,793.70	400 Tract MID Zone	11.7	5,694.40	-43.0
351	N453	5,734.30	400 Tract MID Zone	23.5	5,697.17	-16.1
352	N433	5,706.90	400 Tract MID Zone	13.7	5,702.14	-2.1
353	N425	5,683.00	400 Tract LOWER Zone	35.2	5,774.44	39.6
354	N378	5,718.50	400 Tract LOWER Zone	29.4	5,775.17	24.5
355	N365	5,714.40	400 Tract LOWER Zone	68.0	5,770.34	24.2
356	N418	5,728.40	400 Tract LOWER Zone	33.3	5,804.75	33.0
357	N358	5,665.10	400 Tract LOWER Zone	17.6	5,792.77	55.2
358	N401	5,724.60	400 Tract LOWER Zone	16.4	5,792.32	29.3
359	N420	5,735.70	400 Tract LOWER Zone	9.8	5,806.82	30.8
360	N387	5,708.80	400 Tract LOWER Zone	28.3	5,885.33	76.4
361	N416	5,779.10	400 Tract LOWER Zone	3.9	5,893.01	49.3
362	N415	5,779.10	400 Tract LOWER Zone	2.0	5,887.16	46.8
363	N120	5,398.80	300 Tract WEST Zone	105.6	5,474.42	32.7

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ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
364	N413	5,773.00	400 Tract LOWER Zone	26.4	5,886.82	49.2
365	N391	5,741.50	400 Tract LOWER Zone	25.4	5,852.98	48.2
366	N372	5,738.30	400 Tract LOWER Zone	17.6	5,820.90	35.7
367	N354	5,740.30	400 Tract LOWER Zone	13.7	5,808.46	29.5
368	N350	5,719.50	400 Tract LOWER Zone	35.2	5,802.66	36.0
369	N428	5,782.10	400 Tract LOWER Zone	15.7	5,891.16	47.2
370	N419	5,796.10	400 Tract LOWER Zone	13.7	5,892.20	41.6
371	N405	5,778.70	400 Tract LOWER Zone	29.4	5,891.03	48.6
372	N392	5,758.40	400 Tract LOWER Zone	21.5	5,888.85	56.4
373	N388	5,764.20	400 Tract LOWER Zone	23.5	5,889.68	54.3
374	N364	5,733.00	400 Tract LOWER Zone	13.7	5,887.95	67.0
375	N376	5,710.40	400 Tract LOWER Zone	75.8	5,851.12	60.9
376	N342	5,645.40	400 Tract LOWER Zone	26.1	5,849.66	88.4
377	N333	5,677.10	400 Tract LOWER Zone	30.3	5,849.30	74.5
378	N297	5,634.50	400 Tract LOWER Zone	25.4	5,848.76	92.7
379	N281	5,593.00	400 Tract LOWER Zone	27.4	5,733.81	60.9
380	N255	5,590.70	400 Tract LOWER Zone	33.3	5,848.26	111.4
381	N282	5,594.00	400 Tract LOWER Zone	23.5	5,733.82	60.5
382	N316	5,617.60	400 Tract LOWER Zone	31.3	5,741.41	53.6
383	N346	5,652.70	400 Tract LOWER Zone	25.4	5,794.29	61.3
384	N290	5,625.20	400 Tract SE Zone	19.6	5,829.18	88.3
385	N287	5,634.80	400 Tract SE Zone	13.7	5,833.47	86.0
386	N291	5,624.90	400 Tract SE Zone	9.8	5,835.89	91.3
387	N273	5,571.20	400 Tract SE Zone	11.7	5,838.95	115.8

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ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
388	N314	5,628.10	100 Tract SE Zone	7.8	5,843.69	93.3
389	N353	5,730.70	100 Tract SE Zone	13.7	5,844.85	49.4
390	N389	5,558.60	100 Tract SE Zone	25.4	5,840.49	122.0
391	N322	5,703.80	100 Tract SE Zone	17.6	5,856.64	66.1
392	N269	5,685.10	100 Tract SE Zone	31.3	5,843.53	68.5
393	N231	5,653.00	100 Tract SE Zone	16.4	5,846.24	83.6
394	N311	5,702.60	100 Tract SE Zone	3.9	5,860.01	68.1
395	N399	5,478.20	100 Tract NW Zone	17.6	5,731.14	109.4
396	N404	5,480.00	100 Tract NW Zone	5.9	5,762.67	122.3
397	N374	5,466.60	100 Tract NW Zone	13.7	5,754.93	124.7
398	N302(IRR G)	5,604.00	100 Tract NW Zone	103.7	5,716.27	48.6
399	N438	5,798.30	400 Tract LOWER Zone	0.0	5,931.39	57.6
400	N292	5,636.20	100 Tract NW Zone	0.0	5,718.76	35.7
401	N308	5,602.60	100 Tract NW Zone	3.9	5,718.76	50.3
402	N312	5,602.60	100 Tract NW Zone	7.8	5,719.13	50.4
403	N318	5,540.00	100 Tract NW Zone	17.6	5,719.03	77.5
404	N330	5,525.10	100 Tract NW Zone	37.2	5,719.08	83.9
405	N325	5,505.50	100 Tract NW Zone	12.7	5,719.72	92.7
406	N317	5,468.40	100 Tract NW Zone	19.6	5,714.64	106.5
408	N309	5,444.60	100 Tract NW Zone	11.7	5,719.55	119.0
409	N343	5,459.00	100 Tract NW Zone	31.3	5,736.00	119.8
410	N370	5,463.00	100 Tract NW Zone	19.6	5,754.26	126.0
411	N360	5,492.10	100 Tract NW Zone	23.5	5,749.92	111.5
412	N357	5,499.30	100 Tract NW Zone	19.6	5,747.98	107.6

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ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
413	N355	5,495.00	100 Tract NW Zone	5.9	5,742.64	107.1
415	N240	5,429.80	100 Tract NW Zone	37.2	5,704.14	118.7
416	N277	5,467.20	100 Tract NW Zone	31.3	5,705.67	103.2
417	N260	5,491.50	100 Tract NW Zone	23.5	5,708.31	93.8
418	N256	5,479.40	100 Tract NW Zone	7.8	5,707.52	98.7
419	N225	5,451.80	100 Tract NW Zone	21.5	5,698.03	106.5
420	N229	5,453.30	100 Tract NW Zone	23.5	5,698.60	106.1
421	N249	5,474.20	100 Tract NW Zone	16.4	5,707.33	100.9
422	N459	5,811.00	400 Tract LOWER Zone	0.0	5,912.48	43.9
423	N257	5,463.10	100 Tract NW Zone	19.6	5,707.72	105.8
424	N253	5,451.40	100 Tract NW Zone	7.8	5,707.45	110.8
425	N239	5,444.80	100 Tract NW Zone	11.7	5,705.05	112.6
426	N236	5,435.60	100 Tract NW Zone	29.4	5,704.02	116.1
427	N262	5,447.40	100 Tract NW Zone	11.7	5,707.41	112.5
428	N460	5,811.00	400 Tract LOWER Zone	3.9	5,931.39	52.1
429	N304	5,444.60	100 Tract NW Zone	19.6	5,716.27	117.5
430	N326	5,442.20	100 Tract NW Zone	5.9	5,719.29	119.9
431	N337	5,481.70	100 Tract NW Zone	9.8	5,721.00	103.5
432	N331	5,490.90	100 Tract NW Zone	33.3	5,716.91	97.8
433	N285	5,453.50	100 Tract NW Zone	25.4	5,706.37	109.4
434	N267	5,435.90	100 Tract NW Zone	29.4	5,705.09	116.5
435	N252	5,470.10	100 Tract NW Zone	21.5	5,700.49	99.7
436	N208	5,454.50	100 Tract NW Zone	13.7	5,693.02	103.2
437	N221	5,453.60	100 Tract NW Zone	27.4	5,693.11	103.6

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ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
438	N224	5,451.90	100 Tract NW Zone	15.7	5,694.75	105.1
439	N179	5,441.80	100 Tract NW Zone	39.1	5,696.84	110.3
440	N199	5,460.40	100 Tract NW Zone	27.4	5,699.95	103.6
441	N194	5,471.60	100 Tract NW Zone	23.5	5,699.53	98.6
442	N219	5,446.10	100 Tract NW Zone	33.3	5,700.25	110.0
443	N215	5,459.80	100 Tract NW Zone	37.2	5,697.14	102.7
444	N210	5,469.96	100 Tract NW Zone	25.4	5,696.90	98.2
445	N485	5,755.10	400 Tract MID Zone	17.6	5,720.45	-15.0
446	N212(IRR G)	5,453.50	100 Tract NW Zone	135.0	5,696.56	105.2
447	N213	5,461.40	100 Tract NW Zone	27.4	5,697.13	102.0
448	N217	5,458.90	100 Tract NW Zone	33.3	5,697.43	103.2
449	N258	5,483.50	100 Tract NW Zone	5.9	5,707.58	96.9
450	N250	5,480.90	100 Tract NW Zone	31.3	5,706.11	97.4
451	N216	5,468.60	100 Tract NW Zone	25.4	5,702.09	101.0
452	N204	5,460.70	100 Tract NW Zone	35.2	5,701.75	104.3
453	N234	5,443.20	100 Tract NW Zone	37.2	5,703.08	112.4
454	N193	5,470.28	100 Tract NW Zone	11.7	5,700.44	99.6
455	N183	5,442.30	100 Tract NW Zone	14.6	5,700.19	111.6
456	N158	5,411.80	100 Tract NW Zone	9.8	5,698.51	124.0
457	N145	5,404.10	300 Tract NW Zone	0.0	5,702.15	129.0
458	N139	5,403.30	300 Tract NW Zone	0.0	5,701.63	129.1
459	N134	5,396.60	300 Tract NW Zone	3.9	5,701.14	131.8
460	N140	5,397.10	300 Tract NW Zone	11.7	5,700.65	131.3
461	N207	5,431.70	100 Tract NW Zone	7.8	5,693.02	113.1



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ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
462	N172	5,457.51	100 Tract NW Zone	25.4	5,700.34	105.1
463	N173	5,455.61	100 Tract NW Zone	25.4	5,699.54	105.5
464	N175	5,458.80	100 Tract NW Zone	5.9	5,700.23	104.5
465	N181	5,476.70	100 Tract NW Zone	23.5	5,699.08	96.2
466	N192	5,472.00	100 Tract NW Zone	9.8	5,700.63	98.9
467	N205	5,565.50	100 Tract NW Zone	15.7	5,693.79	55.5
468	N206	5,552.80	100 Tract NW Zone	29.4	5,696.42	62.1
469	N190	5,498.50	100 Tract NW Zone	7.8	5,698.93	86.7
470	N165	5,453.90	100 Tract NW Zone	17.6	5,700.74	106.8
471	N178	5,499.90	300 Tract NW Zone	35.2	5,701.49	87.2
472	N168	5,503.00	300 Tract NW Zone	17.6	5,710.82	89.9
473	N162	5,491.60	300 Tract NW Zone	27.4	5,709.61	94.3
474	N155	5,449.00	300 Tract NW Zone	13.7	5,706.16	111.3
475	N151	5,451.00	300 Tract NW Zone	19.6	5,704.82	109.8
476	N447	5,770.60	400 Tract MID Zone	30.3	5,694.87	-32.8
477	N138	5,407.20	300 Tract NW Zone	2.0	5,702.70	127.8
478	N124	5,408.20	300 Tract WEST Zone	0.0	5,473.62	28.3
479	N131	5,423.80	300 Tract WEST Zone	5.9	5,473.62	21.6
480	N132	5,408.50	300 Tract WEST Zone	13.7	5,473.72	28.2
481	N129	5,405.70	300 Tract WEST Zone	23.5	5,473.74	29.4
482	N126	5,398.30	300 Tract WEST Zone	7.8	5,473.85	32.7
483	N119	5,394.80	300 Tract WEST Zone	0.0	5,474.56	34.5
484	N114	5,453.60	300 Tract WEST Zone	5.9	5,471.72	7.8
485	N112	5,444.50	300 Tract WEST Zone	23.5	5,471.67	11.8

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ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
486	N110	5,480.00	300 Tract WEST Zone	33.3	5,462.42	-7.6
487	N115	5,479.10	300 Tract WEST Zone	27.4	5,463.28	-6.8
488	N100	5,331.20	300 Tract WEST Zone	3.9	5,464.24	57.6
489	N102	5,361.40	300 Tract WEST Zone	21.5	5,464.26	44.5
490	N106	5,422.90	300 Tract WEST Zone	25.4	5,465.30	18.3
491	N334	5,593.50	400 Tract SE Zone	11.7	5,837.53	105.6
492	N274	5,586.50	400 Tract SE Zone	3.9	5,840.84	110.0
493	N271	5,598.80	100 Tract SE Zone	5.9	5,840.92	104.8
494	N214	5,570.70	100 Tract NW Zone	11.7	5,693.45	53.1
496	N187	5,523.50	300 Tract NW Zone	17.6	5,715.61	83.1
497	N359	5,462.70	100 Tract NW Zone	27.4	5,681.98	94.9
498	N336	5,485.50	100 Tract NW Zone	11.7	5,712.54	98.2
499	N107	5,421.00	300 Tract WEST Zone	21.5	5,468.32	20.5
500	N108	5,445.17	300 Tract WEST Zone	27.4	5,469.02	10.3
501	N103	5,360.43	300 Tract WEST Zone	24.4	5,464.30	44.9
502	N101	5,361.92	300 Tract WEST Zone	16.4	5,463.13	43.8
503	N109	5,451.40	300 Tract WEST Zone	41.1	5,462.42	4.8
504	N111	5,484.73	300 Tract WEST Zone	16.4	5,463.11	-9.4
505	N113	5,443.93	300 Tract WEST Zone	21.5	5,471.73	12.0
506	N118	5,397.74	300 Tract WEST Zone	2.0	5,476.02	33.9
507	N122	5,393.47	300 Tract WEST Zone	2.0	5,474.21	34.9
508	N121	5,393.47	300 Tract WEST Zone	5.9	5,474.21	34.9
509	N123	5,395.75	300 Tract WEST Zone	23.5	5,474.02	33.9
510	N125	5,397.50	300 Tract WEST Zone	5.9	5,473.85	33.0

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ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
511	N127	5,399.13	300 Tract WEST Zone	11.7	5,473.81	32.3
512	N128	5,402.12	300 Tract WEST Zone	11.7	5,473.77	31.0
513	N130	5,408.59	300 Tract WEST Zone	7.8	5,473.72	28.2
514	N135	5,407.46	300 Tract WEST Zone	2.0	5,473.72	28.7
515	N146	5,409.52	300 Tract NW Zone	2.0	5,702.70	126.8
516	N454	5,809.90	400 Tract UPPER Zone	0.0	6,047.14	102.6
517	N430	5,771.70	400 Tract LOWER Zone	0.0	5,896.94	54.2
518	N440	5,799.80	400 Tract UPPER Zone	9.8	6,047.13	107.0
519	N478	5,821.50	400 Tract UPPER Zone	17.6	6,047.41	97.7
520	N508	5,882.00	400 Tract UPPER Zone	21.5	6,050.10	72.7
521	N483	5,765.00	400 Tract MID Zone	39.1	5,708.41	-24.5
522	N473	5,738.70	400 Tract MID Zone	39.1	5,710.50	-12.2
523	N513	5,785.40	400 Tract UPPER Zone	17.6	5,732.12	-23.0
524	N504	5,769.70	400 Tract UPPER Zone	25.4	5,726.63	-18.6
525	N488	5,756.90	400 Tract UPPER Zone	7.8	5,721.40	-15.4
526	N514	5,817.00	400 Tract UPPER Zone	37.2	5,856.94	17.3
527	N523	5,838.40	400 Tract UPPER Zone	17.6	5,886.29	20.7
528	N524	5,848.00	400 Tract UPPER Zone	21.5	6,015.73	72.6
529	N515	5,835.10	400 Tract UPPER Zone	15.7	6,015.75	78.2
530	N496	5,835.80	400 Tract UPPER Zone	36.1	6,036.55	86.9
531	N512	5,860.00	400 Tract UPPER Zone	3.9	6,049.43	82.0
532	N527	5,896.60	400 Tract UPPER Zone	19.6	6,074.50	77.0
533	N450	5,799.00	400 Tract UPPER Zone	16.4	6,046.67	107.2
534	N463	5,819.00	400 Tract UPPER Zone	23.5	6,046.67	98.5

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ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
535	N484	5,864.10	400 Tract UPPER Zone	39.1	6,047.71	79.4
536	N493	5,865.50	400 Tract UPPER Zone	29.4	6,048.31	79.1
537	N494	5,860.00	400 Tract UPPER Zone	19.6	6,048.44	81.5
538	N492	5,820.70	400 Tract UPPER Zone	3.9	6,048.02	98.3
539	N502	5,842.50	400 Tract UPPER Zone	21.5	6,048.46	89.1
540	N520	5,896.10	400 Tract UPPER Zone	18.4	6,060.98	71.3
541	N435	5,760.00	400 Tract LOWER Zone	3.9	5,879.48	51.7
542	N443	5,761.00	400 Tract LOWER Zone	15.7	5,814.55	23.2
543	N452	5,758.60	400 Tract LOWER Zone	16.4	5,811.45	22.9
544	N439	5,733.10	400 Tract LOWER Zone	13.7	5,804.95	31.1
545	N475	5,780.90	400 Tract MID Zone	33.3	5,692.02	-38.5
546	N377	5,682.60	400 Tract LOWER Zone	73.9	5,786.61	45.0
547	N400	5,711.90	400 Tract LOWER Zone	39.1	5,788.86	33.3
548	N422	5,719.60	400 Tract LOWER Zone	35.2	5,798.73	34.2
549	N432	5,725.80	400 Tract MID Zone	35.2	5,701.03	-10.7
550	N449	5,720.30	400 Tract MID Zone	13.7	5,702.56	-7.7
551	N437	5,716.00	400 Tract MID Zone	11.7	5,702.30	-5.9
552	N373	5,679.50	400 Tract LOWER Zone	25.4	5,784.20	45.3
553	N385	5,664.50	400 Tract LOWER Zone	35.2	5,785.95	52.5
554	N394	5,692.40	400 Tract LOWER Zone	15.7	5,788.88	41.7
555	N409	5,765.30	400 Tract LOWER Zone	17.6	5,776.76	5.0
556	N410	5,734.90	400 Tract LOWER Zone	15.7	5,776.12	17.8
557	N411	5,720.60	400 Tract LOWER Zone	17.6	5,775.69	23.8
558	N414	5,692.10	400 Tract LOWER Zone	19.6	5,775.31	36.0

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ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
559	N426	5,703.90	400 Tract LOWER Zone	9.8	5,775.19	30.8
560	N393	5,686.00	400 Tract LOWER Zone	73.9	5,774.58	38.3
561	N382	5,739.00	400 Tract LOWER Zone	27.4	5,886.01	63.6
562	N395	5,777.90	400 Tract LOWER Zone	15.7	5,890.48	48.7
563	N417	5,798.50	400 Tract LOWER Zone	3.9	5,891.87	40.4
564	N381	5,759.30	400 Tract LOWER Zone	15.7	5,889.09	56.2
565	N412	5,776.30	400 Tract LOWER Zone	7.8	5,885.11	47.1
566	N396	5,772.00	400 Tract LOWER Zone	25.4	5,863.14	39.4
567	N384	5,749.50	400 Tract LOWER Zone	29.4	5,834.36	36.7
568	N363	5,734.00	400 Tract LOWER Zone	19.6	5,811.56	33.6
569	N349	5,673.40	400 Tract LOWER Zone	9.8	5,796.31	53.2
570	N299	5,617.26	400 Tract LOWER Zone	35.2	5,737.55	52.0
571	N283	5,597.10	400 Tract LOWER Zone	11.7	5,734.17	59.3
572	N329	5,628.94	400 Tract LOWER Zone	73.9	5,748.35	51.7
573	N340	5,656.80	400 Tract SE Zone	31.3	5,835.54	77.3
574	N307	5,666.00	400 Tract SE Zone	13.7	5,835.75	73.4
575	N247	5,588.64	400 Tract SE Zone	11.7	5,833.27	105.8
576	N272	5,578.80	400 Tract SE Zone	13.7	5,840.01	113.0
577	N300	5,702.60	100 Tract SE Zone	15.7	5,856.60	66.6
578	N279	5,699.27	100 Tract SE Zone	31.3	5,846.79	63.8
579	N246	5,629.58	100 Tract SE Zone	16.4	5,841.94	91.9
580	N275	5,603.74	100 Tract SE Zone	39.1	5,841.76	103.0
581	N351	5,707.90	100 Tract SE Zone	23.5	5,842.93	58.4
582	N344	5,708.20	100 Tract SE Zone	16.4	5,845.77	59.5

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ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
583	N361	5,651.90	100 Tract SE Zone	25.4	5,847.59	84.7
584	N347	5,594.10	100 Tract SE Zone	31.2	5,848.74	110.2
585	N327	5,664.40	100 Tract SE Zone	23.5	5,851.48	80.9
586	N324	5,703.00	100 Tract SE Zone	9.8	5,852.20	64.6
587	N305	5,615.00	100 Tract NW Zone	11.7	5,721.70	46.2
588	N528	5,764.60	100 Tract NE Zone	19.6	5,928.57	70.9
589	N521	5,746.10	100 Tract NE Zone	13.7	5,928.62	79.0
590	N518	5,739.50	100 Tract NE Zone	13.7	5,928.70	81.9
591	N482	5,749.00	100 Tract NE Zone	21.5	5,927.47	77.2
592	N472	5,737.40	100 Tract NE Zone	13.7	5,926.52	81.8
593	N525	5,744.00	100 Tract NE Zone	17.6	5,925.72	78.6
594	N516	5,743.30	100 Tract NE Zone	21.5	5,926.65	79.3
595	N510	5,753.40	100 Tract NE Zone	9.8	5,928.90	75.9
596	N501	5,724.90	100 Tract NE Zone	5.9	5,928.98	88.3
597	N491	5,754.40	100 Tract NE Zone	7.8	5,929.06	75.6
598	N445	5,739.90	100 Tract NE Zone	25.4	5,930.12	82.3
599	N429	5,732.10	100 Tract NE Zone	25.4	5,929.68	85.5
600	N499	5,726.20	100 Tract NE Zone	19.6	5,923.56	85.4
601	N479	5,757.10	100 Tract NE Zone	11.7	5,929.24	74.5
602	N470	5,736.80	100 Tract NE Zone	5.9	5,929.53	83.4
603	N461	5,755.10	100 Tract NE Zone	5.9	5,929.84	75.6
604	N451	5,725.20	100 Tract NE Zone	7.8	5,930.14	88.7
605	N280	5,475.26	100 Tract NW Zone	19.3	5,707.62	100.5
606	N301	5,574.00	100 Tract NW Zone	9.8	5,716.25	61.5

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ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
607	N222	5,468.25	100 Tract NW Zone	7.8	5,702.45	101.3
608	N220	5,462.94	100 Tract NW Zone	37.2	5,703.19	103.9
609	N254	5,476.65	100 Tract NW Zone	7.8	5,707.48	99.9
610	N242	5,478.49	100 Tract NW Zone	27.4	5,705.38	98.2
611	N270	5,468.35	100 Tract NW Zone	27.4	5,707.51	103.5
612	N259	5,463.50	100 Tract NW Zone	21.5	5,707.62	105.6
613	N276	5,458.60	100 Tract NW Zone	15.7	5,707.61	107.7
614	N315	5,460.17	100 Tract NW Zone	24.4	5,714.64	110.1
615	N402	5,475.00	100 Tract NW Zone	37.2	5,761.61	124.0
616	N379	5,472.60	100 Tract NW Zone	27.4	5,756.19	122.7
617	N366	5,479.50	100 Tract NW Zone	17.6	5,752.77	118.2
618	N352	5,472.50	100 Tract NW Zone	7.8	5,743.85	117.4
619	N332	5,447.88	100 Tract NW Zone	43.1	5,726.62	120.6
620	N313	5,440.02	100 Tract NW Zone	13.7	5,718.22	120.4
621	N306	5,447.79	100 Tract NW Zone	11.7	5,717.71	116.8
622	N298	5,457.52	100 Tract NW Zone	29.4	5,714.11	111.0
623	N268	5,451.41	100 Tract NW Zone	7.8	5,707.81	110.9
624	N265	5,447.51	100 Tract NW Zone	2.0	5,707.40	112.4
625	N261	5,458.15	100 Tract NW Zone	29.4	5,707.38	107.8
626	N248	5,462.54	100 Tract NW Zone	3.9	5,706.85	105.7
627	N232	5,452.42	100 Tract NW Zone	9.8	5,704.89	109.2
628	N233	5,450.70	100 Tract NW Zone	9.8	5,704.95	110.0
629	N241	5,445.42	100 Tract NW Zone	6.8	5,706.50	113.0
630	N266	5,454.11	100 Tract NW Zone	27.0	5,708.06	109.9

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ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
631	N201	5,467.99	100 Tract NW Zone	21.5	5,700.59	100.6
632	N196	5,452.70	100 Tract NW Zone	17.6	5,701.27	107.5
633	N197	5,459.48	100 Tract NW Zone	21.5	5,701.69	104.8
634	N195	5,462.91	100 Tract NW Zone	15.7	5,701.54	103.2
635	N191	5,484.66	100 Tract NW Zone	13.7	5,699.89	93.1
636	N223	5,576.50	100 Tract NW Zone	13.7	5,692.91	50.4
637	N198	5,508.50	100 Tract NW Zone	22.4	5,698.95	82.4
638	N182	5,470.64	100 Tract NW Zone	29.4	5,699.07	98.8
639	N177	5,476.83	100 Tract NW Zone	31.3	5,698.96	96.1
640	N174	5,473.42	100 Tract NW Zone	18.4	5,699.44	97.8
641	N166	5,475.82	300 Tract NW Zone	23.5	5,703.22	98.4
642	N169	5,482.80	300 Tract NW Zone	21.5	5,702.96	95.3
643	N170	5,491.47	300 Tract NW Zone	24.4	5,711.25	95.1
644	N167	5,501.81	300 Tract NW Zone	5.9	5,710.84	90.4
645	N180	5,507.20	300 Tract NW Zone	17.6	5,712.98	89.0
646	N156	5,465.12	300 Tract NW Zone	21.5	5,709.13	105.6
647	N154	5,456.58	300 Tract NW Zone	5.9	5,707.51	108.6
648	N150	5,451.57	300 Tract NW Zone	9.8	5,705.90	110.0
649	N152	5,441.65	300 Tract NW Zone	3.9	5,704.52	113.7
650	N153	5,436.78	300 Tract NW Zone	21.5	5,703.92	115.6
651	N294	5,441.67	100 Tract NW Zone	13.7	5,713.89	117.8
652	N251	5,445.34	100 Tract NW Zone	11.7	5,706.07	112.8
653	Com284	5,451.94	100 Tract NW Zone	7.8	5,709.23	111.3
654	N237	5,437.00	100 Tract NW Zone	33.3	5,704.22	115.6



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ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
655	Com230	5,430.43	100 Tract NW Zone	25.4	5,702.48	117.7
656	N209	5,465.89	100 Tract NW Zone	27.4	5,699.59	101.1
657	N202	5,478.02	100 Tract NW Zone	19.6	5,699.54	95.8
658	N186	5,459.00	100 Tract NW Zone	31.3	5,697.42	103.2
659	N184	5,457.01	100 Tract NW Zone	13.7	5,700.26	105.2
660	N185	5,451.02	100 Tract NW Zone	13.7	5,699.90	107.7
661	N176	5,457.36	100 Tract NW Zone	23.5	5,700.20	105.1
662	N164	5,450.85	300 Tract NW Zone	15.7	5,700.91	108.2
663	N148	5,441.71	300 Tract NW Zone	7.8	5,703.32	113.2
664	N403	5,493.40	100 Tract NW Zone	11.7	5,731.08	102.8
665	N386	5,489.80	100 Tract NW Zone	35.2	5,722.42	100.6
666	Com407	5,501.00	100 Tract NW Zone	15.7	5,722.78	96.0
667	N408	5,494.70	100 Tract NW Zone	19.6	5,722.98	98.8
668	N390	5,471.70	100 Tract NW Zone	27.4	5,732.58	112.9
669	N383	5,496.50	100 Tract NW Zone	23.5	5,735.00	103.2
670	N356	5,491.20	100 Tract NW Zone	35.2	5,741.29	108.2
671	N328	5,453.75	100 Tract NW Zone	0.0	5,719.32	114.9
672	N345	5,480.70	100 Tract NW Zone	35.2	5,729.25	107.5
673	N335	5,491.00	100 Tract NW Zone	2.0	5,719.35	98.8
674	N323	5,494.53	100 Tract NW Zone	25.4	5,712.55	94.3
675	N238	5,440.10	100 Tract NW Zone	21.5	5,695.79	110.6
676	N218	5,446.07	100 Tract NW Zone	2.0	5,693.06	106.9
677	N211	5,440.32	100 Tract NW Zone	35.2	5,696.06	110.6
678	N171	5,443.02	100 Tract NW Zone	9.8	5,698.25	110.4

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ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
679	N161	5,436.18	100 Tract NW Zone	11.7	5,698.40	113.4
680	N157	5,426.57	100 Tract NW Zone	29.4	5,698.98	117.9
681	N159	5,428.85	100 Tract NW Zone	25.4	5,699.67	117.2
682	N160	5,433.29	100 Tract NW Zone	17.6	5,700.28	115.5
683	N133	5,393.91	300 Tract NW Zone	34.2	5,700.56	132.7
684	Com136	5,396.17	300 Tract NW Zone	17.6	5,700.59	131.7
685	N141	5,397.55	300 Tract NW Zone	21.5	5,700.83	131.2
686	N137	5,397.03	300 Tract NW Zone	7.8	5,701.03	131.5
687	N104	5,414.62	300 Tract WEST Zone	28.3	5,468.06	23.1
688	N105	5,414.00	300 Tract WEST Zone	31.3	5,468.09	23.4
1713	J-1	5,458.10	100 Tract NW Zone	2.0	5,700.21	104.8
1716	Church-LDS	5,458.00	100 Tract NW Zone	0.0	5,700.21	104.8
1718	J-3	5,449.16	300 Tract NW Zone	0.0	5,701.36	109.1
1721	Bawcom RE	5,449.00	300 Tract NW Zone	0.0	5,701.36	109.2
1723	J-5	5,429.02	300 Tract NW Zone	0.0	5,703.05	118.6
1726	Spring Creek Elementary	5,429.00	300 Tract NW Zone	17.8	5,703.05	118.6
1728	J-7	5,438.85	100 Tract NW Zone	0.0	5,704.59	115.0
1731	J-8	5,439.00	100 Tract NW Zone	11.4	5,704.59	114.9
1755	J-10	5,788.87	400 Tract LOWER Zone	0.0	5,887.98	42.9
1765	N543	5,436.00	100 Tract NW Zone	0.0	5,695.78	112.4
1773	N544	5,591.44	100 Tract NW Zone	0.0	5,696.42	45.4
1776	N545	5,604.14	100 Tract SE Zone	0.0	5,846.24	104.7
1779	N546	5,589.55	100 Tract NW Zone	0.0	5,692.91	44.7

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ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
1782	J-17	5,528.15	300 Tract NW Zone	0.0	5,716.12	81.3
1785	N548	5,574.00	400 Tract SE Zone	0.0	5,840.01	115.1
1789	N549	5,593.80	400 Tract LOWER Zone	0.0	5,848.26	110.1
1792	N551	5,632.42	400 Tract LOWER Zone	0.0	5,737.55	45.5
1795	N552	5,668.14	400 Tract LOWER Zone	0.0	5,748.35	34.7
1798	N553	5,646.69	400 Tract LOWER Zone	0.0	5,885.33	103.2
1801	N550	5,717.38	400 Tract LOWER Zone	0.0	5,849.30	57.1
1807	N554	5,653.33	400 Tract SE Zone	2.0	5,835.54	78.8
1810	N555	5,658.49	400 Tract LOWER Zone	0.0	5,784.20	54.4
1813	N556	5,668.83	400 Tract LOWER Zone	0.0	5,770.34	43.9
1816	N557	5,720.13	400 Tract MID Zone	0.0	5,701.03	-8.3
1819	N558	5,807.46	400 Tract UPPER Zone	0.0	6,018.17	91.2
1822	N559	5,793.19	400 Tract MID Zone	0.0	5,692.02	-43.8
1825	N560	5,804.27	400 Tract UPPER Zone	0.0	6,020.95	93.7
1828	N561	5,791.09	400 Tract UPPER Zone	0.0	6,047.28	110.8
1831	N562	5,808.06	400 Tract UPPER Zone	0.0	6,047.28	103.5
1834	N563	5,803.47	400 Tract LOWER Zone	0.0	5,811.45	3.5
1837	N565	5,785.17	400 Tract UPPER Zone	0.0	6,016.28	100.0
1840	N564	5,781.39	400 Tract MID Zone	0.0	5,708.41	-31.6
1843	N566	5,788.09	400 Tract UPPER Zone	0.0	5,731.29	-24.6
1846	J-38	5,794.14	400 Tract UPPER Zone	0.0	6,046.67	109.3
1851	N567	5,594.00	100 Tract NW Zone	2.0	5,719.04	54.1
1854	N568	5,644.00	100 Tract SE Zone	2.9	5,848.70	88.6
1856	J-43	5,559.00	100 Tract NW Zone	2.9	5,761.61	87.7

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ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
1880	Liberty Peak Elementary	5,458.15	100 Tract NW Zone	111.4	5,707.31	107.8
1938	N569 (B&G Club)	5,395.41	300 Tract WEST Zone	2.9	5,474.86	34.4

GBWC 2024 IRP - Spring Creek Division - Housing Section  
 Preferred Plan PHD 2044 Distribution System Pipe Report  
 PHD-PIPES - Time: 0.00 hours

Label	Length (Scaled) (ft)	Diamete r (in)	Material	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Hazen- Williams C
L481	1,356	12	PVC	-1,847.1	5.24	10.71	130.0
L503	7,827	12	PVC	-1,081.5	3.07	22.94	130.0
L388	810	8	PVC	-827.3	5.28	10.41	130.0
L453	210	12	PVC	-787.1	2.23	0.34	130.0
L378	707	8	PVC	-764.6	4.88	7.85	130.0
P-46	349	12	PVC	-743.2	2.11	0.51	130.0
P-47	3,457	12	PVC	-743.2	2.11	5.06	130.0
L371	985	8	PVC	-703.7	4.49	9.38	130.0
L394	207	8	PVC	-696.3	4.44	1.94	130.0
L455	155	6	PVC	-694.5	7.88	5.85	130.0
L344	769	8	PVC	-690.2	4.41	7.07	130.0
L192	2,086	12	PVC	-685.9	1.95	2.63	130.0
L391	602	8	PVC	-676.7	4.32	5.34	130.0
L392	155	8	PVC	-670.9	4.28	1.35	130.0
L179	1,473	12	PVC	-661.6	1.88	1.74	130.0
L346	307	8	PVC	-655.3	4.18	2.57	130.0
L342	47	8	PVC	-637.9	4.07	0.37	130.0
L335	317	8	PVC	-634.0	4.05	2.49	130.0
L163	2,030	12	PVC	-618.4	1.75	2.11	130.0
L159	1,590	12	PVC	-611.1	1.73	1.62	130.0
L160	1,350	12	PVC	-605.3	1.72	1.35	130.0
L442	1,092	6	PVC	-601.5	6.83	31.59	130.0
L154	323	12	PVC	-545.7	1.55	0.27	130.0
L155	1,343	12	PVC	-535.9	1.52	1.07	130.0
L412	701	12	PVC	-522.8	1.48	0.53	130.0
L319	553	8	PVC	-520.5	3.32	3.01	130.0
L283	908	8	PVC	-520.5	3.32	4.95	130.0
L578	2,732	6	PVC	-512.5	5.82	58.77	130.0
L452	82	6	PVC	-503.0	5.71	1.71	130.0
L338	358	8	PVC	-502.9	3.21	1.83	130.0
L435	1,068	6	PVC	-500.3	5.68	21.96	130.0
L280	147	8	PVC	-497.0	3.17	0.73	130.0
L291	1,216	8	PVC	-495.6	3.16	6.05	130.0
P-24	894	4	Ductile Iron	-494.1	12.62	129.44	130.0
L330	737	8	PVC	-491.2	3.14	3.61	130.0
L157	467	12	PVC	-482.0	1.37	0.31	130.0
L158	920	12	PVC	-478.1	1.36	0.59	130.0
L428	544	6	PVC	-474.9	5.39	10.16	130.0
L153	1,017	12	PVC	-456.5	1.30	0.60	130.0
L420	1,104	6	PVC	-449.4	5.10	18.62	130.0
L381	767	6	PVC	-432.7	4.91	12.05	130.0
P-21	820	12	PVC	-420.8	1.19	0.37	140.0
L410	905	6	PVC	-420.1	4.77	13.46	130.0
L399	680	6	PVC	-402.5	4.57	9.34	130.0
L375	614	6	PVC	-397.5	4.51	8.25	130.0

GBWC 2024 IRP - Spring Creek Division - Housing Section  
 Preferred Plan PHD 2044 Distribution System Pipe Report  
 PHD-PIPES - Time: 0.00 hours

Label	Length (Scaled) (ft)	Diameter (in)	Material	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Hazen-Williams C
L271	453	8	PVC	-393.5	2.51	1.47	130.0
L329	676	12	PVC	-390.6	1.11	0.30	130.0
L390	247	6	PVC	-382.9	4.34	3.10	130.0
L387	495	6	PVC	-369.2	4.19	5.80	130.0
L416	1,917	8	PVC	-365.1	2.33	5.42	130.0
L573	1,283	6	PVC	-364.1	4.13	14.65	130.0
L409	514	8	PVC	-337.7	2.16	1.26	130.0
L385	652	6	PVC	-334.0	3.79	6.34	130.0
L406	296	8	PVC	-324.0	2.07	0.67	130.0
P-29	957	6	Ductile Iron	-317.8	3.61	8.50	130.0
L483	1,038	4	PVC	-313.9	8.01	64.93	130.0
L326	293	6	PVC	-302.6	3.43	2.37	130.0
L490	392	6	PVC	-298.3	3.38	3.10	130.0
L263	382	8	PVC	-294.3	1.88	0.72	130.0
L570	2,748	4	PVC	-291.9	7.45	150.19	130.0
L314	626	6	PVC	-288.9	3.28	4.66	130.0
L516	1,340	6	PVC	-288.6	3.27	9.95	130.0
L239	1,384	8	PVC	-266.9	1.70	2.19	130.0
L561	637	6	PVC	-262.6	2.98	3.97	130.0
L462	1,843	4	PVC	-257.8	6.58	80.00	130.0
L478	1,155	6	PVC	-248.5	2.82	6.50	130.0
L552	1,002	6	PVC	-245.0	2.78	5.49	130.0
L374	306	6	PVC	-242.7	2.75	1.65	130.0
L110	2,015	8	PVC	-241.6	1.54	2.65	130.0
L252	39	6	PVC	-235.5	2.67	0.20	130.0
L466	1,227	6	PVC	-234.8	2.66	6.22	130.0
L122(2)	971	8	PVC	-229.8	1.47	1.17	130.0
L383	420	6	PVC	-228.5	2.59	2.02	130.0
L122(1)	253	8	PVC	-227.0	1.45	0.30	130.0
L533	1,170	6	PVC	-219.5	2.49	5.23	130.0
L370	547	6	PVC	-219.5	2.49	2.44	130.0
L248	360	6	PVC	-214.5	2.43	1.54	130.0
L294	242	8	PVC	-211.8	1.35	0.25	130.0
L511	715	6	PVC	-210.3	2.39	2.95	130.0
L286	467	6	PVC	-204.2	2.32	1.83	130.0
L285	438	8	PVC	-204.0	1.30	0.42	130.0
L241	779	8	PVC	-202.5	1.29	0.74	130.0
L486	1,343	6	PVC	-198.6	2.25	4.99	130.0
P-9	301	8	PVC	-196.4	1.25	0.27	130.0
L397	733	3	PVC	-191.3	8.68	74.35	130.0
L238	657	6	PVC	-189.1	2.15	2.23	130.0
P-8	463	8	PVC	-178.6	1.14	0.35	130.0
P-32	1,657	6	Ductile Iron	-169.8	1.93	4.60	130.0

GBWC 2024 IRP - Spring Creek Division - Housing Section  
 Preferred Plan PHD 2044 Distribution System Pipe Report  
 PHD-PIPES - Time: 0.00 hours

Label	Length (Scaled) (ft)	Diamete r (in)	Material	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Hazen- Williams C
L235	534	8	PVC	-169.2	1.08	0.36	130.0
L272	514	6	PVC	-163.4	1.85	1.33	130.0
L205	358	6	PVC	-161.7	1.83	0.91	130.0
L336	1,210	6	PVC	-160.4	1.82	3.03	130.0
P-12	658	6	PVC	-151.7	1.72	1.49	130.0
L363	792	3	PVC	-146.3	6.64	48.92	130.0
L365	824	6	PVC	-144.9	1.64	1.71	130.0
L219	677	8	PVC	-143.8	0.92	0.34	130.0
P-11	188	6	PVC	-140.3	1.59	0.37	130.0
L278	792	8	PVC	-131.6	0.84	0.34	130.0
L333	302	4	PVC	-124.6	3.18	3.41	130.0
L124	960	8	PVC	-121.3	0.77	0.35	130.0
L126	592	8	PVC	-113.5	0.72	0.19	130.0
L281	315	8	PVC	-112.0	0.71	0.10	130.0
L204	591	6	PVC	-110.9	1.26	0.75	130.0
L358	487	4	PVC	-109.9	2.80	4.36	130.0
L448	1,369	4	PVC	-109.3	2.79	12.13	130.0
L307	1,115	4	PVC	-108.9	2.78	9.81	130.0
L210	704	8	PVC	-108.5	0.69	0.21	130.0
L458	245	4	PVC	-106.6	2.72	2.07	130.0
L225	582	6	PVC	-105.0	1.19	0.66	130.0
L213	949	6	PVC	-97.2	1.10	0.94	130.0
L106	525	4	PVC	-96.8	2.47	3.72	130.0
L395	512	4	PVC	-95.7	2.44	3.55	130.0
L273	683	4	PVC	-94.2	2.41	4.60	130.0
L269	797	8	PVC	-91.8	0.59	0.17	130.0
L449	715	6	PVC	-91.7	1.04	0.64	130.0
L268	614	6	PVC	-90.3	1.02	0.53	130.0
L127	791	8	PVC	-90.0	0.57	0.17	130.0
L354	883	4	PVC	-86.5	2.21	5.07	130.0
L262	444	6	PVC	-86.3	0.98	0.35	130.0
L247	1,729	4	PVC	-80.7	2.06	8.73	130.0
L447	1,664	4	PVC	-79.4	2.03	8.16	130.0
L413	1,295	4	PVC	-78.1	1.99	6.16	130.0
L305	772	4	PVC	-76.9	1.96	3.56	130.0
L230	2,343	4	PVC	-76.7	1.96	10.78	130.0
L293	2,593	4	PVC	-76.3	1.95	11.82	130.0
L129	253	8	PVC	-76.3	0.49	0.04	130.0
L450	685	6	PVC	-76.0	0.86	0.43	130.0
L296	736	8	PVC	-74.8	0.48	0.11	130.0
L464	1,424	4	PVC	-73.3	1.87	6.02	130.0
L256	1,128	4	PVC	-72.7	1.86	4.70	130.0
L315	1,486	4	PVC	-72.7	1.86	6.18	130.0
L209	1,177	8	PVC	-68.8	0.44	0.15	130.0
L400	1,314	4	PVC	-68.0	1.74	4.83	130.0

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GBWC 2024 IRP - Spring Creek Division - Housing Section  
 Preferred Plan PHD 2044 Distribution System Pipe Report  
 PHD-PIPES - Time: 0.00 hours

Label	Length (Scaled) (ft)	Diameter (in)	Material	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Hazen-Williams C
L430	3,390	4	PVC	-64.7	1.65	11.36	130.0
L130	343	8	PVC	-64.6	0.41	0.04	130.0
L309	2,155	4	PVC	-63.7	1.63	7.02	130.0
L295	1,076	4	PVC	-61.2	1.56	3.26	130.0
L477	617	6	PVC	-60.7	0.69	0.25	130.0
L446	493	6	PVC	-59.8	0.68	0.20	130.0
L454	985	6	PVC	-58.4	0.66	0.38	130.0
L246	214	4	PVC	-57.2	1.46	0.57	130.0
L351	2,905	3	PVC	-54.9	2.49	29.21	130.0
L131	412	8	PVC	-52.8	0.34	0.03	130.0
L234	1,452	4	PVC	-50.8	1.30	3.11	130.0
L473	589	6	PVC	-48.9	0.56	0.16	130.0
L292	684	4	PVC	-47.2	1.21	1.28	130.0
L541	1,155	4	PVC	-45.0	1.15	1.98	130.0
L168	1,951	6	PVC	-44.8	0.51	0.46	130.0
L297	478	6	PVC	-44.4	0.50	0.11	130.0
L423	1,550	6	PVC	-44.2	0.50	0.36	130.0
L556	964	4	PVC	-43.5	1.11	1.55	130.0
L170	813	4	PVC	-41.6	1.06	1.21	130.0
L194	1,076	4	PVC	-40.9	1.05	1.55	130.0
L176	3,530	4	PVC	-39.7	1.01	4.79	130.0
L468	689	6	PVC	-38.8	0.44	0.12	130.0
L245	853	4	PVC	-37.5	0.96	1.04	130.0
L104	3,303	4	PVC	-36.3	0.93	3.79	130.0
L227	1,007	4	PVC	-35.7	0.91	1.12	130.0
L331	530	4	PVC	-33.8	0.86	0.53	130.0
L425	1,084	3	PVC	-33.5	1.52	4.35	130.0
L103	1,170	4	PVC	-31.7	0.81	1.04	130.0
L259	1,783	4	PVC	-31.0	0.79	1.53	130.0
L267	1,989	4	PVC	-29.9	0.76	1.59	130.0
L372	2,934	3	PVC	-29.6	1.34	9.38	130.0
L132	605	8	PVC	-29.4	0.19	0.02	130.0
L289	335	8	PVC	-29.0	0.19	0.01	130.0
L467	978	4	PVC	-29.0	0.74	0.74	130.0
L251	634	3	PVC	-27.9	1.26	1.81	130.0
L232	2,208	3	PVC	-27.2	1.24	6.06	130.0
L284	566	8	PVC	-27.1	0.17	0.01	130.0
L195	1,805	4	PVC	-26.1	0.67	1.13	130.0
L218	629	6	PVC	-25.8	0.29	0.05	130.0
L310	1,507	3	PVC	-25.8	1.17	3.74	130.0
L526	1,384	4	PVC	-25.5	0.65	0.83	130.0
L229	656	4	PVC	-23.9	0.61	0.35	130.0
L134	362	8	PVC	-21.5	0.14	0.01	130.0
L367	540	6	PVC	-21.3	0.24	0.03	130.0
L364	489	6	PVC	-21.3	0.24	0.03	130.0



GBWC 2024 IRP - Spring Creek Division - Housing Section  
 Preferred Plan PHD 2044 Distribution System Pipe Report  
 PHD-PIPES - Time: 0.00 hours

Label	Length (Scaled) (ft)	Diamete r (in)	Material	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Hazen- Williams C
L100	3,578	4	PVC	-18.1	0.46	1.13	130.0
L487	4,290	4	PVC	-15.6	0.40	1.04	130.0
L260	1,789	3	PVC	-14.5	0.66	1.53	130.0
L162	2,364	4	PVC	-14.3	0.36	0.48	130.0
L188	628	4	PVC	-14.2	0.36	0.13	130.0
L226	1,276	4	PVC	-13.6	0.35	0.24	130.0
L303	990	4	PVC	-13.4	0.34	0.18	130.0
L102	263	4	PVC	-11.9	0.30	0.04	130.0
L253	1,515	4	PVC	-8.4	0.21	0.12	130.0
L355	587	4	PVC	-8.0	0.20	0.04	130.0
L208	766	6	PVC	-6.2	0.07	0.00	130.0
L451	1,752	3	PVC	-5.1	0.23	0.22	130.0
L203	826	4	PVC	-4.3	0.11	0.02	130.0
L350	189	4	PVC	-3.2	0.08	0.00	130.0
L137	373	8	PVC	-2.0	0.01	0.00	130.0
L113	3,660	4	PVC	-1.6	0.04	0.01	130.0
P-50	2,158	3	PVC	0.0	0.00	0.00	130.0
P-51	624	4	PVC	0.0	0.00	0.00	130.0
P-53	2,032	3	PVC	0.0	0.00	0.00	130.0
P-67	2,834	4	PVC	0.0	0.00	0.00	130.0
P-63	2,065	6	PVC	0.0	0.00	0.00	130.0
P-58	2,412	3	PVC	0.0	0.00	0.00	130.0
P-4	146	8	PVC	0.0	0.00	0.00	130.0
P-74	881	3	PVC	0.0	0.00	0.00	130.0
P-35	437	6	PVC	0.0	0.00	0.00	130.0
P-82	967	3	PVC	0.0	0.00	0.00	130.0
L249	1,720	3	PVC	0.0	0.00	0.00	130.0
L471	263	6	PVC	0.0	0.00	0.00	130.0
P-49	136	3	PVC	0.0	0.00	0.00	130.0
P-52	86	4	PVC	0.0	0.00	0.00	130.0
P-54	96	3	PVC	0.0	0.00	0.00	130.0
P-56	83	3	PVC	0.0	0.00	0.00	130.0
P-57	127	3	PVC	0.0	0.00	0.00	130.0
P-62	172	6	PVC	0.0	0.00	0.00	130.0
P-64	167	6	PVC	0.0	0.00	0.00	130.0
P-65	173	4	PVC	0.0	0.00	0.00	130.0
P-68	266	4	PVC	0.0	0.00	0.00	130.0
P-45	387	2	Ductile Iron	0.0	0.00	0.00	130.0
P-69	852	3	PVC	0.0	0.00	0.00	130.0
L133	2,080	3	PVC	0.0	0.00	0.00	130.0
P-43	764	2	PVC	0.0	0.00	0.00	130.0
P-75	500	3	PVC	0.0	0.00	0.00	130.0
P-85	421	3	PVC	0.0	0.00	0.00	130.0
P-78	120	4	PVC	0.0	0.00	0.00	130.0
L504	1,625	6	PVC	0.0	0.00	0.00	130.0

GBWC 2024 IRP - Spring Creek Division - Housing Section  
 Preferred Plan PHD 2044 Distribution System Pipe Report  
 PHD-PIPES - Time: 0.00 hours

Label	Length (Scaled) (ft)	Diamete r (in)	Material	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Hazen- Williams C
P-88	527	6	Ductile Iron	0.0	0.00	0.00	130.0
L341	505	8	PVC	0.0	0.00	0.00	130.0
P-55	3,981	3	PVC	0.0	0.00	0.00	130.0
P-66	2,873	4	PVC	0.0	0.00	0.00	130.0
P-71	546	3	PVC	0.0	0.00	0.00	130.0
P-83	915	3	PVC	0.0	0.00	0.00	130.0
P-48	806	3	PVC	0.0	0.00	0.00	130.0
P-40	611	2	PVC	0.0	0.00	0.00	130.0
P-79	1,912	6	Ductile Iron	0.0	0.00	0.00	130.0
P-7	201	8	Ductile Iron	0.0	0.00	0.00	130.0
L583	1,347	8	PVC	0.0	0.00	0.00	130.0
L112	2,126	3	PVC	0.3	0.02	0.00	130.0
L506	1,091	4	PVC	0.8	0.02	0.00	130.0
L111	1,079	4	PVC	1.1	0.03	0.00	130.0
L312	316	3	PVC	1.6	0.07	0.00	130.0
L125	505	8	PVC	2.0	0.01	0.00	130.0
P-90	1,627	3	PVC	2.0	0.09	0.03	130.0
P-61	938	6	PVC	2.0	0.02	0.00	130.0
L148	252	8	PVC	2.0	0.01	0.00	130.0
P-91	1,029	3	PVC	2.9	0.13	0.04	130.0
P-92	1,375	6	Ductile Iron	2.9	0.03	0.00	130.0
L564	1,191	4	PVC	3.1	0.08	0.01	130.0
L193	1,137	4	PVC	3.3	0.08	0.02	130.0
L189	1,928	4	PVC	3.5	0.09	0.03	130.0
L497	890	3	PVC	3.9	0.18	0.07	130.0
L101	1,000	4	PVC	3.9	0.10	0.02	130.0
L593	7,523	6	PVC	3.9	0.04	0.02	130.0
L586	362	6	PVC	3.9	0.04	0.00	130.0
L222	364	6	PVC	5.9	0.07	0.00	130.0
L135	2,391	4	PVC	5.9	0.15	0.09	130.0
L128	86	6	PVC	5.9	0.07	0.00	130.0
L116	463	4	PVC	5.9	0.15	0.02	130.0
L554	827	3	PVC	5.9	0.27	0.13	130.0
L431	3,226	4	PVC	6.2	0.16	0.14	130.0
L517	898	4	PVC	6.3	0.16	0.04	130.0
L191	1,480	2	PVC	6.6	0.68	2.15	130.0
L223	624	6	PVC	7.8	0.09	0.01	130.0
L579	1,281	3	PVC	7.8	0.36	0.35	130.0
L574	1,949	6	PVC	7.8	0.09	0.02	130.0
L187	815	8	PVC	8.4	0.05	0.00	130.0
L214	1,136	3	PVC	9.3	0.42	0.42	130.0
L274	1,610	2	PVC	9.3	0.95	4.37	130.0
L347	990	4	PVC	9.6	0.25	0.10	130.0
L509	865	6	PVC	9.8	0.11	0.01	130.0
L495	950	6	PVC	9.8	0.11	0.01	130.0

Housing Section Model.wtg  
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GBWC 2024 IRP - Spring Creek Division - Housing Section  
 Preferred Plan PHD 2044 Distribution System Pipe Report  
 PHD-PIPES - Time: 0.00 hours

Label	Length (Scaled) (ft)	Diamete r (in)	Material	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Hazen- Williams C
L334	235	4	PVC	9.8	0.25	0.02	130.0
L553	944	3	PVC	9.8	0.44	0.39	130.0
L181	2,045	3	PVC	10.1	0.46	0.90	130.0
L174	2,111	4	PVC	10.8	0.28	0.26	130.0
P-13	154	6	Ductile Iron	11.4	0.13	0.00	130.0
L546	1,635	3	PVC	11.7	0.53	0.94	130.0
L499	1,734	3	PVC	11.7	0.53	1.00	130.0
L484	819	3	PVC	11.7	0.53	0.47	130.0
L359	751	6	PVC	11.7	0.13	0.01	130.0
L323	1,026	4	PVC	11.7	0.30	0.15	130.0
L322	774	4	PVC	11.7	0.30	0.11	130.0
L316	1,400	4	PVC	11.7	0.30	0.20	130.0
L301	2,457	3	PVC	11.7	0.53	1.42	130.0
L530	1,858	3	PVC	13.7	0.62	1.43	130.0
L510	1,107	3	PVC	13.7	0.62	0.85	130.0
L507	1,720	4	PVC	13.7	0.35	0.33	130.0
L417	1,485	3	PVC	13.7	0.62	1.14	130.0
L233	697	3	PVC	13.7	0.62	0.54	130.0
L255	747	6	PVC	13.7	0.16	0.02	130.0
L118	756	4	PVC	14.8	0.38	0.17	130.0
L415	2,495	4	PVC	15.4	0.39	0.59	130.0
L460	1,057	3	PVC	15.7	0.71	1.04	130.0
L282	291	6	PVC	15.7	0.18	0.01	130.0
L563	1,142	3	PVC	15.7	0.71	1.12	130.0
L306	2,083	4	PVC	16.4	0.42	0.55	130.0
L349	1,322	3	PVC	17.6	0.80	1.62	130.0
P-10	348	8	PVC	17.8	0.11	0.00	130.0
L538	1,254	4	PVC	18.1	0.46	0.40	130.0
L190	2,402	4	PVC	18.4	0.47	0.78	130.0
L418	1,308	2	PVC	18.5	1.88	12.58	130.0
L183	3,902	4	PVC	18.5	0.47	1.29	130.0
L547	1,589	4	PVC	18.7	0.48	0.54	130.0
L178	1,201	4	PVC	18.8	0.48	0.41	130.0
L175	41	4	PVC	19.6	0.50	0.02	130.0
L199	1,494	4	PVC	20.1	0.51	0.58	130.0
L184	1,210	4	PVC	20.6	0.53	0.49	130.0
L531	1,076	4	PVC	21.5	0.55	0.47	130.0
L398	599	2	PVC	21.5	2.20	7.67	130.0
L557	480	3	PVC	21.5	0.98	0.85	130.0
L551	757	4	PVC	21.5	0.55	0.33	130.0
L549	985	4	PVC	22.0	0.56	0.45	130.0
L525	735	4	PVC	22.0	0.56	0.33	130.0
L389	922	3	PVC	23.5	1.07	1.92	130.0
L581	321	8	PVC	23.5	0.15	0.01	130.0
L528	1,893	4	PVC	24.3	0.62	1.04	130.0

Housing Section Model.wtg  
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GBWC 2024 IRP - Spring Creek Division - Housing Section  
 Preferred Plan PHD 2044 Distribution System Pipe Report  
 PHD-PIPES - Time: 0.00 hours

Label	Length (Scaled) (ft)	Diamete r (in)	Material	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Hazen- Williams C
L313	149	3	PVC	25.1	1.14	0.35	130.0
L488	914	8	PVC	25.4	0.16	0.02	130.0
L475	431	12	PVC	25.4	0.07	0.00	130.0
L474	325	3	PVC	25.4	1.15	0.79	130.0
L396	2,935	3	PVC	25.4	1.15	7.10	130.0
L379	3,485	4	PVC	25.4	0.65	2.08	130.0
L242	276	4	PVC	25.4	0.65	0.16	130.0
L220	576	4	PVC	25.4	0.65	0.34	130.0
L565	1,551	4	PVC	25.4	0.65	0.92	130.0
L429	1,021	3	PVC	27.4	1.24	2.83	130.0
L422	2,022	2	PVC	27.4	2.80	40.44	130.0
L237	423	6	PVC	27.4	0.31	0.04	130.0
L105	1,167	8	PVC	28.3	0.18	0.03	130.0
L169	1,397	6	PVC	28.7	0.33	0.14	130.0
L173	1,725	4	PVC	28.9	0.74	1.30	130.0
L240	408	6	PVC	29.4	0.33	0.04	130.0
L543	1,260	4	PVC	31.3	0.80	1.10	130.0
L512	1,080	4	PVC	31.3	0.80	0.95	130.0
L520	3,578	4	PVC	33.3	0.85	3.50	130.0
L491	1,090	4	PVC	33.3	0.85	1.07	130.0
P-59	1,562	6	PVC	33.3	0.38	0.21	130.0
L508	1,731	4	PVC	33.3	0.85	1.70	130.0
L139	708	8	PVC	34.2	0.22	0.02	130.0
L156	1,546	4	PVC	34.3	0.88	1.60	130.0
L231	550	4	PVC	34.4	0.88	0.57	130.0
L236	283	4	PVC	34.6	0.88	0.30	130.0
L117	811	4	PVC	34.7	0.89	0.86	130.0
L228	1,215	4	PVC	34.9	0.89	1.30	130.0
L472	1,023	4	PVC	35.2	0.90	1.11	130.0
L513	613	6	PVC	35.2	0.40	0.09	130.0
L177	1,352	4	PVC	35.2	0.90	1.47	130.0
L439	2,065	4	PVC	35.3	0.90	2.25	130.0
L438	351	6	PVC	36.6	0.42	0.06	130.0
L217	540	4	PVC	36.7	0.94	0.63	130.0
L352	1,509	3	PVC	36.8	1.67	7.25	130.0
L380	763	4	PVC	37.2	0.95	0.92	130.0
L180	1,158	4	PVC	37.4	0.96	1.41	130.0
L566	3,370	3	PVC	37.6	1.71	16.81	130.0
L250	345	6	PVC	37.6	0.43	0.06	130.0
L515	1,579	4	PVC	39.1	1.00	2.09	130.0
L107	2,125	4	PVC	39.7	1.01	2.88	130.0
L165	601	6	PVC	40.4	0.46	0.12	130.0
L221	1,814	4	PVC	41.1	1.05	2.63	130.0
L493	1,524	4	PVC	42.0	1.07	2.30	130.0
L317	670	3	PVC	43.1	1.95	4.29	130.0

GBWC 2024 IRP - Spring Creek Division - Housing Section  
 Preferred Plan PHD 2044 Distribution System Pipe Report  
 PHD-PIPES - Time: 0.00 hours

Label	Length (Scaled) (ft)	Diameter (in)	Material	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Hazen-Williams C
L534	1,686	4	PVC	43.1	1.10	2.66	130.0
L575	1,013	8	PVC	43.1	0.27	0.05	130.0
L185	421	4	PVC	44.0	1.12	0.69	130.0
L522	720	6	PVC	44.5	0.51	0.17	130.0
L161	1,801	4	PVC	45.9	1.17	3.20	130.0
L536	602	4	PVC	47.0	1.20	1.12	130.0
L558	1,218	4	PVC	47.0	1.20	2.26	130.0
L325	539	6	PVC	47.0	0.53	0.14	130.0
L362	343	4	PVC	47.1	1.20	0.64	130.0
L257	388	6	PVC	47.4	0.54	0.10	130.0
L434	815	4	PVC	48.9	1.25	1.63	130.0
L164	1,594	6	PVC	50.2	0.57	0.46	130.0
L440	2,683	4	PVC	50.6	1.29	5.71	130.0
L207	964	4	PVC	51.4	1.31	2.11	130.0
L224	1,590	4	PVC	51.8	1.32	3.53	130.0
L524	1,740	4	PVC	56.8	1.45	4.58	130.0
L244	626	4	PVC	56.8	1.45	1.65	130.0
L529	1,708	4	PVC	57.9	1.48	4.66	130.0
P-3	196	8	PVC	58.0	0.37	0.02	130.0
L494	1,232	4	PVC	58.7	1.50	3.45	130.0
L198	934	6	PVC	59.4	0.67	0.37	130.0
P-2	187	8	PVC	60.0	0.38	0.02	130.0
L353	1,283	4	PVC	61.0	1.56	3.86	130.0
L539	2,069	6	PVC	62.2	0.71	0.89	130.0
L568	630	8	PVC	64.6	0.41	0.07	130.0
L270	2,369	4	PVC	67.8	1.73	8.68	130.0
L324	649	4	PVC	68.5	1.75	2.42	130.0
L215	644	4	PVC	70.5	1.80	2.53	130.0
L535	205	4	PVC	71.6	1.83	0.83	130.0
L196	500	6	PVC	73.1	0.83	0.29	130.0
L441	797	4	PVC	74.4	1.90	3.46	130.0
L114	1,817	4	PVC	76.9	1.96	8.39	130.0
L151	1,652	8	PVC	77.8	0.50	0.27	130.0
L140	233	8	PVC	77.8	0.50	0.04	130.0
L559	1,279	8	PVC	78.3	0.50	0.21	130.0
L361	1,321	4	PVC	79.1	2.02	6.43	130.0
L540	882	6	PVC	79.1	0.90	0.60	130.0
L197	400	8	PVC	79.3	0.51	0.07	130.0
L166	1,012	6	PVC	79.6	0.90	0.69	130.0
L276	806	8	PVC	82.1	0.52	0.14	130.0
L571	2,153	4	PVC	87.0	2.22	12.51	130.0
L560	414	4	PVC	89.2	2.28	2.52	130.0
L277	200	8	PVC	89.9	0.57	0.04	130.0
L414	770	6	PVC	90.1	1.02	0.66	130.0
L206	782	8	PVC	93.0	0.59	0.18	130.0

GBWC 2024 IRP - Spring Creek Division - Housing Section  
 Preferred Plan PHD 2044 Distribution System Pipe Report  
 PHD-PIPES - Time: 0.00 hours

Label	Length (Scaled) (ft)	Diamete r (in)	Material	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Hazen- Williams C
L567	596	4	PVC	93.1	2.38	3.93	130.0
L544	1,460	4	PVC	94.5	2.41	9.89	130.0
P-28	866	6	PVC	94.6	1.07	0.81	130.0
L108	958	8	PVC	95.9	0.61	0.23	130.0
L279	235	8	PVC	97.7	0.62	0.06	130.0
L216	538	8	PVC	104.7	0.67	0.15	130.0
L167	539	6	PVC	105.0	1.19	0.62	130.0
L123	486	8	PVC	105.6	0.67	0.14	130.0
L275	786	6	PVC	108.1	1.23	0.95	130.0
L182	358	8	PVC	109.8	0.70	0.11	130.0
P-93	226	8	PVC	111.4	0.71	0.07	130.0
L408	962	4	PVC	112.7	2.88	9.03	130.0
L582	852	6	PVC	113.7	1.29	1.13	130.0
L109	2,039	8	PVC	117.4	0.75	0.71	130.0
L555	940	4	PVC	123.0	3.14	10.36	130.0
L485	480	4	PVC	124.2	3.17	5.39	130.0
L542	1,311	4	PVC	124.4	3.18	14.77	130.0
L300	1,929	6	PVC	125.3	1.42	3.05	130.0
L290	383	6	PVC	125.3	1.42	0.61	130.0
L258	502	6	PVC	128.5	1.46	0.83	130.0
L368	575	4	PVC	129.2	3.30	6.94	130.0
L143	140	8	PVC	129.6	0.83	0.06	130.0
L562	2,472	3	PVC	131.7	5.98	125.65	130.0
L427	808	6	PVC	133.6	1.52	1.44	130.0
L421	921	6	PVC	138.2	1.57	1.75	130.0
L144	370	8	PVC	141.4	0.90	0.18	130.0
L461	1,015	4	PVC	141.5	3.61	14.50	130.0
L172	780	8	PVC	145.4	0.93	0.40	130.0
L432	1,364	6	PVC	148.0	1.68	2.94	130.0
L299	489	6	PVC	148.7	1.69	1.06	130.0
L580	1,261	4	PVC	154.2	3.94	21.15	130.0
L548	919	12	PVC	156.6	0.44	0.08	130.0
L419	962	6	PVC	161.0	1.83	2.42	130.0
L348	769	6	PVC	161.8	1.84	1.96	130.0
L537	942	12	PVC	162.4	0.46	0.08	130.0
L302	326	6	PVC	162.4	1.84	0.83	130.0
L141	325	8	PVC	162.9	1.04	0.21	130.0
L211	1,079	8	PVC	162.9	1.04	0.68	130.0
L298	807	12	PVC	166.4	0.47	0.07	130.0
L550	756	6	PVC	170.6	1.94	2.12	130.0
L136	153	8	PVC	170.7	1.09	0.11	130.0
L304	295	6	PVC	172.2	1.95	0.84	130.0
L149	760	8	PVC	174.6	1.11	0.55	130.0
L147	724	8	PVC	174.6	1.11	0.52	130.0
L142	684	8	PVC	174.6	1.11	0.49	130.0

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GBWC 2024 IRP - Spring Creek Division - Housing Section  
 Preferred Plan PHD 2044 Distribution System Pipe Report  
 PHD-PIPES - Time: 0.00 hours

Label	Length (Scaled) (ft)	Diamete r (in)	Material	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Hazen- Williams C
L343	448	6	PVC	175.5	1.99	1.33	130.0
L212	548	8	PVC	180.5	1.15	0.42	130.0
L576	1,255	4	PVC	184.6	4.71	29.35	130.0
L261	433	6	PVC	187.7	2.13	1.45	130.0
L356	1,990	6	PVC	198.0	2.25	7.35	130.0
L321	2,038	6	PVC	198.0	2.25	7.53	130.0
L393	1,626	6	PVC	203.0	2.30	6.29	130.0
L382	1,647	4	PVC	203.0	5.18	45.94	130.0
L523	1,177	12	PVC	217.2	0.62	0.18	130.0
L171	132	8	PVC	236.7	1.51	0.17	130.0
L384	874	8	PVC	242.2	1.55	1.16	130.0
P-6	314	8	PVC	252.3	1.61	0.45	130.0
P-5	1,377	8	PVC	252.3	1.61	1.96	130.0
L572	1,740	6	PVC	258.7	2.94	10.55	130.0
L463	1,471	6	PVC	272.9	3.10	9.85	130.0
L366	1,622	8	PVC	276.2	1.76	2.73	130.0
L521	461	12	PVC	285.7	0.81	0.11	130.0
L360	366	8	PVC	299.7	1.91	0.72	130.0
L115	25	8	PVC	342.0	2.18	0.06	130.0
L514	494	12	PVC	342.5	0.97	0.17	130.0
L505	867	12	PVC	348.4	0.99	0.31	130.0
L489	806	12	PVC	354.2	1.00	0.30	130.0
L328	1,452	12	PVC	365.1	1.04	0.50	140.0
L121	1,486	8	PVC	369.4	2.36	4.29	130.0
L476	765	12	PVC	387.5	1.10	0.33	130.0
L357	345	6	PVC	388.6	4.41	4.44	130.0
L373	541	12	PVC	390.6	1.11	0.24	130.0
L596	354	6	PVC	392.3	4.45	6.48	130.0
L443	310	8	PVC	405.2	2.59	1.06	130.0
P-27	959	6	PVC	412.4	4.68	13.80	130.0
L411	2,546	12	PVC	446.9	1.27	1.45	130.0
L594	280	6	PVC	483.7	5.49	3.77	130.0
P-23	178	12	PVC	522.8	1.48	0.14	130.0
L405	1,158	8	PVC	522.9	3.34	6.37	130.0
L426	699	12	PVC	552.1	1.57	0.59	130.0
L584	448	8	PVC	572.6	3.65	2.91	130.0
L119	762	8	PVC	601.1	3.84	5.43	130.0
L345	470	8	PVC	604.1	3.86	3.37	130.0
L433	786	12	PVC	609.1	1.73	0.80	130.0
L444	456	12	PVC	673.7	1.91	0.56	130.0
L457	632	12	PVC	703.0	1.99	0.83	130.0
L459	249	12	PVC	706.9	2.01	0.33	130.0
L401	287	8	PVC	719.8	4.59	2.86	130.0
L456	567	12	PVC	736.3	2.09	0.81	130.0
L404	756	8	PVC	737.4	4.71	7.86	130.0

GBWC 2024 IRP - Spring Creek Division - Housing Section  
 Preferred Plan PHD 2044 Distribution System Pipe Report  
 PHD-PIPES - Time: 0.00 hours

Label	Length (Scaled) (ft)	Diamete r (in)	Material	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Hazen- Williams C
L480	976	12	PVC	1,434.7	4.07	4.83	130.0
L469	795	12	PVC	1,434.7	4.07	3.93	130.0
L588	467	12	PVC	1,473.8	4.18	1.19	130.0



***Great Basin Water Company – Cold Springs Division (Volume IV)***

WaterCAD Modeling Scenarios

**GBWC 2024 IRP - Cold Springs Division**  
**Existing (2022) MDD Condition Distribution System Junction Report**  
MDD - Time: 0.00 hours

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
232	J-127	5,090.00	Zone 2	6.7	5,185.12	41.2
142	J-33	5,083.00	Zone 2	0.0	5,177.99	41.1
233	J-128	5,085.00	Zone 2	7.6	5,184.32	43.0
231	J-126	5,083.00	Zone 2	7.1	5,184.18	43.8
1620	J-760	5,181.43	Zone 4	0.0	5,279.43	42.4
1595	J-759	5,180.85	Zone 4	0.0	5,279.43	42.7
322	J-241	5,180.85	Zone 4	0.0	5,279.44	42.7
183	J-77	5,080.00	Zone 2	5.8	5,183.70	44.9
185	J-79	5,080.00	Zone 2	17.8	5,183.94	45.0
234	J-129	5,080.00	Zone 2	0.0	5,184.02	45.0
1564	J-747	5,177.53	Zone 4	3.3	5,279.44	44.1
171	J-65	5,078.00	Zone 2	4.9	5,183.89	45.8
215	J-110	5,078.00	Zone 2	11.1	5,184.06	45.9
235	J-130	5,078.00	Zone 2	6.7	5,184.15	45.9
1535	J-742	5,176.39	Zone 4	0.0	5,279.44	44.6
1569	J-749	5,176.03	Zone 4	0.0	5,279.44	44.7
181	J-75	5,076.00	Zone 2	3.6	5,184.05	46.7
1562	J-746	5,174.93	Zone 4	0.0	5,279.45	45.2
186	J-80	5,075.00	Zone 2	0.0	5,183.44	46.9
230	J-125	5,075.00	Zone 2	0.0	5,183.67	47.0
1538	J-743	5,174.58	Zone 4	4.0	5,279.45	45.4
1573	J-751	5,174.46	Zone 4	2.9	5,279.45	45.4
184	J-78	5,074.00	Zone 2	0.0	5,183.61	47.4
193	J-87	5,074.00	Zone 2	5.3	5,183.71	47.5
237	J-132	5,073.00	Zone 2	0.0	5,183.87	48.0
236	J-131	5,073.00	Zone 2	8.9	5,183.98	48.0
238	J-133	5,072.00	Zone 2	8.9	5,183.75	48.3
194	J-88	5,072.00	Zone 2	6.2	5,183.78	48.4
204	J-98	5,072.00	Zone 2	0.0	5,183.98	48.4
505	J-480	5,170.56	Zone 4	0.0	5,279.47	47.1
430	J-397	5,170.00	Zone 4	4.4	5,279.49	47.4
195	J-89	5,070.00	Zone 2	0.0	5,183.84	49.3
170	J-64	5,070.00	Zone 2	4.9	5,183.89	49.3
198	J-92	5,070.00	Zone 2	6.7	5,183.95	49.3
205	J-99	5,070.00	Zone 2	0.0	5,183.97	49.3
211	J-105	5,070.00	Zone 2	0.0	5,184.03	49.3
212	J-106	5,070.00	Zone 2	7.6	5,184.03	49.3
213	J-108	5,070.00	Zone 2	6.2	5,184.04	49.3
224	J-119	5,070.00	Zone 2	4.5	5,184.05	49.3
321	J-240	5,070.00	Zone 2	0.0	5,183.98	49.3
182	J-76	5,070.00	Zone 2	2.2	5,184.03	49.3
172	J-66	5,070.00	Zone 2	6.2	5,184.07	49.4
429	J-396	5,169.00	Zone 4	5.1	5,279.49	47.8
202	J-96	5,069.00	Zone 2	7.1	5,184.01	49.8
210	J-104	5,069.00	Zone 2	5.8	5,184.03	49.8
214	J-109	5,069.00	Zone 2	4.5	5,184.03	49.8

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**GBWC 2024 IRP - Cold Springs Division**  
**Existing (2022) MDD Condition Distribution System Junction Report**  
MDD - Time: 0.00 hours

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
239	J-134	5,068.00	Zone 2	0.0	5,183.91	50.1
188	J-82	5,068.00	Zone 2	0.0	5,183.90	50.1
189	J-83	5,068.00	Zone 2	5.3	5,183.92	50.2
191	J-85	5,068.00	Zone 2	5.8	5,183.93	50.2
190	J-84	5,068.00	Zone 2	6.2	5,183.93	50.2
201	J-95	5,068.00	Zone 2	8.5	5,184.01	50.2
209	J-103	5,068.00	Zone 2	4.9	5,184.03	50.2
223	J-118	5,068.00	Zone 2	4.9	5,184.06	50.2
222	J-117	5,068.00	Zone 2	0.0	5,184.06	50.2
228	J-123	5,068.00	Zone 2	7.1	5,184.06	50.2
199	J-93	5,067.00	Zone 2	0.0	5,183.90	50.6
431	J-398	5,166.00	Zone 4	0.6	5,279.49	49.1
1579	J-753	5,165.91	Zone 4	3.7	5,279.46	49.1
196	J-90	5,066.00	Zone 2	5.3	5,183.91	51.0
221	J-116	5,065.00	Zone 2	6.2	5,184.06	51.5
227	J-122	5,065.00	Zone 2	6.2	5,184.06	51.5
203	J-97	5,065.00	Zone 2	0.0	5,184.05	51.5
216	J-111	5,065.00	Zone 2	8.0	5,184.09	51.5
1560	J-ph19 IRR2	5,164.42	NO FIRE	0.0	5,279.46	49.8
168	J-62	5,065.00	Zone 2	4.5	5,184.02	51.5
1558	J-744	5,164.42	Zone 4	0.0	5,279.48	49.8
148	J-40	5,065.00	Zone 2	8.5	5,184.04	51.5
316	J-235	5,203.00	Zone 3	0.0	5,317.88	49.7
317	J-237	5,203.00	Zone 3	2.9	5,317.88	49.7
315	J-234	5,202.00	Zone 3	2.6	5,317.51	50.0
1576	J-752	5,163.52	Zone 4	3.7	5,279.46	50.2
1586	J-756	5,163.08	Zone 4	3.7	5,279.48	50.4
226	J-121	5,063.00	Zone 2	0.0	5,184.06	52.4
152	J-45	5,063.00	Zone 2	7.1	5,184.07	52.4
269	J-185	5,200.00	Zone 3	0.0	5,317.51	50.8
200	GOMES ELEM SCHOOL	5,062.00	Zone 2	6.5	5,184.01	52.8
220	J-115	5,062.00	Zone 2	5.8	5,184.06	52.8
225	J-120	5,062.00	Zone 2	8.9	5,184.06	52.8
192	J-86	5,062.00	Zone 2	0.0	5,183.99	52.8
229	J-124	5,062.00	Zone 2	0.0	5,184.06	52.8
187	J-81	5,061.00	Zone 2	8.9	5,183.99	53.2
197	J-91	5,061.00	Zone 2	0.0	5,184.00	53.2
219	J-114	5,060.00	Zone 2	7.1	5,184.07	53.7
146	J-38	5,060.00	Zone 2	8.0	5,184.01	53.7
147	J-39	5,060.00	Zone 2	7.1	5,184.01	53.7
415	J-355	5,060.00	Zone 2	0.0	5,184.09	53.7
151	J-44	5,060.00	Zone 2	8.5	5,184.10	53.7
173	J-67	5,060.00	Zone 2	7.1	5,184.09	53.7
178	J-72	5,060.00	Zone 2	9.8	5,184.13	53.7

**GBWC 2024 IRP - Cold Springs Division**  
**Existing (2022) MDD Condition Distribution System Junction Report**  
MDD - Time: 0.00 hours

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
179	J-73	5,060.00	Zone 2	0.0	5,184.17	53.7
180	J-74	5,060.00	Zone 2	7.6	5,184.20	53.7
176	J-70	5,060.00	Zone 2	3.1	5,184.29	53.8
166	J-60	5,058.00	Zone 2	7.1	5,184.01	54.5
167	J-61	5,058.00	Zone 2	8.0	5,184.01	54.5
207	J-101	5,058.00	Zone 2	0.0	5,184.41	54.7
506	J-481	5,156.88	Zone 4	0.0	5,279.52	53.1
274	J-192	5,200.00	Zone 1	0.6	5,322.63	53.1
1583	J-755	5,155.60	Zone 4	3.7	5,279.50	53.6
175	J-69	5,056.00	Zone 2	0.0	5,184.17	55.5
353	J-275	5,055.00	Zone 2	6.2	5,184.07	55.8
352	J-274	5,055.00	Zone 2	4.5	5,184.08	55.8
218	J-113	5,055.00	Zone 2	1.8	5,184.11	55.9
217	J-112	5,055.00	Zone 2	9.4	5,184.14	55.9
259	J-157	5,055.00	Zone 2	0.0	5,184.11	55.9
206	J-100	5,055.00	Zone 2	5.8	5,184.40	56.0
136	J-17	5,055.00	Zone 2	0.0	5,184.37	56.0
428	J-395	5,152.00	Zone 4	3.7	5,279.55	55.2
177	J-71	5,052.00	Zone 2	0.0	5,184.37	57.3
135	J-16	5,052.00	Zone 2	0.0	5,184.46	57.3
208	J-102	5,052.00	Zone 2	8.9	5,184.70	57.4
150	J-43	5,052.00	Zone 2	4.5	5,184.75	57.4
174	J-68	5,050.00	Zone 2	6.2	5,184.13	58.0
159	J-53	5,050.00	Zone 2	8.0	5,184.71	58.3
2938	J-1245	5,050.00	Zone 2	0.0	5,184.73	58.3
2946	J-1246	5,050.00	Zone 2	0.0	5,184.72	58.3
145	J-37	5,050.00	Zone 2	0.0	5,184.72	58.3
163	J-57	5,050.00	Zone 2	6.2	5,185.61	58.7
432	J-399	5,147.42	Zone 4	0.7	5,279.58	57.2
165	J-59	5,050.00	Zone 2	4.5	5,186.30	59.0
164	J-58	5,048.00	Zone 2	0.0	5,185.33	59.4
427	J-394	5,146.00	Zone 4	5.1	5,279.56	57.8
1592	J-758	5,145.34	Zone 4	3.7	5,279.70	58.1
162	J-56	5,048.00	Zone 2	8.0	5,186.45	59.9
161	J-55	5,048.00	Zone 2	5.3	5,187.13	60.2
276	J-194	5,046.00	Zone 2	6.7	5,185.50	60.4
1860	J-805	5,046.00	Zone 4	0.0	5,185.63	60.4
156	J-50	5,046.00	Zone 2	5.3	5,185.66	60.4
158	J-52	5,045.00	Zone 2	3.1	5,184.86	60.5
169	J-63	5,045.00	Zone 2	7.3	5,185.00	60.6
680	J-ph19 IRR1	5,143.72	NO FIRE	0.0	5,279.89	58.9
247	J-142	5,180.00	Zone 3	4.7	5,316.27	59.0
333	J-255	5,045.00	Zone 2	0.0	5,186.03	61.0
1589	J-757	5,142.82	Zone 4	3.7	5,279.87	59.3
134	J-15	5,046.00	Zone 2	0.3	5,187.31	61.1
149	J-42	5,045.00	Zone 2	1.2	5,186.45	61.2

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**GBWC 2024 IRP - Cold Springs Division**  
**Existing (2022) MDD Condition Distribution System Junction Report**  
MDD - Time: 0.00 hours

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
245	J-140	5,180.00	Zone 3	9.5	5,317.00	59.3
157	J-51	5,042.00	Zone 2	4.0	5,185.14	61.9
425	J-392	5,140.00	Zone 4	5.1	5,279.53	60.4
426	J-393	5,140.00	Zone 4	4.4	5,279.57	60.4
423	J-390	5,140.00	Zone 4	0.0	5,279.58	60.4
160	J-54	5,045.00	Zone 2	0.0	5,189.81	62.7
252	J-149 Reno Truss	5,045.00	Zone 2	0.5	5,189.81	62.7
424	J-391	5,138.00	Zone 4	3.7	5,279.59	61.3
422	J-389	5,138.00	Zone 4	1.5	5,279.62	61.3
1806	J-797	5,045.00	Zone 2	8.0	5,192.29	63.7
507	J-482	5,135.00	Zone 4	0.0	5,279.61	62.6
690	FH-925	5,134.00	Zone 4	0.0	5,279.97	63.2
123	J-3	5,175.00	Zone 1	0.0	5,321.93	63.6
2752	J-23-1190	5,133.35	Zone 4	0.7	5,280.70	63.7
679	J-685	5,132.00	Zone 4	0.0	5,280.01	64.0
673	J-679	5,131.00	Zone 4	6.2	5,279.65	64.3
2750	J-23-1189	5,131.90	Zone 4	1.1	5,280.70	64.4
2834	J-23-1225	5,131.90	Zone 4	0.0	5,280.70	64.4
2754	J-23-1191	5,131.52	Zone 4	0.0	5,280.70	64.5
693	FH-921	5,130.00	Zone 4	0.0	5,279.74	64.8
2756	J-23-1192	5,130.50	Zone 4	0.0	5,280.70	65.0
1938	J-819	5,130.00	Zone 4	0.0	5,280.69	65.2
1940	J-820	5,129.04	Zone 4	0.0	5,280.69	65.6
1982	J-829	5,129.00	Zone 4	0.0	5,280.69	65.6
2748	J-23-1188	5,128.90	Zone 4	1.1	5,280.70	65.7
2758	J-23-1193	5,128.40	Zone 4	2.6	5,280.70	65.9
1996	J-836	5,128.20	Zone 4	3.3	5,280.69	66.0
2746	J-23-1187	5,128.18	Zone 4	0.7	5,280.70	66.0
1911	J-815	5,128.00	Zone 4	1.0	5,280.69	66.1
672	J-678	5,126.00	Zone 4	0.0	5,279.85	66.6
2140	J22-901	5,126.71	Zone 4	0.0	5,280.70	66.6
2999	J-1262	5,167.94	Zone 1	0.2	5,321.77	66.6
678	FH-926	5,126.00	Zone 4	0.0	5,280.14	66.7
418	J-352	5,125.00	Zone 4	4.7	5,279.62	66.9
283	J-184	5,125.00	Zone 4	49.6	5,279.65	66.9
2744	J-23-1186	5,125.90	Zone 4	0.0	5,280.70	67.0
692	FH-922	5,125.00	Zone 4	0.0	5,279.88	67.0
2760	J-23-1194	5,125.40	Zone 4	1.8	5,280.70	67.2
1899	J-810	5,125.00	Zone 4	0.0	5,280.68	67.4
1984	J-830	5,124.80	Zone 4	0.0	5,280.69	67.4
2007	J-841	5,124.70	Zone 4	0.0	5,280.69	67.5
1495	J-730	5,124.00	Zone 4	0.0	5,280.65	67.8
1890	J-806	5,124.00	Zone 4	0.0	5,280.67	67.8
1901	J-811	5,124.00	Zone 4	4.7	5,280.68	67.8
1913	J-816	5,124.00	Zone 4	4.4	5,280.69	67.8

**GBWC 2024 IRP - Cold Springs Division**  
**Existing (2022) MDD Condition Distribution System Junction Report**  
MDD - Time: 0.00 hours

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
2762	J-23-1195	5,124.00	Zone 4	1.1	5,280.70	67.8
248	J-143	5,160.00	Zone 3	3.3	5,316.24	67.6
250	J-145	5,160.00	Zone 3	4.4	5,316.31	67.6
1503	J-732	5,123.61	Zone 4	0.0	5,280.59	67.9
671	J-677	5,123.00	Zone 4	7.3	5,279.98	67.9
246	J-141	5,160.00	Zone 3	4.0	5,316.43	67.7
2735	J-1184	5,123.50	Zone 4	0.0	5,280.70	68.0
2772	J-1199	5,123.45	Zone 4	0.0	5,280.70	68.0
270	J-187	5,160.00	Zone 3	0.0	5,316.86	67.9
1892	J-807	5,123.00	Zone 4	4.0	5,280.67	68.2
2137	J22-899	5,122.97	Zone 4	0.0	5,280.70	68.2
682	J-688	5,122.00	Zone 4	2.2	5,280.33	68.5
2764	J-23-1196	5,122.20	Zone 4	1.5	5,280.70	68.6
691	FH-923	5,121.00	Zone 4	0.0	5,280.02	68.8
681	J-687	5,121.00	Zone 4	0.0	5,280.31	68.9
2768	J-1198	5,121.33	Zone 4	0.0	5,280.70	69.0
465	J-434	5,120.00	Zone 4	2.9	5,279.69	69.1
284	J-195	5,120.00	Zone 4	0.0	5,279.69	69.1
464	J-433	5,120.00	Zone 4	1.5	5,279.69	69.1
2766	J-23-1197	5,120.77	Zone 4	1.1	5,280.70	69.2
687	FH-927	5,119.00	Zone 4	0.0	5,280.26	69.8
685	FH-930	5,119.00	Zone 4	0.0	5,280.34	69.8
279	J-189	5,160.00	Zone 1	0.0	5,321.48	69.9
124	J-4	5,160.00	Zone 1	4.6	5,321.60	69.9
2436	J22-1078	5,118.46	Zone 4	0.0	5,280.70	70.2
669	J-675	5,118.00	Zone 4	0.0	5,280.29	70.2
244	J-139	5,155.00	Zone 3	0.0	5,316.71	70.0
508	J-483	5,117.00	Zone 4	0.0	5,279.63	70.4
578	J-576	5,117.00	Zone 4	4.4	5,279.89	70.5
2002	J-839	5,117.70	Zone 4	0.0	5,280.69	70.5
2781	J-23-1202	5,117.50	Zone 4	1.8	5,280.70	70.6
2776	J-1200	5,116.98	Zone 4	0.0	5,280.70	70.8
1519	J-736	5,116.72	Zone 4	5.1	5,280.65	70.9
1915	J-817	5,116.00	Zone 4	0.0	5,280.69	71.3
2731	J-1183	5,115.25	Zone 4	0.0	5,280.70	71.6
473	J-443	5,114.00	Zone 4	3.7	5,279.65	71.7
2779	J-23-1201	5,115.00	Zone 4	1.5	5,280.70	71.7
670	J-676	5,114.00	Zone 4	0.0	5,280.17	71.9
281	J-191	5,155.00	Zone 1	4.6	5,321.23	71.9
280	J-190	5,155.00	Zone 1	0.0	5,321.32	72.0
688	J-674	5,113.00	Zone 4	0.0	5,280.30	72.4
684	J-690	5,113.00	Zone 4	0.0	5,280.34	72.4
417	J-348	5,112.00	Zone 4	3.7	5,279.63	72.5
2013	J-844	5,113.00	Zone 4	1.8	5,280.70	72.6
2713	J-1179	5,112.09	Zone 4	0.0	5,280.70	73.0
1894	J-808	5,112.00	Zone 4	0.0	5,280.68	73.0

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**GBWC 2024 IRP - Cold Springs Division**  
**Existing (2022) MDD Condition Distribution System Junction Report**  
MDD - Time: 0.00 hours

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
2018	J-846	5,111.50	Zone 4	0.0	5,280.70	73.2
689	FH-924	5,111.00	Zone 4	0.0	5,280.28	73.2
1903	J-812	5,111.00	Zone 4	0.0	5,280.68	73.4
2011	J-843	5,110.80	Zone 4	0.0	5,280.70	73.5
2114	J22-884	5,110.48	Zone 4	1.1	5,280.71	73.7
2009	J-842	5,110.40	Zone 4	3.3	5,280.70	73.7
282	J-193	5,150.00	Zone 1	4.6	5,321.19	74.1
2605	J22-1158	5,109.16	Zone 4	1.1	5,280.71	74.2
2439	J22-1079	5,109.01	Zone 4	2.8	5,280.71	74.3
2004	J-840	5,108.90	Zone 4	3.7	5,280.70	74.3
674	J-680	5,108.00	Zone 4	4.7	5,280.32	74.6
1493	J-729	5,108.00	Zone 4	0.0	5,280.66	74.7
1649	J-770	5,108.00	Zone 4	0.0	5,280.70	74.7
2117	J22-886	5,107.93	Zone 4	1.1	5,280.72	74.8
1516	J-735	5,107.24	Zone 4	0.0	5,280.66	75.0
1905	J-813	5,107.00	Zone 4	4.4	5,280.69	75.1
1917	J-818	5,107.00	Zone 4	4.0	5,280.69	75.1
472	J-442	5,106.00	Zone 4	4.0	5,279.66	75.1
649	J-652	5,145.00	Zone 1	5.7	5,318.52	75.1
2609	J22-1159	5,106.83	Zone 4	1.1	5,280.72	75.2
2015	J-845	5,106.70	Zone 4	3.7	5,280.70	75.3
2442	J22-1080	5,106.38	Zone 4	0.0	5,280.72	75.4
686	FH-928	5,106.00	Zone 4	0.0	5,280.34	75.4
575	J-570	5,106.00	Zone 4	0.0	5,280.35	75.4
416	J-346	5,105.00	Zone 4	0.0	5,279.63	75.6
1896	J-809	5,106.00	Zone 4	4.0	5,280.68	75.6
2789	J-23-1206	5,106.00	Zone 4	1.1	5,280.77	75.6
1946	J-823	5,105.90	Zone 4	0.0	5,280.69	75.6
2119	J22-887	5,105.85	Zone 4	0.0	5,280.72	75.7
1988	J-832	5,105.60	Zone 4	0.0	5,280.70	75.8
2123	J22-890	5,105.57	Zone 4	0.7	5,280.73	75.8
683	J-689	5,105.00	Zone 4	3.3	5,280.36	75.9
646	J-649	5,105.00	Zone 4	0.0	5,280.39	75.9
611	CS MIDDLE SCHOOL	5,105.00	Zone 4	23.4	5,280.40	75.9
576	J-571	5,105.00	Zone 4	0.0	5,280.40	75.9
645	J-642	5,105.00	Zone 4	0.0	5,280.42	75.9
1994	J-835	5,105.20	Zone 4	0.0	5,280.70	75.9
2787	J-23-1205	5,105.15	Zone 4	1.1	5,280.77	76.0
2446	J22-1082	5,104.95	Zone 4	1.7	5,280.72	76.0
2613	J22-1160	5,104.92	Zone 4	0.0	5,280.72	76.1
1992	J-834	5,104.80	Zone 4	0.0	5,280.70	76.1
1990	J-833	5,104.80	Zone 4	0.0	5,280.70	76.1
2785	J-23-1204	5,104.50	Zone 4	1.8	5,280.77	76.3
1907	J-814	5,104.28	Zone 4	0.0	5,280.70	76.3
1513	J-734	5,104.16	Zone 4	0.0	5,280.67	76.4

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**Existing (2022) MDD Condition Distribution System Junction Report**  
MDD - Time: 0.00 hours

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
2621	J22-1163	5,104.00	Zone 4	1.1	5,280.73	76.5
364	J-286	5,103.00	Zone 4	9.8	5,279.69	76.4
2617	J22-1161	5,103.84	Zone 4	1.1	5,280.73	76.5
249	J-144	5,140.00	Zone 3	0.0	5,316.21	76.2
2449	J22-1083	5,103.53	Zone 4	0.0	5,280.73	76.7
695	FH-919	5,103.00	Zone 4	4.4	5,280.36	76.7
1498	J-731	5,103.00	Zone 4	0.0	5,280.68	76.9
474	J-441	5,102.00	Zone 4	4.0	5,279.67	76.9
2041	J-856	5,102.40	Zone 4	3.3	5,280.71	77.1
2783	J-23-1203	5,102.20	Zone 4	1.8	5,280.77	77.3
243	J-138	5,138.00	Zone 3	0.0	5,316.52	77.2
475	J-444	5,138.00	Zone 3	0.0	5,316.52	77.2
327	J-248	5,138.00	Zone 3	5.1	5,316.55	77.3
2039	J-855	5,101.00	Zone 4	3.3	5,280.71	77.8
360	J-282	5,100.00	Zone 4	4.0	5,279.73	77.8
285	J-196	5,100.00	Zone 4	0.0	5,279.75	77.8
463	J-432	5,100.00	Zone 4	1.5	5,279.75	77.8
1730	J-783	5,100.37	Zone 4	2.6	5,280.70	78.0
2031	J-852	5,100.10	Zone 4	2.9	5,280.70	78.1
511	J-485	5,100.00	Zone 4	8.6	5,280.73	78.2
362	J-284	5,099.00	Zone 4	5.8	5,279.71	78.2
2126	J22-892	5,099.98	Zone 4	0.7	5,280.74	78.2
292	J-203	5,099.00	Zone 4	3.7	5,279.85	78.2
125	J-5	5,140.00	Zone 1	4.6	5,321.14	78.4
675	J-681	5,099.00	Zone 4	0.0	5,280.37	78.5
2046	J-858	5,099.00	Zone 4	2.9	5,280.71	78.6
361	J-283	5,098.00	Zone 4	4.0	5,279.72	78.6
2629	J22-1165	5,098.57	Zone 4	1.5	5,280.74	78.8
2643	J22-1169	5,098.46	Zone 4	1.8	5,280.75	78.9
2029	J-851	5,098.30	Zone 4	2.9	5,280.71	78.9
638	J-639	5,098.00	Zone 4	0.0	5,280.61	79.0
2626	J22-1164	5,098.00	Zone 4	1.1	5,280.74	79.1
2452	J22-1084	5,098.00	Zone 4	0.0	5,280.74	79.1
2639	J22-1168	5,098.00	Zone 4	1.5	5,280.76	79.1
2653	J22-1172	5,097.47	Zone 4	3.3	5,280.74	79.3
664	J-667	5,097.00	Zone 4	0.0	5,280.42	79.4
2854	J23-IRR	5,097.29	NO FIRE	0.0	5,280.77	79.4
2037	J-854	5,097.00	Zone 4	3.3	5,280.72	79.5
293	J-204	5,096.00	Zone 4	3.7	5,279.86	79.5
1510	J-733	5,096.68	Zone 4	5.1	5,280.69	79.6
2034	J-853	5,096.50	Zone 4	0.0	5,280.73	79.7
459	J-428	5,095.50	Zone 4	0.0	5,279.86	79.8
2825	J-23-1222	5,097.83	Zone 4	0.0	5,282.50	79.9
2634	J22-1166	5,095.99	Zone 4	0.0	5,280.77	79.9
359	J-281	5,095.00	Zone 4	2.9	5,279.75	79.9
2455	J22-1085	5,095.96	Zone 4	0.0	5,280.77	80.0

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**GBWC 2024 IRP - Cold Springs Division**  
**Existing (2022) MDD Condition Distribution System Junction Report**  
MDD - Time: 0.00 hours

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
2407	J22-1069	5,095.84	Zone 4	0.0	5,280.73	80.0
2132	J22-896	5,095.73	Zone 4	0.0	5,280.74	80.0
2023	J22-848	5,095.00	Zone 4	0.0	5,280.72	80.4
510	J-484	5,095.00	Zone 4	4.0	5,280.73	80.4
2829	J-23-1223	5,095.00	Zone 4	0.0	5,280.79	80.4
2650	J22-1171	5,094.93	Zone 4	1.5	5,280.74	80.4
2793	J-23-1208	5,094.90	Zone 4	2.6	5,280.78	80.4
2044	J-857	5,094.80	Zone 4	0.0	5,280.71	80.4
2411	J22-1070	5,094.79	Zone 4	0.0	5,280.74	80.5
694	FH-920	5,094.00	Zone 4	0.0	5,280.48	80.7
1648	J-769	5,094.00	Zone 4	0.0	5,280.70	80.8
2647	J22-1170	5,093.97	Zone 4	1.5	5,280.74	80.8
2543	J22-1147	5,093.94	Zone 4	0.0	5,280.74	80.8
2458	J22-1086	5,093.95	Zone 4	0.0	5,280.82	80.9
294	J-205	5,093.00	Zone 4	3.7	5,279.87	80.9
676	FH-929	5,093.00	Zone 4	0.0	5,280.48	81.1
2847	J-23-1228	5,093.33	Zone 4	2.9	5,280.83	81.1
2135	J22-898	5,093.00	Zone 4	0.0	5,280.74	81.2
3035	J-1275	5,092.00	Zone 4	0.0	5,279.80	81.3
2027	J-850	5,092.60	Zone 4	2.9	5,280.71	81.4
663	J-666	5,092.00	Zone 4	4.7	5,280.50	81.6
610	J-613	5,092.00	Zone 4	0.0	5,280.65	81.6
295	J-206	5,091.00	Zone 4	3.7	5,279.88	81.7
2021	J-847	5,091.70	Zone 4	0.0	5,280.71	81.8
251	J-146	5,128.00	Zone 3	0.0	5,316.38	81.5
328	J-249	5,128.00	Zone 3	4.0	5,316.39	81.5
1644	J-765	5,091.57	Zone 4	0.0	5,280.71	81.8
2791	J-23-1207	5,091.65	Zone 4	1.8	5,280.87	81.9
715	J-715	5,091.33	Zone 4	0.0	5,280.71	81.9
1647	J-768	5,091.00	Zone 4	0.0	5,280.74	82.1
337	J-259	5,091.00	Zone 4	2.2	5,280.74	82.1
358	J-280	5,090.00	Zone 4	2.9	5,279.73	82.1
2795	J-23-1209	5,091.00	Zone 4	0.0	5,280.78	82.1
286	J-197	5,090.00	Zone 4	0.0	5,279.80	82.1
462	J-431	5,090.00	Zone 4	1.8	5,279.80	82.1
2099	J22-874	5,091.00	Zone 4	0.7	5,280.88	82.2
2461	J22-1087	5,091.01	Zone 4	18.2	5,280.89	82.2
2656	J22-1173	5,091.00	Zone 4	0.0	5,280.89	82.2
469	J-438	5,090.00	Zone 4	4.7	5,279.86	82.1
471	J-440	5,090.00	Zone 4	2.2	5,279.86	82.1
1726	J-782	5,090.81	Zone 4	2.6	5,280.71	82.2
468	J-437	5,090.00	Zone 4	0.0	5,279.91	82.2
363	J-285	5,090.00	Zone 4	4.4	5,279.91	82.2
1489	J-728	5,090.70	Zone 4	1.5	5,280.70	82.2
702	J-704	5,090.07	Zone 4	0.4	5,280.67	82.5
662	J-665	5,090.00	Zone 4	0.0	5,280.62	82.5

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**GBWC 2024 IRP - Cold Springs Division**  
**Existing (2022) MDD Condition Distribution System Junction Report**  
MDD - Time: 0.00 hours

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
325	J-246	5,090.00	Zone 4	0.0	5,280.74	82.5
343	J-265	5,090.00	Zone 4	0.0	5,280.75	82.5
509	J-466	5,090.00	Zone 4	5.5	5,280.76	82.5
2797	J-23-1210	5,090.00	Zone 4	0.0	5,280.77	82.5
2415	J-1071	5,089.83	Zone 4	0.0	5,280.74	82.6
470	J-439	5,089.00	Zone 4	0.0	5,279.92	82.6
365	J-288	5,089.00	Zone 4	0.0	5,279.93	82.6
705	BLDG 3 - CCCC	5,089.40	Zone 4	0.7	5,280.67	82.8
703	J-705	5,089.40	Zone 4	0.0	5,280.68	82.8
2823	J-23-1221	5,091.00	Zone 4	0.0	5,282.35	82.8
2803	J-23-1212	5,089.64	Zone 4	1.5	5,281.04	82.8
714	J-714	5,089.18	Zone 4	0.0	5,280.70	82.9
668	J-671	5,089.00	Zone 4	0.1	5,280.68	82.9
1643	J-764	5,089.00	Zone 4	3.0	5,280.71	82.9
2821	J-23-1220	5,090.39	Zone 4	0.0	5,282.16	83.0
395	J-325	5,088.00	Zone 4	7.1	5,279.80	83.0
460	J-429	5,088.00	Zone 4	0.0	5,279.87	83.0
296	J-207	5,088.00	Zone 4	3.7	5,279.89	83.0
2108	J22-880	5,089.07	Zone 4	1.1	5,281.04	83.1
2659	J22-1174	5,088.84	Zone 4	0.0	5,281.04	83.2
2464	J22-1088	5,088.72	Zone 4	2.8	5,281.04	83.2
1718	J-780	5,088.22	Zone 4	4.4	5,280.71	83.3
2818	J-23-1219	5,089.50	Zone 4	0.7	5,282.04	83.3
677	J-683	5,088.00	Zone 4	4.7	5,280.60	83.3
2813	J-23-1217	5,089.40	Zone 4	0.0	5,282.04	83.3
1824	J-799	5,088.05	Zone 4	0.0	5,280.71	83.4
666	J-669	5,088.00	Zone 4	0.0	5,280.69	83.4
667	J-670	5,088.00	Zone 4	0.0	5,280.69	83.4
2704	J22-IRR-1178	5,088.35	NO FIRE	0.0	5,281.07	83.4
2811	J-23-1216	5,089.20	Zone 4	1.1	5,282.04	83.4
287	J-198	5,087.00	Zone 4	4.7	5,279.85	83.4
1722	J-781	5,087.65	Zone 4	3.7	5,280.73	83.5
2809	J-23-1215	5,088.75	Zone 4	0.7	5,281.90	83.6
1710	J-778	5,087.53	Zone 4	5.5	5,280.71	83.6
2807	J-23-1214	5,088.50	Zone 4	0.4	5,281.83	83.6
2805	J-23-1213	5,088.20	Zone 4	2.2	5,281.74	83.7
657	J-660	5,087.00	Zone 4	2.9	5,280.71	83.8
512	J-486	5,087.00	Zone 4	0.0	5,280.72	83.8
1646	J-767	5,087.00	Zone 4	1.4	5,280.74	83.8
461	J-430	5,086.00	Zone 4	0.0	5,279.88	83.9
2419	J22-1072	5,086.31	Zone 4	0.0	5,280.74	84.1
338	J-260	5,086.00	Zone 4	2.2	5,280.54	84.2
704	FH-931	5,086.00	Zone 4	0.0	5,280.69	84.2
650	J-653	5,124.00	Zone 1	5.7	5,318.51	84.2

**GBWC 2024 IRP - Cold Springs Division**  
**Existing (2022) MDD Condition Distribution System Junction Report**  
MDD - Time: 0.00 hours

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
655	J-658	5,086.00	Zone 4	5.5	5,280.79	84.3
659	J-662	5,086.00	Zone 4	3.7	5,280.81	84.3
288	J-199	5,085.00	Zone 4	5.1	5,279.86	84.3
2467	J22-1089	5,086.25	Zone 4	0.0	5,281.19	84.3
1714	J-779	5,085.71	Zone 4	0.0	5,280.72	84.4
2111	J22-882	5,086.21	Zone 4	1.5	5,281.27	84.4
2662	J22-1175	5,086.17	Zone 4	0.0	5,281.25	84.4
1694	J-774	5,085.54	Zone 4	0.0	5,280.72	84.4
334	J-256	5,085.00	Zone 4	0.0	5,280.54	84.6
1645	J-766	5,085.00	Zone 4	0.0	5,280.75	84.7
697	FH-917	5,085.00	Zone 4	0.0	5,280.79	84.7
654	J-657	5,085.00	Zone 4	3.7	5,280.80	84.7
488	BLDG 4 - Village Grill	5,084.50	Zone 4	0.3	5,280.70	84.9
1642	J-763	5,084.50	Zone 4	0.0	5,280.72	84.9
3045	J-1278	5,084.36	Zone 4	0.0	5,280.70	84.9
1666	J-771	5,084.09	Zone 4	6.9	5,280.72	85.1
487	J-456	5,084.00	Zone 4	0.0	5,280.70	85.1
486	J-455	5,084.00	Zone 4	0.0	5,280.73	85.1
661	J-664	5,084.00	Zone 4	3.3	5,280.85	85.2
289	J-200	5,083.00	Zone 4	5.1	5,279.87	85.2
2105	CS ELEM SCHOOL	5,084.00	Zone 4	2.5	5,281.19	85.3
2470	J22-1090	5,084.00	Zone 4	0.0	5,281.19	85.3
2665	J22-1092	5,084.00	Zone 4	0.0	5,281.19	85.3
1702	J-776	5,083.50	Zone 4	3.7	5,280.73	85.3
652	J-655	5,083.00	Zone 4	3.7	5,280.87	85.6
585	J-586	5,082.00	Zone 4	20.6	5,279.98	85.7
335	J-257	5,082.00	Zone 4	0.0	5,280.31	85.8
340	J-262	5,082.00	Zone 4	0.0	5,280.31	85.8
467	J-436	5,082.00	Zone 4	4.7	5,280.31	85.8
339	J-261	5,082.00	Zone 4	1.8	5,280.54	85.9
1706	J-777	5,082.00	Zone 4	0.0	5,280.73	86.0
642	J-646	5,120.00	Zone 1	9.2	5,318.52	85.9
485	J-454	5,082.00	Zone 4	4.4	5,280.76	86.0
290	J-201	5,081.00	Zone 4	5.1	5,279.88	86.0
291	J-202	5,081.00	Zone 4	4.4	5,279.89	86.0
138	BORDER TOWN CASINO	5,120.00	Zone 1	34.2	5,318.80	86.0
1698	J-775	5,081.61	Zone 4	3.7	5,280.75	86.2
394	J-324	5,081.00	Zone 4	1.8	5,280.18	86.2
1641	J-762	5,081.00	Zone 4	0.0	5,280.73	86.4
641	J-645	5,119.00	Zone 1	0.0	5,318.53	86.3
656	J-659	5,081.00	Zone 4	0.0	5,280.78	86.4
696	FH-918	5,081.00	Zone 4	0.0	5,280.78	86.4

**GBWC 2024 IRP - Cold Springs Division**  
**Existing (2022) MDD Condition Distribution System Junction Report**  
MDD - Time: 0.00 hours

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
658	J-661	5,081.00	Zone 4	3.3	5,280.81	86.4
698	FH-915	5,081.00	Zone 4	0.0	5,280.81	86.4
484	J-453	5,081.00	Zone 4	6.2	5,280.82	86.5
700	FH-913	5,081.00	Zone 4	0.0	5,280.85	86.5
2473	J22-1091	5,081.00	Zone 4	0.0	5,281.19	86.6
341	J-263	5,080.00	Zone 4	1.7	5,280.31	86.7
660	J-663	5,080.00	Zone 4	0.0	5,280.85	86.9
1689	J-773	5,079.86	Zone 4	0.0	5,280.75	86.9
483	J-452	5,080.00	Zone 4	0.0	5,280.89	86.9
329	J-250	5,080.00	Zone 4	4.0	5,280.90	86.9
330	J-251	5,080.00	Zone 4	7.3	5,281.05	87.0
420	J-387	5,120.00	Zone 1	0.0	5,321.15	87.0
421	J-388	5,120.00	Zone 1	0.0	5,321.14	87.0
1639	J-761	5,079.00	Zone 4	0.0	5,280.75	87.3
701	FH-916	5,079.00	Zone 4	0.0	5,280.80	87.3
301	J-217	5,115.00	Zone 3	0.0	5,316.13	87.0
299	J-214	5,078.00	Zone 4	3.7	5,279.90	87.4
300	J-215	5,078.00	Zone 4	4.5	5,279.90	87.4
297	J-208	5,078.00	Zone 4	3.7	5,279.90	87.4
503	J-478	5,079.00	Zone 4	2.9	5,281.09	87.4
504	J-479	5,079.00	Zone 4	0.0	5,281.09	87.4
479	J-448	5,116.00	Zone 1	6.3	5,318.36	87.6
640	J-644	5,116.00	Zone 1	9.7	5,318.54	87.6
653	J-656	5,078.00	Zone 4	0.0	5,280.80	87.7
699	FH-914	5,078.00	Zone 4	0.0	5,280.87	87.8
499	J-474	5,078.00	Zone 4	2.9	5,281.05	87.8
2141	J22-902	5,078.00	Zone 4	5.8	5,281.19	87.9
498	J-473	5,077.00	Zone 4	4.4	5,280.71	88.1
651	J-654	5,077.00	Zone 4	0.0	5,280.87	88.2
319	J-239	5,076.00	Zone 4	3.7	5,279.90	88.2
440	J-407	5,077.00	Zone 4	1.8	5,281.16	88.3
493	J-462	5,077.00	Zone 4	6.6	5,281.17	88.3
454	J-421	5,077.00	Zone 4	0.0	5,281.19	88.3
500	J-475	5,076.50	Zone 4	3.3	5,281.12	88.5
342	J-264	5,075.00	Zone 4	3.7	5,280.03	88.7
501	J-476	5,075.50	Zone 4	2.9	5,281.14	89.0
441	J-408	5,075.50	Zone 4	4.4	5,281.16	89.0
442	J-409	5,075.50	Zone 4	2.2	5,281.16	89.0
497	J-472	5,075.00	Zone 4	4.0	5,280.73	89.0
298	J-212	5,074.00	Zone 4	3.3	5,279.91	89.1
478	J-447	5,112.50	Zone 1	4.6	5,318.36	89.1
480	J-423	5,075.00	Zone 4	0.0	5,281.19	89.2
502	J-477	5,074.50	Zone 4	2.9	5,281.15	89.4
391	J-320	5,074.00	Zone 4	2.8	5,280.70	89.4
242	J-137	5,110.00	Zone 3	4.0	5,315.99	89.1
665	J-673	5,074.00	Zone 4	0.0	5,280.92	89.5

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**Existing (2022) MDD Condition Distribution System Junction Report**  
MDD - Time: 0.00 hours

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
453	J-420	5,074.00	Zone 4	0.0	5,281.17	89.6
491	J-460	5,074.00	Zone 4	4.7	5,281.17	89.6
492	J-461	5,073.50	Zone 4	5.5	5,281.17	89.8
443	J-410	5,073.50	Zone 4	2.6	5,281.17	89.8
351	J-273	5,073.00	Zone 4	2.6	5,280.72	89.9
496	J-471	5,073.00	Zone 4	5.5	5,280.78	89.9
308	J-226	5,072.00	Zone 4	3.7	5,280.06	90.0
312	J-230	5,072.00	Zone 4	3.7	5,280.10	90.0
313	J-231	5,072.00	Zone 4	3.7	5,280.13	90.0
452	J-419	5,073.00	Zone 4	0.0	5,281.17	90.1
490	J-459	5,073.00	Zone 4	3.3	5,281.17	90.1
262	J-160	5,110.00	Zone 1	5.2	5,318.33	90.1
261	J-159	5,110.00	Zone 1	6.3	5,318.33	90.1
392	J-321	5,072.00	Zone 4	2.2	5,280.71	90.3
349	J-271	5,072.00	Zone 4	4.0	5,280.73	90.3
481	J-449	5,072.00	Zone 4	0.0	5,280.99	90.4
310	J-228	5,071.00	Zone 4	3.7	5,280.07	90.5
450	J-417	5,072.00	Zone 4	4.4	5,281.17	90.5
444	J-411	5,072.00	Zone 4	2.6	5,281.17	90.5
336	J-258	5,071.00	Zone 4	0.0	5,280.16	90.5
456	J-424	5,072.00	Zone 4	2.5	5,281.19	90.5
393	J-323	5,071.00	Zone 4	2.9	5,280.25	90.5
350	J-272	5,071.00	Zone 4	2.6	5,280.73	90.7
320	J-236	5,070.00	Zone 4	0.0	5,279.98	90.8
332	J-254	5,070.00	Zone 4	2.6	5,279.98	90.8
309	J-227	5,070.00	Zone 4	0.0	5,280.08	90.9
451	J-418	5,071.00	Zone 4	4.0	5,281.17	90.9
489	J-458	5,071.00	Zone 4	3.7	5,281.17	90.9
398	J-328	5,108.00	Zone 1	0.0	5,318.36	91.0
449	J-416	5,070.50	Zone 4	0.0	5,281.17	91.1
347	J-269	5,070.00	Zone 4	3.7	5,280.70	91.2
355	J-277	5,070.00	Zone 4	4.4	5,280.72	91.2
348	J-270	5,070.00	Zone 4	4.0	5,280.75	91.2
311	J-229	5,069.00	Zone 4	0.0	5,280.10	91.3
466	J-435	5,069.00	Zone 4	0.0	5,280.13	91.3
314	J-233	5,069.00	Zone 4	5.9	5,280.13	91.3
445	J-412	5,070.00	Zone 4	2.6	5,281.17	91.4
357	J-279	5,069.00	Zone 4	3.3	5,280.72	91.6
307	J-225	5,068.00	Zone 4	0.0	5,280.06	91.7
446	J-413	5,069.00	Zone 4	2.6	5,281.17	91.8
346	J-268	5,068.00	Zone 4	0.0	5,280.72	92.0
354	J-276	5,068.00	Zone 4	5.1	5,280.73	92.0
356	J-278	5,068.00	Zone 4	4.4	5,280.73	92.0
302	J-218	5,067.00	Zone 4	0.0	5,280.04	92.2
439	J-406	5,068.00	Zone 4	0.0	5,281.16	92.2
586	J-587	5,068.00	Zone 4	4.2	5,281.17	92.2

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**GBWC 2024 IRP - Cold Springs Division**  
**Existing (2022) MDD Condition Distribution System Junction Report**  
MDD - Time: 0.00 hours

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
457	J-425	5,068.00	Zone 4	1.5	5,281.17	92.2
447	J-414	5,067.50	Zone 4	0.0	5,281.18	92.5
345	J-267	5,067.00	Zone 4	0.0	5,280.73	92.5
495	J-470	5,067.00	Zone 4	0.0	5,280.75	92.5
369	J-295	5,067.00	Zone 4	4.7	5,281.12	92.6
370	J-296	5,067.00	Zone 4	4.0	5,281.14	92.6
438	J-405	5,067.00	Zone 4	2.9	5,281.16	92.7
371	J-297	5,067.00	Zone 4	0.0	5,281.17	92.7
448	J-415	5,067.00	Zone 4	0.0	5,281.17	92.7
601	J-603	5,104.00	Zone 1	5.7	5,318.51	92.8
644	J-648	5,104.00	Zone 1	2.9	5,318.51	92.8
368	J-294	5,066.00	Zone 4	3.3	5,281.06	93.0
303	J-219	5,065.00	Zone 4	3.3	5,280.05	93.0
318	J-238	5,065.00	Zone 4	3.7	5,280.08	93.1
306	J-223	5,065.00	Zone 4	3.7	5,280.09	93.1
433	J-400	5,066.00	Zone 4	2.9	5,281.18	93.1
388	J-316	5,065.50	Zone 4	6.8	5,281.18	93.3
380	J-308	5,065.50	Zone 4	5.8	5,281.19	93.3
344	J-266	5,065.00	Zone 4	3.3	5,280.85	93.4
375	J-303	5,065.00	Zone 4	1.8	5,280.85	93.4
305	J-221	5,064.00	Zone 4	3.7	5,280.07	93.5
437	J-404	5,065.00	Zone 4	2.9	5,281.17	93.5
386	J-314	5,065.00	Zone 4	0.0	5,281.17	93.5
387	J-315	5,065.00	Zone 4	5.1	5,281.17	93.5
385	J-313	5,064.50	Zone 4	4.4	5,281.18	93.7
381	J-309	5,064.50	Zone 4	3.7	5,281.19	93.8
643	J-647	5,102.00	Zone 1	5.7	5,318.51	93.7
593	J-596	5,102.00	Zone 1	0.0	5,318.64	93.7
139	J-25	5,102.00	Zone 1	0.0	5,318.67	93.7
436	J-403	5,064.00	Zone 4	2.6	5,281.17	94.0
384	J-312	5,064.00	Zone 4	5.1	5,281.18	94.0
382	J-310	5,064.00	Zone 4	5.1	5,281.19	94.0
304	J-220	5,062.00	Zone 4	3.7	5,280.06	94.3
458	J-426	5,063.00	Zone 4	4.0	5,281.17	94.4
372	J-298	5,063.00	Zone 4	0.0	5,281.17	94.4
383	J-311	5,063.00	Zone 4	0.0	5,281.19	94.4
379	J-307	5,063.00	Zone 4	5.1	5,281.20	94.4
390	J-319	5,063.00	Zone 4	6.3	5,281.24	94.4
404	J-334	5,100.00	Zone 1	0.0	5,318.36	94.5
435	J-402	5,062.00	Zone 4	2.9	5,281.17	94.8
373	J-300	5,062.00	Zone 4	2.9	5,281.19	94.8
389	J-318	5,062.00	Zone 4	0.0	5,281.24	94.9
403	J-333	5,099.00	Zone 1	5.7	5,318.36	94.9
140	J-27	5,099.00	Zone 1	0.0	5,318.46	94.9
605	J-608	5,065.00	Zone 4	0.0	5,284.71	95.1
592	J-595	5,099.00	Zone 1	2.3	5,318.62	95.0

**GBWC 2024 IRP - Cold Springs Division**  
**Existing (2022) MDD Condition Distribution System Junction Report**  
MDD - Time: 0.00 hours

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
434	J-401	5,061.00	Zone 4	3.3	5,281.17	95.3
241	J-136	5,095.00	Zone 3	10.6	5,314.59	95.0
240	J-135	5,095.00	Zone 3	12.4	5,314.69	95.0
331	J-252	5,060.50	Zone 4	11.4	5,281.31	95.5
137	J-23	5,100.00	Zone 1	3.4	5,320.87	95.6
374	J-302	5,060.00	Zone 4	3.7	5,281.21	95.7
399	J-329	5,097.00	Zone 1	4.6	5,318.36	95.8
326	J-247	5,059.50	Zone 4	9.1	5,281.26	95.9
603	J-606	5,096.00	Zone 1	8.0	5,318.53	96.3
591	J-592	5,096.00	Zone 1	7.4	5,318.56	96.3
477	J-446	5,093.00	Zone 1	4.6	5,318.36	97.5
402	J-332	5,091.00	Zone 1	0.0	5,318.36	98.4
268	J-166	5,090.00	Zone 1	4.6	5,318.33	98.8
406	J-336	5,090.00	Zone 1	4.6	5,318.34	98.8
410	J-341	5,090.00	Zone 1	0.0	5,318.34	98.8
407	J-337	5,090.00	Zone 1	8.6	5,318.35	98.8
476	J-445	5,089.00	Zone 1	0.0	5,318.36	99.2
400	J-330	5,089.00	Zone 1	4.0	5,318.36	99.2
589	J-590	5,089.00	Zone 1	5.2	5,318.55	99.3
602	J-604	5,088.00	Zone 1	3.4	5,318.52	99.7
376	J-304	5,090.00	Zone 1	4.6	5,321.01	99.9
126	J-6	5,090.00	Zone 1	4.6	5,321.11	100.0
595	J-597	5,087.00	Zone 1	6.9	5,318.51	100.2
412	J-343	5,085.00	Zone 1	5.2	5,318.33	101.0
409	J-340	5,085.00	Zone 1	3.4	5,318.33	101.0
411	J-342	5,085.00	Zone 1	0.0	5,318.34	101.0
366	J-289	5,085.00	Zone 1	4.6	5,321.11	102.2
367	J-290	5,085.00	Zone 1	0.0	5,321.13	102.2
588	J-589	5,082.00	Zone 1	6.9	5,318.55	102.3
263	J-161	5,080.00	Zone 1	5.2	5,318.34	103.1
264	J-162	5,080.00	Zone 1	5.7	5,318.34	103.1
408	J-339	5,080.00	Zone 1	4.0	5,318.34	103.1
397	J-327	5,080.00	Zone 1	6.3	5,318.36	103.1
594	J-594	5,080.00	Zone 1	0.0	5,318.51	103.2
377	J-305	5,080.00	Zone 1	4.6	5,321.01	104.3
378	J-306	5,080.00	Zone 1	4.6	5,321.13	104.3
419	J-385	5,077.00	Zone 1	1.0	5,318.52	104.5
590	J-591	5,077.00	Zone 1	0.0	5,318.54	104.5
587	J-588	5,077.00	Zone 1	5.2	5,318.55	104.5
405	J-427	5,076.00	Zone 1	5.7	5,318.36	104.9
1798	J-795	5,045.09	Zone 4	0.0	5,289.91	105.9
401	J-331	5,070.50	Zone 1	5.2	5,318.36	107.2
253	J-150	5,070.00	Zone 1	5.2	5,318.38	107.5
606	J-609	5,041.00	Zone 4	0.0	5,289.80	107.6
254	J-151	5,067.00	Zone 1	3.4	5,318.38	108.8
141	J-28	5,066.00	Zone 1	0.0	5,318.38	109.2

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**GBWC 2024 IRP - Cold Springs Division**  
**Existing (2022) MDD Condition Distribution System Junction Report**  
MDD - Time: 0.00 hours

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
266	J-164	5,062.00	Zone 1	8.0	5,318.36	110.9
260	J-158	5,060.00	Zone 1	11.5	5,318.34	111.8
265	J-163	5,060.00	Zone 1	7.4	5,318.35	111.8
256	J-153	5,060.00	Zone 1	5.2	5,318.38	111.8
2922	J-1242	5,059.84	Zone 1	0.0	5,318.34	111.8
267	J-165	5,058.00	Zone 1	12.0	5,318.34	112.6
255	J-152	5,058.00	Zone 1	5.7	5,318.38	112.7
129	J-10	5,060.00	Zone 1	4.6	5,320.82	112.8
128	J-9	5,060.00	Zone 1	4.6	5,320.92	112.9
127	J-8	5,060.00	Zone 1	4.6	5,321.09	113.0
258	J-155	5,052.00	Zone 1	4.6	5,318.38	115.3
257	J-154	5,052.00	Zone 1	6.7	5,318.39	115.3
144	J-36	5,050.00	Zone 1	0.0	5,318.42	116.1
413	J-344	5,050.00	Zone 1	0.0	5,318.42	116.1
608	J-611	5,050.00	Zone 1	4.0	5,318.46	116.1
609	J-612	5,048.00	Zone 1	3.8	5,318.46	117.0
2977	J-1252 IRR	5,045.00	Zone 1	10.3	5,318.76	118.4
414	J-350	5,045.00	Zone 1	0.0	5,318.85	118.5
706	J-706	5,045.00	Zone 1	0.0	5,318.85	118.5
707	FH-801	5,045.00	Zone 1	0.0	5,318.85	118.5
154	J-48	5,043.00	Zone 1	8.6	5,318.62	119.2
153	J-47	5,043.00	Zone 1	6.9	5,318.64	119.3
155	J-49	5,040.00	Zone 1	8.6	5,318.61	120.5
133	J-14	5,040.00	Zone 1	15.7	5,318.85	120.6
131	J-12	5,040.00	Zone 1	0.0	5,319.54	120.9
130	J-11	5,040.00	Zone 1	0.0	5,320.30	121.3
143	J-35	5,038.00	Zone 1	6.3	5,318.74	121.5
132	J-13	5,038.00	Zone 1	1.1	5,318.86	121.5



**GBWC 2024 IRP - Cold Springs Division**  
**Existing (2022) MDD+Fire Condition Distribution System Junction**  
**Report**  
**Fire Flow - Time: 0.00 hours**

Label	Zone	Fire Flow (Needed) (gpm)	MDD (gpm)	Total Flow Needed (Fire Flow + MDD) (gpm)	Available Flow at 20 psi Min. Residual Pressure (gpm)	Satisfies Fire Flow Constraints ?	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Zone Lower Limit @ Total Flow Needed) (psi)	Junction w/ Minimum Pressure (Zone @ Total Flow Needed)
J-3	Zone 1	1,500.0	0.0	1,500.0	2,429.0	True	45.7	48.7	J-1262
J-4	Zone 1	1,500.0	4.6	1,504.6	2,433.9	True	50.1	45.7	J-3
J-5	Zone 1	1,500.0	4.6	1,504.6	1,750.5	True	34.1	42.1	J-193
J-6	Zone 1	1,500.0	4.6	1,504.6	1,811.9	True	50.2	36.8	J-5
J-8	Zone 1	1,500.0	4.6	1,504.6	1,862.0	True	59.3	38.8	J-5
J-9	Zone 1	1,500.0	4.6	1,504.6	2,356.8	True	85.9	45.7	J-3
J-10	Zone 1	1,500.0	4.6	1,504.6	2,331.4	True	86.1	45.7	J-3
J-11	Zone 1	1,500.0	0.0	1,500.0	2,163.4	True	85.8	45.7	J-3
J-12	Zone 1	1,500.0	0.0	1,500.0	2,025.3	True	77.2	42.1	J-652
J-13	Zone 1	1,500.0	1.1	1,501.1	1,935.7	True	72.9	39.4	J-652
J-14	Zone 1	1,500.0	15.7	1,515.7	1,950.6	True	64.0	39.4	J-652
J-15	Zone 2	1,500.0	0.3	1,500.3	3,351.4	True	47.2	36.0	J-127
J-16	Zone 2	1,500.0	0.0	1,500.0	2,988.7	True	43.0	35.8	J-127
J-17	Zone 2	1,500.0	0.0	1,500.0	2,771.5	True	40.7	35.8	J-127
J-23	Zone 1	1,500.0	3.4	1,503.4	2,357.4	True	70.7	45.7	J-3
BORDER TOWN CASINO	Zone 1	1,500.0	34.2	1,534.2	1,737.5	True	41.3	30.8	J-652
J-25	Zone 1	1,500.0	0.0	1,500.0	1,678.3	True	48.1	29.7	J-652
J-27	Zone 1	1,500.0	0.0	1,500.0	1,665.5	True	46.9	29.1	J-652
J-28	Zone 1	1,500.0	0.0	1,500.0	1,689.1	True	59.7	30.2	J-652
J-33	Zone 2	1,500.0	0.0	1,500.0	4,000.0	True	36.3	37.4	J-127
J-35	Zone 1	1,500.0	6.3	1,506.3	1,920.5	True	72.0	38.7	J-652
J-36	Zone 1	1,500.0	0.0	1,500.0	1,846.6	True	64.6	36.4	J-652
J-37	Zone 2	1,500.0	0.0	1,500.0	3,526.0	True	46.0	36.2	J-127
J-38	Zone 2	1,500.0	8.0	1,508.0	4,008.0	True	45.9	35.8	J-127
J-39	Zone 2	1,500.0	7.1	1,507.1	4,007.1	True	46.0	35.8	J-127
J-40	Zone 2	1,500.0	8.5	1,508.5	4,008.5	True	44.3	35.8	J-127
J-42	Zone 2	1,500.0	1.2	1,501.2	3,610.0	True	48.6	36.0	J-127
J-43	Zone 2	1,500.0	4.5	1,504.5	4,004.5	True	49.4	36.0	J-127
J-44	Zone 2	1,500.0	8.5	1,508.5	4,008.5	True	46.2	35.9	J-127
J-45	Zone 2	1,500.0	7.1	1,507.1	4,007.1	True	44.6	35.9	J-127
J-47	Zone 1	1,500.0	6.9	1,506.9	1,912.9	True	54.4	38.5	J-652
J-48	Zone 1	1,500.0	8.6	1,508.6	1,910.5	True	59.3	38.3	J-652
J-49	Zone 1	1,500.0	8.6	1,508.6	1,900.8	True	70.2	38.0	J-652
J-50	Zone 2	1,500.0	5.3	1,505.3	4,005.3	True	50.1	36.0	J-127
J-51	Zone 2	1,500.0	4.0	1,504.0	2,295.5	True	39.8	36.1	J-127
J-52	Zone 2	1,500.0	3.1	1,503.1	2,709.6	True	43.2	36.2	J-127
J-53	Zone 2	1,500.0	8.0	1,508.0	4,008.0	True	49.9	36.5	J-127

**GBWC 2024 IRP - Cold Springs Division**  
**Existing (2022) MDD+Fire Condition Distribution System Junction**  
**Report**  
**Fire Flow - Time: 0.00 hours**

Label	Zone	Fire Flow (Needed) (gpm)	MDD (gpm)	Total Flow Needed (Fire Flow + MDD) (gpm)	Available Flow at 20 psi Min. Residual Pressure (gpm)	Satisfies Fire Flow Constraints ?	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Zone Lower Limit @ Total Flow Needed) (psi)	Junction w/ Minimum Pressure (Zone @ Total Flow Needed)
J-54	Zone 2	1,500.0	0.0	1,500.0	4,000.0	True	51.4	36.0	J-127
J-55	Zone 2	1,500.0	5.3	1,505.3	2,968.2	True	44.4	36.0	J-127
J-56	Zone 2	1,500.0	8.0	1,508.0	2,306.7	True	38.7	36.0	J-127
J-57	Zone 2	1,500.0	6.2	1,506.2	3,675.0	True	47.0	36.0	J-127
J-58	Zone 2	1,500.0	0.0	1,500.0	4,000.0	True	50.4	36.0	J-127
J-59	Zone 2	1,500.0	4.5	1,504.5	2,360.5	True	38.9	36.0	J-127
J-60	Zone 2	1,500.0	7.1	1,507.1	3,979.5	True	44.4	35.8	J-127
J-61	Zone 2	1,500.0	8.0	1,508.0	3,872.5	True	44.2	35.8	J-127
J-62	Zone 2	1,500.0	4.5	1,504.5	4,004.5	True	44.0	35.8	J-127
J-63	Zone 2	1,500.0	7.3	1,507.3	4,007.3	True	51.4	35.8	J-127
J-64	Zone 2	1,500.0	4.9	1,504.9	4,004.9	True	42.0	35.8	J-127
J-65	Zone 2	1,500.0	4.9	1,504.9	4,004.9	True	37.4	35.4	J-127
J-66	Zone 2	1,500.0	6.2	1,506.2	3,640.6	True	39.4	35.8	J-127
J-67	Zone 2	1,500.0	7.1	1,507.1	2,996.1	True	40.4	35.8	J-127
J-68	Zone 2	1,500.0	6.2	1,506.2	2,856.6	True	42.6	35.8	J-127
J-69	Zone 2	1,500.0	0.0	1,500.0	2,876.1	True	41.0	35.8	J-127
J-70	Zone 2	1,500.0	3.1	1,503.1	2,934.4	True	40.1	35.8	J-127
J-71	Zone 2	1,500.0	0.0	1,500.0	2,964.1	True	43.2	35.8	J-127
J-72	Zone 2	1,500.0	9.8	1,509.8	2,933.8	True	40.0	35.8	J-127
J-73	Zone 2	1,500.0	0.0	1,500.0	2,949.5	True	40.2	35.8	J-127
J-74	Zone 2	1,500.0	7.6	1,507.6	3,106.3	True	40.9	35.8	J-127
J-75	Zone 2	1,500.0	3.6	1,503.6	3,892.4	True	37.8	35.8	J-127
J-76	Zone 2	1,500.0	2.2	1,502.2	4,002.2	True	41.5	35.8	J-127
J-77	Zone 2	1,500.0	5.8	1,505.8	3,717.8	True	35.9	35.8	J-127
J-78	Zone 2	1,500.0	0.0	1,500.0	4,000.0	True	40.8	35.8	J-127
J-79	Zone 2	1,500.0	17.8	1,517.8	3,633.3	True	35.8	35.8	J-127
J-80	Zone 2	1,500.0	0.0	1,500.0	4,000.0	True	40.6	35.7	J-127
J-81	Zone 2	1,500.0	8.9	1,508.9	4,008.9	True	46.2	35.8	J-127
J-82	Zone 2	1,500.0	0.0	1,500.0	4,000.0	True	41.2	35.8	J-127
J-83	Zone 2	1,500.0	5.3	1,505.3	4,005.3	True	41.0	35.8	J-127
J-84	Zone 2	1,500.0	6.2	1,506.2	4,006.2	True	42.1	35.8	J-127
J-85	Zone 2	1,500.0	5.8	1,505.8	4,005.8	True	43.0	35.8	J-127
J-86	Zone 2	1,500.0	0.0	1,500.0	4,000.0	True	44.8	35.8	J-127
J-87	Zone 2	1,500.0	5.3	1,505.3	4,005.3	True	40.6	35.8	J-127
J-88	Zone 2	1,500.0	6.2	1,506.2	4,006.2	True	39.6	35.8	J-127
J-89	Zone 2	1,500.0	0.0	1,500.0	4,000.0	True	40.6	35.8	J-127
J-90	Zone 2	1,500.0	5.3	1,505.3	4,005.3	True	44.3	35.8	J-127
J-91	Zone 2	1,500.0	0.0	1,500.0	4,000.0	True	45.7	35.8	J-127
J-92	Zone 2	1,500.0	6.7	1,506.7	4,006.7	True	42.4	35.8	J-127

**GBWC 2024 IRP - Cold Springs Division**  
**Existing (2022) MDD+Fire Condition Distribution System Junction**  
**Report**  
**Fire Flow - Time: 0.00 hours**

Label	Zone	Fire Flow (Needed) (gpm)	MDD (gpm)	Total Flow Needed (Fire Flow + MDD) (gpm)	Available Flow at 20 psi Min. Residual Pressure (gpm)	Satisfies Fire Flow Constraints ?	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Zone Lower Limit @ Total Flow Needed) (psi)	Junction w/ Minimum Pressure (Zone @ Total Flow Needed)
J-93	Zone 2	1,500.0	0.0	1,500.0	4,000.0	True	44.0	35.8	J-127
GOMES	Zone 2	2,125.0	6.5	2,131.5	4,006.5	True	44.3	35.4	J-127
ELEM	Zone 2	1,500.0	8.5	1,508.5	4,008.5	True	42.6	35.9	J-127
SCHOOL	Zone 2	1,500.0	7.1	1,507.1	4,007.1	True	41.7	35.9	J-127
J-95	Zone 2	1,500.0	0.0	1,500.0	4,000.0	True	42.2	35.9	J-127
J-96	Zone 2	1,500.0	0.0	1,500.0	4,000.0	True	39.5	35.8	J-127
J-97	Zone 2	1,500.0	0.0	1,500.0	4,000.0	True	41.7	35.8	J-127
J-98	Zone 2	1,500.0	0.0	1,500.0	4,000.0	True	45.7	35.9	J-127
J-99	Zone 2	1,500.0	5.8	1,505.8	3,992.8	True	46.7	35.9	J-127
J-100	Zone 2	1,500.0	0.0	1,500.0	4,000.0	True	48.1	35.9	J-127
J-101	Zone 2	1,500.0	8.9	1,508.9	4,008.9	True	41.5	35.9	J-127
J-102	Zone 2	1,500.0	4.9	1,504.9	4,004.9	True	39.3	35.9	J-127
J-103	Zone 2	1,500.0	5.8	1,505.8	3,566.4	True	36.6	35.9	J-127
J-104	Zone 2	1,500.0	0.0	1,500.0	2,870.5	True	37.0	35.9	J-127
J-105	Zone 2	1,500.0	7.6	1,507.6	2,958.6	True	38.4	35.9	J-127
J-106	Zone 2	1,500.0	6.2	1,506.2	3,360.1	True	37.9	35.9	J-127
J-108	Zone 2	1,500.0	4.5	1,504.5	3,101.3	True	32.0	36.0	J-127
J-109	Zone 2	1,500.0	11.1	1,511.1	2,444.8	True	36.4	34.4	J-110
J-110	Zone 2	1,500.0	8.0	1,508.0	2,593.7	True	44.8	36.0	J-127
J-111	Zone 2	1,500.0	9.4	1,509.4	3,766.0	True	44.6	36.0	J-127
J-112	Zone 2	1,500.0	1.8	1,501.8	3,677.1	True	43.6	36.0	J-127
J-113	Zone 2	1,500.0	7.1	1,507.1	4,007.1	True	40.1	36.0	J-127
J-114	Zone 2	1,500.0	5.8	1,505.8	3,099.1	True	37.6	36.0	J-127
J-115	Zone 2	1,500.0	6.2	1,506.2	2,775.7	True	37.2	36.0	J-127
J-116	Zone 2	1,500.0	0.0	1,500.0	2,866.5	True	40.1	36.0	J-127
J-117	Zone 2	1,500.0	4.9	1,504.9	3,733.4	True	39.0	35.9	J-127
J-118	Zone 2	1,500.0	4.5	1,504.5	3,492.6	True	43.9	35.9	J-127
J-119	Zone 2	1,500.0	8.9	1,508.9	4,008.9	True	34.9	35.9	J-127
J-120	Zone 2	1,500.0	0.0	1,500.0	2,323.2	True	31.0	35.9	J-127
J-121	Zone 2	1,500.0	6.2	1,506.2	2,023.7	True	40.2	35.9	J-127
J-122	Zone 2	1,500.0	7.1	1,507.1	3,781.3	True	44.2	35.9	J-127
J-123	Zone 2	1,500.0	0.0	1,500.0	4,000.0	True	40.5	35.6	J-127
J-124	Zone 2	1,500.0	0.0	1,500.0	4,000.0	True	34.8	34.8	J-127
J-125	Zone 2	1,500.0	7.1	1,507.1	3,578.1	True	33.8	36.4	J-128
J-126	Zone 2	1,500.0	6.7	1,506.7	4,006.7	True	35.3	34.8	J-127
J-127	Zone 2	1,500.0	7.6	1,507.6	4,007.6	True	36.3	35.2	J-127
J-128	Zone 2	1,500.0	0.0	1,500.0	3,801.1	True	37.4	35.3	J-127
J-129	Zone 2	1,500.0	0.0	1,500.0	3,801.1	True			
J-130	Zone 2	1,500.0	6.7	1,506.7	4,006.7	True			

**GBWC 2024 IRP - Cold Springs Division**  
**Existing (2022) MDD+Fire Condition Distribution System Junction**  
**Report**  
**Fire Flow - Time: 0.00 hours**

Label	Zone	Fire Flow (Needed) (gpm)	MDD (gpm)	Total Flow Needed (Fire Flow + MDD) (gpm)	Available Flow at 20 psi Min. Residual Pressure (gpm)	Satisfies Fire Flow Constraints ?	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Zone Lower Limit @ Total Flow Needed) (psi)	Junction w/ Minimum Pressure (Zone @ Total Flow Needed)
J-131	Zone 2	1,500.0	8.9	1,508.9	4,008.9	True	41.2	35.8	J-127
J-132	Zone 2	1,500.0	0.0	1,500.0	2,807.7	True	35.5	35.7	J-127
J-133	Zone 2	1,500.0	8.9	1,508.9	4,008.9	True	40.0	35.7	J-127
J-134	Zone 2	1,500.0	0.0	1,500.0	4,000.0	True	43.4	35.8	J-127
J-135	Zone 3	1,000.0	12.4	1,012.4	2,527.3	True	78.2	43.3	J-234
J-136	Zone 3	1,000.0	10.6	1,010.6	2,522.2	True	79.8	43.3	J-234
J-137	Zone 3	1,000.0	4.0	1,004.0	2,281.0	True	78.1	43.3	J-234
J-138	Zone 3	1,000.0	0.0	1,000.0	2,390.5	True	66.8	43.2	J-234
J-139	Zone 3	1,000.0	0.0	1,000.0	2,452.5	True	59.8	43.2	J-234
J-140	Zone 3	1,000.0	9.5	1,009.5	2,467.9	True	51.2	43.2	J-234
J-141	Zone 3	1,000.0	4.0	1,004.0	2,331.0	True	57.9	43.2	J-234
J-142	Zone 3	1,000.0	4.7	1,004.7	1,692.7	True	43.0	43.3	J-234
J-143	Zone 3	1,000.0	3.3	1,003.3	1,846.9	True	51.1	43.3	J-234
J-144	Zone 3	1,000.0	0.0	1,000.0	2,244.7	True	65.6	43.3	J-234
J-145	Zone 3	1,000.0	4.4	1,004.4	2,253.4	True	57.3	43.3	J-234
J-146	Zone 3	1,000.0	0.0	1,000.0	2,333.1	True	71.3	43.3	J-234
J-149 Reno Truss	Zone 2	1,500.0	0.5	1,500.5	3,842.0	True	50.2	36.0	J-127
J-150	Zone 1	1,500.0	5.2	1,505.2	1,836.5	True	48.6	35.9	J-652
J-151	Zone 1	1,500.0	3.4	1,503.4	1,776.7	True	42.6	35.9	J-652
J-152	Zone 1	1,500.0	5.7	1,505.7	1,837.1	True	52.8	35.9	J-652
J-153	Zone 1	1,500.0	5.2	1,505.2	1,836.4	True	56.4	35.9	J-652
J-154	Zone 1	1,500.0	6.7	1,506.7	1,837.8	True	63.4	35.9	J-652
J-155	Zone 1	1,500.0	4.6	1,504.6	1,835.9	True	54.6	35.9	J-652
J-157	Zone 2	1,500.0	0.0	1,500.0	2,791.5	True	40.7	35.8	J-127
J-158	Zone 1	1,500.0	11.5	1,511.5	1,743.6	True	60.5	32.0	J-652
J-159	Zone 1	1,500.0	6.3	1,506.3	1,723.2	True	34.6	31.6	J-652
J-160	Zone 1	1,500.0	5.2	1,505.2	1,720.5	True	34.5	31.6	J-652
J-161	Zone 1	1,500.0	5.2	1,505.2	1,725.2	True	50.0	31.5	J-652
J-162	Zone 1	1,500.0	5.7	1,505.7	1,729.1	True	50.4	31.7	J-652
J-163	Zone 1	1,500.0	7.4	1,507.4	1,782.3	True	59.8	33.8	J-652
J-164	Zone 1	1,500.0	8.0	1,508.0	1,804.9	True	58.8	34.6	J-652
J-165	Zone 1	1,500.0	12.0	1,512.0	1,766.6	True	60.9	33.0	J-652
J-166	Zone 1	1,500.0	4.6	1,504.6	1,725.9	True	43.9	31.6	J-652
J-185	Zone 3	1,000.0	0.0	1,000.0	2,456.3	True	44.1	43.2	J-234
J-187	Zone 3	1,000.0	0.0	1,000.0	2,459.3	True	58.3	43.2	J-234
J-194	Zone 2	1,500.0	6.7	1,506.7	2,790.9	True	43.8	36.1	J-127
J-189	Zone 1	1,500.0	0.0	1,500.0	2,338.1	True	47.6	45.7	J-3

**GBWC 2024 IRP - Cold Springs Division**  
**Existing (2022) MDD+Fire Condition Distribution System Junction**  
**Report**  
**Fire Flow - Time: 0.00 hours**

Label	Zone	Fire Flow (Needed) (gpm)	MDD (gpm)	Total Flow Needed (Fire Flow + MDD) (gpm)	Available Flow at 20 psi Min. Residual Pressure (gpm)	Satisfies Fire Flow Constraints ?	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Zone Lower Limit @ Total Flow Needed) (psi)	Junction w/ Minimum Pressure (Zone @ Total Flow Needed)
J-190	Zone 1	1,500.0	0.0	1,500.0	2,238.2	True	46.8	45.7	J-3
J-191	Zone 1	1,500.0	4.6	1,504.6	2,206.1	True	46.0	45.7	J-3
J-193	Zone 1	1,500.0	4.6	1,504.6	1,937.1	True	39.9	45.1	J-5
J-184	Zone 4	1,500.0	49.6	1,549.6	4,049.6	True	64.4	41.5	J-760
J-195	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	65.4	41.5	J-760
J-196	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	73.3	41.5	J-760
J-197	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	77.6	41.5	J-760
J-198	Zone 4	1,500.0	4.7	1,504.7	4,004.7	True	79.1	41.5	J-760
J-199	Zone 4	1,500.0	5.1	1,505.1	4,005.1	True	79.4	41.5	J-760
J-200	Zone 4	1,500.0	5.1	1,505.1	4,005.1	True	79.7	41.5	J-760
J-201	Zone 4	1,500.0	5.1	1,505.1	4,005.1	True	80.0	41.5	J-760
J-202	Zone 4	1,500.0	4.4	1,504.4	4,004.4	True	79.3	41.5	J-760
J-203	Zone 4	1,500.0	3.7	1,503.7	3,436.0	True	65.8	41.5	J-760
J-204	Zone 4	1,500.0	3.7	1,503.7	2,494.3	True	56.3	41.5	J-760
J-205	Zone 4	1,500.0	3.7	1,503.7	2,489.3	True	57.0	41.5	J-760
J-206	Zone 4	1,500.0	3.7	1,503.7	2,515.0	True	58.0	41.5	J-760
J-207	Zone 4	1,500.0	3.7	1,503.7	3,233.8	True	67.9	41.5	J-760
J-208	Zone 4	1,500.0	3.7	1,503.7	4,003.7	True	83.3	41.5	J-760
J-212	Zone 4	1,500.0	3.3	1,503.3	4,003.3	True	83.6	41.5	J-760
J-214	Zone 4	1,500.0	3.7	1,503.7	4,003.7	True	82.0	41.5	J-760
J-215	Zone 4	1,500.0	4.5	1,504.5	4,004.5	True	82.4	41.5	J-760
J-217	Zone 3	1,000.0	0.0	1,000.0	2,294.6	True	76.2	43.3	J-234
J-218	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	86.4	41.5	J-760
J-219	Zone 4	1,500.0	3.3	1,503.3	4,003.3	True	86.3	41.5	J-760
J-220	Zone 4	1,500.0	3.7	1,503.7	4,003.7	True	88.1	41.5	J-760
J-221	Zone 4	1,500.0	3.7	1,503.7	4,003.7	True	87.4	41.5	J-760
J-223	Zone 4	1,500.0	3.7	1,503.7	4,003.7	True	85.7	41.5	J-760
J-225	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	85.9	41.5	J-760
J-226	Zone 4	1,500.0	3.7	1,503.7	2,498.4	True	62.7	41.5	J-760
J-227	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	85.3	41.5	J-760
J-228	Zone 4	1,500.0	3.7	1,503.7	2,408.5	True	61.1	41.5	J-760
J-229	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	86.4	41.5	J-760
J-230	Zone 4	1,500.0	3.7	1,503.7	2,543.7	True	63.6	41.5	J-760
J-231	Zone 4	1,500.0	3.7	1,503.7	2,544.7	True	63.7	41.5	J-760
J-233	Zone 4	1,500.0	5.9	1,505.9	4,005.9	True	87.3	41.5	J-760
J-234	Zone 3	1,000.0	2.6	1,002.6	2,053.9	True	41.1	44.0	J-237
J-235	Zone 3	1,000.0	0.0	1,000.0	2,297.4	True	42.5	44.0	J-237
J-237	Zone 3	1,000.0	2.9	1,002.9	2,673.5	True	44.0	44.0	J-235
J-238	Zone 4	1,500.0	3.7	1,503.7	4,003.7	True	86.8	41.5	J-760

**GBWC 2024 IRP - Cold Springs Division**  
**Existing (2022) MDD+Fire Condition Distribution System Junction**  
**Report**  
**Fire Flow - Time: 0.00 hours**

Label	Zone	Fire Flow (Needed) (gpm)	MDD (gpm)	Total Flow Needed (Fire Flow + MDD) (gpm)	Available Flow at 20 psi Min. Residual Pressure (gpm)	Satisfies Fire Flow Constraints ?	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Zone Lower Limit @ Total Flow Needed) (psi)	Junction w/ Minimum Pressure (Zone @ Total Flow Needed)
J-239	Zone 4	1,500.0	3.7	1,503.7	4,003.7	True	82.7	41.5	J-760
J-236	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	84.7	41.5	J-760
J-240	Zone 2	1,500.0	0.0	1,500.0	4,000.0	True	43.3	37.3	J-127
J-241	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	41.7	41.5	J-760
J-246	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	79.8	41.5	J-760
J-247	Zone 4	1,500.0	9.1	1,509.1	4,009.1	True	91.5	41.5	J-760
J-248	Zone 3	1,000.0	5.1	1,005.1	2,406.3	True	66.8	43.2	J-234
J-249	Zone 3	1,000.0	4.0	1,004.0	2,336.0	True	71.3	43.3	J-234
J-250	Zone 4	1,500.0	4.0	1,504.0	4,004.0	True	83.8	41.5	J-760
J-251	Zone 4	1,500.0	7.3	1,507.3	4,007.3	True	83.8	41.5	J-760
J-252	Zone 4	1,500.0	11.4	1,511.4	4,011.4	True	92.7	41.5	J-760
J-254	Zone 4	1,500.0	2.6	1,502.6	4,002.6	True	84.7	41.5	J-760
J-255	Zone 2	1,500.0	0.0	1,500.0	3,878.7	True	49.5	36.0	J-127
J-256	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	81.6	41.5	J-760
J-257	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	82.5	41.5	J-760
J-258	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	87.1	41.5	J-760
J-259	Zone 4	1,500.0	2.2	1,502.2	3,254.2	True	67.5	41.5	J-760
J-260	Zone 4	1,500.0	2.2	1,502.2	3,178.1	True	68.3	41.5	J-760
J-261	Zone 4	1,500.0	1.8	1,501.8	4,001.8	True	76.9	41.5	J-760
J-262	Zone 4	1,500.0	0.0	1,500.0	2,793.6	True	65.1	41.5	J-760
J-263	Zone 4	1,500.0	1.7	1,501.7	3,772.3	True	74.8	41.5	J-760
J-264	Zone 4	1,500.0	3.7	1,503.7	4,003.7	True	85.0	41.5	J-760
J-265	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	79.8	41.5	J-760
J-266	Zone 4	1,500.0	3.3	1,503.3	4,003.3	True	89.6	41.5	J-760
J-267	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	89.6	41.5	J-760
J-268	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	89.1	41.5	J-760
J-269	Zone 4	1,500.0	3.7	1,503.7	4,003.7	True	88.3	41.5	J-760
J-270	Zone 4	1,500.0	4.0	1,504.0	3,587.7	True	77.3	41.5	J-760
J-271	Zone 4	1,500.0	4.0	1,504.0	2,468.4	True	62.4	41.5	J-760
J-272	Zone 4	1,500.0	2.6	1,502.6	3,979.9	True	79.4	41.5	J-760
J-273	Zone 4	1,500.0	2.6	1,502.6	2,963.8	True	70.2	41.5	J-760
J-274	Zone 2	1,500.0	4.5	1,504.5	3,891.2	True	45.1	36.0	J-127
J-275	Zone 2	1,500.0	6.2	1,506.2	3,134.3	True	42.5	36.0	J-127
J-276	Zone 4	1,500.0	5.1	1,505.1	3,920.7	True	80.4	41.5	J-760
J-277	Zone 4	1,500.0	4.4	1,504.4	4,004.4	True	81.9	41.5	J-760
J-278	Zone 4	1,500.0	4.4	1,504.4	4,004.4	True	85.2	41.5	J-760
J-279	Zone 4	1,500.0	3.3	1,503.3	4,003.3	True	85.8	41.5	J-760
J-280	Zone 4	1,500.0	2.9	1,502.9	2,949.6	True	64.4	41.5	J-760
J-281	Zone 4	1,500.0	2.9	1,502.9	4,002.9	True	74.1	41.5	J-760

**GBWC 2024 IRP - Cold Springs Division**  
**Existing (2022) MDD+Fire Condition Distribution System Junction**  
**Report**  
**Fire Flow - Time: 0.00 hours**

Label	Zone	Fire Flow (Needed) (gpm)	MDD (gpm)	Total Flow Needed (Fire Flow + MDD) (gpm)	Available Flow at 20 psi Min. Residual Pressure (gpm)	Satisfies Fire Flow Constraints ?	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Zone Lower Limit @ Total Flow Needed) (psi)	Junction w/ Minimum Pressure (Zone @ Total Flow Needed)
J-282	Zone 4	1,500.0	4.0	1,504.0	2,789.4	True	59.5	41.5	J-760
J-283	Zone 4	1,500.0	4.0	1,504.0	4,004.0	True	74.4	41.5	J-760
J-284	Zone 4	1,500.0	5.8	1,505.8	4,005.8	True	75.1	41.5	J-760
J-285	Zone 4	1,500.0	4.4	1,504.4	4,004.4	True	76.9	41.5	J-760
J-286	Zone 4	1,500.0	9.8	1,509.8	4,009.8	True	73.6	41.5	J-760
J-288	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	79.1	41.5	J-760
J-289	Zone 1	1,500.0	4.6	1,504.6	2,290.4	True	75.1	45.7	J-3
J-290	Zone 1	1,500.0	0.0	1,500.0	2,257.2	True	69.6	45.7	J-3
J-294	Zone 4	1,500.0	3.3	1,503.3	4,003.3	True	87.2	41.5	J-760
J-295	Zone 4	1,500.0	4.7	1,504.7	4,004.7	True	86.2	41.5	J-760
J-296	Zone 4	1,500.0	4.0	1,504.0	4,004.0	True	83.6	41.5	J-760
J-297	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	89.4	41.5	J-760
J-298	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	91.2	41.5	J-760
J-300	Zone 4	1,500.0	2.9	1,502.9	4,002.9	True	91.7	41.5	J-760
J-302	Zone 4	1,500.0	3.7	1,503.7	4,003.7	True	92.7	41.5	J-760
J-303	Zone 4	1,500.0	1.8	1,501.8	3,644.2	True	79.5	41.5	J-760
J-304	Zone 1	1,500.0	4.6	1,504.6	2,319.5	True	72.5	45.7	J-3
J-305	Zone 1	1,500.0	4.6	1,504.6	1,768.7	True	41.6	45.7	J-3
J-306	Zone 1	1,500.0	4.6	1,504.6	2,215.2	True	70.6	45.7	J-3
J-307	Zone 4	1,500.0	5.1	1,505.1	3,983.7	True	82.5	41.5	J-760
J-308	Zone 4	1,500.0	5.8	1,505.8	4,005.8	True	81.9	41.5	J-760
J-309	Zone 4	1,500.0	3.7	1,503.7	4,003.7	True	87.1	41.5	J-760
J-310	Zone 4	1,500.0	5.1	1,505.1	4,005.1	True	83.4	41.5	J-760
J-311	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	90.3	41.5	J-760
J-312	Zone 4	1,500.0	5.1	1,505.1	4,005.1	True	82.6	41.5	J-760
J-313	Zone 4	1,500.0	4.4	1,504.4	4,004.4	True	89.4	41.5	J-760
J-314	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	90.3	41.5	J-760
J-315	Zone 4	1,500.0	5.1	1,505.1	4,005.1	True	82.3	41.5	J-760
J-316	Zone 4	1,500.0	6.8	1,506.8	4,006.8	True	88.8	41.5	J-760
J-318	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	90.2	41.5	J-760
J-319	Zone 4	1,500.0	6.3	1,506.3	4,006.3	True	89.8	41.5	J-760
J-320	Zone 4	1,500.0	2.8	1,502.8	4,002.8	True	86.4	41.5	J-760
J-321	Zone 4	1,500.0	2.2	1,502.2	4,002.2	True	79.5	41.5	J-760
J-323	Zone 4	1,500.0	2.9	1,502.9	3,933.2	True	78.9	41.5	J-760
J-324	Zone 4	1,500.0	1.8	1,501.8	3,771.3	True	74.4	41.5	J-760
J-325	Zone 4	1,500.0	7.1	1,507.1	4,007.1	True	75.5	41.5	J-760
J-327	Zone 1	1,500.0	6.3	1,506.3	1,699.6	True	49.3	30.3	J-652
J-328	Zone 1	1,500.0	0.0	1,500.0	1,619.1	True	28.9	30.3	J-652
J-329	Zone 1	1,500.0	4.6	1,504.6	1,697.9	True	39.5	30.3	J-652

**GBWC 2024 IRP - Cold Springs Division**  
**Existing (2022) MDD+Fire Condition Distribution System Junction**  
**Report**  
**Fire Flow - Time: 0.00 hours**

Label	Zone	Fire Flow (Needed) (gpm)	MDD (gpm)	Total Flow Needed (Fire Flow + MDD) (gpm)	Available Flow at 20 psi Min. Residual Pressure (gpm)	Satisfies Fire Flow Constraints ?	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Zone Lower Limit @ Total Flow Needed) (psi)	Junction w/ Minimum Pressure (Zone @ Total Flow Needed)
J-330	Zone 1	1,500.0	4.0	1,504.0	1,697.2	True	46.9	30.3	J-652
J-331	Zone 1	1,500.0	5.2	1,505.2	1,698.1	True	57.6	30.3	J-652
J-332	Zone 1	1,500.0	0.0	1,500.0	1,693.2	True	46.0	30.3	J-652
J-333	Zone 1	1,500.0	5.7	1,505.7	1,699.0	True	41.4	30.3	J-652
J-334	Zone 1	1,500.0	0.0	1,500.0	1,693.3	True	35.8	30.3	J-652
J-427	Zone 1	1,500.0	5.7	1,505.7	1,698.8	True	53.0	30.3	J-652
J-336	Zone 1	1,500.0	4.6	1,504.6	1,718.8	True	43.3	31.3	J-652
J-337	Zone 1	1,500.0	8.6	1,508.6	1,717.2	True	48.4	31.0	J-652
J-339	Zone 1	1,500.0	4.0	1,504.0	1,720.5	True	50.2	31.4	J-652
J-340	Zone 1	1,500.0	3.4	1,503.4	1,724.8	True	39.0	31.6	J-652
J-341	Zone 1	1,500.0	0.0	1,500.0	1,714.1	True	47.0	31.3	J-652
J-342	Zone 1	1,500.0	0.0	1,500.0	1,716.4	True	48.3	31.4	J-652
J-343	Zone 1	1,500.0	5.2	1,505.2	1,720.6	True	37.3	31.6	J-652
J-344	Zone 1	1,500.0	0.0	1,500.0	1,846.6	True	63.8	36.4	J-652
J-350	Zone 1	1,500.0	0.0	1,500.0	1,935.0	True	57.6	39.4	J-652
J-355	Zone 2	1,500.0	0.0	1,500.0	4,000.0	True	46.1	35.9	J-127
J-346	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	73.1	41.5	J-760
J-348	Zone 4	1,500.0	3.7	1,503.7	4,003.7	True	70.5	41.5	J-760
J-352	Zone 4	1,500.0	4.7	1,504.7	4,004.7	True	65.3	41.5	J-760
J-385	Zone 1	1,500.0	1.0	1,501.0	1,654.6	True	56.7	28.5	J-652
J-387	Zone 1	1,500.0	0.0	1,500.0	2,099.7	True	50.7	45.7	J-3
J-388	Zone 1	1,500.0	0.0	1,500.0	2,428.8	True	63.6	45.7	J-3
J-389	Zone 4	1,500.0	1.5	1,501.5	4,001.5	True	58.9	41.5	J-760
J-390	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	58.4	41.5	J-760
J-391	Zone 4	1,500.0	3.7	1,503.7	4,003.7	True	59.9	41.5	J-760
J-392	Zone 4	1,500.0	5.1	1,505.1	4,005.1	True	58.2	41.5	J-760
J-393	Zone 4	1,500.0	4.4	1,504.4	4,004.4	True	58.1	41.5	J-760
J-394	Zone 4	1,500.0	5.1	1,505.1	4,005.1	True	54.4	41.5	J-760
J-395	Zone 4	1,500.0	3.7	1,503.7	4,003.7	True	54.0	41.5	J-760
J-396	Zone 4	1,500.0	5.1	1,505.1	4,005.1	True	46.1	41.5	J-760
J-397	Zone 4	1,500.0	4.4	1,504.4	4,004.4	True	44.6	41.5	J-760
J-398	Zone 4	1,500.0	0.6	1,500.6	4,000.6	True	48.0	41.5	J-760
J-399	Zone 4	1,500.0	0.7	1,500.7	4,000.7	True	56.0	41.5	J-760
J-400	Zone 4	1,500.0	2.9	1,502.9	4,002.9	True	82.1	41.5	J-760
J-401	Zone 4	1,500.0	3.3	1,503.3	3,510.5	True	80.5	41.5	J-760
J-402	Zone 4	1,500.0	2.9	1,502.9	3,370.9	True	79.0	41.5	J-760
J-403	Zone 4	1,500.0	2.6	1,502.6	3,507.2	True	79.4	41.5	J-760
J-404	Zone 4	1,500.0	2.9	1,502.9	4,002.9	True	83.2	41.5	J-760
J-405	Zone 4	1,500.0	2.9	1,502.9	2,439.7	True	64.8	41.5	J-760



**GBWC 2024 IRP - Cold Springs Division**  
**Existing (2022) MDD+Fire Condition Distribution System Junction**  
**Report**  
**Fire Flow - Time: 0.00 hours**

Label	Zone	Fire Flow (Needed) (gpm)	MDD (gpm)	Total Flow Needed (Fire Flow + MDD) (gpm)	Available Flow at 20 psi Min. Residual Pressure (gpm)	Satisfies Fire Flow Constraints ?	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Zone Lower Limit @ Total Flow Needed) (psi)	Junction w/ Minimum Pressure (Zone @ Total Flow Needed)
J-406	Zone 4	1,500.0	0.0	1,500.0	1,867.5	True	46.6	41.5	J-760
J-407	Zone 4	1,500.0	1.8	1,501.8	1,622.1	True	29.0	41.5	J-760
J-408	Zone 4	1,500.0	4.4	1,504.4	1,627.9	True	29.3	41.5	J-760
J-409	Zone 4	1,500.0	2.2	1,502.2	1,902.7	True	44.4	41.5	J-760
J-410	Zone 4	1,500.0	2.6	1,502.6	2,508.9	True	62.9	41.5	J-760
J-411	Zone 4	1,500.0	2.6	1,502.6	2,292.8	True	58.3	41.5	J-760
J-412	Zone 4	1,500.0	2.6	1,502.6	2,252.0	True	57.7	41.5	J-760
J-413	Zone 4	1,500.0	2.6	1,502.6	2,224.7	True	57.1	41.5	J-760
J-414	Zone 4	1,500.0	0.0	1,500.0	3,213.4	True	74.9	41.5	J-760
J-415	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	88.6	41.5	J-760
J-416	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	86.2	41.5	J-760
J-417	Zone 4	1,500.0	4.4	1,504.4	4,004.4	True	84.3	41.5	J-760
J-418	Zone 4	1,500.0	4.0	1,504.0	4,004.0	True	82.1	41.5	J-760
J-419	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	86.8	41.5	J-760
J-420	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	86.4	41.5	J-760
J-421	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	85.1	41.5	J-760
J-424	Zone 4	1,500.0	2.5	1,502.5	3,473.9	True	75.9	41.5	J-760
J-425	Zone 4	1,500.0	1.5	1,501.5	3,044.6	True	72.9	41.5	J-760
J-426	Zone 4	1,500.0	4.0	1,504.0	4,004.0	True	88.7	41.5	J-760
J-428	Zone 4	1,500.0	0.0	1,500.0	3,997.9	True	70.2	41.5	J-760
J-429	Zone 4	1,500.0	0.0	1,500.0	3,916.9	True	72.8	41.5	J-760
J-430	Zone 4	1,500.0	0.0	1,500.0	3,796.4	True	72.9	41.5	J-760
J-431	Zone 4	1,500.0	1.8	1,501.8	3,458.0	True	69.0	41.5	J-760
J-432	Zone 4	1,500.0	1.5	1,501.5	3,167.6	True	63.4	41.5	J-760
J-433	Zone 4	1,500.0	1.5	1,501.5	3,001.5	True	55.6	41.5	J-760
J-434	Zone 4	1,500.0	2.9	1,502.9	2,175.7	True	44.4	41.5	J-760
J-435	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	87.1	41.5	J-760
J-436	Zone 4	1,500.0	4.7	1,504.7	4,004.7	True	80.2	41.5	J-760
J-437	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	76.4	41.5	J-760
J-438	Zone 4	1,500.0	4.7	1,504.7	4,004.7	True	73.2	41.5	J-760
J-439	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	78.5	41.5	J-760
J-440	Zone 4	1,500.0	2.2	1,502.2	3,029.2	True	65.3	41.5	J-760
J-442	Zone 4	1,500.0	4.0	1,504.0	3,629.6	True	64.6	41.5	J-760
J-443	Zone 4	1,500.0	3.7	1,503.7	3,264.1	True	59.6	41.5	J-760
J-441	Zone 4	1,500.0	4.0	1,504.0	3,995.9	True	67.8	41.5	J-760
J-444	Zone 3	1,000.0	0.0	1,000.0	2,390.6	True	66.2	43.2	J-234
J-445	Zone 1	1,500.0	0.0	1,500.0	1,693.3	True	41.7	30.3	J-652
J-446	Zone 1	1,500.0	4.6	1,504.6	1,697.9	True	43.2	30.3	J-652
J-447	Zone 1	1,500.0	4.6	1,504.6	1,661.5	True	30.9	30.3	J-652

**GBWC 2024 IRP - Cold Springs Division**  
**Existing (2022) MDD+Fire Condition Distribution System Junction**  
**Report**  
**Fire Flow - Time: 0.00 hours**

Label	Zone	Fire Flow (Needed) (gpm)	MDD (gpm)	Total Flow Needed (Fire Flow + MDD) (gpm)	Available Flow at 20 psi Min. Residual Pressure (gpm)	Satisfies Fire Flow Constraints ?	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Zone Lower Limit @ Total Flow Needed) (psi)	Junction w/ Minimum Pressure (Zone @ Total Flow Needed)
J-448	Zone 1	1,500.0	6.3	1,506.3	1,543.4	True	22.8	30.3	J-652
J-423	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	86.6	41.5	J-760
J-449	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	87.8	41.5	J-760
J-452	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	84.4	41.5	J-760
J-453	Zone 4	1,500.0	6.2	1,506.2	4,006.2	True	83.9	41.5	J-760
J-454	Zone 4	1,500.0	4.4	1,504.4	4,004.4	True	83.5	41.5	J-760
J-455	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	82.6	41.5	J-760
J-456	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	82.5	41.5	J-760
BLDG 4 - Village Grill	Zone 4	1,500.0	0.3	1,500.3	4,000.3	True	81.7	41.5	J-760
J-458	Zone 4	1,500.0	3.7	1,503.7	4,003.7	True	84.2	41.5	J-760
J-459	Zone 4	1,500.0	3.3	1,503.3	4,003.3	True	80.1	41.5	J-760
J-460	Zone 4	1,500.0	4.7	1,504.7	4,004.7	True	86.8	41.5	J-760
J-461	Zone 4	1,500.0	5.5	1,505.5	4,005.5	True	86.8	41.5	J-760
J-462	Zone 4	1,500.0	6.6	1,506.6	4,006.6	True	85.2	41.5	J-760
J-470	Zone 4	1,500.0	0.0	1,500.0	3,538.7	True	78.0	41.5	J-760
J-471	Zone 4	1,500.0	5.5	1,505.5	3,630.2	True	76.5	41.5	J-760
J-472	Zone 4	1,500.0	4.0	1,504.0	3,837.4	True	77.2	41.5	J-760
J-473	Zone 4	1,500.0	4.4	1,504.4	3,960.7	True	77.1	41.5	J-760
J-474	Zone 4	1,500.0	2.9	1,502.9	4,002.9	True	82.7	41.5	J-760
J-475	Zone 4	1,500.0	3.3	1,503.3	4,003.3	True	82.8	41.5	J-760
J-476	Zone 4	1,500.0	2.9	1,502.9	4,002.9	True	82.6	41.5	J-760
J-477	Zone 4	1,500.0	2.9	1,502.9	4,002.9	True	80.5	41.5	J-760
J-478	Zone 4	1,500.0	2.9	1,502.9	4,002.9	True	78.5	41.5	J-760
J-479	Zone 4	1,500.0	0.0	1,500.0	3,470.8	True	73.4	41.5	J-760
J-480	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	46.1	41.5	J-760
J-481	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	51.9	41.5	J-760
J-482	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	61.1	41.5	J-760
J-483	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	68.6	41.5	J-760
J-466	Zone 4	1,500.0	5.5	1,505.5	3,823.8	True	71.7	41.5	J-760
J-484	Zone 4	1,500.0	4.0	1,504.0	3,805.7	True	69.9	41.5	J-760
J-485	Zone 4	1,500.0	8.6	1,508.6	4,008.6	True	71.2	41.5	J-760
J-486	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	78.0	41.5	J-760
J-570	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	72.8	41.5	J-760
J-571	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	72.9	41.5	J-760
J-576	Zone 4	1,500.0	4.4	1,504.4	3,291.1	True	58.9	41.5	J-760
J-586	Zone 4	1,500.0	20.6	1,520.6	4,020.6	True	82.0	41.5	J-760
J-587	Zone 4	1,500.0	4.2	1,504.2	2,642.5	True	66.9	41.5	J-760

**GBWC 2024 IRP - Cold Springs Division**  
**Existing (2022) MDD+Fire Condition Distribution System Junction**  
**Report**  
**Fire Flow - Time: 0.00 hours**

Label	Zone	Fire Flow (Needed) (gpm)	MDD (gpm)	Total Flow Needed (Fire Flow + MDD) (gpm)	Available Flow at 20 psi Min. Residual Pressure (gpm)	Satisfies Fire Flow Constraints ?	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Zone Lower Limit @ Total Flow Needed) (psi)	Junction w/ Minimum Pressure (Zone @ Total Flow Needed)
J-588	Zone 1	1,500.0	5.2	1,505.2	1,661.1	True	49.3	28.6	J-652
J-589	Zone 1	1,500.0	6.9	1,506.9	1,662.7	True	55.0	28.6	J-652
J-590	Zone 1	1,500.0	5.2	1,505.2	1,661.2	True	44.5	28.6	J-652
J-591	Zone 1	1,500.0	0.0	1,500.0	1,655.3	True	56.9	28.6	J-652
J-592	Zone 1	1,500.0	7.4	1,507.4	1,663.9	True	49.8	28.6	J-652
J-595	Zone 1	1,500.0	2.3	1,502.3	1,670.7	True	49.0	29.2	J-652
J-596	Zone 1	1,500.0	0.0	1,500.0	1,672.4	True	47.8	29.4	J-652
J-594	Zone 1	1,500.0	0.0	1,500.0	1,650.6	True	56.1	28.4	J-652
J-597	Zone 1	1,500.0	6.9	1,506.9	1,653.1	True	52.9	28.2	J-652
J-603	Zone 1	1,500.0	5.7	1,505.7	1,652.2	True	36.6	28.2	J-652
J-604	Zone 1	1,500.0	3.4	1,503.4	1,654.0	True	50.6	28.4	J-652
J-606	Zone 1	1,500.0	8.0	1,508.0	1,661.3	True	46.6	28.5	J-652
J-608	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	88.1	41.6	J-760
J-609	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	95.5	41.6	J-760
J-611	Zone 1	1,500.0	4.0	1,504.0	1,860.6	True	56.6	36.8	J-652
J-612	Zone 1	1,500.0	3.8	1,503.8	1,860.3	True	65.7	36.8	J-652
J-613	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	78.7	41.5	J-760
CS MIDDLE SCHOOL	Zone 4	2,750.0	23.4	2,773.4	4,023.4	True	56.0	39.2	J-760
J-639	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	76.0	41.5	J-760
J-644	Zone 1	1,500.0	9.7	1,509.7	1,652.6	True	39.9	28.0	J-652
J-645	Zone 1	1,500.0	0.0	1,500.0	1,633.6	True	38.3	27.5	J-652
J-646	Zone 1	1,500.0	9.2	1,509.2	1,633.1	True	37.9	27.0	J-652
J-647	Zone 1	1,500.0	5.7	1,505.7	1,640.8	True	45.9	27.6	J-652
J-648	Zone 1	1,500.0	2.9	1,502.9	1,638.0	True	40.1	27.6	J-652
J-642	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	72.8	41.5	J-760
J-649	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	73.0	41.5	J-760
J-652	Zone 1	1,500.0	5.7	1,505.7	1,485.3	False	18.7	36.7	J-653
J-653	Zone 1	1,500.0	5.7	1,505.7	1,626.8	True	28.1	27.6	J-652
J-654	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	84.0	41.5	J-760
J-655	Zone 4	1,500.0	3.7	1,503.7	2,632.3	True	62.5	41.5	J-760
J-656	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	83.9	41.5	J-760
J-657	Zone 4	1,500.0	3.7	1,503.7	2,626.1	True	61.8	41.5	J-760
J-658	Zone 4	1,500.0	5.5	1,505.5	4,005.5	True	76.2	41.5	J-760
J-659	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	79.5	41.5	J-760
J-660	Zone 4	1,500.0	2.9	1,502.9	4,002.9	True	77.2	41.5	J-760
J-661	Zone 4	1,500.0	3.3	1,503.3	4,003.3	True	77.2	41.5	J-760
J-662	Zone 4	1,500.0	3.7	1,503.7	2,373.5	True	56.8	41.5	J-760

**GBWC 2024 IRP - Cold Springs Division**  
**Existing (2022) MDD+Fire Condition Distribution System Junction**  
**Report**  
**Fire Flow - Time: 0.00 hours**

Label	Zone	Fire Flow (Needed) (gpm)	MDD (gpm)	Total Flow Needed (Fire Flow + MDD) (gpm)	Available Flow at 20 psi Min. Residual Pressure (gpm)	Satisfies Fire Flow Constraints ?	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Zone Lower Limit @ Total Flow Needed) (psi)	Junction w/ Minimum Pressure (Zone @ Total Flow Needed)
J-663	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	79.0	41.5	J-760
J-664	Zone 4	1,500.0	3.3	1,503.3	2,643.0	True	62.4	41.5	J-760
J-665	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	73.4	41.5	J-760
J-666	Zone 4	1,500.0	4.7	1,504.7	3,716.2	True	70.3	41.5	J-760
J-667	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	70.0	41.5	J-760
J-673	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	85.7	41.5	J-760
J-669	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	78.4	41.5	J-760
J-670	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	78.6	41.5	J-760
J-671	Zone 4	1,500.0	0.1	1,500.1	4,000.1	True	78.1	41.5	J-760
J-675	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	67.7	41.5	J-760
J-676	Zone 4	1,500.0	0.0	1,500.0	3,666.5	True	62.2	41.5	J-760
J-677	Zone 4	1,500.0	7.3	1,507.3	2,955.7	True	54.3	41.5	J-760
J-678	Zone 4	1,500.0	0.0	1,500.0	2,949.8	True	53.4	41.5	J-760
J-679	Zone 4	1,500.0	6.2	1,506.2	4,006.2	True	58.3	41.5	J-760
J-680	Zone 4	1,500.0	4.7	1,504.7	4,004.7	True	67.5	41.5	J-760
J-681	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	71.6	41.5	J-760
FH-929	Zone 4	1,500.0	0.0	1,500.0	3,956.0	True	71.3	41.5	J-760
J-683	Zone 4	1,500.0	4.7	1,504.7	4,004.7	True	74.8	41.5	J-760
FH-926	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	63.9	41.5	J-760
J-685	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	61.2	41.5	J-760
J-687	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	66.0	41.5	J-760
J-688	Zone 4	1,500.0	2.2	1,502.2	4,002.2	True	65.4	41.5	J-760
J-689	Zone 4	1,500.0	3.3	1,503.3	4,003.3	True	67.8	41.5	J-760
J-690	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	64.9	41.5	J-760
FH-930	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	64.5	41.5	J-760
FH-928	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	67.5	41.5	J-760
FH-927	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	67.2	41.5	J-760
J-674	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	69.8	41.5	J-760
FH-924	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	68.9	41.5	J-760
FH-925	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	60.3	41.5	J-760
FH-923	Zone 4	1,500.0	0.0	1,500.0	3,023.6	True	55.6	41.5	J-760
FH-922	Zone 4	1,500.0	0.0	1,500.0	2,918.6	True	53.5	41.5	J-760
FH-921	Zone 4	1,500.0	0.0	1,500.0	3,249.4	True	54.3	41.5	J-760
FH-920	Zone 4	1,500.0	0.0	1,500.0	3,712.9	True	69.6	41.5	J-760
FH-919	Zone 4	1,500.0	4.4	1,504.4	4,004.4	True	71.7	41.5	J-760
FH-918	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	78.8	41.5	J-760
FH-917	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	75.9	41.5	J-760
FH-915	Zone 4	1,500.0	0.0	1,500.0	3,614.7	True	74.1	41.5	J-760
FH-914	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	79.8	41.5	J-760

**GBWC 2024 IRP - Cold Springs Division**  
**Existing (2022) MDD+Fire Condition Distribution System Junction**  
**Report**  
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Label	Zone	Fire Flow (Needed) (gpm)	MDD (gpm)	Total Flow Needed (Fire Flow + MDD) (gpm)	Available Flow at 20 psi Min. Residual Pressure (gpm)	Satisfies Fire Flow Constraints ?	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Zone Lower Limit @ Total Flow Needed) (psi)	Junction w/ Minimum Pressure (Zone @ Total Flow Needed)
FH-913	Zone 4	1,500.0	0.0	1,500.0	3,788.7	True	75.1	41.5	J-760
FH-916	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	79.8	41.5	J-760
J-704	Zone 4	1,500.0	0.4	1,500.4	4,000.4	True	77.7	41.5	J-760
J-705	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	77.9	41.5	J-760
FH-931	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	79.7	41.5	J-760
BLDG 3 - CCCC	Zone 4	1,500.0	0.7	1,500.7	4,000.7	True	77.9	41.5	J-760
J-706	Zone 1	1,500.0	0.0	1,500.0	1,935.0	True	57.3	39.4	J-652
FH-801	Zone 1	1,500.0	0.0	1,500.0	1,893.0	True	53.2	39.4	J-652
J-714	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	78.3	41.5	J-760
J-715	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	77.1	41.5	J-760
J-728	Zone 4	1,500.0	1.5	1,501.5	4,001.5	True	76.8	41.5	J-760
J-729	Zone 4	1,500.0	0.0	1,500.0	3,241.3	True	61.7	41.5	J-760
J-730	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	63.4	41.5	J-760
J-731	Zone 4	1,500.0	0.0	1,500.0	3,216.8	True	63.4	41.5	J-760
J-732	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	63.0	41.5	J-760
J-733	Zone 4	1,500.0	5.1	1,505.1	3,716.1	True	68.7	41.5	J-760
J-734	Zone 4	1,500.0	0.0	1,500.0	3,184.7	True	62.6	41.5	J-760
J-735	Zone 4	1,500.0	0.0	1,500.0	3,198.1	True	61.7	41.5	J-760
J-736	Zone 4	1,500.0	5.1	1,505.1	3,622.7	True	61.2	41.5	J-760
J-742	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	43.3	41.5	J-760
J-743	Zone 4	1,500.0	4.0	1,504.0	4,004.0	True	43.8	41.5	J-760
J-744	Zone 4	1,500.0	0.0	1,500.0	2,436.0	True	37.7	39.0	J-756
J-746	Zone 4	1,500.0	0.0	1,500.0	2,239.9	True	33.3	34.2	J-751
J-747	Zone 4	1,500.0	3.3	1,503.3	2,595.7	True	35.5	37.6	J-749
J-749	Zone 4	1,500.0	0.0	1,500.0	2,265.9	True	33.3	33.3	H-8 - PH19
J-751	Zone 4	1,500.0	2.9	1,502.9	2,229.5	True	33.3	33.3	H-7 - PH19
J-752	Zone 4	1,500.0	3.7	1,503.7	2,807.3	True	40.8	38.9	J-746
J-753	Zone 4	1,500.0	3.7	1,503.7	2,781.4	True	40.0	40.0	H-6 - PH19
J-755	Zone 4	1,500.0	3.7	1,503.7	2,884.9	True	43.7	41.5	J-760
J-756	Zone 4	1,500.0	3.7	1,503.7	2,444.9	True	38.1	38.1	H-3 - PH19
J-757	Zone 4	1,500.0	3.7	1,503.7	4,003.7	True	56.6	41.5	J-760
J-758	Zone 4	1,500.0	3.7	1,503.7	4,003.7	True	56.1	41.5	J-760
J-759	Zone 4	1,500.0	0.0	1,500.0	3,499.0	True	38.1	38.1	H-9 - PH19
J-760	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	41.5	41.7	J-759

**GBWC 2024 IRP - Cold Springs Division**  
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Label	Zone	Fire Flow (Needed) (gpm)	MDD (gpm)	Total Flow Needed (Fire Flow + MDD) (gpm)	Available Flow at 20 psi Min. Residual Pressure (gpm)	Satisfies Fire Flow Constraints ?	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Zone Lower Limit @ Total Flow Needed) (psi)	Junction w/ Minimum Pressure (Zone @ Total Flow Needed)
J-761	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	83.8	41.5	J-760
J-762	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	82.7	41.5	J-760
J-763	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	81.0	41.5	J-760
J-764	Zone 4	1,500.0	3.0	1,503.0	4,003.0	True	78.6	41.5	J-760
J-765	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	77.3	41.5	J-760
J-766	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	80.6	41.5	J-760
J-767	Zone 4	1,500.0	1.4	1,501.4	4,001.4	True	79.9	41.5	J-760
J-768	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	78.2	41.5	J-760
J-769	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	76.2	41.5	J-760
J-770	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	69.9	41.5	J-760
J-771	Zone 4	1,500.0	6.9	1,506.9	4,006.9	True	80.1	41.5	J-760
J-773	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	82.9	41.5	J-760
J-774	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	79.4	41.5	J-760
J-775	Zone 4	1,500.0	3.7	1,503.7	4,003.7	True	81.9	41.5	J-760
J-776	Zone 4	1,500.0	3.7	1,503.7	4,003.7	True	81.0	41.5	J-760
J-777	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	81.8	41.5	J-760
J-778	Zone 4	1,500.0	5.5	1,505.5	4,005.5	True	78.4	41.5	J-760
J-779	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	80.1	41.5	J-760
J-780	Zone 4	1,500.0	4.4	1,504.4	4,004.4	True	78.6	41.5	J-760
J-781	Zone 4	1,500.0	3.7	1,503.7	4,003.7	True	79.1	41.5	J-760
J-782	Zone 4	1,500.0	2.6	1,502.6	4,002.6	True	77.4	41.5	J-760
J-783	Zone 4	1,500.0	2.6	1,502.6	4,002.6	True	72.5	41.5	J-760
J-795	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	93.7	41.6	J-760
J-797	Zone 2	1,500.0	8.0	1,508.0	4,008.0	True	53.2	35.9	J-127
J-799	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	79.0	41.5	J-760
J-805	Zone 4	1,500.0	0.0	1,500.0	3,801.2	True	48.8	42.3	J-760
J-806	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	63.6	41.5	J-760
J-807	Zone 4	1,500.0	4.0	1,504.0	4,004.0	True	63.5	41.5	J-760
J-808	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	67.1	41.5	J-760
J-809	Zone 4	1,500.0	4.0	1,504.0	4,004.0	True	69.2	41.5	J-760
J-810	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	63.2	41.5	J-760
J-811	Zone 4	1,500.0	4.7	1,504.7	4,004.7	True	63.0	41.5	J-760
J-812	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	67.4	41.5	J-760
J-813	Zone 4	1,500.0	4.4	1,504.4	4,004.4	True	68.7	41.5	J-760
J-814	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	70.7	41.5	J-760
J-815	Zone 4	1,500.0	1.0	1,501.0	4,001.0	True	61.8	41.5	J-760
J-816	Zone 4	1,500.0	4.4	1,504.4	4,004.4	True	62.9	41.5	J-760
J-817	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	65.4	41.5	J-760
J-818	Zone 4	1,500.0	4.0	1,504.0	4,004.0	True	69.1	41.5	J-760

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Label	Zone	Fire Flow (Needed) (gpm)	MDD (gpm)	Total Flow Needed (Fire Flow + MDD) (gpm)	Available Flow at 20 psi Min. Residual Pressure (gpm)	Satisfies Fire Flow Constraints ?	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Zone Lower Limit @ Total Flow Needed) (psi)	Junction w/ Minimum Pressure (Zone @ Total Flow Needed)
J-819	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	60.8	41.5	J-760
J-820	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	61.3	41.5	J-760
J-823	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	69.3	41.5	J-760
CS Valley Church	Zone 2	1,500.0	0.9	1,500.9	2,988.4	True	45.6	36.0	J-127
J-829	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	61.2	41.5	J-760
J-830	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	62.8	41.5	J-760
J-832	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	70.7	41.5	J-760
J-833	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	70.2	41.5	J-760
J-834	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	70.0	41.5	J-760
J-835	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	69.3	41.5	J-760
J-836	Zone 4	1,500.0	3.3	1,503.3	4,003.3	True	61.1	41.5	J-760
J-839	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	64.7	41.5	J-760
J-840	Zone 4	1,500.0	3.7	1,503.7	4,003.7	True	68.4	41.5	J-760
J-841	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	62.4	41.5	J-760
J-842	Zone 4	1,500.0	3.3	1,503.3	4,003.3	True	67.3	41.5	J-760
J-843	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	66.8	41.5	J-760
J-844	Zone 4	1,500.0	1.8	1,501.8	3,754.0	True	63.1	41.5	J-760
J-845	Zone 4	1,500.0	3.7	1,503.7	4,003.7	True	68.7	41.5	J-760
J-846	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	65.9	41.5	J-760
J-847	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	77.3	41.5	J-760
J22-848	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	76.2	41.5	J-760
J-850	Zone 4	1,500.0	2.9	1,502.9	4,002.9	True	76.6	41.5	J-760
J-851	Zone 4	1,500.0	2.9	1,502.9	4,002.9	True	73.3	41.5	J-760
J-852	Zone 4	1,500.0	2.9	1,502.9	4,002.9	True	72.5	41.5	J-760
J-853	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	75.3	41.5	J-760
J-854	Zone 4	1,500.0	3.3	1,503.3	4,003.3	True	74.9	41.5	J-760
J-855	Zone 4	1,500.0	3.3	1,503.3	4,003.3	True	71.8	41.5	J-760
J-856	Zone 4	1,500.0	3.3	1,503.3	4,003.3	True	71.0	41.5	J-760
J-857	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	75.0	41.5	J-760
J-858	Zone 4	1,500.0	2.9	1,502.9	4,002.9	True	71.3	41.5	J-760
J22-874	Zone 4	1,500.0	0.7	1,500.7	4,000.7	True	78.1	41.5	J-760
CS ELEM SCHOOL	Zone 4	3,125.0	2.5	3,127.5	2,903.8	False	10.3	38.3	J-760
J22-880	Zone 4	1,500.0	1.1	1,501.1	4,001.1	True	78.7	41.5	J-760
J22-882	Zone 4	1,500.0	1.5	1,501.5	4,001.5	True	80.7	41.5	J-760
J22-884	Zone 4	1,500.0	1.1	1,501.1	4,001.1	True	66.7	41.5	J-760
J22-886	Zone 4	1,500.0	1.1	1,501.1	4,001.1	True	68.0	41.5	J-760
J22-887	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	70.9	41.5	J-760

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**Report**  
**Fire Flow - Time: 0.00 hours**

Label	Zone	Fire Flow (Needed) (gpm)	MDD (gpm)	Total Flow Needed (Fire Flow + MDD) (gpm)	Available Flow at 20 psi Min. Residual Pressure (gpm)	Satisfies Fire Flow Constraints ?	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Zone Lower Limit @ Total Flow Needed) (psi)	Junction w/ Minimum Pressure (Zone @ Total Flow Needed)
J22-890	Zone 4	1,500.0	0.7	1,500.7	4,000.7	True	71.2	41.5	J-760
J22-892	Zone 4	1,500.0	0.7	1,500.7	4,000.7	True	73.7	41.5	J-760
J22-896	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	75.8	41.5	J-760
J22-898	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	76.4	41.5	J-760
J22-899	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	63.1	41.5	J-760
J22-901	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	61.7	41.5	J-760
J22-902	Zone 4	1,500.0	5.8	1,505.8	4,005.8	True	84.6	41.5	J-760
J22-1069	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	75.7	41.5	J-760
J22-1070	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	76.3	41.5	J-760
J-1071	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	78.7	41.5	J-760
J22-1072	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	79.9	41.5	J-760
J22-1078	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	65.0	41.5	J-760
J22-1079	Zone 4	1,500.0	2.8	1,502.8	4,002.8	True	69.4	41.5	J-760
J22-1080	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	70.8	41.5	J-760
J22-1082	Zone 4	1,500.0	1.7	1,501.7	4,001.7	True	71.8	41.5	J-760
J22-1083	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	72.6	41.5	J-760
J22-1084	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	75.1	41.5	J-760
J22-1085	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	76.1	41.5	J-760
J22-1086	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	76.9	41.5	J-760
J22-1087	Zone 4	1,500.0	18.2	1,518.2	4,018.2	True	78.5	41.5	J-760
J22-1088	Zone 4	1,500.0	2.8	1,502.8	4,002.8	True	79.5	41.5	J-760
J22-1089	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	80.9	41.5	J-760
J22-1090	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	81.7	41.5	J-760
J22-1091	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	83.1	41.5	J-760
J22-1147	Zone 4	1,500.0	0.0	1,500.0	3,009.4	True	64.2	41.5	J-760
J22-1158	Zone 4	1,500.0	1.1	1,501.1	4,001.1	True	68.8	41.5	J-760
J22-1159	Zone 4	1,500.0	1.1	1,501.1	4,001.1	True	70.1	41.5	J-760
J22-1160	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	71.6	41.5	J-760
J22-1161	Zone 4	1,500.0	1.1	1,501.1	4,001.1	True	72.3	41.5	J-760
J22-1163	Zone 4	1,500.0	1.1	1,501.1	4,001.1	True	71.8	41.5	J-760
J22-1164	Zone 4	1,500.0	1.1	1,501.1	4,001.1	True	74.9	41.5	J-760
J22-1165	Zone 4	1,500.0	1.5	1,501.5	4,001.5	True	74.2	41.5	J-760
J22-1166	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	75.7	41.5	J-760
J22-1168	Zone 4	1,500.0	1.5	1,501.5	4,001.5	True	74.3	41.5	J-760
J22-1169	Zone 4	1,500.0	1.8	1,501.8	4,001.8	True	74.1	41.5	J-760
J22-1170	Zone 4	1,500.0	1.5	1,501.5	3,087.2	True	65.0	41.5	J-760
J22-1171	Zone 4	1,500.0	1.5	1,501.5	3,322.4	True	66.7	41.5	J-760
J22-1172	Zone 4	1,500.0	3.3	1,503.3	4,003.3	True	70.2	41.5	J-760
J22-1173	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	78.2	41.5	J-760



**GBWC 2024 IRP - Cold Springs Division**  
**Existing (2022) MDD+Fire Condition Distribution System Junction**  
**Report**  
**Fire Flow - Time: 0.00 hours**

Label	Zone	Fire Flow (Needed) (gpm)	MDD (gpm)	Total Flow Needed (Fire Flow + MDD) (gpm)	Available Flow at 20 psi Min. Residual Pressure (gpm)	Satisfies Fire Flow Constraints ?	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Zone Lower Limit @ Total Flow Needed) (psi)	Junction w/ Minimum Pressure (Zone @ Total Flow Needed)
J22-1174	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	79.0	41.5	J-760
J22-1175	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	80.8	41.5	J-760
J22-1092	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	81.3	41.5	J-760
J-1179	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	68.0	41.5	J-760
J-1183	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	66.4	41.5	J-760
J-1184	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	63.0	41.5	J-760
J-23-1186	Zone 4	0.0	0.0	1,000.0	4,000.0	True	64.2	42.0	J-760
J-23-1187	Zone 4	0.0	0.7	1,000.7	4,000.7	True	62.9	42.0	J-760
J-23-1188	Zone 4	0.0	1.1	1,001.1	4,001.1	True	62.4	42.0	J-760
J-23-1189	Zone 4	0.0	1.1	1,001.1	3,591.3	True	60.2	42.0	J-760
J-23-1190	Zone 4	0.0	0.7	1,000.7	3,513.8	True	59.4	42.0	J-760
J-23-1191	Zone 4	0.0	0.0	1,000.0	3,530.7	True	60.2	42.0	J-760
J-23-1192	Zone 4	0.0	0.0	1,000.0	3,550.3	True	60.6	42.0	J-760
J-23-1193	Zone 4	0.0	2.6	1,002.6	3,616.0	True	61.6	42.0	J-760
J-23-1194	Zone 4	0.0	1.8	1,001.8	3,804.6	True	63.2	42.0	J-760
J-23-1195	Zone 4	0.0	1.1	1,001.1	4,001.1	True	64.1	42.0	J-760
J-23-1196	Zone 4	0.0	1.5	1,001.5	4,001.5	True	65.1	42.0	J-760
J-23-1197	Zone 4	0.0	1.1	1,001.1	4,001.1	True	66.1	42.0	J-760
J-1198	Zone 4	0.0	0.0	1,000.0	4,000.0	True	66.4	42.0	J-760
J-1199	Zone 4	0.0	0.0	1,000.0	4,000.0	True	65.5	42.0	J-760
J-1200	Zone 4	0.0	0.0	1,000.0	4,000.0	True	68.3	42.0	J-760
J-23-1201	Zone 4	0.0	1.5	1,001.5	4,001.5	True	68.3	42.0	J-760
J-23-1202	Zone 4	0.0	1.8	1,001.8	3,758.2	True	66.2	42.0	J-760
J-23-1203	Zone 4	0.0	1.8	1,001.8	4,001.8	True	74.0	42.0	J-760
J-23-1204	Zone 4	0.0	1.8	1,001.8	3,625.2	True	71.1	42.0	J-760

**GBWC 2024 IRP - Cold Springs Division**  
**Existing (2022) MDD+Fire Condition Distribution System Junction**  
**Report**  
**Fire Flow - Time: 0.00 hours**

Label	Zone	Fire Flow (Needed) (gpm)	MDD (gpm)	Total Flow Needed (Fire Flow + MDD) (gpm)	Available Flow at 20 psi Min. Residual Pressure (gpm)	Satisfies Fire Flow Constraints ?	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Zone Lower Limit @ Total Flow Needed) (psi)	Junction w/ Minimum Pressure (Zone @ Total Flow Needed)
J-23-1205	Zone 4	0.0	1.1	1,001.1	3,877.9	True	71.4	42.0	J-760
J-23-1206	Zone 4	0.0	1.1	1,001.1	3,711.8	True	70.7	42.0	J-760
J-23-1207	Zone 4	0.0	1.8	1,001.8	4,001.8	True	79.6	42.0	J-760
J-23-1208	Zone 4	0.0	2.6	1,002.6	4,002.6	True	77.9	42.0	J-760
J-23-1209	Zone 4	0.0	0.0	1,000.0	4,000.0	True	79.6	42.0	J-760
J-23-1210	Zone 4	0.0	0.0	1,000.0	4,000.0	True	80.1	42.0	J-760
J-23-1212	Zone 4	0.0	1.5	1,001.5	4,001.5	True	79.9	42.0	J-760
J-23-1213	Zone 4	0.0	2.2	1,002.2	4,002.2	True	81.4	42.0	J-760
J-23-1214	Zone 4	0.0	0.4	1,000.4	4,000.4	True	81.3	42.0	J-760
J-23-1215	Zone 4	0.0	0.7	1,000.7	4,000.7	True	81.2	42.0	J-760
J-23-1216	Zone 4	0.0	1.1	1,001.1	4,001.1	True	80.8	42.0	J-760
J-23-1217	Zone 4	0.0	0.0	1,000.0	4,000.0	True	80.8	42.0	J-760
J-23-1219	Zone 4	0.0	0.7	1,000.7	4,000.7	True	80.9	42.0	J-760
J-23-1220	Zone 4	0.0	0.0	1,000.0	4,000.0	True	80.6	42.0	J-760
J-23-1221	Zone 4	0.0	0.0	1,000.0	4,000.0	True	80.6	42.0	J-760
J-23-1222	Zone 4	0.0	0.0	1,000.0	4,000.0	True	78.0	42.0	J-760
J-23-1223	Zone 4	0.0	0.0	1,000.0	4,000.0	True	77.8	42.0	J-760
J-23-1225	Zone 4	0.0	0.0	1,000.0	3,440.9	True	59.8	42.0	J-760
J-23-1228	Zone 4	0.0	2.9	1,002.9	4,002.9	True	78.4	42.0	J-760
J-1242	Zone 1	1,500.0	0.0	1,500.0	1,734.6	True	60.5	32.1	J-652
J-1245	Zone 2	1,500.0	0.0	1,500.0	4,000.0	True	52.1	37.8	J-127
J-1246	Zone 2	1,500.0	0.0	1,500.0	4,000.0	True	50.1	36.9	J-127

**GBWC 2024 IRP - Cold Springs Division**  
**Existing (2022) MDD+Fire Condition Distribution System Junction**  
**Report**  
 Fire Flow - Time: 0.00 hours

Label	Zone	Fire Flow (Needed) (gpm)	MDD (gpm)	Total Flow Needed (Fire Flow + MDD) (gpm)	Available Flow at 20 psi Min. Residual Pressure (gpm)	Satisfies Fire Flow Constraints ?	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Zone Lower Limit @ Total Flow Needed) (psi)	Junction w/ Minimum Pressure (Zone @ Total Flow Needed)
J-1248	Zone 2	1,500.0	0.0	1,500.0	3,426.6	True	38.6	35.9	J-127
J-1275	Zone 4	0.0	0.0	1,000.0	3,890.8	True	76.4	42.0	J-760
J-1278	Zone 4	0.0	0.0	1,000.0	4,000.0	True	83.4	42.0	J-760

**GBWC 2024 IRP - Cold Springs Division**  
**Existing (2022) PHD Condition Distribution System Junction Report**  
**PHD-NODES - Time: 0.00 hours**

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
232	J-127	5,090.00	Zone 2	11.5	5,183.66	40.5
142	J-33	5,083.00	Zone 2	0.0	5,176.87	40.6
233	J-128	5,085.00	Zone 2	13.0	5,182.69	42.3
231	J-126	5,083.00	Zone 2	12.3	5,182.56	43.1
1620	J-760	5,181.43	Zone 4	0.0	5,278.87	42.2
1595	J-759	5,180.85	Zone 4	0.0	5,278.87	42.4
322	J-241	5,180.85	Zone 4	0.0	5,278.87	42.4
183	J-77	5,080.00	Zone 2	10.0	5,181.95	44.1
185	J-79	5,080.00	Zone 2	30.7	5,182.13	44.2
234	J-129	5,080.00	Zone 2	0.0	5,182.37	44.3
1564	J-747	5,177.53	Zone 4	5.8	5,278.87	43.8
171	J-65	5,078.00	Zone 2	8.4	5,182.22	45.1
215	J-110	5,078.00	Zone 2	19.2	5,182.33	45.1
235	J-130	5,078.00	Zone 2	11.5	5,182.47	45.2
1535	J-742	5,176.39	Zone 4	0.0	5,278.87	44.3
1569	J-749	5,176.03	Zone 4	0.0	5,278.87	44.5
181	J-75	5,076.00	Zone 2	6.1	5,182.23	46.0
1562	J-746	5,174.93	Zone 4	0.0	5,278.86	45.0
186	J-80	5,075.00	Zone 2	0.0	5,181.76	46.2
230	J-125	5,075.00	Zone 2	0.0	5,181.99	46.3
1538	J-743	5,174.58	Zone 4	7.1	5,278.87	45.1
1573	J-751	5,174.46	Zone 4	5.2	5,278.86	45.2
184	J-78	5,074.00	Zone 2	0.0	5,181.89	46.7
193	J-87	5,074.00	Zone 2	9.2	5,181.97	46.7
237	J-132	5,073.00	Zone 2	0.0	5,182.15	47.2
236	J-131	5,073.00	Zone 2	15.3	5,182.26	47.3
238	J-133	5,072.00	Zone 2	15.3	5,182.05	47.6
194	J-88	5,072.00	Zone 2	10.7	5,182.03	47.6
204	J-98	5,072.00	Zone 2	0.0	5,182.24	47.7
505	J-480	5,170.56	Zone 4	0.0	5,278.87	46.9
430	J-397	5,170.00	Zone 4	7.8	5,278.86	47.1
195	J-89	5,070.00	Zone 2	0.0	5,182.09	48.5
170	J-64	5,070.00	Zone 2	8.4	5,182.12	48.5
198	J-92	5,070.00	Zone 2	11.5	5,182.21	48.6
205	J-99	5,070.00	Zone 2	0.0	5,182.23	48.6
211	J-105	5,070.00	Zone 2	0.0	5,182.29	48.6
212	J-106	5,070.00	Zone 2	13.0	5,182.29	48.6
213	J-108	5,070.00	Zone 2	10.7	5,182.29	48.6
224	J-119	5,070.00	Zone 2	7.7	5,182.32	48.6
321	J-240	5,070.00	Zone 2	0.0	5,182.26	48.6
182	J-76	5,070.00	Zone 2	3.8	5,182.22	48.6
172	J-66	5,070.00	Zone 2	10.7	5,182.24	48.6
429	J-396	5,169.00	Zone 4	9.1	5,278.86	47.5
202	J-96	5,069.00	Zone 2	12.3	5,182.27	49.0
210	J-104	5,069.00	Zone 2	10.0	5,182.29	49.0
214	J-109	5,069.00	Zone 2	7.7	5,182.29	49.0

**GBWC 2024 IRP - Cold Springs Division**  
**Existing (2022) PHD Condition Distribution System Junction Report**  
**PHD-NODES - Time: 0.00 hours**

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
239	J-134	5,068.00	Zone 2	0.0	5,182.17	49.4
188	J-82	5,068.00	Zone 2	0.0	5,182.13	49.4
189	J-83	5,068.00	Zone 2	9.2	5,182.14	49.4
191	J-85	5,068.00	Zone 2	10.0	5,182.17	49.4
190	J-84	5,068.00	Zone 2	10.7	5,182.17	49.4
201	J-95	5,068.00	Zone 2	14.6	5,182.27	49.4
209	J-103	5,068.00	Zone 2	8.4	5,182.29	49.4
223	J-118	5,068.00	Zone 2	8.4	5,182.32	49.5
222	J-117	5,068.00	Zone 2	0.0	5,182.32	49.5
228	J-123	5,068.00	Zone 2	12.3	5,182.33	49.5
199	J-93	5,067.00	Zone 2	0.0	5,182.16	49.8
431	J-398	5,166.00	Zone 4	1.1	5,278.87	48.8
1579	J-753	5,165.91	Zone 4	6.5	5,278.86	48.9
196	J-90	5,066.00	Zone 2	9.2	5,182.16	50.3
221	J-116	5,065.00	Zone 2	10.7	5,182.32	50.8
227	J-122	5,065.00	Zone 2	10.7	5,182.33	50.8
203	J-97	5,065.00	Zone 2	0.0	5,182.32	50.8
216	J-111	5,065.00	Zone 2	13.8	5,182.40	50.8
1560	J-ph19 IRR2	5,164.42	NO FIRE	0.0	5,278.86	49.5
168	J-62	5,065.00	Zone 2	7.7	5,182.22	50.7
1558	J-744	5,164.42	Zone 4	0.0	5,278.86	49.5
148	J-40	5,065.00	Zone 2	14.6	5,182.24	50.7
316	J-235	5,203.00	Zone 3	0.0	5,317.00	49.3
317	J-237	5,203.00	Zone 3	5.2	5,317.00	49.3
315	J-234	5,202.00	Zone 3	4.5	5,316.45	49.5
1576	J-752	5,163.52	Zone 4	6.5	5,278.86	49.9
1586	J-756	5,163.08	Zone 4	6.5	5,278.86	50.1
226	J-121	5,063.00	Zone 2	0.0	5,182.33	51.6
152	J-45	5,063.00	Zone 2	12.3	5,182.34	51.6
269	J-185	5,200.00	Zone 3	0.0	5,316.45	50.4
200	GOMES ELEM SCHOOL	5,062.00	Zone 2	11.1	5,182.27	52.0
220	J-115	5,062.00	Zone 2	10.0	5,182.33	52.1
225	J-120	5,062.00	Zone 2	15.3	5,182.33	52.1
192	J-86	5,062.00	Zone 2	0.0	5,182.21	52.0
229	J-124	5,062.00	Zone 2	0.0	5,182.34	52.1
187	J-81	5,061.00	Zone 2	15.3	5,182.26	52.5
197	J-91	5,061.00	Zone 2	0.0	5,182.26	52.5
219	J-114	5,060.00	Zone 2	12.3	5,182.35	52.9
146	J-38	5,060.00	Zone 2	13.8	5,182.22	52.9
147	J-39	5,060.00	Zone 2	12.3	5,182.22	52.9
415	J-355	5,060.00	Zone 2	0.0	5,182.38	52.9
151	J-44	5,060.00	Zone 2	14.6	5,182.38	52.9
173	J-67	5,060.00	Zone 2	12.3	5,182.25	52.9
178	J-72	5,060.00	Zone 2	16.9	5,182.28	52.9
179	J-73	5,060.00	Zone 2	0.0	5,182.31	52.9

**GBWC 2024 IRP - Cold Springs Division**  
**Existing (2022) PHD Condition Distribution System Junction Report**  
**PHD-NODES - Time: 0.00 hours**

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
180	J-74	5,060.00	Zone 2	13.0	5,182.34	52.9
176	J-70	5,060.00	Zone 2	5.4	5,182.43	53.0
166	J-60	5,058.00	Zone 2	12.3	5,182.22	53.7
167	J-61	5,058.00	Zone 2	13.8	5,182.22	53.7
207	J-101	5,058.00	Zone 2	0.0	5,182.83	54.0
506	J-481	5,156.88	Zone 4	0.0	5,278.87	52.8
274	J-192	5,200.00	Zone 1	1.0	5,318.98	51.5
1583	J-755	5,155.60	Zone 4	6.5	5,278.86	53.3
175	J-69	5,056.00	Zone 2	0.0	5,182.32	54.7
353	J-275	5,055.00	Zone 2	10.7	5,182.35	55.1
352	J-274	5,055.00	Zone 2	7.7	5,182.37	55.1
218	J-113	5,055.00	Zone 2	3.1	5,182.44	55.1
217	J-112	5,055.00	Zone 2	16.1	5,182.52	55.2
259	J-157	5,055.00	Zone 2	0.0	5,182.27	55.1
206	J-100	5,055.00	Zone 2	10.0	5,182.81	55.3
136	J-17	5,055.00	Zone 2	0.0	5,182.52	55.2
428	J-395	5,152.00	Zone 4	6.5	5,278.87	54.9
177	J-71	5,052.00	Zone 2	0.0	5,182.52	56.5
135	J-16	5,052.00	Zone 2	0.0	5,182.62	56.5
208	J-102	5,052.00	Zone 2	15.3	5,183.16	56.7
150	J-43	5,052.00	Zone 2	7.7	5,183.36	56.8
174	J-68	5,050.00	Zone 2	10.7	5,182.28	57.2
159	J-53	5,050.00	Zone 2	13.8	5,183.94	57.9
2938	J-1245	5,050.00	Zone 2	0.0	5,184.69	58.3
2946	J-1246	5,050.00	Zone 2	0.0	5,184.18	58.1
145	J-37	5,050.00	Zone 2	0.0	5,183.85	57.9
163	J-57	5,050.00	Zone 2	10.7	5,184.08	58.0
432	J-399	5,147.42	Zone 4	1.3	5,278.86	56.9
165	J-59	5,050.00	Zone 2	7.7	5,184.72	58.3
164	J-58	5,048.00	Zone 2	0.0	5,183.92	58.8
427	J-394	5,146.00	Zone 4	9.1	5,278.85	57.5
1592	J-758	5,145.34	Zone 4	6.5	5,278.87	57.8
162	J-56	5,048.00	Zone 2	13.8	5,184.84	59.2
161	J-55	5,048.00	Zone 2	9.2	5,185.52	59.5
276	J-194	5,046.00	Zone 2	11.5	5,184.20	59.8
1860	J-805	5,046.00	Zone 4	0.0	5,184.27	59.8
156	J-50	5,046.00	Zone 2	9.2	5,184.28	59.8
158	J-52	5,045.00	Zone 2	5.4	5,183.98	60.1
169	J-63	5,045.00	Zone 2	12.6	5,183.19	59.8
680	J-ph19 IRR1	5,143.72	NO FIRE	0.0	5,278.89	58.5
247	J-142	5,180.00	Zone 3	8.4	5,314.66	58.3
333	J-255	5,045.00	Zone 2	0.0	5,184.63	60.4
1589	J-757	5,142.82	Zone 4	6.5	5,278.89	58.9
134	J-15	5,046.00	Zone 2	0.5	5,185.84	60.5
149	J-42	5,045.00	Zone 2	2.1	5,185.02	60.6
245	J-140	5,180.00	Zone 3	16.9	5,315.72	58.7

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**Existing (2022) PHD Condition Distribution System Junction Report**  
**PHD-NODES - Time: 0.00 hours**

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
157	J-51	5,042.00	Zone 2	6.9	5,184.06	61.5
425	J-392	5,140.00	Zone 4	9.1	5,278.84	60.1
426	J-393	5,140.00	Zone 4	7.8	5,278.85	60.1
423	J-390	5,140.00	Zone 4	0.0	5,278.83	60.1
160	J-54	5,045.00	Zone 2	0.0	5,188.21	62.0
252	J-149 Reno Truss	5,045.00	Zone 2	0.9	5,188.21	62.0
424	J-391	5,138.00	Zone 4	6.5	5,278.86	60.9
422	J-389	5,138.00	Zone 4	2.6	5,278.81	60.9
1806	J-797	5,045.00	Zone 2	13.8	5,190.64	63.0
507	J-482	5,135.00	Zone 4	0.0	5,278.86	62.2
690	FH-925	5,134.00	Zone 4	0.0	5,278.90	62.7
123	J-3	5,175.00	Zone 1	0.0	5,316.09	61.0
2752	J-23-1190	5,133.35	Zone 4	1.3	5,278.96	63.0
679	J-685	5,132.00	Zone 4	0.0	5,278.91	63.6
673	J-679	5,131.00	Zone 4	11.0	5,278.86	64.0
2750	J-23-1189	5,131.90	Zone 4	1.9	5,278.96	63.6
2834	J-23-1225	5,131.90	Zone 4	0.0	5,278.96	63.6
2754	J-23-1191	5,131.52	Zone 4	0.0	5,278.96	63.8
693	FH-921	5,130.00	Zone 4	0.0	5,278.87	64.4
2756	J-23-1192	5,130.50	Zone 4	0.0	5,278.96	64.2
1938	J-819	5,130.00	Zone 4	0.0	5,278.96	64.4
1940	J-820	5,129.04	Zone 4	0.0	5,278.96	64.9
1982	J-829	5,129.00	Zone 4	0.0	5,278.96	64.9
2748	J-23-1188	5,128.90	Zone 4	1.9	5,278.96	64.9
2758	J-23-1193	5,128.40	Zone 4	4.5	5,278.96	65.1
1996	J-836	5,128.20	Zone 4	5.8	5,278.96	65.2
2746	J-23-1187	5,128.18	Zone 4	1.3	5,278.96	65.2
1911	J-815	5,128.00	Zone 4	1.8	5,278.96	65.3
672	J-678	5,126.00	Zone 4	0.0	5,278.87	66.1
2140	J22-901	5,126.71	Zone 4	0.0	5,278.96	65.9
2999	J-1262	5,167.94	Zone 1	0.4	5,315.46	63.8
678	FH-926	5,126.00	Zone 4	0.0	5,278.92	66.2
418	J-352	5,125.00	Zone 4	8.4	5,278.86	66.6
283	J-184	5,125.00	Zone 4	88.1	5,278.79	66.5
2744	J-23-1186	5,125.90	Zone 4	0.0	5,278.96	66.2
692	FH-922	5,125.00	Zone 4	0.0	5,278.88	66.6
2760	J-23-1194	5,125.40	Zone 4	3.2	5,278.96	66.4
1899	J-810	5,125.00	Zone 4	0.0	5,278.96	66.6
1984	J-830	5,124.80	Zone 4	0.0	5,278.96	66.7
2007	J-841	5,124.70	Zone 4	0.0	5,278.96	66.7
1495	J-730	5,124.00	Zone 4	0.0	5,278.96	67.0
1890	J-806	5,124.00	Zone 4	0.0	5,278.96	67.0
1901	J-811	5,124.00	Zone 4	8.4	5,278.96	67.0
1913	J-816	5,124.00	Zone 4	7.8	5,278.96	67.0
2762	J-23-1195	5,124.00	Zone 4	1.9	5,278.96	67.0

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**PHD-NODES - Time: 0.00 hours**

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
248	J-143	5,160.00	Zone 3	5.8	5,314.63	66.9
250	J-145	5,160.00	Zone 3	7.8	5,314.72	66.9
1503	J-732	5,123.61	Zone 4	0.0	5,278.95	67.2
671	J-677	5,123.00	Zone 4	13.0	5,278.88	67.4
246	J-141	5,160.00	Zone 3	7.1	5,314.90	67.0
2735	J-1184	5,123.50	Zone 4	0.0	5,278.96	67.3
2772	J-1199	5,123.45	Zone 4	0.0	5,278.96	67.3
270	J-187	5,160.00	Zone 3	0.0	5,315.51	67.3
1892	J-807	5,123.00	Zone 4	7.1	5,278.96	67.5
2137	J22-899	5,122.97	Zone 4	0.0	5,278.96	67.5
682	J-688	5,122.00	Zone 4	3.9	5,278.94	67.9
2764	J-23-1196	5,122.20	Zone 4	2.6	5,278.96	67.8
691	FH-923	5,121.00	Zone 4	0.0	5,278.89	68.3
681	J-687	5,121.00	Zone 4	0.0	5,278.94	68.3
2768	J-1198	5,121.33	Zone 4	0.0	5,278.96	68.2
465	J-434	5,120.00	Zone 4	5.2	5,278.79	68.7
284	J-195	5,120.00	Zone 4	0.0	5,278.79	68.7
464	J-433	5,120.00	Zone 4	2.6	5,278.79	68.7
2766	J-23-1197	5,120.77	Zone 4	1.9	5,278.96	68.4
687	FH-927	5,119.00	Zone 4	0.0	5,278.93	69.2
685	FH-930	5,119.00	Zone 4	0.0	5,278.94	69.2
279	J-189	5,160.00	Zone 1	0.0	5,314.28	66.8
124	J-4	5,160.00	Zone 1	7.9	5,314.74	67.0
2436	J22-1078	5,118.46	Zone 4	0.0	5,278.96	69.4
669	J-675	5,118.00	Zone 4	0.0	5,278.94	69.6
244	J-139	5,155.00	Zone 3	0.0	5,315.30	69.4
508	J-483	5,117.00	Zone 4	0.0	5,278.86	70.0
578	J-576	5,117.00	Zone 4	7.8	5,278.88	70.0
2002	J-839	5,117.70	Zone 4	0.0	5,278.96	69.8
2781	J-23-1202	5,117.50	Zone 4	3.2	5,278.96	69.9
2776	J-1200	5,116.98	Zone 4	0.0	5,278.96	70.1
1519	J-736	5,116.72	Zone 4	9.1	5,278.96	70.2
1915	J-817	5,116.00	Zone 4	0.0	5,278.96	70.5
2731	J-1183	5,115.25	Zone 4	0.0	5,278.96	70.8
473	J-443	5,114.00	Zone 4	6.5	5,278.82	71.3
2779	J-23-1201	5,115.00	Zone 4	2.6	5,278.96	70.9
670	J-676	5,114.00	Zone 4	0.0	5,278.91	71.4
281	J-191	5,155.00	Zone 1	7.9	5,313.29	68.5
280	J-190	5,155.00	Zone 1	0.0	5,313.64	68.6
688	J-674	5,113.00	Zone 4	0.0	5,278.94	71.8
684	J-690	5,113.00	Zone 4	0.0	5,278.94	71.8
417	J-348	5,112.00	Zone 4	6.5	5,278.85	72.2
2013	J-844	5,113.00	Zone 4	3.2	5,278.96	71.8
2713	J-1179	5,112.09	Zone 4	0.0	5,278.96	72.2
1894	J-808	5,112.00	Zone 4	0.0	5,278.96	72.2
2018	J-846	5,111.50	Zone 4	0.0	5,278.96	72.5

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ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
689	FH-924	5,111.00	Zone 4	0.0	5,278.93	72.7
1903	J-812	5,111.00	Zone 4	0.0	5,278.96	72.7
2011	J-843	5,110.80	Zone 4	0.0	5,278.96	72.8
2114	J22-884	5,110.48	Zone 4	1.9	5,278.96	72.9
2009	J-842	5,110.40	Zone 4	5.8	5,278.96	72.9
282	J-193	5,150.00	Zone 1	7.9	5,313.15	70.6
2605	J22-1158	5,109.16	Zone 4	1.9	5,278.96	73.5
2439	J22-1079	5,109.01	Zone 4	4.9	5,278.96	73.5
2004	J-840	5,108.90	Zone 4	6.5	5,278.96	73.6
674	J-680	5,108.00	Zone 4	8.4	5,278.94	74.0
1493	J-729	5,108.00	Zone 4	0.0	5,278.96	74.0
1649	J-770	5,108.00	Zone 4	0.0	5,278.96	74.0
2117	J22-886	5,107.93	Zone 4	1.9	5,278.97	74.0
1516	J-735	5,107.24	Zone 4	0.0	5,278.96	74.3
1905	J-813	5,107.00	Zone 4	7.8	5,278.96	74.4
1917	J-818	5,107.00	Zone 4	7.1	5,278.96	74.4
472	J-442	5,106.00	Zone 4	7.1	5,278.82	74.8
649	J-652	5,145.00	Zone 1	9.9	5,301.80	67.8
2609	J22-1159	5,106.83	Zone 4	1.9	5,278.97	74.5
2015	J-845	5,106.70	Zone 4	6.5	5,278.96	74.5
2442	J22-1080	5,106.38	Zone 4	0.0	5,278.97	74.7
686	FH-928	5,106.00	Zone 4	0.0	5,278.94	74.8
575	J-570	5,106.00	Zone 4	0.0	5,278.95	74.8
416	J-346	5,105.00	Zone 4	0.0	5,278.85	75.2
1896	J-809	5,106.00	Zone 4	7.1	5,278.96	74.8
2789	J-23-1206	5,106.00	Zone 4	1.9	5,279.02	74.9
1946	J-823	5,105.90	Zone 4	0.0	5,278.96	74.9
2119	J22-887	5,105.85	Zone 4	0.0	5,278.98	74.9
1988	J-832	5,105.60	Zone 4	0.0	5,278.96	75.0
2123	J22-890	5,105.57	Zone 4	1.3	5,278.98	75.0
683	J-689	5,105.00	Zone 4	5.8	5,278.94	75.3
646	J-649	5,105.00	Zone 4	0.0	5,278.96	75.3
611	CS MIDDLE SCHOOL	5,105.00	Zone 4	41.5	5,278.95	75.3
576	J-571	5,105.00	Zone 4	0.0	5,278.96	75.3
645	J-642	5,105.00	Zone 4	0.0	5,278.97	75.3
1994	J-835	5,105.20	Zone 4	0.0	5,278.96	75.2
2787	J-23-1205	5,105.15	Zone 4	1.9	5,279.02	75.2
2446	J22-1082	5,104.95	Zone 4	3.0	5,278.98	75.3
2613	J22-1160	5,104.92	Zone 4	0.0	5,278.98	75.3
1992	J-834	5,104.80	Zone 4	0.0	5,278.96	75.4
1990	J-833	5,104.80	Zone 4	0.0	5,278.96	75.4
2785	J-23-1204	5,104.50	Zone 4	3.2	5,279.02	75.5
1907	J-814	5,104.28	Zone 4	0.0	5,278.96	75.6
1513	J-734	5,104.16	Zone 4	0.0	5,278.97	75.6
2621	J22-1163	5,104.00	Zone 4	1.9	5,278.98	75.7

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ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
364	J-286	5,103.00	Zone 4	17.4	5,278.80	76.1
2617	J22-1161	5,103.84	Zone 4	1.9	5,278.98	75.8
249	J-144	5,140.00	Zone 3	0.0	5,314.59	75.5
2449	J22-1083	5,103.53	Zone 4	0.0	5,278.98	75.9
695	FH-919	5,103.00	Zone 4	7.8	5,278.95	76.1
1498	J-731	5,103.00	Zone 4	0.0	5,278.97	76.1
474	J-441	5,102.00	Zone 4	7.1	5,278.83	76.5
2041	J-856	5,102.40	Zone 4	5.8	5,278.96	76.4
2783	J-23-1203	5,102.20	Zone 4	3.2	5,279.02	76.5
243	J-138	5,138.00	Zone 3	0.0	5,315.03	76.6
475	J-444	5,138.00	Zone 3	0.0	5,315.03	76.6
327	J-248	5,138.00	Zone 3	9.1	5,315.07	76.6
2039	J-855	5,101.00	Zone 4	5.8	5,278.97	77.0
360	J-282	5,100.00	Zone 4	7.1	5,278.81	77.4
285	J-196	5,100.00	Zone 4	0.0	5,278.78	77.4
463	J-432	5,100.00	Zone 4	2.6	5,278.78	77.4
1730	J-783	5,100.37	Zone 4	4.5	5,278.96	77.3
2031	J-852	5,100.10	Zone 4	5.2	5,278.96	77.4
511	J-485	5,100.00	Zone 4	15.2	5,279.08	77.5
362	J-284	5,099.00	Zone 4	10.4	5,278.80	77.8
2126	J22-892	5,099.98	Zone 4	1.3	5,278.99	77.5
292	J-203	5,099.00	Zone 4	6.5	5,278.78	77.8
125	J-5	5,140.00	Zone 1	7.9	5,312.95	74.8
675	J-681	5,099.00	Zone 4	0.0	5,278.94	77.9
2046	J-858	5,099.00	Zone 4	5.2	5,278.97	77.9
361	J-283	5,098.00	Zone 4	7.1	5,278.81	78.2
2629	J22-1165	5,098.57	Zone 4	2.6	5,278.99	78.1
2643	J22-1169	5,098.46	Zone 4	3.2	5,279.00	78.1
2029	J-851	5,098.30	Zone 4	5.2	5,278.96	78.2
638	J-639	5,098.00	Zone 4	0.0	5,279.05	78.3
2626	J22-1164	5,098.00	Zone 4	1.9	5,279.00	78.3
2452	J22-1084	5,098.00	Zone 4	0.0	5,279.00	78.3
2639	J22-1168	5,098.00	Zone 4	2.6	5,279.01	78.3
2653	J22-1172	5,097.47	Zone 4	5.8	5,279.00	78.5
664	J-667	5,097.00	Zone 4	0.0	5,278.96	78.7
2854	J23-IRR	5,097.29	NO FIRE	0.0	5,279.02	78.6
2037	J-854	5,097.00	Zone 4	5.8	5,278.97	78.7
293	J-204	5,096.00	Zone 4	6.5	5,278.77	79.1
1510	J-733	5,096.68	Zone 4	9.1	5,278.97	78.9
2034	J-853	5,096.50	Zone 4	0.0	5,278.99	79.0
459	J-428	5,095.50	Zone 4	0.0	5,278.78	79.3
2825	J-23-1222	5,097.83	Zone 4	0.0	5,280.75	79.1
2634	J22-1166	5,095.99	Zone 4	0.0	5,279.02	79.2
359	J-281	5,095.00	Zone 4	5.2	5,278.81	79.5
2455	J22-1085	5,095.96	Zone 4	0.0	5,279.02	79.2
2407	J22-1069	5,095.84	Zone 4	0.0	5,278.98	79.2

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ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
2132	J22-896	5,095.73	Zone 4	0.0	5,279.00	79.3
2023	J22-848	5,095.00	Zone 4	0.0	5,278.97	79.6
510	J-484	5,095.00	Zone 4	7.1	5,279.08	79.6
2829	J-23-1223	5,095.00	Zone 4	0.0	5,279.04	79.6
2650	J22-1171	5,094.93	Zone 4	2.6	5,279.00	79.6
2793	J-23-1208	5,094.90	Zone 4	4.5	5,279.04	79.7
2044	J-857	5,094.80	Zone 4	0.0	5,278.97	79.7
2411	J22-1070	5,094.79	Zone 4	0.0	5,278.99	79.7
694	FH-920	5,094.00	Zone 4	0.0	5,278.97	80.0
1648	J-769	5,094.00	Zone 4	0.0	5,278.97	80.0
2647	J22-1170	5,093.97	Zone 4	2.6	5,279.00	80.1
2543	J22-1147	5,093.94	Zone 4	0.0	5,279.00	80.1
2458	J22-1086	5,093.95	Zone 4	0.0	5,279.06	80.1
294	J-205	5,093.00	Zone 4	6.5	5,278.77	80.4
676	FH-929	5,093.00	Zone 4	0.0	5,278.96	80.5
2847	J-23-1228	5,093.33	Zone 4	5.2	5,279.07	80.4
2135	J22-898	5,093.00	Zone 4	0.0	5,279.00	80.5
3035	J-1275	5,092.00	Zone 4	0.0	5,278.82	80.8
2027	J-850	5,092.60	Zone 4	5.2	5,278.97	80.6
663	J-666	5,092.00	Zone 4	8.4	5,278.98	80.9
610	J-613	5,092.00	Zone 4	0.0	5,279.07	80.9
295	J-206	5,091.00	Zone 4	6.5	5,278.77	81.2
2021	J-847	5,091.70	Zone 4	0.0	5,278.97	81.0
251	J-146	5,128.00	Zone 3	0.0	5,314.82	80.8
328	J-249	5,128.00	Zone 3	7.1	5,314.83	80.8
1644	J-765	5,091.57	Zone 4	0.0	5,278.97	81.1
2791	J-23-1207	5,091.65	Zone 4	3.2	5,279.11	81.1
715	J-715	5,091.33	Zone 4	0.0	5,278.98	81.2
1647	J-768	5,091.00	Zone 4	0.0	5,278.99	81.3
337	J-259	5,091.00	Zone 4	3.9	5,279.15	81.4
358	J-280	5,090.00	Zone 4	5.2	5,278.81	81.7
2795	J-23-1209	5,091.00	Zone 4	0.0	5,279.03	81.4
286	J-197	5,090.00	Zone 4	0.0	5,278.78	81.7
462	J-431	5,090.00	Zone 4	3.2	5,278.78	81.7
2099	J22-874	5,091.00	Zone 4	1.3	5,279.12	81.4
2461	J22-1087	5,091.01	Zone 4	32.3	5,279.12	81.4
2656	J22-1173	5,091.00	Zone 4	0.0	5,279.12	81.4
469	J-438	5,090.00	Zone 4	8.4	5,278.80	81.7
471	J-440	5,090.00	Zone 4	3.9	5,278.80	81.7
1726	J-782	5,090.81	Zone 4	4.5	5,278.97	81.4
468	J-437	5,090.00	Zone 4	0.0	5,278.80	81.7
363	J-285	5,090.00	Zone 4	7.8	5,278.80	81.7
1489	J-728	5,090.70	Zone 4	2.7	5,278.98	81.5
702	J-704	5,090.07	Zone 4	0.7	5,279.08	81.8
662	J-665	5,090.00	Zone 4	0.0	5,279.01	81.8
325	J-246	5,090.00	Zone 4	0.0	5,279.15	81.8

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**Existing (2022) PHD Condition Distribution System Junction Report**  
**PHD-NODES - Time: 0.00 hours**

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
343	J-265	5,090.00	Zone 4	0.0	5,279.15	81.8
509	J-466	5,090.00	Zone 4	9.7	5,279.09	81.8
2797	J-23-1210	5,090.00	Zone 4	0.0	5,279.03	81.8
2415	J-1071	5,089.83	Zone 4	0.0	5,279.00	81.8
470	J-439	5,089.00	Zone 4	0.0	5,278.80	82.1
365	J-288	5,089.00	Zone 4	0.0	5,278.80	82.1
705	BLDG 3 - CCCC	5,089.40	Zone 4	1.3	5,279.08	82.1
703	J-705	5,089.40	Zone 4	0.0	5,279.08	82.1
2823	J-23-1221	5,091.00	Zone 4	0.0	5,280.59	82.0
2803	J-23-1212	5,089.64	Zone 4	2.6	5,279.28	82.0
714	J-714	5,089.18	Zone 4	0.0	5,279.00	82.1
668	J-671	5,089.00	Zone 4	0.2	5,279.00	82.2
1643	J-764	5,089.00	Zone 4	5.3	5,278.97	82.2
2821	J-23-1220	5,090.39	Zone 4	0.0	5,280.40	82.2
395	J-325	5,088.00	Zone 4	12.6	5,278.82	82.6
460	J-429	5,088.00	Zone 4	0.0	5,278.77	82.5
296	J-207	5,088.00	Zone 4	6.5	5,278.77	82.5
2108	J22-880	5,089.07	Zone 4	1.9	5,279.28	82.3
2659	J22-1174	5,088.84	Zone 4	0.0	5,279.28	82.4
2464	J22-1088	5,088.72	Zone 4	4.9	5,279.28	82.4
1718	J-780	5,088.22	Zone 4	7.8	5,278.98	82.5
2818	J-23-1219	5,089.50	Zone 4	1.3	5,280.27	82.5
677	J-683	5,088.00	Zone 4	8.4	5,278.98	82.6
2813	J-23-1217	5,089.40	Zone 4	0.0	5,280.27	82.6
1824	J-799	5,088.05	Zone 4	0.0	5,278.97	82.6
666	J-669	5,088.00	Zone 4	0.0	5,279.03	82.6
667	J-670	5,088.00	Zone 4	0.0	5,279.03	82.6
2704	J22-IRR-1178	5,088.35	NO FIRE	0.0	5,279.30	82.6
2811	J-23-1216	5,089.20	Zone 4	1.9	5,280.27	82.7
287	J-198	5,087.00	Zone 4	8.4	5,278.78	83.0
1722	J-781	5,087.65	Zone 4	6.5	5,278.99	82.8
2809	J-23-1215	5,088.75	Zone 4	1.3	5,280.13	82.8
1710	J-778	5,087.53	Zone 4	9.7	5,278.99	82.8
2807	J-23-1214	5,088.50	Zone 4	0.6	5,280.06	82.9
2805	J-23-1213	5,088.20	Zone 4	3.9	5,279.98	83.0
657	J-660	5,087.00	Zone 4	5.2	5,279.04	83.1
512	J-486	5,087.00	Zone 4	0.0	5,279.06	83.1
1646	J-767	5,087.00	Zone 4	2.5	5,279.00	83.1
461	J-430	5,086.00	Zone 4	0.0	5,278.77	83.4
2419	J22-1072	5,086.31	Zone 4	0.0	5,279.00	83.4
338	J-260	5,086.00	Zone 4	3.9	5,279.05	83.5
704	FH-931	5,086.00	Zone 4	0.0	5,279.09	83.5
650	J-653	5,124.00	Zone 1	9.9	5,301.77	76.9
655	J-658	5,086.00	Zone 4	9.7	5,279.07	83.5
659	J-662	5,086.00	Zone 4	6.5	5,279.09	83.5

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**Existing (2022) PHD Condition Distribution System Junction Report**  
**PHD-NODES - Time: 0.00 hours**

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
288	J-199	5,085.00	Zone 4	9.1	5,278.78	83.8
2467	J22-1089	5,086.25	Zone 4	0.0	5,279.43	83.6
1714	J-779	5,085.71	Zone 4	0.0	5,278.98	83.6
2111	J22-882	5,086.21	Zone 4	2.6	5,279.51	83.6
2662	J22-1175	5,086.17	Zone 4	0.0	5,279.48	83.6
1694	J-774	5,085.54	Zone 4	0.0	5,279.00	83.7
334	J-256	5,085.00	Zone 4	0.0	5,279.05	84.0
1645	J-766	5,085.00	Zone 4	0.0	5,279.02	83.9
697	FH-917	5,085.00	Zone 4	0.0	5,279.07	84.0
654	J-657	5,085.00	Zone 4	6.5	5,279.07	84.0
488	BLDG 4 - Village Grill	5,084.50	Zone 4	0.5	5,279.09	84.2
1642	J-763	5,084.50	Zone 4	0.0	5,278.98	84.1
3045	J-1278	5,084.36	Zone 4	0.0	5,279.09	84.3
1666	J-771	5,084.09	Zone 4	12.3	5,279.00	84.3
487	J-456	5,084.00	Zone 4	0.0	5,279.09	84.4
486	J-455	5,084.00	Zone 4	0.0	5,279.10	84.4
661	J-664	5,084.00	Zone 4	5.8	5,279.14	84.4
289	J-200	5,083.00	Zone 4	9.1	5,278.77	84.7
2105	CS ELEM SCHOOL	5,084.00	Zone 4	4.4	5,279.42	84.6
2470	J22-1090	5,084.00	Zone 4	0.0	5,279.42	84.6
2665	J22-1092	5,084.00	Zone 4	0.0	5,279.42	84.6
1702	J-776	5,083.50	Zone 4	6.5	5,279.00	84.6
652	J-655	5,083.00	Zone 4	6.5	5,279.14	84.9
585	J-586	5,082.00	Zone 4	36.5	5,278.81	85.2
335	J-257	5,082.00	Zone 4	0.0	5,278.94	85.2
340	J-262	5,082.00	Zone 4	0.0	5,278.94	85.2
467	J-436	5,082.00	Zone 4	8.4	5,278.94	85.2
339	J-261	5,082.00	Zone 4	3.2	5,279.05	85.3
1706	J-777	5,082.00	Zone 4	0.0	5,278.99	85.2
642	J-646	5,120.00	Zone 1	15.8	5,301.80	78.7
485	J-454	5,082.00	Zone 4	7.8	5,279.12	85.3
290	J-201	5,081.00	Zone 4	9.1	5,278.77	85.6
291	J-202	5,081.00	Zone 4	7.8	5,278.77	85.6
138	BORDER TOWN CASINO	5,120.00	Zone 1	58.9	5,303.06	79.2
1698	J-775	5,081.61	Zone 4	6.5	5,279.02	85.4
394	J-324	5,081.00	Zone 4	3.2	5,278.92	85.6
1641	J-762	5,081.00	Zone 4	0.0	5,278.99	85.7
641	J-645	5,119.00	Zone 1	0.0	5,301.86	79.1
656	J-659	5,081.00	Zone 4	0.0	5,279.07	85.7
696	FH-918	5,081.00	Zone 4	0.0	5,279.07	85.7
658	J-661	5,081.00	Zone 4	5.8	5,279.10	85.7
698	FH-915	5,081.00	Zone 4	0.0	5,279.10	85.7

**GBWC 2024 IRP - Cold Springs Division**  
**Existing (2022) PHD Condition Distribution System Junction Report**  
**PHD-NODES - Time: 0.00 hours**

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
484	J-453	5,081.00	Zone 4	11.0	5,279.15	85.7
700	FH-913	5,081.00	Zone 4	0.0	5,279.15	85.7
2473	J22-1091	5,081.00	Zone 4	0.0	5,279.42	85.8
341	J-263	5,080.00	Zone 4	3.0	5,278.94	86.1
660	J-663	5,080.00	Zone 4	0.0	5,279.15	86.2
1689	J-773	5,079.86	Zone 4	0.0	5,279.01	86.2
483	J-452	5,080.00	Zone 4	0.0	5,279.20	86.2
329	J-250	5,080.00	Zone 4	7.1	5,279.25	86.2
330	J-251	5,080.00	Zone 4	13.0	5,279.37	86.3
420	J-387	5,120.00	Zone 1	0.0	5,312.94	83.5
421	J-388	5,120.00	Zone 1	0.0	5,312.85	83.4
1639	J-761	5,079.00	Zone 4	0.0	5,279.02	86.5
701	FH-916	5,079.00	Zone 4	0.0	5,279.07	86.6
301	J-217	5,115.00	Zone 3	0.0	5,314.48	86.3
299	J-214	5,078.00	Zone 4	6.5	5,278.78	86.9
300	J-215	5,078.00	Zone 4	7.9	5,278.78	86.9
297	J-208	5,078.00	Zone 4	6.5	5,278.79	86.9
503	J-478	5,079.00	Zone 4	5.2	5,279.33	86.7
504	J-479	5,079.00	Zone 4	0.0	5,279.33	86.7
479	J-448	5,116.00	Zone 1	10.8	5,300.79	79.9
640	J-644	5,116.00	Zone 1	16.8	5,301.92	80.4
653	J-656	5,078.00	Zone 4	0.0	5,279.07	87.0
699	FH-914	5,078.00	Zone 4	0.0	5,279.14	87.0
499	J-474	5,078.00	Zone 4	5.2	5,279.30	87.1
2141	J22-902	5,078.00	Zone 4	10.2	5,279.42	87.1
498	J-473	5,077.00	Zone 4	7.8	5,279.09	87.4
651	J-654	5,077.00	Zone 4	0.0	5,279.14	87.5
319	J-239	5,076.00	Zone 4	6.5	5,278.78	87.7
440	J-407	5,077.00	Zone 4	3.2	5,279.35	87.5
493	J-462	5,077.00	Zone 4	11.7	5,279.39	87.6
454	J-421	5,077.00	Zone 4	0.0	5,279.42	87.6
500	J-475	5,076.50	Zone 4	5.8	5,279.35	87.8
342	J-264	5,075.00	Zone 4	6.5	5,278.83	88.2
501	J-476	5,075.50	Zone 4	5.2	5,279.37	88.2
441	J-408	5,075.50	Zone 4	7.8	5,279.35	88.2
442	J-409	5,075.50	Zone 4	3.9	5,279.35	88.2
497	J-472	5,075.00	Zone 4	7.1	5,279.10	88.3
298	J-212	5,074.00	Zone 4	5.8	5,278.78	88.6
478	J-447	5,112.50	Zone 1	7.9	5,300.79	81.5
480	J-423	5,075.00	Zone 4	0.0	5,279.42	88.4
502	J-477	5,074.50	Zone 4	5.2	5,279.37	88.6
391	J-320	5,074.00	Zone 4	5.0	5,279.09	88.7
242	J-137	5,110.00	Zone 3	7.1	5,314.29	88.4
665	J-673	5,074.00	Zone 4	0.0	5,279.20	88.8
453	J-420	5,074.00	Zone 4	0.0	5,279.39	88.9
491	J-460	5,074.00	Zone 4	8.4	5,279.40	88.9

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**PHD-NODES - Time: 0.00 hours**

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
492	J-461	5,073.50	Zone 4	9.7	5,279.39	89.1
443	J-410	5,073.50	Zone 4	4.5	5,279.37	89.1
351	J-273	5,073.00	Zone 4	4.5	5,279.10	89.2
496	J-471	5,073.00	Zone 4	9.7	5,279.13	89.2
308	J-226	5,072.00	Zone 4	6.5	5,278.81	89.5
312	J-230	5,072.00	Zone 4	6.5	5,278.83	89.5
313	J-231	5,072.00	Zone 4	6.5	5,278.85	89.5
452	J-419	5,073.00	Zone 4	0.0	5,279.39	89.3
490	J-459	5,073.00	Zone 4	5.8	5,279.39	89.3
262	J-160	5,110.00	Zone 1	8.9	5,300.45	82.4
261	J-159	5,110.00	Zone 1	10.8	5,300.45	82.4
392	J-321	5,072.00	Zone 4	3.9	5,279.09	89.6
349	J-271	5,072.00	Zone 4	7.1	5,279.11	89.6
481	J-449	5,072.00	Zone 4	0.0	5,279.26	89.7
310	J-228	5,071.00	Zone 4	6.5	5,278.81	89.9
450	J-417	5,072.00	Zone 4	7.8	5,279.39	89.7
444	J-411	5,072.00	Zone 4	4.5	5,279.37	89.7
336	J-258	5,071.00	Zone 4	0.0	5,278.87	89.9
456	J-424	5,072.00	Zone 4	4.5	5,279.42	89.7
393	J-323	5,071.00	Zone 4	5.2	5,278.94	90.0
350	J-272	5,071.00	Zone 4	4.5	5,279.10	90.0
320	J-236	5,070.00	Zone 4	0.0	5,278.79	90.3
332	J-254	5,070.00	Zone 4	4.5	5,278.79	90.3
309	J-227	5,070.00	Zone 4	0.0	5,278.82	90.3
451	J-418	5,071.00	Zone 4	7.1	5,279.39	90.2
489	J-458	5,071.00	Zone 4	6.5	5,279.39	90.2
398	J-328	5,108.00	Zone 1	0.0	5,300.80	83.4
449	J-416	5,070.50	Zone 4	0.0	5,279.39	90.4
347	J-269	5,070.00	Zone 4	6.5	5,279.09	90.5
355	J-277	5,070.00	Zone 4	7.8	5,279.10	90.5
348	J-270	5,070.00	Zone 4	7.1	5,279.12	90.5
311	J-229	5,069.00	Zone 4	0.0	5,278.83	90.8
466	J-435	5,069.00	Zone 4	0.0	5,278.84	90.8
314	J-233	5,069.00	Zone 4	10.5	5,278.85	90.8
445	J-412	5,070.00	Zone 4	4.5	5,279.37	90.6
357	J-279	5,069.00	Zone 4	5.8	5,279.10	90.9
307	J-225	5,068.00	Zone 4	0.0	5,278.81	91.2
446	J-413	5,069.00	Zone 4	4.5	5,279.37	91.0
346	J-268	5,068.00	Zone 4	0.0	5,279.10	91.3
354	J-276	5,068.00	Zone 4	9.1	5,279.11	91.3
356	J-278	5,068.00	Zone 4	7.8	5,279.12	91.3
302	J-218	5,067.00	Zone 4	0.0	5,278.81	91.6
439	J-406	5,068.00	Zone 4	0.0	5,279.35	91.4
586	J-587	5,068.00	Zone 4	7.5	5,279.38	91.5
457	J-425	5,068.00	Zone 4	2.6	5,279.39	91.5
447	J-414	5,067.50	Zone 4	0.0	5,279.39	91.7

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**PHD-NODES - Time: 0.00 hours**

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
345	J-267	5,067.00	Zone 4	0.0	5,279.12	91.8
495	J-470	5,067.00	Zone 4	0.0	5,279.12	91.8
369	J-295	5,067.00	Zone 4	8.4	5,279.36	91.9
370	J-296	5,067.00	Zone 4	7.1	5,279.37	91.9
438	J-405	5,067.00	Zone 4	5.2	5,279.35	91.9
371	J-297	5,067.00	Zone 4	0.0	5,279.39	91.9
448	J-415	5,067.00	Zone 4	0.0	5,279.39	91.9
601	J-603	5,104.00	Zone 1	9.9	5,301.76	85.6
644	J-648	5,104.00	Zone 1	4.9	5,301.77	85.6
368	J-294	5,066.00	Zone 4	5.8	5,279.33	92.3
303	J-219	5,065.00	Zone 4	5.8	5,278.81	92.5
318	J-238	5,065.00	Zone 4	6.5	5,278.82	92.5
306	J-223	5,065.00	Zone 4	6.5	5,278.82	92.5
433	J-400	5,066.00	Zone 4	5.2	5,279.39	92.3
388	J-316	5,065.50	Zone 4	12.0	5,279.40	92.5
380	J-308	5,065.50	Zone 4	10.4	5,279.41	92.6
344	J-266	5,065.00	Zone 4	5.8	5,279.21	92.7
375	J-303	5,065.00	Zone 4	3.2	5,279.21	92.7
305	J-221	5,064.00	Zone 4	6.5	5,278.81	92.9
437	J-404	5,065.00	Zone 4	5.2	5,279.37	92.7
386	J-314	5,065.00	Zone 4	0.0	5,279.40	92.8
387	J-315	5,065.00	Zone 4	9.1	5,279.39	92.8
385	J-313	5,064.50	Zone 4	7.8	5,279.40	93.0
381	J-309	5,064.50	Zone 4	6.5	5,279.41	93.0
643	J-647	5,102.00	Zone 1	9.9	5,301.77	86.4
593	J-596	5,102.00	Zone 1	0.0	5,302.37	86.7
139	J-25	5,102.00	Zone 1	0.0	5,302.51	86.8
436	J-403	5,064.00	Zone 4	4.5	5,279.37	93.2
384	J-312	5,064.00	Zone 4	9.1	5,279.40	93.2
382	J-310	5,064.00	Zone 4	9.1	5,279.41	93.2
304	J-220	5,062.00	Zone 4	6.5	5,278.81	93.8
458	J-426	5,063.00	Zone 4	7.1	5,279.39	93.6
372	J-298	5,063.00	Zone 4	0.0	5,279.40	93.6
383	J-311	5,063.00	Zone 4	0.0	5,279.41	93.6
379	J-307	5,063.00	Zone 4	9.1	5,279.43	93.6
390	J-319	5,063.00	Zone 4	11.2	5,279.47	93.7
404	J-334	5,100.00	Zone 1	0.0	5,300.80	86.9
435	J-402	5,062.00	Zone 4	5.2	5,279.37	94.0
373	J-300	5,062.00	Zone 4	5.2	5,279.42	94.1
389	J-318	5,062.00	Zone 4	0.0	5,279.47	94.1
403	J-333	5,099.00	Zone 1	9.9	5,300.79	87.3
140	J-27	5,099.00	Zone 1	0.0	5,301.42	87.6
605	J-608	5,065.00	Zone 4	0.0	5,283.05	94.3
592	J-595	5,099.00	Zone 1	3.9	5,302.28	87.9
434	J-401	5,061.00	Zone 4	5.8	5,279.37	94.5
241	J-136	5,095.00	Zone 3	18.8	5,312.40	94.1

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**GBWC 2024 IRP - Cold Springs Division**  
**Existing (2022) PHD Condition Distribution System Junction Report**  
**PHD-NODES - Time: 0.00 hours**

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
240	J-135	5,095.00	Zone 3	22.0	5,312.49	94.1
331	J-252	5,060.50	Zone 4	20.3	5,279.56	94.8
137	J-23	5,100.00	Zone 1	5.9	5,311.73	91.6
374	J-302	5,060.00	Zone 4	6.5	5,279.45	94.9
399	J-329	5,097.00	Zone 1	7.9	5,300.80	88.2
326	J-247	5,059.50	Zone 4	16.2	5,279.50	95.2
603	J-606	5,096.00	Zone 1	13.8	5,301.87	89.1
591	J-592	5,096.00	Zone 1	12.8	5,302.00	89.1
477	J-446	5,093.00	Zone 1	7.9	5,300.79	89.9
402	J-332	5,091.00	Zone 1	0.0	5,300.80	90.8
268	J-166	5,090.00	Zone 1	7.9	5,300.45	91.1
406	J-336	5,090.00	Zone 1	7.9	5,300.58	91.1
410	J-341	5,090.00	Zone 1	0.0	5,300.58	91.1
407	J-337	5,090.00	Zone 1	14.8	5,300.63	91.1
476	J-445	5,089.00	Zone 1	0.0	5,300.79	91.6
400	J-330	5,089.00	Zone 1	6.9	5,300.80	91.6
589	J-590	5,089.00	Zone 1	8.9	5,301.94	92.1
602	J-604	5,088.00	Zone 1	5.9	5,301.80	92.5
376	J-304	5,090.00	Zone 1	7.9	5,312.36	96.2
126	J-6	5,090.00	Zone 1	7.9	5,312.83	96.4
595	J-597	5,087.00	Zone 1	11.8	5,301.76	92.9
412	J-343	5,085.00	Zone 1	8.9	5,300.45	93.2
409	J-340	5,085.00	Zone 1	5.9	5,300.45	93.2
411	J-342	5,085.00	Zone 1	0.0	5,300.54	93.3
366	J-289	5,085.00	Zone 1	7.9	5,312.79	98.6
367	J-290	5,085.00	Zone 1	0.0	5,312.86	98.6
588	J-589	5,082.00	Zone 1	11.8	5,301.94	95.2
263	J-161	5,080.00	Zone 1	8.9	5,300.46	95.4
264	J-162	5,080.00	Zone 1	9.9	5,300.45	95.4
408	J-339	5,080.00	Zone 1	6.9	5,300.53	95.4
397	J-327	5,080.00	Zone 1	10.8	5,300.79	95.5
594	J-594	5,080.00	Zone 1	0.0	5,301.74	95.9
377	J-305	5,080.00	Zone 1	7.9	5,312.36	100.5
378	J-306	5,080.00	Zone 1	7.9	5,312.88	100.8
419	J-385	5,077.00	Zone 1	1.8	5,301.82	97.3
590	J-591	5,077.00	Zone 1	0.0	5,301.91	97.3
587	J-588	5,077.00	Zone 1	8.9	5,301.94	97.3
405	J-427	5,076.00	Zone 1	9.9	5,300.80	97.3
1798	J-795	5,045.09	Zone 4	0.0	5,288.36	105.3
401	J-331	5,070.50	Zone 1	8.9	5,300.81	99.6
253	J-150	5,070.00	Zone 1	8.9	5,300.33	99.7
606	J-609	5,041.00	Zone 4	0.0	5,288.26	107.0
254	J-151	5,067.00	Zone 1	5.9	5,300.33	101.0
141	J-28	5,066.00	Zone 1	0.0	5,300.90	101.6
266	J-164	5,062.00	Zone 1	13.8	5,300.35	103.1
260	J-158	5,060.00	Zone 1	19.7	5,300.44	104.0

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**GBWC 2024 IRP - Cold Springs Division**  
**Existing (2022) PHD Condition Distribution System Junction Report**  
**PHD-NODES - Time: 0.00 hours**

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
265	J-163	5,060.00	Zone 1	12.8	5,300.37	104.0
256	J-153	5,060.00	Zone 1	8.9	5,300.33	104.0
2922	J-1242	5,059.84	Zone 1	0.0	5,300.44	104.1
267	J-165	5,058.00	Zone 1	20.7	5,300.39	104.9
255	J-152	5,058.00	Zone 1	9.9	5,300.33	104.8
129	J-10	5,060.00	Zone 1	7.9	5,311.51	108.8
128	J-9	5,060.00	Zone 1	7.9	5,311.94	109.0
127	J-8	5,060.00	Zone 1	7.9	5,312.73	109.3
258	J-155	5,052.00	Zone 1	7.9	5,300.33	107.4
257	J-154	5,052.00	Zone 1	11.5	5,300.34	107.4
144	J-36	5,050.00	Zone 1	0.0	5,300.35	108.3
413	J-344	5,050.00	Zone 1	0.0	5,300.28	108.3
608	J-611	5,050.00	Zone 1	6.9	5,300.57	108.4
609	J-612	5,048.00	Zone 1	6.6	5,300.57	109.3
2977	J-1252 IRR	5,045.00	Zone 1	17.7	5,302.42	111.4
414	J-350	5,045.00	Zone 1	0.0	5,302.66	111.5
706	J-706	5,045.00	Zone 1	0.0	5,302.66	111.5
707	FH-801	5,045.00	Zone 1	0.0	5,302.66	111.5
154	J-48	5,043.00	Zone 1	14.8	5,301.49	111.8
153	J-47	5,043.00	Zone 1	11.8	5,301.62	111.9
155	J-49	5,040.00	Zone 1	14.8	5,301.44	113.1
133	J-14	5,040.00	Zone 1	27.0	5,302.66	113.6
131	J-12	5,040.00	Zone 1	0.0	5,305.74	115.0
130	J-11	5,040.00	Zone 1	0.0	5,309.17	116.5
143	J-35	5,038.00	Zone 1	10.8	5,302.07	114.3
132	J-13	5,038.00	Zone 1	1.9	5,302.69	114.5

**GBWC 2024 IRP - Cold Springs Division**  
**Existing (2022) PHD Condition Distribution System Pipe Report**  
**PHD-PIPES - Time: 0.00 hours**

Label	Length (Scaled) (ft)	Diameter (in)	Material	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Hazen- Williams C	Zone
P-333	306	6.0	PVC	-601.6	6.8268	7.72	140.0	Zone 3
P-332	335	6.0	PVC	-601.6	6.8267	8.45	140.0	Zone 2
P-112	817	10.0	PVC	1,060.4	4.3316	4.89	140.0	Zone 2
P-1320	290	8.0	Asbestos Cement	554.7	3.5405	2.42	110.0	Zone 2
P-69	485	6.0	PVC	265.7	3.0149	2.69	140.0	Zone 2
P-1321	1,295	8.0	Asbestos Cement	453.6	2.8949	7.45	110.0	Zone 2
P-138	1,660	10.0	PVC	602.3	2.4604	3.49	140.0	Zone 4
P-139	2,481	10.0	PVC	602.3	2.4604	5.21	140.0	Zone 4
P-1319	50	10.0	PVC	602.3	2.4604	0.10	140.0	Zone 4
P-1504	71	8.0	PVC	-306.6	1.9572	0.13	140.0	Zone 4
P-1505	107	8.0	PVC	-306.6	1.9572	0.19	140.0	Zone 4
P-1506	87	8.0	PVC	-306.6	1.9572	0.16	140.0	Zone 4
P-1502(1)(1)	81	8.0	PVC	-303.4	1.9365	0.14	140.0	Zone 4
P-67	955	8.0	Asbestos Cement	288.1	1.8390	2.37	110.0	Zone 2
P-1501	41	8.0	PVC	-302.1	1.9282	0.07	140.0	Zone 4
P-48	331	8.0	Asbestos Cement	287.6	1.8360	0.82	110.0	Zone 2
P-1500	49	8.0	PVC	-301.4	1.9241	0.08	140.0	Zone 4
P-447	249	8.0	PVC	285.6	1.8229	0.39	140.0	Zone 2
P-153	374	6.0	PVC	171.1	1.9417	0.92	140.0	Zone 2
P-1499	278	8.0	PVC	-297.6	1.8992	0.47	140.0	Zone 4
P-1345	228	8.0	PVC	284.0	1.8130	0.35	140.0	Zone 2
P22-N-7-2	16	8.0	PVC	-295.0	1.8827	0.03	140.0	Zone 4
P22-N-7-1	32	8.0	PVC	-295.0	1.8827	0.05	140.0	Zone 4
P-191	451	8.0	PVC	-338.6	2.1611	0.97	140.0	Zone 2
P-187	165	10.0	PVC	487.7	1.9924	0.23	140.0	Zone 2
P-398	279	10.0	PVC	581.6	2.3759	0.55	140.0	Zone 3
P-73	392	8.0	PVC	270.9	1.7289	0.56	140.0	Zone 2
P-299	377	10.0	PVC	577.1	2.3574	0.73	140.0	Zone 3
P-206	1,236	10.0	PVC	507.7	2.0739	1.89	140.0	Zone 3
P-76	544	6.0	PVC	129.7	1.4721	0.80	140.0	Zone 2
P-70	484	6.0	PVC	126.8	1.4383	0.68	140.0	Zone 2
P-75	486	6.0	PVC	122.1	1.3850	0.64	140.0	Zone 2
P-450	267	10.0	PVC	243.1	0.9930	0.10	140.0	Zone 4
P-452	285	10.0	PVC	236.0	0.9639	0.11	140.0	Zone 4
P-26	2,117	8.0	PVC	480.4	3.0661	8.67	140.0	Zone 1
P-190	887	8.0	PVC	251.5	1.6055	1.10	140.0	Zone 2
P-454	198	10.0	PVC	224.6	0.9173	0.07	140.0	Zone 4
P-110	186	10.0	PVC	337.8	1.3799	0.13	140.0	Zone 2
P-71	665	6.0	PVC	112.9	1.2816	0.76	140.0	Zone 2
P-147	346	8.0	PVC	281.8	1.7986	0.53	140.0	Zone 2
P-189	506	8.0	PVC	239.3	1.5271	0.57	140.0	Zone 2

**GBWC 2024 IRP - Cold Springs Division**  
**Existing (2022) PHD Condition Distribution System Pipe Report**  
**PHD-PIPES - Time: 0.00 hours**

Label	Length (Scaled) (ft)	Diameter (in)	Material	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Hazen- Williams C	Zone
P-148	342	8.0	PVC	260.3	1.6616	0.45	140.0	Zone 2
P-84	1,489	10.0	PVC	315.7	1.2898	0.95	140.0	Zone 2
P-1346	384	8.0	PVC	217.7	1.3897	0.36	140.0	Zone 2
P-1173	51	6.0	PVC	24.5	0.2782	0.00	140.0	Zone 4
P-1174	219	6.0	PVC	24.5	0.2782	0.02	140.0	Zone 4
P-317	1,062	12.0	Ductile Iron	958.4	2.7187	2.89	120.0	Zone 1
P-4(1)	233	12.0	Ductile Iron	958.4	2.7187	0.63	120.0	Zone 1
P-4(2)	263	12.0	Ductile Iron	958.0	2.7176	0.71	120.0	Zone 1
P-370	267	8.0	PVC	254.1	1.6216	0.34	140.0	Zone 3
P-433	151	8.0	PVC	-254.1	1.6216	0.19	140.0	Zone 3
P-210	864	10.0	PVC	391.3	1.5983	0.82	140.0	Zone 3
P-438	442	10.0	PVC	253.0	1.0336	0.19	140.0	Zone 4
P-780	474	12.0	PVC	365.3	1.0363	0.16	140.0	Zone 4
P-436	302	10.0	PVC	240.1	0.9806	0.11	140.0	Zone 4
P-676	519	10.0	PVC	612.9	2.5035	1.13	140.0	Zone 1
P-434	311	10.0	PVC	232.9	0.9515	0.11	140.0	Zone 4
P-759	489	6.0	PVC	55.1	0.6248	0.15	140.0	Zone 4
P-178	531	6.0	PVC	179.1	2.0326	1.42	140.0	Zone 2
P22-N-15-11 -1	50	10.0	PVC	-266.6	1.0889	0.02	140.0	Zone 4
P22-N-15-11 -2	276	10.0	PVC	-266.6	1.0889	0.13	140.0	Zone 4
P-760	152	6.0	PVC	49.8	0.5656	0.02	140.0	Zone 4
P-152	351	6.0	PVC	106.2	1.2047	0.36	140.0	Zone 2
P-560	374	6.0	PVC	-46.6	0.5288	0.10	140.0	Zone 4
P22-N-15-10	349	10.0	PVC	-257.1	1.0503	0.15	140.0	Zone 4
P-146	441	6.0	PVC	117.7	1.3352	0.54	140.0	Zone 2
P-813	196	6.0	PVC	73.5	0.8338	0.10	140.0	Zone 4
P-331	217	8.0	PVC	337.2	2.1525	0.46	140.0	Zone 1
P-515	275	6.0	PVC	66.3	0.7525	0.12	140.0	Zone 4
P-1350	198	6.0	PVC	-57.1	0.6480	0.06	140.0	Zone 2
P-1349	40	6.0	PVC	-57.1	0.6480	0.01	140.0	Zone 2
P-192	503	8.0	PVC	177.6	1.1338	0.33	140.0	Zone 2
P-193	229	8.0	PVC	177.6	1.1338	0.15	140.0	Zone 2
P-122	186	10.0	PVC	251.9	1.0291	0.08	140.0	Zone 2
P-334	250	8.0	PVC	134.8	0.8604	0.10	140.0	Zone 2
P-335	246	8.0	PVC	134.8	0.8604	0.10	140.0	Zone 3
P-462	208	8.0	PVC	114.8	0.7329	0.06	140.0	Zone 4
P-783	256	12.0	PVC	271.0	0.7689	0.05	140.0	Zone 4
P-1082	330	10.0	PVC	73.3	0.2993	0.01	140.0	Zone 4
P-1090	59	10.0	PVC	73.3	0.2993	0.00	140.0	Zone 4
P-1091	303	10.0	PVC	73.3	0.2993	0.01	140.0	Zone 4
P-1094	120	10.0	PVC	73.3	0.2993	0.00	140.0	Zone 4
P-1095	190	10.0	PVC	73.3	0.2993	0.01	140.0	Zone 4
P-1213	62	10.0	PVC	73.3	0.2993	0.00	140.0	Zone 4

**GBWC 2024 IRP - Cold Springs Division**  
**Existing (2022) PHD Condition Distribution System Pipe Report**  
**PHD-PIPES - Time: 0.00 hours**

Label	Length (Scaled) (ft)	Diameter (in)	Material	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Hazen- Williams C	Zone
P-151	876	6.0	PVC	109.4	1.2418	0.94	140.0	Zone 2
P-1228	13	14.0	PVC	-180.5	0.3762	0.00	140.0	Zone 4
P-188	379	8.0	PVC	169.2	1.0799	0.23	140.0	Zone 2
P-1215	424	10.0	PVC	66.8	0.2728	0.02	140.0	Zone 4
P-1216	325	10.0	PVC	60.3	0.2463	0.01	140.0	Zone 4
P-324	661	6.0	PVC	-45.6	0.5174	0.14	140.0	Zone 2
P-673	351	4.0	PVC	74.8	1.9090	1.34	140.0	Zone 1
P-128	1,094	10.0	PVC	234.8	0.9593	0.40	140.0	Zone 2
P-1102	779	6.0	PVC	-28.4	0.3223	0.07	140.0	Zone 4
P-460	354	10.0	PVC	-116.8	0.4772	0.04	140.0	Zone 4
P-214	339	10.0	PVC	282.8	1.1553	0.18	140.0	Zone 3
P-954	190	10.0	PVC	-110.3	0.4507	0.02	140.0	Zone 4
P-63	545	6.0	PVC	-38.7	0.4391	0.09	140.0	Zone 2
P-826	114	14.0	PVC	-73.8	0.1538	0.00	140.0	Zone 4
P-40	302	8.0	PVC	330.5	2.1094	0.62	140.0	Zone 1
P-782	389	12.0	PVC	248.2	0.7042	0.06	140.0	Zone 4
P-530	325	10.0	PVC	223.5	0.9131	0.11	140.0	Zone 4
P-1092	47	6.0	PVC	28.9	0.3279	0.00	140.0	Zone 4
P-1097	73	6.0	PVC	-28.9	0.3279	0.01	140.0	Zone 4
P-1096	284	6.0	PVC	-28.9	0.3279	0.03	140.0	Zone 4
P-1093	209	6.0	PVC	28.9	0.3279	0.02	140.0	Zone 4
P-938	490	6.0	PVC	-20.6	0.2340	0.02	140.0	Zone 4
P-74	581	6.0	PVC	53.1	0.6030	0.16	140.0	Zone 2
P-217	668	10.0	PVC	260.8	1.0652	0.30	140.0	Zone 3
P-194	482	8.0	PVC	-147.9	0.9440	0.22	140.0	Zone 2
P-66	328	6.0	PVC	-33.3	0.3781	0.04	140.0	Zone 2
P-1026	141	10.0	PVC	126.4	0.5165	0.01	140.0	Zone 4
P-1033	79	10.0	PVC	126.4	0.5165	0.01	140.0	Zone 4
P-1032	697	10.0	PVC	126.4	0.5165	0.08	140.0	Zone 4
P-306	354	8.0	PVC	169.0	1.0784	0.21	140.0	Zone 3
P-307	351	8.0	PVC	169.0	1.0784	0.21	140.0	Zone 3
P-429	390	8.0	PVC	169.0	1.0784	0.23	140.0	Zone 3
P-698	172	14.0	PVC	-36.5	0.0762	0.00	140.0	Zone 4
P-825	175	14.0	PVC	-83.8	0.1746	0.00	140.0	Zone 4
P-675	2,121	12.0	PVC	612.9	1.7386	1.89	140.0	Zone 1
P-756	757	6.0	PVC	57.6	0.6535	0.25	140.0	Zone 4
P-337	480	8.0	PVC	262.5	1.6752	0.64	140.0	Zone 1
P-338	266	8.0	PVC	262.5	1.6752	0.36	140.0	Zone 1
P-824	112	14.0	PVC	-110.2	0.2297	0.00	140.0	Zone 4
P-784	253	12.0	PVC	205.4	0.5827	0.03	140.0	Zone 4
P-83	1,068	8.0	Asbestos Cement	125.2	0.7994	0.57	110.0	Zone 2
P-93	252	8.0	PVC	125.2	0.7994	0.09	140.0	Zone 2
P-1121	176	6.0	PVC	32.8	0.3718	0.02	140.0	Zone 4
P-823	184	14.0	PVC	-122.5	0.2553	0.00	140.0	Zone 4

**GBWC 2024 IRP - Cold Springs Division**  
**Existing (2022) PHD Condition Distribution System Pipe Report**  
**PHD-PIPES - Time: 0.00 hours**

Label	Length (Scaled) (ft)	Diameter (in)	Material	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Hazen-Williams C	Zone
P-953	197	10.0	PVC	-73.8	0.3015	0.01	140.0	Zone 4
P-431	76	8.0	PVC	159.9	1.0205	0.04	140.0	Zone 3
P-219	387	8.0	PVC	-159.9	1.0204	0.21	140.0	Zone 3
P-195	527	8.0	PVC	-136.4	0.8706	0.21	140.0	Zone 2
P-97	290	8.0	PVC	119.9	0.7651	0.09	140.0	Zone 2
P-27	506	10.0	PVC	421.5	1.7217	0.55	140.0	Zone 1
P-963	123	10.0	PVC	421.5	1.7217	0.13	140.0	Zone 1
P-965	86	10.0	PVC	421.5	1.7217	0.09	140.0	Zone 1
P-216	351	10.0	PVC	239.7	0.9793	0.13	140.0	Zone 3
P-962	260	10.0	PVC	417.5	1.7056	0.28	140.0	Zone 1
P-1099	76	6.0	PVC	-15.9	0.1807	0.00	140.0	Zone 4
P-1100	205	6.0	PVC	-15.9	0.1807	0.01	140.0	Zone 4
P-1101	237	6.0	PVC	-15.9	0.1807	0.01	140.0	Zone 4
P-1098	233	6.0	PVC	-15.9	0.1807	0.01	140.0	Zone 4
P-121	649	10.0	PVC	182.4	0.7452	0.15	140.0	Zone 2
P-677	93	8.0	PVC	-89.9	0.5737	0.02	140.0	Zone 4
P-1066	230	8.0	PVC	117.1	0.7472	0.07	140.0	Zone 4
P-1067	180	8.0	PVC	117.1	0.7472	0.05	140.0	Zone 4
P-1079	259	6.0	PVC	24.3	0.2762	0.02	140.0	Zone 4
P-1080	299	6.0	PVC	24.3	0.2762	0.02	140.0	Zone 4
P-1049	264	8.0	PVC	110.6	0.7058	0.07	140.0	Zone 4
P-1041	189	10.0	PVC	-85.0	0.3470	0.01	140.0	Zone 4
P-1042	81	10.0	PVC	85.0	0.3470	0.00	140.0	Zone 4
P-1059	326	6.0	PVC	31.2	0.3537	0.03	140.0	Zone 4
P-1065	183	6.0	PVC	31.2	0.3537	0.02	140.0	Zone 4
P-1120	119	6.0	PVC	-4.9	0.0556	0.00	140.0	Zone 4
P-11	1,692	10.0	Asbestos Cement	377.0	1.5401	2.33	110.0	Zone 1
P-12	2,491	10.0	Asbestos Cement	377.0	1.5401	3.43	110.0	Zone 1
P-13	2,215	10.0	Asbestos Cement	377.0	1.5401	3.05	110.0	Zone 1
P-534	401	8.0	PVC	230.5	1.4714	0.42	140.0	Zone 1
P22-N-15-8	289	10.0	PVC	-150.9	0.6162	0.05	140.0	Zone 4
P22-N-15-9	366	10.0	PVC	-150.9	0.6162	0.06	140.0	Zone 4
P-785	249	12.0	PVC	159.5	0.4526	0.02	140.0	Zone 4
P-85	738	10.0	PVC	152.1	0.6213	0.12	140.0	Zone 2
P-345	215	8.0	PVC	-17.2	0.1098	0.00	140.0	Zone 4
P-982	583	8.0	PVC	278.2	1.7758	0.87	140.0	Zone 1
P-57	497	8.0	PVC	255.0	1.6278	0.63	140.0	Zone 1
P-814	214	6.0	PVC	46.2	0.5244	0.05	140.0	Zone 4
P-344	182	8.0	PVC	-20.4	0.1305	0.00	140.0	Zone 4
P-109	865	8.0	PVC	95.8	0.6118	0.18	140.0	Zone 2
P-343	273	8.0	PVC	-23.0	0.1471	0.00	140.0	Zone 4
P-993	398	10.0	PVC	98.7	0.4031	0.02	140.0	Zone 4

**GBWC 2024 IRP - Cold Springs Division**  
**Existing (2022) PHD Condition Distribution System Pipe Report**  
**PHD-PIPES - Time: 0.00 hours**

Label	Length (Scaled) (ft)	Diameter (in)	Material	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Hazen- Williams C	Zone
P-1105	64	6.0	PVC	22.7	0.2581	0.00	140.0	Zone 4
P-1106	192	6.0	PVC	22.7	0.2581	0.01	140.0	Zone 4
P-1107	199	6.0	PVC	22.7	0.2581	0.01	140.0	Zone 4
P-752	244	6.0	PVC	-12.7	0.1437	0.00	140.0	Zone 4
P-533	460	8.0	PVC	214.7	1.3706	0.42	140.0	Zone 1
P-342	195	8.0	PVC	-30.8	0.1968	0.00	140.0	Zone 4
P-1071	271	10.0	PVC	-71.5	0.2921	0.01	140.0	Zone 4
P-985	165	8.0	PVC	264.7	1.6896	0.22	140.0	Zone 1
P-320	265	8.0	PVC	-26.6	0.1700	0.00	140.0	Zone 1
P-786	189	12.0	PVC	129.0	0.3659	0.01	140.0	Zone 4
P-107	354	8.0	PVC	85.9	0.5481	0.06	140.0	Zone 2
P-204	929	10.0	PVC	-112.7	0.4606	0.09	140.0	Zone 3
P-1235	254	8.0	PVC	96.7	0.6173	0.05	140.0	Zone 4
P-749	758	6.0	PVC	3.5	0.0402	0.00	140.0	Zone 4
P-1108	65	6.0	PVC	15.0	0.1698	0.00	140.0	Zone 4
P-443	307	8.0	PVC	39.5	0.2523	0.01	140.0	Zone 4
P-197	353	6.0	PVC	54.6	0.6191	0.10	140.0	Zone 2
P-198	362	6.0	PVC	54.6	0.6191	0.11	140.0	Zone 2
P-561	267	8.0	PVC	-34.1	0.2173	0.01	140.0	Zone 4
P-516	261	6.0	PVC	35.5	0.4024	0.03	140.0	Zone 4
P-742	145	8.0	PVC	66.0	0.4214	0.02	140.0	Zone 4
P-1084	169	10.0	PVC	28.1	0.1150	0.00	140.0	Zone 4
P-1085	154	10.0	PVC	28.1	0.1150	0.00	140.0	Zone 4
P-827	159	12.0	PVC	-60.8	0.1723	0.00	140.0	Zone 4
P-444	65	8.0	PVC	35.0	0.2233	0.00	140.0	Zone 4
P-407	362	8.0	PVC	-35.0	0.2233	0.01	140.0	Zone 4
P-751	718	6.0	PVC	-0.3	0.0039	0.00	140.0	Zone 4
P-453	236	10.0	PVC	107.7	0.4401	0.02	140.0	Zone 4
P-118	384	8.0	PVC	69.3	0.4425	0.04	140.0	Zone 2
P-1053	336	6.0	PVC	30.2	0.3423	0.03	140.0	Zone 4
P-503	206	8.0	PVC	-56.9	0.3633	0.02	140.0	Zone 4
P22-1460	16	8.0	PVC	-73.9	0.4719	0.00	140.0	Zone 4
P22-1461	31	8.0	PVC	-73.9	0.4719	0.00	140.0	Zone 4
P-1058	209	6.0	PVC	50.7	0.5751	0.05	140.0	Zone 4
P-1141	95	6.0	PVC	-3.9	0.0439	0.00	140.0	Zone 4
P-91	556	10.0	Asbestos Cement	125.2	0.5116	0.10	110.0	Zone 2
P-1491	87	8.0	PVC	72.6	0.4636	0.01	140.0	Zone 4
P-508	823	8.0	PVC	171.5	1.0948	0.50	140.0	Zone 1
P-1546	196	3.0	PVC	17.7	0.8021	0.24	130.0	Zone 1
P-755	625	6.0	PVC	36.7	0.4164	0.09	140.0	Zone 4
P-108	789	10.0	PVC	126.5	0.5169	0.09	140.0	Zone 2
P-1492(1)(1)	300	8.0	PVC	69.4	0.4429	0.03	140.0	Zone 4
P-124	309	8.0	PVC	89.5	0.5710	0.06	140.0	Zone 2
P-125	406	8.0	PVC	89.5	0.5710	0.07	140.0	Zone 2

**GBWC 2024 IRP - Cold Springs Division**  
**Existing (2022) PHD Condition Distribution System Pipe Report**  
**PHD-PIPES - Time: 0.00 hours**

Label	Length (Scaled) (ft)	Diameter (in)	Material	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Hazen- Williams C	Zone
P-1069	91	6.0	PVC	25.0	0.2834	0.01	140.0	Zone 4
P-199	382	8.0	PVC	79.3	0.5061	0.06	140.0	Zone 2
P-1064	172	6.0	PVC	43.1	0.4888	0.03	140.0	Zone 4
P-1492(1)(2)	348	8.0	PVC	64.2	0.4098	0.03	140.0	Zone 4
P-1492(2)	16	8.0	PVC	64.2	0.4098	0.00	140.0	Zone 4
P-529	262	10.0	PVC	134.9	0.5509	0.04	140.0	Zone 4
P-821	492	6.0	PVC	37.6	0.4271	0.07	140.0	Zone 4
P-1056	243	6.0	PVC	44.8	0.5088	0.05	140.0	Zone 4
P-500	308	8.0	PVC	-29.1	0.1855	0.01	140.0	Zone 4
P-680	376	10.0	PVC	-92.5	0.3778	0.02	140.0	Zone 4
P-432	71	8.0	PVC	94.2	0.6012	0.01	140.0	Zone 3
P22-N-15-7	279	10.0	PVC	-102.3	0.4178	0.02	140.0	Zone 4
P-552	307	8.0	PVC	78.1	0.4982	0.05	140.0	Zone 4
P-1493	54	8.0	PVC	59.7	0.3808	0.00	140.0	Zone 4
P-1494	48	8.0	PVC	59.7	0.3808	0.00	140.0	Zone 4
P-1497	137	8.0	PVC	59.7	0.3808	0.01	140.0	Zone 4
P-984	987	10.0	PVC	258.3	1.0553	0.43	140.0	Zone 1
P-791	169	10.0	PVC	134.0	0.5472	0.02	140.0	Zone 4
P-699	143	12.0	PVC	-95.5	0.2710	0.00	140.0	Zone 4
P-685	472	10.0	PVC	-50.3	0.2054	0.01	140.0	Zone 4
P-123	425	8.0	PVC	78.7	0.5024	0.06	140.0	Zone 2
P-492	270	8.0	PVC	-20.9	0.1335	0.00	140.0	Zone 4
P-820	222	6.0	PVC	32.5	0.3682	0.03	140.0	Zone 4
P-1072	186	10.0	PVC	-45.1	0.1843	0.00	140.0	Zone 4
P-202	717	6.0	PVC	40.1	0.4547	0.12	140.0	Zone 2
P-693	462	10.0	PVC	-59.4	0.2425	0.01	140.0	Zone 4
P-1088	127	6.0	PVC	10.9	0.1241	0.00	140.0	Zone 4
P-1089	189	6.0	PVC	10.9	0.1241	0.00	140.0	Zone 4
P-393	238	8.0	PVC	45.1	0.2881	0.01	140.0	Zone 4
P-49	847	6.0	PVC	78.4	0.8899	0.49	140.0	Zone 2
P-1352	250	10.0	PVC	-20.9	0.0853	0.00	140.0	Zone 4
P-1192	405	10.0	PVC	-50.9	0.2078	0.01	140.0	Zone 4
P-129	767	10.0	PVC	132.0	0.5394	0.10	140.0	Zone 2
P-600	395	10.0	PVC	112.2	0.4583	0.04	140.0	Zone 2
P-601	92	10.0	PVC	112.2	0.4583	0.01	140.0	Zone 2
P-134	892	10.0	PVC	133.5	0.5455	0.11	140.0	Zone 2
P-95	405	8.0	PVC	59.4	0.3792	0.03	140.0	Zone 2
P-98	316	8.0	PVC	59.4	0.3792	0.03	140.0	Zone 2
P-80	414	10.0	PVC	-68.7	0.2808	0.02	140.0	Zone 2
P-258	602	8.0	PVC	26.2	0.1674	0.01	140.0	Zone 1
P-1189	119	10.0	PVC	-58.0	0.2370	0.00	140.0	Zone 4
P-1191	132	10.0	PVC	-58.0	0.2370	0.00	140.0	Zone 4
P-1054	233	6.0	PVC	32.5	0.3690	0.03	140.0	Zone 4
P-196	421	8.0	PVC	66.5	0.4244	0.04	140.0	Zone 2
P-803	510	6.0	PVC	33.2	0.3766	0.06	140.0	Zone 4



**GBWC 2024 IRP - Cold Springs Division**  
**Existing (2022) PHD Condition Distribution System Pipe Report**  
**PHD-PIPES - Time: 0.00 hours**

Label	Length (Scaled) (ft)	Diameter (in)	Material	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Hazen- Williams C	Zone
P-828	141	12.0	PVC	-65.7	0.1862	0.00	140.0	Zone 4
P-201	483	10.0	PVC	115.4	0.4714	0.05	140.0	Zone 2
P-127	317	10.0	PVC	-49.6	0.2027	0.01	140.0	Zone 2
P-499	253	8.0	PVC	-29.6	0.1890	0.01	140.0	Zone 4
P-815	219	6.0	PVC	27.0	0.3064	0.02	140.0	Zone 4
P-763	307	6.0	PVC	-17.7	0.2007	0.02	140.0	Zone 4
P-355	669	8.0	PVC	-20.9	0.1331	0.01	140.0	Zone 4
P-120	876	8.0	PVC	49.0	0.3128	0.05	140.0	Zone 2
P-523	460	6.0	PVC	27.9	0.3163	0.04	140.0	Zone 4
P-30	1,146	10.0	PVC	264.9	1.0820	0.53	140.0	Zone 1
P-770	184	10.0	PVC	264.9	1.0820	0.08	140.0	Zone 1
P-961	682	10.0	PVC	264.9	1.0820	0.31	140.0	Zone 1
P-439	822	10.0	PVC	105.5	0.4309	0.07	140.0	Zone 4
P-389	407	6.0	PVC	24.7	0.2806	0.03	140.0	Zone 4
P-1077	191	6.0	PVC	2.5	0.0284	0.00	140.0	Zone 4
P-502	255	8.0	PVC	4.2	0.0271	0.00	140.0	Zone 4
P-743	85	10.0	PVC	66.0	0.2697	0.00	140.0	Zone 4
P-126	757	8.0	PVC	76.5	0.4884	0.10	140.0	Zone 2
P-469	289	10.0	PVC	65.9	0.2692	0.01	140.0	Zone 4
P-395	238	8.0	PVC	26.3	0.1677	0.00	140.0	Zone 4
P-1254	320	8.0	PVC	33.8	0.2160	0.01	140.0	Zone 4
P-1253	65	8.0	PVC	33.8	0.2160	0.00	140.0	Zone 4
P-753	68	8.0	PVC	-12.7	0.0808	0.00	140.0	Zone 4
P-1239	278	8.0	PVC	57.6	0.3674	0.02	140.0	Zone 4
P-829	144	12.0	PVC	-34.3	0.0972	0.00	140.0	Zone 4
P-346	233	8.0	PVC	23.1	0.1477	0.00	140.0	Zone 4
P-394	240	8.0	PVC	32.3	0.2063	0.01	140.0	Zone 4
P22-N-15-6	280	10.0	PVC	-77.1	0.3149	0.01	140.0	Zone 4
P-468	229	10.0	PVC	81.3	0.3323	0.01	140.0	Zone 4
P-119	270	10.0	PVC	69.3	0.2832	0.01	140.0	Zone 2
P-257	392	8.0	PVC	40.0	0.2556	0.02	140.0	Zone 1
P-169	344	8.0	PVC	98.8	0.6308	0.08	140.0	Zone 2
P-750	68	8.0	PVC	-3.5	0.0226	0.00	140.0	Zone 4
P-467	405	10.0	PVC	100.8	0.4117	0.03	140.0	Zone 4
P-1237-1	172	8.0	PVC	58.5	0.3733	0.01	140.0	Zone 4
P-936	411	10.0	PVC	89.3	0.3647	0.03	140.0	Zone 4
P-764	520	6.0	PVC	-24.8	0.2816	0.03	140.0	Zone 4
P-94	894	8.0	PVC	42.5	0.2715	0.04	140.0	Zone 2
P-835	389	6.0	PVC	23.5	0.2662	0.03	140.0	Zone 4
P-1243	77	8.0	PVC	50.6	0.3227	0.00	140.0	Zone 4
P-430	860	10.0	PVC	101.3	0.4139	0.07	140.0	Zone 3
P-89	692	8.0	PVC	47.4	0.3026	0.04	140.0	Zone 2
P-96	414	8.0	PVC	47.4	0.3026	0.02	140.0	Zone 2
P-1122	116	6.0	PVC	13.4	0.1521	0.00	140.0	Zone 4
P-475	337	8.0	PVC	95.8	0.6112	0.07	140.0	Zone 2

GBWC CS IRP 2024 Model\_LIDAR Elev  
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Bentley Systems, Inc. Haestad Methods Solution  
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**GBWC 2024 IRP - Cold Springs Division**  
**Existing (2022) PHD Condition Distribution System Pipe Report**  
**PHD-PIPES - Time: 0.00 hours**

Label	Length (Scaled) (ft)	Diameter (in)	Material	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Hazen- Williams C	Zone
P-819	597	6.0	PVC	25.1	0.2843	0.04	140.0	Zone 4
P-809	432	6.0	PVC	21.4	0.2431	0.02	140.0	Zone 4
P-461	195	10.0	PVC	-14.1	0.0574	0.00	140.0	Zone 4
P-101	388	10.0	PVC	-56.2	0.2295	0.01	140.0	Zone 2
P-55	1,098	6.0	PVC	64.6	0.7331	0.44	140.0	Zone 1
P-765	439	6.0	PVC	-16.4	0.1865	0.02	140.0	Zone 4
P-525	268	10.0	PVC	-86.9	0.3549	0.01	140.0	Zone 4
P-1357	267	10.0	PVC	-10.3	0.0422	0.00	140.0	Zone 4
P-1257	276	8.0	PVC	21.5	0.1374	0.00	140.0	Zone 4
P-1256	109	8.0	PVC	21.5	0.1374	0.00	140.0	Zone 4
P-520	403	6.0	PVC	23.2	0.2627	0.02	140.0	Zone 4
P-553	155	10.0	PVC	78.1	0.3189	0.00	140.0	Zone 4
P-959	339	10.0	PVC	166.1	0.6785	0.07	140.0	Zone 1
P-788(1)(1)	195	8.0	PVC	30.2	0.1930	0.00	140.0	Zone 4
P-788(1)(2)	78	8.0	PVC	30.2	0.1930	0.00	140.0	Zone 4
P-215	518	6.0	PVC	35.3	0.4006	0.07	140.0	Zone 3
P-378	249	8.0	PVC	26.0	0.1660	0.00	140.0	Zone 4
P-133	154	10.0	PVC	106.2	0.4340	0.01	140.0	Zone 2
P-1127	187	8.0	PVC	29.7	0.1895	0.00	140.0	Zone 4
P-1128	250	8.0	PVC	29.7	0.1895	0.01	140.0	Zone 4
P-1130	79	8.0	PVC	29.7	0.1895	0.00	140.0	Zone 4
P22-N-15-5	196	10.0	PVC	-66.1	0.2702	0.01	140.0	Zone 4
P-103	329	10.0	PVC	-50.0	0.2044	0.01	140.0	Zone 2
P-1129	52	8.0	PVC	28.4	0.1814	0.00	140.0	Zone 4
P-1428-1	191	8.0	PVC	-41.8	0.2666	0.01	140.0	Zone 4
P-1131	480	8.0	PVC	27.8	0.1773	0.01	140.0	Zone 4
P-406	238	8.0	PVC	-12.2	0.0778	0.00	140.0	Zone 4
P22-N-12-1	54	8.0	PVC	38.2	0.2438	0.00	140.0	Zone 4
P22-N-12-2	125	8.0	PVC	38.2	0.2438	0.00	140.0	Zone 4
P-260	364	8.0	PVC	52.9	0.3374	0.02	140.0	Zone 1
P-1209	329	6.0	PVC	10.0	0.1131	0.00	140.0	Zone 4
P-1070	204	6.0	PVC	36.9	0.4185	0.03	140.0	Zone 4
P-79	344	10.0	PVC	-44.4	0.1813	0.01	140.0	Zone 2
P-1087	227	6.0	PVC	7.6	0.0859	0.00	140.0	Zone 4
P-1103	133	6.0	PVC	7.6	0.0859	0.00	140.0	Zone 4
P-1104	71	6.0	PVC	7.6	0.0859	0.00	140.0	Zone 4
P-551	246	8.0	PVC	-43.9	0.2799	0.01	140.0	Zone 4
P-1178	220	6.0	PVC	21.8	0.2474	0.01	140.0	Zone 4
P22-N-12-4	299	8.0	PVC	35.6	0.2273	0.01	140.0	Zone 4
P-347	241	8.0	PVC	14.5	0.0923	0.00	140.0	Zone 4
P-403	232	8.0	PVC	26.2	0.1670	0.00	140.0	Zone 4
P-339	845	8.0	PVC	83.0	0.5301	0.13	140.0	Zone 1
P-246	352	8.0	PVC	36.7	0.2340	0.01	140.0	Zone 2
P-247	591	8.0	PVC	36.7	0.2340	0.02	140.0	Zone 2
P-1168	93	6.0	PVC	-0.9	0.0106	0.00	140.0	Zone 4

**GBWC 2024 IRP - Cold Springs Division**  
**Existing (2022) PHD Condition Distribution System Pipe Report**  
**PHD-PIPES - Time: 0.00 hours**

Label	Length (Scaled) (ft)	Diameter (in)	Material	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Hazen- Williams C	Zone
P-1035	567	10.0	PVC	146.8	0.5995	0.09	140.0	Zone 1
P22-1455	55	8.0	PVC	32.4	0.2066	0.00	140.0	Zone 4
P22-N-12-3	119	8.0	PVC	32.4	0.2066	0.00	140.0	Zone 4
P-1238	90	8.0	PVC	41.6	0.2656	0.00	140.0	Zone 4
P-1265	60	8.0	PVC	27.8	0.1775	0.00	140.0	Zone 4
P-1268	331	8.0	PVC	27.8	0.1775	0.01	140.0	Zone 4
P-130	206	10.0	PVC	-27.5	0.1122	0.00	140.0	Zone 2
P-766	605	6.0	PVC	-23.6	0.2674	0.03	140.0	Zone 4
P-1244	260	8.0	PVC	44.2	0.2823	0.01	140.0	Zone 4
P-495	282	8.0	PVC	-27.1	0.1729	0.01	140.0	Zone 4
P-1271	61	8.0	PVC	29.6	0.1889	0.00	140.0	Zone 4
P-1274	128	8.0	PVC	29.6	0.1889	0.00	140.0	Zone 4
P-1277	211	8.0	PVC	33.9	0.2165	0.01	140.0	Zone 4
P-143	148	8.0	PVC	60.4	0.3856	0.01	140.0	Zone 2
P-150	570	6.0	PVC	59.8	0.6788	0.20	140.0	Zone 2
P-517	262	6.0	PVC	16.0	0.1818	0.01	140.0	Zone 4
P-978	661	8.0	PVC	91.8	0.5862	0.14	140.0	Zone 1
P-9	2,238	6.0	Ductile Iron	51.5	0.5843	0.79	120.0	Zone 1
P-767	581	6.0	PVC	-16.5	0.1871	0.02	140.0	Zone 4
P-808	102	6.0	PVC	11.7	0.1327	0.00	140.0	Zone 4
P-810	449	6.0	PVC	11.7	0.1327	0.01	140.0	Zone 4
P-132	179	8.0	PVC	41.2	0.2627	0.01	140.0	Zone 2
P-834	706	6.0	PVC	23.7	0.2690	0.04	140.0	Zone 4
P-359	668	8.0	PVC	-16.9	0.1082	0.01	140.0	Zone 4
P-576	264	8.0	PVC	184.0	1.1745	0.18	140.0	Zone 1
P-1211	428	6.0	PVC	3.5	0.0395	0.00	140.0	Zone 4
P-1364	257	10.0	PVC	-9.9	0.0405	0.00	140.0	Zone 4
P-212	379	6.0	PVC	26.9	0.3049	0.03	140.0	Zone 3
P-700	237	6.0	PVC	29.9	0.3388	0.02	140.0	Zone 4
P-831	691	6.0	PVC	14.4	0.1631	0.02	140.0	Zone 4
P-340	1,510	8.0	PVC	75.2	0.4797	0.20	140.0	Zone 1
P-377	290	8.0	PVC	19.1	0.1218	0.00	140.0	Zone 4
P-25	1,879	10.0	PVC	126.6	0.5170	0.22	140.0	Zone 1
P-1327	187	8.0	PVC	42.1	0.2685	0.01	140.0	Zone 4
P-1328	50	8.0	PVC	42.1	0.2685	0.00	140.0	Zone 4
P-1278	187	8.0	PVC	27.4	0.1751	0.00	140.0	Zone 4
P-818	507	6.0	PVC	19.3	0.2192	0.02	140.0	Zone 4
P-65	607	8.0	PVC	78.4	0.5005	0.09	140.0	Zone 2
P-365	680	6.0	PVC	-6.9	0.0781	0.00	140.0	Zone 4
P-168	1,253	8.0	PVC	64.2	0.4097	0.12	140.0	Zone 2
P-1275	294	8.0	PVC	21.8	0.1392	0.00	140.0	Zone 4
P-674	465	8.0	PVC	74.8	0.4772	0.06	140.0	Zone 1
P-348	237	8.0	PVC	5.8	0.0368	0.00	140.0	Zone 4
P-1428-2	149	8.0	PVC	-36.0	0.2297	0.00	140.0	Zone 4
P-1429-1	86	8.0	PVC	-36.0	0.2297	0.00	140.0	Zone 4

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Label	Length (Scaled) (ft)	Diameter (in)	Material	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Hazen- Williams C	Zone
P-1269	227	8.0	PVC	18.1	0.1154	0.00	140.0	Zone 4
P-137	332	8.0	PVC	49.3	0.3144	0.02	140.0	Zone 2
P-155	513	8.0	PVC	49.3	0.3144	0.03	140.0	Zone 2
P-200	189	10.0	PVC	75.3	0.3077	0.01	140.0	Zone 2
P-56	478	6.0	PVC	52.8	0.5989	0.13	140.0	Zone 1
P-794	258	10.0	PVC	74.5	0.3044	0.01	140.0	Zone 4
P-1036	470	10.0	PVC	130.0	0.5311	0.06	140.0	Zone 1
P-1037	444	10.0	PVC	130.0	0.5311	0.05	140.0	Zone 1
P-102	341	10.0	PVC	80.3	0.3281	0.02	140.0	Zone 2
P-957	669	10.0	PVC	136.5	0.5577	0.09	140.0	Zone 1
P-958	197	10.0	PVC	136.5	0.5577	0.03	140.0	Zone 1
P-1356	698	8.0	PVC	-24.8	0.1583	0.01	140.0	Zone 4
P22-1459	221	10.0	PVC	-49.1	0.2005	0.00	140.0	Zone 4
P-1179	232	6.0	PVC	12.7	0.1444	0.00	140.0	Zone 4
P-1180	85	6.0	PVC	12.7	0.1444	0.00	140.0	Zone 4
P-1182	225	6.0	PVC	12.7	0.1444	0.00	140.0	Zone 4
P-1183	55	6.0	PVC	12.7	0.1444	0.00	140.0	Zone 4
P-1184	225	6.0	PVC	12.7	0.1444	0.00	140.0	Zone 4
P-964	655	10.0	PVC	134.8	0.5505	0.09	140.0	Zone 1
P-688	364	8.0	PVC	-21.7	0.1384	0.01	140.0	Zone 4
P-376	339	8.0	PVC	13.2	0.0845	0.00	140.0	Zone 4
P-116	377	8.0	PVC	48.0	0.3063	0.02	140.0	Zone 2
P-87	461	8.0	PVC	-24.4	0.1557	0.01	140.0	Zone 2
P-817	430	6.0	PVC	18.1	0.2049	0.02	140.0	Zone 4
P-401	407	6.0	PVC	14.4	0.1634	0.01	140.0	Zone 4
P-1068	75	6.0	PVC	11.9	0.1351	0.00	140.0	Zone 4
P-687	773	8.0	PVC	-28.3	0.1805	0.01	140.0	Zone 4
P-768	684	6.0	PVC	-23.0	0.2607	0.04	140.0	Zone 4
P22-N-15-3	381	10.0	PVC	-45.2	0.1846	0.01	140.0	Zone 4
P-545	142	10.0	PVC	-50.8	0.2077	0.00	140.0	Zone 4
P-716	202	6.0	PVC	-12.7	0.1439	0.00	140.0	Zone 4
P-6	887	8.0	Ductile Iron	67.3	0.4294	0.13	120.0	Zone 1
P-701	262	6.0	PVC	24.7	0.2799	0.02	140.0	Zone 4
P-259(1)	44	8.0	PVC	73.6	0.4696	0.01	140.0	Zone 1
P-259(2)	358	8.0	PVC	73.6	0.4696	0.05	140.0	Zone 1
P-1280	70	8.0	PVC	26.7	0.1706	0.00	140.0	Zone 4
P-1197	283	6.0	PVC	-3.7	0.0419	0.00	140.0	Zone 4
P-1203	55	6.0	PVC	-3.7	0.0419	0.00	140.0	Zone 4
P-485	481	6.0	PVC	4.6	0.0518	0.00	140.0	Zone 4
P-213	693	6.0	PVC	21.0	0.2387	0.04	140.0	Zone 3
P-1262	240	8.0	PVC	-21.0	0.1338	0.00	140.0	Zone 4
P-1430	52	8.0	PVC	31.9	0.2038	0.00	140.0	Zone 4
P-1051	197	6.0	PVC	7.4	0.0837	0.00	140.0	Zone 4
P-975	482	8.0	PVC	78.0	0.4981	0.06	140.0	Zone 1
P-1196	300	6.0	PVC	-3.0	0.0341	0.00	140.0	Zone 4

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Label	Length (Scaled) (ft)	Diameter (in)	Material	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Hazen-Williams C	Zone
P-1212	50	6.0	PVC	-3.0	0.0341	0.00	140.0	Zone 4
P-537	398	6.0	PVC	24.6	0.2789	0.03	140.0	Zone 4
P-832	475	6.0	PVC	12.3	0.1391	0.01	140.0	Zone 4
P-507	725	8.0	PVC	66.9	0.4269	0.08	140.0	Zone 1
P-536	169	8.0	PVC	66.9	0.4269	0.02	140.0	Zone 1
P-1422	226	8.0	PVC	-23.9	0.1527	0.00	140.0	Zone 4
P-145	918	6.0	PVC	26.5	0.3005	0.07	140.0	Zone 2
P-715	198	6.0	PVC	34.3	0.3897	0.02	140.0	Zone 4
P-546	255	10.0	PVC	-55.4	0.2262	0.01	140.0	Zone 4
P-1354	247	8.0	PVC	-17.7	0.1128	0.00	140.0	Zone 4
P-1355	272	8.0	PVC	-17.7	0.1128	0.00	140.0	Zone 4
P-1424	61	8.0	PVC	28.8	0.1837	0.00	140.0	Zone 4
P-811	97	6.0	PVC	7.2	0.0822	0.00	140.0	Zone 4
P-349	225	8.0	PVC	-2.7	0.0171	0.00	140.0	Zone 4
P-1379	47	10.0	PVC	-9.5	0.0386	0.00	140.0	Zone 4
P-1380	131	10.0	PVC	-9.5	0.0386	0.00	140.0	Zone 4
P-1400	89	10.0	PVC	-9.5	0.0386	0.00	140.0	Zone 4
P22-N-11-1	30	8.0	PVC	25.2	0.1607	0.00	140.0	Zone 4
P-366	676	6.0	PVC	-6.9	0.0780	0.00	140.0	Zone 4
P22-N-15-2-2	247	10.0	PVC	-36.4	0.1487	0.00	140.0	Zone 4
P-550	274	8.0	PVC	-30.6	0.1956	0.01	140.0	Zone 4
P-1283	381	8.0	PVC	22.2	0.1416	0.00	140.0	Zone 4
P-476	337	8.0	PVC	58.6	0.3739	0.03	140.0	Zone 2
P22-N-11-2	138	8.0	PVC	23.2	0.1483	0.00	140.0	Zone 4
P-691	615	8.0	PVC	-30.8	0.1964	0.01	140.0	Zone 4
P-414	233	8.0	PVC	18.2	0.1164	0.00	140.0	Zone 4
P-747	562	6.0	PVC	7.9	0.0902	0.00	140.0	Zone 4
P-1431	293	8.0	PVC	26.1	0.1666	0.01	140.0	Zone 4
P-816	215	6.0	PVC	12.9	0.1460	0.00	140.0	Zone 4
P-1263	164	8.0	PVC	-14.5	0.0924	0.00	140.0	Zone 4
P-8	833	8.0	Ductile Iron	59.4	0.3790	0.09	120.0	Zone 1
P-974	338	8.0	PVC	72.1	0.4603	0.04	140.0	Zone 1
P-404	683	6.0	PVC	-7.1	0.0808	0.00	140.0	Zone 4
P22-N-11-3	212	8.0	PVC	20.6	0.1317	0.00	140.0	Zone 4
P-1425	253	8.0	PVC	23.6	0.1506	0.00	140.0	Zone 4
P-114	366	8.0	PVC	38.8	0.2476	0.01	140.0	Zone 2
P-115	298	8.0	PVC	38.8	0.2476	0.01	140.0	Zone 2
P-144	722	6.0	PVC	21.8	0.2478	0.04	140.0	Zone 2
P-167	964	8.0	PVC	50.4	0.3215	0.06	140.0	Zone 2
P-1284	271	8.0	PVC	17.6	0.1126	0.00	140.0	Zone 4
P22-1454	71	8.0	PVC	19.3	0.1235	0.00	140.0	Zone 4
P-1202	218	6.0	PVC	-8.9	0.1007	0.00	140.0	Zone 4
P-1204	296	6.0	PVC	-8.9	0.1007	0.00	140.0	Zone 4
P-991	261	6.0	PVC	19.6	0.2226	0.01	140.0	Zone 4

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Label	Length (Scaled) (ft)	Diameter (in)	Material	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Hazen- Williams C	Zone
P-1353	71	8.0	PVC	-10.5	0.0672	0.00	140.0	Zone 4
P-405	245	8.0	PVC	1.4	0.0090	0.00	140.0	Zone 4
P-572	331	8.0	PVC	40.8	0.2604	0.01	140.0	Zone 1
P-1382	191	8.0	PVC	-16.6	0.1062	0.00	140.0	Zone 4
P-1383	280	8.0	PVC	-16.6	0.1062	0.00	140.0	Zone 4
P-140	707	8.0	PVC	38.6	0.2462	0.03	140.0	Zone 2
P-142	304	8.0	PVC	38.6	0.2462	0.01	140.0	Zone 2
P-487	343	6.0	PVC	2.7	0.0307	0.00	140.0	Zone 4
P-253	377	8.0	PVC	19.9	0.1269	0.00	140.0	Zone 1
P-994	221	8.0	PVC	41.5	0.2648	0.01	140.0	Zone 4
P-1038	363	10.0	PVC	104.4	0.4263	0.03	140.0	Zone 1
P-185	232	10.0	PVC	-24.2	0.0988	0.00	140.0	Zone 2
P-186	396	10.0	PVC	24.2	0.0988	0.00	140.0	Zone 2
P-1432	242	8.0	PVC	20.3	0.1293	0.00	140.0	Zone 4
P-1185	186	6.0	PVC	3.6	0.0413	0.00	140.0	Zone 4
P-1362	371	6.0	PVC	-16.0	0.1819	0.01	140.0	Zone 4
P-1426	214	8.0	PVC	18.4	0.1175	0.00	140.0	Zone 4
P22-N-15-2-1(2)	253	10.0	PVC	-29.1	0.1188	0.00	140.0	Zone 4
P22-N-15-2-1(1)(2)	139	10.0	PVC	-29.1	0.1188	0.00	140.0	Zone 4
P-966	185	10.0	PVC	130.1	0.5316	0.02	140.0	Zone 1
P-154	412	8.0	PVC	44.6	0.2849	0.02	140.0	Zone 2
P-582	296	8.0	PVC	95.8	0.6116	0.05	140.0	Zone 1
P-812	84	6.0	PVC	-4.5	0.0508	0.00	140.0	Zone 4
P-81	433	8.0	PVC	-16.7	0.1064	0.00	140.0	Zone 2
P-1368	379	8.0	PVC	-17.2	0.1095	0.00	140.0	Zone 4
P-512	243	6.0	PVC	2.8	0.0313	0.00	140.0	Zone 4
P-726	1,019	8.0	PVC	33.0	0.2104	0.03	140.0	Zone 4
P-1412	267	8.0	PVC	-17.8	0.1134	0.00	140.0	Zone 4
P-1361	134	6.0	PVC	0.6	0.0068	0.00	140.0	Zone 4
P-538	436	6.0	PVC	15.5	0.1759	0.01	140.0	Zone 4
P-1260	237	8.0	PVC	-1.2	0.0075	0.00	140.0	Zone 4
P-705	285	6.0	PVC	20.1	0.2281	0.01	140.0	Zone 4
P-830	158	12.0	PVC	-54.9	0.1557	0.00	140.0	Zone 4
P22-N-15-1(2)	177	10.0	PVC	-23.2	0.0950	0.00	140.0	Zone 4
P22-N-15-2-1(1)(1)	119	10.0	PVC	-23.2	0.0950	0.00	140.0	Zone 4
P-1251	259	6.0	PVC	-19.0	0.2158	0.01	140.0	Zone 4
P-1360	241	8.0	PVC	-8.9	0.0565	0.00	140.0	Zone 4
P-1359	267	8.0	PVC	-8.9	0.0565	0.00	140.0	Zone 4
P-702	259	6.0	PVC	14.3	0.1622	0.01	140.0	Zone 4
P-1433	214	8.0	PVC	14.4	0.0921	0.00	140.0	Zone 4
P-1110	45	6.0	PVC	-2.4	0.0267	0.00	140.0	Zone 4

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Label	Length (Scaled) (ft)	Diameter (in)	Material	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Hazen- Williams C	Zone
P-1109	111	6.0	PVC	-2.4	0.0267	0.00	140.0	Zone 4
P-1111	243	6.0	PVC	-2.4	0.0267	0.00	140.0	Zone 4
P-1427	195	8.0	PVC	13.2	0.0844	0.00	140.0	Zone 4
P22-N-15-12	345	10.0	PVC	28.4	0.1160	0.00	140.0	Zone 4
P-1401	287	10.0	PVC	-4.0	0.0164	0.00	140.0	Zone 4
P-1418	162	8.0	PVC	-17.1	0.1090	0.00	140.0	Zone 4
P-171	477	8.0	PVC	30.4	0.1938	0.01	140.0	Zone 2
P-1405	198	6.0	PVC	9.8	0.1107	0.00	140.0	Zone 4
P-1217	168	6.0	PVC	-14.7	0.1670	0.00	140.0	Zone 4
P-1230	89	6.0	PVC	-14.7	0.1670	0.00	140.0	Zone 4
P-363	304	8.0	PVC	29.6	0.1888	0.01	140.0	Zone 4
P-568	515	8.0	PVC	31.2	0.1991	0.01	140.0	Zone 1
P22-N-15-13	366	10.0	PVC	24.0	0.0981	0.00	140.0	Zone 4
P22-N-15-14	162	10.0	PVC	24.0	0.0981	0.00	140.0	Zone 4
P-758	454	6.0	PVC	-0.6	0.0066	0.00	140.0	Zone 4
P-541	372	6.0	PVC	3.0	0.0339	0.00	140.0	Zone 4
P-1367	216	8.0	PVC	-10.0	0.0640	0.00	140.0	Zone 4
P-1366	278	8.0	PVC	-10.0	0.0640	0.00	140.0	Zone 4
P-1411	267	8.0	PVC	-11.3	0.0720	0.00	140.0	Zone 4
P-1410	254	8.0	PVC	-11.3	0.0720	0.00	140.0	Zone 4
P-583	233	8.0	PVC	87.9	0.5613	0.04	140.0	Zone 1
P-584	195	8.0	PVC	87.9	0.5613	0.01	140.0	Zone 1
P-14	1,017	10.0	Asbestos Cement	44.7	0.1824	0.03	110.0	Zone 1
P-183	356	8.0	PVC	20.5	0.1311	0.00	140.0	Zone 2
P-234	370	8.0	PVC	27.9	0.1780	0.01	140.0	Zone 1
P-1259	165	8.0	PVC	5.3	0.0339	0.00	140.0	Zone 4
P-544	499	6.0	PVC	5.4	0.0616	0.00	140.0	Zone 4
P-184	940	10.0	PVC	34.1	0.1391	0.01	140.0	Zone 2
P-1404	308	6.0	PVC	-4.7	0.0529	0.00	140.0	Zone 4
P-117	409	8.0	PVC	9.7	0.0621	0.00	140.0	Zone 2
P-177	352	8.0	PVC	21.7	0.1388	0.00	140.0	Zone 2
P22-1452	205	8.0	PVC	-14.1	0.0899	0.00	140.0	Zone 4
P22-N-10-1	157	8.0	PVC	-14.1	0.0899	0.00	140.0	Zone 4
P22-N-10-2	39	8.0	PVC	-14.1	0.0899	0.00	140.0	Zone 4
P-1417	411	8.0	PVC	-10.6	0.0676	0.00	140.0	Zone 4
P-1406	166	6.0	PVC	-7.3	0.0831	0.00	140.0	Zone 4
P-1462	105	6.0	PVC	-7.3	0.0831	0.00	150.0	Zone 4
P-570	186	8.0	PVC	25.5	0.1628	0.00	140.0	Zone 1
P-1358	82	8.0	PVC	-0.4	0.0027	0.00	140.0	Zone 4
P-793	517	6.0	PVC	13.4	0.1516	0.01	140.0	Zone 4
P-548	480	6.0	PVC	4.6	0.0517	0.00	140.0	Zone 4
P-479	855	8.0	PVC	29.5	0.1883	0.02	140.0	Zone 2
P-720	219	10.0	PVC	-27.7	0.1131	0.00	140.0	Zone 4
P-235	404	6.0	PVC	13.5	0.1535	0.01	140.0	Zone 1

**GBWC 2024 IRP - Cold Springs Division**  
**Existing (2022) PHD Condition Distribution System Pipe Report**  
**PHD-PIPES - Time: 0.00 hours**

Label	Length (Scaled) (ft)	Diameter (in)	Material	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Hazen-Williams C	Zone
P-1403	366	6.0	PVC	-0.1	0.0013	0.00	140.0	Zone 4
P-748	757	6.0	PVC	4.4	0.0496	0.00	140.0	Zone 4
P-1451	48	10.0	PVC	13.8	0.0564	0.00	140.0	Zone 4
P-542	178	6.0	PVC	4.3	0.0493	0.00	140.0	Zone 4
P-1407	75	8.0	PVC	-5.5	0.0348	0.00	140.0	Zone 4
P-262	304	8.0	PVC	37.1	0.2367	0.01	140.0	Zone 1
P-1040	339	10.0	PVC	79.7	0.3256	0.02	140.0	Zone 1
P-1415	117	8.0	PVC	-7.4	0.0469	0.00	140.0	Zone 4
P22-N-15-1(1)	100	10.0	PVC	-11.0	0.0449	0.00	140.0	Zone 4
P22-1458(2)(2)	203	10.0	PVC	-11.0	0.0449	0.00	140.0	Zone 4
P-1208	345	6.0	PVC	12.3	0.1394	0.01	140.0	Zone 4
P-573	350	8.0	PVC	21.8	0.1393	0.00	140.0	Zone 1
P-579	418	8.0	PVC	81.0	0.5172	0.06	140.0	Zone 1
P-797	242	10.0	PVC	34.9	0.1425	0.00	140.0	Zone 4
P-1365	84	8.0	PVC	-2.2	0.0143	0.00	140.0	Zone 4
P-180	307	6.0	PVC	9.5	0.1077	0.00	140.0	Zone 2
P-181	538	6.0	PVC	9.5	0.1077	0.01	140.0	Zone 2
P22-1458(2)(1)	21	10.0	PVC	-2.5	0.0102	0.00	140.0	Zone 4
P-1450	160	10.0	PVC	2.5	0.0102	0.00	140.0	Zone 4
P22-1458(1)	44	10.0	PVC	-2.5	0.0102	0.00	140.0	Zone 4
P-484	397	8.0	PVC	3.2	0.0206	0.00	140.0	Zone 4
P-757	478	8.0	PVC	-14.1	0.0898	0.00	140.0	Zone 4
P22-N-2-1	29	8.0	PVC	11.0	0.0700	0.00	140.0	Zone 4
P-723	247	10.0	PVC	-21.0	0.0856	0.00	140.0	Zone 4
P-384	420	6.0	PVC	6.3	0.0718	0.00	140.0	Zone 4
P-78	1,317	8.0	PVC	-2.9	0.0183	0.00	140.0	Zone 2
P-172	806	8.0	PVC	20.4	0.1301	0.01	140.0	Zone 2
P-617	298	12.0	PVC	-24.8	0.0704	0.00	140.0	Zone 4
P-176	701	8.0	PVC	31.2	0.1991	0.02	140.0	Zone 2
P-135	652	10.0	PVC	-16.2	0.0660	0.00	140.0	Zone 2
P-254	575	8.0	PVC	-5.3	0.0340	0.00	140.0	Zone 1
P22-N-2-2	138	8.0	PVC	9.0	0.0575	0.00	140.0	Zone 4
P-149	548	6.0	PVC	21.5	0.2437	0.03	140.0	Zone 2
P-706	300	6.0	PVC	11.0	0.1251	0.00	140.0	Zone 4
P-717	277	6.0	PVC	3.7	0.0418	0.00	140.0	Zone 4
P-136	334	8.0	PVC	-6.2	0.0397	0.00	140.0	Zone 2
P-1413	54	8.0	PVC	-1.5	0.0097	0.00	140.0	Zone 4
P-1414	266	8.0	PVC	-1.5	0.0097	0.00	140.0	Zone 4
P-833	516	6.0	PVC	18.3	0.2075	0.02	140.0	Zone 4
P-703	274	6.0	PVC	-4.6	0.0518	0.00	140.0	Zone 4
P-730	242	6.0	PVC	10.1	0.1141	0.00	140.0	Zone 4
P22-N-2-3	141	8.0	PVC	7.1	0.0451	0.00	140.0	Zone 4



**GBWC 2024 IRP - Cold Springs Division**  
**Existing (2022) PHD Condition Distribution System Pipe Report**  
**PHD-PIPES - Time: 0.00 hours**

Label	Length (Scaled) (ft)	Diameter (in)	Material	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Hazen- Williams C	Zone
P-486	352	8.0	PVC	3.1	0.0200	0.00	140.0	Zone 4
P-1483	113	8.0	PVC	-12.2	0.0782	0.00	140.0	Zone 4
P-59	1,409	8.0	PVC	38.0	0.2424	0.05	140.0	Zone 1
P-539	263	6.0	PVC	-5.1	0.0581	0.00	140.0	Zone 4
P22-N-6-2	35	4.0	PVC	4.4	0.1117	0.00	140.0	Zone 4
P-731	255	6.0	PVC	1.1	0.0120	0.00	140.0	Zone 4
P-569	245	8.0	PVC	16.4	0.1047	0.00	140.0	Zone 1
P-162	343	8.0	PVC	20.3	0.1297	0.00	140.0	Zone 2
P22-1456	44	8.0	PVC	-16.9	0.1076	0.00	140.0	Zone 4
P22-N-13-4	290	8.0	PVC	-16.9	0.1076	0.00	140.0	Zone 4
P22-1453	66	8.0	PVC	5.8	0.0368	0.00	140.0	Zone 4
P-790	254	6.0	PVC	7.5	0.0854	0.00	140.0	Zone 4
P-480	476	8.0	PVC	16.2	0.1035	0.00	140.0	Zone 4
P-382	416	6.0	PVC	0.4	0.0050	0.00	140.0	Zone 4
P-1482	116	8.0	PVC	-10.3	0.0658	0.00	140.0	Zone 4
P-1429-2	190	8.0	PVC	-16.6	0.1063	0.00	140.0	Zone 4
P-535	590	6.0	PVC	7.9	0.0895	0.00	140.0	Zone 1
P-540	452	6.0	PVC	6.1	0.0691	0.00	140.0	Zone 4
P-1242	187	8.0	PVC	18.2	0.1162	0.00	140.0	Zone 4
P-708	225	6.0	PVC	7.8	0.0883	0.00	140.0	Zone 4
P-231	377	8.0	PVC	12.7	0.0812	0.00	140.0	Zone 1
P-955	100	6.0	PVC	7.5	0.0846	0.00	140.0	Zone 4
P-543	499	6.0	PVC	-3.7	0.0415	0.00	140.0	Zone 4
P-1481	110	8.0	PVC	-7.7	0.0492	0.00	140.0	Zone 4
P-478	798	8.0	PVC	18.8	0.1198	0.01	140.0	Zone 2
P-481	438	6.0	PVC	7.1	0.0809	0.00	140.0	Zone 4
P-179	335	8.0	PVC	34.7	0.2215	0.01	140.0	Zone 2
P-1207	410	6.0	PVC	5.8	0.0658	0.00	140.0	Zone 4
P-482	372	8.0	PVC	12.3	0.0786	0.00	140.0	Zone 4
P-595	534	10.0	Asbestos Cement	17.7	0.0722	0.00	110.0	Zone 1
P-1132	78	10.0	PVC	17.7	0.0722	0.00	140.0	Zone 1
P-232	566	6.0	PVC	6.3	0.0714	0.00	140.0	Zone 1
P-721	381	6.0	PVC	-6.7	0.0764	0.00	140.0	Zone 4
P-772	353	8.0	PVC	11.0	0.0701	0.00	140.0	Zone 1
P-775	543	8.0	PVC	10.8	0.0692	0.00	140.0	Zone 1
P-383	331	6.0	PVC	6.5	0.0736	0.00	140.0	Zone 4
P-385	355	6.0	PVC	6.5	0.0736	0.00	140.0	Zone 4
P-387	338	6.0	PVC	6.5	0.0736	0.00	140.0	Zone 4
P-390	335	6.0	PVC	6.5	0.0736	0.00	140.0	Zone 4
P-733	208	6.0	PVC	6.5	0.0736	0.00	140.0	Zone 4
P-735	208	6.0	PVC	6.5	0.0736	0.00	140.0	Zone 4
P-737	198	6.0	PVC	6.5	0.0736	0.00	140.0	Zone 4
P-1112	52	6.0	PVC	6.5	0.0736	0.00	140.0	Zone 4
P-1113	254	6.0	PVC	6.5	0.0736	0.00	140.0	Zone 4

**GBWC 2024 IRP - Cold Springs Division**  
**Existing (2022) PHD Condition Distribution System Pipe Report**  
**PHD-PIPES - Time: 0.00 hours**

Label	Length (Scaled) (ft)	Diameter (in)	Material	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Hazen- Williams C	Zone
P-1114	64	6.0	PVC	6.5	0.0736	0.00	140.0	Zone 4
P-1115	253	6.0	PVC	6.5	0.0736	0.00	140.0	Zone 4
P-1118	61	6.0	PVC	6.5	0.0736	0.00	140.0	Zone 4
P-1119	258	6.0	PVC	6.5	0.0736	0.00	140.0	Zone 4
P-1480	174	8.0	PVC	-5.8	0.0368	0.00	140.0	Zone 4
P-255	474	8.0	PVC	35.1	0.2239	0.02	140.0	Zone 1
P-236	410	6.0	PVC	5.6	0.0640	0.00	140.0	Zone 1
P-973	572	8.0	PVC	9.9	0.0629	0.00	140.0	Zone 1
P-1045	569	8.0	PVC	9.9	0.0629	0.00	140.0	Zone 1
P-1046	565	8.0	PVC	9.9	0.0629	0.00	140.0	Zone 1
P-156	364	8.0	PVC	3.8	0.0244	0.00	140.0	Zone 2
P-1116	59	6.0	PVC	5.8	0.0662	0.00	140.0	Zone 4
P-1117	190	6.0	PVC	5.8	0.0662	0.00	140.0	Zone 4
P22-13-HL	12	6.0	PVC	5.8	0.0662	0.00	140.0	Zone 4
P-1487(1)	39	8.0	PVC	10.4	0.0662	0.00	140.0	Zone 4
P-1487(2)	144	8.0	PVC	10.4	0.0662	0.00	140.0	Zone 4
P-787	682	10.0	PVC	-0.1	0.0003	0.00	140.0	Zone 4
P-547	480	6.0	PVC	-4.5	0.0514	0.00	140.0	Zone 4
P-261	304	8.0	PVC	23.3	0.1486	0.00	140.0	Zone 1
P-574	521	8.0	PVC	9.1	0.0581	0.00	140.0	Zone 1
P-686	303	8.0	PVC	-42.2	0.2693	0.01	140.0	Zone 4
P-776	1,465	8.0	PVC	73.4	0.4685	0.19	140.0	Zone 1
P-585	544	8.0	PVC	8.9	0.0566	0.00	140.0	Zone 1
P-931	540	8.0	PVC	8.9	0.0566	0.00	140.0	Zone 1
P-935	507	8.0	PVC	8.9	0.0566	0.00	140.0	Zone 1
P-164	885	8.0	PVC	14.2	0.0906	0.01	140.0	Zone 2
P-799	629	6.0	PVC	2.3	0.0260	0.00	140.0	Zone 4
P-697	372	8.0	PVC	-25.4	0.1618	0.01	140.0	Zone 4
P-741	300	6.0	PVC	5.2	0.0589	0.00	140.0	Zone 4
P-362	237	8.0	PVC	14.8	0.0942	0.00	140.0	Zone 4
P-251	376	8.0	PVC	5.5	0.0353	0.00	140.0	Zone 1
P-745	218	8.0	PVC	8.4	0.0538	0.00	140.0	Zone 4
P-565	218	8.0	PVC	7.9	0.0504	0.00	140.0	Zone 1
P-581	180	8.0	PVC	7.9	0.0504	0.00	140.0	Zone 1
P-774	319	8.0	PVC	7.9	0.0504	0.00	140.0	Zone 1
P-173	528	8.0	PVC	9.6	0.0616	0.00	140.0	Zone 2
P-174	570	8.0	PVC	9.6	0.0616	0.00	140.0	Zone 2
P-773	387	8.0	PVC	7.8	0.0495	0.00	140.0	Zone 1
P-483	342	6.0	PVC	4.5	0.0515	0.00	140.0	Zone 4
P-710	271	6.0	PVC	4.5	0.0515	0.00	140.0	Zone 4
P-711	278	6.0	PVC	4.5	0.0515	0.00	140.0	Zone 4
P-712	288	6.0	PVC	4.5	0.0515	0.00	140.0	Zone 4
P-713	304	6.0	PVC	4.5	0.0515	0.00	140.0	Zone 4
P-1479	272	8.0	PVC	-2.5	0.0161	0.00	140.0	Zone 4
P-986	561	8.0	PVC	6.9	0.0441	0.00	140.0	Zone 1

**GBWC 2024 IRP - Cold Springs Division**  
**Existing (2022) PHD Condition Distribution System Pipe Report**  
**PHD-PIPES - Time: 0.00 hours**

Label	Length (Scaled) (ft)	Diameter (in)	Material	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Hazen- Williams C	Zone
P-228	709	6.0	PVC	3.8	0.0436	0.00	140.0	Zone 1
P-1167	224	6.0	PVC	25.4	0.2881	0.02	140.0	Zone 4
P-555	146	10.0	PVC	4.9	0.0201	0.00	140.0	Zone 4
P-455	165	6.0	PVC	3.9	0.0442	0.00	140.0	Zone 4
P-456	180	6.0	PVC	3.9	0.0442	0.00	140.0	Zone 4
P-709	256	6.0	PVC	3.9	0.0442	0.00	140.0	Zone 4
P-754	108	6.0	PVC	3.9	0.0442	0.00	140.0	Zone 4
P-77	354	8.0	PVC	9.4	0.0601	0.00	140.0	Zone 2
P-350	510	8.0	PVC	-6.5	0.0414	0.00	140.0	Zone 4
P-354	506	8.0	PVC	6.5	0.0414	0.00	140.0	Zone 4
P-732	306	8.0	PVC	6.5	0.0414	0.00	140.0	Zone 4
P-734	299	8.0	PVC	6.5	0.0414	0.00	140.0	Zone 4
P-736	304	8.0	PVC	6.5	0.0414	0.00	140.0	Zone 4
P-580	483	8.0	PVC	5.9	0.0378	0.00	140.0	Zone 1
P-1485	115	8.0	PVC	5.8	0.0373	0.00	140.0	Zone 4
P-457	111	6.0	PVC	3.2	0.0368	0.00	140.0	Zone 4
P-532	100	6.0	PVC	3.2	0.0368	0.00	140.0	Zone 4
P-707	195	6.0	PVC	3.2	0.0368	0.00	140.0	Zone 4
P-738	104	6.0	PVC	3.2	0.0368	0.00	140.0	Zone 4
P-992	259	6.0	PVC	11.1	0.1265	0.00	140.0	Zone 4
P-459	149	6.0	PVC	3.0	0.0337	0.00	140.0	Zone 4
P-1039	340	8.0	PVC	4.9	0.0315	0.00	140.0	Zone 1
P-1434	66	8.0	PVC	5.2	0.0331	0.00	140.0	Zone 4
P-1435	130	8.0	PVC	5.2	0.0331	0.00	140.0	Zone 4
P22-N-13-3	312	8.0	PVC	-5.2	0.0331	0.00	140.0	Zone 4
P-789	252	6.0	PVC	5.9	0.0669	0.00	140.0	Zone 4
P-739	111	6.0	PVC	2.6	0.0294	0.00	140.0	Zone 4
P-740	141	6.0	PVC	2.6	0.0294	0.00	140.0	Zone 4
P22-N-1-1	32	8.0	PVC	4.5	0.0290	0.00	140.0	Zone 4
P22-N-1-2	16	8.0	PVC	4.5	0.0290	0.00	140.0	Zone 4
P-724	394	6.0	PVC	4.5	0.0511	0.00	140.0	Zone 4
P-729	690	8.0	PVC	4.5	0.0287	0.00	140.0	Zone 4
P-396	302	8.0	PVC	4.5	0.0290	0.00	140.0	Zone 3
P22-N-6-1	32	8.0	PVC	4.4	0.0279	0.00	140.0	Zone 4
P-229	477	6.0	PVC	2.1	0.0235	0.00	140.0	Zone 1
P22-N-5-1	35	8.0	PVC	3.9	0.0248	0.00	140.0	Zone 4
P22-N-3-1	33	8.0	PVC	3.9	0.0248	0.00	140.0	Zone 4
P-1489	191	8.0	PVC	3.9	0.0248	0.00	140.0	Zone 4
P-1247	147	8.0	PVC	10.1	0.0642	0.00	140.0	Zone 4
P-1421	63	8.0	PVC	10.1	0.0642	0.00	140.0	Zone 4
P-1476	147	8.0	PVC	2.0	0.0129	0.00	140.0	Zone 4
P-1477	52	8.0	PVC	2.0	0.0129	0.00	140.0	Zone 4
P-1478	157	8.0	PVC	2.0	0.0129	0.00	140.0	Zone 4
P-1420	143	8.0	PVC	3.2	0.0207	0.00	140.0	Zone 4
P-1486	148	8.0	PVC	3.2	0.0207	0.00	140.0	Zone 4

**GBWC 2024 IRP - Cold Springs Division**  
**Existing (2022) PHD Condition Distribution System Pipe Report**  
**PHD-PIPES - Time: 0.00 hours**

Label	Length (Scaled) (ft)	Diameter (in)	Material	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Hazen- Williams C	Zone
P-1488	288	8.0	PVC	3.2	0.0207	0.00	140.0	Zone 4
P-1419	53	8.0	PVC	3.2	0.0207	0.00	150.0	Zone 4
P-798	244	10.0	PVC	1.6	0.0065	0.00	140.0	Zone 4
P-1472	75	8.0	PVC	8.5	0.0543	0.00	140.0	Zone 4
P-1484	65	8.0	PVC	-8.5	0.0543	0.00	140.0	Zone 4
P22-N-13-2	147	8.0	PVC	-2.6	0.0166	0.00	140.0	Zone 4
P-1498	109	8.0	PVC	2.6	0.0166	0.00	140.0	Zone 4
P-1475	157	8.0	PVC	3.3	0.0212	0.00	140.0	Zone 4
P-1502(1)(2)	27	8.0	PVC	1.9	0.0124	0.00	140.0	Zone 4
P22-N-5-2	106	8.0	PVC	1.9	0.0124	0.00	140.0	Zone 4
P22-N-3-2	117	8.0	PVC	1.9	0.0124	0.00	140.0	Zone 4
P-1490	56	8.0	PVC	1.9	0.0124	0.00	140.0	Zone 4
P-1502(2)	14	8.0	PVC	1.9	0.0124	0.00	140.0	Zone 4
P-704	265	6.0	PVC	4.5	0.0512	0.00	140.0	Zone 4
P-779	692	10.0	PVC	23.7	0.0967	0.00	140.0	Zone 4
P-1473	47	8.0	PVC	7.2	0.0460	0.00	140.0	Zone 4
P-44	1,015	10.0	PVC	16.9	0.0690	0.00	140.0	Zone 2
P-694	281	8.0	PVC	-17.6	0.1122	0.00	140.0	Zone 4
P-157	617	8.0	PVC	7.3	0.0464	0.00	140.0	Zone 2
P-158	370	8.0	PVC	7.3	0.0464	0.00	140.0	Zone 2
P-1205	55	6.0	PVC	-0.7	0.0078	0.00	140.0	Zone 4
P-718	243	6.0	PVC	0.4	0.0046	0.00	140.0	Zone 4
P-182	586	6.0	PVC	1.2	0.0141	0.00	140.0	Zone 2
P-225	375	12.0	Asbestos Cement	-0.9	0.0025	0.00	110.0	Zone 2
P-1474	489	8.0	PVC	5.3	0.0336	0.00	140.0	Zone 4
P-796	571	6.0	PVC	4.9	0.0551	0.00	140.0	Zone 4
P-165	278	8.0	PVC	6.5	0.0417	0.00	140.0	Zone 2
P-586	56	8.0	PVC	238.1	1.5195	0.06	140.0	Zone 1
P-771	252	8.0	PVC	0.0	0.0000	0.00	140.0	Zone 1
P-769	98	8.0	PVC	0.0	0.0000	0.00	140.0	Zone 3
P-412	563	8.0	PVC	0.0	0.0000	0.00	140.0	Zone 2
P-322(2)(1)	454	8.0	PVC	238.0	1.5194	0.51	140.0	Zone 2
P-322(2)(2)	215	8.0	PVC	238.0	1.5194	0.24	140.0	Zone 2
P-587	41	8.0	PVC	238.1	1.5195	0.05	140.0	Zone 1
P-322(1)	39	8.0	PVC	238.1	1.5194	0.04	140.0	Zone 2
P-411	64	8.0	PVC	0.0	0.0000	0.00	140.0	Zone 2
P-596	195	10.0	Asbestos Cement	0.0	0.0000	0.00	110.0	Zone 1
P-1512	26	8.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P22-6-HL	11	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P22-N-22-HL	12	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1255-HL	18	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P22-23-HL	12	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P22-20-HL	12	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4

**GBWC 2024 IRP - Cold Springs Division**  
**Existing (2022) PHD Condition Distribution System Pipe Report**  
**PHD-PIPES - Time: 0.00 hours**

Label	Length (Scaled) (ft)	Diameter (in)	Material	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Hazen- Williams C	Zone
P-1261-HL	22	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1508	50	8.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1276-HL	19	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1282-HL	37	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P22-15-HL	13	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1226-HL	21	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1227-HL	27	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1279-HL	34	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1219-HL	24	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1223-HL	23	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1193-HL	30	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1446-HL	30	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1285-HL	35	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1267-HL	39	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P22-8-HL	12	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1372-HL	40	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1225-HL	18	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1468	30	8.0	PVC	0.0	0.0000	0.00	150.0	Zone 4
P22-1-HL	13	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1440-HL	23	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1371-HL	24	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1436-HL	24	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1222-HL	21	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1224-HL	23	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P22-10-HL	46	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1469	37	8.0	PVC	0.0	0.0000	0.00	150.0	Zone 4
P-1220-HL	26	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1376-HL	39	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1467	34	6.0	PVC	0.0	0.0000	0.00	150.0	Zone 4
P-1441-HL	35	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1445-HL	32	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1351-HL	24	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 2
P-1444-HL	34	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1270-HL	28	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1448-HL	29	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1511	35	8.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-571	181	8.0	PVC	0.0	0.0000	0.00	140.0	Zone 1
P22-N-24-HL	29	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1447-HL	40	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P22-N-21-HL	12	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P22-9-HL	12	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P22-12-HL	12	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P22-11-HL	12	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P22-7-HL	12	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1438-HL	26	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4

**GBWC 2024 IRP - Cold Springs Division**  
**Existing (2022) PHD Condition Distribution System Pipe Report**  
**PHD-PIPES - Time: 0.00 hours**

Label	Length (Scaled) (ft)	Diameter (in)	Material	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Hazen-Williams C	Zone
P-1273-HL	34	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-92	238	10.0	PVC	0.0	0.0000	0.00	140.0	Zone 2
P-1175-HL	30	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1437-HL	30	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1369-HL	35	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1439-HL	35	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1449-HL	35	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1377-HL	39	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1373-HL	34	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P22-14-HL	13	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1375-HL	38	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1370-HL	31	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1442-HL	31	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1443-HL	31	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1176-HL	36	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1177-HL	39	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1513	54	8.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1374-HL	33	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-399	159	8.0	PVC	0.0	0.0000	0.00	140.0	Zone 3
P-746	256	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1221-HL	14	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1264-HL	27	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-822	81	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-714	113	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1258-HL	30	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P22-N-13-1	53	8.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1553(1)	193	8.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1134	68	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 1
P-564	414	8.0	PVC	0.0	0.0000	0.00	140.0	Zone 1
P-330	277	10.0	Asbestos Cement	0.0	0.0000	0.00	110.0	Zone 2
P-408	68	8.0	PVC	0.0	0.0000	0.00	140.0	Zone 4

**GBWC 2024 IRP - Cold Springs Division**  
**Action (2027) MDD Condition Distribution System Junction Report**  
MDD - Time: 0.00 hours

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
232	J-127	5,090.00	Zone 2	8.1	5,181.03	39.4
142	J-33	5,083.00	Zone 2	0.0	5,175.30	39.9
233	J-128	5,085.00	Zone 2	9.2	5,180.29	41.2
231	J-126	5,083.00	Zone 2	8.7	5,180.18	42.0
1620	J-760	5,181.43	Zone 4	0.0	5,279.39	42.4
1595	J-759	5,180.85	Zone 4	0.0	5,279.39	42.6
322	J-241	5,180.85	Zone 4	0.0	5,279.39	42.6
183	J-77	5,080.00	Zone 2	7.0	5,179.75	43.2
185	J-79	5,080.00	Zone 2	21.6	5,179.93	43.2
234	J-129	5,080.00	Zone 2	0.0	5,180.03	43.3
1564	J-747	5,177.53	Zone 4	3.4	5,279.39	44.1
171	J-65	5,078.00	Zone 2	6.0	5,179.92	44.1
215	J-110	5,078.00	Zone 2	13.5	5,179.96	44.1
235	J-130	5,078.00	Zone 2	8.1	5,180.12	44.2
1535	J-742	5,176.39	Zone 4	0.0	5,279.40	44.6
1569	J-749	5,176.03	Zone 4	0.0	5,279.40	44.7
181	J-75	5,076.00	Zone 2	4.3	5,180.03	45.0
1562	J-746	5,174.93	Zone 4	0.0	5,279.41	45.2
186	J-80	5,075.00	Zone 2	0.0	5,179.55	45.2
230	J-125	5,075.00	Zone 2	0.0	5,179.74	45.3
1538	J-743	5,174.58	Zone 4	4.1	5,279.41	45.4
1573	J-751	5,174.46	Zone 4	3.0	5,279.40	45.4
184	J-78	5,074.00	Zone 2	0.0	5,179.68	45.7
193	J-87	5,074.00	Zone 2	6.5	5,179.75	45.8
237	J-132	5,073.00	Zone 2	0.0	5,179.87	46.2
236	J-131	5,073.00	Zone 2	10.8	5,179.96	46.3
238	J-133	5,072.00	Zone 2	10.8	5,179.79	46.6
194	J-88	5,072.00	Zone 2	7.6	5,179.80	46.6
204	J-98	5,072.00	Zone 2	0.0	5,179.93	46.7
505	J-480	5,170.56	Zone 4	0.0	5,279.42	47.1
430	J-397	5,170.00	Zone 4	4.5	5,279.44	47.3
195	J-89	5,070.00	Zone 2	0.0	5,179.84	47.5
170	J-64	5,070.00	Zone 2	6.0	5,179.89	47.5
198	J-92	5,070.00	Zone 2	8.1	5,179.92	47.6
205	J-99	5,070.00	Zone 2	0.0	5,179.93	47.6
211	J-105	5,070.00	Zone 2	0.0	5,179.95	47.6
212	J-106	5,070.00	Zone 2	9.2	5,179.95	47.6
213	J-108	5,070.00	Zone 2	7.6	5,179.95	47.6
224	J-119	5,070.00	Zone 2	5.4	5,179.96	47.6
321	J-240	5,070.00	Zone 2	0.0	5,179.96	47.6
182	J-76	5,070.00	Zone 2	2.7	5,180.02	47.6
172	J-66	5,070.00	Zone 2	7.6	5,180.05	47.6
429	J-396	5,169.00	Zone 4	5.3	5,279.44	47.8
202	J-96	5,069.00	Zone 2	8.7	5,179.95	48.0
210	J-104	5,069.00	Zone 2	7.0	5,179.95	48.0
214	J-109	5,069.00	Zone 2	5.4	5,179.95	48.0

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**GBWC 2024 IRP - Cold Springs Division**  
**Action (2027) MDD Condition Distribution System Junction Report**  
MDD - Time: 0.00 hours

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
239	J-134	5,068.00	Zone 2	0.0	5,179.89	48.4
188	J-82	5,068.00	Zone 2	0.0	5,179.90	48.4
189	J-83	5,068.00	Zone 2	6.5	5,179.91	48.4
191	J-85	5,068.00	Zone 2	7.0	5,179.91	48.4
190	J-84	5,068.00	Zone 2	7.6	5,179.92	48.4
201	J-95	5,068.00	Zone 2	10.3	5,179.95	48.4
209	J-103	5,068.00	Zone 2	6.0	5,179.95	48.4
223	J-118	5,068.00	Zone 2	6.0	5,179.96	48.4
222	J-117	5,068.00	Zone 2	0.0	5,179.96	48.4
228	J-123	5,068.00	Zone 2	8.7	5,179.96	48.4
199	J-93	5,067.00	Zone 2	0.0	5,179.89	48.8
431	J-398	5,166.00	Zone 4	0.6	5,279.44	49.1
1579	J-753	5,165.91	Zone 4	3.8	5,279.42	49.1
196	J-90	5,066.00	Zone 2	6.5	5,179.89	49.3
221	J-116	5,065.00	Zone 2	7.6	5,179.96	49.7
227	J-122	5,065.00	Zone 2	7.6	5,179.96	49.7
203	J-97	5,065.00	Zone 2	0.0	5,179.97	49.7
216	J-111	5,065.00	Zone 2	9.7	5,179.98	49.7
1560	J-ph19 IRR2	5,164.42	NO FIRE	0.0	5,279.42	49.8
168	J-62	5,065.00	Zone 2	5.4	5,180.00	49.8
1558	J-744	5,164.42	Zone 4	0.0	5,279.43	49.8
148	J-40	5,065.00	Zone 2	10.3	5,180.03	49.8
316	J-235	5,203.00	Zone 3	0.0	5,318.17	49.8
317	J-237	5,203.00	Zone 3	3.0	5,318.17	49.8
315	J-234	5,202.00	Zone 3	2.6	5,317.85	50.1
1576	J-752	5,163.52	Zone 4	3.8	5,279.42	50.1
1586	J-756	5,163.08	Zone 4	3.8	5,279.43	50.3
226	J-121	5,063.00	Zone 2	0.0	5,179.97	50.6
152	J-45	5,063.00	Zone 2	8.7	5,179.98	50.6
269	J-185	5,200.00	Zone 3	0.0	5,317.85	51.0
200	GOMES ELEM SCHOOL	5,062.00	Zone 2	7.9	5,179.95	51.0
220	J-115	5,062.00	Zone 2	7.0	5,179.97	51.0
225	J-120	5,062.00	Zone 2	10.8	5,179.97	51.0
192	J-86	5,062.00	Zone 2	0.0	5,179.97	51.0
229	J-124	5,062.00	Zone 2	0.0	5,179.97	51.0
187	J-81	5,061.00	Zone 2	10.8	5,179.94	51.5
197	J-91	5,061.00	Zone 2	0.0	5,179.95	51.5
219	J-114	5,060.00	Zone 2	8.7	5,179.97	51.9
146	J-38	5,060.00	Zone 2	9.7	5,179.99	51.9
147	J-39	5,060.00	Zone 2	8.7	5,179.99	51.9
415	J-355	5,060.00	Zone 2	0.0	5,180.01	51.9
151	J-44	5,060.00	Zone 2	10.3	5,180.01	51.9
173	J-67	5,060.00	Zone 2	8.7	5,180.06	51.9
178	J-72	5,060.00	Zone 2	11.9	5,180.10	52.0



**GBWC 2024 IRP - Cold Springs Division**  
**Action (2027) MDD Condition Distribution System Junction Report**  
MDD - Time: 0.00 hours

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
179	J-73	5,060.00	Zone 2	0.0	5,180.14	52.0
180	J-74	5,060.00	Zone 2	9.2	5,180.17	52.0
176	J-70	5,060.00	Zone 2	3.8	5,180.26	52.0
166	J-60	5,058.00	Zone 2	8.7	5,179.99	52.8
167	J-61	5,058.00	Zone 2	9.7	5,179.99	52.8
207	J-101	5,058.00	Zone 2	0.0	5,180.30	52.9
506	J-481	5,156.88	Zone 4	0.0	5,279.47	53.0
274	J-192	5,200.00	Zone 1	0.6	5,322.67	53.1
1583	J-755	5,155.60	Zone 4	3.8	5,279.45	53.6
175	J-69	5,056.00	Zone 2	0.0	5,180.14	53.7
353	J-275	5,055.00	Zone 2	7.6	5,179.97	54.1
352	J-274	5,055.00	Zone 2	5.4	5,179.98	54.1
218	J-113	5,055.00	Zone 2	2.2	5,180.00	54.1
217	J-112	5,055.00	Zone 2	11.4	5,180.02	54.1
259	J-157	5,055.00	Zone 2	0.0	5,180.09	54.1
206	J-100	5,055.00	Zone 2	7.0	5,180.30	54.2
136	J-17	5,055.00	Zone 2	0.0	5,180.34	54.2
428	J-395	5,152.00	Zone 4	3.8	5,279.49	55.2
177	J-71	5,052.00	Zone 2	0.0	5,180.34	55.5
135	J-16	5,052.00	Zone 2	0.0	5,180.44	55.6
208	J-102	5,052.00	Zone 2	10.8	5,180.58	55.6
150	J-43	5,052.00	Zone 2	5.4	5,180.61	55.6
174	J-68	5,050.00	Zone 2	7.6	5,180.10	56.3
159	J-53	5,050.00	Zone 2	9.7	5,180.48	56.5
2938	J-1245	5,050.00	Zone 2	0.0	5,180.48	56.5
2946	J-1246	5,050.00	Zone 2	0.0	5,180.48	56.5
145	J-37	5,050.00	Zone 2	0.0	5,180.50	56.5
163	J-57	5,050.00	Zone 2	7.6	5,181.47	56.9
432	J-399	5,147.42	Zone 4	0.8	5,279.53	57.2
165	J-59	5,050.00	Zone 2	5.4	5,182.16	57.2
164	J-58	5,048.00	Zone 2	0.0	5,181.18	57.6
427	J-394	5,146.00	Zone 4	5.3	5,279.50	57.8
1592	J-758	5,145.34	Zone 4	3.8	5,279.64	58.1
162	J-56	5,048.00	Zone 2	9.7	5,182.30	58.1
161	J-55	5,048.00	Zone 2	6.5	5,183.01	58.4
276	J-194	5,046.00	Zone 2	8.1	5,181.33	58.6
1860	J-805	5,046.00	Zone 4	0.0	5,181.47	58.6
156	J-50	5,046.00	Zone 2	6.5	5,181.50	58.6
158	J-52	5,045.00	Zone 2	3.8	5,180.64	58.7
169	J-63	5,045.00	Zone 2	8.9	5,180.98	58.8
680	J-ph19 IRR1	5,143.72	NO FIRE	0.0	5,279.82	58.9
247	J-142	5,180.00	Zone 3	4.8	5,316.82	59.2
333	J-255	5,045.00	Zone 2	0.0	5,181.88	59.2
1589	J-757	5,142.82	Zone 4	3.8	5,279.79	59.3
134	J-15	5,046.00	Zone 2	0.3	5,183.19	59.4
149	J-42	5,045.00	Zone 2	1.4	5,182.31	59.4

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**GBWC 2024 IRP - Cold Springs Division**  
**Action (2027) MDD Condition Distribution System Junction Report**  
MDD - Time: 0.00 hours

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
245	J-140	5,180.00	Zone 3	9.6	5,317.44	59.5
157	J-51	5,042.00	Zone 2	4.9	5,180.93	60.1
425	J-392	5,140.00	Zone 4	5.3	5,279.48	60.3
426	J-393	5,140.00	Zone 4	4.5	5,279.52	60.4
423	J-390	5,140.00	Zone 4	0.0	5,279.52	60.4
160	J-54	5,045.00	Zone 2	0.0	5,185.76	60.9
252	J-149 Reno Truss	5,045.00	Zone 2	0.6	5,185.76	60.9
424	J-391	5,138.00	Zone 4	3.8	5,279.54	61.2
422	J-389	5,138.00	Zone 4	1.5	5,279.55	61.2
1806	J-797	5,045.00	Zone 2	9.7	5,188.30	62.0
507	J-482	5,135.00	Zone 4	0.0	5,279.55	62.5
690	FH-925	5,134.00	Zone 4	0.0	5,279.89	63.1
123	J-3	5,175.00	Zone 1	0.0	5,321.98	63.6
2752	J-23-1190	5,133.35	Zone 4	0.8	5,280.58	63.7
679	J-685	5,132.00	Zone 4	0.0	5,279.93	64.0
673	J-679	5,131.00	Zone 4	6.4	5,279.59	64.3
2750	J-23-1189	5,131.90	Zone 4	1.1	5,280.58	64.3
2834	J-23-1225	5,131.90	Zone 4	0.0	5,280.58	64.3
2754	J-23-1191	5,131.52	Zone 4	0.0	5,280.58	64.5
693	FH-921	5,130.00	Zone 4	0.0	5,279.68	64.8
2756	J-23-1192	5,130.50	Zone 4	0.0	5,280.58	64.9
1938	J-819	5,130.00	Zone 4	0.0	5,280.58	65.1
1940	J-820	5,129.04	Zone 4	0.0	5,280.58	65.6
1982	J-829	5,129.00	Zone 4	0.0	5,280.58	65.6
2748	J-23-1188	5,128.90	Zone 4	1.1	5,280.58	65.6
2758	J-23-1193	5,128.40	Zone 4	2.6	5,280.58	65.8
1996	J-836	5,128.20	Zone 4	3.4	5,280.58	65.9
2746	J-23-1187	5,128.18	Zone 4	0.8	5,280.58	65.9
1911	J-815	5,128.00	Zone 4	1.0	5,280.58	66.0
672	J-678	5,126.00	Zone 4	0.0	5,279.77	66.5
2140	J22-901	5,126.71	Zone 4	0.0	5,280.58	66.6
2999	J-1262	5,167.94	Zone 1	0.2	5,321.82	66.6
678	FH-926	5,126.00	Zone 4	0.0	5,280.06	66.7
418	J-352	5,125.00	Zone 4	4.9	5,279.56	66.9
283	J-184	5,125.00	Zone 4	51.1	5,279.58	66.9
2744	J-23-1186	5,125.90	Zone 4	0.0	5,280.58	66.9
692	FH-922	5,125.00	Zone 4	0.0	5,279.80	67.0
2760	J-23-1194	5,125.40	Zone 4	1.9	5,280.58	67.1
1899	J-810	5,125.00	Zone 4	0.0	5,280.57	67.3
1984	J-830	5,124.80	Zone 4	0.0	5,280.58	67.4
2007	J-841	5,124.70	Zone 4	0.0	5,280.58	67.4
1495	J-730	5,124.00	Zone 4	0.0	5,280.54	67.7
1890	J-806	5,124.00	Zone 4	0.0	5,280.56	67.7
1901	J-811	5,124.00	Zone 4	4.9	5,280.57	67.7
1913	J-816	5,124.00	Zone 4	4.5	5,280.58	67.7

**GBWC 2024 IRP - Cold Springs Division**  
**Action (2027) MDD Condition Distribution System Junction Report**  
MDD - Time: 0.00 hours

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
2762	J-23-1195	5,124.00	Zone 4	1.1	5,280.58	67.7
248	J-143	5,160.00	Zone 3	3.3	5,316.80	67.8
250	J-145	5,160.00	Zone 3	4.4	5,316.86	67.9
1503	J-732	5,123.61	Zone 4	0.0	5,280.48	67.9
671	J-677	5,123.00	Zone 4	7.5	5,279.90	67.9
246	J-141	5,160.00	Zone 3	4.1	5,316.96	67.9
2735	J-1184	5,123.50	Zone 4	0.0	5,280.58	68.0
2772	J-1199	5,123.45	Zone 4	0.0	5,280.58	68.0
270	J-187	5,160.00	Zone 3	0.0	5,317.32	68.1
1892	J-807	5,123.00	Zone 4	4.1	5,280.56	68.2
2137	J22-899	5,122.97	Zone 4	0.0	5,280.58	68.2
682	J-688	5,122.00	Zone 4	2.3	5,280.24	68.5
2764	J-23-1196	5,122.20	Zone 4	1.5	5,280.58	68.5
691	FH-923	5,121.00	Zone 4	0.0	5,279.94	68.8
681	J-687	5,121.00	Zone 4	0.0	5,280.22	68.9
2768	J-1198	5,121.33	Zone 4	0.0	5,280.58	68.9
465	J-434	5,120.00	Zone 4	3.0	5,279.62	69.1
284	J-195	5,120.00	Zone 4	0.0	5,279.62	69.1
464	J-433	5,120.00	Zone 4	1.5	5,279.62	69.1
2766	J-23-1197	5,120.77	Zone 4	1.1	5,280.58	69.1
687	FH-927	5,119.00	Zone 4	0.0	5,280.17	69.7
685	FH-930	5,119.00	Zone 4	0.0	5,280.24	69.8
279	J-189	5,160.00	Zone 1	0.0	5,321.54	69.9
124	J-4	5,160.00	Zone 1	4.9	5,321.65	69.9
2436	J22-1078	5,118.46	Zone 4	0.0	5,280.59	70.1
669	J-675	5,118.00	Zone 4	0.0	5,280.19	70.2
244	J-139	5,155.00	Zone 3	0.0	5,317.19	70.2
508	J-483	5,117.00	Zone 4	0.0	5,279.56	70.3
578	J-576	5,117.00	Zone 4	4.5	5,279.81	70.4
2002	J-839	5,117.70	Zone 4	0.0	5,280.58	70.5
2781	J-23-1202	5,117.50	Zone 4	1.9	5,280.59	70.6
2776	J-1200	5,116.98	Zone 4	0.0	5,280.59	70.8
1519	J-736	5,116.72	Zone 4	5.3	5,280.54	70.9
1915	J-817	5,116.00	Zone 4	0.0	5,280.58	71.2
2731	J-1183	5,115.25	Zone 4	0.0	5,280.59	71.5
473	J-443	5,114.00	Zone 4	3.8	5,279.58	71.6
2779	J-23-1201	5,115.00	Zone 4	1.5	5,280.59	71.6
670	J-676	5,114.00	Zone 4	0.0	5,280.08	71.9
281	J-191	5,155.00	Zone 1	4.9	5,321.29	71.9
280	J-190	5,155.00	Zone 1	0.0	5,321.38	72.0
688	J-674	5,113.00	Zone 4	0.0	5,280.21	72.3
684	J-690	5,113.00	Zone 4	0.0	5,280.25	72.4
417	J-348	5,112.00	Zone 4	3.8	5,279.57	72.5
2013	J-844	5,113.00	Zone 4	1.9	5,280.58	72.5
2713	J-1179	5,112.09	Zone 4	0.0	5,280.59	72.9
1894	J-808	5,112.00	Zone 4	0.0	5,280.56	72.9

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**GBWC 2024 IRP - Cold Springs Division**  
**Action (2027) MDD Condition Distribution System Junction Report**  
MDD - Time: 0.00 hours

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
2018	J-846	5,111.50	Zone 4	0.0	5,280.58	73.2
689	FH-924	5,111.00	Zone 4	0.0	5,280.19	73.2
1903	J-812	5,111.00	Zone 4	0.0	5,280.57	73.4
2011	J-843	5,110.80	Zone 4	0.0	5,280.58	73.5
2114	J22-884	5,110.48	Zone 4	1.1	5,280.60	73.6
2009	J-842	5,110.40	Zone 4	3.4	5,280.58	73.6
282	J-193	5,150.00	Zone 1	4.9	5,321.25	74.1
2605	J22-1158	5,109.16	Zone 4	1.1	5,280.60	74.2
2439	J22-1079	5,109.01	Zone 4	2.8	5,280.60	74.2
2004	J-840	5,108.90	Zone 4	3.8	5,280.58	74.3
674	J-680	5,108.00	Zone 4	4.9	5,280.23	74.5
1493	J-729	5,108.00	Zone 4	0.0	5,280.55	74.7
1649	J-770	5,108.00	Zone 4	0.0	5,280.58	74.7
2117	J22-886	5,107.93	Zone 4	1.1	5,280.60	74.7
1516	J-735	5,107.24	Zone 4	0.0	5,280.55	75.0
1905	J-813	5,107.00	Zone 4	4.5	5,280.57	75.1
1917	J-818	5,107.00	Zone 4	4.1	5,280.58	75.1
472	J-442	5,106.00	Zone 4	4.1	5,279.60	75.1
649	J-652	5,145.00	Zone 1	6.1	5,318.63	75.1
2609	J22-1159	5,106.83	Zone 4	1.1	5,280.60	75.2
2015	J-845	5,106.70	Zone 4	3.8	5,280.59	75.2
2442	J22-1080	5,106.38	Zone 4	0.0	5,280.60	75.4
686	FH-928	5,106.00	Zone 4	0.0	5,280.25	75.4
575	J-570	5,106.00	Zone 4	0.0	5,280.25	75.4
416	J-346	5,105.00	Zone 4	0.0	5,279.57	75.5
1896	J-809	5,106.00	Zone 4	4.1	5,280.57	75.5
2789	J-23-1206	5,106.00	Zone 4	1.1	5,280.66	75.6
1946	J-823	5,105.90	Zone 4	0.0	5,280.58	75.6
2119	J22-887	5,105.85	Zone 4	0.0	5,280.61	75.6
1988	J-832	5,105.60	Zone 4	0.0	5,280.59	75.7
2123	J22-890	5,105.57	Zone 4	0.8	5,280.62	75.7
683	J-689	5,105.00	Zone 4	3.4	5,280.26	75.8
646	J-649	5,105.00	Zone 4	0.0	5,280.29	75.8
611	CS MIDDLE SCHOOL	5,105.00	Zone 4	24.1	5,280.30	75.8
576	J-571	5,105.00	Zone 4	0.0	5,280.31	75.8
645	J-642	5,105.00	Zone 4	0.0	5,280.33	75.9
1994	J-835	5,105.20	Zone 4	0.0	5,280.59	75.9
2787	J-23-1205	5,105.15	Zone 4	1.1	5,280.66	75.9
2446	J22-1082	5,104.95	Zone 4	1.7	5,280.61	76.0
2613	J22-1160	5,104.92	Zone 4	0.0	5,280.61	76.0
1992	J-834	5,104.80	Zone 4	0.0	5,280.59	76.1
1990	J-833	5,104.80	Zone 4	0.0	5,280.59	76.1
2785	J-23-1204	5,104.50	Zone 4	1.9	5,280.66	76.2
1907	J-814	5,104.28	Zone 4	0.0	5,280.58	76.3
1513	J-734	5,104.16	Zone 4	0.0	5,280.56	76.3

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**GBWC 2024 IRP - Cold Springs Division**  
**Action (2027) MDD Condition Distribution System Junction Report**  
MDD - Time: 0.00 hours

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
2621	J22-1163	5,104.00	Zone 4	1.1	5,280.62	76.4
364	J-286	5,103.00	Zone 4	10.1	5,279.62	76.4
2617	J22-1161	5,103.84	Zone 4	1.1	5,280.62	76.5
249	J-144	5,140.00	Zone 3	0.0	5,316.78	76.5
2449	J22-1083	5,103.53	Zone 4	0.0	5,280.62	76.6
695	FH-919	5,103.00	Zone 4	4.5	5,280.27	76.7
1498	J-731	5,103.00	Zone 4	0.0	5,280.57	76.8
474	J-441	5,102.00	Zone 4	4.1	5,279.60	76.8
2041	J-856	5,102.40	Zone 4	3.4	5,280.59	77.1
2783	J-23-1203	5,102.20	Zone 4	1.9	5,280.66	77.2
243	J-138	5,138.00	Zone 3	0.0	5,317.04	77.5
475	J-444	5,138.00	Zone 3	0.0	5,317.04	77.5
327	J-248	5,138.00	Zone 3	5.2	5,317.06	77.5
2039	J-855	5,101.00	Zone 4	3.4	5,280.60	77.7
360	J-282	5,100.00	Zone 4	4.1	5,279.65	77.7
285	J-196	5,100.00	Zone 4	0.0	5,279.67	77.7
463	J-432	5,100.00	Zone 4	1.5	5,279.67	77.7
1730	J-783	5,100.37	Zone 4	2.6	5,280.59	78.0
2031	J-852	5,100.10	Zone 4	3.0	5,280.59	78.1
511	J-485	5,100.00	Zone 4	8.8	5,280.62	78.1
362	J-284	5,099.00	Zone 4	6.0	5,279.64	78.2
2126	J22-892	5,099.98	Zone 4	0.8	5,280.62	78.2
292	J-203	5,099.00	Zone 4	3.8	5,279.76	78.2
125	J-5	5,140.00	Zone 1	4.9	5,321.20	78.4
675	J-681	5,099.00	Zone 4	0.0	5,280.27	78.4
2046	J-858	5,099.00	Zone 4	3.0	5,280.60	78.6
361	J-283	5,098.00	Zone 4	4.1	5,279.65	78.6
2629	J22-1165	5,098.57	Zone 4	1.5	5,280.63	78.8
2643	J22-1169	5,098.46	Zone 4	1.9	5,280.63	78.8
2029	J-851	5,098.30	Zone 4	3.0	5,280.59	78.9
638	J-639	5,098.00	Zone 4	0.0	5,280.51	79.0
2626	J22-1164	5,098.00	Zone 4	1.1	5,280.63	79.0
2452	J22-1084	5,098.00	Zone 4	0.0	5,280.63	79.0
2639	J22-1168	5,098.00	Zone 4	1.5	5,280.65	79.0
2653	J22-1172	5,097.47	Zone 4	3.4	5,280.63	79.2
664	J-667	5,097.00	Zone 4	0.0	5,280.33	79.3
2854	J23-IRR	5,097.29	NO FIRE	0.0	5,280.66	79.3
2037	J-854	5,097.00	Zone 4	3.4	5,280.60	79.4
293	J-204	5,096.00	Zone 4	3.8	5,279.78	79.5
1510	J-733	5,096.68	Zone 4	5.3	5,280.58	79.6
2034	J-853	5,096.50	Zone 4	0.0	5,280.62	79.7
459	J-428	5,095.50	Zone 4	0.0	5,279.78	79.7
2825	J-23-1222	5,097.83	Zone 4	0.0	5,282.39	79.8
2634	J22-1166	5,095.99	Zone 4	0.0	5,280.65	79.9
359	J-281	5,095.00	Zone 4	3.0	5,279.68	79.9
2455	J22-1085	5,095.96	Zone 4	0.0	5,280.66	79.9

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**Action (2027) MDD Condition Distribution System Junction Report**  
MDD - Time: 0.00 hours

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
2407	J22-1069	5,095.84	Zone 4	0.0	5,280.61	79.9
2132	J22-896	5,095.73	Zone 4	0.0	5,280.63	80.0
2023	J22-848	5,095.00	Zone 4	0.0	5,280.61	80.3
510	J-484	5,095.00	Zone 4	4.1	5,280.62	80.3
2829	J-23-1223	5,095.00	Zone 4	0.0	5,280.67	80.3
2650	J22-1171	5,094.93	Zone 4	1.5	5,280.63	80.3
2793	J-23-1208	5,094.90	Zone 4	2.6	5,280.67	80.4
2044	J-857	5,094.80	Zone 4	0.0	5,280.60	80.4
2411	J22-1070	5,094.79	Zone 4	0.0	5,280.62	80.4
694	FH-920	5,094.00	Zone 4	0.0	5,280.38	80.6
1648	J-769	5,094.00	Zone 4	0.0	5,280.59	80.7
2647	J22-1170	5,093.97	Zone 4	1.5	5,280.63	80.8
2543	J22-1147	5,093.94	Zone 4	0.0	5,280.63	80.8
2458	J22-1086	5,093.95	Zone 4	0.0	5,280.71	80.8
294	J-205	5,093.00	Zone 4	3.8	5,279.79	80.8
676	FH-929	5,093.00	Zone 4	0.0	5,280.37	81.1
2847	J-23-1228	5,093.33	Zone 4	3.0	5,280.72	81.1
2135	J22-898	5,093.00	Zone 4	0.0	5,280.63	81.2
3035	J-1275	5,092.00	Zone 4	0.0	5,279.72	81.2
2027	J-850	5,092.60	Zone 4	3.0	5,280.60	81.3
663	J-666	5,092.00	Zone 4	4.9	5,280.40	81.5
610	J-613	5,092.00	Zone 4	0.0	5,280.54	81.6
295	J-206	5,091.00	Zone 4	3.8	5,279.80	81.7
2021	J-847	5,091.70	Zone 4	0.0	5,280.60	81.7
251	J-146	5,128.00	Zone 3	0.0	5,316.91	81.7
328	J-249	5,128.00	Zone 3	4.1	5,316.92	81.7
1644	J-765	5,091.57	Zone 4	0.0	5,280.60	81.8
2791	J-23-1207	5,091.65	Zone 4	1.9	5,280.76	81.8
715	J-715	5,091.33	Zone 4	0.0	5,280.60	81.9
1647	J-768	5,091.00	Zone 4	0.0	5,280.62	82.0
337	J-259	5,091.00	Zone 4	2.3	5,280.64	82.0
358	J-280	5,090.00	Zone 4	3.0	5,279.66	82.1
2795	J-23-1209	5,091.00	Zone 4	0.0	5,280.66	82.1
286	J-197	5,090.00	Zone 4	0.0	5,279.72	82.1
462	J-431	5,090.00	Zone 4	1.9	5,279.72	82.1
2099	J22-874	5,091.00	Zone 4	0.8	5,280.77	82.1
2461	J22-1087	5,091.01	Zone 4	18.8	5,280.78	82.1
2656	J22-1173	5,091.00	Zone 4	0.0	5,280.77	82.1
469	J-438	5,090.00	Zone 4	4.9	5,279.78	82.1
471	J-440	5,090.00	Zone 4	2.3	5,279.78	82.1
1726	J-782	5,090.81	Zone 4	2.6	5,280.60	82.1
468	J-437	5,090.00	Zone 4	0.0	5,279.82	82.1
363	J-285	5,090.00	Zone 4	4.5	5,279.83	82.1
1489	J-728	5,090.70	Zone 4	1.5	5,280.59	82.2
702	J-704	5,090.07	Zone 4	0.4	5,280.56	82.4
662	J-665	5,090.00	Zone 4	0.0	5,280.52	82.4

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**Action (2027) MDD Condition Distribution System Junction Report**  
MDD - Time: 0.00 hours

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
325	J-246	5,090.00	Zone 4	0.0	5,280.64	82.5
343	J-265	5,090.00	Zone 4	0.0	5,280.65	82.5
509	J-466	5,090.00	Zone 4	5.6	5,280.65	82.5
2797	J-23-1210	5,090.00	Zone 4	0.0	5,280.66	82.5
2415	J-1071	5,089.83	Zone 4	0.0	5,280.63	82.5
470	J-439	5,089.00	Zone 4	0.0	5,279.84	82.6
365	J-288	5,089.00	Zone 4	0.0	5,279.84	82.6
705	BLDG 3 - CCCC	5,089.40	Zone 4	0.7	5,280.57	82.7
703	J-705	5,089.40	Zone 4	0.0	5,280.57	82.7
2823	J-23-1221	5,091.00	Zone 4	0.0	5,282.23	82.7
2803	J-23-1212	5,089.64	Zone 4	1.5	5,280.93	82.8
714	J-714	5,089.18	Zone 4	0.0	5,280.59	82.8
668	J-671	5,089.00	Zone 4	0.1	5,280.57	82.9
1643	J-764	5,089.00	Zone 4	3.1	5,280.60	82.9
2821	J-23-1220	5,090.39	Zone 4	0.0	5,282.05	82.9
395	J-325	5,088.00	Zone 4	7.3	5,279.72	82.9
460	J-429	5,088.00	Zone 4	0.0	5,279.79	83.0
296	J-207	5,088.00	Zone 4	3.8	5,279.80	83.0
2108	J22-880	5,089.07	Zone 4	1.1	5,280.93	83.0
2659	J22-1174	5,088.84	Zone 4	0.0	5,280.93	83.1
2464	J22-1088	5,088.72	Zone 4	2.9	5,280.93	83.2
1718	J-780	5,088.22	Zone 4	4.5	5,280.60	83.2
2818	J-23-1219	5,089.50	Zone 4	0.8	5,281.92	83.3
677	J-683	5,088.00	Zone 4	4.9	5,280.49	83.3
2813	J-23-1217	5,089.40	Zone 4	0.0	5,281.92	83.3
1824	J-799	5,088.05	Zone 4	0.0	5,280.60	83.3
666	J-669	5,088.00	Zone 4	0.0	5,280.58	83.3
667	J-670	5,088.00	Zone 4	0.0	5,280.58	83.3
2704	J22-IRR-1178	5,088.35	NO FIRE	0.0	5,280.95	83.3
2811	J-23-1216	5,089.20	Zone 4	1.1	5,281.92	83.4
287	J-198	5,087.00	Zone 4	4.9	5,279.76	83.4
1722	J-781	5,087.65	Zone 4	3.8	5,280.61	83.5
2809	J-23-1215	5,088.75	Zone 4	0.8	5,281.78	83.5
1710	J-778	5,087.53	Zone 4	5.6	5,280.60	83.5
2807	J-23-1214	5,088.50	Zone 4	0.4	5,281.71	83.6
2805	J-23-1213	5,088.20	Zone 4	2.3	5,281.63	83.7
657	J-660	5,087.00	Zone 4	3.0	5,280.60	83.8
512	J-486	5,087.00	Zone 4	0.0	5,280.61	83.8
1646	J-767	5,087.00	Zone 4	1.4	5,280.63	83.8
461	J-430	5,086.00	Zone 4	0.0	5,279.80	83.8
2419	J22-1072	5,086.31	Zone 4	0.0	5,280.63	84.1
338	J-260	5,086.00	Zone 4	2.3	5,280.44	84.1
704	FH-931	5,086.00	Zone 4	0.0	5,280.58	84.2
650	J-653	5,124.00	Zone 1	6.1	5,318.63	84.2

**GBWC 2024 IRP - Cold Springs Division**  
**Action (2027) MDD Condition Distribution System Junction Report**  
MDD - Time: 0.00 hours

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
655	J-658	5,086.00	Zone 4	5.6	5,280.68	84.2
659	J-662	5,086.00	Zone 4	3.8	5,280.70	84.2
288	J-199	5,085.00	Zone 4	5.3	5,279.78	84.3
2467	J22-1089	5,086.25	Zone 4	0.0	5,281.08	84.3
1714	J-779	5,085.71	Zone 4	0.0	5,280.61	84.3
2111	J22-882	5,086.21	Zone 4	1.5	5,281.16	84.3
2662	J22-1175	5,086.17	Zone 4	0.0	5,281.13	84.4
1694	J-774	5,085.54	Zone 4	0.0	5,280.60	84.4
334	J-256	5,085.00	Zone 4	0.0	5,280.44	84.6
1645	J-766	5,085.00	Zone 4	0.0	5,280.64	84.6
697	FH-917	5,085.00	Zone 4	0.0	5,280.68	84.7
654	J-657	5,085.00	Zone 4	3.8	5,280.68	84.7
488	BLDG 4 - Village Grill	5,084.50	Zone 4	0.3	5,280.59	84.8
1642	J-763	5,084.50	Zone 4	0.0	5,280.61	84.8
3045	J-1278	5,084.36	Zone 4	0.0	5,280.59	84.9
1666	J-771	5,084.09	Zone 4	7.2	5,280.61	85.0
487	J-456	5,084.00	Zone 4	0.0	5,280.60	85.1
486	J-455	5,084.00	Zone 4	0.0	5,280.62	85.1
661	J-664	5,084.00	Zone 4	3.4	5,280.74	85.1
289	J-200	5,083.00	Zone 4	5.3	5,279.79	85.1
2105	CS ELEM SCHOOL	5,084.00	Zone 4	2.5	5,281.08	85.3
2470	J22-1090	5,084.00	Zone 4	0.0	5,281.08	85.3
2665	J22-1092	5,084.00	Zone 4	0.0	5,281.08	85.3
1702	J-776	5,083.50	Zone 4	3.8	5,280.62	85.3
652	J-655	5,083.00	Zone 4	3.8	5,280.76	85.6
585	J-586	5,082.00	Zone 4	21.2	5,279.89	85.6
335	J-257	5,082.00	Zone 4	0.0	5,280.22	85.8
340	J-262	5,082.00	Zone 4	0.0	5,280.22	85.8
467	J-436	5,082.00	Zone 4	4.9	5,280.22	85.8
339	J-261	5,082.00	Zone 4	1.9	5,280.44	85.9
1706	J-777	5,082.00	Zone 4	0.0	5,280.62	85.9
642	J-646	5,120.00	Zone 1	9.7	5,318.63	85.9
485	J-454	5,082.00	Zone 4	4.5	5,280.66	85.9
290	J-201	5,081.00	Zone 4	5.3	5,279.80	86.0
291	J-202	5,081.00	Zone 4	4.5	5,279.80	86.0
138	BORDER TOWN CASINO	5,120.00	Zone 1	36.4	5,318.90	86.1
1698	J-775	5,081.61	Zone 4	3.8	5,280.64	86.1
394	J-324	5,081.00	Zone 4	1.9	5,280.09	86.1
1641	J-762	5,081.00	Zone 4	0.0	5,280.62	86.4
641	J-645	5,119.00	Zone 1	0.0	5,318.64	86.4
656	J-659	5,081.00	Zone 4	0.0	5,280.67	86.4
696	FH-918	5,081.00	Zone 4	0.0	5,280.67	86.4



**GBWC 2024 IRP - Cold Springs Division**  
**Action (2027) MDD Condition Distribution System Junction Report**  
MDD - Time: 0.00 hours

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
658	J-661	5,081.00	Zone 4	3.4	5,280.70	86.4
698	FH-915	5,081.00	Zone 4	0.0	5,280.70	86.4
484	J-453	5,081.00	Zone 4	6.4	5,280.71	86.4
700	FH-913	5,081.00	Zone 4	0.0	5,280.74	86.4
2473	J22-1091	5,081.00	Zone 4	0.0	5,281.08	86.6
341	J-263	5,080.00	Zone 4	1.7	5,280.22	86.6
660	J-663	5,080.00	Zone 4	0.0	5,280.74	86.9
1689	J-773	5,079.86	Zone 4	0.0	5,280.63	86.9
483	J-452	5,080.00	Zone 4	0.0	5,280.78	86.9
329	J-250	5,080.00	Zone 4	4.1	5,280.79	86.9
330	J-251	5,080.00	Zone 4	7.5	5,280.94	86.9
420	J-387	5,120.00	Zone 1	0.0	5,321.21	87.1
421	J-388	5,120.00	Zone 1	0.0	5,321.21	87.1
1639	J-761	5,079.00	Zone 4	0.0	5,280.64	87.2
701	FH-916	5,079.00	Zone 4	0.0	5,280.68	87.3
301	J-217	5,115.00	Zone 3	0.0	5,316.71	87.3
299	J-214	5,078.00	Zone 4	3.8	5,279.81	87.3
300	J-215	5,078.00	Zone 4	4.6	5,279.81	87.3
297	J-208	5,078.00	Zone 4	3.8	5,279.81	87.3
503	J-478	5,079.00	Zone 4	3.0	5,280.97	87.4
504	J-479	5,079.00	Zone 4	0.0	5,280.97	87.4
479	J-448	5,116.00	Zone 1	6.7	5,318.50	87.6
640	J-644	5,116.00	Zone 1	10.3	5,318.65	87.7
653	J-656	5,078.00	Zone 4	0.0	5,280.68	87.7
699	FH-914	5,078.00	Zone 4	0.0	5,280.76	87.7
499	J-474	5,078.00	Zone 4	3.0	5,280.94	87.8
2141	J22-902	5,078.00	Zone 4	5.9	5,281.07	87.9
498	J-473	5,077.00	Zone 4	4.5	5,280.60	88.1
651	J-654	5,077.00	Zone 4	0.0	5,280.76	88.2
319	J-239	5,076.00	Zone 4	3.8	5,279.82	88.2
440	J-407	5,077.00	Zone 4	1.9	5,281.05	88.3
493	J-462	5,077.00	Zone 4	6.8	5,281.05	88.3
454	J-421	5,077.00	Zone 4	0.0	5,281.07	88.3
500	J-475	5,076.50	Zone 4	3.4	5,281.00	88.5
342	J-264	5,075.00	Zone 4	3.8	5,279.94	88.7
501	J-476	5,075.50	Zone 4	3.0	5,281.03	88.9
441	J-408	5,075.50	Zone 4	4.5	5,281.05	88.9
442	J-409	5,075.50	Zone 4	2.3	5,281.05	88.9
497	J-472	5,075.00	Zone 4	4.1	5,280.62	89.0
298	J-212	5,074.00	Zone 4	3.4	5,279.83	89.1
478	J-447	5,112.50	Zone 1	4.9	5,318.50	89.1
480	J-423	5,075.00	Zone 4	0.0	5,281.07	89.2
502	J-477	5,074.50	Zone 4	3.0	5,281.03	89.4
391	J-320	5,074.00	Zone 4	2.9	5,280.60	89.4
242	J-137	5,110.00	Zone 3	4.1	5,316.60	89.4
665	J-673	5,074.00	Zone 4	0.0	5,280.81	89.5

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**GBWC 2024 IRP - Cold Springs Division**  
**Action (2027) MDD Condition Distribution System Junction Report**  
MDD - Time: 0.00 hours

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
453	J-420	5,074.00	Zone 4	0.0	5,281.05	89.6
491	J-460	5,074.00	Zone 4	4.9	5,281.06	89.6
492	J-461	5,073.50	Zone 4	5.6	5,281.05	89.8
443	J-410	5,073.50	Zone 4	2.6	5,281.05	89.8
351	J-273	5,073.00	Zone 4	2.6	5,280.61	89.8
496	J-471	5,073.00	Zone 4	5.6	5,280.67	89.8
308	J-226	5,072.00	Zone 4	3.8	5,279.97	90.0
312	J-230	5,072.00	Zone 4	3.8	5,280.01	90.0
313	J-231	5,072.00	Zone 4	3.8	5,280.04	90.0
452	J-419	5,073.00	Zone 4	0.0	5,281.05	90.0
490	J-459	5,073.00	Zone 4	3.4	5,281.05	90.0
262	J-160	5,110.00	Zone 1	5.5	5,318.49	90.2
261	J-159	5,110.00	Zone 1	6.7	5,318.49	90.2
392	J-321	5,072.00	Zone 4	2.3	5,280.60	90.3
349	J-271	5,072.00	Zone 4	4.1	5,280.62	90.3
481	J-449	5,072.00	Zone 4	0.0	5,280.87	90.4
310	J-228	5,071.00	Zone 4	3.8	5,279.98	90.4
450	J-417	5,072.00	Zone 4	4.5	5,281.05	90.4
444	J-411	5,072.00	Zone 4	2.6	5,281.05	90.4
336	J-258	5,071.00	Zone 4	0.0	5,280.06	90.5
456	J-424	5,072.00	Zone 4	2.6	5,281.07	90.5
393	J-323	5,071.00	Zone 4	3.0	5,280.16	90.5
350	J-272	5,071.00	Zone 4	2.6	5,280.62	90.7
320	J-236	5,070.00	Zone 4	0.0	5,279.89	90.8
332	J-254	5,070.00	Zone 4	2.6	5,279.89	90.8
309	J-227	5,070.00	Zone 4	0.0	5,279.98	90.8
451	J-418	5,071.00	Zone 4	4.1	5,281.05	90.9
489	J-458	5,071.00	Zone 4	3.8	5,281.05	90.9
398	J-328	5,108.00	Zone 1	0.0	5,318.50	91.1
449	J-416	5,070.50	Zone 4	0.0	5,281.05	91.1
347	J-269	5,070.00	Zone 4	3.8	5,280.60	91.1
355	J-277	5,070.00	Zone 4	4.5	5,280.61	91.1
348	J-270	5,070.00	Zone 4	4.1	5,280.64	91.1
311	J-229	5,069.00	Zone 4	0.0	5,280.01	91.3
466	J-435	5,069.00	Zone 4	0.0	5,280.03	91.3
314	J-233	5,069.00	Zone 4	6.1	5,280.04	91.3
445	J-412	5,070.00	Zone 4	2.6	5,281.05	91.3
357	J-279	5,069.00	Zone 4	3.4	5,280.61	91.6
307	J-225	5,068.00	Zone 4	0.0	5,279.97	91.7
446	J-413	5,069.00	Zone 4	2.6	5,281.06	91.7
346	J-268	5,068.00	Zone 4	0.0	5,280.61	92.0
354	J-276	5,068.00	Zone 4	5.3	5,280.62	92.0
356	J-278	5,068.00	Zone 4	4.5	5,280.63	92.0
302	J-218	5,067.00	Zone 4	0.0	5,279.95	92.1
439	J-406	5,068.00	Zone 4	0.0	5,281.05	92.2
586	J-587	5,068.00	Zone 4	4.3	5,281.05	92.2

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**GBWC 2024 IRP - Cold Springs Division**  
**Action (2027) MDD Condition Distribution System Junction Report**  
MDD - Time: 0.00 hours

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
457	J-425	5,068.00	Zone 4	1.5	5,281.05	92.2
447	J-414	5,067.50	Zone 4	0.0	5,281.07	92.4
345	J-267	5,067.00	Zone 4	0.0	5,280.63	92.4
495	J-470	5,067.00	Zone 4	0.0	5,280.65	92.4
369	J-295	5,067.00	Zone 4	4.9	5,281.01	92.6
370	J-296	5,067.00	Zone 4	4.1	5,281.02	92.6
438	J-405	5,067.00	Zone 4	3.0	5,281.05	92.6
371	J-297	5,067.00	Zone 4	0.0	5,281.05	92.6
448	J-415	5,067.00	Zone 4	0.0	5,281.06	92.6
601	J-603	5,104.00	Zone 1	6.1	5,318.63	92.9
644	J-648	5,104.00	Zone 1	3.0	5,318.63	92.9
368	J-294	5,066.00	Zone 4	3.4	5,280.95	93.0
303	J-219	5,065.00	Zone 4	3.4	5,279.96	93.0
318	J-238	5,065.00	Zone 4	3.8	5,279.99	93.0
306	J-223	5,065.00	Zone 4	3.8	5,280.00	93.0
433	J-400	5,066.00	Zone 4	3.0	5,281.07	93.1
388	J-316	5,065.50	Zone 4	7.0	5,281.06	93.3
380	J-308	5,065.50	Zone 4	6.0	5,281.08	93.3
344	J-266	5,065.00	Zone 4	3.4	5,280.75	93.3
375	J-303	5,065.00	Zone 4	1.9	5,280.75	93.3
305	J-221	5,064.00	Zone 4	3.8	5,279.98	93.4
437	J-404	5,065.00	Zone 4	3.0	5,281.05	93.5
386	J-314	5,065.00	Zone 4	0.0	5,281.06	93.5
387	J-315	5,065.00	Zone 4	5.3	5,281.06	93.5
385	J-313	5,064.50	Zone 4	4.5	5,281.07	93.7
381	J-309	5,064.50	Zone 4	3.8	5,281.08	93.7
643	J-647	5,102.00	Zone 1	6.1	5,318.63	93.7
593	J-596	5,102.00	Zone 1	0.0	5,318.75	93.8
139	J-25	5,102.00	Zone 1	0.0	5,318.78	93.8
436	J-403	5,064.00	Zone 4	2.6	5,281.05	93.9
384	J-312	5,064.00	Zone 4	5.3	5,281.06	93.9
382	J-310	5,064.00	Zone 4	5.3	5,281.07	93.9
304	J-220	5,062.00	Zone 4	3.8	5,279.97	94.3
458	J-426	5,063.00	Zone 4	4.1	5,281.05	94.3
372	J-298	5,063.00	Zone 4	0.0	5,281.06	94.3
383	J-311	5,063.00	Zone 4	0.0	5,281.08	94.4
379	J-307	5,063.00	Zone 4	5.3	5,281.09	94.4
390	J-319	5,063.00	Zone 4	6.5	5,281.13	94.4
404	J-334	5,100.00	Zone 1	0.0	5,318.50	94.5
435	J-402	5,062.00	Zone 4	3.0	5,281.06	94.8
373	J-300	5,062.00	Zone 4	3.0	5,281.07	94.8
389	J-318	5,062.00	Zone 4	0.0	5,281.12	94.8
403	J-333	5,099.00	Zone 1	6.1	5,318.50	95.0
140	J-27	5,099.00	Zone 1	0.0	5,318.58	95.0
605	J-608	5,065.00	Zone 4	0.0	5,284.61	95.0
592	J-595	5,099.00	Zone 1	2.4	5,318.73	95.1

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**GBWC 2024 IRP - Cold Springs Division**  
**Action (2027) MDD Condition Distribution System Junction Report**  
MDD - Time: 0.00 hours

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
434	J-401	5,061.00	Zone 4	3.4	5,281.06	95.2
241	J-136	5,095.00	Zone 3	10.7	5,315.45	95.4
240	J-135	5,095.00	Zone 3	12.6	5,315.58	95.4
331	J-252	5,060.50	Zone 4	11.8	5,281.19	95.5
137	J-23	5,100.00	Zone 1	3.7	5,320.94	95.6
374	J-302	5,060.00	Zone 4	3.8	5,281.10	95.7
399	J-329	5,097.00	Zone 1	4.9	5,318.50	95.8
326	J-247	5,059.50	Zone 4	9.4	5,281.15	95.9
603	J-606	5,096.00	Zone 1	8.5	5,318.64	96.3
591	J-592	5,096.00	Zone 1	7.9	5,318.67	96.3
477	J-446	5,093.00	Zone 1	4.9	5,318.50	97.6
402	J-332	5,091.00	Zone 1	0.0	5,318.50	98.4
268	J-166	5,090.00	Zone 1	4.9	5,318.49	98.9
406	J-336	5,090.00	Zone 1	4.9	5,318.49	98.9
410	J-341	5,090.00	Zone 1	0.0	5,318.49	98.9
407	J-337	5,090.00	Zone 1	9.1	5,318.50	98.9
476	J-445	5,089.00	Zone 1	0.0	5,318.50	99.3
400	J-330	5,089.00	Zone 1	4.3	5,318.50	99.3
589	J-590	5,089.00	Zone 1	5.5	5,318.66	99.4
602	J-604	5,088.00	Zone 1	3.7	5,318.63	99.8
376	J-304	5,090.00	Zone 1	4.9	5,321.07	100.0
126	J-6	5,090.00	Zone 1	4.9	5,321.17	100.0
595	J-597	5,087.00	Zone 1	7.3	5,318.63	100.2
412	J-343	5,085.00	Zone 1	5.5	5,318.49	101.0
409	J-340	5,085.00	Zone 1	3.7	5,318.49	101.0
411	J-342	5,085.00	Zone 1	0.0	5,318.49	101.0
366	J-289	5,085.00	Zone 1	4.9	5,321.17	102.2
367	J-290	5,085.00	Zone 1	0.0	5,321.19	102.2
588	J-589	5,082.00	Zone 1	7.3	5,318.66	102.4
263	J-161	5,080.00	Zone 1	5.5	5,318.49	103.2
264	J-162	5,080.00	Zone 1	6.1	5,318.49	103.2
408	J-339	5,080.00	Zone 1	4.3	5,318.49	103.2
397	J-327	5,080.00	Zone 1	6.7	5,318.50	103.2
594	J-594	5,080.00	Zone 1	0.0	5,318.62	103.2
377	J-305	5,080.00	Zone 1	4.9	5,321.07	104.3
378	J-306	5,080.00	Zone 1	4.9	5,321.19	104.4
419	J-385	5,077.00	Zone 1	1.1	5,318.64	104.5
590	J-591	5,077.00	Zone 1	0.0	5,318.65	104.6
587	J-588	5,077.00	Zone 1	5.5	5,318.66	104.6
405	J-427	5,076.00	Zone 1	6.1	5,318.50	104.9
1798	J-795	5,045.09	Zone 4	0.0	5,289.81	105.9
401	J-331	5,070.50	Zone 1	5.5	5,318.51	107.3
253	J-150	5,070.00	Zone 1	5.5	5,318.60	107.6
606	J-609	5,041.00	Zone 4	0.0	5,289.70	107.6
254	J-151	5,067.00	Zone 1	3.7	5,318.60	108.9
141	J-28	5,066.00	Zone 1	0.0	5,318.52	109.3

GBWC CS IRP 2024 Model\_LIDAR Elev  
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2/28/2024

Bentley Systems, Inc. Haestad Methods Solution  
Center  
76 Watertown Road, Suite 2D Thomaston, CT  
06787 USA +1-203-755-1666

WaterCAD  
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**GBWC 2024 IRP - Cold Springs Division**  
**Action (2027) MDD Condition Distribution System Junction Report**  
MDD - Time: 0.00 hours

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
266	J-164	5,062.00	Zone 1	8.5	5,318.55	111.0
260	J-158	5,060.00	Zone 1	12.2	5,318.50	111.8
265	J-163	5,060.00	Zone 1	7.9	5,318.52	111.9
256	J-153	5,060.00	Zone 1	5.5	5,318.60	111.9
2922	J-1242	5,059.84	Zone 1	0.0	5,318.50	111.9
267	J-165	5,058.00	Zone 1	12.8	5,318.51	112.7
255	J-152	5,058.00	Zone 1	6.1	5,318.60	112.7
129	J-10	5,060.00	Zone 1	4.9	5,320.89	112.9
128	J-9	5,060.00	Zone 1	4.9	5,320.98	112.9
127	J-8	5,060.00	Zone 1	4.9	5,321.15	113.0
258	J-155	5,052.00	Zone 1	4.9	5,318.60	115.3
257	J-154	5,052.00	Zone 1	7.1	5,318.60	115.3
144	J-36	5,050.00	Zone 1	0.0	5,318.65	116.2
413	J-344	5,050.00	Zone 1	0.0	5,318.65	116.2
608	J-611	5,050.00	Zone 1	4.3	5,318.68	116.2
609	J-612	5,048.00	Zone 1	4.1	5,318.69	117.1
2977	J-1252 IRR	5,045.00	Zone 1	10.9	5,318.93	118.5
414	J-350	5,045.00	Zone 1	0.0	5,319.03	118.6
706	J-706	5,045.00	Zone 1	0.0	5,319.03	118.6
707	FH-801	5,045.00	Zone 1	0.0	5,319.03	118.6
154	J-48	5,043.00	Zone 1	9.1	5,318.82	119.3
153	J-47	5,043.00	Zone 1	7.3	5,318.84	119.3
155	J-49	5,040.00	Zone 1	9.1	5,318.82	120.6
133	J-14	5,040.00	Zone 1	16.7	5,319.03	120.7
131	J-12	5,040.00	Zone 1	0.0	5,319.69	121.0
130	J-11	5,040.00	Zone 1	0.0	5,320.40	121.3
143	J-35	5,038.00	Zone 1	6.7	5,318.93	121.5
132	J-13	5,038.00	Zone 1	1.2	5,319.05	121.6

## GBWC 2024 IRP - Cold Springs Division

### Action (2027) MDD+Fire Condition Distribution System Junction Report

Fire Flow - Time: 0.00 hours

Label	Zone	Fire Flow (Needed) (gpm)	MDD (gpm)	Total Flow Needed (Fire Flow + MDD) (gpm)	Available Flow at 20 psi Min. Residual Pressure (gpm)	Satisfies Fire Flow Constraints ?	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Zone Lower Limit @ Total Flow Needed) (psi)	Junction w/ Minimum Pressure (Zone @ Total Flow Needed)
J-3	Zone 1	1,500.0	0.0	1,500.0	2,403.1	True	45.1	48.1	J-1262
J-4	Zone 1	1,500.0	4.9	1,504.9	2,407.9	True	49.4	45.1	J-3
J-5	Zone 1	1,500.0	4.9	1,504.9	1,736.7	True	33.3	41.3	J-193
J-6	Zone 1	1,500.0	4.9	1,504.9	1,797.2	True	49.4	36.0	J-5
J-8	Zone 1	1,500.0	4.9	1,504.9	1,846.6	True	58.5	38.0	J-5
J-9	Zone 1	1,500.0	4.9	1,504.9	2,331.8	True	85.1	45.1	J-3
J-10	Zone 1	1,500.0	4.9	1,504.9	2,302.5	True	85.3	45.1	J-3
J-11	Zone 1	1,500.0	0.0	1,500.0	2,132.9	True	84.9	44.8	J-652
J-12	Zone 1	1,500.0	0.0	1,500.0	1,995.6	True	76.1	41.0	J-652
J-13	Zone 1	1,500.0	1.2	1,501.2	1,907.5	True	71.8	38.2	J-652
J-14	Zone 1	1,500.0	16.7	1,516.7	1,923.0	True	62.8	38.2	J-652
J-15	Zone 2	1,500.0	0.3	1,500.3	3,337.1	True	47.1	35.9	J-127
J-16	Zone 2	1,500.0	0.0	1,500.0	2,973.0	True	42.9	35.7	J-127
J-17	Zone 2	1,500.0	0.0	1,500.0	2,757.2	True	40.6	35.7	J-127
J-23	Zone 1	1,500.0	3.7	1,503.7	2,329.4	True	69.9	45.1	J-3
BORDER TOWN CASINO	Zone 1	1,500.0	36.4	1,536.4	1,716.2	True	40.1	29.6	J-652
J-25	Zone 1	1,500.0	0.0	1,500.0	1,655.1	True	46.9	28.5	J-652
J-27	Zone 1	1,500.0	0.0	1,500.0	1,642.5	True	45.7	27.9	J-652
J-28	Zone 1	1,500.0	0.0	1,500.0	1,666.1	True	58.5	29.0	J-652
J-33	Zone 2	1,500.0	0.0	1,500.0	4,000.0	True	36.1	36.9	J-127
J-35	Zone 1	1,500.0	6.7	1,506.7	1,892.5	True	70.8	37.6	J-652
J-36	Zone 1	1,500.0	0.0	1,500.0	1,819.5	True	63.4	35.2	J-652
J-37	Zone 2	1,500.0	0.0	1,500.0	3,516.0	True	45.9	36.2	J-127
J-38	Zone 2	1,500.0	9.7	1,509.7	4,009.7	True	45.7	35.7	J-127
J-39	Zone 2	1,500.0	8.7	1,508.7	4,008.7	True	45.9	35.7	J-127
J-40	Zone 2	1,500.0	10.3	1,510.3	4,010.3	True	44.2	35.7	J-127
J-42	Zone 2	1,500.0	1.4	1,501.4	3,593.3	True	48.4	35.9	J-127
J-43	Zone 2	1,500.0	5.4	1,505.4	4,005.4	True	49.3	35.9	J-127
J-44	Zone 2	1,500.0	10.3	1,510.3	4,010.3	True	46.1	35.8	J-127
J-45	Zone 2	1,500.0	8.7	1,508.7	4,008.7	True	44.4	35.8	J-127
J-47	Zone 1	1,500.0	7.3	1,507.3	1,885.6	True	53.2	37.3	J-652
J-48	Zone 1	1,500.0	9.1	1,509.1	1,883.0	True	58.1	37.1	J-652
J-49	Zone 1	1,500.0	9.1	1,509.1	1,873.3	True	69.0	36.8	J-652
J-50	Zone 2	1,500.0	6.5	1,506.5	4,006.5	True	50.0	35.9	J-127
J-51	Zone 2	1,500.0	4.9	1,504.9	2,290.9	True	39.7	36.1	J-127
J-52	Zone 2	1,500.0	3.8	1,503.8	2,704.2	True	43.1	36.1	J-127
J-53	Zone 2	1,500.0	9.7	1,509.7	4,009.7	True	49.7	36.3	J-127
J-54	Zone 2	1,500.0	0.0	1,500.0	4,000.0	True	51.3	35.9	J-127
J-55	Zone 2	1,500.0	6.5	1,506.5	2,955.7	True	44.2	35.9	J-127

## GBWC 2024 IRP - Cold Springs Division

### Action (2027) MDD+Fire Condition Distribution System Junction Report

Fire Flow - Time: 0.00 hours

Label	Zone	Fire Flow (Needed) (gpm)	MDD (gpm)	Total Flow Needed (Fire Flow + MDD) (gpm)	Available Flow at 20 psi Min. Residual Pressure (gpm)	Satisfies Fire Flow Constraints ?	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Zone Lower Limit @ Total Flow Needed) (psi)	Junction w/ Minimum Pressure (Zone @ Total Flow Needed)
J-56	Zone 2	1,500.0	9.7	1,509.7	2,300.6	True	38.5	35.9	J-127
J-57	Zone 2	1,500.0	7.6	1,507.6	3,655.4	True	46.8	35.9	J-127
J-58	Zone 2	1,500.0	0.0	1,500.0	4,000.0	True	50.3	35.9	J-127
J-59	Zone 2	1,500.0	5.4	1,505.4	2,353.5	True	38.7	35.9	J-127
J-60	Zone 2	1,500.0	8.7	1,508.7	3,955.0	True	44.3	35.7	J-127
J-61	Zone 2	1,500.0	9.7	1,509.7	3,849.3	True	44.0	35.7	J-127
J-62	Zone 2	1,500.0	5.4	1,505.4	4,005.4	True	43.9	35.7	J-127
J-63	Zone 2	1,500.0	8.9	1,508.9	4,008.9	True	51.3	35.7	J-127
J-64	Zone 2	1,500.0	6.0	1,506.0	4,006.0	True	41.9	35.7	J-127
J-65	Zone 2	1,500.0	6.0	1,506.0	4,006.0	True	37.3	35.3	J-127
J-66	Zone 2	1,500.0	7.6	1,507.6	3,611.3	True	39.2	35.7	J-127
J-67	Zone 2	1,500.0	8.7	1,508.7	2,978.8	True	40.2	35.7	J-127
J-68	Zone 2	1,500.0	7.6	1,507.6	2,842.7	True	42.4	35.7	J-127
J-69	Zone 2	1,500.0	0.0	1,500.0	2,859.6	True	40.8	35.7	J-127
J-70	Zone 2	1,500.0	3.8	1,503.8	2,917.3	True	40.0	35.7	J-127
J-71	Zone 2	1,500.0	0.0	1,500.0	2,947.7	True	43.0	35.7	J-127
J-72	Zone 2	1,500.0	11.9	1,511.9	2,917.6	True	39.9	35.7	J-127
J-73	Zone 2	1,500.0	0.0	1,500.0	2,931.0	True	40.0	35.7	J-127
J-74	Zone 2	1,500.0	9.2	1,509.2	3,087.5	True	40.8	35.7	J-127
J-75	Zone 2	1,500.0	4.3	1,504.3	3,855.7	True	37.7	35.7	J-127
J-76	Zone 2	1,500.0	2.7	1,502.7	4,002.7	True	41.4	35.7	J-127
J-77	Zone 2	1,500.0	7.0	1,507.0	3,688.9	True	35.8	35.7	J-127
J-78	Zone 2	1,500.0	0.0	1,500.0	4,000.0	True	40.7	35.7	J-127
J-79	Zone 2	1,500.0	21.6	1,521.6	3,604.1	True	35.7	35.7	J-127
J-80	Zone 2	1,500.0	0.0	1,500.0	4,000.0	True	40.5	35.7	J-127
J-81	Zone 2	1,500.0	10.8	1,510.8	4,010.8	True	46.1	35.8	J-127
J-82	Zone 2	1,500.0	0.0	1,500.0	4,000.0	True	41.1	35.7	J-127
J-83	Zone 2	1,500.0	6.5	1,506.5	4,006.5	True	40.9	35.7	J-127
J-84	Zone 2	1,500.0	7.6	1,507.6	4,007.6	True	42.0	35.7	J-127
J-85	Zone 2	1,500.0	7.0	1,507.0	4,007.0	True	42.9	35.7	J-127
J-86	Zone 2	1,500.0	0.0	1,500.0	4,000.0	True	44.7	35.7	J-127
J-87	Zone 2	1,500.0	6.5	1,506.5	4,006.5	True	40.5	35.7	J-127
J-88	Zone 2	1,500.0	7.6	1,507.6	4,007.6	True	39.5	35.7	J-127
J-89	Zone 2	1,500.0	0.0	1,500.0	4,000.0	True	40.5	35.7	J-127
J-90	Zone 2	1,500.0	6.5	1,506.5	4,006.5	True	44.2	35.7	J-127
J-91	Zone 2	1,500.0	0.0	1,500.0	4,000.0	True	45.6	35.8	J-127
J-92	Zone 2	1,500.0	8.1	1,508.1	4,008.1	True	42.2	35.7	J-127
J-93	Zone 2	1,500.0	0.0	1,500.0	4,000.0	True	43.9	35.7	J-127
GOMES ELEM SCHOOL	Zone 2	2,125.0	7.9	2,132.9	4,007.9	True	44.2	35.4	J-127

## GBWC 2024 IRP - Cold Springs Division

### Action (2027) MDD+Fire Condition Distribution System Junction Report

Fire Flow - Time: 0.00 hours

Label	Zone	Fire Flow (Needed) (gpm)	MDD (gpm)	Total Flow Needed (Fire Flow + MDD) (gpm)	Available Flow at 20 psi Min. Residual Pressure (gpm)	Satisfies Fire Flow Constraints ?	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Zone Lower Limit @ Total Flow Needed) (psi)	Junction w/ Minimum Pressure (Zone @ Total Flow Needed)
J-95	Zone 2	1,500.0	10.3	1,510.3	4,010.3	True	42.4	35.8	J-127
J-96	Zone 2	1,500.0	8.7	1,508.7	4,008.7	True	41.5	35.8	J-127
J-97	Zone 2	1,500.0	0.0	1,500.0	4,000.0	True	42.0	35.8	J-127
J-98	Zone 2	1,500.0	0.0	1,500.0	4,000.0	True	39.4	35.7	J-127
J-99	Zone 2	1,500.0	0.0	1,500.0	4,000.0	True	41.5	35.7	J-127
J-100	Zone 2	1,500.0	7.0	1,507.0	3,970.4	True	45.5	35.8	J-127
J-101	Zone 2	1,500.0	0.0	1,500.0	4,000.0	True	46.6	35.9	J-127
J-102	Zone 2	1,500.0	10.8	1,510.8	4,010.8	True	47.9	35.8	J-127
J-103	Zone 2	1,500.0	6.0	1,506.0	4,006.0	True	41.3	35.8	J-127
J-104	Zone 2	1,500.0	7.0	1,507.0	3,537.9	True	39.2	35.8	J-127
J-105	Zone 2	1,500.0	0.0	1,500.0	2,850.3	True	36.4	35.8	J-127
J-106	Zone 2	1,500.0	9.2	1,509.2	2,938.4	True	36.8	35.8	J-127
J-108	Zone 2	1,500.0	7.6	1,507.6	3,333.3	True	38.2	35.8	J-127
J-109	Zone 2	1,500.0	5.4	1,505.4	3,079.3	True	37.7	35.8	J-127
J-110	Zone 2	1,500.0	13.5	1,513.5	2,429.4	True	31.7	35.9	J-127
J-111	Zone 2	1,500.0	9.7	1,509.7	2,579.1	True	36.2	34.2	J-110
J-112	Zone 2	1,500.0	11.4	1,511.4	3,741.5	True	44.6	35.9	J-127
J-113	Zone 2	1,500.0	2.2	1,502.2	3,651.5	True	44.4	35.9	J-127
J-114	Zone 2	1,500.0	8.7	1,508.7	3,999.4	True	43.4	35.9	J-127
J-115	Zone 2	1,500.0	7.0	1,507.0	3,078.4	True	39.9	35.9	J-127
J-116	Zone 2	1,500.0	7.6	1,507.6	2,758.7	True	37.4	35.9	J-127
J-117	Zone 2	1,500.0	0.0	1,500.0	2,846.3	True	37.0	35.9	J-127
J-118	Zone 2	1,500.0	6.0	1,506.0	3,700.7	True	39.9	35.9	J-127
J-119	Zone 2	1,500.0	5.4	1,505.4	3,456.4	True	38.8	35.8	J-110
J-120	Zone 2	1,500.0	10.8	1,510.8	4,010.8	True	43.8	35.9	J-127
J-121	Zone 2	1,500.0	0.0	1,500.0	2,312.5	True	34.7	35.9	J-127
J-122	Zone 2	1,500.0	7.6	1,507.6	2,016.3	True	30.8	35.9	J-127
J-123	Zone 2	1,500.0	8.7	1,508.7	3,748.7	True	40.0	35.9	J-127
J-124	Zone 2	1,500.0	0.0	1,500.0	4,000.0	True	44.1	35.8	J-127
J-125	Zone 2	1,500.0	0.0	1,500.0	4,000.0	True	40.4	35.5	J-127
J-126	Zone 2	1,500.0	8.7	1,508.7	3,558.4	True	34.7	34.7	J-127
J-127	Zone 2	1,500.0	8.1	1,508.1	4,008.1	True	33.7	36.3	J-128
J-128	Zone 2	1,500.0	9.2	1,509.2	4,009.2	True	35.2	34.7	J-127
J-129	Zone 2	1,500.0	0.0	1,500.0	3,777.6	True	36.2	35.1	J-127
J-130	Zone 2	1,500.0	8.1	1,508.1	4,008.1	True	37.3	35.2	J-127
J-131	Zone 2	1,500.0	10.8	1,510.8	4,010.8	True	41.1	35.7	J-127
J-132	Zone 2	1,500.0	0.0	1,500.0	2,797.6	True	35.4	35.6	J-127
J-133	Zone 2	1,500.0	10.8	1,510.8	4,010.8	True	39.9	35.6	J-127
J-134	Zone 2	1,500.0	0.0	1,500.0	4,000.0	True	43.3	35.7	J-127
J-135	Zone 3	1,000.0	12.6	1,012.6	2,487.1	True	77.1	42.8	J-234



## GBWC 2024 IRP - Cold Springs Division

### Action (2027) MDD+Fire Condition Distribution System Junction Report

Fire Flow - Time: 0.00 hours

Label	Zone	Fire Flow (Needed) (gpm)	MDD (gpm)	Total Flow Needed (Fire Flow + MDD) (gpm)	Available Flow at 20 psi Min. Residual Pressure (gpm)	Satisfies Fire Flow Constraints ?	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Zone Lower Limit @ Total Flow Needed) (psi)	Junction w/ Minimum Pressure (Zone @ Total Flow Needed)
J-136	Zone 3	1,000.0	10.7	1,010.7	2,481.8	True	78.6	42.8	J-234
J-137	Zone 3	1,000.0	4.1	1,004.1	2,234.6	True	77.3	42.7	J-234
J-138	Zone 3	1,000.0	0.0	1,000.0	2,341.2	True	66.1	42.7	J-234
J-139	Zone 3	1,000.0	0.0	1,000.0	2,402.3	True	59.1	42.7	J-234
J-140	Zone 3	1,000.0	9.6	1,009.6	2,421.5	True	50.6	42.7	J-234
J-141	Zone 3	1,000.0	4.1	1,004.1	2,284.5	True	57.2	42.7	J-234
J-142	Zone 3	1,000.0	4.8	1,004.8	1,665.3	True	42.2	42.7	J-234
J-143	Zone 3	1,000.0	3.3	1,003.3	1,814.8	True	50.3	42.7	J-234
J-144	Zone 3	1,000.0	0.0	1,000.0	2,198.8	True	64.8	42.7	J-234
J-145	Zone 3	1,000.0	4.4	1,004.4	2,207.7	True	56.5	42.7	J-234
J-146	Zone 3	1,000.0	0.0	1,000.0	2,285.7	True	70.6	42.7	J-234
J-149									
Reno Truss	Zone 2	1,500.0	0.6	1,500.6	3,824.6	True	50.1	35.9	J-127
J-150	Zone 1	1,500.0	5.5	1,505.5	1,810.1	True	47.4	34.7	J-652
J-151	Zone 1	1,500.0	3.7	1,503.7	1,761.1	True	41.4	34.7	J-652
J-152	Zone 1	1,500.0	6.1	1,506.1	1,810.7	True	51.6	34.7	J-652
J-153	Zone 1	1,500.0	5.5	1,505.5	1,810.0	True	55.2	34.7	J-652
J-154	Zone 1	1,500.0	7.1	1,507.1	1,811.4	True	62.2	34.7	J-652
J-155	Zone 1	1,500.0	4.9	1,504.9	1,809.5	True	53.4	34.7	J-652
J-157	Zone 2	1,500.0	0.0	1,500.0	2,776.1	True	40.6	35.7	J-127
J-158	Zone 1	1,500.0	12.2	1,512.2	1,719.8	True	59.3	30.8	J-652
J-159	Zone 1	1,500.0	6.7	1,506.7	1,703.8	True	33.3	30.4	J-652
J-160	Zone 1	1,500.0	5.5	1,505.5	1,701.1	True	33.2	30.4	J-652
J-161	Zone 1	1,500.0	5.5	1,505.5	1,701.3	True	48.7	30.3	J-652
J-162	Zone 1	1,500.0	6.1	1,506.1	1,705.2	True	49.1	30.5	J-652
J-163	Zone 1	1,500.0	7.9	1,507.9	1,757.2	True	58.5	32.6	J-652
J-164	Zone 1	1,500.0	8.5	1,508.5	1,779.4	True	57.6	33.4	J-652
J-165	Zone 1	1,500.0	12.8	1,512.8	1,742.3	True	59.7	31.8	J-652
J-166	Zone 1	1,500.0	4.9	1,504.9	1,702.0	True	42.7	30.4	J-652
J-185	Zone 3	1,000.0	0.0	1,000.0	2,409.8	True	43.6	42.7	J-234
J-187	Zone 3	1,000.0	0.0	1,000.0	2,412.8	True	57.6	42.7	J-234
J-194	Zone 2	1,500.0	8.1	1,508.1	2,782.1	True	43.6	36.0	J-127
J-189	Zone 1	1,500.0	0.0	1,500.0	2,313.3	True	46.9	45.1	J-3
J-190	Zone 1	1,500.0	0.0	1,500.0	2,215.3	True	46.1	45.1	J-3
J-191	Zone 1	1,500.0	4.9	1,504.9	2,184.0	True	45.2	45.1	J-3
J-193	Zone 1	1,500.0	4.9	1,504.9	1,919.5	True	39.2	44.4	J-5
J-184	Zone 4	1,500.0	51.1	1,551.1	4,051.1	True	64.3	41.4	J-760
J-195	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	65.3	41.4	J-760
J-196	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	73.3	41.4	J-760
J-197	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	77.5	41.4	J-760

## GBWC 2024 IRP - Cold Springs Division

### Action (2027) MDD+Fire Condition Distribution System Junction Report

Fire Flow - Time: 0.00 hours

Label	Zone	Fire Flow (Needed) (gpm)	MDD (gpm)	Total Flow Needed (Fire Flow + MDD) (gpm)	Available Flow at 20 psi Min. Residual Pressure (gpm)	Satisfies Fire Flow Constraints ?	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Zone Lower Limit @ Total Flow Needed) (psi)	Junction w/ Minimum Pressure (Zone @ Total Flow Needed)
J-198	Zone 4	1,500.0	4.9	1,504.9	4,004.9	True	79.0	41.5	J-760
J-199	Zone 4	1,500.0	5.3	1,505.3	4,005.3	True	79.3	41.5	J-760
J-200	Zone 4	1,500.0	5.3	1,505.3	4,005.3	True	79.6	41.5	J-760
J-201	Zone 4	1,500.0	5.3	1,505.3	4,005.3	True	79.9	41.5	J-760
J-202	Zone 4	1,500.0	4.5	1,504.5	4,004.5	True	79.2	41.5	J-760
J-203	Zone 4	1,500.0	3.8	1,503.8	3,431.3	True	65.7	41.5	J-760
J-204	Zone 4	1,500.0	3.8	1,503.8	2,491.8	True	56.2	41.5	J-760
J-205	Zone 4	1,500.0	3.8	1,503.8	2,486.8	True	56.9	41.5	J-760
J-206	Zone 4	1,500.0	3.8	1,503.8	2,512.4	True	57.9	41.5	J-760
J-207	Zone 4	1,500.0	3.8	1,503.8	3,229.7	True	67.8	41.5	J-760
J-208	Zone 4	1,500.0	3.8	1,503.8	4,003.8	True	83.2	41.5	J-760
J-212	Zone 4	1,500.0	3.4	1,503.4	4,003.4	True	83.5	41.5	J-760
J-214	Zone 4	1,500.0	3.8	1,503.8	4,003.8	True	82.0	41.5	J-760
J-215	Zone 4	1,500.0	4.6	1,504.6	4,004.6	True	82.3	41.5	J-760
J-217	Zone 3	1,000.0	0.0	1,000.0	2,247.7	True	75.4	42.7	J-234
J-218	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	86.3	41.5	J-760
J-219	Zone 4	1,500.0	3.4	1,503.4	4,003.4	True	86.2	41.5	J-760
J-220	Zone 4	1,500.0	3.8	1,503.8	4,003.8	True	88.0	41.5	J-760
J-221	Zone 4	1,500.0	3.8	1,503.8	4,003.8	True	87.3	41.5	J-760
J-223	Zone 4	1,500.0	3.8	1,503.8	4,003.8	True	85.7	41.5	J-760
J-225	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	85.8	41.5	J-760
J-226	Zone 4	1,500.0	3.8	1,503.8	2,496.1	True	62.7	41.5	J-760
J-227	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	85.2	41.5	J-760
J-228	Zone 4	1,500.0	3.8	1,503.8	2,406.5	True	61.0	41.5	J-760
J-229	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	86.3	41.5	J-760
J-230	Zone 4	1,500.0	3.8	1,503.8	2,541.4	True	63.6	41.5	J-760
J-231	Zone 4	1,500.0	3.8	1,503.8	2,542.4	True	63.6	41.5	J-760
J-233	Zone 4	1,500.0	6.1	1,506.1	4,006.1	True	87.3	41.5	J-760
J-234	Zone 3	1,000.0	2.6	1,002.6	2,020.4	True	40.6	43.5	J-237
J-235	Zone 3	1,000.0	0.0	1,000.0	2,262.0	True	42.1	43.5	J-237
J-237	Zone 3	1,000.0	3.0	1,003.0	2,626.9	True	43.5	43.5	J-235
J-238	Zone 4	1,500.0	3.8	1,503.8	4,003.8	True	86.7	41.5	J-760
J-239	Zone 4	1,500.0	3.8	1,503.8	4,003.8	True	82.6	41.5	J-760
J-236	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	84.6	41.5	J-760
J-240	Zone 2	1,500.0	0.0	1,500.0	4,000.0	True	43.3	37.0	J-127
J-241	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	41.7	41.4	J-760
J-246	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	79.8	41.5	J-760
J-247	Zone 4	1,500.0	9.4	1,509.4	4,009.4	True	91.5	41.5	J-760
J-248	Zone 3	1,000.0	5.2	1,005.2	2,356.9	True	66.1	42.7	J-234
J-249	Zone 3	1,000.0	4.1	1,004.1	2,288.8	True	70.5	42.7	J-234

## GBWC 2024 IRP - Cold Springs Division

### Action (2027) MDD+Fire Condition Distribution System Junction Report

Fire Flow - Time: 0.00 hours

Label	Zone	Fire Flow (Needed) (gpm)	MDD (gpm)	Total Flow Needed (Fire Flow + MDD) (gpm)	Available Flow at 20 psi Min. Residual Pressure (gpm)	Satisfies Fire Flow Constraints ?	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Zone Lower Limit @ Total Flow Needed) (psi)	Junction w/ Minimum Pressure (Zone @ Total Flow Needed)
J-250	Zone 4	1,500.0	4.1	1,504.1	4,004.1	True	83.8	41.5	J-760
J-251	Zone 4	1,500.0	7.5	1,507.5	4,007.5	True	83.7	41.5	J-760
J-252	Zone 4	1,500.0	11.8	1,511.8	4,011.8	True	92.6	41.5	J-760
J-254	Zone 4	1,500.0	2.6	1,502.6	4,002.6	True	84.6	41.5	J-760
J-255	Zone 2	1,500.0	0.0	1,500.0	3,859.2	True	49.3	35.9	J-127
J-256	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	81.5	41.5	J-760
J-257	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	82.4	41.5	J-760
J-258	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	87.1	41.5	J-760
J-259	Zone 4	1,500.0	2.3	1,502.3	3,250.0	True	67.4	41.5	J-760
J-260	Zone 4	1,500.0	2.3	1,502.3	3,174.2	True	68.3	41.5	J-760
J-261	Zone 4	1,500.0	1.9	1,501.9	4,001.9	True	76.8	41.5	J-760
J-262	Zone 4	1,500.0	0.0	1,500.0	2,790.7	True	65.1	41.5	J-760
J-263	Zone 4	1,500.0	1.7	1,501.7	3,767.2	True	74.7	41.5	J-760
J-264	Zone 4	1,500.0	3.8	1,503.8	4,003.8	True	85.0	41.5	J-760
J-265	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	79.8	41.5	J-760
J-266	Zone 4	1,500.0	3.4	1,503.4	4,003.4	True	89.6	41.5	J-760
J-267	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	89.5	41.5	J-760
J-268	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	89.0	41.5	J-760
J-269	Zone 4	1,500.0	3.8	1,503.8	4,003.8	True	88.2	41.5	J-760
J-270	Zone 4	1,500.0	4.1	1,504.1	3,583.2	True	77.2	41.5	J-760
J-271	Zone 4	1,500.0	4.1	1,504.1	2,466.2	True	62.3	41.5	J-760
J-272	Zone 4	1,500.0	2.6	1,502.6	3,974.2	True	79.4	41.5	J-760
J-273	Zone 4	1,500.0	2.6	1,502.6	2,960.6	True	70.2	41.5	J-760
J-274	Zone 2	1,500.0	5.4	1,505.4	3,862.2	True	44.9	35.9	J-127
J-275	Zone 2	1,500.0	7.6	1,507.6	3,115.6	True	42.3	35.9	J-127
J-276	Zone 4	1,500.0	5.3	1,505.3	3,915.2	True	80.4	41.5	J-760
J-277	Zone 4	1,500.0	4.5	1,504.5	4,004.5	True	81.9	41.5	J-760
J-278	Zone 4	1,500.0	4.5	1,504.5	4,004.5	True	85.1	41.5	J-760
J-279	Zone 4	1,500.0	3.4	1,503.4	4,003.4	True	85.7	41.5	J-760
J-280	Zone 4	1,500.0	3.0	1,503.0	2,946.6	True	64.4	41.4	J-760
J-281	Zone 4	1,500.0	3.0	1,503.0	4,003.0	True	74.1	41.4	J-760
J-282	Zone 4	1,500.0	4.1	1,504.1	2,786.6	True	59.4	41.4	J-760
J-283	Zone 4	1,500.0	4.1	1,504.1	4,004.1	True	74.3	41.4	J-760
J-284	Zone 4	1,500.0	6.0	1,506.0	4,006.0	True	75.0	41.4	J-760
J-285	Zone 4	1,500.0	4.5	1,504.5	4,004.5	True	76.8	41.5	J-760
J-286	Zone 4	1,500.0	10.1	1,510.1	4,010.1	True	73.6	41.4	J-760
J-288	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	79.0	41.5	J-760
J-289	Zone 1	1,500.0	4.9	1,504.9	2,266.1	True	74.4	45.1	J-3
J-290	Zone 1	1,500.0	0.0	1,500.0	2,238.6	True	68.8	45.1	J-3
J-294	Zone 4	1,500.0	3.4	1,503.4	4,003.4	True	87.1	41.5	J-760

## GBWC 2024 IRP - Cold Springs Division

### Action (2027) MDD+Fire Condition Distribution System Junction Report

Fire Flow - Time: 0.00 hours

Label	Zone	Fire Flow (Needed) (gpm)	MDD (gpm)	Total Flow Needed (Fire Flow + MDD) (gpm)	Available Flow at 20 psi Min. Residual Pressure (gpm)	Satisfies Fire Flow Constraints ?	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Zone Lower Limit @ Total Flow Needed) (psi)	Junction w/ Minimum Pressure (Zone @ Total Flow Needed)
J-295	Zone 4	1,500.0	4.9	1,504.9	4,004.9	True	86.1	41.5	J-760
J-296	Zone 4	1,500.0	4.1	1,504.1	4,004.1	True	83.5	41.5	J-760
J-297	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	89.3	41.5	J-760
J-298	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	91.2	41.5	J-760
J-300	Zone 4	1,500.0	3.0	1,503.0	4,003.0	True	91.6	41.5	J-760
J-302	Zone 4	1,500.0	3.8	1,503.8	4,003.8	True	92.6	41.5	J-760
J-303	Zone 4	1,500.0	1.9	1,501.9	3,639.7	True	79.4	41.5	J-760
J-304	Zone 1	1,500.0	4.9	1,504.9	2,295.0	True	71.7	45.1	J-3
J-305	Zone 1	1,500.0	4.9	1,504.9	1,758.9	True	40.8	45.1	J-3
J-306	Zone 1	1,500.0	4.9	1,504.9	2,197.5	True	69.9	45.1	J-3
J-307	Zone 4	1,500.0	5.3	1,505.3	3,978.3	True	82.4	41.5	J-760
J-308	Zone 4	1,500.0	6.0	1,506.0	4,006.0	True	81.8	41.5	J-760
J-309	Zone 4	1,500.0	3.8	1,503.8	4,003.8	True	87.0	41.5	J-760
J-310	Zone 4	1,500.0	5.3	1,505.3	4,005.3	True	83.3	41.5	J-760
J-311	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	90.2	41.5	J-760
J-312	Zone 4	1,500.0	5.3	1,505.3	4,005.3	True	82.5	41.5	J-760
J-313	Zone 4	1,500.0	4.5	1,504.5	4,004.5	True	89.3	41.5	J-760
J-314	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	90.2	41.5	J-760
J-315	Zone 4	1,500.0	5.3	1,505.3	4,005.3	True	82.3	41.5	J-760
J-316	Zone 4	1,500.0	7.0	1,507.0	4,007.0	True	88.7	41.5	J-760
J-318	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	90.1	41.5	J-760
J-319	Zone 4	1,500.0	6.5	1,506.5	4,006.5	True	89.7	41.5	J-760
J-320	Zone 4	1,500.0	2.9	1,502.9	4,002.9	True	86.3	41.5	J-760
J-321	Zone 4	1,500.0	2.3	1,502.3	4,002.3	True	79.4	41.5	J-760
J-323	Zone 4	1,500.0	3.0	1,503.0	3,928.4	True	78.8	41.5	J-760
J-324	Zone 4	1,500.0	1.9	1,501.9	3,766.5	True	74.3	41.5	J-760
J-325	Zone 4	1,500.0	7.3	1,507.3	4,007.3	True	75.5	41.4	J-760
J-327	Zone 1	1,500.0	6.7	1,506.7	1,676.5	True	48.0	29.1	J-652
J-328	Zone 1	1,500.0	0.0	1,500.0	1,601.7	True	27.6	29.1	J-652
J-329	Zone 1	1,500.0	4.9	1,504.9	1,674.6	True	38.3	29.1	J-652
J-330	Zone 1	1,500.0	4.3	1,504.3	1,673.9	True	45.7	29.1	J-652
J-331	Zone 1	1,500.0	5.5	1,505.5	1,674.8	True	56.3	29.1	J-652
J-332	Zone 1	1,500.0	0.0	1,500.0	1,669.6	True	44.8	29.1	J-652
J-333	Zone 1	1,500.0	6.1	1,506.1	1,675.8	True	40.1	29.1	J-652
J-334	Zone 1	1,500.0	0.0	1,500.0	1,669.8	True	34.6	29.1	J-652
J-427	Zone 1	1,500.0	6.1	1,506.1	1,675.6	True	51.7	29.1	J-652
J-336	Zone 1	1,500.0	4.9	1,504.9	1,695.0	True	42.1	30.1	J-652
J-337	Zone 1	1,500.0	9.1	1,509.1	1,693.8	True	47.2	29.8	J-652
J-339	Zone 1	1,500.0	4.3	1,504.3	1,696.6	True	48.9	30.2	J-652
J-340	Zone 1	1,500.0	3.7	1,503.7	1,700.8	True	37.7	30.4	J-652

## GBWC 2024 IRP - Cold Springs Division

### Action (2027) MDD+Fire Condition Distribution System Junction Report

Fire Flow - Time: 0.00 hours

Label	Zone	Fire Flow (Needed) (gpm)	MDD (gpm)	Total Flow Needed (Fire Flow + MDD) (gpm)	Available Flow at 20 psi Min. Residual Pressure (gpm)	Satisfies Fire Flow Constraints ?	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Zone Lower Limit @ Total Flow Needed) (psi)	Junction w/ Minimum Pressure (Zone @ Total Flow Needed)
J-341	Zone 1	1,500.0	0.0	1,500.0	1,690.1	True	45.7	30.1	J-652
J-342	Zone 1	1,500.0	0.0	1,500.0	1,692.3	True	47.0	30.2	J-652
J-343	Zone 1	1,500.0	5.5	1,505.5	1,701.2	True	36.1	30.4	J-652
J-344	Zone 1	1,500.0	0.0	1,500.0	1,819.5	True	62.5	35.2	J-652
J-350	Zone 1	1,500.0	0.0	1,500.0	1,906.4	True	56.5	38.2	J-652
J-355	Zone 2	1,500.0	0.0	1,500.0	4,000.0	True	46.0	35.8	J-127
J-346	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	73.1	41.4	J-760
J-348	Zone 4	1,500.0	3.8	1,503.8	4,003.8	True	70.5	41.4	J-760
J-352	Zone 4	1,500.0	4.9	1,504.9	4,004.9	True	65.2	41.4	J-760
J-385	Zone 1	1,500.0	1.1	1,501.1	1,632.3	True	55.5	27.3	J-652
J-387	Zone 1	1,500.0	0.0	1,500.0	2,083.4	True	50.0	45.1	J-3
J-388	Zone 1	1,500.0	0.0	1,500.0	2,402.8	True	62.8	45.1	J-3
J-389	Zone 4	1,500.0	1.5	1,501.5	4,001.5	True	58.8	41.4	J-760
J-390	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	58.4	41.4	J-760
J-391	Zone 4	1,500.0	3.8	1,503.8	4,003.8	True	59.9	41.4	J-760
J-392	Zone 4	1,500.0	5.3	1,505.3	4,005.3	True	58.2	41.4	J-760
J-393	Zone 4	1,500.0	4.5	1,504.5	4,004.5	True	58.1	41.4	J-760
J-394	Zone 4	1,500.0	5.3	1,505.3	4,005.3	True	54.3	41.4	J-760
J-395	Zone 4	1,500.0	3.8	1,503.8	4,003.8	True	54.0	41.4	J-760
J-396	Zone 4	1,500.0	5.3	1,505.3	4,005.3	True	46.0	41.4	J-760
J-397	Zone 4	1,500.0	4.5	1,504.5	4,004.5	True	44.6	41.4	J-760
J-398	Zone 4	1,500.0	0.6	1,500.6	4,000.6	True	48.0	41.4	J-760
J-399	Zone 4	1,500.0	0.8	1,500.8	4,000.8	True	55.9	41.4	J-760
J-400	Zone 4	1,500.0	3.0	1,503.0	4,003.0	True	82.0	41.5	J-760
J-401	Zone 4	1,500.0	3.4	1,503.4	3,505.6	True	80.4	41.5	J-760
J-402	Zone 4	1,500.0	3.0	1,503.0	3,366.4	True	78.9	41.5	J-760
J-403	Zone 4	1,500.0	2.6	1,502.6	3,502.2	True	79.3	41.5	J-760
J-404	Zone 4	1,500.0	3.0	1,503.0	4,003.0	True	83.1	41.5	J-760
J-405	Zone 4	1,500.0	3.0	1,503.0	2,437.0	True	64.7	41.5	J-760
J-406	Zone 4	1,500.0	0.0	1,500.0	1,865.8	True	46.5	41.5	J-760
J-407	Zone 4	1,500.0	1.9	1,501.9	1,620.8	True	28.9	41.5	J-760
J-408	Zone 4	1,500.0	4.5	1,504.5	1,626.3	True	29.3	41.5	J-760
J-409	Zone 4	1,500.0	2.3	1,502.3	1,901.1	True	44.3	41.5	J-760
J-410	Zone 4	1,500.0	2.6	1,502.6	2,506.2	True	62.8	41.5	J-760
J-411	Zone 4	1,500.0	2.6	1,502.6	2,291.1	True	58.2	41.5	J-760
J-412	Zone 4	1,500.0	2.6	1,502.6	2,250.1	True	57.6	41.5	J-760
J-413	Zone 4	1,500.0	2.6	1,502.6	2,222.7	True	57.0	41.5	J-760
J-414	Zone 4	1,500.0	0.0	1,500.0	3,209.4	True	74.9	41.5	J-760
J-415	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	88.5	41.5	J-760
J-416	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	86.1	41.5	J-760

## GBWC 2024 IRP - Cold Springs Division

### Action (2027) MDD+Fire Condition Distribution System Junction Report

Fire Flow - Time: 0.00 hours

Label	Zone	Fire Flow (Needed) (gpm)	MDD (gpm)	Total Flow Needed (Fire Flow + MDD) (gpm)	Available Flow at 20 psi Min. Residual Pressure (gpm)	Satisfies Fire Flow Constraints ?	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Zone Lower Limit @ Total Flow Needed) (psi)	Junction w/ Minimum Pressure (Zone @ Total Flow Needed)
J-417	Zone 4	1,500.0	4.5	1,504.5	4,004.5	True	84.3	41.5	J-760
J-418	Zone 4	1,500.0	4.1	1,504.1	4,004.1	True	82.0	41.5	J-760
J-419	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	86.7	41.5	J-760
J-420	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	86.4	41.5	J-760
J-421	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	85.0	41.5	J-760
J-424	Zone 4	1,500.0	2.6	1,502.6	3,469.5	True	75.8	41.5	J-760
J-425	Zone 4	1,500.0	1.5	1,501.5	3,041.1	True	72.8	41.5	J-760
J-426	Zone 4	1,500.0	4.1	1,504.1	4,004.1	True	88.6	41.5	J-760
J-428	Zone 4	1,500.0	0.0	1,500.0	3,991.4	True	70.1	41.5	J-760
J-429	Zone 4	1,500.0	0.0	1,500.0	3,910.8	True	72.8	41.5	J-760
J-430	Zone 4	1,500.0	0.0	1,500.0	3,790.7	True	72.9	41.5	J-760
J-431	Zone 4	1,500.0	1.9	1,501.9	3,453.8	True	68.9	41.4	J-760
J-432	Zone 4	1,500.0	1.5	1,501.5	3,163.8	True	63.3	41.4	J-760
J-433	Zone 4	1,500.0	1.5	1,501.5	2,997.8	True	55.6	41.4	J-760
J-434	Zone 4	1,500.0	3.0	1,503.0	2,173.7	True	44.4	41.4	J-760
J-435	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	87.0	41.5	J-760
J-436	Zone 4	1,500.0	4.9	1,504.9	4,004.9	True	80.2	41.5	J-760
J-437	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	76.4	41.5	J-760
J-438	Zone 4	1,500.0	4.9	1,504.9	4,004.9	True	73.2	41.4	J-760
J-439	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	78.4	41.5	J-760
J-440	Zone 4	1,500.0	2.3	1,502.3	3,025.9	True	65.2	41.4	J-760
J-442	Zone 4	1,500.0	4.1	1,504.1	3,625.3	True	64.6	41.4	J-760
J-443	Zone 4	1,500.0	3.8	1,503.8	3,260.3	True	59.6	41.4	J-760
J-441	Zone 4	1,500.0	4.1	1,504.1	3,990.8	True	67.8	41.4	J-760
J-444	Zone 3	1,000.0	0.0	1,000.0	2,341.4	True	65.5	42.7	J-234
J-445	Zone 1	1,500.0	0.0	1,500.0	1,669.7	True	40.4	29.1	J-652
J-446	Zone 1	1,500.0	4.9	1,504.9	1,673.8	True	41.9	29.1	J-652
J-447	Zone 1	1,500.0	4.9	1,504.9	1,643.0	True	29.7	29.1	J-652
J-448	Zone 1	1,500.0	6.7	1,506.7	1,526.9	True	21.5	29.1	J-652
J-423	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	86.6	41.5	J-760
J-449	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	87.8	41.5	J-760
J-452	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	84.3	41.5	J-760
J-453	Zone 4	1,500.0	6.4	1,506.4	4,006.4	True	83.9	41.5	J-760
J-454	Zone 4	1,500.0	4.5	1,504.5	4,004.5	True	83.4	41.5	J-760
J-455	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	82.5	41.5	J-760
J-456	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	82.5	41.5	J-760
BLDG 4 - Village Grill	Zone 4	1,500.0	0.3	1,500.3	4,000.3	True	81.6	41.5	J-760
J-458	Zone 4	1,500.0	3.8	1,503.8	4,003.8	True	84.1	41.5	J-760
J-459	Zone 4	1,500.0	3.4	1,503.4	4,003.4	True	80.1	41.5	J-760

## GBWC 2024 IRP - Cold Springs Division

### Action (2027) MDD+Fire Condition Distribution System Junction Report

Fire Flow - Time: 0.00 hours

Label	Zone	Fire Flow (Needed) (gpm)	MDD (gpm)	Total Flow Needed (Fire Flow + MDD) (gpm)	Available Flow at 20 psi Min. Residual Pressure (gpm)	Satisfies Fire Flow Constraints ?	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Zone Lower Limit @ Total Flow Needed) (psi)	Junction w/ Minimum Pressure (Zone @ Total Flow Needed)
J-460	Zone 4	1,500.0	4.9	1,504.9	4,004.9	True	86.7	41.5	J-760
J-461	Zone 4	1,500.0	5.6	1,505.6	4,005.6	True	86.7	41.5	J-760
J-462	Zone 4	1,500.0	6.8	1,506.8	4,006.8	True	85.1	41.5	J-760
J-470	Zone 4	1,500.0	0.0	1,500.0	3,534.2	True	77.9	41.5	J-760
J-471	Zone 4	1,500.0	5.6	1,505.6	3,625.5	True	76.5	41.5	J-760
J-472	Zone 4	1,500.0	4.1	1,504.1	3,832.2	True	77.1	41.5	J-760
J-473	Zone 4	1,500.0	4.5	1,504.5	3,955.0	True	77.1	41.5	J-760
J-474	Zone 4	1,500.0	3.0	1,503.0	4,003.0	True	82.6	41.5	J-760
J-475	Zone 4	1,500.0	3.4	1,503.4	4,003.4	True	82.7	41.5	J-760
J-476	Zone 4	1,500.0	3.0	1,503.0	4,003.0	True	82.5	41.5	J-760
J-477	Zone 4	1,500.0	3.0	1,503.0	4,003.0	True	80.5	41.5	J-760
J-478	Zone 4	1,500.0	3.0	1,503.0	4,003.0	True	78.4	41.5	J-760
J-479	Zone 4	1,500.0	0.0	1,500.0	3,466.2	True	73.4	41.5	J-760
J-480	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	46.1	41.4	J-760
J-481	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	51.9	41.4	J-760
J-482	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	61.0	41.4	J-760
J-483	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	68.5	41.4	J-760
J-466	Zone 4	1,500.0	5.6	1,505.6	3,817.5	True	71.7	41.5	J-760
J-484	Zone 4	1,500.0	4.1	1,504.1	3,799.3	True	69.8	41.5	J-760
J-485	Zone 4	1,500.0	8.8	1,508.8	4,008.8	True	71.1	41.5	J-760
J-486	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	77.9	41.5	J-760
J-570	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	72.7	41.5	J-760
J-571	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	72.8	41.5	J-760
J-576	Zone 4	1,500.0	4.5	1,504.5	3,287.0	True	58.8	41.4	J-760
J-586	Zone 4	1,500.0	21.2	1,521.2	4,021.2	True	81.9	41.5	J-760
J-587	Zone 4	1,500.0	4.3	1,504.3	2,639.8	True	66.8	41.5	J-760
J-588	Zone 1	1,500.0	5.5	1,505.5	1,638.7	True	48.0	27.4	J-652
J-589	Zone 1	1,500.0	7.3	1,507.3	1,640.3	True	53.8	27.4	J-652
J-590	Zone 1	1,500.0	5.5	1,505.5	1,638.8	True	43.3	27.4	J-652
J-591	Zone 1	1,500.0	0.0	1,500.0	1,633.0	True	55.7	27.4	J-652
J-592	Zone 1	1,500.0	7.9	1,507.9	1,641.6	True	48.6	27.4	J-652
J-595	Zone 1	1,500.0	2.4	1,502.4	1,647.8	True	47.8	28.0	J-652
J-596	Zone 1	1,500.0	0.0	1,500.0	1,649.4	True	46.6	28.2	J-652
J-594	Zone 1	1,500.0	0.0	1,500.0	1,628.4	True	54.9	27.2	J-652
J-597	Zone 1	1,500.0	7.3	1,507.3	1,630.8	True	51.7	26.9	J-652
J-603	Zone 1	1,500.0	6.1	1,506.1	1,630.0	True	35.4	26.9	J-652
J-604	Zone 1	1,500.0	3.7	1,503.7	1,631.5	True	49.4	27.1	J-652
J-606	Zone 1	1,500.0	8.5	1,508.5	1,639.1	True	45.4	27.3	J-652
J-608	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	88.1	41.5	J-760
J-609	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	95.5	41.6	J-760

## GBWC 2024 IRP - Cold Springs Division

### Action (2027) MDD+Fire Condition Distribution System Junction Report

Fire Flow - Time: 0.00 hours

Label	Zone	Fire Flow (Needed) (gpm)	MDD (gpm)	Total Flow Needed (Fire Flow + MDD) (gpm)	Available Flow at 20 psi Min. Residual Pressure (gpm)	Satisfies Fire Flow Constraints ?	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Zone Lower Limit @ Total Flow Needed) (psi)	Junction w/ Minimum Pressure (Zone @ Total Flow Needed)
J-611	Zone 1	1,500.0	4.3	1,504.3	1,833.6	True	55.4	35.6	J-652
J-612	Zone 1	1,500.0	4.1	1,504.1	1,833.2	True	64.5	35.6	J-652
J-613	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	78.6	41.5	J-760
CS MIDDLE SCHOOL	Zone 4	2,750.0	24.1	2,774.1	4,024.1	True	55.8	39.1	J-760
J-639	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	75.9	41.5	J-760
J-644	Zone 1	1,500.0	10.3	1,510.3	1,630.8	True	38.7	26.8	J-652
J-645	Zone 1	1,500.0	0.0	1,500.0	1,611.3	True	37.0	26.3	J-652
J-646	Zone 1	1,500.0	9.7	1,509.7	1,611.6	True	36.6	25.8	J-652
J-647	Zone 1	1,500.0	6.1	1,506.1	1,618.8	True	44.7	26.4	J-652
J-648	Zone 1	1,500.0	3.0	1,503.0	1,615.9	True	38.9	26.4	J-652
J-642	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	72.8	41.5	J-760
J-649	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	72.9	41.5	J-760
J-652	Zone 1	1,500.0	6.1	1,506.1	1,467.0	False	17.4	35.5	J-653
J-653	Zone 1	1,500.0	6.1	1,506.1	1,608.4	True	26.9	26.4	J-652
J-654	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	83.9	41.5	J-760
J-655	Zone 4	1,500.0	3.8	1,503.8	2,629.5	True	62.5	41.5	J-760
J-656	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	83.8	41.5	J-760
J-657	Zone 4	1,500.0	3.8	1,503.8	2,623.3	True	61.8	41.5	J-760
J-658	Zone 4	1,500.0	5.6	1,505.6	4,005.6	True	76.2	41.5	J-760
J-659	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	79.4	41.5	J-760
J-660	Zone 4	1,500.0	3.0	1,503.0	4,003.0	True	77.1	41.5	J-760
J-661	Zone 4	1,500.0	3.4	1,503.4	4,003.4	True	77.1	41.5	J-760
J-662	Zone 4	1,500.0	3.8	1,503.8	2,371.2	True	56.7	41.5	J-760
J-663	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	78.9	41.5	J-760
J-664	Zone 4	1,500.0	3.4	1,503.4	2,640.1	True	62.4	41.5	J-760
J-665	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	73.3	41.5	J-760
J-666	Zone 4	1,500.0	4.9	1,504.9	3,710.8	True	70.3	41.5	J-760
J-667	Zone 4	1,500.0	0.0	1,500.0	3,996.0	True	70.0	41.5	J-760
J-673	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	85.6	41.5	J-760
J-669	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	78.3	41.5	J-760
J-670	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	78.5	41.5	J-760
J-671	Zone 4	1,500.0	0.1	1,500.1	4,000.1	True	78.0	41.5	J-760
J-675	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	67.6	41.5	J-760
J-676	Zone 4	1,500.0	0.0	1,500.0	3,661.1	True	62.1	41.4	J-760
J-677	Zone 4	1,500.0	7.5	1,507.5	2,952.2	True	54.3	41.4	J-760
J-678	Zone 4	1,500.0	0.0	1,500.0	2,946.2	True	53.4	41.4	J-760
J-679	Zone 4	1,500.0	6.4	1,506.4	4,006.4	True	58.3	41.4	J-760
J-680	Zone 4	1,500.0	4.9	1,504.9	4,004.9	True	67.4	41.5	J-760
J-681	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	71.5	41.5	J-760



## GBWC 2024 IRP - Cold Springs Division

### Action (2027) MDD+Fire Condition Distribution System Junction Report

Fire Flow - Time: 0.00 hours

Label	Zone	Fire Flow (Needed) (gpm)	MDD (gpm)	Total Flow Needed (Fire Flow + MDD) (gpm)	Available Flow at 20 psi Min. Residual Pressure (gpm)	Satisfies Fire Flow Constraints ?	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Zone Lower Limit @ Total Flow Needed) (psi)	Junction w/ Minimum Pressure (Zone @ Total Flow Needed)
FH-929	Zone 4	1,500.0	0.0	1,500.0	3,949.8	True	71.2	41.5	J-760
J-683	Zone 4	1,500.0	4.9	1,504.9	4,004.9	True	74.8	41.5	J-760
FH-926	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	63.8	41.5	J-760
J-685	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	61.1	41.4	J-760
J-687	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	66.0	41.5	J-760
J-688	Zone 4	1,500.0	2.3	1,502.3	4,002.3	True	65.3	41.5	J-760
J-689	Zone 4	1,500.0	3.4	1,503.4	4,003.4	True	67.7	41.5	J-760
J-690	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	64.8	41.5	J-760
FH-930	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	64.4	41.5	J-760
FH-928	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	67.5	41.5	J-760
FH-927	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	67.1	41.5	J-760
J-674	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	69.8	41.5	J-760
FH-924	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	68.8	41.5	J-760
FH-925	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	60.3	41.4	J-760
FH-923	Zone 4	1,500.0	0.0	1,500.0	3,019.7	True	55.6	41.4	J-760
FH-922	Zone 4	1,500.0	0.0	1,500.0	2,915.0	True	53.4	41.4	J-760
FH-921	Zone 4	1,500.0	0.0	1,500.0	3,245.0	True	54.3	41.4	J-760
FH-920	Zone 4	1,500.0	0.0	1,500.0	3,707.4	True	69.6	41.5	J-760
FH-919	Zone 4	1,500.0	4.5	1,504.5	4,004.5	True	71.6	41.5	J-760
FH-918	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	78.7	41.5	J-760
FH-917	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	75.8	41.5	J-760
FH-915	Zone 4	1,500.0	0.0	1,500.0	3,609.4	True	74.0	41.5	J-760
FH-914	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	79.7	41.5	J-760
FH-913	Zone 4	1,500.0	0.0	1,500.0	3,783.0	True	75.0	41.5	J-760
FH-916	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	79.7	41.5	J-760
J-704	Zone 4	1,500.0	0.4	1,500.4	4,000.4	True	77.6	41.5	J-760
J-705	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	77.9	41.5	J-760
FH-931	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	79.7	41.5	J-760
BLDG 3 - CCCC	Zone 4	1,500.0	0.7	1,500.7	4,000.7	True	77.9	41.5	J-760
J-706	Zone 1	1,500.0	0.0	1,500.0	1,906.4	True	56.1	38.2	J-652
FH-801	Zone 1	1,500.0	0.0	1,500.0	1,878.1	True	52.1	38.2	J-652
J-714	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	78.3	41.5	J-760
J-715	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	77.0	41.5	J-760
J-728	Zone 4	1,500.0	1.5	1,501.5	4,001.5	True	76.7	41.5	J-760
J-729	Zone 4	1,500.0	0.0	1,500.0	3,236.1	True	61.7	41.5	J-760
J-730	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	63.4	41.5	J-760
J-731	Zone 4	1,500.0	0.0	1,500.0	3,211.7	True	63.3	41.5	J-760
J-732	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	62.9	41.5	J-760
J-733	Zone 4	1,500.0	5.3	1,505.3	3,709.9	True	68.6	41.5	J-760

## GBWC 2024 IRP - Cold Springs Division

### Action (2027) MDD+Fire Condition Distribution System Junction Report

Fire Flow - Time: 0.00 hours

Label	Zone	Fire Flow (Needed) (gpm)	MDD (gpm)	Total Flow Needed (Fire Flow + MDD) (gpm)	Available Flow at 20 psi Min. Residual Pressure (gpm)	Satisfies Fire Flow Constraints ?	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Zone Lower Limit @ Total Flow Needed) (psi)	Junction w/ Minimum Pressure (Zone @ Total Flow Needed)
J-734	Zone 4	1,500.0	0.0	1,500.0	3,179.8	True	62.5	41.5	J-760
J-735	Zone 4	1,500.0	0.0	1,500.0	3,193.0	True	61.6	41.5	J-760
J-736	Zone 4	1,500.0	5.3	1,505.3	3,615.9	True	61.1	41.5	J-760
J-742	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	43.2	41.4	J-760
J-743	Zone 4	1,500.0	4.1	1,504.1	4,004.1	True	43.8	41.4	J-760
J-744	Zone 4	1,500.0	0.0	1,500.0	2,433.0	True	37.7	39.0	J-756
J-746	Zone 4	1,500.0	0.0	1,500.0	2,236.9	True	33.3	34.2	J-751
J-747	Zone 4	1,500.0	3.4	1,503.4	2,591.9	True	35.4	37.6	J-749
J-749	Zone 4	1,500.0	0.0	1,500.0	2,262.9	True	33.3	33.3	H-8 - PH19
J-751	Zone 4	1,500.0	3.0	1,503.0	2,226.7	True	33.2	33.2	H-7 - PH19
J-752	Zone 4	1,500.0	3.8	1,503.8	2,803.5	True	40.8	38.9	J-746
J-753	Zone 4	1,500.0	3.8	1,503.8	2,777.6	True	39.9	39.9	H-6 - PH19
J-755	Zone 4	1,500.0	3.8	1,503.8	2,881.2	True	43.7	41.4	J-760
J-756	Zone 4	1,500.0	3.8	1,503.8	2,442.0	True	38.1	38.1	H-3 - PH19
J-757	Zone 4	1,500.0	3.8	1,503.8	4,003.8	True	56.6	41.4	J-760
J-758	Zone 4	1,500.0	3.8	1,503.8	4,003.8	True	56.0	41.4	J-760
J-759	Zone 4	1,500.0	0.0	1,500.0	3,491.7	True	38.1	38.1	H-9 - PH19
J-760	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	41.4	41.7	J-759
J-761	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	83.7	41.5	J-760
J-762	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	82.6	41.5	J-760
J-763	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	81.0	41.5	J-760
J-764	Zone 4	1,500.0	3.1	1,503.1	4,003.1	True	78.5	41.5	J-760
J-765	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	77.2	41.5	J-760
J-766	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	80.5	41.5	J-760
J-767	Zone 4	1,500.0	1.4	1,501.4	4,001.4	True	79.8	41.5	J-760
J-768	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	78.1	41.5	J-760
J-769	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	76.1	41.5	J-760
J-770	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	69.8	41.5	J-760
J-771	Zone 4	1,500.0	7.2	1,507.2	4,007.1	True	80.0	41.5	J-760
J-773	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	82.9	41.5	J-760
J-774	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	79.3	41.5	J-760
J-775	Zone 4	1,500.0	3.8	1,503.8	4,003.8	True	81.9	41.5	J-760
J-776	Zone 4	1,500.0	3.8	1,503.8	4,003.8	True	80.9	41.5	J-760
J-777	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	81.8	41.5	J-760
J-778	Zone 4	1,500.0	5.6	1,505.6	4,005.6	True	78.4	41.5	J-760
J-779	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	80.0	41.5	J-760

## GBWC 2024 IRP - Cold Springs Division

### Action (2027) MDD+Fire Condition Distribution System Junction Report

Fire Flow - Time: 0.00 hours

Label	Zone	Fire Flow (Needed) (gpm)	MDD (gpm)	Total Flow Needed (Fire Flow + MDD) (gpm)	Available Flow at 20 psi Min. Residual Pressure (gpm)	Satisfies Fire Flow Constraints ?	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Zone Lower Limit @ Total Flow Needed) (psi)	Junction w/ Minimum Pressure (Zone @ Total Flow Needed)
J-780	Zone 4	1,500.0	4.5	1,504.5	4,004.5	True	78.5	41.5	J-760
J-781	Zone 4	1,500.0	3.8	1,503.8	4,003.8	True	79.0	41.5	J-760
J-782	Zone 4	1,500.0	2.6	1,502.6	4,002.6	True	77.3	41.5	J-760
J-783	Zone 4	1,500.0	2.6	1,502.6	4,002.6	True	72.4	41.5	J-760
J-795	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	93.7	41.6	J-760
J-797	Zone 2	1,500.0	9.7	1,509.7	4,009.7	True	53.0	35.8	J-127
J-799	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	78.9	41.5	J-760
J-805	Zone 4	1,500.0	0.0	1,500.0	3,782.0	True	48.6	42.3	J-760
J-806	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	63.5	41.5	J-760
J-807	Zone 4	1,500.0	4.1	1,504.1	4,004.1	True	63.4	41.5	J-760
J-808	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	67.0	41.5	J-760
J-809	Zone 4	1,500.0	4.1	1,504.1	4,004.1	True	69.1	41.5	J-760
J-810	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	63.1	41.5	J-760
J-811	Zone 4	1,500.0	4.9	1,504.9	4,004.9	True	62.9	41.5	J-760
J-812	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	67.3	41.5	J-760
J-813	Zone 4	1,500.0	4.5	1,504.5	4,004.5	True	68.6	41.5	J-760
J-814	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	70.7	41.5	J-760
J-815	Zone 4	1,500.0	1.0	1,501.0	4,001.0	True	61.7	41.5	J-760
J-816	Zone 4	1,500.0	4.5	1,504.5	4,004.5	True	62.8	41.5	J-760
J-817	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	65.3	41.5	J-760
J-818	Zone 4	1,500.0	4.1	1,504.1	4,004.1	True	69.1	41.5	J-760
J-819	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	60.7	41.5	J-760
J-820	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	61.2	41.5	J-760
J-823	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	69.2	41.5	J-760
CS Valley Church	Zone 2	1,500.0	1.1	1,501.1	2,977.3	True	45.5	35.9	J-127
J-829	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	61.2	41.5	J-760
J-830	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	62.7	41.5	J-760
J-832	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	70.7	41.5	J-760
J-833	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	70.2	41.5	J-760
J-834	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	69.9	41.5	J-760
J-835	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	69.2	41.5	J-760
J-836	Zone 4	1,500.0	3.4	1,503.4	4,003.4	True	61.0	41.5	J-760
J-839	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	64.6	41.5	J-760
J-840	Zone 4	1,500.0	3.8	1,503.8	4,003.8	True	68.4	41.5	J-760
J-841	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	62.3	41.5	J-760
J-842	Zone 4	1,500.0	3.4	1,503.4	4,003.4	True	67.2	41.5	J-760
J-843	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	66.8	41.5	J-760
J-844	Zone 4	1,500.0	1.9	1,501.9	3,746.6	True	63.0	41.5	J-760
J-845	Zone 4	1,500.0	3.8	1,503.8	4,003.8	True	68.6	41.5	J-760

## GBWC 2024 IRP - Cold Springs Division

### Action (2027) MDD+Fire Condition Distribution System Junction Report

Fire Flow - Time: 0.00 hours

Label	Zone	Fire Flow (Needed) (gpm)	MDD (gpm)	Total Flow Needed (Fire Flow + MDD) (gpm)	Available Flow at 20 psi Min. Residual Pressure (gpm)	Satisfies Fire Flow Constraints ?	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Zone Lower Limit @ Total Flow Needed) (psi)	Junction w/ Minimum Pressure (Zone @ Total Flow Needed)
J-846	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	65.8	41.5	J-760
J-847	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	77.3	41.5	J-760
J22-848	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	76.1	41.5	J-760
J-850	Zone 4	1,500.0	3.0	1,503.0	4,003.0	True	76.5	41.5	J-760
J-851	Zone 4	1,500.0	3.0	1,503.0	4,003.0	True	73.2	41.5	J-760
J-852	Zone 4	1,500.0	3.0	1,503.0	4,003.0	True	72.5	41.5	J-760
J-853	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	75.2	41.5	J-760
J-854	Zone 4	1,500.0	3.4	1,503.4	4,003.4	True	74.8	41.5	J-760
J-855	Zone 4	1,500.0	3.4	1,503.4	4,003.4	True	71.7	41.5	J-760
J-856	Zone 4	1,500.0	3.4	1,503.4	4,003.4	True	70.9	41.5	J-760
J-857	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	75.0	41.5	J-760
J-858	Zone 4	1,500.0	3.0	1,503.0	4,003.0	True	71.2	41.5	J-760
J22-874	Zone 4	1,500.0	0.8	1,500.8	4,000.8	True	78.0	41.5	J-760
CS ELEM SCHOOL	Zone 4	3,125.0	2.5	3,127.5	2,900.3	False	10.1	38.2	J-760
J22-880	Zone 4	1,500.0	1.1	1,501.1	4,001.1	True	78.6	41.5	J-760
J22-882	Zone 4	1,500.0	1.5	1,501.5	4,001.5	True	80.6	41.5	J-760
J22-884	Zone 4	1,500.0	1.1	1,501.1	4,001.1	True	66.6	41.5	J-760
J22-886	Zone 4	1,500.0	1.1	1,501.1	4,001.1	True	67.9	41.5	J-760
J22-887	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	70.8	41.5	J-760
J22-890	Zone 4	1,500.0	0.8	1,500.8	4,000.8	True	71.2	41.5	J-760
J22-892	Zone 4	1,500.0	0.8	1,500.8	4,000.8	True	73.6	41.5	J-760
J22-896	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	75.7	41.5	J-760
J22-898	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	76.3	41.5	J-760
J22-899	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	63.0	41.5	J-760
J22-901	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	61.6	41.5	J-760
J22-902	Zone 4	1,500.0	5.9	1,505.9	4,005.9	True	84.5	41.5	J-760
J22-1069	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	75.6	41.5	J-760
J22-1070	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	76.2	41.5	J-760
J-1071	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	78.6	41.5	J-760
J22-1072	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	79.9	41.5	J-760
J22-1078	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	64.9	41.5	J-760
J22-1079	Zone 4	1,500.0	2.8	1,502.8	4,002.8	True	69.3	41.5	J-760
J22-1080	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	70.7	41.5	J-760
J22-1082	Zone 4	1,500.0	1.7	1,501.7	4,001.7	True	71.8	41.5	J-760
J22-1083	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	72.5	41.5	J-760
J22-1084	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	75.0	41.5	J-760
J22-1085	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	76.0	41.5	J-760
J22-1086	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	76.8	41.5	J-760
J22-1087	Zone 4	1,500.0	18.8	1,518.8	4,018.8	True	78.4	41.5	J-760

## GBWC 2024 IRP - Cold Springs Division

### Action (2027) MDD+Fire Condition Distribution System Junction Report

Fire Flow - Time: 0.00 hours

Label	Zone	Fire Flow (Needed) (gpm)	MDD (gpm)	Total Flow Needed (Fire Flow + MDD) (gpm)	Available Flow at 20 psi Min. Residual Pressure (gpm)	Satisfies Fire Flow Constraints ?	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Zone Lower Limit @ Total Flow Needed) (psi)	Junction w/ Minimum Pressure (Zone @ Total Flow Needed)
J22-1088	Zone 4	1,500.0	2.9	1,502.9	4,002.9	True	79.5	41.5	J-760
J22-1089	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	80.8	41.5	J-760
J22-1090	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	81.7	41.5	J-760
J22-1091	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	83.1	41.5	J-760
J22-1147	Zone 4	1,500.0	0.0	1,500.0	3,005.2	True	64.1	41.5	J-760
J22-1158	Zone 4	1,500.0	1.1	1,501.1	4,001.1	True	68.7	41.5	J-760
J22-1159	Zone 4	1,500.0	1.1	1,501.1	4,001.1	True	70.1	41.5	J-760
J22-1160	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	71.6	41.5	J-760
J22-1161	Zone 4	1,500.0	1.1	1,501.1	4,001.1	True	72.2	41.5	J-760
J22-1163	Zone 4	1,500.0	1.1	1,501.1	4,001.1	True	71.7	41.5	J-760
J22-1164	Zone 4	1,500.0	1.1	1,501.1	4,001.1	True	74.8	41.5	J-760
J22-1165	Zone 4	1,500.0	1.5	1,501.5	4,001.5	True	74.1	41.5	J-760
J22-1166	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	75.6	41.5	J-760
J22-1168	Zone 4	1,500.0	1.5	1,501.5	4,001.5	True	74.3	41.5	J-760
J22-1169	Zone 4	1,500.0	1.9	1,501.9	4,001.9	True	74.1	41.5	J-760
J22-1170	Zone 4	1,500.0	1.5	1,501.5	3,082.9	True	64.9	41.5	J-760
J22-1171	Zone 4	1,500.0	1.5	1,501.5	3,317.4	True	66.6	41.5	J-760
J22-1172	Zone 4	1,500.0	3.4	1,503.4	4,003.4	True	70.1	41.5	J-760
J22-1173	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	78.1	41.5	J-760
J22-1174	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	78.9	41.5	J-760
J22-1175	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	80.7	41.5	J-760
J22-1092	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	81.2	41.5	J-760
J-1179	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	68.0	41.5	J-760
J-1183	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	66.4	41.5	J-760
J-1184	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	62.9	41.5	J-760
J-23-1186	Zone 4	0.0	0.0	1,000.0	4,000.0	True	64.1	42.0	J-760
J-23-1187	Zone 4	0.0	0.8	1,000.8	4,000.8	True	62.8	42.0	J-760
J-23-1188	Zone 4	0.0	1.1	1,001.1	4,001.1	True	62.4	42.0	J-760
J-23-1189	Zone 4	0.0	1.1	1,001.1	3,582.8	True	60.1	42.0	J-760
J-23-1190	Zone 4	0.0	0.8	1,000.8	3,505.9	True	59.4	42.0	J-760
J-23-1191	Zone 4	0.0	0.0	1,000.0	3,522.8	True	60.1	42.0	J-760
J-23-1192	Zone 4	0.0	0.0	1,000.0	3,542.5	True	60.6	42.0	J-760
J-23-1193	Zone 4	0.0	2.6	1,002.6	3,608.4	True	61.5	42.0	J-760

## GBWC 2024 IRP - Cold Springs Division

### Action (2027) MDD+Fire Condition Distribution System Junction Report

Fire Flow - Time: 0.00 hours

Label	Zone	Fire Flow (Needed) (gpm)	MDD (gpm)	Total Flow Needed (Fire Flow + MDD) (gpm)	Available Flow at 20 psi Min. Residual Pressure (gpm)	Satisfies Fire Flow Constraints ?	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Zone Lower Limit @ Total Flow Needed) (psi)	Junction w/ Minimum Pressure (Zone @ Total Flow Needed)
J-23-1194	Zone 4	0.0	1.9	1,001.9	3,796.6	True	63.1	42.0	J-760
J-23-1195	Zone 4	0.0	1.1	1,001.1	3,995.5	True	64.0	42.0	J-760
J-23-1196	Zone 4	0.0	1.5	1,001.5	4,001.5	True	65.1	42.0	J-760
J-23-1197	Zone 4	0.0	1.1	1,001.1	4,001.1	True	66.1	42.0	J-760
J-1198	Zone 4	0.0	0.0	1,000.0	4,000.0	True	66.3	42.0	J-760
J-1199	Zone 4	0.0	0.0	1,000.0	4,000.0	True	65.5	42.0	J-760
J-1200	Zone 4	0.0	0.0	1,000.0	4,000.0	True	68.2	42.0	J-760
J-23-1201	Zone 4	0.0	1.5	1,001.5	4,001.5	True	68.3	42.0	J-760
J-23-1202	Zone 4	0.0	1.9	1,001.9	3,751.1	True	66.2	42.0	J-760
J-23-1203	Zone 4	0.0	1.9	1,001.9	4,001.9	True	74.0	42.0	J-760
J-23-1204	Zone 4	0.0	1.9	1,001.9	3,619.2	True	71.0	42.0	J-760
J-23-1205	Zone 4	0.0	1.1	1,001.1	3,870.6	True	71.4	42.0	J-760
J-23-1206	Zone 4	0.0	1.1	1,001.1	3,705.4	True	70.6	42.0	J-760
J-23-1207	Zone 4	0.0	1.9	1,001.9	4,001.9	True	79.5	42.0	J-760
J-23-1208	Zone 4	0.0	2.6	1,002.6	4,002.6	True	77.8	42.0	J-760
J-23-1209	Zone 4	0.0	0.0	1,000.0	4,000.0	True	79.6	42.0	J-760
J-23-1210	Zone 4	0.0	0.0	1,000.0	4,000.0	True	80.1	42.0	J-760
J-23-1212	Zone 4	0.0	1.5	1,001.5	4,001.5	True	79.8	42.0	J-760
J-23-1213	Zone 4	0.0	2.3	1,002.3	4,002.3	True	81.4	42.0	J-760
J-23-1214	Zone 4	0.0	0.4	1,000.4	4,000.4	True	81.2	42.0	J-760
J-23-1215	Zone 4	0.0	0.8	1,000.8	4,000.8	True	81.1	42.0	J-760
J-23-1216	Zone 4	0.0	1.1	1,001.1	4,001.1	True	80.7	42.0	J-760
J-23-1217	Zone 4	0.0	0.0	1,000.0	4,000.0	True	80.7	42.0	J-760

## GBWC 2024 IRP - Cold Springs Division

### Action (2027) MDD+Fire Condition Distribution System Junction Report

Fire Flow - Time: 0.00 hours

Label	Zone	Fire Flow (Needed) (gpm)	MDD (gpm)	Total Flow Needed (Fire Flow + MDD) (gpm)	Available Flow at 20 psi Min. Residual Pressure (gpm)	Satisfies Fire Flow Constraints ?	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Zone Lower Limit @ Total Flow Needed) (psi)	Junction w/ Minimum Pressure (Zone @ Total Flow Needed)
J-23-1219	Zone 4	0.0	0.8	1,000.8	4,000.8	True	80.9	42.0	J-760
J-23-1220	Zone 4	0.0	0.0	1,000.0	4,000.0	True	80.6	42.0	J-760
J-23-1221	Zone 4	0.0	0.0	1,000.0	4,000.0	True	80.6	42.0	J-760
J-23-1222	Zone 4	0.0	0.0	1,000.0	4,000.0	True	77.9	42.0	J-760
J-23-1223	Zone 4	0.0	0.0	1,000.0	4,000.0	True	77.7	42.0	J-760
J-23-1225	Zone 4	0.0	0.0	1,000.0	3,433.6	True	59.8	42.0	J-760
J-23-1228	Zone 4	0.0	3.0	1,003.0	4,003.0	True	78.4	42.0	J-760
J-1242	Zone 1	1,500.0	0.0	1,500.0	1,709.9	True	59.3	30.9	J-652
J-1245	Zone 2	1,500.0	0.0	1,500.0	4,000.0	True	52.1	37.5	J-127
J-1246	Zone 2	1,500.0	0.0	1,500.0	4,000.0	True	50.0	36.6	J-127
J-1248	Zone 2	1,500.0	0.0	1,500.0	3,396.9	True	38.4	35.9	J-127
J-1275	Zone 4	0.0	0.0	1,000.0	3,885.6	True	76.4	42.0	J-760
J-1278	Zone 4	0.0	0.0	1,000.0	4,000.0	True	83.4	42.0	J-760

**GBWC 2024 IRP - Cold Springs Division**  
**Action (2027) PHD Condition Distribution System Junction Report**  
 PHD-NODES - Time: 0.00 hours

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
232	J-127	5,090.00	Zone 2	14.0	5,176.90	37.6
142	J-33	5,083.00	Zone 2	0.0	5,172.16	38.6
233	J-128	5,085.00	Zone 2	15.8	5,175.66	39.2
231	J-126	5,083.00	Zone 2	14.9	5,175.58	40.1
1620	J-760	5,181.43	Zone 4	0.0	5,278.83	42.1
1595	J-759	5,180.85	Zone 4	0.0	5,278.82	42.4
322	J-241	5,180.85	Zone 4	0.0	5,278.83	42.4
183	J-77	5,080.00	Zone 2	12.1	5,174.79	41.0
185	J-79	5,080.00	Zone 2	37.3	5,174.87	41.0
234	J-129	5,080.00	Zone 2	0.0	5,175.31	41.2
1564	J-747	5,177.53	Zone 4	6.0	5,278.82	43.8
171	J-65	5,078.00	Zone 2	10.3	5,175.15	42.0
215	J-110	5,078.00	Zone 2	23.3	5,174.76	41.9
235	J-130	5,078.00	Zone 2	14.0	5,175.32	42.1
1535	J-742	5,176.39	Zone 4	0.0	5,278.82	44.3
1569	J-749	5,176.03	Zone 4	0.0	5,278.82	44.5
181	J-75	5,076.00	Zone 2	7.5	5,174.93	42.8
1562	J-746	5,174.93	Zone 4	0.0	5,278.81	44.9
186	J-80	5,075.00	Zone 2	0.0	5,174.72	43.1
230	J-125	5,075.00	Zone 2	0.0	5,174.91	43.2
1538	J-743	5,174.58	Zone 4	7.4	5,278.82	45.1
1573	J-751	5,174.46	Zone 4	5.4	5,278.81	45.1
184	J-78	5,074.00	Zone 2	0.0	5,174.77	43.6
193	J-87	5,074.00	Zone 2	11.2	5,174.79	43.6
237	J-132	5,073.00	Zone 2	0.0	5,174.95	44.1
236	J-131	5,073.00	Zone 2	18.6	5,175.00	44.1
238	J-133	5,072.00	Zone 2	18.6	5,174.90	44.5
194	J-88	5,072.00	Zone 2	13.0	5,174.81	44.5
204	J-98	5,072.00	Zone 2	0.0	5,174.85	44.5
505	J-480	5,170.56	Zone 4	0.0	5,278.82	46.8
430	J-397	5,170.00	Zone 4	8.0	5,278.81	47.1
195	J-89	5,070.00	Zone 2	0.0	5,174.83	45.4
170	J-64	5,070.00	Zone 2	10.3	5,174.86	45.4
198	J-92	5,070.00	Zone 2	14.0	5,174.87	45.4
205	J-99	5,070.00	Zone 2	0.0	5,174.86	45.4
211	J-105	5,070.00	Zone 2	0.0	5,174.77	45.3
212	J-106	5,070.00	Zone 2	15.8	5,174.77	45.3
213	J-108	5,070.00	Zone 2	13.0	5,174.77	45.3
224	J-119	5,070.00	Zone 2	9.3	5,174.76	45.3
321	J-240	5,070.00	Zone 2	0.0	5,175.00	45.4
182	J-76	5,070.00	Zone 2	4.7	5,174.92	45.4
172	J-66	5,070.00	Zone 2	13.0	5,174.93	45.4
429	J-396	5,169.00	Zone 4	9.4	5,278.81	47.5
202	J-96	5,069.00	Zone 2	14.9	5,174.83	45.8
210	J-104	5,069.00	Zone 2	12.1	5,174.78	45.8
214	J-109	5,069.00	Zone 2	9.3	5,174.77	45.8



**GBWC 2024 IRP - Cold Springs Division**  
**Action (2027) PHD Condition Distribution System Junction Report**  
**PHD-NODES - Time: 0.00 hours**

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
239	J-134	5,068.00	Zone 2	0.0	5,174.86	46.2
188	J-82	5,068.00	Zone 2	0.0	5,174.86	46.2
189	J-83	5,068.00	Zone 2	11.2	5,174.86	46.2
191	J-85	5,068.00	Zone 2	12.1	5,174.86	46.2
190	J-84	5,068.00	Zone 2	13.0	5,174.86	46.2
201	J-95	5,068.00	Zone 2	17.7	5,174.84	46.2
209	J-103	5,068.00	Zone 2	10.3	5,174.81	46.2
223	J-118	5,068.00	Zone 2	10.3	5,174.77	46.2
222	J-117	5,068.00	Zone 2	0.0	5,174.77	46.2
228	J-123	5,068.00	Zone 2	14.9	5,174.77	46.2
199	J-93	5,067.00	Zone 2	0.0	5,174.85	46.7
431	J-398	5,166.00	Zone 4	1.1	5,278.82	48.8
1579	J-753	5,165.91	Zone 4	6.7	5,278.81	48.8
196	J-90	5,066.00	Zone 2	11.2	5,174.85	47.1
221	J-116	5,065.00	Zone 2	13.0	5,174.76	47.5
227	J-122	5,065.00	Zone 2	13.0	5,174.77	47.5
203	J-97	5,065.00	Zone 2	0.0	5,174.82	47.5
216	J-111	5,065.00	Zone 2	16.8	5,174.77	47.5
1560	J-ph19 IRR2	5,164.42	NO FIRE	0.0	5,278.81	49.5
168	J-62	5,065.00	Zone 2	9.3	5,174.91	47.6
1558	J-744	5,164.42	Zone 4	0.0	5,278.81	49.5
148	J-40	5,065.00	Zone 2	17.7	5,174.94	47.6
316	J-235	5,203.00	Zone 3	0.0	5,316.44	49.1
317	J-237	5,203.00	Zone 3	5.3	5,316.44	49.1
315	J-234	5,202.00	Zone 3	4.6	5,315.79	49.2
1576	J-752	5,163.52	Zone 4	6.7	5,278.81	49.9
1586	J-756	5,163.08	Zone 4	6.7	5,278.81	50.1
226	J-121	5,063.00	Zone 2	0.0	5,174.78	48.4
152	J-45	5,063.00	Zone 2	14.9	5,174.82	48.4
269	J-185	5,200.00	Zone 3	0.0	5,315.79	50.1
200	GOMES ELEM SCHOOL	5,062.00	Zone 2	13.5	5,174.85	48.8
220	J-115	5,062.00	Zone 2	12.1	5,174.77	48.8
225	J-120	5,062.00	Zone 2	18.6	5,174.78	48.8
192	J-86	5,062.00	Zone 2	0.0	5,174.89	48.8
229	J-124	5,062.00	Zone 2	0.0	5,174.80	48.8
187	J-81	5,061.00	Zone 2	18.6	5,174.85	49.3
197	J-91	5,061.00	Zone 2	0.0	5,174.86	49.3
219	J-114	5,060.00	Zone 2	14.9	5,174.77	49.7
146	J-38	5,060.00	Zone 2	16.8	5,174.90	49.7
147	J-39	5,060.00	Zone 2	14.9	5,174.90	49.7
415	J-355	5,060.00	Zone 2	0.0	5,174.86	49.7
151	J-44	5,060.00	Zone 2	17.7	5,174.87	49.7
173	J-67	5,060.00	Zone 2	14.9	5,174.94	49.7
178	J-72	5,060.00	Zone 2	20.5	5,174.96	49.7
179	J-73	5,060.00	Zone 2	0.0	5,174.99	49.8

**GBWC 2024 IRP - Cold Springs Division**  
**Action (2027) PHD Condition Distribution System Junction Report**  
**PHD-NODES - Time: 0.00 hours**

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
180	J-74	5,060.00	Zone 2	15.8	5,175.02	49.8
176	J-70	5,060.00	Zone 2	6.5	5,175.11	49.8
166	J-60	5,058.00	Zone 2	14.9	5,174.90	50.6
167	J-61	5,058.00	Zone 2	16.8	5,174.90	50.6
207	J-101	5,058.00	Zone 2	0.0	5,175.11	50.7
506	J-481	5,156.88	Zone 4	0.0	5,278.81	52.8
274	J-192	5,200.00	Zone 1	1.1	5,320.78	52.3
1583	J-755	5,155.60	Zone 4	6.7	5,278.81	53.3
175	J-69	5,056.00	Zone 2	0.0	5,175.00	51.5
353	J-275	5,055.00	Zone 2	13.0	5,174.77	51.8
352	J-274	5,055.00	Zone 2	9.3	5,174.78	51.8
218	J-113	5,055.00	Zone 2	3.7	5,174.79	51.8
217	J-112	5,055.00	Zone 2	19.6	5,174.80	51.8
259	J-157	5,055.00	Zone 2	0.0	5,174.95	51.9
206	J-100	5,055.00	Zone 2	12.1	5,175.11	52.0
136	J-17	5,055.00	Zone 2	0.0	5,175.19	52.0
428	J-395	5,152.00	Zone 4	6.7	5,278.81	54.9
177	J-71	5,052.00	Zone 2	0.0	5,175.19	53.3
135	J-16	5,052.00	Zone 2	0.0	5,175.29	53.3
208	J-102	5,052.00	Zone 2	18.6	5,175.34	53.4
150	J-43	5,052.00	Zone 2	9.3	5,175.37	53.4
174	J-68	5,050.00	Zone 2	13.0	5,174.96	54.1
159	J-53	5,050.00	Zone 2	16.8	5,175.19	54.2
2938	J-1245	5,050.00	Zone 2	0.0	5,175.19	54.2
2946	J-1246	5,050.00	Zone 2	0.0	5,175.19	54.2
145	J-37	5,050.00	Zone 2	0.0	5,175.22	54.2
163	J-57	5,050.00	Zone 2	13.0	5,176.13	54.6
432	J-399	5,147.42	Zone 4	1.4	5,278.81	56.8
165	J-59	5,050.00	Zone 2	9.3	5,176.79	54.9
164	J-58	5,048.00	Zone 2	0.0	5,175.88	55.3
427	J-394	5,146.00	Zone 4	9.4	5,278.80	57.5
1592	J-758	5,145.34	Zone 4	6.7	5,278.81	57.7
162	J-56	5,048.00	Zone 2	16.8	5,176.90	55.8
161	J-55	5,048.00	Zone 2	11.2	5,177.62	56.1
276	J-194	5,046.00	Zone 2	14.0	5,175.98	56.2
1860	J-805	5,046.00	Zone 4	0.0	5,176.14	56.3
156	J-50	5,046.00	Zone 2	11.2	5,176.17	56.3
158	J-52	5,045.00	Zone 2	6.5	5,175.33	56.4
169	J-63	5,045.00	Zone 2	15.3	5,175.84	56.6
680	J-ph19 IRR1	5,143.72	NO FIRE	0.0	5,278.83	58.5
247	J-142	5,180.00	Zone 3	8.6	5,313.64	57.8
333	J-255	5,045.00	Zone 2	0.0	5,176.56	56.9
1589	J-757	5,142.82	Zone 4	6.7	5,278.82	58.8
134	J-15	5,046.00	Zone 2	0.6	5,177.88	57.1
149	J-42	5,045.00	Zone 2	2.5	5,176.99	57.1
245	J-140	5,180.00	Zone 3	17.1	5,314.91	58.4

GBWC CS IRP 2024 Model\_LIDAR Elev  
Update.wtg  
2/28/2024

Bentley Systems, Inc. Haestad Methods Solution  
Center  
76 Watertown Road, Suite 2D Thomaston, CT  
06787 USA +1-203-755-1666

WaterCAD  
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**GBWC 2024 IRP - Cold Springs Division**  
**Action (2027) PHD Condition Distribution System Junction Report**  
**PHD-NODES - Time: 0.00 hours**

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
157	J-51	5,042.00	Zone 2	8.4	5,175.59	57.8
425	J-392	5,140.00	Zone 4	9.4	5,278.79	60.0
426	J-393	5,140.00	Zone 4	8.0	5,278.79	60.0
423	J-390	5,140.00	Zone 4	0.0	5,278.77	60.0
160	J-54	5,045.00	Zone 2	0.0	5,180.49	58.6
252	J-149 Reno Truss	5,045.00	Zone 2	1.1	5,180.49	58.6
424	J-391	5,138.00	Zone 4	6.7	5,278.80	60.9
422	J-389	5,138.00	Zone 4	2.7	5,278.74	60.9
1806	J-797	5,045.00	Zone 2	16.8	5,183.11	59.8
507	J-482	5,135.00	Zone 4	0.0	5,278.80	62.2
690	FH-925	5,134.00	Zone 4	0.0	5,278.83	62.7
123	J-3	5,175.00	Zone 1	0.0	5,318.88	62.2
2752	J-23-1190	5,133.35	Zone 4	1.3	5,278.86	63.0
679	J-685	5,132.00	Zone 4	0.0	5,278.83	63.5
673	J-679	5,131.00	Zone 4	11.4	5,278.80	63.9
2750	J-23-1189	5,131.90	Zone 4	2.0	5,278.86	63.6
2834	J-23-1225	5,131.90	Zone 4	0.0	5,278.86	63.6
2754	J-23-1191	5,131.52	Zone 4	0.0	5,278.86	63.7
693	FH-921	5,130.00	Zone 4	0.0	5,278.80	64.4
2756	J-23-1192	5,130.50	Zone 4	0.0	5,278.86	64.2
1938	J-819	5,130.00	Zone 4	0.0	5,278.86	64.4
1940	J-820	5,129.04	Zone 4	0.0	5,278.86	64.8
1982	J-829	5,129.00	Zone 4	0.0	5,278.86	64.8
2748	J-23-1188	5,128.90	Zone 4	2.0	5,278.86	64.9
2758	J-23-1193	5,128.40	Zone 4	4.7	5,278.86	65.1
1996	J-836	5,128.20	Zone 4	6.0	5,278.86	65.2
2746	J-23-1187	5,128.18	Zone 4	1.3	5,278.86	65.2
1911	J-815	5,128.00	Zone 4	1.8	5,278.86	65.3
672	J-678	5,126.00	Zone 4	0.0	5,278.81	66.1
2140	J22-901	5,126.71	Zone 4	0.0	5,278.86	65.8
2999	J-1262	5,167.94	Zone 1	0.4	5,318.46	65.1
678	FH-926	5,126.00	Zone 4	0.0	5,278.84	66.1
418	J-352	5,125.00	Zone 4	8.7	5,278.80	66.5
283	J-184	5,125.00	Zone 4	90.9	5,278.72	66.5
2744	J-23-1186	5,125.90	Zone 4	0.0	5,278.86	66.2
692	FH-922	5,125.00	Zone 4	0.0	5,278.81	66.5
2760	J-23-1194	5,125.40	Zone 4	3.3	5,278.86	66.4
1899	J-810	5,125.00	Zone 4	0.0	5,278.86	66.6
1984	J-830	5,124.80	Zone 4	0.0	5,278.86	66.7
2007	J-841	5,124.70	Zone 4	0.0	5,278.86	66.7
1495	J-730	5,124.00	Zone 4	0.0	5,278.86	67.0
1890	J-806	5,124.00	Zone 4	0.0	5,278.86	67.0
1901	J-811	5,124.00	Zone 4	8.7	5,278.86	67.0
1913	J-816	5,124.00	Zone 4	8.0	5,278.86	67.0
2762	J-23-1195	5,124.00	Zone 4	2.0	5,278.86	67.0

**GBWC 2024 IRP - Cold Springs Division**  
**Action (2027) PHD Condition Distribution System Junction Report**  
**PHD-NODES - Time: 0.00 hours**

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
248	J-143	5,160.00	Zone 3	5.9	5,313.61	66.5
250	J-145	5,160.00	Zone 3	7.9	5,313.72	66.5
1503	J-732	5,123.61	Zone 4	0.0	5,278.86	67.2
671	J-677	5,123.00	Zone 4	13.4	5,278.81	67.4
246	J-141	5,160.00	Zone 3	7.2	5,313.93	66.6
2735	J-1184	5,123.50	Zone 4	0.0	5,278.86	67.2
2772	J-1199	5,123.45	Zone 4	0.0	5,278.86	67.2
270	J-187	5,160.00	Zone 3	0.0	5,314.67	66.9
1892	J-807	5,123.00	Zone 4	7.4	5,278.86	67.4
2137	J22-899	5,122.97	Zone 4	0.0	5,278.86	67.4
682	J-688	5,122.00	Zone 4	4.1	5,278.85	67.9
2764	J-23-1196	5,122.20	Zone 4	2.7	5,278.86	67.8
691	FH-923	5,121.00	Zone 4	0.0	5,278.82	68.3
681	J-687	5,121.00	Zone 4	0.0	5,278.85	68.3
2768	J-1198	5,121.33	Zone 4	0.0	5,278.86	68.2
465	J-434	5,120.00	Zone 4	5.4	5,278.71	68.7
284	J-195	5,120.00	Zone 4	0.0	5,278.71	68.7
464	J-433	5,120.00	Zone 4	2.7	5,278.71	68.7
2766	J-23-1197	5,120.77	Zone 4	2.0	5,278.86	68.4
687	FH-927	5,119.00	Zone 4	0.0	5,278.85	69.2
685	FH-930	5,119.00	Zone 4	0.0	5,278.85	69.2
279	J-189	5,160.00	Zone 1	0.0	5,317.67	68.2
124	J-4	5,160.00	Zone 1	8.4	5,317.99	68.4
2436	J22-1078	5,118.46	Zone 4	0.0	5,278.86	69.4
669	J-675	5,118.00	Zone 4	0.0	5,278.85	69.6
244	J-139	5,155.00	Zone 3	0.0	5,314.41	69.0
508	J-483	5,117.00	Zone 4	0.0	5,278.80	70.0
578	J-576	5,117.00	Zone 4	8.0	5,278.81	70.0
2002	J-839	5,117.70	Zone 4	0.0	5,278.86	69.7
2781	J-23-1202	5,117.50	Zone 4	3.3	5,278.86	69.8
2776	J-1200	5,116.98	Zone 4	0.0	5,278.86	70.0
1519	J-736	5,116.72	Zone 4	9.4	5,278.86	70.2
1915	J-817	5,116.00	Zone 4	0.0	5,278.86	70.5
2731	J-1183	5,115.25	Zone 4	0.0	5,278.86	70.8
473	J-443	5,114.00	Zone 4	6.7	5,278.75	71.3
2779	J-23-1201	5,115.00	Zone 4	2.7	5,278.86	70.9
670	J-676	5,114.00	Zone 4	0.0	5,278.84	71.3
281	J-191	5,155.00	Zone 1	8.4	5,316.99	70.1
280	J-190	5,155.00	Zone 1	0.0	5,317.23	70.2
688	J-674	5,113.00	Zone 4	0.0	5,278.86	71.8
684	J-690	5,113.00	Zone 4	0.0	5,278.86	71.8
417	J-348	5,112.00	Zone 4	6.7	5,278.79	72.2
2013	J-844	5,113.00	Zone 4	3.3	5,278.86	71.8
2713	J-1179	5,112.09	Zone 4	0.0	5,278.87	72.2
1894	J-808	5,112.00	Zone 4	0.0	5,278.86	72.2
2018	J-846	5,111.50	Zone 4	0.0	5,278.86	72.4

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**GBWC 2024 IRP - Cold Springs Division**  
**Action (2027) PHD Condition Distribution System Junction Report**  
**PHD-NODES - Time: 0.00 hours**

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
689	FH-924	5,111.00	Zone 4	0.0	5,278.85	72.6
1903	J-812	5,111.00	Zone 4	0.0	5,278.86	72.6
2011	J-843	5,110.80	Zone 4	0.0	5,278.86	72.7
2114	J22-884	5,110.48	Zone 4	2.0	5,278.87	72.9
2009	J-842	5,110.40	Zone 4	6.0	5,278.86	72.9
282	J-193	5,150.00	Zone 1	8.4	5,316.89	72.2
2605	J22-1158	5,109.16	Zone 4	2.0	5,278.87	73.4
2439	J22-1079	5,109.01	Zone 4	5.1	5,278.87	73.5
2004	J-840	5,108.90	Zone 4	6.7	5,278.86	73.5
674	J-680	5,108.00	Zone 4	8.7	5,278.86	73.9
1493	J-729	5,108.00	Zone 4	0.0	5,278.87	73.9
1649	J-770	5,108.00	Zone 4	0.0	5,278.87	73.9
2117	J22-886	5,107.93	Zone 4	2.0	5,278.88	74.0
1516	J-735	5,107.24	Zone 4	0.0	5,278.87	74.3
1905	J-813	5,107.00	Zone 4	8.0	5,278.86	74.4
1917	J-818	5,107.00	Zone 4	7.4	5,278.86	74.4
472	J-442	5,106.00	Zone 4	7.4	5,278.75	74.7
649	J-652	5,145.00	Zone 1	10.5	5,309.71	71.3
2609	J22-1159	5,106.83	Zone 4	2.0	5,278.88	74.4
2015	J-845	5,106.70	Zone 4	6.7	5,278.86	74.5
2442	J22-1080	5,106.38	Zone 4	0.0	5,278.88	74.6
686	FH-928	5,106.00	Zone 4	0.0	5,278.86	74.8
575	J-570	5,106.00	Zone 4	0.0	5,278.87	74.8
416	J-346	5,105.00	Zone 4	0.0	5,278.79	75.2
1896	J-809	5,106.00	Zone 4	7.4	5,278.87	74.8
2789	J-23-1206	5,106.00	Zone 4	2.0	5,278.92	74.8
1946	J-823	5,105.90	Zone 4	0.0	5,278.86	74.8
2119	J22-887	5,105.85	Zone 4	0.0	5,278.88	74.9
1988	J-832	5,105.60	Zone 4	0.0	5,278.87	75.0
2123	J22-890	5,105.57	Zone 4	1.3	5,278.89	75.0
683	J-689	5,105.00	Zone 4	6.0	5,278.86	75.2
646	J-649	5,105.00	Zone 4	0.0	5,278.87	75.2
611	CS MIDDLE SCHOOL	5,105.00	Zone 4	42.8	5,278.87	75.2
576	J-571	5,105.00	Zone 4	0.0	5,278.88	75.2
645	J-642	5,105.00	Zone 4	0.0	5,278.89	75.2
1994	J-835	5,105.20	Zone 4	0.0	5,278.87	75.1
2787	J-23-1205	5,105.15	Zone 4	2.0	5,278.92	75.2
2446	J22-1082	5,104.95	Zone 4	3.1	5,278.88	75.3
2613	J22-1160	5,104.92	Zone 4	0.0	5,278.88	75.3
1992	J-834	5,104.80	Zone 4	0.0	5,278.86	75.3
1990	J-833	5,104.80	Zone 4	0.0	5,278.87	75.3
2785	J-23-1204	5,104.50	Zone 4	3.3	5,278.92	75.5
1907	J-814	5,104.28	Zone 4	0.0	5,278.87	75.5
1513	J-734	5,104.16	Zone 4	0.0	5,278.87	75.6
2621	J22-1163	5,104.00	Zone 4	2.0	5,278.89	75.7

**GBWC 2024 IRP - Cold Springs Division**  
**Action (2027) PHD Condition Distribution System Junction Report**  
**PHD-NODES - Time: 0.00 hours**

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
364	J-286	5,103.00	Zone 4	17.9	5,278.73	76.0
2617	J22-1161	5,103.84	Zone 4	2.0	5,278.89	75.7
249	J-144	5,140.00	Zone 3	0.0	5,313.56	75.1
2449	J22-1083	5,103.53	Zone 4	0.0	5,278.89	75.9
695	FH-919	5,103.00	Zone 4	8.0	5,278.87	76.1
1498	J-731	5,103.00	Zone 4	0.0	5,278.87	76.1
474	J-441	5,102.00	Zone 4	7.4	5,278.76	76.5
2041	J-856	5,102.40	Zone 4	6.0	5,278.87	76.3
2783	J-23-1203	5,102.20	Zone 4	3.3	5,278.92	76.5
243	J-138	5,138.00	Zone 3	0.0	5,314.09	76.2
475	J-444	5,138.00	Zone 3	0.0	5,314.09	76.2
327	J-248	5,138.00	Zone 3	9.2	5,314.14	76.2
2039	J-855	5,101.00	Zone 4	6.0	5,278.87	77.0
360	J-282	5,100.00	Zone 4	7.4	5,278.73	77.3
285	J-196	5,100.00	Zone 4	0.0	5,278.71	77.3
463	J-432	5,100.00	Zone 4	2.7	5,278.71	77.3
1730	J-783	5,100.37	Zone 4	4.7	5,278.87	77.2
2031	J-852	5,100.10	Zone 4	5.4	5,278.87	77.3
511	J-485	5,100.00	Zone 4	15.7	5,278.98	77.4
362	J-284	5,099.00	Zone 4	10.7	5,278.73	77.8
2126	J22-892	5,099.98	Zone 4	1.3	5,278.89	77.4
292	J-203	5,099.00	Zone 4	6.7	5,278.70	77.7
125	J-5	5,140.00	Zone 1	8.4	5,316.74	76.5
675	J-681	5,099.00	Zone 4	0.0	5,278.86	77.8
2046	J-858	5,099.00	Zone 4	5.4	5,278.87	77.8
361	J-283	5,098.00	Zone 4	7.4	5,278.74	78.2
2629	J22-1165	5,098.57	Zone 4	2.7	5,278.90	78.0
2643	J22-1169	5,098.46	Zone 4	3.3	5,278.90	78.1
2029	J-851	5,098.30	Zone 4	5.4	5,278.87	78.1
638	J-639	5,098.00	Zone 4	0.0	5,278.96	78.3
2626	J22-1164	5,098.00	Zone 4	2.0	5,278.90	78.3
2452	J22-1084	5,098.00	Zone 4	0.0	5,278.90	78.3
2639	J22-1168	5,098.00	Zone 4	2.7	5,278.91	78.3
2653	J22-1172	5,097.47	Zone 4	6.0	5,278.90	78.5
664	J-667	5,097.00	Zone 4	0.0	5,278.88	78.7
2854	J23-IRR	5,097.29	NO FIRE	0.0	5,278.92	78.6
2037	J-854	5,097.00	Zone 4	6.0	5,278.88	78.7
293	J-204	5,096.00	Zone 4	6.7	5,278.70	79.0
1510	J-733	5,096.68	Zone 4	9.4	5,278.88	78.8
2034	J-853	5,096.50	Zone 4	0.0	5,278.89	78.9
459	J-428	5,095.50	Zone 4	0.0	5,278.70	79.3
2825	J-23-1222	5,097.83	Zone 4	0.0	5,280.64	79.1
2634	J22-1166	5,095.99	Zone 4	0.0	5,278.92	79.1
359	J-281	5,095.00	Zone 4	5.4	5,278.74	79.5
2455	J22-1085	5,095.96	Zone 4	0.0	5,278.92	79.2
2407	J22-1069	5,095.84	Zone 4	0.0	5,278.89	79.2

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**GBWC 2024 IRP - Cold Springs Division**  
**Action (2027) PHD Condition Distribution System Junction Report**  
**PHD-NODES - Time: 0.00 hours**

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
2132	J22-896	5,095.73	Zone 4	0.0	5,278.90	79.2
2023	J22-848	5,095.00	Zone 4	0.0	5,278.88	79.6
510	J-484	5,095.00	Zone 4	7.4	5,278.98	79.6
2829	J-23-1223	5,095.00	Zone 4	0.0	5,278.94	79.6
2650	J22-1171	5,094.93	Zone 4	2.7	5,278.90	79.6
2793	J-23-1208	5,094.90	Zone 4	4.7	5,278.94	79.6
2044	J-857	5,094.80	Zone 4	0.0	5,278.87	79.6
2411	J22-1070	5,094.79	Zone 4	0.0	5,278.89	79.7
694	FH-920	5,094.00	Zone 4	0.0	5,278.89	80.0
1648	J-769	5,094.00	Zone 4	0.0	5,278.88	80.0
2647	J22-1170	5,093.97	Zone 4	2.7	5,278.90	80.0
2543	J22-1147	5,093.94	Zone 4	0.0	5,278.90	80.0
2458	J22-1086	5,093.95	Zone 4	0.0	5,278.97	80.0
294	J-205	5,093.00	Zone 4	6.7	5,278.69	80.3
676	FH-929	5,093.00	Zone 4	0.0	5,278.87	80.4
2847	J-23-1228	5,093.33	Zone 4	5.4	5,278.97	80.3
2135	J22-898	5,093.00	Zone 4	0.0	5,278.90	80.4
3035	J-1275	5,092.00	Zone 4	0.0	5,278.75	80.8
2027	J-850	5,092.60	Zone 4	5.4	5,278.87	80.6
663	J-666	5,092.00	Zone 4	8.7	5,278.89	80.9
610	J-613	5,092.00	Zone 4	0.0	5,278.97	80.9
295	J-206	5,091.00	Zone 4	6.7	5,278.69	81.2
2021	J-847	5,091.70	Zone 4	0.0	5,278.87	81.0
251	J-146	5,128.00	Zone 3	0.0	5,313.84	80.4
328	J-249	5,128.00	Zone 3	7.2	5,313.85	80.4
1644	J-765	5,091.57	Zone 4	0.0	5,278.87	81.0
2791	J-23-1207	5,091.65	Zone 4	3.3	5,279.01	81.1
715	J-715	5,091.33	Zone 4	0.0	5,278.89	81.1
1647	J-768	5,091.00	Zone 4	0.0	5,278.89	81.3
337	J-259	5,091.00	Zone 4	4.0	5,279.05	81.4
358	J-280	5,090.00	Zone 4	5.4	5,278.73	81.7
2795	J-23-1209	5,091.00	Zone 4	0.0	5,278.93	81.3
286	J-197	5,090.00	Zone 4	0.0	5,278.70	81.6
462	J-431	5,090.00	Zone 4	3.3	5,278.70	81.6
2099	J22-874	5,091.00	Zone 4	1.3	5,279.02	81.3
2461	J22-1087	5,091.01	Zone 4	33.3	5,279.02	81.3
2656	J22-1173	5,091.00	Zone 4	0.0	5,279.02	81.3
469	J-438	5,090.00	Zone 4	8.7	5,278.72	81.7
471	J-440	5,090.00	Zone 4	4.0	5,278.72	81.7
1726	J-782	5,090.81	Zone 4	4.7	5,278.87	81.4
468	J-437	5,090.00	Zone 4	0.0	5,278.73	81.7
363	J-285	5,090.00	Zone 4	8.0	5,278.73	81.7
1489	J-728	5,090.70	Zone 4	2.7	5,278.89	81.4
702	J-704	5,090.07	Zone 4	0.7	5,278.98	81.7
662	J-665	5,090.00	Zone 4	0.0	5,278.92	81.7
325	J-246	5,090.00	Zone 4	0.0	5,279.05	81.8

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**Action (2027) PHD Condition Distribution System Junction Report**  
 PHD-NODES - Time: 0.00 hours

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
343	J-265	5,090.00	Zone 4	0.0	5,279.05	81.8
509	J-466	5,090.00	Zone 4	10.0	5,278.99	81.8
2797	J-23-1210	5,090.00	Zone 4	0.0	5,278.93	81.7
2415	J-1071	5,089.83	Zone 4	0.0	5,278.90	81.8
470	J-439	5,089.00	Zone 4	0.0	5,278.73	82.1
365	J-288	5,089.00	Zone 4	0.0	5,278.73	82.1
705	BLDG 3 - CCCC	5,089.40	Zone 4	1.3	5,278.98	82.0
703	J-705	5,089.40	Zone 4	0.0	5,278.99	82.0
2823	J-23-1221	5,091.00	Zone 4	0.0	5,280.49	82.0
2803	J-23-1212	5,089.64	Zone 4	2.7	5,279.17	82.0
714	J-714	5,089.18	Zone 4	0.0	5,278.90	82.1
668	J-671	5,089.00	Zone 4	0.3	5,278.90	82.2
1643	J-764	5,089.00	Zone 4	5.5	5,278.87	82.1
2821	J-23-1220	5,090.39	Zone 4	0.0	5,280.30	82.2
395	J-325	5,088.00	Zone 4	12.9	5,278.75	82.5
460	J-429	5,088.00	Zone 4	0.0	5,278.69	82.5
296	J-207	5,088.00	Zone 4	6.7	5,278.69	82.5
2108	J22-880	5,089.07	Zone 4	2.0	5,279.17	82.2
2659	J22-1174	5,088.84	Zone 4	0.0	5,279.17	82.3
2464	J22-1088	5,088.72	Zone 4	5.1	5,279.17	82.4
1718	J-780	5,088.22	Zone 4	8.0	5,278.88	82.5
2818	J-23-1219	5,089.50	Zone 4	1.3	5,280.17	82.5
677	J-683	5,088.00	Zone 4	8.7	5,278.89	82.6
2813	J-23-1217	5,089.40	Zone 4	0.0	5,280.17	82.5
1824	J-799	5,088.05	Zone 4	0.0	5,278.88	82.6
666	J-669	5,088.00	Zone 4	0.0	5,278.94	82.6
667	J-670	5,088.00	Zone 4	0.0	5,278.93	82.6
2704	J22-IRR-1178	5,088.35	NO FIRE	0.0	5,279.20	82.6
2811	J-23-1216	5,089.20	Zone 4	2.0	5,280.17	82.6
287	J-198	5,087.00	Zone 4	8.7	5,278.70	82.9
1722	J-781	5,087.65	Zone 4	6.7	5,278.89	82.7
2809	J-23-1215	5,088.75	Zone 4	1.3	5,280.03	82.8
1710	J-778	5,087.53	Zone 4	10.0	5,278.89	82.8
2807	J-23-1214	5,088.50	Zone 4	0.7	5,279.96	82.8
2805	J-23-1213	5,088.20	Zone 4	4.0	5,279.87	82.9
657	J-660	5,087.00	Zone 4	5.4	5,278.94	83.0
512	J-486	5,087.00	Zone 4	0.0	5,278.97	83.1
1646	J-767	5,087.00	Zone 4	2.5	5,278.90	83.0
461	J-430	5,086.00	Zone 4	0.0	5,278.69	83.4
2419	J22-1072	5,086.31	Zone 4	0.0	5,278.90	83.3
338	J-260	5,086.00	Zone 4	4.0	5,278.95	83.5
704	FH-931	5,086.00	Zone 4	0.0	5,278.99	83.5
650	J-653	5,124.00	Zone 1	10.5	5,309.70	80.3
655	J-658	5,086.00	Zone 4	10.0	5,278.97	83.5
659	J-662	5,086.00	Zone 4	6.7	5,278.99	83.5



**GBWC 2024 IRP - Cold Springs Division**  
**Action (2027) PHD Condition Distribution System Junction Report**  
**PHD-NODES - Time: 0.00 hours**

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
288	J-199	5,085.00	Zone 4	9.4	5,278.70	83.8
2467	J22-1089	5,086.25	Zone 4	0.0	5,279.32	83.5
1714	J-779	5,085.71	Zone 4	0.0	5,278.88	83.6
2111	J22-882	5,086.21	Zone 4	2.7	5,279.40	83.6
2662	J22-1175	5,086.17	Zone 4	0.0	5,279.38	83.6
1694	J-774	5,085.54	Zone 4	0.0	5,278.91	83.7
334	J-256	5,085.00	Zone 4	0.0	5,278.96	83.9
1645	J-766	5,085.00	Zone 4	0.0	5,278.92	83.9
697	FH-917	5,085.00	Zone 4	0.0	5,278.97	83.9
654	J-657	5,085.00	Zone 4	6.7	5,278.97	83.9
488	BLDG 4 - Village Grill	5,084.50	Zone 4	0.6	5,279.00	84.1
1642	J-763	5,084.50	Zone 4	0.0	5,278.88	84.1
3045	J-1278	5,084.36	Zone 4	0.0	5,279.00	84.2
1666	J-771	5,084.09	Zone 4	12.7	5,278.91	84.3
487	J-456	5,084.00	Zone 4	0.0	5,279.00	84.4
486	J-455	5,084.00	Zone 4	0.0	5,279.01	84.4
661	J-664	5,084.00	Zone 4	6.0	5,279.04	84.4
289	J-200	5,083.00	Zone 4	9.4	5,278.70	84.7
2105	CS ELEM SCHOOL	5,084.00	Zone 4	4.5	5,279.32	84.5
2470	J22-1090	5,084.00	Zone 4	0.0	5,279.32	84.5
2665	J22-1092	5,084.00	Zone 4	0.0	5,279.32	84.5
1702	J-776	5,083.50	Zone 4	6.7	5,278.90	84.5
652	J-655	5,083.00	Zone 4	6.7	5,279.04	84.8
585	J-586	5,082.00	Zone 4	37.7	5,278.73	85.1
335	J-257	5,082.00	Zone 4	0.0	5,278.85	85.2
340	J-262	5,082.00	Zone 4	0.0	5,278.85	85.2
467	J-436	5,082.00	Zone 4	8.7	5,278.85	85.2
339	J-261	5,082.00	Zone 4	3.3	5,278.96	85.2
1706	J-777	5,082.00	Zone 4	0.0	5,278.90	85.2
642	J-646	5,120.00	Zone 1	16.8	5,309.71	82.1
485	J-454	5,082.00	Zone 4	8.0	5,279.02	85.2
290	J-201	5,081.00	Zone 4	9.4	5,278.69	85.5
291	J-202	5,081.00	Zone 4	8.0	5,278.69	85.5
138	BORDER TOWN CASINO	5,120.00	Zone 1	62.7	5,310.44	82.4
1698	J-775	5,081.61	Zone 4	6.7	5,278.92	85.4
394	J-324	5,081.00	Zone 4	3.3	5,278.84	85.6
1641	J-762	5,081.00	Zone 4	0.0	5,278.90	85.6
641	J-645	5,119.00	Zone 1	0.0	5,309.74	82.5
656	J-659	5,081.00	Zone 4	0.0	5,278.97	85.7
696	FH-918	5,081.00	Zone 4	0.0	5,278.97	85.7
658	J-661	5,081.00	Zone 4	6.0	5,279.00	85.7
698	FH-915	5,081.00	Zone 4	0.0	5,279.00	85.7

**GBWC 2024 IRP - Cold Springs Division**  
**Action (2027) PHD Condition Distribution System Junction Report**  
**PHD-NODES - Time: 0.00 hours**

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
484	J-453	5,081.00	Zone 4	11.4	5,279.05	85.7
700	FH-913	5,081.00	Zone 4	0.0	5,279.05	85.7
2473	J22-1091	5,081.00	Zone 4	0.0	5,279.32	85.8
341	J-263	5,080.00	Zone 4	3.1	5,278.85	86.0
660	J-663	5,080.00	Zone 4	0.0	5,279.05	86.1
1689	J-773	5,079.86	Zone 4	0.0	5,278.92	86.1
483	J-452	5,080.00	Zone 4	0.0	5,279.10	86.1
329	J-250	5,080.00	Zone 4	7.4	5,279.16	86.2
330	J-251	5,080.00	Zone 4	13.4	5,279.27	86.2
420	J-387	5,120.00	Zone 1	0.0	5,316.77	85.1
421	J-388	5,120.00	Zone 1	0.0	5,316.77	85.1
1639	J-761	5,079.00	Zone 4	0.0	5,278.92	86.5
701	FH-916	5,079.00	Zone 4	0.0	5,278.97	86.5
301	J-217	5,115.00	Zone 3	0.0	5,313.43	85.9
299	J-214	5,078.00	Zone 4	6.7	5,278.70	86.8
300	J-215	5,078.00	Zone 4	8.2	5,278.70	86.8
297	J-208	5,078.00	Zone 4	6.7	5,278.71	86.8
503	J-478	5,079.00	Zone 4	5.4	5,279.23	86.6
504	J-479	5,079.00	Zone 4	0.0	5,279.23	86.6
479	J-448	5,116.00	Zone 1	11.5	5,309.34	83.7
640	J-644	5,116.00	Zone 1	17.8	5,309.77	83.8
653	J-656	5,078.00	Zone 4	0.0	5,278.97	87.0
699	FH-914	5,078.00	Zone 4	0.0	5,279.04	87.0
499	J-474	5,078.00	Zone 4	5.4	5,279.20	87.0
2141	J22-902	5,078.00	Zone 4	10.5	5,279.32	87.1
498	J-473	5,077.00	Zone 4	8.0	5,279.00	87.4
651	J-654	5,077.00	Zone 4	0.0	5,279.04	87.4
319	J-239	5,076.00	Zone 4	6.7	5,278.70	87.7
440	J-407	5,077.00	Zone 4	3.3	5,279.24	87.5
493	J-462	5,077.00	Zone 4	12.0	5,279.28	87.5
454	J-421	5,077.00	Zone 4	0.0	5,279.32	87.5
500	J-475	5,076.50	Zone 4	6.0	5,279.25	87.7
342	J-264	5,075.00	Zone 4	6.7	5,278.75	88.2
501	J-476	5,075.50	Zone 4	5.4	5,279.26	88.2
441	J-408	5,075.50	Zone 4	8.0	5,279.24	88.1
442	J-409	5,075.50	Zone 4	4.0	5,279.24	88.2
497	J-472	5,075.00	Zone 4	7.4	5,279.01	88.3
298	J-212	5,074.00	Zone 4	6.0	5,278.70	88.6
478	J-447	5,112.50	Zone 1	8.4	5,309.35	85.2
480	J-423	5,075.00	Zone 4	0.0	5,279.32	88.4
502	J-477	5,074.50	Zone 4	5.4	5,279.27	88.6
391	J-320	5,074.00	Zone 4	5.2	5,279.00	88.7
242	J-137	5,110.00	Zone 3	7.2	5,313.20	87.9
665	J-673	5,074.00	Zone 4	0.0	5,279.10	88.7
453	J-420	5,074.00	Zone 4	0.0	5,279.28	88.8
491	J-460	5,074.00	Zone 4	8.7	5,279.30	88.8

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**GBWC 2024 IRP - Cold Springs Division**  
**Action (2027) PHD Condition Distribution System Junction Report**  
**PHD-NODES - Time: 0.00 hours**

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
492	J-461	5,073.50	Zone 4	10.0	5,279.29	89.0
443	J-410	5,073.50	Zone 4	4.7	5,279.26	89.0
351	J-273	5,073.00	Zone 4	4.7	5,279.00	89.1
496	J-471	5,073.00	Zone 4	10.0	5,279.03	89.1
308	J-226	5,072.00	Zone 4	6.7	5,278.72	89.4
312	J-230	5,072.00	Zone 4	6.7	5,278.74	89.4
313	J-231	5,072.00	Zone 4	6.7	5,278.76	89.5
452	J-419	5,073.00	Zone 4	0.0	5,279.28	89.2
490	J-459	5,073.00	Zone 4	6.0	5,279.29	89.3
262	J-160	5,110.00	Zone 1	9.4	5,309.31	86.2
261	J-159	5,110.00	Zone 1	11.5	5,309.31	86.2
392	J-321	5,072.00	Zone 4	4.0	5,279.00	89.6
349	J-271	5,072.00	Zone 4	7.4	5,279.01	89.6
481	J-449	5,072.00	Zone 4	0.0	5,279.16	89.6
310	J-228	5,071.00	Zone 4	6.7	5,278.73	89.9
450	J-417	5,072.00	Zone 4	8.0	5,279.28	89.7
444	J-411	5,072.00	Zone 4	4.7	5,279.26	89.7
336	J-258	5,071.00	Zone 4	0.0	5,278.78	89.9
456	J-424	5,072.00	Zone 4	4.6	5,279.32	89.7
393	J-323	5,071.00	Zone 4	5.4	5,278.86	89.9
350	J-272	5,071.00	Zone 4	4.7	5,279.01	90.0
320	J-236	5,070.00	Zone 4	0.0	5,278.71	90.3
332	J-254	5,070.00	Zone 4	4.7	5,278.71	90.3
309	J-227	5,070.00	Zone 4	0.0	5,278.73	90.3
451	J-418	5,071.00	Zone 4	7.4	5,279.28	90.1
489	J-458	5,071.00	Zone 4	6.7	5,279.28	90.1
398	J-328	5,108.00	Zone 1	0.0	5,309.35	87.1
449	J-416	5,070.50	Zone 4	0.0	5,279.28	90.3
347	J-269	5,070.00	Zone 4	6.7	5,279.00	90.4
355	J-277	5,070.00	Zone 4	8.0	5,279.00	90.4
348	J-270	5,070.00	Zone 4	7.4	5,279.02	90.4
311	J-229	5,069.00	Zone 4	0.0	5,278.75	90.7
466	J-435	5,069.00	Zone 4	0.0	5,278.76	90.8
314	J-233	5,069.00	Zone 4	10.8	5,278.76	90.8
445	J-412	5,070.00	Zone 4	4.7	5,279.26	90.5
357	J-279	5,069.00	Zone 4	6.0	5,279.01	90.9
307	J-225	5,068.00	Zone 4	0.0	5,278.73	91.2
446	J-413	5,069.00	Zone 4	4.7	5,279.27	91.0
346	J-268	5,068.00	Zone 4	0.0	5,279.01	91.3
354	J-276	5,068.00	Zone 4	9.4	5,279.01	91.3
356	J-278	5,068.00	Zone 4	8.0	5,279.02	91.3
302	J-218	5,067.00	Zone 4	0.0	5,278.72	91.6
439	J-406	5,068.00	Zone 4	0.0	5,279.24	91.4
586	J-587	5,068.00	Zone 4	7.7	5,279.28	91.4
457	J-425	5,068.00	Zone 4	2.7	5,279.28	91.4
447	J-414	5,067.50	Zone 4	0.0	5,279.28	91.6

**GBWC 2024 IRP - Cold Springs Division**  
**Action (2027) PHD Condition Distribution System Junction Report**  
**PHD-NODES - Time: 0.00 hours**

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
345	J-267	5,067.00	Zone 4	0.0	5,279.02	91.7
495	J-470	5,067.00	Zone 4	0.0	5,279.02	91.7
369	J-295	5,067.00	Zone 4	8.7	5,279.26	91.8
370	J-296	5,067.00	Zone 4	7.4	5,279.26	91.8
438	J-405	5,067.00	Zone 4	5.4	5,279.25	91.8
371	J-297	5,067.00	Zone 4	0.0	5,279.29	91.8
448	J-415	5,067.00	Zone 4	0.0	5,279.29	91.8
601	J-603	5,104.00	Zone 1	10.5	5,309.70	89.0
644	J-648	5,104.00	Zone 1	5.2	5,309.70	89.0
368	J-294	5,066.00	Zone 4	6.0	5,279.22	92.3
303	J-219	5,065.00	Zone 4	6.0	5,278.72	92.5
318	J-238	5,065.00	Zone 4	6.7	5,278.74	92.5
306	J-223	5,065.00	Zone 4	6.7	5,278.74	92.5
433	J-400	5,066.00	Zone 4	5.4	5,279.28	92.3
388	J-316	5,065.50	Zone 4	12.4	5,279.29	92.5
380	J-308	5,065.50	Zone 4	10.7	5,279.31	92.5
344	J-266	5,065.00	Zone 4	6.0	5,279.11	92.6
375	J-303	5,065.00	Zone 4	3.3	5,279.11	92.6
305	J-221	5,064.00	Zone 4	6.7	5,278.73	92.9
437	J-404	5,065.00	Zone 4	5.4	5,279.26	92.7
386	J-314	5,065.00	Zone 4	0.0	5,279.29	92.7
387	J-315	5,065.00	Zone 4	9.4	5,279.29	92.7
385	J-313	5,064.50	Zone 4	8.0	5,279.30	92.9
381	J-309	5,064.50	Zone 4	6.7	5,279.31	92.9
643	J-647	5,102.00	Zone 1	10.5	5,309.70	89.9
593	J-596	5,102.00	Zone 1	0.0	5,310.04	90.0
139	J-25	5,102.00	Zone 1	0.0	5,310.12	90.0
436	J-403	5,064.00	Zone 4	4.7	5,279.26	93.1
384	J-312	5,064.00	Zone 4	9.4	5,279.29	93.1
382	J-310	5,064.00	Zone 4	9.4	5,279.31	93.2
304	J-220	5,062.00	Zone 4	6.7	5,278.73	93.8
458	J-426	5,063.00	Zone 4	7.4	5,279.28	93.6
372	J-298	5,063.00	Zone 4	0.0	5,279.29	93.6
383	J-311	5,063.00	Zone 4	0.0	5,279.31	93.6
379	J-307	5,063.00	Zone 4	9.4	5,279.32	93.6
390	J-319	5,063.00	Zone 4	11.6	5,279.36	93.6
404	J-334	5,100.00	Zone 1	0.0	5,309.35	90.6
435	J-402	5,062.00	Zone 4	5.4	5,279.26	94.0
373	J-300	5,062.00	Zone 4	5.4	5,279.31	94.0
389	J-318	5,062.00	Zone 4	0.0	5,279.36	94.0
403	J-333	5,099.00	Zone 1	10.5	5,309.35	91.0
140	J-27	5,099.00	Zone 1	0.0	5,309.58	91.1
605	J-608	5,065.00	Zone 4	0.0	5,282.95	94.3
592	J-595	5,099.00	Zone 1	4.2	5,309.99	91.3
434	J-401	5,061.00	Zone 4	6.0	5,279.27	94.4
241	J-136	5,095.00	Zone 3	19.1	5,310.90	93.4

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**GBWC 2024 IRP - Cold Springs Division**  
**Action (2027) PHD Condition Distribution System Junction Report**  
**PHD-NODES - Time: 0.00 hours**

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
240	J-135	5,095.00	Zone 3	22.4	5,311.01	93.5
331	J-252	5,060.50	Zone 4	20.9	5,279.46	94.7
137	J-23	5,100.00	Zone 1	6.3	5,316.04	93.5
374	J-302	5,060.00	Zone 4	6.7	5,279.35	94.9
399	J-329	5,097.00	Zone 1	8.4	5,309.35	91.9
326	J-247	5,059.50	Zone 4	16.7	5,279.39	95.1
603	J-606	5,096.00	Zone 1	14.7	5,309.75	92.5
591	J-592	5,096.00	Zone 1	13.6	5,309.82	92.5
477	J-446	5,093.00	Zone 1	8.4	5,309.35	93.6
402	J-332	5,091.00	Zone 1	0.0	5,309.35	94.5
268	J-166	5,090.00	Zone 1	8.4	5,309.31	94.9
406	J-336	5,090.00	Zone 1	8.4	5,309.33	94.9
410	J-341	5,090.00	Zone 1	0.0	5,309.33	94.9
407	J-337	5,090.00	Zone 1	15.7	5,309.34	94.9
476	J-445	5,089.00	Zone 1	0.0	5,309.35	95.3
400	J-330	5,089.00	Zone 1	7.3	5,309.35	95.3
589	J-590	5,089.00	Zone 1	9.4	5,309.79	95.5
602	J-604	5,088.00	Zone 1	6.3	5,309.72	95.9
376	J-304	5,090.00	Zone 1	8.4	5,316.41	98.0
126	J-6	5,090.00	Zone 1	8.4	5,316.66	98.1
595	J-597	5,087.00	Zone 1	12.6	5,309.70	96.4
412	J-343	5,085.00	Zone 1	9.4	5,309.31	97.0
409	J-340	5,085.00	Zone 1	6.3	5,309.31	97.1
411	J-342	5,085.00	Zone 1	0.0	5,309.33	97.1
366	J-289	5,085.00	Zone 1	8.4	5,316.67	100.2
367	J-290	5,085.00	Zone 1	0.0	5,316.72	100.3
588	J-589	5,082.00	Zone 1	12.6	5,309.79	98.6
263	J-161	5,080.00	Zone 1	9.4	5,309.32	99.2
264	J-162	5,080.00	Zone 1	10.5	5,309.32	99.2
408	J-339	5,080.00	Zone 1	7.3	5,309.33	99.2
397	J-327	5,080.00	Zone 1	11.5	5,309.35	99.2
594	J-594	5,080.00	Zone 1	0.0	5,309.69	99.4
377	J-305	5,080.00	Zone 1	8.4	5,316.40	102.3
378	J-306	5,080.00	Zone 1	8.4	5,316.73	102.4
419	J-385	5,077.00	Zone 1	1.9	5,309.73	100.7
590	J-591	5,077.00	Zone 1	0.0	5,309.77	100.7
587	J-588	5,077.00	Zone 1	9.4	5,309.79	100.7
405	J-427	5,076.00	Zone 1	10.5	5,309.35	101.0
1798	J-795	5,045.09	Zone 4	0.0	5,288.27	105.2
401	J-331	5,070.50	Zone 1	9.4	5,309.37	103.3
253	J-150	5,070.00	Zone 1	9.4	5,309.62	103.7
606	J-609	5,041.00	Zone 4	0.0	5,288.17	106.9
254	J-151	5,067.00	Zone 1	6.3	5,309.62	105.0
141	J-28	5,066.00	Zone 1	0.0	5,309.40	105.3
266	J-164	5,062.00	Zone 1	14.7	5,309.49	107.1
260	J-158	5,060.00	Zone 1	21.0	5,309.34	107.9

**GBWC 2024 IRP - Cold Springs Division**  
**Action (2027) PHD Condition Distribution System Junction Report**  
 PHD-NODES - Time: 0.00 hours

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
265	J-163	5,060.00	Zone 1	13.6	5,309.42	107.9
256	J-153	5,060.00	Zone 1	9.4	5,309.62	108.0
2922	J-1242	5,059.84	Zone 1	0.0	5,309.34	107.9
267	J-165	5,058.00	Zone 1	22.0	5,309.37	108.8
255	J-152	5,058.00	Zone 1	10.5	5,309.62	108.9
129	J-10	5,060.00	Zone 1	8.4	5,315.91	110.7
128	J-9	5,060.00	Zone 1	8.4	5,316.16	110.8
127	J-8	5,060.00	Zone 1	8.4	5,316.60	111.0
258	J-155	5,052.00	Zone 1	8.4	5,309.62	111.5
257	J-154	5,052.00	Zone 1	12.2	5,309.63	111.5
144	J-36	5,050.00	Zone 1	0.0	5,309.77	112.4
413	J-344	5,050.00	Zone 1	0.0	5,309.77	112.4
608	J-611	5,050.00	Zone 1	7.3	5,309.86	112.4
609	J-612	5,048.00	Zone 1	7.0	5,309.86	113.3
2977	J-1252 IRR	5,045.00	Zone 1	18.8	5,310.54	114.9
414	J-350	5,045.00	Zone 1	0.0	5,310.81	115.0
706	J-706	5,045.00	Zone 1	0.0	5,310.81	115.0
707	FH-801	5,045.00	Zone 1	0.0	5,310.81	115.0
154	J-48	5,043.00	Zone 1	15.7	5,310.24	115.6
153	J-47	5,043.00	Zone 1	12.6	5,310.29	115.6
155	J-49	5,040.00	Zone 1	15.7	5,310.23	116.9
133	J-14	5,040.00	Zone 1	28.7	5,310.82	117.2
131	J-12	5,040.00	Zone 1	0.0	5,312.60	117.9
130	J-11	5,040.00	Zone 1	0.0	5,314.57	118.8
143	J-35	5,038.00	Zone 1	11.5	5,310.53	117.9
132	J-13	5,038.00	Zone 1	2.0	5,310.85	118.0

**GBWC 2024 IRP - Cold Springs Division**  
**Action (2027) PHD Condition Distribution System Pipe Report**  
 PHD-PIPES - Time: 0.00 hours

Label	Length (Scaled) (ft)	Diameter (in)	Material	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Hazen- Williams C	Zone
P-333	306	6.0	PVC	-678.4	7.6974	9.64	140.0	Zone 3
P-332	335	6.0	PVC	-678.4	7.6974	10.56	140.0	Zone 2
P-112	817	10.0	PVC	747.8	3.0547	2.56	140.0	Zone 2
P-1320	290	8.0	Asbestos Cement	578.6	3.6929	2.62	110.0	Zone 2
P-69	485	6.0	PVC	274.6	3.1162	2.86	140.0	Zone 2
P-1321	1,295	8.0	Asbestos Cement	447.3	2.8551	7.26	110.0	Zone 2
P-138	1,660	10.0	PVC	602.8	2.4623	3.49	140.0	Zone 4
P-139	2,481	10.0	PVC	602.8	2.4623	5.22	140.0	Zone 4
P-1319	50	10.0	PVC	602.8	2.4623	0.10	140.0	Zone 4
P-1504	71	8.0	PVC	-306.8	1.9585	0.13	140.0	Zone 4
P-1505	107	8.0	PVC	-306.8	1.9585	0.19	140.0	Zone 4
P-1506	87	8.0	PVC	-306.8	1.9585	0.16	140.0	Zone 4
P-1502(1)(1)	81	8.0	PVC	-303.5	1.9372	0.14	140.0	Zone 4
P-67	955	8.0	Asbestos Cement	302.9	1.9332	2.60	110.0	Zone 2
P-1501	41	8.0	PVC	-302.2	1.9287	0.07	140.0	Zone 4
P-48	331	8.0	Asbestos Cement	302.3	1.9295	0.90	110.0	Zone 2
P-1500	49	8.0	PVC	-301.5	1.9244	0.08	140.0	Zone 4
P-447	249	8.0	PVC	299.8	1.9136	0.43	140.0	Zone 2
P-153	374	6.0	PVC	157.5	1.7873	0.79	140.0	Zone 2
P-1499	278	8.0	PVC	-297.5	1.8988	0.47	140.0	Zone 4
P-1345	228	8.0	PVC	298.0	1.9018	0.39	140.0	Zone 2
P22-N-7-2	16	8.0	PVC	-294.8	1.8817	0.03	140.0	Zone 4
P22-N-7-1	32	8.0	PVC	-294.8	1.8817	0.05	140.0	Zone 4
P-191	451	8.0	PVC	-386.9	2.4697	1.24	140.0	Zone 2
P-187	165	10.0	PVC	430.1	1.7571	0.19	140.0	Zone 2
P-398	279	10.0	PVC	639.7	2.6133	0.65	140.0	Zone 3
P-73	392	8.0	PVC	260.0	1.6594	0.51	140.0	Zone 2
P-299	377	10.0	PVC	635.1	2.5945	0.87	140.0	Zone 3
P-206	1,236	10.0	PVC	564.7	2.3068	2.30	140.0	Zone 3
P-76	544	6.0	PVC	132.8	1.5073	0.84	140.0	Zone 2
P-70	484	6.0	PVC	130.6	1.4820	0.72	140.0	Zone 2
P-75	486	6.0	PVC	123.5	1.4015	0.65	140.0	Zone 2
P-450	267	10.0	PVC	237.7	0.9708	0.09	140.0	Zone 4
P-452	285	10.0	PVC	230.3	0.9408	0.10	140.0	Zone 4
P-26	2,117	8.0	PVC	379.5	2.4220	5.60	140.0	Zone 1
P-190	887	8.0	PVC	277.4	1.7708	1.31	140.0	Zone 2
P-454	198	10.0	PVC	218.5	0.8927	0.07	140.0	Zone 4
P-110	186	10.0	PVC	190.4	0.7777	0.05	140.0	Zone 2
P-71	665	6.0	PVC	113.8	1.2917	0.77	140.0	Zone 2
P-147	346	8.0	PVC	190.4	1.2155	0.26	140.0	Zone 2
P-189	506	8.0	PVC	262.5	1.6757	0.68	140.0	Zone 2

**GBWC 2024 IRP - Cold Springs Division**  
**Action (2027) PHD Condition Distribution System Pipe Report**  
 PHD-PIPES - Time: 0.00 hours

Label	Length (Scaled) (ft)	Diameter (in)	Material	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Hazen- Williams C	Zone
P-148	342	8.0	PVC	185.8	1.1858	0.24	140.0	Zone 2
P-84	1,489	10.0	PVC	308.2	1.2591	0.90	140.0	Zone 2
P-1346	384	8.0	PVC	193.2	1.2331	0.29	140.0	Zone 2
P-1173	51	6.0	PVC	14.4	0.1634	0.00	140.0	Zone 4
P-1174	219	6.0	PVC	14.4	0.1634	0.01	140.0	Zone 4
P-317	1,062	12.0	Ductile Iron	766.3	2.1738	1.91	120.0	Zone 1
P-4(1)	233	12.0	Ductile Iron	766.3	2.1738	0.42	120.0	Zone 1
P-4(2)	263	12.0	Ductile Iron	765.9	2.1726	0.47	120.0	Zone 1
P-370	267	8.0	PVC	281.9	1.7994	0.41	140.0	Zone 3
P-433	151	8.0	PVC	-281.9	1.7994	0.23	140.0	Zone 3
P-210	864	10.0	PVC	431.7	1.7637	0.98	140.0	Zone 3
P-438	442	10.0	PVC	250.9	1.0250	0.19	140.0	Zone 4
P-780	474	12.0	PVC	361.9	1.0267	0.16	140.0	Zone 4
P-436	302	10.0	PVC	237.5	0.9703	0.11	140.0	Zone 4
P-676	519	10.0	PVC	483.0	1.9730	0.72	140.0	Zone 1
P-434	311	10.0	PVC	230.2	0.9403	0.11	140.0	Zone 4
P-759	489	6.0	PVC	53.1	0.6023	0.14	140.0	Zone 4
P-178	531	6.0	PVC	89.3	1.0128	0.39	140.0	Zone 2
P22-N-15-11 -1	50	10.0	PVC	-265.4	1.0840	0.02	140.0	Zone 4
P22-N-15-11 -2	276	10.0	PVC	-265.4	1.0840	0.13	140.0	Zone 4
P-760	152	6.0	PVC	47.7	0.5413	0.02	140.0	Zone 4
P-152	351	6.0	PVC	84.5	0.9584	0.23	140.0	Zone 2
P-560	374	6.0	PVC	-44.4	0.5034	0.09	140.0	Zone 4
P22-N-15-10	349	10.0	PVC	-255.6	1.0441	0.15	140.0	Zone 4
P-146	441	6.0	PVC	77.0	0.8737	0.25	140.0	Zone 2
P-813	196	6.0	PVC	72.1	0.8185	0.10	140.0	Zone 4
P-331	217	8.0	PVC	274.5	1.7521	0.32	140.0	Zone 1
P-515	275	6.0	PVC	64.9	0.7369	0.12	140.0	Zone 4
P-1350	198	6.0	PVC	-93.6	1.0619	0.16	140.0	Zone 2
P-1349	40	6.0	PVC	-93.6	1.0619	0.03	140.0	Zone 2
P-192	503	8.0	PVC	185.4	1.1834	0.35	140.0	Zone 2
P-193	229	8.0	PVC	185.4	1.1834	0.16	140.0	Zone 2
P-122	186	10.0	PVC	141.0	0.5761	0.03	140.0	Zone 2
P-334	250	8.0	PVC	155.1	0.9901	0.13	140.0	Zone 2
P-335	246	8.0	PVC	155.1	0.9901	0.12	140.0	Zone 3
P-462	208	8.0	PVC	112.4	0.7176	0.06	140.0	Zone 4
P-783	256	12.0	PVC	267.0	0.7575	0.05	140.0	Zone 4
P-1082	330	10.0	PVC	57.8	0.2360	0.01	140.0	Zone 4
P-1090	59	10.0	PVC	57.8	0.2360	0.00	140.0	Zone 4
P-1091	303	10.0	PVC	57.8	0.2360	0.01	140.0	Zone 4
P-1094	120	10.0	PVC	57.8	0.2360	0.00	140.0	Zone 4
P-1095	190	10.0	PVC	57.8	0.2360	0.00	140.0	Zone 4
P-1213	62	10.0	PVC	57.8	0.2360	0.00	140.0	Zone 4



**GBWC 2024 IRP - Cold Springs Division**  
**Action (2027) PHD Condition Distribution System Pipe Report**  
 PHD-PIPES - Time: 0.00 hours

Label	Length (Scaled) (ft)	Diameter (in)	Material	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Hazen- Williams C	Zone
P-151	876	6.0	PVC	73.3	0.8317	0.45	140.0	Zone 2
P-1228	13	14.0	PVC	-228.9	0.4771	0.00	140.0	Zone 4
P-188	379	8.0	PVC	175.2	1.1179	0.24	140.0	Zone 2
P-1215	424	10.0	PVC	51.1	0.2087	0.01	140.0	Zone 4
P-1216	325	10.0	PVC	44.4	0.1814	0.01	140.0	Zone 4
P-324	661	6.0	PVC	-79.6	0.9032	0.39	140.0	Zone 2
P-673	351	4.0	PVC	60.4	1.5413	0.90	140.0	Zone 1
P-128	1,094	10.0	PVC	127.3	0.5199	0.13	140.0	Zone 2
P-1102	779	6.0	PVC	-24.6	0.2791	0.05	140.0	Zone 4
P-460	354	10.0	PVC	-111.0	0.4536	0.04	140.0	Zone 4
P-214	339	10.0	PVC	312.4	1.2761	0.21	140.0	Zone 3
P-954	190	10.0	PVC	-104.4	0.4263	0.02	140.0	Zone 4
P-63	545	6.0	PVC	-71.2	0.8081	0.26	140.0	Zone 2
P-826	114	14.0	PVC	-112.7	0.2349	0.00	140.0	Zone 4
P-40	302	8.0	PVC	229.9	1.4675	0.32	140.0	Zone 1
P-782	389	12.0	PVC	245.6	0.6966	0.06	140.0	Zone 4
P-530	325	10.0	PVC	224.3	0.9164	0.11	140.0	Zone 4
P-1092	47	6.0	PVC	25.0	0.2832	0.00	140.0	Zone 4
P-1097	73	6.0	PVC	-25.0	0.2832	0.00	140.0	Zone 4
P-1096	284	6.0	PVC	-25.0	0.2832	0.02	140.0	Zone 4
P-1093	209	6.0	PVC	25.0	0.2832	0.01	140.0	Zone 4
P-938	490	6.0	PVC	-16.6	0.1880	0.02	140.0	Zone 4
P-74	581	6.0	PVC	66.8	0.7578	0.25	140.0	Zone 2
P-217	668	10.0	PVC	290.0	1.1847	0.36	140.0	Zone 3
P-194	482	8.0	PVC	-185.7	1.1852	0.34	140.0	Zone 2
P-66	328	6.0	PVC	-64.7	0.7340	0.13	140.0	Zone 2
P-1026	141	10.0	PVC	120.9	0.4940	0.01	140.0	Zone 4
P-1033	79	10.0	PVC	120.9	0.4940	0.01	140.0	Zone 4
P-1032	697	10.0	PVC	120.9	0.4940	0.07	140.0	Zone 4
P-306	354	8.0	PVC	186.3	1.1889	0.25	140.0	Zone 3
P-307	351	8.0	PVC	186.3	1.1889	0.25	140.0	Zone 3
P-429	390	8.0	PVC	186.3	1.1889	0.28	140.0	Zone 3
P-698	172	14.0	PVC	-72.3	0.1506	0.00	140.0	Zone 4
P-825	175	14.0	PVC	-121.3	0.2528	0.00	140.0	Zone 4
P-675	2,121	12.0	PVC	483.0	1.3701	1.22	140.0	Zone 1
P-756	757	6.0	PVC	56.9	0.6451	0.24	140.0	Zone 4
P-337	480	8.0	PVC	214.1	1.3668	0.44	140.0	Zone 1
P-338	266	8.0	PVC	214.1	1.3668	0.24	140.0	Zone 1
P-824	112	14.0	PVC	-149.1	0.3107	0.00	140.0	Zone 4
P-784	253	12.0	PVC	201.4	0.5713	0.03	140.0	Zone 4
P-83	1,068	8.0	Asbestos Cement	123.8	0.7902	0.56	110.0	Zone 2
P-93	252	8.0	PVC	123.8	0.7902	0.08	140.0	Zone 2
P-1121	176	6.0	PVC	29.9	0.3393	0.02	140.0	Zone 4
P-823	184	14.0	PVC	-162.2	0.3380	0.01	140.0	Zone 4

**GBWC 2024 IRP - Cold Springs Division**  
**Action (2027) PHD Condition Distribution System Pipe Report**  
 PHD-PIPES - Time: 0.00 hours

Label	Length (Scaled) (ft)	Diameter (in)	Material	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Hazen- Williams C	Zone
P-953	197	10.0	PVC	-66.7	0.2724	0.01	140.0	Zone 4
P-431	76	8.0	PVC	177.1	1.1301	0.05	140.0	Zone 3
P-219	387	8.0	PVC	-177.0	1.1301	0.25	140.0	Zone 3
P-195	527	8.0	PVC	-171.7	1.0960	0.32	140.0	Zone 2
P-97	290	8.0	PVC	117.3	0.7486	0.09	140.0	Zone 2
P-27	506	10.0	PVC	316.8	1.2941	0.32	140.0	Zone 1
P-963	123	10.0	PVC	316.8	1.2941	0.08	140.0	Zone 1
P-965	86	10.0	PVC	316.8	1.2941	0.05	140.0	Zone 1
P-216	351	10.0	PVC	266.0	1.0866	0.16	140.0	Zone 3
P-962	260	10.0	PVC	312.6	1.2769	0.16	140.0	Zone 1
P-1099	76	6.0	PVC	-11.6	0.1314	0.00	140.0	Zone 4
P-1100	205	6.0	PVC	-11.6	0.1314	0.00	140.0	Zone 4
P-1101	237	6.0	PVC	-11.6	0.1314	0.00	140.0	Zone 4
P-1098	233	6.0	PVC	-11.6	0.1314	0.00	140.0	Zone 4
P-121	649	10.0	PVC	116.1	0.4744	0.06	140.0	Zone 2
P-677	93	8.0	PVC	-102.5	0.6543	0.02	140.0	Zone 4
P-1066	230	8.0	PVC	116.4	0.7428	0.07	140.0	Zone 4
P-1067	180	8.0	PVC	116.4	0.7428	0.05	140.0	Zone 4
P-1079	259	6.0	PVC	21.2	0.2407	0.01	140.0	Zone 4
P-1080	299	6.0	PVC	21.2	0.2407	0.02	140.0	Zone 4
P-1049	264	8.0	PVC	109.7	0.7001	0.07	140.0	Zone 4
P-1041	189	10.0	PVC	-78.1	0.3192	0.01	140.0	Zone 4
P-1042	81	10.0	PVC	78.1	0.3192	0.00	140.0	Zone 4
P-1059	326	6.0	PVC	29.1	0.3301	0.03	140.0	Zone 4
P-1065	183	6.0	PVC	29.1	0.3301	0.02	140.0	Zone 4
P-1120	119	6.0	PVC	-0.2	0.0024	0.00	140.0	Zone 4
P-11	1,692	10.0	Asbestos Cement	279.4	1.1414	1.34	110.0	Zone 1
P-12	2,491	10.0	Asbestos Cement	279.4	1.1414	1.97	110.0	Zone 1
P-13	2,215	10.0	Asbestos Cement	279.4	1.1414	1.75	110.0	Zone 1
P-534	401	8.0	PVC	178.1	1.1371	0.26	140.0	Zone 1
P22-N-15-8	289	10.0	PVC	-149.0	0.6089	0.05	140.0	Zone 4
P22-N-15-9	366	10.0	PVC	-149.0	0.6089	0.06	140.0	Zone 4
P-785	249	12.0	PVC	155.5	0.4412	0.02	140.0	Zone 4
P-85	738	10.0	PVC	122.1	0.4987	0.08	140.0	Zone 2
P-345	215	8.0	PVC	-22.4	0.1428	0.00	140.0	Zone 4
P-982	583	8.0	PVC	174.3	1.1126	0.37	140.0	Zone 1
P-57	497	8.0	PVC	172.5	1.1009	0.31	140.0	Zone 1
P-814	214	6.0	PVC	45.4	0.5153	0.05	140.0	Zone 4
P-344	182	8.0	PVC	-25.7	0.1641	0.00	140.0	Zone 4
P-109	865	8.0	PVC	61.5	0.3922	0.08	140.0	Zone 2
P-343	273	8.0	PVC	-28.4	0.1812	0.01	140.0	Zone 4
P-993	398	10.0	PVC	94.4	0.3857	0.02	140.0	Zone 4

**GBWC 2024 IRP - Cold Springs Division**  
**Action (2027) PHD Condition Distribution System Pipe Report**  
 PHD-PIPES - Time: 0.00 hours

Label	Length (Scaled) (ft)	Diameter (in)	Material	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Hazen- Williams C	Zone
P-1105	64	6.0	PVC	20.4	0.2315	0.00	140.0	Zone 4
P-1106	192	6.0	PVC	20.4	0.2315	0.01	140.0	Zone 4
P-1107	199	6.0	PVC	20.4	0.2315	0.01	140.0	Zone 4
P-752	244	6.0	PVC	-8.3	0.0945	0.00	140.0	Zone 4
P-533	460	8.0	PVC	161.4	1.0299	0.25	140.0	Zone 1
P-342	195	8.0	PVC	-36.4	0.2325	0.01	140.0	Zone 4
P-1071	271	10.0	PVC	-65.9	0.2692	0.01	140.0	Zone 4
P-985	165	8.0	PVC	159.9	1.0208	0.09	140.0	Zone 1
P-320	265	8.0	PVC	-159.9	1.0208	0.14	140.0	Zone 1
P-786	189	12.0	PVC	125.0	0.3547	0.01	140.0	Zone 4
P-107	354	8.0	PVC	49.3	0.3149	0.02	140.0	Zone 2
P-204	929	10.0	PVC	-132.8	0.5423	0.12	140.0	Zone 3
P-1235	254	8.0	PVC	95.8	0.6116	0.05	140.0	Zone 4
P-749	758	6.0	PVC	7.3	0.0833	0.00	140.0	Zone 4
P-1108	65	6.0	PVC	12.4	0.1404	0.00	140.0	Zone 4
P-443	307	8.0	PVC	37.2	0.2371	0.01	140.0	Zone 4
P-197	353	6.0	PVC	35.2	0.3989	0.05	140.0	Zone 2
P-198	362	6.0	PVC	35.2	0.3989	0.05	140.0	Zone 2
P-561	267	8.0	PVC	-31.4	0.2005	0.01	140.0	Zone 4
P-516	261	6.0	PVC	34.7	0.3934	0.03	140.0	Zone 4
P-742	145	8.0	PVC	65.4	0.4177	0.02	140.0	Zone 4
P-1084	169	10.0	PVC	16.9	0.0691	0.00	140.0	Zone 4
P-1085	154	10.0	PVC	16.9	0.0691	0.00	140.0	Zone 4
P-827	159	12.0	PVC	-79.1	0.2245	0.00	140.0	Zone 4
P-444	65	8.0	PVC	32.5	0.2073	0.00	140.0	Zone 4
P-407	362	8.0	PVC	-32.5	0.2072	0.01	140.0	Zone 4
P-751	718	6.0	PVC	4.4	0.0497	0.00	140.0	Zone 4
P-453	236	10.0	PVC	107.5	0.4391	0.02	140.0	Zone 4
P-118	384	8.0	PVC	57.6	0.3674	0.03	140.0	Zone 2
P-1053	336	6.0	PVC	29.1	0.3300	0.03	140.0	Zone 4
P-503	206	8.0	PVC	-57.7	0.3682	0.02	140.0	Zone 4
P22-1460	16	8.0	PVC	-73.2	0.4673	0.00	140.0	Zone 4
P22-1461	31	8.0	PVC	-73.2	0.4673	0.00	140.0	Zone 4
P-1058	209	6.0	PVC	50.7	0.5748	0.05	140.0	Zone 4
P-1141	95	6.0	PVC	-6.6	0.0749	0.00	140.0	Zone 4
P-91	556	10.0	Asbestos Cement	123.8	0.5057	0.10	110.0	Zone 2
P-1491	87	8.0	PVC	71.9	0.4588	0.01	140.0	Zone 4
P-508	823	8.0	PVC	134.6	0.8589	0.32	140.0	Zone 1
P-1546	196	3.0	PVC	18.8	0.8533	0.27	130.0	Zone 1
P-755	625	6.0	PVC	36.3	0.4118	0.09	140.0	Zone 4
P-108	789	10.0	PVC	98.7	0.4033	0.06	140.0	Zone 2
P-1492(1)(1)	300	8.0	PVC	68.5	0.4374	0.03	140.0	Zone 4
P-124	309	8.0	PVC	49.1	0.3136	0.02	140.0	Zone 2
P-125	406	8.0	PVC	49.1	0.3136	0.02	140.0	Zone 2

**GBWC 2024 IRP - Cold Springs Division**  
**Action (2027) PHD Condition Distribution System Pipe Report**  
 PHD-PIPES - Time: 0.00 hours

Label	Length (Scaled) (ft)	Diameter (in)	Material	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Hazen- Williams C	Zone
P-1069	91	6.0	PVC	23.7	0.2692	0.01	140.0	Zone 4
P-199	382	8.0	PVC	-7.5	0.0481	0.00	140.0	Zone 2
P-1064	172	6.0	PVC	42.1	0.4780	0.03	140.0	Zone 4
P-1492(1)(2)	348	8.0	PVC	63.2	0.4033	0.03	140.0	Zone 4
P-1492(2)	16	8.0	PVC	63.2	0.4033	0.00	140.0	Zone 4
P-529	262	10.0	PVC	135.8	0.5546	0.04	140.0	Zone 4
P-821	492	6.0	PVC	37.4	0.4246	0.07	140.0	Zone 4
P-1056	243	6.0	PVC	44.6	0.5065	0.05	140.0	Zone 4
P-500	308	8.0	PVC	-24.8	0.1583	0.00	140.0	Zone 4
P-680	376	10.0	PVC	-105.2	0.4297	0.03	140.0	Zone 4
P-432	71	8.0	PVC	104.9	0.6694	0.02	140.0	Zone 3
P22-N-15-7	279	10.0	PVC	-100.7	0.4113	0.02	140.0	Zone 4
P-552	307	8.0	PVC	78.3	0.4998	0.05	140.0	Zone 4
P-1493	54	8.0	PVC	58.5	0.3734	0.00	140.0	Zone 4
P-1494	48	8.0	PVC	58.5	0.3734	0.00	140.0	Zone 4
P-1497	137	8.0	PVC	58.5	0.3734	0.01	140.0	Zone 4
P-984	987	10.0	PVC	190.6	0.7785	0.25	140.0	Zone 1
P-791	169	10.0	PVC	136.7	0.5585	0.02	140.0	Zone 4
P-699	143	12.0	PVC	-115.3	0.3272	0.01	140.0	Zone 4
P-685	472	10.0	PVC	-59.3	0.2423	0.01	140.0	Zone 4
P-123	425	8.0	PVC	36.1	0.2303	0.01	140.0	Zone 2
P-492	270	8.0	PVC	-18.3	0.1165	0.00	140.0	Zone 4
P-820	222	6.0	PVC	32.1	0.3639	0.03	140.0	Zone 4
P-1072	186	10.0	PVC	-40.9	0.1669	0.00	140.0	Zone 4
P-202	717	6.0	PVC	-24.0	0.2729	0.05	140.0	Zone 2
P-693	462	10.0	PVC	-68.7	0.2806	0.02	140.0	Zone 4
P-1088	127	6.0	PVC	8.6	0.0976	0.00	140.0	Zone 4
P-1089	189	6.0	PVC	8.6	0.0976	0.00	140.0	Zone 4
P-393	238	8.0	PVC	44.5	0.2838	0.01	140.0	Zone 4
P-49	847	6.0	PVC	-41.3	0.4691	0.15	140.0	Zone 2
P-1352	250	10.0	PVC	-11.8	0.0480	0.00	140.0	Zone 4
P-1192	405	10.0	PVC	-59.4	0.2426	0.01	140.0	Zone 4
P-129	767	10.0	PVC	23.8	0.0974	0.00	140.0	Zone 2
P-600	395	10.0	PVC	117.5	0.4800	0.04	140.0	Zone 2
P-601	92	10.0	PVC	117.5	0.4800	0.01	140.0	Zone 2
P-134	892	10.0	PVC	50.6	0.2066	0.02	140.0	Zone 2
P-95	405	8.0	PVC	56.4	0.3601	0.03	140.0	Zone 2
P-98	316	8.0	PVC	56.4	0.3601	0.02	140.0	Zone 2
P-80	414	10.0	PVC	-97.5	0.3984	0.03	140.0	Zone 2
P-258	602	8.0	PVC	-103.7	0.6618	0.14	140.0	Zone 1
P-1189	119	10.0	PVC	-66.8	0.2727	0.00	140.0	Zone 4
P-1191	132	10.0	PVC	-66.8	0.2727	0.00	140.0	Zone 4
P-1054	233	6.0	PVC	31.9	0.3623	0.03	140.0	Zone 4
P-196	421	8.0	PVC	117.9	0.7527	0.13	140.0	Zone 2
P-803	510	6.0	PVC	33.0	0.3744	0.06	140.0	Zone 4

**GBWC 2024 IRP - Cold Springs Division**  
**Action (2027) PHD Condition Distribution System Pipe Report**  
 PHD-PIPES - Time: 0.00 hours

Label	Length (Scaled) (ft)	Diameter (in)	Material	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Hazen- Williams C	Zone
P-828	141	12.0	PVC	-79.4	0.2251	0.00	140.0	Zone 4
P-201	483	10.0	PVC	55.8	0.2280	0.01	140.0	Zone 2
P-127	317	10.0	PVC	-57.5	0.2349	0.01	140.0	Zone 2
P-499	253	8.0	PVC	-28.2	0.1800	0.01	140.0	Zone 4
P-815	219	6.0	PVC	26.5	0.3011	0.02	140.0	Zone 4
P-763	307	6.0	PVC	-21.0	0.2385	0.02	140.0	Zone 4
P-355	669	8.0	PVC	-19.7	0.1259	0.01	140.0	Zone 4
P-120	876	8.0	PVC	40.6	0.2591	0.04	140.0	Zone 2
P-523	460	6.0	PVC	27.7	0.3140	0.04	140.0	Zone 4
P-30	1,146	10.0	PVC	150.2	0.6136	0.18	140.0	Zone 1
P-770	184	10.0	PVC	150.2	0.6136	0.03	140.0	Zone 1
P-961	682	10.0	PVC	150.2	0.6136	0.11	140.0	Zone 1
P-439	822	10.0	PVC	106.6	0.4354	0.07	140.0	Zone 4
P-389	407	6.0	PVC	24.5	0.2785	0.03	140.0	Zone 4
P-1077	191	6.0	PVC	-0.1	0.0011	0.00	140.0	Zone 4
P-502	255	8.0	PVC	0.7	0.0044	0.00	140.0	Zone 4
P-743	85	10.0	PVC	65.4	0.2673	0.00	140.0	Zone 4
P-126	757	8.0	PVC	26.4	0.1683	0.01	140.0	Zone 2
P-469	289	10.0	PVC	63.5	0.2593	0.01	140.0	Zone 4
P-395	238	8.0	PVC	24.9	0.1588	0.00	140.0	Zone 4
P-1254	320	8.0	PVC	32.2	0.2053	0.01	140.0	Zone 4
P-1253	65	8.0	PVC	32.2	0.2053	0.00	140.0	Zone 4
P-753	68	8.0	PVC	-8.3	0.0531	0.00	140.0	Zone 4
P-1239	278	8.0	PVC	57.1	0.3643	0.02	140.0	Zone 4
P-829	144	12.0	PVC	-45.1	0.1279	0.00	140.0	Zone 4
P-346	233	8.0	PVC	26.7	0.1705	0.00	140.0	Zone 4
P-394	240	8.0	PVC	31.5	0.2009	0.01	140.0	Zone 4
P22-N-15-6	280	10.0	PVC	-75.8	0.3096	0.01	140.0	Zone 4
P-468	229	10.0	PVC	80.1	0.3271	0.01	140.0	Zone 4
P-119	270	10.0	PVC	57.6	0.2351	0.01	140.0	Zone 2
P-257	392	8.0	PVC	-89.0	0.5680	0.07	140.0	Zone 1
P-169	344	8.0	PVC	38.4	0.2452	0.01	140.0	Zone 2
P-750	68	8.0	PVC	-7.3	0.0468	0.00	140.0	Zone 4
P-467	405	10.0	PVC	100.9	0.4124	0.03	140.0	Zone 4
P-1237-1	172	8.0	PVC	58.4	0.3727	0.01	140.0	Zone 4
P-936	411	10.0	PVC	89.9	0.3671	0.03	140.0	Zone 4
P-764	520	6.0	PVC	-28.4	0.3219	0.04	140.0	Zone 4
P-94	894	8.0	PVC	35.9	0.2292	0.03	140.0	Zone 2
P-835	389	6.0	PVC	23.0	0.2605	0.02	140.0	Zone 4
P-1243	77	8.0	PVC	49.8	0.3181	0.00	140.0	Zone 4
P-430	860	10.0	PVC	112.1	0.4580	0.08	140.0	Zone 3
P-89	692	8.0	PVC	45.0	0.2874	0.04	140.0	Zone 2
P-96	414	8.0	PVC	45.0	0.2874	0.02	140.0	Zone 2
P-1122	116	6.0	PVC	12.6	0.1431	0.00	140.0	Zone 4
P-475	337	8.0	PVC	34.7	0.2214	0.01	140.0	Zone 2

**GBWC 2024 IRP - Cold Springs Division**  
**Action (2027) PHD Condition Distribution System Pipe Report**  
 PHD-PIPES - Time: 0.00 hours

Label	Length (Scaled) (ft)	Diameter (in)	Material	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Hazen- Williams C	Zone
P-819	597	6.0	PVC	24.9	0.2825	0.04	140.0	Zone 4
P-809	432	6.0	PVC	21.3	0.2414	0.02	140.0	Zone 4
P-461	195	10.0	PVC	-11.5	0.0469	0.00	140.0	Zone 4
P-101	388	10.0	PVC	-39.9	0.1631	0.00	140.0	Zone 2
P-55	1,098	6.0	PVC	45.9	0.5209	0.24	140.0	Zone 1
P-765	439	6.0	PVC	-19.2	0.2182	0.02	140.0	Zone 4
P-525	268	10.0	PVC	-87.2	0.3563	0.01	140.0	Zone 4
P-1357	267	10.0	PVC	-2.7	0.0108	0.00	140.0	Zone 4
P-1257	276	8.0	PVC	19.5	0.1242	0.00	140.0	Zone 4
P-1256	109	8.0	PVC	19.5	0.1242	0.00	140.0	Zone 4
P-520	403	6.0	PVC	23.1	0.2616	0.02	140.0	Zone 4
P-553	155	10.0	PVC	78.3	0.3199	0.00	140.0	Zone 4
P-959	339	10.0	PVC	122.3	0.4996	0.04	140.0	Zone 1
P-788(1)(1)	195	8.0	PVC	29.0	0.1854	0.00	140.0	Zone 4
P-788(1)(2)	78	8.0	PVC	29.0	0.1854	0.00	140.0	Zone 4
P-215	518	6.0	PVC	38.5	0.4369	0.08	140.0	Zone 3
P-378	249	8.0	PVC	25.1	0.1601	0.00	140.0	Zone 4
P-133	154	10.0	PVC	-8.1	0.0333	0.00	140.0	Zone 2
P-1127	187	8.0	PVC	28.5	0.1818	0.00	140.0	Zone 4
P-1128	250	8.0	PVC	28.5	0.1818	0.01	140.0	Zone 4
P-1130	79	8.0	PVC	28.5	0.1818	0.00	140.0	Zone 4
P22-N-15-5	196	10.0	PVC	-64.9	0.2649	0.01	140.0	Zone 4
P-103	329	10.0	PVC	-32.5	0.1327	0.00	140.0	Zone 2
P-1129	52	8.0	PVC	27.2	0.1734	0.00	140.0	Zone 4
P-1428-1	191	8.0	PVC	-41.0	0.2618	0.01	140.0	Zone 4
P-1131	480	8.0	PVC	26.5	0.1691	0.01	140.0	Zone 4
P-406	238	8.0	PVC	-10.3	0.0656	0.00	140.0	Zone 4
P22-N-12-1	54	8.0	PVC	37.7	0.2404	0.00	140.0	Zone 4
P22-N-12-2	125	8.0	PVC	37.7	0.2404	0.00	140.0	Zone 4
P-260	364	8.0	PVC	-75.4	0.4810	0.05	140.0	Zone 1
P-1209	329	6.0	PVC	8.6	0.0972	0.00	140.0	Zone 4
P-1070	204	6.0	PVC	36.8	0.4171	0.03	140.0	Zone 4
P-79	344	10.0	PVC	-62.1	0.2539	0.01	140.0	Zone 2
P-1087	227	6.0	PVC	6.6	0.0748	0.00	140.0	Zone 4
P-1103	133	6.0	PVC	6.6	0.0748	0.00	140.0	Zone 4
P-1104	71	6.0	PVC	6.6	0.0748	0.00	140.0	Zone 4
P-551	246	8.0	PVC	-43.6	0.2784	0.01	140.0	Zone 4
P-1178	220	6.0	PVC	21.4	0.2425	0.01	140.0	Zone 4
P22-N-12-4	299	8.0	PVC	35.0	0.2233	0.01	140.0	Zone 4
P-347	241	8.0	PVC	17.1	0.1093	0.00	140.0	Zone 4
P-403	232	8.0	PVC	25.5	0.1625	0.00	140.0	Zone 4
P-339	845	8.0	PVC	71.2	0.4544	0.10	140.0	Zone 1
P-246	352	8.0	PVC	32.0	0.2041	0.01	140.0	Zone 2
P-247	591	8.0	PVC	32.0	0.2041	0.02	140.0	Zone 2
P-1168	93	6.0	PVC	-2.0	0.0221	0.00	140.0	Zone 4

**GBWC 2024 IRP - Cold Springs Division**  
**Action (2027) PHD Condition Distribution System Pipe Report**  
 PHD-PIPES - Time: 0.00 hours

Label	Length (Scaled) (ft)	Diameter (in)	Material	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Hazen- Williams C	Zone
P-1035	567	10.0	PVC	109.7	0.4480	0.05	140.0	Zone 1
P22-1455	55	8.0	PVC	31.6	0.2020	0.00	140.0	Zone 4
P22-N-12-3	119	8.0	PVC	31.6	0.2020	0.00	140.0	Zone 4
P-1238	90	8.0	PVC	41.0	0.2617	0.00	140.0	Zone 4
P-1265	60	8.0	PVC	27.0	0.1720	0.00	140.0	Zone 4
P-1268	331	8.0	PVC	27.0	0.1720	0.01	140.0	Zone 4
P-130	206	10.0	PVC	-23.6	0.0962	0.00	140.0	Zone 2
P-766	605	6.0	PVC	-26.6	0.3016	0.04	140.0	Zone 4
P-1244	260	8.0	PVC	43.7	0.2790	0.01	140.0	Zone 4
P-495	282	8.0	PVC	-27.0	0.1724	0.01	140.0	Zone 4
P-1271	61	8.0	PVC	28.7	0.1835	0.00	140.0	Zone 4
P-1274	128	8.0	PVC	28.7	0.1835	0.00	140.0	Zone 4
P-1277	211	8.0	PVC	33.3	0.2124	0.01	140.0	Zone 4
P-143	148	8.0	PVC	-48.1	0.3072	0.01	140.0	Zone 2
P-150	570	6.0	PVC	18.9	0.2143	0.02	140.0	Zone 2
P-517	262	6.0	PVC	15.7	0.1781	0.01	140.0	Zone 4
P-978	661	8.0	PVC	67.0	0.4274	0.08	140.0	Zone 1
P-9	2,238	6.0	Ductile Iron	37.6	0.4268	0.44	120.0	Zone 1
P-767	581	6.0	PVC	-18.9	0.2145	0.03	140.0	Zone 4
P-808	102	6.0	PVC	11.2	0.1275	0.00	140.0	Zone 4
P-810	449	6.0	PVC	11.2	0.1275	0.01	140.0	Zone 4
P-132	179	8.0	PVC	50.6	0.3231	0.01	140.0	Zone 2
P-834	706	6.0	PVC	23.7	0.2687	0.04	140.0	Zone 4
P-359	668	8.0	PVC	-16.2	0.1032	0.00	140.0	Zone 4
P-576	264	8.0	PVC	64.2	0.4096	0.03	140.0	Zone 1
P-1211	428	6.0	PVC	1.9	0.0213	0.00	140.0	Zone 4
P-1364	257	10.0	PVC	-3.9	0.0161	0.00	140.0	Zone 4
P-212	379	6.0	PVC	29.9	0.3398	0.04	140.0	Zone 3
P-700	237	6.0	PVC	30.5	0.3461	0.02	140.0	Zone 4
P-831	691	6.0	PVC	14.2	0.1607	0.02	140.0	Zone 4
P-340	1,510	8.0	PVC	62.8	0.4008	0.14	140.0	Zone 1
P-377	290	8.0	PVC	18.3	0.1168	0.00	140.0	Zone 4
P-25	1,879	10.0	PVC	97.2	0.3972	0.13	140.0	Zone 1
P-1327	187	8.0	PVC	41.6	0.2652	0.01	140.0	Zone 4
P-1328	50	8.0	PVC	41.6	0.2652	0.00	140.0	Zone 4
P-1278	187	8.0	PVC	26.6	0.1697	0.00	140.0	Zone 4
P-818	507	6.0	PVC	19.2	0.2182	0.02	140.0	Zone 4
P-65	607	8.0	PVC	-41.3	0.2638	0.03	140.0	Zone 2
P-365	680	6.0	PVC	-6.5	0.0733	0.00	140.0	Zone 4
P-168	1,253	8.0	PVC	31.3	0.1995	0.03	140.0	Zone 2
P-1275	294	8.0	PVC	20.7	0.1322	0.00	140.0	Zone 4
P-674	465	8.0	PVC	60.4	0.3853	0.04	140.0	Zone 1
P-348	237	8.0	PVC	7.7	0.0489	0.00	140.0	Zone 4
P-1428-2	149	8.0	PVC	-35.4	0.2262	0.00	140.0	Zone 4
P-1429-1	86	8.0	PVC	-35.4	0.2262	0.00	140.0	Zone 4

**GBWC 2024 IRP - Cold Springs Division**  
**Action (2027) PHD Condition Distribution System Pipe Report**  
 PHD-PIPES - Time: 0.00 hours

Label	Length (Scaled) (ft)	Diameter (in)	Material	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Hazen- Williams C	Zone
P-1269	227	8.0	PVC	16.9	0.1080	0.00	140.0	Zone 4
P-137	332	8.0	PVC	22.7	0.1448	0.00	140.0	Zone 2
P-155	513	8.0	PVC	22.7	0.1448	0.01	140.0	Zone 2
P-200	189	10.0	PVC	79.9	0.3262	0.01	140.0	Zone 2
P-56	478	6.0	PVC	33.3	0.3780	0.06	140.0	Zone 1
P-794	258	10.0	PVC	76.8	0.3136	0.01	140.0	Zone 4
P-1036	470	10.0	PVC	91.8	0.3752	0.03	140.0	Zone 1
P-1037	444	10.0	PVC	91.8	0.3752	0.03	140.0	Zone 1
P-102	341	10.0	PVC	70.9	0.2897	0.01	140.0	Zone 2
P-957	669	10.0	PVC	90.8	0.3711	0.04	140.0	Zone 1
P-958	197	10.0	PVC	90.8	0.3711	0.01	140.0	Zone 1
P-1356	698	8.0	PVC	-23.8	0.1520	0.01	140.0	Zone 4
P22-1459	221	10.0	PVC	-47.9	0.1957	0.00	140.0	Zone 4
P-1179	232	6.0	PVC	12.0	0.1362	0.00	140.0	Zone 4
P-1180	85	6.0	PVC	12.0	0.1362	0.00	140.0	Zone 4
P-1182	225	6.0	PVC	12.0	0.1362	0.00	140.0	Zone 4
P-1183	55	6.0	PVC	12.0	0.1362	0.00	140.0	Zone 4
P-1184	225	6.0	PVC	12.0	0.1362	0.00	140.0	Zone 4
P-964	655	10.0	PVC	89.0	0.3634	0.04	140.0	Zone 1
P-688	364	8.0	PVC	-24.4	0.1556	0.01	140.0	Zone 4
P-376	339	8.0	PVC	12.3	0.0784	0.00	140.0	Zone 4
P-116	377	8.0	PVC	15.5	0.0988	0.00	140.0	Zone 2
P-87	461	8.0	PVC	-17.1	0.1089	0.00	140.0	Zone 2
P-817	430	6.0	PVC	18.0	0.2043	0.02	140.0	Zone 4
P-401	407	6.0	PVC	14.3	0.1622	0.01	140.0	Zone 4
P-1068	75	6.0	PVC	13.0	0.1478	0.00	140.0	Zone 4
P-687	773	8.0	PVC	-29.5	0.1883	0.02	140.0	Zone 4
P-768	684	6.0	PVC	-25.6	0.2903	0.05	140.0	Zone 4
P22-N-15-3	381	10.0	PVC	-43.9	0.1793	0.01	140.0	Zone 4
P-545	142	10.0	PVC	-50.3	0.2054	0.00	140.0	Zone 4
P-716	202	6.0	PVC	-12.2	0.1383	0.00	140.0	Zone 4
P-6	887	8.0	Ductile Iron	54.4	0.3472	0.09	120.0	Zone 1
P-701	262	6.0	PVC	25.2	0.2854	0.02	140.0	Zone 4
P-259(1)	44	8.0	PVC	-53.3	0.3404	0.00	140.0	Zone 1
P-259(2)	358	8.0	PVC	-53.3	0.3404	0.02	140.0	Zone 1
P-1280	70	8.0	PVC	26.0	0.1660	0.00	140.0	Zone 4
P-1197	283	6.0	PVC	-5.1	0.0580	0.00	140.0	Zone 4
P-1203	55	6.0	PVC	-5.1	0.0580	0.00	140.0	Zone 4
P-485	481	6.0	PVC	3.9	0.0440	0.00	140.0	Zone 4
P-213	693	6.0	PVC	24.0	0.2726	0.04	140.0	Zone 3
P-1262	240	8.0	PVC	-20.3	0.1295	0.00	140.0	Zone 4
P-1430	52	8.0	PVC	31.5	0.2012	0.00	140.0	Zone 4
P-1051	197	6.0	PVC	7.2	0.0815	0.00	140.0	Zone 4
P-975	482	8.0	PVC	52.3	0.3337	0.03	140.0	Zone 1
P-1196	300	6.0	PVC	-4.8	0.0546	0.00	140.0	Zone 4



**GBWC 2024 IRP - Cold Springs Division**  
**Action (2027) PHD Condition Distribution System Pipe Report**  
**PHD-PIPES - Time: 0.00 hours**

Label	Length (Scaled) (ft)	Diameter (in)	Material	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Hazen-Williams C	Zone
P-1212	50	6.0	PVC	-4.8	0.0546	0.00	140.0	Zone 4
P-537	398	6.0	PVC	25.0	0.2842	0.03	140.0	Zone 4
P-832	475	6.0	PVC	11.9	0.1356	0.01	140.0	Zone 4
P-507	725	8.0	PVC	52.0	0.3318	0.05	140.0	Zone 1
P-536	169	8.0	PVC	52.0	0.3318	0.01	140.0	Zone 1
P-1422	226	8.0	PVC	-23.4	0.1493	0.00	140.0	Zone 4
P-145	918	6.0	PVC	-13.0	0.1481	0.02	140.0	Zone 2
P-715	198	6.0	PVC	35.7	0.4052	0.03	140.0	Zone 4
P-546	255	10.0	PVC	-55.3	0.2260	0.01	140.0	Zone 4
P-1354	247	8.0	PVC	-16.5	0.1051	0.00	140.0	Zone 4
P-1355	272	8.0	PVC	-16.5	0.1051	0.00	140.0	Zone 4
P-1424	61	8.0	PVC	28.1	0.1796	0.00	140.0	Zone 4
P-811	97	6.0	PVC	6.8	0.0773	0.00	140.0	Zone 4
P-349	225	8.0	PVC	-1.5	0.0093	0.00	140.0	Zone 4
P-1379	47	10.0	PVC	-4.9	0.0202	0.00	140.0	Zone 4
P-1380	131	10.0	PVC	-4.9	0.0202	0.00	140.0	Zone 4
P-1400	89	10.0	PVC	-4.9	0.0202	0.00	140.0	Zone 4
P22-N-11-1	30	8.0	PVC	24.9	0.1589	0.00	140.0	Zone 4
P-366	676	6.0	PVC	-6.6	0.0748	0.00	140.0	Zone 4
P22-N-15-2-2	247	10.0	PVC	-34.8	0.1422	0.00	140.0	Zone 4
P-550	274	8.0	PVC	-30.5	0.1944	0.01	140.0	Zone 4
P-1283	381	8.0	PVC	21.3	0.1361	0.00	140.0	Zone 4
P-476	337	8.0	PVC	15.4	0.0985	0.00	140.0	Zone 2
P22-N-11-2	138	8.0	PVC	22.9	0.1461	0.00	140.0	Zone 4
P-691	615	8.0	PVC	-33.7	0.2154	0.01	140.0	Zone 4
P-414	233	8.0	PVC	17.9	0.1140	0.00	140.0	Zone 4
P-747	562	6.0	PVC	7.8	0.0886	0.01	140.0	Zone 4
P-1431	293	8.0	PVC	25.5	0.1627	0.01	140.0	Zone 4
P-816	215	6.0	PVC	12.7	0.1436	0.00	140.0	Zone 4
P-1263	164	8.0	PVC	-13.6	0.0868	0.00	140.0	Zone 4
P-8	833	8.0	Ductile Iron	46.0	0.2937	0.06	120.0	Zone 1
P-974	338	8.0	PVC	46.0	0.2935	0.02	140.0	Zone 1
P-404	683	6.0	PVC	-6.9	0.0787	0.00	140.0	Zone 4
P22-N-11-3	212	8.0	PVC	20.2	0.1290	0.00	140.0	Zone 4
P-1425	253	8.0	PVC	22.8	0.1455	0.00	140.0	Zone 4
P-114	366	8.0	PVC	4.3	0.0274	0.00	140.0	Zone 2
P-115	298	8.0	PVC	4.3	0.0274	0.00	140.0	Zone 2
P-144	722	6.0	PVC	-15.4	0.1750	0.02	140.0	Zone 2
P-167	964	8.0	PVC	14.5	0.0925	0.01	140.0	Zone 2
P-1284	271	8.0	PVC	16.6	0.1062	0.00	140.0	Zone 4
P22-1454	71	8.0	PVC	18.9	0.1205	0.00	140.0	Zone 4
P-1202	218	6.0	PVC	-10.5	0.1188	0.00	140.0	Zone 4
P-1204	296	6.0	PVC	-10.5	0.1188	0.00	140.0	Zone 4
P-991	261	6.0	PVC	19.2	0.2174	0.01	140.0	Zone 4

**GBWC 2024 IRP - Cold Springs Division**  
**Action (2027) PHD Condition Distribution System Pipe Report**  
 PHD-PIPES - Time: 0.00 hours

Label	Length (Scaled) (ft)	Diameter (in)	Material	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Hazen- Williams C	Zone
P-1353	71	8.0	PVC	-9.1	0.0581	0.00	140.0	Zone 4
P-405	245	8.0	PVC	3.3	0.0214	0.00	140.0	Zone 4
P-572	331	8.0	PVC	43.4	0.2771	0.02	140.0	Zone 1
P-1382	191	8.0	PVC	-15.4	0.0985	0.00	140.0	Zone 4
P-1383	280	8.0	PVC	-15.4	0.0985	0.00	140.0	Zone 4
P-140	707	8.0	PVC	-32.7	0.2087	0.02	140.0	Zone 2
P-142	304	8.0	PVC	-32.7	0.2087	0.01	140.0	Zone 2
P-487	343	6.0	PVC	2.1	0.0241	0.00	140.0	Zone 4
P-253	377	8.0	PVC	-41.9	0.2673	0.02	140.0	Zone 1
P-994	221	8.0	PVC	42.8	0.2731	0.01	140.0	Zone 4
P-1038	363	10.0	PVC	64.6	0.2638	0.01	140.0	Zone 1
P-185	232	10.0	PVC	-93.0	0.3797	0.02	140.0	Zone 2
P-186	396	10.0	PVC	93.0	0.3797	0.03	140.0	Zone 2
P-1432	242	8.0	PVC	19.5	0.1243	0.00	140.0	Zone 4
P-1185	186	6.0	PVC	2.6	0.0300	0.00	140.0	Zone 4
P-1362	371	6.0	PVC	-15.8	0.1789	0.01	140.0	Zone 4
P-1426	214	8.0	PVC	17.4	0.1113	0.00	140.0	Zone 4
P22-N-15-2-1(2)	253	10.0	PVC	-27.8	0.1134	0.00	140.0	Zone 4
P22-N-15-2-1(1)(2)	139	10.0	PVC	-27.8	0.1134	0.00	140.0	Zone 4
P-966	185	10.0	PVC	61.2	0.2502	0.01	140.0	Zone 1
P-154	412	8.0	PVC	-47.6	0.3041	0.02	140.0	Zone 2
P-582	296	8.0	PVC	38.9	0.2483	0.01	140.0	Zone 1
P-812	84	6.0	PVC	-3.9	0.0445	0.00	140.0	Zone 4
P-81	433	8.0	PVC	-26.1	0.1664	0.01	140.0	Zone 2
P-1368	379	8.0	PVC	-16.2	0.1035	0.00	140.0	Zone 4
P-512	243	6.0	PVC	2.5	0.0278	0.00	140.0	Zone 4
P-726	1,019	8.0	PVC	34.2	0.2181	0.03	140.0	Zone 4
P-1412	267	8.0	PVC	-17.0	0.1087	0.00	140.0	Zone 4
P-1361	134	6.0	PVC	-0.3	0.0038	0.00	140.0	Zone 4
P-538	436	6.0	PVC	15.7	0.1779	0.01	140.0	Zone 4
P-1260	237	8.0	PVC	-0.1	0.0007	0.00	140.0	Zone 4
P-705	285	6.0	PVC	20.7	0.2353	0.01	140.0	Zone 4
P-830	158	12.0	PVC	-61.6	0.1749	0.00	140.0	Zone 4
P22-N-15-1(2)	177	10.0	PVC	-21.7	0.0888	0.00	140.0	Zone 4
P22-N-15-2-1(1)(1)	119	10.0	PVC	-21.7	0.0888	0.00	140.0	Zone 4
P-1251	259	6.0	PVC	-18.9	0.2141	0.01	140.0	Zone 4
P-1360	241	8.0	PVC	-7.4	0.0473	0.00	140.0	Zone 4
P-1359	267	8.0	PVC	-7.4	0.0473	0.00	140.0	Zone 4
P-702	259	6.0	PVC	14.5	0.1640	0.01	140.0	Zone 4
P-1433	214	8.0	PVC	13.5	0.0859	0.00	140.0	Zone 4
P-1110	45	6.0	PVC	-2.9	0.0324	0.00	140.0	Zone 4

**GBWC 2024 IRP - Cold Springs Division**  
**Action (2027) PHD Condition Distribution System Pipe Report**  
 PHD-PIPES - Time: 0.00 hours

Label	Length (Scaled) (ft)	Diameter (in)	Material	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Hazen- Williams C	Zone
P-1109	111	6.0	PVC	-2.9	0.0324	0.00	140.0	Zone 4
P-1111	243	6.0	PVC	-2.9	0.0324	0.00	140.0	Zone 4
P-1427	195	8.0	PVC	12.1	0.0772	0.00	140.0	Zone 4
P22-N-15-12	345	10.0	PVC	29.5	0.1203	0.00	140.0	Zone 4
P-1401	287	10.0	PVC	-0.6	0.0025	0.00	140.0	Zone 4
P-1418	162	8.0	PVC	-16.3	0.1042	0.00	140.0	Zone 4
P-171	477	8.0	PVC	23.1	0.1477	0.01	140.0	Zone 2
P-1405	198	6.0	PVC	9.3	0.1052	0.00	140.0	Zone 4
P-1217	168	6.0	PVC	-16.5	0.1871	0.01	140.0	Zone 4
P-1230	89	6.0	PVC	-16.5	0.1871	0.00	140.0	Zone 4
P-363	304	8.0	PVC	31.3	0.1996	0.01	140.0	Zone 4
P-568	515	8.0	PVC	33.2	0.2118	0.02	140.0	Zone 1
P22-N-15-13	366	10.0	PVC	24.9	0.1019	0.00	140.0	Zone 4
P22-N-15-14	162	10.0	PVC	24.9	0.1019	0.00	140.0	Zone 4
P-758	454	6.0	PVC	0.1	0.0010	0.00	140.0	Zone 4
P-541	372	6.0	PVC	2.5	0.0281	0.00	140.0	Zone 4
P-1367	216	8.0	PVC	-8.9	0.0566	0.00	140.0	Zone 4
P-1366	278	8.0	PVC	-8.9	0.0566	0.00	140.0	Zone 4
P-1411	267	8.0	PVC	-10.3	0.0660	0.00	140.0	Zone 4
P-1410	254	8.0	PVC	-10.3	0.0660	0.00	140.0	Zone 4
P-583	233	8.0	PVC	30.5	0.1947	0.01	140.0	Zone 1
P-584	195	8.0	PVC	30.5	0.1947	0.00	140.0	Zone 1
P-14	1,017	10.0	Asbestos Cement	47.5	0.1941	0.03	110.0	Zone 1
P-183	356	8.0	PVC	20.6	0.1317	0.00	140.0	Zone 2
P-234	370	8.0	PVC	29.7	0.1894	0.01	140.0	Zone 1
P-1259	165	8.0	PVC	6.6	0.0420	0.00	140.0	Zone 4
P-544	499	6.0	PVC	5.1	0.0582	0.00	140.0	Zone 4
P-184	940	10.0	PVC	37.9	0.1547	0.01	140.0	Zone 2
P-1404	308	6.0	PVC	-4.2	0.0475	0.00	140.0	Zone 4
P-117	409	8.0	PVC	-12.1	0.0770	0.00	140.0	Zone 2
P-177	352	8.0	PVC	8.4	0.0534	0.00	140.0	Zone 2
P22-1452	205	8.0	PVC	-13.9	0.0887	0.00	140.0	Zone 4
P22-N-10-1	157	8.0	PVC	-13.9	0.0887	0.00	140.0	Zone 4
P22-N-10-2	39	8.0	PVC	-13.9	0.0887	0.00	140.0	Zone 4
P-1417	411	8.0	PVC	-9.6	0.0615	0.00	140.0	Zone 4
P-1406	166	6.0	PVC	-7.1	0.0801	0.00	140.0	Zone 4
P-1462	105	6.0	PVC	-7.1	0.0801	0.00	150.0	Zone 4
P-570	186	8.0	PVC	27.1	0.1732	0.00	140.0	Zone 1
P-1358	82	8.0	PVC	1.3	0.0082	0.00	140.0	Zone 4
P-793	517	6.0	PVC	13.8	0.1570	0.01	140.0	Zone 4
P-548	480	6.0	PVC	4.3	0.0491	0.00	140.0	Zone 4
P-479	855	8.0	PVC	9.9	0.0634	0.00	140.0	Zone 2
P-720	219	10.0	PVC	-27.2	0.1113	0.00	140.0	Zone 4
P-235	404	6.0	PVC	14.4	0.1633	0.01	140.0	Zone 1

**GBWC 2024 IRP - Cold Springs Division**  
**Action (2027) PHD Condition Distribution System Pipe Report**  
 PHD-PIPES - Time: 0.00 hours

Label	Length (Scaled) (ft)	Diameter (in)	Material	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Hazen- Williams C	Zone
P-1403	366	6.0	PVC	0.8	0.0086	0.00	140.0	Zone 4
P-748	757	6.0	PVC	4.9	0.0556	0.00	140.0	Zone 4
P-1451	48	10.0	PVC	14.4	0.0588	0.00	140.0	Zone 4
P-542	178	6.0	PVC	4.2	0.0475	0.00	140.0	Zone 4
P-1407	75	8.0	PVC	-4.3	0.0276	0.00	140.0	Zone 4
P-262	304	8.0	PVC	24.6	0.1572	0.01	140.0	Zone 1
P-1040	339	10.0	PVC	38.3	0.1566	0.00	140.0	Zone 1
P-1415	117	8.0	PVC	-6.3	0.0402	0.00	140.0	Zone 4
P22-N-15-1(1)	100	10.0	PVC	-9.3	0.0380	0.00	140.0	Zone 4
P22-1458(2)(2)	203	10.0	PVC	-9.3	0.0380	0.00	140.0	Zone 4
P-1208	345	6.0	PVC	13.1	0.1483	0.01	140.0	Zone 4
P-573	350	8.0	PVC	23.2	0.1482	0.01	140.0	Zone 1
P-579	418	8.0	PVC	23.2	0.1478	0.01	140.0	Zone 1
P-797	242	10.0	PVC	36.6	0.1496	0.00	140.0	Zone 4
P-1365	84	8.0	PVC	-0.8	0.0053	0.00	140.0	Zone 4
P-180	307	6.0	PVC	10.7	0.1215	0.00	140.0	Zone 2
P-181	538	6.0	PVC	10.7	0.1215	0.01	140.0	Zone 2
P22-1458(2)(1)	21	10.0	PVC	-0.3	0.0014	0.00	140.0	Zone 4
P-1450	160	10.0	PVC	0.3	0.0014	0.00	140.0	Zone 4
P22-1458(1)	44	10.0	PVC	-0.3	0.0014	0.00	140.0	Zone 4
P-484	397	8.0	PVC	4.1	0.0265	0.00	140.0	Zone 4
P-757	478	8.0	PVC	-13.7	0.0876	0.00	140.0	Zone 4
P22-N-2-1	29	8.0	PVC	10.9	0.0698	0.00	140.0	Zone 4
P-723	247	10.0	PVC	-20.3	0.0829	0.00	140.0	Zone 4
P-384	420	6.0	PVC	6.3	0.0715	0.00	140.0	Zone 4
P-78	1,317	8.0	PVC	-9.3	0.0593	0.00	140.0	Zone 2
P-172	806	8.0	PVC	11.0	0.0704	0.00	140.0	Zone 2
P-617	298	12.0	PVC	-28.4	0.0805	0.00	140.0	Zone 4
P-176	701	8.0	PVC	-8.8	0.0562	0.00	140.0	Zone 2
P-135	652	10.0	PVC	-45.2	0.1846	0.01	140.0	Zone 2
P-254	575	8.0	PVC	-20.5	0.1307	0.01	140.0	Zone 1
P22-N-2-2	138	8.0	PVC	8.9	0.0570	0.00	140.0	Zone 4
P-149	548	6.0	PVC	4.6	0.0527	0.00	140.0	Zone 2
P-706	300	6.0	PVC	11.4	0.1290	0.00	140.0	Zone 4
P-717	277	6.0	PVC	3.5	0.0401	0.00	140.0	Zone 4
P-136	334	8.0	PVC	-29.9	0.1906	0.01	140.0	Zone 2
P-1413	54	8.0	PVC	-0.3	0.0018	0.00	140.0	Zone 4
P-1414	266	8.0	PVC	-0.3	0.0018	0.00	140.0	Zone 4
P-833	516	6.0	PVC	18.6	0.2106	0.02	140.0	Zone 4
P-703	274	6.0	PVC	-4.4	0.0502	0.00	140.0	Zone 4
P-730	242	6.0	PVC	10.4	0.1177	0.00	140.0	Zone 4
P22-N-2-3	141	8.0	PVC	6.9	0.0442	0.00	140.0	Zone 4

**GBWC 2024 IRP - Cold Springs Division**  
**Action (2027) PHD Condition Distribution System Pipe Report**  
 PHD-PIPES - Time: 0.00 hours

Label	Length (Scaled) (ft)	Diameter (in)	Material	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Hazen- Williams C	Zone
P-486	352	8.0	PVC	3.9	0.0248	0.00	140.0	Zone 4
P-1483	113	8.0	PVC	-12.4	0.0794	0.00	140.0	Zone 4
P-59	1,409	8.0	PVC	17.6	0.1122	0.01	140.0	Zone 1
P-539	263	6.0	PVC	-5.0	0.0565	0.00	140.0	Zone 4
P22-N-6-2	35	4.0	PVC	4.5	0.1152	0.00	140.0	Zone 4
P-731	255	6.0	PVC	1.7	0.0194	0.00	140.0	Zone 4
P-569	245	8.0	PVC	17.4	0.1113	0.00	140.0	Zone 1
P-162	343	8.0	PVC	-5.5	0.0353	0.00	140.0	Zone 2
P22-1456	44	8.0	PVC	-17.4	0.1110	0.00	140.0	Zone 4
P22-N-13-4	290	8.0	PVC	-17.4	0.1110	0.00	140.0	Zone 4
P22-1453	66	8.0	PVC	5.6	0.0356	0.00	140.0	Zone 4
P-790	254	6.0	PVC	7.8	0.0887	0.00	140.0	Zone 4
P-480	476	8.0	PVC	16.7	0.1067	0.00	140.0	Zone 4
P-382	416	6.0	PVC	0.1	0.0010	0.00	140.0	Zone 4
P-1482	116	8.0	PVC	-10.4	0.0666	0.00	140.0	Zone 4
P-1429-2	190	8.0	PVC	-16.6	0.1057	0.00	140.0	Zone 4
P-535	590	6.0	PVC	8.4	0.0952	0.01	140.0	Zone 1
P-540	452	6.0	PVC	6.9	0.0781	0.00	140.0	Zone 4
P-1242	187	8.0	PVC	18.2	0.1161	0.00	140.0	Zone 4
P-708	225	6.0	PVC	8.0	0.0911	0.00	140.0	Zone 4
P-231	377	8.0	PVC	13.5	0.0864	0.00	140.0	Zone 1
P-955	100	6.0	PVC	7.7	0.0873	0.00	140.0	Zone 4
P-543	499	6.0	PVC	-4.2	0.0480	0.00	140.0	Zone 4
P-1481	110	8.0	PVC	-7.8	0.0496	0.00	140.0	Zone 4
P-478	798	8.0	PVC	-3.1	0.0199	0.00	140.0	Zone 2
P-481	438	6.0	PVC	7.4	0.0835	0.00	140.0	Zone 4
P-179	335	8.0	PVC	-25.7	0.1642	0.01	140.0	Zone 2
P-1207	410	6.0	PVC	6.4	0.0724	0.00	140.0	Zone 4
P-482	372	8.0	PVC	12.7	0.0811	0.00	140.0	Zone 4
P-595	534	10.0	Asbestos Cement	18.8	0.0768	0.00	110.0	Zone 1
P-1132	78	10.0	PVC	18.8	0.0768	0.00	140.0	Zone 1
P-232	566	6.0	PVC	6.7	0.0760	0.00	140.0	Zone 1
P-721	381	6.0	PVC	-6.9	0.0789	0.00	140.0	Zone 4
P-772	353	8.0	PVC	11.7	0.0746	0.00	140.0	Zone 1
P-775	543	8.0	PVC	11.5	0.0737	0.00	140.0	Zone 1
P-383	331	6.0	PVC	6.7	0.0759	0.00	140.0	Zone 4
P-385	355	6.0	PVC	6.7	0.0759	0.00	140.0	Zone 4
P-387	338	6.0	PVC	6.7	0.0759	0.00	140.0	Zone 4
P-390	335	6.0	PVC	6.7	0.0759	0.00	140.0	Zone 4
P-733	208	6.0	PVC	6.7	0.0759	0.00	140.0	Zone 4
P-735	208	6.0	PVC	6.7	0.0759	0.00	140.0	Zone 4
P-737	198	6.0	PVC	6.7	0.0759	0.00	140.0	Zone 4
P-1112	52	6.0	PVC	6.7	0.0759	0.00	140.0	Zone 4
P-1113	254	6.0	PVC	6.7	0.0759	0.00	140.0	Zone 4

**GBWC 2024 IRP - Cold Springs Division**  
**Action (2027) PHD Condition Distribution System Pipe Report**  
 PHD-PIPES - Time: 0.00 hours

Label	Length (Scaled) (ft)	Diameter (in)	Material	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Hazen- Williams C	Zone
P-1114	64	6.0	PVC	6.7	0.0759	0.00	140.0	Zone 4
P-1115	253	6.0	PVC	6.7	0.0759	0.00	140.0	Zone 4
P-1118	61	6.0	PVC	6.7	0.0759	0.00	140.0	Zone 4
P-1119	258	6.0	PVC	6.7	0.0759	0.00	140.0	Zone 4
P-1480	174	8.0	PVC	-5.8	0.0368	0.00	140.0	Zone 4
P-255	474	8.0	PVC	-10.9	0.0697	0.00	140.0	Zone 1
P-236	410	6.0	PVC	6.0	0.0681	0.00	140.0	Zone 1
P-973	572	8.0	PVC	10.5	0.0670	0.00	140.0	Zone 1
P-1045	569	8.0	PVC	10.5	0.0670	0.00	140.0	Zone 1
P-1046	565	8.0	PVC	10.5	0.0670	0.00	140.0	Zone 1
P-156	364	8.0	PVC	-60.1	0.3835	0.03	140.0	Zone 2
P-1116	59	6.0	PVC	6.0	0.0683	0.00	140.0	Zone 4
P-1117	190	6.0	PVC	6.0	0.0683	0.00	140.0	Zone 4
P22-13-HL	12	6.0	PVC	6.0	0.0683	0.00	140.0	Zone 4
P-1487(1)	39	8.0	PVC	10.7	0.0683	0.00	140.0	Zone 4
P-1487(2)	144	8.0	PVC	10.7	0.0683	0.00	140.0	Zone 4
P-787	682	10.0	PVC	-1.5	0.0063	0.00	140.0	Zone 4
P-547	480	6.0	PVC	-5.0	0.0571	0.00	140.0	Zone 4
P-261	304	8.0	PVC	9.9	0.0635	0.00	140.0	Zone 1
P-574	521	8.0	PVC	9.7	0.0619	0.00	140.0	Zone 1
P-686	303	8.0	PVC	-45.9	0.2927	0.01	140.0	Zone 4
P-776	1,465	8.0	PVC	9.5	0.0609	0.00	140.0	Zone 1
P-585	544	8.0	PVC	9.4	0.0603	0.00	140.0	Zone 1
P-931	540	8.0	PVC	9.4	0.0603	0.00	140.0	Zone 1
P-935	507	8.0	PVC	9.4	0.0603	0.00	140.0	Zone 1
P-164	885	8.0	PVC	-17.3	0.1103	0.01	140.0	Zone 2
P-799	629	6.0	PVC	2.7	0.0309	0.00	140.0	Zone 4
P-697	372	8.0	PVC	-26.7	0.1703	0.01	140.0	Zone 4
P-741	300	6.0	PVC	5.4	0.0607	0.00	140.0	Zone 4
P-362	237	8.0	PVC	16.6	0.1061	0.00	140.0	Zone 4
P-251	376	8.0	PVC	-8.9	0.0570	0.00	140.0	Zone 1
P-745	218	8.0	PVC	8.7	0.0555	0.00	140.0	Zone 4
P-565	218	8.0	PVC	8.4	0.0536	0.00	140.0	Zone 1
P-581	180	8.0	PVC	8.4	0.0536	0.00	140.0	Zone 1
P-774	319	8.0	PVC	8.4	0.0536	0.00	140.0	Zone 1
P-173	528	8.0	PVC	-2.0	0.0129	0.00	140.0	Zone 2
P-174	570	8.0	PVC	-2.0	0.0129	0.00	140.0	Zone 2
P-773	387	8.0	PVC	8.2	0.0527	0.00	140.0	Zone 1
P-483	342	6.0	PVC	4.7	0.0531	0.00	140.0	Zone 4
P-710	271	6.0	PVC	4.7	0.0531	0.00	140.0	Zone 4
P-711	278	6.0	PVC	4.7	0.0531	0.00	140.0	Zone 4
P-712	288	6.0	PVC	4.7	0.0531	0.00	140.0	Zone 4
P-713	304	6.0	PVC	4.7	0.0531	0.00	140.0	Zone 4
P-1479	272	8.0	PVC	-2.4	0.0154	0.00	140.0	Zone 4
P-986	561	8.0	PVC	7.3	0.0469	0.00	140.0	Zone 1

**GBWC 2024 IRP - Cold Springs Division**  
**Action (2027) PHD Condition Distribution System Pipe Report**  
 PHD-PIPES - Time: 0.00 hours

Label	Length (Scaled) (ft)	Diameter (in)	Material	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Hazen-Williams C	Zone
P-228	709	6.0	PVC	4.1	0.0464	0.00	140.0	Zone 1
P-1167	224	6.0	PVC	26.1	0.2957	0.02	140.0	Zone 4
P-555	146	10.0	PVC	3.6	0.0148	0.00	140.0	Zone 4
P-455	165	6.0	PVC	4.0	0.0455	0.00	140.0	Zone 4
P-456	180	6.0	PVC	4.0	0.0455	0.00	140.0	Zone 4
P-709	256	6.0	PVC	4.0	0.0455	0.00	140.0	Zone 4
P-754	108	6.0	PVC	4.0	0.0455	0.00	140.0	Zone 4
P-77	354	8.0	PVC	5.6	0.0359	0.00	140.0	Zone 2
P-350	510	8.0	PVC	-6.7	0.0427	0.00	140.0	Zone 4
P-354	506	8.0	PVC	6.7	0.0427	0.00	140.0	Zone 4
P-732	306	8.0	PVC	6.7	0.0427	0.00	140.0	Zone 4
P-734	299	8.0	PVC	6.7	0.0427	0.00	140.0	Zone 4
P-736	304	8.0	PVC	6.7	0.0427	0.00	140.0	Zone 4
P-580	483	8.0	PVC	6.3	0.0402	0.00	140.0	Zone 1
P-1485	115	8.0	PVC	6.0	0.0384	0.00	140.0	Zone 4
P-457	111	6.0	PVC	3.3	0.0379	0.00	140.0	Zone 4
P-532	100	6.0	PVC	3.3	0.0379	0.00	140.0	Zone 4
P-707	195	6.0	PVC	3.3	0.0379	0.00	140.0	Zone 4
P-738	104	6.0	PVC	3.3	0.0379	0.00	140.0	Zone 4
P-992	259	6.0	PVC	11.2	0.1271	0.00	140.0	Zone 4
P-459	149	6.0	PVC	3.1	0.0347	0.00	140.0	Zone 4
P-1039	340	8.0	PVC	5.2	0.0335	0.00	140.0	Zone 1
P-1434	66	8.0	PVC	5.4	0.0342	0.00	140.0	Zone 4
P-1435	130	8.0	PVC	5.4	0.0342	0.00	140.0	Zone 4
P22-N-13-3	312	8.0	PVC	-5.4	0.0342	0.00	140.0	Zone 4
P-789	252	6.0	PVC	6.3	0.0719	0.00	140.0	Zone 4
P-739	111	6.0	PVC	2.7	0.0304	0.00	140.0	Zone 4
P-740	141	6.0	PVC	2.7	0.0304	0.00	140.0	Zone 4
P22-N-1-1	32	8.0	PVC	4.7	0.0299	0.00	140.0	Zone 4
P22-N-1-2	16	8.0	PVC	4.7	0.0299	0.00	140.0	Zone 4
P-724	394	6.0	PVC	4.9	0.0557	0.00	140.0	Zone 4
P-729	690	8.0	PVC	4.6	0.0296	0.00	140.0	Zone 4
P-396	302	8.0	PVC	4.6	0.0294	0.00	140.0	Zone 3
P22-N-6-1	32	8.0	PVC	4.5	0.0288	0.00	140.0	Zone 4
P-229	477	6.0	PVC	2.2	0.0250	0.00	140.0	Zone 1
P22-N-5-1	35	8.0	PVC	4.0	0.0256	0.00	140.0	Zone 4
P22-N-3-1	33	8.0	PVC	4.0	0.0256	0.00	140.0	Zone 4
P-1489	191	8.0	PVC	4.0	0.0256	0.00	140.0	Zone 4
P-1247	147	8.0	PVC	10.1	0.0645	0.00	140.0	Zone 4
P-1421	63	8.0	PVC	10.1	0.0645	0.00	140.0	Zone 4
P-1476	147	8.0	PVC	2.3	0.0145	0.00	140.0	Zone 4
P-1477	52	8.0	PVC	2.3	0.0145	0.00	140.0	Zone 4
P-1478	157	8.0	PVC	2.3	0.0145	0.00	140.0	Zone 4
P-1420	143	8.0	PVC	3.3	0.0213	0.00	140.0	Zone 4
P-1486	148	8.0	PVC	3.3	0.0213	0.00	140.0	Zone 4

**GBWC 2024 IRP - Cold Springs Division**  
**Action (2027) PHD Condition Distribution System Pipe Report**  
 PHD-PIPES - Time: 0.00 hours

Label	Length (Scaled) (ft)	Diameter (in)	Material	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Hazen- Williams C	Zone
P-1488	288	8.0	PVC	3.3	0.0213	0.00	140.0	Zone 4
P-1419	53	8.0	PVC	3.3	0.0213	0.00	150.0	Zone 4
P-798	244	10.0	PVC	2.6	0.0107	0.00	140.0	Zone 4
P-1472	75	8.0	PVC	9.0	0.0572	0.00	140.0	Zone 4
P-1484	65	8.0	PVC	-9.0	0.0572	0.00	140.0	Zone 4
P22-N-13-2	147	8.0	PVC	-2.7	0.0171	0.00	140.0	Zone 4
P-1498	109	8.0	PVC	2.7	0.0171	0.00	140.0	Zone 4
P-1475	157	8.0	PVC	3.6	0.0230	0.00	140.0	Zone 4
P-1502(1)(2)	27	8.0	PVC	2.0	0.0128	0.00	140.0	Zone 4
P22-N-5-2	106	8.0	PVC	2.0	0.0128	0.00	140.0	Zone 4
P22-N-3-2	117	8.0	PVC	2.0	0.0128	0.00	140.0	Zone 4
P-1490	56	8.0	PVC	2.0	0.0128	0.00	140.0	Zone 4
P-1502(2)	14	8.0	PVC	2.0	0.0128	0.00	140.0	Zone 4
P-704	265	6.0	PVC	4.9	0.0561	0.00	140.0	Zone 4
P-779	692	10.0	PVC	24.4	0.0997	0.00	140.0	Zone 4
P-1473	47	8.0	PVC	7.6	0.0486	0.00	140.0	Zone 4
P-44	1,015	10.0	PVC	-6.7	0.0272	0.00	140.0	Zone 2
P-694	281	8.0	PVC	-18.7	0.1191	0.00	140.0	Zone 4
P-157	617	8.0	PVC	-21.4	0.1364	0.01	140.0	Zone 2
P-158	370	8.0	PVC	-21.4	0.1364	0.00	140.0	Zone 2
P-1205	55	6.0	PVC	-0.3	0.0035	0.00	140.0	Zone 4
P-718	243	6.0	PVC	0.4	0.0046	0.00	140.0	Zone 4
P-182	586	6.0	PVC	2.3	0.0265	0.00	140.0	Zone 2
P-225	375	12.0	Asbestos Cement	-1.1	0.0030	0.00	110.0	Zone 2
P-1474	489	8.0	PVC	5.6	0.0358	0.00	140.0	Zone 4
P-796	571	6.0	PVC	5.2	0.0591	0.00	140.0	Zone 4
P-165	278	8.0	PVC	-26.6	0.1698	0.01	140.0	Zone 2
P-586	56	8.0	PVC	0.0	0.0000	0.00	140.0	Zone 1
P-771	252	8.0	PVC	0.0	0.0000	0.00	140.0	Zone 1
P-769	98	8.0	PVC	0.0	0.0000	0.00	140.0	Zone 3
P-412	563	8.0	PVC	0.0	0.0000	0.00	140.0	Zone 2
P-322(2)(1)	454	8.0	PVC	0.0	0.0000	0.00	140.0	Zone 2
P-322(2)(2)	215	8.0	PVC	0.0	0.0000	0.00	140.0	Zone 2
P-587	41	8.0	PVC	0.0	0.0000	0.00	140.0	Zone 1
P-322(1)	39	8.0	PVC	0.0	0.0000	0.00	140.0	Zone 2
P-411	64	8.0	PVC	0.0	0.0000	0.00	140.0	Zone 2
P-596	195	10.0	Asbestos Cement	0.0	0.0000	0.00	110.0	Zone 1
P-1512	26	8.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P22-6-HL	11	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P22-N-22-HL	12	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1255-HL	18	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P22-23-HL	12	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P22-20-HL	12	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4



**GBWC 2024 IRP - Cold Springs Division**  
**Action (2027) PHD Condition Distribution System Pipe Report**  
 PHD-PIPES - Time: 0.00 hours

Label	Length (Scaled) (ft)	Diameter (in)	Material	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Hazen- Williams C	Zone
P-1261-HL	22	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1508	50	8.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1276-HL	19	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1282-HL	37	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P22-15-HL	13	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1226-HL	21	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1227-HL	27	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1279-HL	34	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1219-HL	24	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1223-HL	23	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1193-HL	30	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1446-HL	30	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1285-HL	35	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1267-HL	39	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P22-8-HL	12	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1372-HL	40	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1225-HL	18	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1468	30	8.0	PVC	0.0	0.0000	0.00	150.0	Zone 4
P22-1-HL	13	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1440-HL	23	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1371-HL	24	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1436-HL	24	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1222-HL	21	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1224-HL	23	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P22-10-HL	46	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1469	37	8.0	PVC	0.0	0.0000	0.00	150.0	Zone 4
P-1220-HL	26	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1376-HL	39	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1467	34	6.0	PVC	0.0	0.0000	0.00	150.0	Zone 4
P-1441-HL	35	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1445-HL	32	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1351-HL	24	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 2
P-1444-HL	34	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1270-HL	28	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1448-HL	29	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1511	35	8.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-571	181	8.0	PVC	0.0	0.0000	0.00	140.0	Zone 1
P22-N-24-HL	29	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1447-HL	40	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P22-N-21-HL	12	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P22-9-HL	12	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P22-12-HL	12	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P22-11-HL	12	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P22-7-HL	12	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1438-HL	26	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4

**GBWC 2024 IRP - Cold Springs Division**  
**Action (2027) PHD Condition Distribution System Pipe Report**  
 PHD-PIPES - Time: 0.00 hours

Label	Length (Scaled) (ft)	Diameter (in)	Material	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Hazen-Williams C	Zone
P-1273-HL	34	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-92	238	10.0	PVC	0.0	0.0000	0.00	140.0	Zone 2
P-1175-HL	30	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1437-HL	30	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1369-HL	35	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1439-HL	35	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1449-HL	35	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1377-HL	39	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1373-HL	34	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P22-14-HL	13	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1375-HL	38	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1370-HL	31	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1442-HL	31	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1443-HL	31	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1176-HL	36	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1177-HL	39	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1513	54	8.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1374-HL	33	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-399	159	8.0	PVC	0.0	0.0000	0.00	140.0	Zone 3
P-746	256	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1221-HL	14	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1264-HL	27	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-822	81	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-714	113	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1258-HL	30	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P22-N-13-1	53	8.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1553(1)	193	8.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1134	68	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 1
P-564	414	8.0	PVC	0.0	0.0000	0.00	140.0	Zone 1
P-330	277	10.0	Asbestos Cement	0.0	0.0000	0.00	110.0	Zone 2
P-408	68	8.0	PVC	0.0	0.0000	0.00	140.0	Zone 4

**GBWC 2024 IRP - Cold Springs Division**  
**Preferred (2044) MDD Condition Distribution System Junction Report**  
MDD - Time: 0.00 hours

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
2894	J-1230 (CS Drive Homes)	5,054.00	Zone 1	2.5	5,317.29	113.9
2898	J-1233 (CS Drive Homes)	5,044.00	Zone 1	6.3	5,317.29	118.2
2900	J-1232 (CS Drive Homes)	5,040.00	Zone 1	5.0	5,317.29	120.0
2902	J-1231 (CS Drive Homes)	5,048.00	Zone 1	5.0	5,317.29	116.5
2908	J-1236 (CS Drive Homes)	5,044.00	Zone 1	2.5	5,317.29	118.2
2982	J-1255	5,086.00	Zone 4	3.7	5,279.98	83.9
2984	J-1256	5,083.00	Zone 4	2.5	5,279.93	85.2
2986	J-1257	5,085.00	Zone 4	4.9	5,279.85	84.3
2989	J-1258	5,088.00	Zone 4	0.0	5,280.02	83.1
2993	J-1259	5,087.00	Zone 4	2.5	5,279.85	83.4
2995	J-1260	5,092.00	Zone 4	0.0	5,279.78	81.2
3009	J-1266	5,087.50	Zone 4	1.2	5,280.01	83.3
3026	J-1272	5,090.00	Zone 4	2.5	5,279.79	82.1
3032	J-1274	5,082.00	Zone 4	0.0	5,279.90	85.6
3090	J-1298	5,063.00	Zone 2	0.0	5,179.27	50.3
3092	J-1299	5,065.00	Zone 2	0.0	5,179.25	49.4
3094	J-1300	5,068.00	Zone 2	4.1	5,179.22	48.1
3096	J-1301	5,069.70	Zone 2	4.1	5,179.16	47.4
3098	J-1302	5,070.70	Zone 2	4.1	5,179.16	46.9
3100	J-1303	5,071.50	Zone 2	4.1	5,179.16	46.6
3102	J-1304	5,072.50	Zone 2	4.1	5,179.15	46.1
3104	J-1305	5,075.10	Zone 2	4.1	5,179.15	45.0
3106	J-1306	5,075.40	Zone 2	4.1	5,179.15	44.9
3108	J-1307	5,075.40	Zone 2	4.1	5,179.15	44.9
3110	J-1308	5,082.70	Zone 2	4.1	5,179.15	41.7
3112	J-1309	5,082.90	Zone 2	4.1	5,179.15	41.6
3114	J-1310	5,075.20	Zone 2	4.1	5,179.15	45.0
3116	J-1311	5,074.20	Zone 2	4.1	5,179.15	45.4
3118	J-1312	5,070.60	Zone 2	4.1	5,179.15	47.0
3120	J-1313	5,069.30	Zone 2	4.1	5,179.15	47.5
3122	J-1314	5,070.00	Zone 2	0.0	5,179.15	47.2
3124	J-1315	5,070.00	Zone 2	0.0	5,179.15	47.2
3127	J-1316	5,069.70	Zone 2	0.0	5,179.16	47.4
3129	J-1317	5,064.00	Zone 2	0.0	5,179.16	49.8
3136	J-1320	5,062.00	Zone 2	0.0	5,179.16	50.7
3138	J-1321	5,066.00	Zone 2	0.0	5,179.16	49.0

**GBWC 2024 IRP - Cold Springs Division**  
**Preferred (2044) MDD Condition Distribution System Junction Report**  
MDD - Time: 0.00 hours

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
3158	J-1322 (CS Drive Homes)	5,049.82	<None>	2.0	5,317.30	115.7
232	J-127	5,090.00	Zone 2	8.1	5,180.43	39.1
142	J-33	5,083.00	Zone 2	0.0	5,174.84	39.7
233	J-128	5,085.00	Zone 2	9.2	5,179.61	40.9
231	J-126	5,083.00	Zone 2	8.7	5,179.51	41.8
1620	J-760	5,181.43	Zone 4	0.0	5,279.25	42.3
1595	J-759	5,180.85	Zone 4	0.0	5,279.25	42.6
322	J-241	5,180.85	Zone 4	0.0	5,279.25	42.6
183	J-77	5,080.00	Zone 2	7.1	5,179.02	42.8
185	J-79	5,080.00	Zone 2	21.7	5,179.19	42.9
234	J-129	5,080.00	Zone 2	0.0	5,179.34	43.0
1564	J-747	5,177.53	Zone 4	3.7	5,279.25	44.0
171	J-65	5,078.00	Zone 2	6.0	5,179.22	43.8
215	J-110	5,078.00	Zone 2	13.6	5,179.16	43.8
235	J-130	5,078.00	Zone 2	8.1	5,179.41	43.9
1535	J-742	5,176.39	Zone 4	0.0	5,279.26	44.5
1569	J-749	5,176.03	Zone 4	0.0	5,279.26	44.7
181	J-75	5,076.00	Zone 2	4.3	5,179.28	44.7
1562	J-746	5,174.93	Zone 4	0.0	5,279.26	45.1
186	J-80	5,075.00	Zone 2	0.0	5,178.84	44.9
230	J-125	5,075.00	Zone 2	0.0	5,179.03	45.0
1538	J-743	5,174.58	Zone 4	4.5	5,279.26	45.3
1573	J-751	5,174.46	Zone 4	3.3	5,279.26	45.3
184	J-78	5,074.00	Zone 2	0.0	5,178.95	45.4
193	J-87	5,074.00	Zone 2	6.5	5,179.02	45.4
237	J-132	5,073.00	Zone 2	0.0	5,179.14	45.9
236	J-131	5,073.00	Zone 2	10.9	5,179.22	46.0
238	J-133	5,072.00	Zone 2	10.9	5,179.07	46.3
194	J-88	5,072.00	Zone 2	7.6	5,179.06	46.3
204	J-98	5,072.00	Zone 2	0.0	5,179.17	46.4
505	J-480	5,170.56	Zone 4	0.0	5,279.27	47.0
430	J-397	5,170.00	Zone 4	4.9	5,279.28	47.3
195	J-89	5,070.00	Zone 2	0.0	5,179.09	47.2
170	J-64	5,070.00	Zone 2	6.0	5,179.15	47.2
198	J-92	5,070.00	Zone 2	8.1	5,179.16	47.2
205	J-99	5,070.00	Zone 2	0.0	5,179.17	47.2
211	J-105	5,070.00	Zone 2	0.0	5,179.16	47.2
212	J-106	5,070.00	Zone 2	9.2	5,179.16	47.2
213	J-108	5,070.00	Zone 2	7.6	5,179.16	47.2
224	J-119	5,070.00	Zone 2	5.4	5,179.16	47.2
321	J-240	5,070.00	Zone 2	0.0	5,179.22	47.3
182	J-76	5,070.00	Zone 2	2.7	5,179.27	47.3
172	J-66	5,070.00	Zone 2	7.6	5,179.30	47.3
429	J-396	5,169.00	Zone 4	5.7	5,279.28	47.7

**GBWC 2024 IRP - Cold Springs Division**  
**Preferred (2044) MDD Condition Distribution System Junction Report**  
MDD - Time: 0.00 hours

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
202	J-96	5,069.00	Zone 2	8.7	5,179.17	47.7
210	J-104	5,069.00	Zone 2	7.1	5,179.16	47.7
214	J-109	5,069.00	Zone 2	5.4	5,179.16	47.7
239	J-134	5,068.00	Zone 2	0.0	5,179.14	48.1
188	J-82	5,068.00	Zone 2	0.0	5,179.15	48.1
189	J-83	5,068.00	Zone 2	6.5	5,179.16	48.1
191	J-85	5,068.00	Zone 2	7.1	5,179.16	48.1
190	J-84	5,068.00	Zone 2	7.6	5,179.17	48.1
201	J-95	5,068.00	Zone 2	10.3	5,179.17	48.1
209	J-103	5,068.00	Zone 2	6.0	5,179.17	48.1
223	J-118	5,068.00	Zone 2	6.0	5,179.17	48.1
222	J-117	5,068.00	Zone 2	0.0	5,179.17	48.1
228	J-123	5,068.00	Zone 2	8.7	5,179.17	48.1
199	J-93	5,067.00	Zone 2	0.0	5,179.13	48.5
431	J-398	5,166.00	Zone 4	0.7	5,279.29	49.0
1579	J-753	5,165.91	Zone 4	4.1	5,279.27	49.0
196	J-90	5,066.00	Zone 2	6.5	5,179.14	48.9
221	J-116	5,065.00	Zone 2	7.6	5,179.17	49.4
227	J-122	5,065.00	Zone 2	7.6	5,179.17	49.4
203	J-97	5,065.00	Zone 2	0.0	5,179.18	49.4
216	J-111	5,065.00	Zone 2	9.8	5,179.17	49.4
1560	J-ph19 IRR2	5,164.42	NO FIRE	0.0	5,279.27	49.7
168	J-62	5,065.00	Zone 2	5.4	5,179.25	49.4
1558	J-744	5,164.42	Zone 4	0.0	5,279.27	49.7
148	J-40	5,065.00	Zone 2	10.3	5,179.28	49.4
316	J-235	5,203.00	Zone 3	0.0	5,318.00	49.8
317	J-237	5,203.00	Zone 3	3.0	5,318.00	49.8
315	J-234	5,202.00	Zone 3	2.6	5,317.65	50.0
1576	J-752	5,163.52	Zone 4	4.1	5,279.27	50.1
1586	J-756	5,163.08	Zone 4	4.1	5,279.27	50.3
226	J-121	5,063.00	Zone 2	0.0	5,179.17	50.3
152	J-45	5,063.00	Zone 2	8.7	5,179.19	50.3
269	J-185	5,200.00	Zone 3	0.0	5,317.65	50.9
200	GOMES ELEM SCHOOL	5,062.00	Zone 2	7.9	5,179.17	50.7
220	J-115	5,062.00	Zone 2	7.1	5,179.17	50.7
225	J-120	5,062.00	Zone 2	10.9	5,179.17	50.7
192	J-86	5,062.00	Zone 2	0.0	5,179.22	50.7
229	J-124	5,062.00	Zone 2	0.0	5,179.18	50.7
187	J-81	5,061.00	Zone 2	10.9	5,179.17	51.1
197	J-91	5,061.00	Zone 2	0.0	5,179.18	51.1
219	J-114	5,060.00	Zone 2	8.7	5,179.17	51.6
146	J-38	5,060.00	Zone 2	9.8	5,179.23	51.6
147	J-39	5,060.00	Zone 2	8.7	5,179.23	51.6
415	J-355	5,060.00	Zone 2	0.0	5,179.22	51.6

**GBWC 2024 IRP - Cold Springs Division**  
**Preferred (2044) MDD Condition Distribution System Junction Report**  
MDD - Time: 0.00 hours

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
151	J-44	5,060.00	Zone 2	10.3	5,179.22	51.6
173	J-67	5,060.00	Zone 2	8.7	5,179.31	51.6
178	J-72	5,060.00	Zone 2	11.9	5,179.35	51.6
179	J-73	5,060.00	Zone 2	0.0	5,179.39	51.7
180	J-74	5,060.00	Zone 2	9.2	5,179.42	51.7
176	J-70	5,060.00	Zone 2	3.8	5,179.51	51.7
166	J-60	5,058.00	Zone 2	8.7	5,179.23	52.5
167	J-61	5,058.00	Zone 2	9.8	5,179.24	52.5
207	J-101	5,058.00	Zone 2	0.0	5,179.48	52.6
506	J-481	5,156.88	Zone 4	0.0	5,279.31	53.0
274	J-192	5,200.00	Zone 1	0.7	5,322.21	52.9
1583	J-755	5,155.60	Zone 4	4.1	5,279.29	53.5
175	J-69	5,056.00	Zone 2	0.0	5,179.39	53.4
353	J-275	5,055.00	Zone 2	7.6	5,179.17	53.7
352	J-274	5,055.00	Zone 2	5.4	5,179.17	53.7
218	J-113	5,055.00	Zone 2	2.2	5,179.18	53.7
217	J-112	5,055.00	Zone 2	11.4	5,179.19	53.7
259	J-157	5,055.00	Zone 2	0.0	5,179.34	53.8
206	J-100	5,055.00	Zone 2	7.1	5,179.48	53.9
136	J-17	5,055.00	Zone 2	0.0	5,179.59	53.9
428	J-395	5,152.00	Zone 4	4.1	5,279.32	55.1
177	J-71	5,052.00	Zone 2	0.0	5,179.59	55.2
135	J-16	5,052.00	Zone 2	0.0	5,179.68	55.2
208	J-102	5,052.00	Zone 2	10.9	5,179.74	55.3
150	J-43	5,052.00	Zone 2	5.4	5,179.75	55.3
174	J-68	5,050.00	Zone 2	7.6	5,179.35	56.0
159	J-53	5,050.00	Zone 2	9.8	5,179.43	56.0
2938	J-1245	5,050.00	Zone 2	0.0	5,179.41	56.0
2946	J-1246	5,050.00	Zone 2	0.0	5,179.41	56.0
145	J-37	5,050.00	Zone 2	0.0	5,179.48	56.0
163	J-57	5,050.00	Zone 2	7.6	5,180.62	56.5
432	J-399	5,147.42	Zone 4	0.8	5,279.34	57.1
165	J-59	5,050.00	Zone 2	5.4	5,181.32	56.8
164	J-58	5,048.00	Zone 2	0.0	5,180.31	57.2
427	J-394	5,146.00	Zone 4	5.7	5,279.33	57.7
1592	J-758	5,145.34	Zone 4	4.1	5,279.42	58.0
162	J-56	5,048.00	Zone 2	9.8	5,181.46	57.7
161	J-55	5,048.00	Zone 2	6.5	5,182.17	58.0
276	J-194	5,046.00	Zone 2	8.1	5,180.42	58.2
1860	J-805	5,046.00	Zone 4	0.0	5,180.59	58.2
156	J-50	5,046.00	Zone 2	6.5	5,180.62	58.2
158	J-52	5,045.00	Zone 2	3.8	5,179.62	58.2
169	J-63	5,045.00	Zone 2	8.9	5,180.23	58.5
680	J-ph19 IRR1	5,143.72	NO FIRE	0.0	5,279.53	58.8
247	J-142	5,180.00	Zone 3	4.8	5,316.50	59.1
333	J-255	5,045.00	Zone 2	0.0	5,181.01	58.8

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**GBWC 2024 IRP - Cold Springs Division**  
**Preferred (2044) MDD Condition Distribution System Junction Report**  
MDD - Time: 0.00 hours

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
1589	J-757	5,142.82	Zone 4	4.1	5,279.52	59.1
134	J-15	5,046.00	Zone 2	0.3	5,182.34	59.0
149	J-42	5,045.00	Zone 2	1.5	5,181.44	59.0
245	J-140	5,180.00	Zone 3	9.6	5,317.19	59.4
157	J-51	5,042.00	Zone 2	4.9	5,179.96	59.7
425	J-392	5,140.00	Zone 4	5.7	5,279.31	60.3
426	J-393	5,140.00	Zone 4	4.9	5,279.34	60.3
423	J-390	5,140.00	Zone 4	0.0	5,279.34	60.3
160	J-54	5,045.00	Zone 2	0.0	5,184.94	60.5
252	J-149 Reno Truss	5,045.00	Zone 2	0.6	5,184.94	60.5
424	J-391	5,138.00	Zone 4	4.1	5,279.35	61.2
422	J-389	5,138.00	Zone 4	1.6	5,279.36	61.2
1806	J-797	5,045.00	Zone 2	9.8	5,187.51	61.7
507	J-482	5,135.00	Zone 4	0.0	5,279.37	62.5
690	FH-925	5,134.00	Zone 4	0.0	5,279.58	63.0
123	J-3	5,175.00	Zone 1	0.0	5,321.40	63.3
2752	J-23-1190	5,133.35	Zone 4	0.8	5,280.06	63.5
679	J-685	5,132.00	Zone 4	0.0	5,279.61	63.9
673	J-679	5,131.00	Zone 4	7.0	5,279.39	64.2
2750	J-23-1189	5,131.90	Zone 4	1.2	5,280.06	64.1
2834	J-23-1225	5,131.90	Zone 4	0.0	5,280.06	64.1
2754	J-23-1191	5,131.52	Zone 4	0.0	5,280.06	64.3
693	FH-921	5,130.00	Zone 4	0.0	5,279.44	64.7
2756	J-23-1192	5,130.50	Zone 4	0.0	5,280.06	64.7
1938	J-819	5,130.00	Zone 4	0.0	5,280.05	64.9
1940	J-820	5,129.04	Zone 4	0.0	5,280.05	65.3
1982	J-829	5,129.00	Zone 4	0.0	5,280.05	65.4
2748	J-23-1188	5,128.90	Zone 4	1.2	5,280.06	65.4
2758	J-23-1193	5,128.40	Zone 4	2.9	5,280.06	65.6
1996	J-836	5,128.20	Zone 4	3.7	5,280.05	65.7
2746	J-23-1187	5,128.18	Zone 4	0.8	5,280.06	65.7
1911	J-815	5,128.00	Zone 4	1.1	5,280.05	65.8
672	J-678	5,126.00	Zone 4	0.0	5,279.50	66.4
2140	J22-901	5,126.71	Zone 4	0.0	5,280.05	66.3
2999	J-1262	5,167.94	Zone 1	0.3	5,321.22	66.3
678	FH-926	5,126.00	Zone 4	0.0	5,279.69	66.5
418	J-352	5,125.00	Zone 4	5.3	5,279.37	66.8
283	J-184	5,125.00	Zone 4	55.6	5,279.38	66.8
2744	J-23-1186	5,125.90	Zone 4	0.0	5,280.06	66.7
692	FH-922	5,125.00	Zone 4	0.0	5,279.52	66.9
2760	J-23-1194	5,125.40	Zone 4	2.0	5,280.06	66.9
1899	J-810	5,125.00	Zone 4	0.0	5,280.04	67.1
1984	J-830	5,124.80	Zone 4	0.0	5,280.05	67.2
2007	J-841	5,124.70	Zone 4	0.0	5,280.05	67.2
1495	J-730	5,124.00	Zone 4	0.0	5,280.02	67.5

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**GBWC 2024 IRP - Cold Springs Division**  
**Preferred (2044) MDD Condition Distribution System Junction Report**  
MDD - Time: 0.00 hours

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
1890	J-806	5,124.00	Zone 4	0.0	5,280.04	67.5
1901	J-811	5,124.00	Zone 4	5.3	5,280.04	67.5
1913	J-816	5,124.00	Zone 4	4.9	5,280.05	67.5
2762	J-23-1195	5,124.00	Zone 4	1.2	5,280.06	67.5
248	J-143	5,160.00	Zone 3	3.3	5,316.48	67.7
250	J-145	5,160.00	Zone 3	4.4	5,316.54	67.7
1503	J-732	5,123.61	Zone 4	0.0	5,279.98	67.7
671	J-677	5,123.00	Zone 4	8.2	5,279.58	67.7
246	J-141	5,160.00	Zone 3	4.1	5,316.66	67.8
2735	J-1184	5,123.50	Zone 4	0.0	5,280.06	67.7
2772	J-1199	5,123.45	Zone 4	0.0	5,280.06	67.8
270	J-187	5,160.00	Zone 3	0.0	5,317.05	67.9
1892	J-807	5,123.00	Zone 4	4.5	5,280.04	67.9
2137	J22-899	5,122.97	Zone 4	0.0	5,280.06	68.0
682	J-688	5,122.00	Zone 4	2.5	5,279.81	68.3
2764	J-23-1196	5,122.20	Zone 4	1.6	5,280.06	68.3
691	FH-923	5,121.00	Zone 4	0.0	5,279.60	68.6
681	J-687	5,121.00	Zone 4	0.0	5,279.79	68.7
2768	J-1198	5,121.33	Zone 4	0.0	5,280.06	68.7
465	J-434	5,120.00	Zone 4	3.3	5,279.40	69.0
284	J-195	5,120.00	Zone 4	0.0	5,279.40	69.0
464	J-433	5,120.00	Zone 4	1.6	5,279.40	69.0
2766	J-23-1197	5,120.77	Zone 4	1.2	5,280.06	68.9
687	FH-927	5,119.00	Zone 4	0.0	5,279.76	69.6
685	FH-930	5,119.00	Zone 4	0.0	5,279.81	69.6
279	J-189	5,160.00	Zone 1	0.0	5,320.89	69.6
124	J-4	5,160.00	Zone 1	5.0	5,321.02	69.7
2436	J22-1078	5,118.46	Zone 4	0.0	5,280.06	69.9
669	J-675	5,118.00	Zone 4	0.0	5,279.78	70.0
244	J-139	5,155.00	Zone 3	0.0	5,316.92	70.1
508	J-483	5,117.00	Zone 4	0.0	5,279.38	70.3
578	J-576	5,117.00	Zone 4	4.9	5,279.53	70.3
2002	J-839	5,117.70	Zone 4	0.0	5,280.05	70.2
2781	J-23-1202	5,117.50	Zone 4	2.0	5,280.06	70.3
2776	J-1200	5,116.98	Zone 4	0.0	5,280.06	70.6
1519	J-736	5,116.72	Zone 4	5.7	5,280.02	70.7
1915	J-817	5,116.00	Zone 4	0.0	5,280.05	71.0
2731	J-1183	5,115.25	Zone 4	0.0	5,280.06	71.3
473	J-443	5,114.00	Zone 4	4.1	5,279.40	71.6
2779	J-23-1201	5,115.00	Zone 4	1.6	5,280.06	71.4
670	J-676	5,114.00	Zone 4	0.0	5,279.70	71.7
281	J-191	5,155.00	Zone 1	5.0	5,320.60	71.6
280	J-190	5,155.00	Zone 1	0.0	5,320.70	71.7
688	J-674	5,113.00	Zone 4	0.0	5,279.78	72.2
684	J-690	5,113.00	Zone 4	0.0	5,279.81	72.2
417	J-348	5,112.00	Zone 4	4.1	5,279.38	72.4

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**GBWC 2024 IRP - Cold Springs Division**  
**Preferred (2044) MDD Condition Distribution System Junction Report**  
MDD - Time: 0.00 hours

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
2013	J-844	5,113.00	Zone 4	2.0	5,280.06	72.3
2713	J-1179	5,112.09	Zone 4	0.0	5,280.06	72.7
1894	J-808	5,112.00	Zone 4	0.0	5,280.04	72.7
2018	J-846	5,111.50	Zone 4	0.0	5,280.06	72.9
689	FH-924	5,111.00	Zone 4	0.0	5,279.77	73.0
1903	J-812	5,111.00	Zone 4	0.0	5,280.05	73.1
2011	J-843	5,110.80	Zone 4	0.0	5,280.06	73.2
2114	J22-884	5,110.48	Zone 4	1.2	5,280.07	73.4
2009	J-842	5,110.40	Zone 4	3.7	5,280.06	73.4
282	J-193	5,150.00	Zone 1	5.0	5,320.56	73.8
2605	J22-1158	5,109.16	Zone 4	1.2	5,280.07	73.9
2439	J22-1079	5,109.01	Zone 4	3.1	5,280.07	74.0
2004	J-840	5,108.90	Zone 4	4.1	5,280.06	74.1
674	J-680	5,108.00	Zone 4	5.3	5,279.80	74.3
1493	J-729	5,108.00	Zone 4	0.0	5,280.03	74.4
1649	J-770	5,108.00	Zone 4	0.0	5,280.06	74.4
2117	J22-886	5,107.93	Zone 4	1.2	5,280.07	74.5
1516	J-735	5,107.24	Zone 4	0.0	5,280.03	74.8
1905	J-813	5,107.00	Zone 4	4.9	5,280.05	74.9
1917	J-818	5,107.00	Zone 4	4.5	5,280.05	74.9
472	J-442	5,106.00	Zone 4	4.5	5,279.42	75.0
649	J-652	5,145.00	Zone 1	6.3	5,317.48	74.6
2609	J22-1159	5,106.83	Zone 4	1.2	5,280.07	75.0
2015	J-845	5,106.70	Zone 4	4.1	5,280.06	75.0
2442	J22-1080	5,106.38	Zone 4	0.0	5,280.07	75.1
686	FH-928	5,106.00	Zone 4	0.0	5,279.81	75.2
575	J-570	5,106.00	Zone 4	0.0	5,279.81	75.2
416	J-346	5,105.00	Zone 4	0.0	5,279.38	75.4
1896	J-809	5,106.00	Zone 4	4.5	5,280.05	75.3
2789	J-23-1206	5,106.00	Zone 4	1.2	5,280.12	75.3
1946	J-823	5,105.90	Zone 4	0.0	5,280.05	75.3
2119	J22-887	5,105.85	Zone 4	0.0	5,280.08	75.4
1988	J-832	5,105.60	Zone 4	0.0	5,280.06	75.5
2123	J22-890	5,105.57	Zone 4	0.8	5,280.08	75.5
683	J-689	5,105.00	Zone 4	3.7	5,279.82	75.6
646	J-649	5,105.00	Zone 4	0.0	5,279.83	75.6
611	CS MIDDLE SCHOOL	5,105.00	Zone 4	26.2	5,279.84	75.6
576	J-571	5,105.00	Zone 4	0.0	5,279.84	75.6
645	J-642	5,105.00	Zone 4	0.0	5,279.86	75.7
1994	J-835	5,105.20	Zone 4	0.0	5,280.06	75.7
2787	J-23-1205	5,105.15	Zone 4	1.2	5,280.12	75.7
2446	J22-1082	5,104.95	Zone 4	1.9	5,280.08	75.8
2613	J22-1160	5,104.92	Zone 4	0.0	5,280.08	75.8
1992	J-834	5,104.80	Zone 4	0.0	5,280.06	75.8
1990	J-833	5,104.80	Zone 4	0.0	5,280.06	75.8

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**GBWC 2024 IRP - Cold Springs Division**  
**Preferred (2044) MDD Condition Distribution System Junction Report**  
MDD - Time: 0.00 hours

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
2785	J-23-1204	5,104.50	Zone 4	2.0	5,280.12	76.0
1907	J-814	5,104.28	Zone 4	0.0	5,280.06	76.0
1513	J-734	5,104.16	Zone 4	0.0	5,280.04	76.1
2621	J22-1163	5,104.00	Zone 4	1.2	5,280.09	76.2
364	J-286	5,103.00	Zone 4	11.0	5,279.43	76.3
2617	J22-1161	5,103.84	Zone 4	1.2	5,280.09	76.3
249	J-144	5,140.00	Zone 3	0.0	5,316.45	76.3
2449	J22-1083	5,103.53	Zone 4	0.0	5,280.09	76.4
695	FH-919	5,103.00	Zone 4	4.9	5,279.82	76.5
1498	J-731	5,103.00	Zone 4	0.0	5,280.04	76.6
474	J-441	5,102.00	Zone 4	4.5	5,279.44	76.8
2041	J-856	5,102.40	Zone 4	3.7	5,280.07	76.9
2783	J-23-1203	5,102.20	Zone 4	2.0	5,280.12	77.0
243	J-138	5,138.00	Zone 3	0.0	5,316.74	77.3
475	J-444	5,138.00	Zone 3	0.0	5,316.74	77.3
327	J-248	5,138.00	Zone 3	5.2	5,316.77	77.3
2039	J-855	5,101.00	Zone 4	3.7	5,280.07	77.5
360	J-282	5,100.00	Zone 4	4.5	5,279.55	77.7
285	J-196	5,100.00	Zone 4	0.0	5,279.43	77.6
463	J-432	5,100.00	Zone 4	1.6	5,279.43	77.6
1730	J-783	5,100.37	Zone 4	2.9	5,280.06	77.7
2031	J-852	5,100.10	Zone 4	3.3	5,280.06	77.9
511	J-485	5,100.00	Zone 4	9.6	5,280.07	77.9
362	J-284	5,099.00	Zone 4	6.6	5,279.47	78.1
2126	J22-892	5,099.98	Zone 4	0.8	5,280.09	77.9
292	J-203	5,099.00	Zone 4	4.1	5,279.48	78.1
125	J-5	5,140.00	Zone 1	5.0	5,320.50	78.1
675	J-681	5,099.00	Zone 4	0.0	5,279.83	78.2
2046	J-858	5,099.00	Zone 4	3.3	5,280.07	78.3
361	J-283	5,098.00	Zone 4	4.5	5,279.52	78.5
2629	J22-1165	5,098.57	Zone 4	1.6	5,280.10	78.5
2643	J22-1169	5,098.46	Zone 4	2.0	5,280.10	78.6
2029	J-851	5,098.30	Zone 4	3.3	5,280.06	78.6
638	J-639	5,098.00	Zone 4	0.0	5,279.98	78.7
2626	J22-1164	5,098.00	Zone 4	1.2	5,280.10	78.8
2452	J22-1084	5,098.00	Zone 4	0.0	5,280.10	78.8
2639	J22-1168	5,098.00	Zone 4	1.6	5,280.12	78.8
2653	J22-1172	5,097.47	Zone 4	3.7	5,280.10	79.0
664	J-667	5,097.00	Zone 4	0.0	5,279.86	79.1
2854	J23-IRR	5,097.29	NO FIRE	0.0	5,280.13	79.1
2037	J-854	5,097.00	Zone 4	3.7	5,280.07	79.2
293	J-204	5,096.00	Zone 4	4.1	5,279.49	79.4
1510	J-733	5,096.68	Zone 4	5.7	5,280.05	79.3
2034	J-853	5,096.50	Zone 4	0.0	5,280.09	79.4
459	J-428	5,095.50	Zone 4	0.0	5,279.49	79.6
2825	J-23-1222	5,097.83	Zone 4	0.0	5,281.85	79.6

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**GBWC 2024 IRP - Cold Springs Division**  
**Preferred (2044) MDD Condition Distribution System Junction Report**  
MDD - Time: 0.00 hours

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
2634	J22-1166	5,095.99	Zone 4	0.0	5,280.12	79.7
359	J-281	5,095.00	Zone 4	3.3	5,279.61	79.9
2455	J22-1085	5,095.96	Zone 4	0.0	5,280.13	79.7
2407	J22-1069	5,095.84	Zone 4	0.0	5,280.08	79.7
2132	J22-896	5,095.73	Zone 4	0.0	5,280.10	79.8
2023	J22-848	5,095.00	Zone 4	0.0	5,280.08	80.1
510	J-484	5,095.00	Zone 4	4.5	5,280.07	80.1
2829	J-23-1223	5,095.00	Zone 4	0.0	5,280.14	80.1
2650	J22-1171	5,094.93	Zone 4	1.6	5,280.10	80.1
2793	J-23-1208	5,094.90	Zone 4	2.9	5,280.14	80.1
2044	J-857	5,094.80	Zone 4	0.0	5,280.07	80.2
2411	J22-1070	5,094.79	Zone 4	0.0	5,280.09	80.2
694	FH-920	5,094.00	Zone 4	0.0	5,279.91	80.4
1648	J-769	5,094.00	Zone 4	0.0	5,280.06	80.5
2647	J22-1170	5,093.97	Zone 4	1.6	5,280.10	80.5
2543	J22-1147	5,093.94	Zone 4	0.0	5,280.10	80.5
2458	J22-1086	5,093.95	Zone 4	0.0	5,280.18	80.6
294	J-205	5,093.00	Zone 4	4.1	5,279.50	80.7
676	FH-929	5,093.00	Zone 4	0.0	5,279.90	80.9
2847	J-23-1228	5,093.33	Zone 4	3.3	5,280.18	80.8
2135	J22-898	5,093.00	Zone 4	0.0	5,280.10	80.9
3035	J-1275	5,092.00	Zone 4	0.0	5,279.78	81.2
2027	J-850	5,092.60	Zone 4	3.3	5,280.07	81.1
663	J-666	5,092.00	Zone 4	5.3	5,279.92	81.3
610	J-613	5,092.00	Zone 4	0.0	5,280.00	81.3
295	J-206	5,091.00	Zone 4	4.1	5,279.50	81.6
2021	J-847	5,091.70	Zone 4	0.0	5,280.07	81.5
251	J-146	5,128.00	Zone 3	0.0	5,316.60	81.6
328	J-249	5,128.00	Zone 3	4.1	5,316.61	81.6
1644	J-765	5,091.57	Zone 4	0.0	5,280.07	81.6
2791	J-23-1207	5,091.65	Zone 4	2.0	5,280.22	81.6
715	J-715	5,091.33	Zone 4	0.0	5,280.07	81.7
1647	J-768	5,091.00	Zone 4	0.0	5,280.09	81.8
337	J-259	5,091.00	Zone 4	2.5	5,280.14	81.8
358	J-280	5,090.00	Zone 4	3.3	5,279.56	82.0
2795	J-23-1209	5,091.00	Zone 4	0.0	5,280.13	81.8
286	J-197	5,090.00	Zone 4	0.0	5,279.46	82.0
462	J-431	5,090.00	Zone 4	2.0	5,279.46	82.0
2099	J22-874	5,091.00	Zone 4	0.8	5,280.23	81.9
2461	J22-1087	5,091.01	Zone 4	20.4	5,280.24	81.9
2656	J22-1173	5,091.00	Zone 4	0.0	5,280.24	81.9
469	J-438	5,090.00	Zone 4	5.3	5,279.51	82.0
471	J-440	5,090.00	Zone 4	2.5	5,279.51	82.0
1726	J-782	5,090.81	Zone 4	2.9	5,280.07	81.9
468	J-437	5,090.00	Zone 4	0.0	5,279.54	82.0
363	J-285	5,090.00	Zone 4	4.9	5,279.54	82.0

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**GBWC 2024 IRP - Cold Springs Division**  
**Preferred (2044) MDD Condition Distribution System Junction Report**  
MDD - Time: 0.00 hours

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
1489	J-728	5,090.70	Zone 4	1.7	5,280.06	81.9
702	J-704	5,090.07	Zone 4	0.4	5,280.01	82.2
662	J-665	5,090.00	Zone 4	0.0	5,280.00	82.2
325	J-246	5,090.00	Zone 4	0.0	5,280.14	82.3
343	J-265	5,090.00	Zone 4	0.0	5,280.14	82.3
509	J-466	5,090.00	Zone 4	6.1	5,280.10	82.2
2797	J-23-1210	5,090.00	Zone 4	0.0	5,280.13	82.3
2415	J-1071	5,089.83	Zone 4	0.0	5,280.10	82.3
470	J-439	5,089.00	Zone 4	0.0	5,279.55	82.4
365	J-288	5,089.00	Zone 4	0.0	5,279.55	82.4
705	BLDG 3 - CCCC	5,089.40	Zone 4	0.8	5,280.01	82.5
703	J-705	5,089.40	Zone 4	0.0	5,280.01	82.5
2823	J-23-1221	5,091.00	Zone 4	0.0	5,281.70	82.5
2803	J-23-1212	5,089.64	Zone 4	1.6	5,280.39	82.5
714	J-714	5,089.18	Zone 4	0.0	5,280.06	82.6
668	J-671	5,089.00	Zone 4	0.2	5,280.05	82.7
1643	J-764	5,089.00	Zone 4	3.3	5,280.07	82.7
2821	J-23-1220	5,090.39	Zone 4	0.0	5,281.51	82.7
395	J-325	5,088.00	Zone 4	7.9	5,279.73	83.0
460	J-429	5,088.00	Zone 4	0.0	5,279.50	82.9
296	J-207	5,088.00	Zone 4	4.1	5,279.51	82.9
2108	J22-880	5,089.07	Zone 4	1.2	5,280.39	82.8
2659	J22-1174	5,088.84	Zone 4	0.0	5,280.39	82.9
2464	J22-1088	5,088.72	Zone 4	3.1	5,280.39	82.9
1718	J-780	5,088.22	Zone 4	4.9	5,280.07	83.0
2818	J-23-1219	5,089.50	Zone 4	0.8	5,281.39	83.0
677	J-683	5,088.00	Zone 4	5.3	5,279.99	83.1
2813	J-23-1217	5,089.40	Zone 4	0.0	5,281.39	83.1
1824	J-799	5,088.05	Zone 4	0.0	5,280.07	83.1
666	J-669	5,088.00	Zone 4	0.0	5,280.05	83.1
667	J-670	5,088.00	Zone 4	0.0	5,280.06	83.1
2704	J22-IRR-1178	5,088.35	NO FIRE	0.0	5,280.42	83.1
2811	J-23-1216	5,089.20	Zone 4	1.2	5,281.39	83.1
287	J-198	5,087.00	Zone 4	5.3	5,279.49	83.3
1722	J-781	5,087.65	Zone 4	4.1	5,280.08	83.3
2809	J-23-1215	5,088.75	Zone 4	0.8	5,281.25	83.3
1710	J-778	5,087.53	Zone 4	6.1	5,280.07	83.3
2807	J-23-1214	5,088.50	Zone 4	0.4	5,281.18	83.4
2805	J-23-1213	5,088.20	Zone 4	2.5	5,281.09	83.5
657	J-660	5,087.00	Zone 4	3.3	5,280.07	83.5
512	J-486	5,087.00	Zone 4	0.0	5,280.07	83.5
1646	J-767	5,087.00	Zone 4	1.5	5,280.10	83.5
461	J-430	5,086.00	Zone 4	0.0	5,279.50	83.7
2419	J22-1072	5,086.31	Zone 4	0.0	5,280.10	83.8

**GBWC 2024 IRP - Cold Springs Division**  
**Preferred (2044) MDD Condition Distribution System Junction Report**  
MDD - Time: 0.00 hours

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
338	J-260	5,086.00	Zone 4	2.5	5,279.99	83.9
704	FH-931	5,086.00	Zone 4	0.0	5,280.01	83.9
650	J-653	5,124.00	Zone 1	6.3	5,317.47	83.7
655	J-658	5,086.00	Zone 4	6.1	5,280.14	84.0
659	J-662	5,086.00	Zone 4	4.1	5,280.16	84.0
288	J-199	5,085.00	Zone 4	5.7	5,279.49	84.1
2467	J22-1089	5,086.25	Zone 4	0.0	5,280.54	84.1
1714	J-779	5,085.71	Zone 4	0.0	5,280.08	84.1
2111	J22-882	5,086.21	Zone 4	1.6	5,280.62	84.1
2662	J22-1175	5,086.17	Zone 4	0.0	5,280.59	84.1
1694	J-774	5,085.54	Zone 4	0.0	5,280.08	84.2
334	J-256	5,085.00	Zone 4	0.0	5,279.99	84.4
1645	J-766	5,085.00	Zone 4	0.0	5,280.11	84.4
697	FH-917	5,085.00	Zone 4	0.0	5,280.14	84.4
654	J-657	5,085.00	Zone 4	4.1	5,280.15	84.4
488	BLDG 4 - Village Grill	5,084.50	Zone 4	0.3	5,280.02	84.6
1642	J-763	5,084.50	Zone 4	0.0	5,280.08	84.6
3045	J-1278	5,084.36	Zone 4	0.0	5,280.02	84.7
1666	J-771	5,084.09	Zone 4	7.8	5,280.08	84.8
487	J-456	5,084.00	Zone 4	0.0	5,280.04	84.8
486	J-455	5,084.00	Zone 4	0.0	5,280.07	84.8
661	J-664	5,084.00	Zone 4	3.7	5,280.20	84.9
289	J-200	5,083.00	Zone 4	5.7	5,279.50	85.0
2105	CS ELEM SCHOOL	5,084.00	Zone 4	2.8	5,280.54	85.0
2470	J22-1090	5,084.00	Zone 4	0.0	5,280.54	85.0
2665	J22-1092	5,084.00	Zone 4	0.0	5,280.54	85.0
1702	J-776	5,083.50	Zone 4	4.1	5,280.09	85.1
652	J-655	5,083.00	Zone 4	4.1	5,280.22	85.3
585	J-586	5,082.00	Zone 4	23.1	5,279.58	85.5
335	J-257	5,082.00	Zone 4	0.0	5,279.82	85.6
340	J-262	5,082.00	Zone 4	0.0	5,279.82	85.6
467	J-436	5,082.00	Zone 4	5.3	5,279.82	85.6
339	J-261	5,082.00	Zone 4	2.0	5,279.99	85.7
1706	J-777	5,082.00	Zone 4	0.0	5,280.09	85.7
642	J-646	5,120.00	Zone 1	10.1	5,317.48	85.4
485	J-454	5,082.00	Zone 4	4.9	5,280.11	85.7
290	J-201	5,081.00	Zone 4	5.7	5,279.50	85.9
291	J-202	5,081.00	Zone 4	4.9	5,279.51	85.9
138	BORDER TOWN CASINO	5,120.00	Zone 1	37.6	5,317.80	85.6
1698	J-775	5,081.61	Zone 4	4.1	5,280.11	85.9
394	J-324	5,081.00	Zone 4	2.0	5,279.86	86.0
1641	J-762	5,081.00	Zone 4	0.0	5,280.09	86.1

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**Preferred (2044) MDD Condition Distribution System Junction Report**  
MDD - Time: 0.00 hours

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
641	J-645	5,119.00	Zone 1	0.0	5,317.49	85.9
656	J-659	5,081.00	Zone 4	0.0	5,280.14	86.2
696	FH-918	5,081.00	Zone 4	0.0	5,280.14	86.2
658	J-661	5,081.00	Zone 4	3.7	5,280.16	86.2
698	FH-915	5,081.00	Zone 4	0.0	5,280.16	86.2
484	J-453	5,081.00	Zone 4	7.0	5,280.16	86.2
700	FH-913	5,081.00	Zone 4	0.0	5,280.20	86.2
2473	J22-1091	5,081.00	Zone 4	0.0	5,280.53	86.3
341	J-263	5,080.00	Zone 4	1.9	5,279.82	86.5
660	J-663	5,080.00	Zone 4	0.0	5,280.20	86.6
1689	J-773	5,079.86	Zone 4	0.0	5,280.10	86.6
483	J-452	5,080.00	Zone 4	0.0	5,280.24	86.6
329	J-250	5,080.00	Zone 4	4.5	5,280.28	86.7
330	J-251	5,080.00	Zone 4	8.2	5,280.43	86.7
420	J-387	5,120.00	Zone 1	0.0	5,320.50	86.7
421	J-388	5,120.00	Zone 1	0.0	5,320.50	86.7
1639	J-761	5,079.00	Zone 4	0.0	5,280.11	87.0
701	FH-916	5,079.00	Zone 4	0.0	5,280.15	87.0
301	J-217	5,115.00	Zone 3	0.0	5,316.38	87.1
299	J-214	5,078.00	Zone 4	4.1	5,279.52	87.2
300	J-215	5,078.00	Zone 4	5.0	5,279.52	87.2
297	J-208	5,078.00	Zone 4	4.1	5,279.52	87.2
503	J-478	5,079.00	Zone 4	3.3	5,280.43	87.2
504	J-479	5,079.00	Zone 4	0.0	5,280.43	87.2
479	J-448	5,116.00	Zone 1	6.9	5,317.30	87.1
640	J-644	5,116.00	Zone 1	10.7	5,317.51	87.2
653	J-656	5,078.00	Zone 4	0.0	5,280.15	87.5
699	FH-914	5,078.00	Zone 4	0.0	5,280.22	87.5
499	J-474	5,078.00	Zone 4	3.3	5,280.39	87.6
2141	J22-902	5,078.00	Zone 4	6.5	5,280.53	87.6
498	J-473	5,077.00	Zone 4	4.9	5,280.06	87.9
651	J-654	5,077.00	Zone 4	0.0	5,280.22	87.9
319	J-239	5,076.00	Zone 4	4.1	5,279.52	88.1
440	J-407	5,077.00	Zone 4	2.0	5,280.50	88.0
493	J-462	5,077.00	Zone 4	7.4	5,280.51	88.0
454	J-421	5,077.00	Zone 4	0.0	5,280.53	88.1
500	J-475	5,076.50	Zone 4	3.7	5,280.46	88.2
342	J-264	5,075.00	Zone 4	4.1	5,279.62	88.5
501	J-476	5,075.50	Zone 4	3.3	5,280.49	88.7
441	J-408	5,075.50	Zone 4	4.9	5,280.50	88.7
442	J-409	5,075.50	Zone 4	2.5	5,280.51	88.7
497	J-472	5,075.00	Zone 4	4.5	5,280.08	88.7
298	J-212	5,074.00	Zone 4	3.7	5,279.53	88.9
478	J-447	5,112.50	Zone 1	5.0	5,317.30	88.6
480	J-423	5,075.00	Zone 4	0.0	5,280.53	88.9
502	J-477	5,074.50	Zone 4	3.3	5,280.49	89.1

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**GBWC 2024 IRP - Cold Springs Division**  
**Preferred (2044) MDD Condition Distribution System Junction Report**  
MDD - Time: 0.00 hours

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
391	J-320	5,074.00	Zone 4	3.2	5,280.05	89.1
242	J-137	5,110.00	Zone 3	4.1	5,316.25	89.2
665	J-673	5,074.00	Zone 4	0.0	5,280.27	89.2
453	J-420	5,074.00	Zone 4	0.0	5,280.51	89.3
491	J-460	5,074.00	Zone 4	5.3	5,280.52	89.4
492	J-461	5,073.50	Zone 4	6.1	5,280.51	89.6
443	J-410	5,073.50	Zone 4	2.9	5,280.51	89.6
351	J-273	5,073.00	Zone 4	2.9	5,280.08	89.6
496	J-471	5,073.00	Zone 4	6.1	5,280.13	89.6
308	J-226	5,072.00	Zone 4	4.1	5,279.62	89.8
312	J-230	5,072.00	Zone 4	4.1	5,279.65	89.8
313	J-231	5,072.00	Zone 4	4.1	5,279.68	89.9
452	J-419	5,073.00	Zone 4	0.0	5,280.51	89.8
490	J-459	5,073.00	Zone 4	3.7	5,280.51	89.8
262	J-160	5,110.00	Zone 1	5.7	5,317.28	89.7
261	J-159	5,110.00	Zone 1	6.9	5,317.28	89.7
392	J-321	5,072.00	Zone 4	2.5	5,280.06	90.0
349	J-271	5,072.00	Zone 4	4.5	5,280.10	90.0
481	J-449	5,072.00	Zone 4	0.0	5,280.33	90.1
310	J-228	5,071.00	Zone 4	4.1	5,279.63	90.3
450	J-417	5,072.00	Zone 4	4.9	5,280.51	90.2
444	J-411	5,072.00	Zone 4	2.9	5,280.51	90.2
336	J-258	5,071.00	Zone 4	0.0	5,279.70	90.3
456	J-424	5,072.00	Zone 4	2.8	5,280.53	90.2
393	J-323	5,071.00	Zone 4	3.3	5,279.89	90.4
350	J-272	5,071.00	Zone 4	2.9	5,280.08	90.5
320	J-236	5,070.00	Zone 4	0.0	5,279.57	90.7
332	J-254	5,070.00	Zone 4	2.9	5,279.57	90.7
309	J-227	5,070.00	Zone 4	0.0	5,279.64	90.7
451	J-418	5,071.00	Zone 4	4.5	5,280.51	90.6
489	J-458	5,071.00	Zone 4	4.1	5,280.51	90.6
398	J-328	5,108.00	Zone 1	0.0	5,317.31	90.6
449	J-416	5,070.50	Zone 4	0.0	5,280.51	90.9
347	J-269	5,070.00	Zone 4	4.1	5,280.06	90.9
355	J-277	5,070.00	Zone 4	4.9	5,280.08	90.9
348	J-270	5,070.00	Zone 4	4.5	5,280.11	90.9
311	J-229	5,069.00	Zone 4	0.0	5,279.65	91.1
466	J-435	5,069.00	Zone 4	0.0	5,279.67	91.1
314	J-233	5,069.00	Zone 4	6.6	5,279.68	91.2
445	J-412	5,070.00	Zone 4	2.9	5,280.51	91.1
357	J-279	5,069.00	Zone 4	3.7	5,280.08	91.3
307	J-225	5,068.00	Zone 4	0.0	5,279.62	91.6
446	J-413	5,069.00	Zone 4	2.9	5,280.52	91.5
346	J-268	5,068.00	Zone 4	0.0	5,280.08	91.8
354	J-276	5,068.00	Zone 4	5.7	5,280.10	91.8
356	J-278	5,068.00	Zone 4	4.9	5,280.10	91.8

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**GBWC 2024 IRP - Cold Springs Division**  
**Preferred (2044) MDD Condition Distribution System Junction Report**  
MDD - Time: 0.00 hours

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
302	J-218	5,067.00	Zone 4	0.0	5,279.61	92.0
439	J-406	5,068.00	Zone 4	0.0	5,280.50	91.9
586	J-587	5,068.00	Zone 4	4.7	5,280.51	91.9
457	J-425	5,068.00	Zone 4	1.6	5,280.51	91.9
447	J-414	5,067.50	Zone 4	0.0	5,280.53	92.2
345	J-267	5,067.00	Zone 4	0.0	5,280.10	92.2
495	J-470	5,067.00	Zone 4	0.0	5,280.11	92.2
369	J-295	5,067.00	Zone 4	5.3	5,280.48	92.4
370	J-296	5,067.00	Zone 4	4.5	5,280.49	92.4
438	J-405	5,067.00	Zone 4	3.3	5,280.51	92.4
371	J-297	5,067.00	Zone 4	0.0	5,280.51	92.4
448	J-415	5,067.00	Zone 4	0.0	5,280.52	92.4
601	J-603	5,104.00	Zone 1	6.3	5,317.47	92.4
644	J-648	5,104.00	Zone 1	3.2	5,317.48	92.4
368	J-294	5,066.00	Zone 4	3.7	5,280.42	92.8
303	J-219	5,065.00	Zone 4	3.7	5,279.62	92.9
318	J-238	5,065.00	Zone 4	4.1	5,279.64	92.9
306	J-223	5,065.00	Zone 4	4.1	5,279.65	92.9
433	J-400	5,066.00	Zone 4	3.3	5,280.53	92.8
388	J-316	5,065.50	Zone 4	7.6	5,280.52	93.0
380	J-308	5,065.50	Zone 4	6.6	5,280.54	93.0
344	J-266	5,065.00	Zone 4	3.7	5,280.23	93.1
375	J-303	5,065.00	Zone 4	2.0	5,280.23	93.1
305	J-221	5,064.00	Zone 4	4.1	5,279.63	93.3
437	J-404	5,065.00	Zone 4	3.3	5,280.51	93.2
386	J-314	5,065.00	Zone 4	0.0	5,280.52	93.2
387	J-315	5,065.00	Zone 4	5.7	5,280.52	93.2
385	J-313	5,064.50	Zone 4	4.9	5,280.53	93.5
381	J-309	5,064.50	Zone 4	4.1	5,280.54	93.5
643	J-647	5,102.00	Zone 1	6.3	5,317.48	93.2
593	J-596	5,102.00	Zone 1	0.0	5,317.62	93.3
139	J-25	5,102.00	Zone 1	0.0	5,317.66	93.3
436	J-403	5,064.00	Zone 4	2.9	5,280.51	93.7
384	J-312	5,064.00	Zone 4	5.7	5,280.52	93.7
382	J-310	5,064.00	Zone 4	5.7	5,280.54	93.7
304	J-220	5,062.00	Zone 4	4.1	5,279.62	94.2
458	J-426	5,063.00	Zone 4	4.5	5,280.51	94.1
372	J-298	5,063.00	Zone 4	0.0	5,280.52	94.1
383	J-311	5,063.00	Zone 4	0.0	5,280.54	94.1
379	J-307	5,063.00	Zone 4	5.7	5,280.55	94.1
390	J-319	5,063.00	Zone 4	7.1	5,280.59	94.1
404	J-334	5,100.00	Zone 1	0.0	5,317.31	94.0
435	J-402	5,062.00	Zone 4	3.3	5,280.51	94.5
373	J-300	5,062.00	Zone 4	3.3	5,280.54	94.5
389	J-318	5,062.00	Zone 4	0.0	5,280.59	94.6
403	J-333	5,099.00	Zone 1	6.3	5,317.30	94.5

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**GBWC 2024 IRP - Cold Springs Division**  
**Preferred (2044) MDD Condition Distribution System Junction Report**  
MDD - Time: 0.00 hours

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
140	J-27	5,099.00	Zone 1	0.0	5,317.42	94.5
605	J-608	5,065.00	Zone 4	0.0	5,284.10	94.8
592	J-595	5,099.00	Zone 1	2.5	5,317.60	94.6
434	J-401	5,061.00	Zone 4	3.7	5,280.52	95.0
241	J-136	5,095.00	Zone 3	10.8	5,314.96	95.2
240	J-135	5,095.00	Zone 3	12.6	5,315.09	95.2
331	J-252	5,060.50	Zone 4	12.8	5,280.66	95.3
137	J-23	5,100.00	Zone 1	3.8	5,320.19	95.3
374	J-302	5,060.00	Zone 4	4.1	5,280.57	95.4
399	J-329	5,097.00	Zone 1	5.0	5,317.31	95.3
326	J-247	5,059.50	Zone 4	10.2	5,280.61	95.7
603	J-606	5,096.00	Zone 1	8.8	5,317.50	95.8
591	J-592	5,096.00	Zone 1	8.2	5,317.53	95.8
477	J-446	5,093.00	Zone 1	5.0	5,317.30	97.0
402	J-332	5,091.00	Zone 1	0.0	5,317.31	97.9
268	J-166	5,090.00	Zone 1	5.0	5,317.28	98.3
406	J-336	5,090.00	Zone 1	5.0	5,317.29	98.3
410	J-341	5,090.00	Zone 1	0.0	5,317.29	98.3
407	J-337	5,090.00	Zone 1	9.5	5,317.30	98.3
476	J-445	5,089.00	Zone 1	0.0	5,317.30	98.8
400	J-330	5,089.00	Zone 1	4.4	5,317.31	98.8
589	J-590	5,089.00	Zone 1	5.7	5,317.51	98.9
602	J-604	5,088.00	Zone 1	3.8	5,317.48	99.3
376	J-304	5,090.00	Zone 1	5.0	5,320.35	99.7
126	J-6	5,090.00	Zone 1	5.0	5,320.46	99.7
595	J-597	5,087.00	Zone 1	7.6	5,317.47	99.7
412	J-343	5,085.00	Zone 1	5.7	5,317.28	100.5
409	J-340	5,085.00	Zone 1	3.8	5,317.28	100.5
411	J-342	5,085.00	Zone 1	0.0	5,317.29	100.5
366	J-289	5,085.00	Zone 1	5.0	5,320.46	101.9
367	J-290	5,085.00	Zone 1	0.0	5,320.48	101.9
588	J-589	5,082.00	Zone 1	7.6	5,317.51	101.9
263	J-161	5,080.00	Zone 1	5.7	5,317.28	102.7
264	J-162	5,080.00	Zone 1	6.3	5,317.28	102.7
408	J-339	5,080.00	Zone 1	4.4	5,317.29	102.7
397	J-327	5,080.00	Zone 1	6.9	5,317.30	102.7
594	J-594	5,080.00	Zone 1	0.0	5,317.47	102.7
377	J-305	5,080.00	Zone 1	5.0	5,320.35	104.0
378	J-306	5,080.00	Zone 1	5.0	5,320.49	104.0
419	J-385	5,077.00	Zone 1	1.1	5,317.49	104.0
590	J-591	5,077.00	Zone 1	0.0	5,317.51	104.1
587	J-588	5,077.00	Zone 1	5.7	5,317.51	104.1
405	J-427	5,076.00	Zone 1	6.3	5,317.31	104.4
1798	J-795	5,045.09	Zone 4	0.0	5,289.34	105.7
401	J-331	5,070.50	Zone 1	5.7	5,317.31	106.8
253	J-150	5,070.00	Zone 1	5.7	5,317.35	107.0

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**GBWC 2024 IRP - Cold Springs Division**  
**Preferred (2044) MDD Condition Distribution System Junction Report**  
MDD - Time: 0.00 hours

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
606	J-609	5,041.00	Zone 4	0.0	5,289.23	107.4
254	J-151	5,067.00	Zone 1	3.8	5,317.35	108.3
141	J-28	5,066.00	Zone 1	0.0	5,317.33	108.7
266	J-164	5,062.00	Zone 1	8.8	5,317.32	110.5
260	J-158	5,060.00	Zone 1	12.6	5,317.29	111.3
265	J-163	5,060.00	Zone 1	8.2	5,317.30	111.3
256	J-153	5,060.00	Zone 1	5.7	5,317.35	111.3
2922	J-1242	5,059.84	Zone 1	0.0	5,317.29	111.4
267	J-165	5,058.00	Zone 1	13.2	5,317.29	112.2
255	J-152	5,058.00	Zone 1	6.3	5,317.35	112.2
129	J-10	5,060.00	Zone 1	5.0	5,320.13	112.5
128	J-9	5,060.00	Zone 1	5.0	5,320.24	112.6
127	J-8	5,060.00	Zone 1	5.0	5,320.43	112.7
258	J-155	5,052.00	Zone 1	5.0	5,317.35	114.8
257	J-154	5,052.00	Zone 1	7.3	5,317.35	114.8
144	J-36	5,050.00	Zone 1	0.0	5,317.40	115.7
413	J-344	5,050.00	Zone 1	0.0	5,317.40	115.7
608	J-611	5,050.00	Zone 1	4.4	5,317.44	115.7
609	J-612	5,048.00	Zone 1	4.2	5,317.44	116.6
2977	J-1252 IRR	5,045.00	Zone 1	11.3	5,317.78	118.0
414	J-350	5,045.00	Zone 1	0.0	5,317.88	118.1
706	J-706	5,045.00	Zone 1	0.0	5,317.88	118.1
707	FH-801	5,045.00	Zone 1	0.0	5,317.88	118.1
154	J-48	5,043.00	Zone 1	9.5	5,317.62	118.8
153	J-47	5,043.00	Zone 1	7.6	5,317.65	118.8
155	J-49	5,040.00	Zone 1	9.5	5,317.61	120.1
133	J-14	5,040.00	Zone 1	17.3	5,317.88	120.2
131	J-12	5,040.00	Zone 1	0.0	5,318.67	120.6
130	J-11	5,040.00	Zone 1	0.0	5,319.54	120.9
143	J-35	5,038.00	Zone 1	6.9	5,317.75	121.0
132	J-13	5,038.00	Zone 1	1.2	5,317.90	121.1

**GBWC 2024 IRP - Cold Springs Division**  
**Preferred (2044) MDD+Fire Condition Distribution System Junction**  
**Report**  
**Fire Flow - Time: 0.00 hours**

Label	Zone	Fire Flow (Needed) (gpm)	MDD (gpm)	Total Flow Needed (Fire Flow + MDD) (gpm)	Available Flow at 20 psi Min. Residual Pressure (gpm)	Satisfies Fire Flow Constraints ?	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Zone Lower Limit @ Total Flow Needed) (psi)	Junction w/ Minimum Pressure (Zone @ Total Flow Needed)
J-3	Zone 1	1,500.0	0.0	1,500.0	2,364.0	True	44.2	47.2	J-1262
J-4	Zone 1	1,500.0	5.0	1,505.0	2,369.0	True	48.4	44.2	J-3
J-5	Zone 1	1,500.0	5.0	1,505.0	1,716.2	True	32.2	40.2	J-193
J-6	Zone 1	1,500.0	5.0	1,505.0	1,775.4	True	48.2	34.9	J-5
J-8	Zone 1	1,500.0	5.0	1,505.0	1,823.6	True	57.4	36.9	J-5
J-9	Zone 1	1,500.0	5.0	1,505.0	2,294.2	True	83.9	44.2	J-3
J-10	Zone 1	1,500.0	5.0	1,505.0	2,256.0	True	84.1	44.2	J-3
J-11	Zone 1	1,500.0	0.0	1,500.0	2,075.0	True	83.7	43.0	J-652
J-12	Zone 1	1,500.0	0.0	1,500.0	1,932.5	True	75.1	38.7	J-652
J-13	Zone 1	1,500.0	1.2	1,501.2	1,842.0	True	71.1	35.7	J-652
J-14	Zone 1	1,500.0	17.3	1,517.3	1,857.9	True	62.1	35.7	J-652
J-15	Zone 2	1,500.0	0.3	1,500.3	3,336.2	True	47.0	35.9	J-127
J-16	Zone 2	1,500.0	0.0	1,500.0	2,976.7	True	42.9	35.7	J-127
J-17	Zone 2	1,500.0	0.0	1,500.0	2,759.8	True	40.6	35.7	J-127
J-23	Zone 1	1,500.0	3.8	1,503.8	2,287.8	True	68.7	44.2	J-3
BORDER TOWN CASINO	Zone 1	1,500.0	37.6	1,537.6	1,700.2	True	39.1	28.6	J-652
J-25	Zone 1	1,500.0	0.0	1,500.0	1,638.8	True	45.9	27.5	J-652
J-27	Zone 1	1,500.0	0.0	1,500.0	1,628.1	True	44.9	27.0	J-652
J-28	Zone 1	1,500.0	0.0	1,500.0	1,652.6	True	57.8	28.2	J-652
J-33	Zone 2	1,500.0	0.0	1,500.0	4,000.0	True	35.9	36.7	J-127
J-35	Zone 1	1,500.0	6.9	1,506.9	1,827.1	True	70.2	35.0	J-652
J-36	Zone 1	1,500.0	0.0	1,500.0	1,752.1	True	63.2	32.4	J-652
J-37	Zone 2	1,500.0	0.0	1,500.0	3,522.4	True	45.9	36.1	J-127
J-38	Zone 2	1,500.0	9.8	1,509.8	4,009.8	True	45.7	35.7	J-127
J-39	Zone 2	1,500.0	8.7	1,508.7	4,008.7	True	45.9	35.7	J-127
J-40	Zone 2	1,500.0	10.3	1,510.3	4,010.3	True	44.2	35.7	J-127
J-42	Zone 2	1,500.0	1.5	1,501.5	3,592.3	True	48.4	35.9	J-127
J-43	Zone 2	1,500.0	5.4	1,505.4	4,005.4	True	49.2	35.9	J-127
J-44	Zone 2	1,500.0	10.3	1,510.3	4,010.3	True	46.2	35.8	J-127
J-45	Zone 2	1,500.0	8.7	1,508.7	4,008.7	True	44.6	35.9	J-127
J-47	Zone 1	1,500.0	7.6	1,507.6	1,819.4	True	52.6	34.7	J-652
J-48	Zone 1	1,500.0	9.5	1,509.5	1,816.8	True	57.6	34.5	J-652
J-49	Zone 1	1,500.0	9.5	1,509.5	1,807.4	True	68.6	34.1	J-652
J-50	Zone 2	1,500.0	6.5	1,506.5	4,006.5	True	49.9	35.9	J-127
J-51	Zone 2	1,500.0	4.9	1,504.9	2,288.2	True	39.6	36.0	J-127
J-52	Zone 2	1,500.0	3.8	1,503.8	2,705.5	True	43.1	36.1	J-127
J-53	Zone 2	1,500.0	9.8	1,509.8	4,009.8	True	49.7	36.2	J-127

**GBWC 2024 IRP - Cold Springs Division**  
**Preferred (2044) MDD+Fire Condition Distribution System Junction**  
**Report**  
**Fire Flow - Time: 0.00 hours**

Label	Zone	Fire Flow (Needed) (gpm)	MDD (gpm)	Total Flow Needed (Fire Flow + MDD) (gpm)	Available Flow at 20 psi Min. Residual Pressure (gpm)	Satisfies Fire Flow Constraints ?	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Zone Lower Limit @ Total Flow Needed) (psi)	Junction w/ Minimum Pressure (Zone @ Total Flow Needed)
J-54	Zone 2	1,500.0	0.0	1,500.0	4,000.0	True	51.3	35.9	J-127
J-55	Zone 2	1,500.0	6.5	1,506.5	2,955.8	True	44.2	35.9	J-127
J-56	Zone 2	1,500.0	9.8	1,509.8	2,299.7	True	38.4	35.9	J-127
J-57	Zone 2	1,500.0	7.6	1,507.6	3,658.9	True	46.8	35.9	J-127
J-58	Zone 2	1,500.0	0.0	1,500.0	4,000.0	True	50.2	35.9	J-127
J-59	Zone 2	1,500.0	5.4	1,505.4	2,352.6	True	38.7	35.9	J-127
J-60	Zone 2	1,500.0	8.7	1,508.7	3,971.1	True	44.3	35.7	J-127
J-61	Zone 2	1,500.0	9.8	1,509.8	3,863.6	True	44.0	35.7	J-127
J-62	Zone 2	1,500.0	5.4	1,505.4	4,005.4	True	43.9	35.7	J-127
J-63	Zone 2	1,500.0	8.9	1,508.9	4,008.9	True	51.3	35.7	J-127
J-64	Zone 2	1,500.0	6.0	1,506.0	4,006.0	True	41.9	35.7	J-127
J-65	Zone 2	1,500.0	6.0	1,506.0	4,006.0	True	37.4	35.3	J-127
J-66	Zone 2	1,500.0	7.6	1,507.6	3,623.6	True	39.2	35.7	J-127
J-67	Zone 2	1,500.0	8.7	1,508.7	2,983.2	True	40.2	35.7	J-127
J-68	Zone 2	1,500.0	7.6	1,507.6	2,845.7	True	42.5	35.7	J-127
J-69	Zone 2	1,500.0	0.0	1,500.0	2,862.9	True	40.8	35.7	J-127
J-70	Zone 2	1,500.0	3.8	1,503.8	2,921.1	True	40.0	35.7	J-127
J-71	Zone 2	1,500.0	0.0	1,500.0	2,951.4	True	43.0	35.7	J-127
J-72	Zone 2	1,500.0	11.9	1,511.9	2,921.5	True	39.9	35.7	J-127
J-73	Zone 2	1,500.0	0.0	1,500.0	2,935.1	True	40.0	35.7	J-127
J-74	Zone 2	1,500.0	9.2	1,509.2	3,092.6	True	40.8	35.7	J-127
J-75	Zone 2	1,500.0	4.3	1,504.3	3,873.9	True	37.7	35.7	J-127
J-76	Zone 2	1,500.0	2.7	1,502.7	4,002.7	True	41.4	35.7	J-127
J-77	Zone 2	1,500.0	7.1	1,507.1	3,705.3	True	35.8	35.7	J-127
J-78	Zone 2	1,500.0	0.0	1,500.0	4,000.0	True	40.7	35.7	J-127
J-79	Zone 2	1,500.0	21.7	1,521.7	3,619.0	True	35.7	35.7	J-127
J-80	Zone 2	1,500.0	0.0	1,500.0	4,000.0	True	40.5	35.7	J-127
J-81	Zone 2	1,500.0	10.9	1,510.9	4,010.9	True	46.2	35.8	J-127
J-82	Zone 2	1,500.0	0.0	1,500.0	4,000.0	True	41.1	35.7	J-127
J-83	Zone 2	1,500.0	6.5	1,506.5	4,006.5	True	40.9	35.7	J-127
J-84	Zone 2	1,500.0	7.6	1,507.6	4,007.6	True	42.0	35.7	J-127
J-85	Zone 2	1,500.0	7.1	1,507.1	4,007.1	True	42.9	35.7	J-127
J-86	Zone 2	1,500.0	0.0	1,500.0	4,000.0	True	44.7	35.7	J-127
J-87	Zone 2	1,500.0	6.5	1,506.5	4,006.5	True	40.5	35.7	J-127
J-88	Zone 2	1,500.0	7.6	1,507.6	4,007.6	True	39.6	35.7	J-127
J-89	Zone 2	1,500.0	0.0	1,500.0	4,000.0	True	40.5	35.7	J-127
J-90	Zone 2	1,500.0	6.5	1,506.5	4,006.5	True	44.2	35.7	J-127
J-91	Zone 2	1,500.0	0.0	1,500.0	4,000.0	True	45.6	35.8	J-127
J-92	Zone 2	1,500.0	8.1	1,508.1	4,008.1	True	42.3	35.7	J-127

**GBWC 2024 IRP - Cold Springs Division**  
**Preferred (2044) MDD+Fire Condition Distribution System Junction**  
**Report**  
**Fire Flow - Time: 0.00 hours**

Label	Zone	Fire Flow (Needed) (gpm)	MDD (gpm)	Total Flow Needed (Fire Flow + MDD) (gpm)	Available Flow at 20 psi Min. Residual Pressure (gpm)	Satisfies Fire Flow Constraints ?	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Zone Lower Limit @ Total Flow Needed) (psi)	Junction w/ Minimum Pressure (Zone @ Total Flow Needed)
J-93	Zone 2	1,500.0	0.0	1,500.0	4,000.0	True	43.9	35.7	J-127
GOMES	Zone 2	2,125.0	7.9	2,132.9	4,007.9	True	44.3	35.4	J-127
ELEM	Zone 2	1,500.0	10.3	1,510.3	4,010.3	True	42.5	35.8	J-127
SCHOOL	Zone 2	1,500.0	8.7	1,508.7	4,008.7	True	41.7	35.8	J-127
J-95	Zone 2	1,500.0	0.0	1,500.0	4,000.0	True	42.2	35.9	J-127
J-96	Zone 2	1,500.0	0.0	1,500.0	4,000.0	True	39.4	35.8	J-127
J-97	Zone 2	1,500.0	0.0	1,500.0	4,000.0	True	41.6	35.7	J-127
J-98	Zone 2	1,500.0	7.1	1,507.1	3,987.4	True	45.5	35.8	J-127
J-99	Zone 2	1,500.0	0.0	1,500.0	4,000.0	True	46.6	35.9	J-127
J-100	Zone 2	1,500.0	10.9	1,510.9	4,010.9	True	47.9	35.8	J-127
J-101	Zone 2	1,500.0	6.0	1,506.0	4,006.0	True	41.5	35.8	J-127
J-102	Zone 2	1,500.0	7.1	1,507.1	3,767.6	True	39.7	35.9	J-127
J-103	Zone 2	1,500.0	0.0	1,500.0	3,002.9	True	37.1	35.9	J-127
J-104	Zone 2	1,500.0	9.2	1,509.2	3,121.4	True	37.5	35.8	J-1309
J-105	Zone 2	1,500.0	7.6	1,507.6	3,662.4	True	39.1	35.6	J-1309
J-106	Zone 2	1,500.0	5.4	1,505.4	3,259.1	True	38.3	35.9	J-127
J-107	Zone 2	1,500.0	13.6	1,513.6	2,525.3	True	32.3	35.9	J-1309
J-108	Zone 2	1,500.0	9.8	1,509.8	2,640.7	True	36.6	34.6	J-110
J-109	Zone 2	1,500.0	11.4	1,511.4	3,824.3	True	44.8	36.0	J-127
J-110	Zone 2	1,500.0	2.2	1,502.2	3,748.7	True	44.6	36.0	J-127
J-111	Zone 2	1,500.0	8.7	1,508.7	4,008.7	True	43.8	35.9	J-127
J-112	Zone 2	1,500.0	7.1	1,507.1	3,167.0	True	40.2	35.9	J-127
J-113	Zone 2	1,500.0	7.6	1,507.6	2,831.0	True	37.7	35.9	J-127
J-114	Zone 2	1,500.0	0.0	1,500.0	2,939.2	True	37.4	35.9	J-127
J-115	Zone 2	1,500.0	6.0	1,506.0	3,954.9	True	40.4	35.9	J-127
J-116	Zone 2	1,500.0	5.4	1,505.4	3,841.5	True	39.7	35.6	J-1309
J-117	Zone 2	1,500.0	10.9	1,510.9	4,010.9	True	44.0	35.9	J-127
J-118	Zone 2	1,500.0	0.0	1,500.0	2,344.8	True	35.0	35.9	J-127
J-119	Zone 2	1,500.0	7.6	1,507.6	2,039.2	True	31.1	35.9	J-127
J-120	Zone 2	1,500.0	8.7	1,508.7	3,936.4	True	40.4	35.9	J-127
J-121	Zone 2	1,500.0	0.0	1,500.0	4,000.0	True	44.3	35.9	J-127
J-122	Zone 2	1,500.0	0.0	1,500.0	4,000.0	True	40.4	35.5	J-127
J-123	Zone 2	1,500.0	8.7	1,508.7	3,568.0	True	34.7	34.7	J-127
J-124	Zone 2	1,500.0	8.1	1,508.1	4,008.1	True	33.7	36.3	J-128
J-125	Zone 2	1,500.0	9.2	1,509.2	4,009.2	True	35.2	34.7	J-127
J-126	Zone 2	1,500.0	0.0	1,500.0	3,790.9	True	36.2	35.1	J-127
J-127	Zone 2	1,500.0	8.1	1,508.1	4,008.1	True	37.3	35.2	J-127

**GBWC 2024 IRP - Cold Springs Division**  
**Preferred (2044) MDD+Fire Condition Distribution System Junction**  
**Report**  
**Fire Flow - Time: 0.00 hours**

Label	Zone	Fire Flow (Needed) (gpm)	MDD (gpm)	Total Flow Needed (Fire Flow + MDD) (gpm)	Available Flow at 20 psi Min. Residual Pressure (gpm)	Satisfies Fire Flow Constraints ?	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Zone Lower Limit @ Total Flow Needed) (psi)	Junction w/ Minimum Pressure (Zone @ Total Flow Needed)
J-131	Zone 2	1,500.0	10.9	1,510.9	4,010.9	True	41.1	35.7	J-127
J-132	Zone 2	1,500.0	0.0	1,500.0	2,801.4	True	35.4	35.6	J-127
J-133	Zone 2	1,500.0	10.9	1,510.9	4,010.9	True	39.9	35.6	J-127
J-134	Zone 2	1,500.0	0.0	1,500.0	4,000.0	True	43.3	35.7	J-127
J-135	Zone 3	1,000.0	12.6	1,012.6	2,465.7	True	76.4	42.5	J-234
J-136	Zone 3	1,000.0	10.8	1,010.8	2,461.2	True	78.0	42.5	J-234
J-137	Zone 3	1,000.0	4.1	1,004.1	2,209.2	True	76.8	42.4	J-234
J-138	Zone 3	1,000.0	0.0	1,000.0	2,314.2	True	65.6	42.4	J-234
J-139	Zone 3	1,000.0	0.0	1,000.0	2,374.8	True	58.7	42.4	J-234
J-140	Zone 3	1,000.0	9.6	1,009.6	2,396.0	True	50.2	42.4	J-234
J-141	Zone 3	1,000.0	4.1	1,004.1	2,258.9	True	56.8	42.4	J-234
J-142	Zone 3	1,000.0	4.8	1,004.8	1,650.1	True	41.8	42.4	J-234
J-143	Zone 3	1,000.0	3.3	1,003.3	1,797.1	True	49.9	42.4	J-234
J-144	Zone 3	1,000.0	0.0	1,000.0	2,174.0	True	64.4	42.4	J-234
J-145	Zone 3	1,000.0	4.4	1,004.4	2,182.5	True	56.1	42.4	J-234
J-146	Zone 3	1,000.0	0.0	1,000.0	2,259.1	True	70.1	42.4	J-234
J-149									
Reno Truss	Zone 2	1,500.0	0.6	1,500.6	3,827.4	True	50.1	35.9	J-127
J-150	Zone 1	1,500.0	5.7	1,505.7	1,747.0	True	46.3	32.0	J-652
J-151	Zone 1	1,500.0	3.8	1,503.8	1,745.2	True	40.4	32.0	J-652
J-152	Zone 1	1,500.0	6.3	1,506.3	1,747.6	True	50.6	32.0	J-652
J-153	Zone 1	1,500.0	5.7	1,505.7	1,746.9	True	54.1	32.0	J-652
J-154	Zone 1	1,500.0	7.3	1,507.3	1,748.7	True	61.2	32.0	J-652
J-155	Zone 1	1,500.0	5.0	1,505.0	1,746.3	True	52.4	32.0	J-652
J-157	Zone 2	1,500.0	0.0	1,500.0	2,779.0	True	40.6	35.7	J-127
J-158	Zone 1	1,500.0	12.6	1,512.6	1,709.0	True	58.9	30.1	J-652
J-159	Zone 1	1,500.0	6.9	1,506.9	1,692.9	True	32.8	29.7	J-652
J-160	Zone 1	1,500.0	5.7	1,505.7	1,691.3	True	32.8	29.6	J-652
J-161	Zone 1	1,500.0	5.7	1,505.7	1,689.4	True	48.2	29.6	J-652
J-162	Zone 1	1,500.0	6.3	1,506.3	1,693.3	True	48.6	29.7	J-652
J-163	Zone 1	1,500.0	8.2	1,508.2	1,728.8	True	56.6	31.1	J-652
J-164	Zone 1	1,500.0	8.8	1,508.8	1,734.3	True	55.6	31.4	J-652
J-165	Zone 1	1,500.0	13.2	1,513.2	1,724.5	True	58.2	30.7	J-652
J-166	Zone 1	1,500.0	5.0	1,505.0	1,690.0	True	42.2	29.6	J-652
J-185	Zone 3	1,000.0	0.0	1,000.0	2,384.2	True	43.3	42.4	J-234
J-187	Zone 3	1,000.0	0.0	1,000.0	2,387.3	True	57.3	42.4	J-234
J-192	Zone 1	1,500.0	0.7	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-194	Zone 2	1,500.0	8.1	1,508.1	2,778.0	True	43.6	36.0	J-127

**GBWC 2024 IRP - Cold Springs Division**  
**Preferred (2044) MDD+Fire Condition Distribution System Junction**  
**Report**  
**Fire Flow - Time: 0.00 hours**

Label	Zone	Fire Flow (Needed) (gpm)	MDD (gpm)	Total Flow Needed (Fire Flow + MDD) (gpm)	Available Flow at 20 psi Min. Residual Pressure (gpm)	Satisfies Fire Flow Constraints ?	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Zone Lower Limit @ Total Flow Needed) (psi)	Junction w/ Minimum Pressure (Zone @ Total Flow Needed)
J-189	Zone 1	1,500.0	0.0	1,500.0	2,276.5	True	45.9	44.2	J-3
J-190	Zone 1	1,500.0	0.0	1,500.0	2,181.2	True	45.0	44.2	J-3
J-191	Zone 1	1,500.0	5.0	1,505.0	2,150.4	True	44.2	44.2	J-3
J-193	Zone 1	1,500.0	5.0	1,505.0	1,893.4	True	38.1	43.3	J-5
J-184	Zone 4	1,500.0	55.6	1,555.6	4,055.6	True	64.2	41.3	J-760
J-195	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	65.2	41.3	J-760
J-196	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	73.1	41.3	J-760
J-197	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	77.3	41.3	J-760
J-198	Zone 4	1,500.0	5.3	1,505.3	4,005.3	True	78.9	41.3	J-760
J-199	Zone 4	1,500.0	5.7	1,505.7	4,005.7	True	79.1	41.3	J-760
J-200	Zone 4	1,500.0	5.7	1,505.7	4,005.7	True	79.4	41.3	J-760
J-201	Zone 4	1,500.0	5.7	1,505.7	4,005.7	True	79.7	41.3	J-760
J-202	Zone 4	1,500.0	4.9	1,504.9	4,004.9	True	79.0	41.3	J-760
J-203	Zone 4	1,500.0	4.1	1,504.1	3,416.2	True	65.5	41.3	J-760
J-204	Zone 4	1,500.0	4.1	1,504.1	2,483.3	True	56.0	41.3	J-760
J-205	Zone 4	1,500.0	4.1	1,504.1	2,478.2	True	56.7	41.3	J-760
J-206	Zone 4	1,500.0	4.1	1,504.1	2,503.6	True	57.7	41.3	J-760
J-207	Zone 4	1,500.0	4.1	1,504.1	3,215.5	True	67.6	41.3	J-760
J-208	Zone 4	1,500.0	4.1	1,504.1	4,004.1	True	83.0	41.3	J-760
J-212	Zone 4	1,500.0	3.7	1,503.7	4,003.7	True	83.3	41.3	J-760
J-214	Zone 4	1,500.0	4.1	1,504.1	4,004.1	True	81.8	41.3	J-760
J-215	Zone 4	1,500.0	5.0	1,505.0	4,005.0	True	82.1	41.3	J-760
J-217	Zone 3	1,000.0	0.0	1,000.0	2,221.9	True	74.9	42.4	J-234
J-218	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	86.1	41.3	J-760
J-219	Zone 4	1,500.0	3.7	1,503.7	4,003.7	True	86.0	41.3	J-760
J-220	Zone 4	1,500.0	4.1	1,504.1	4,004.1	True	87.8	41.3	J-760
J-221	Zone 4	1,500.0	4.1	1,504.1	4,004.1	True	87.1	41.3	J-760
J-223	Zone 4	1,500.0	4.1	1,504.1	4,004.1	True	85.4	41.3	J-760
J-225	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	85.6	41.3	J-760
J-226	Zone 4	1,500.0	4.1	1,504.1	2,488.0	True	62.4	41.3	J-760
J-227	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	85.0	41.3	J-760
J-228	Zone 4	1,500.0	4.1	1,504.1	2,398.9	True	60.8	41.3	J-760
J-229	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	86.1	41.3	J-760
J-230	Zone 4	1,500.0	4.1	1,504.1	2,532.9	True	63.3	41.3	J-760
J-231	Zone 4	1,500.0	4.1	1,504.1	2,534.0	True	63.4	41.3	J-760
J-233	Zone 4	1,500.0	6.6	1,506.6	4,006.6	True	87.0	41.3	J-760
J-234	Zone 3	1,000.0	2.6	1,002.6	2,001.8	True	40.3	43.3	J-235
J-235	Zone 3	1,000.0	0.0	1,000.0	2,242.5	True	41.8	43.3	J-237
J-237	Zone 3	1,000.0	3.0	1,003.0	2,601.4	True	43.3	43.3	J-235

**GBWC 2024 IRP - Cold Springs Division**  
**Preferred (2044) MDD+Fire Condition Distribution System Junction**  
**Report**  
**Fire Flow - Time: 0.00 hours**

Label	Zone	Fire Flow (Needed) (gpm)	MDD (gpm)	Total Flow Needed (Fire Flow + MDD) (gpm)	Available Flow at 20 psi Min. Residual Pressure (gpm)	Satisfies Fire Flow Constraints ?	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Zone Lower Limit @ Total Flow Needed) (psi)	Junction w/ Minimum Pressure (Zone @ Total Flow Needed)
J-238	Zone 4	1,500.0	4.1	1,504.1	4,004.1	True	86.5	41.3	J-760
J-239	Zone 4	1,500.0	4.1	1,504.1	4,004.1	True	82.4	41.3	J-760
J-236	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	84.4	41.3	J-760
J-240	Zone 2	1,500.0	0.0	1,500.0	4,000.0	True	43.3	36.9	J-127
J-241	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	41.5	41.3	J-760
J-246	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	79.5	41.3	J-760
J-247	Zone 4	1,500.0	10.2	1,510.2	4,010.2	True	91.2	41.3	J-760
J-248	Zone 3	1,000.0	5.2	1,005.2	2,329.8	True	65.7	42.4	J-234
J-249	Zone 3	1,000.0	4.1	1,004.1	2,262.9	True	70.1	42.4	J-234
J-250	Zone 4	1,500.0	4.5	1,504.5	4,004.5	True	83.5	41.3	J-760
J-251	Zone 4	1,500.0	8.2	1,508.2	4,008.2	True	83.5	41.3	J-760
J-252	Zone 4	1,500.0	12.8	1,512.8	4,012.8	True	92.4	41.3	J-760
J-254	Zone 4	1,500.0	2.9	1,502.9	4,002.9	True	84.4	41.3	J-760
J-255	Zone 2	1,500.0	0.0	1,500.0	3,858.2	True	49.3	35.9	J-127
J-256	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	81.2	41.3	J-760
J-257	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	82.2	41.3	J-760
J-258	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	86.8	41.3	J-760
J-259	Zone 4	1,500.0	2.5	1,502.5	3,240.4	True	67.2	41.3	J-760
J-260	Zone 4	1,500.0	2.5	1,502.5	3,162.0	True	68.0	41.3	J-760
J-261	Zone 4	1,500.0	2.0	1,502.0	4,002.0	True	76.6	41.3	J-760
J-262	Zone 4	1,500.0	0.0	1,500.0	2,779.6	True	64.8	41.3	J-760
J-263	Zone 4	1,500.0	1.9	1,501.9	3,749.2	True	74.4	41.3	J-760
J-264	Zone 4	1,500.0	4.1	1,504.1	4,004.1	True	84.8	41.3	J-760
J-265	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	79.5	41.3	J-760
J-266	Zone 4	1,500.0	3.7	1,503.7	4,003.7	True	89.3	41.3	J-760
J-267	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	89.3	41.3	J-760
J-268	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	88.8	41.3	J-760
J-269	Zone 4	1,500.0	4.1	1,504.1	4,004.1	True	88.0	41.3	J-760
J-270	Zone 4	1,500.0	4.5	1,504.5	3,584.4	True	77.0	41.3	J-760
J-271	Zone 4	1,500.0	4.5	1,504.5	2,461.1	True	62.1	41.3	J-760
J-272	Zone 4	1,500.0	2.9	1,502.9	3,981.1	True	79.2	41.3	J-760
J-273	Zone 4	1,500.0	2.9	1,502.9	2,955.7	True	69.9	41.3	J-760
J-274	Zone 2	1,500.0	5.4	1,505.4	3,997.4	True	45.2	35.9	J-127
J-275	Zone 2	1,500.0	7.6	1,507.6	3,189.3	True	42.6	35.9	J-127
J-276	Zone 4	1,500.0	5.7	1,505.7	3,911.7	True	80.1	41.3	J-760
J-277	Zone 4	1,500.0	4.9	1,504.9	4,004.9	True	81.6	41.3	J-760
J-278	Zone 4	1,500.0	4.9	1,504.9	4,004.9	True	84.9	41.3	J-760
J-279	Zone 4	1,500.0	3.7	1,503.7	4,003.7	True	85.5	41.3	J-760
J-280	Zone 4	1,500.0	3.3	1,503.3	3,045.8	True	65.4	41.3	J-760



**GBWC 2024 IRP - Cold Springs Division**  
**Preferred (2044) MDD+Fire Condition Distribution System Junction**  
**Report**  
**Fire Flow - Time: 0.00 hours**

Label	Zone	Fire Flow (Needed) (gpm)	MDD (gpm)	Total Flow Needed (Fire Flow + MDD) (gpm)	Available Flow at 20 psi Min. Residual Pressure (gpm)	Satisfies Fire Flow Constraints ?	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Zone Lower Limit @ Total Flow Needed) (psi)	Junction w/ Minimum Pressure (Zone @ Total Flow Needed)
J-281	Zone 4	1,500.0	3.3	1,503.3	4,003.3	True	75.7	41.3	J-760
J-282	Zone 4	1,500.0	4.5	1,504.5	2,868.3	True	60.4	41.3	J-760
J-283	Zone 4	1,500.0	4.5	1,504.5	4,004.5	True	75.0	41.3	J-760
J-284	Zone 4	1,500.0	6.6	1,506.6	4,006.6	True	75.1	41.3	J-760
J-285	Zone 4	1,500.0	4.9	1,504.9	4,004.9	True	76.6	41.3	J-760
J-286	Zone 4	1,500.0	11.0	1,511.0	4,011.0	True	73.5	41.3	J-760
J-288	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	78.8	41.3	J-760
J-289	Zone 1	1,500.0	5.0	1,505.0	2,230.6	True	73.2	44.2	J-3
J-290	Zone 1	1,500.0	0.0	1,500.0	2,211.0	True	67.7	44.2	J-3
J-294	Zone 4	1,500.0	3.7	1,503.7	4,003.7	True	86.9	41.3	J-760
J-295	Zone 4	1,500.0	5.3	1,505.3	4,005.3	True	85.9	41.3	J-760
J-296	Zone 4	1,500.0	4.5	1,504.5	4,004.5	True	83.3	41.3	J-760
J-297	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	89.1	41.3	J-760
J-298	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	90.9	41.3	J-760
J-300	Zone 4	1,500.0	3.3	1,503.3	4,003.3	True	91.4	41.3	J-760
J-302	Zone 4	1,500.0	4.1	1,504.1	4,004.1	True	92.4	41.3	J-760
J-303	Zone 4	1,500.0	2.0	1,502.0	3,634.8	True	79.2	41.3	J-760
J-304	Zone 1	1,500.0	5.0	1,505.0	2,258.5	True	70.5	44.2	J-3
J-305	Zone 1	1,500.0	5.0	1,505.0	1,744.1	True	39.7	44.2	J-3
J-306	Zone 1	1,500.0	5.0	1,505.0	2,171.2	True	68.8	44.2	J-3
J-307	Zone 4	1,500.0	5.7	1,505.7	3,976.4	True	82.2	41.3	J-760
J-308	Zone 4	1,500.0	6.6	1,506.6	4,006.6	True	81.6	41.3	J-760
J-309	Zone 4	1,500.0	4.1	1,504.1	4,004.1	True	86.8	41.3	J-760
J-310	Zone 4	1,500.0	5.7	1,505.7	4,005.7	True	83.1	41.3	J-760
J-311	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	90.0	41.3	J-760
J-312	Zone 4	1,500.0	5.7	1,505.7	4,005.7	True	82.3	41.3	J-760
J-313	Zone 4	1,500.0	4.9	1,504.9	4,004.9	True	89.1	41.3	J-760
J-314	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	90.0	41.3	J-760
J-315	Zone 4	1,500.0	5.7	1,505.7	4,005.7	True	82.0	41.3	J-760
J-316	Zone 4	1,500.0	7.6	1,507.6	4,007.6	True	88.5	41.3	J-760
J-318	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	89.9	41.3	J-760
J-319	Zone 4	1,500.0	7.1	1,507.1	4,007.1	True	89.5	41.3	J-760
J-320	Zone 4	1,500.0	3.2	1,503.2	4,003.2	True	86.1	41.3	J-760
J-321	Zone 4	1,500.0	2.5	1,502.5	4,002.5	True	79.2	41.3	J-760
J-323	Zone 4	1,500.0	3.3	1,503.3	4,003.3	True	79.3	41.3	J-760
J-324	Zone 4	1,500.0	2.0	1,502.0	3,888.7	True	75.0	41.3	J-760
J-325	Zone 4	1,500.0	7.9	1,507.9	4,007.9	True	78.6	41.3	J-760
J-327	Zone 1	1,500.0	6.9	1,506.9	1,663.4	True	47.3	28.3	J-652
J-328	Zone 1	1,500.0	0.0	1,500.0	1,593.7	True	26.9	28.3	J-652

**GBWC 2024 IRP - Cold Springs Division**  
**Preferred (2044) MDD+Fire Condition Distribution System Junction**  
**Report**  
**Fire Flow - Time: 0.00 hours**

Label	Zone	Fire Flow (Needed) (gpm)	MDD (gpm)	Total Flow Needed (Fire Flow + MDD) (gpm)	Available Flow at 20 psi Min. Residual Pressure (gpm)	Satisfies Fire Flow Constraints ?	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Zone Lower Limit @ Total Flow Needed) (psi)	Junction w/ Minimum Pressure (Zone @ Total Flow Needed)
J-329	Zone 1	1,500.0	5.0	1,505.0	1,661.5	True	37.6	28.3	J-652
J-330	Zone 1	1,500.0	4.4	1,504.4	1,660.7	True	45.0	28.3	J-652
J-331	Zone 1	1,500.0	5.7	1,505.7	1,662.1	True	55.7	28.3	J-652
J-332	Zone 1	1,500.0	0.0	1,500.0	1,656.3	True	44.1	28.3	J-652
J-333	Zone 1	1,500.0	6.3	1,506.3	1,662.7	True	39.4	28.3	J-652
J-334	Zone 1	1,500.0	0.0	1,500.0	1,656.4	True	33.9	28.3	J-652
J-427	Zone 1	1,500.0	6.3	1,506.3	1,662.4	True	51.1	28.3	J-652
J-336	Zone 1	1,500.0	5.0	1,505.0	1,682.9	True	41.5	29.3	J-652
J-337	Zone 1	1,500.0	9.5	1,509.5	1,681.4	True	46.6	29.0	J-652
J-339	Zone 1	1,500.0	4.4	1,504.4	1,685.0	True	48.4	29.4	J-652
J-340	Zone 1	1,500.0	3.8	1,503.8	1,688.8	True	37.2	29.6	J-652
J-341	Zone 1	1,500.0	0.0	1,500.0	1,677.7	True	45.2	29.3	J-652
J-342	Zone 1	1,500.0	0.0	1,500.0	1,680.3	True	46.5	29.4	J-652
J-343	Zone 1	1,500.0	5.7	1,505.7	1,691.3	True	35.6	29.6	J-652
J-344	Zone 1	1,500.0	0.0	1,500.0	1,752.1	True	62.3	32.4	J-652
J-350	Zone 1	1,500.0	0.0	1,500.0	1,840.8	True	55.8	35.7	J-652
J-355	Zone 2	1,500.0	0.0	1,500.0	4,000.0	True	46.1	35.8	J-127
J-346	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	72.9	41.3	J-760
J-348	Zone 4	1,500.0	4.1	1,504.1	4,004.1	True	70.3	41.3	J-760
J-352	Zone 4	1,500.0	5.3	1,505.3	4,005.3	True	65.0	41.3	J-760
J-385	Zone 1	1,500.0	1.1	1,501.1	1,617.2	True	54.6	26.4	J-652
J-387	Zone 1	1,500.0	0.0	1,500.0	2,059.2	True	48.9	44.2	J-3
J-388	Zone 1	1,500.0	0.0	1,500.0	2,359.5	True	61.7	44.2	J-3
J-389	Zone 4	1,500.0	1.6	1,501.6	4,001.6	True	58.6	41.3	J-760
J-390	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	58.2	41.3	J-760
J-391	Zone 4	1,500.0	4.1	1,504.1	4,004.1	True	59.7	41.3	J-760
J-392	Zone 4	1,500.0	5.7	1,505.7	4,005.7	True	58.0	41.3	J-760
J-393	Zone 4	1,500.0	4.9	1,504.9	4,004.9	True	57.9	41.3	J-760
J-394	Zone 4	1,500.0	5.7	1,505.7	4,005.7	True	54.2	41.3	J-760
J-395	Zone 4	1,500.0	4.1	1,504.1	4,004.1	True	53.8	41.3	J-760
J-396	Zone 4	1,500.0	5.7	1,505.7	4,005.7	True	45.9	41.3	J-760
J-397	Zone 4	1,500.0	4.9	1,504.9	4,004.9	True	44.4	41.3	J-760
J-398	Zone 4	1,500.0	0.7	1,500.7	4,000.7	True	47.9	41.3	J-760
J-399	Zone 4	1,500.0	0.8	1,500.8	4,000.8	True	55.7	41.3	J-760
J-400	Zone 4	1,500.0	3.3	1,503.3	4,003.3	True	81.8	41.3	J-760
J-401	Zone 4	1,500.0	3.7	1,503.7	3,501.9	True	80.2	41.3	J-760
J-402	Zone 4	1,500.0	3.3	1,503.3	3,361.7	True	78.6	41.3	J-760
J-403	Zone 4	1,500.0	2.9	1,502.9	3,498.0	True	79.1	41.3	J-760
J-404	Zone 4	1,500.0	3.3	1,503.3	4,003.3	True	82.9	41.3	J-760

**GBWC 2024 IRP - Cold Springs Division**  
**Preferred (2044) MDD+Fire Condition Distribution System Junction**  
**Report**  
**Fire Flow - Time: 0.00 hours**

Label	Zone	Fire Flow (Needed) (gpm)	MDD (gpm)	Total Flow Needed (Fire Flow + MDD) (gpm)	Available Flow at 20 psi Min. Residual Pressure (gpm)	Satisfies Fire Flow Constraints ?	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Zone Lower Limit @ Total Flow Needed) (psi)	Junction w/ Minimum Pressure (Zone @ Total Flow Needed)
J-405	Zone 4	1,500.0	3.3	1,503.3	2,431.7	True	64.4	41.3	J-760
J-406	Zone 4	1,500.0	0.0	1,500.0	1,861.2	True	46.2	41.3	J-760
J-407	Zone 4	1,500.0	2.0	1,502.0	1,617.2	True	28.7	41.3	J-760
J-408	Zone 4	1,500.0	4.9	1,504.9	1,623.1	True	29.0	41.3	J-760
J-409	Zone 4	1,500.0	2.5	1,502.5	1,896.8	True	44.0	41.3	J-760
J-410	Zone 4	1,500.0	2.9	1,502.9	2,501.4	True	62.5	41.3	J-760
J-411	Zone 4	1,500.0	2.9	1,502.9	2,286.4	True	58.0	41.3	J-760
J-412	Zone 4	1,500.0	2.9	1,502.9	2,245.8	True	57.3	41.3	J-760
J-413	Zone 4	1,500.0	2.9	1,502.9	2,218.2	True	56.8	41.3	J-760
J-414	Zone 4	1,500.0	0.0	1,500.0	3,205.1	True	74.6	41.3	J-760
J-415	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	88.3	41.3	J-760
J-416	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	85.9	41.3	J-760
J-417	Zone 4	1,500.0	4.9	1,504.9	4,004.9	True	84.1	41.3	J-760
J-418	Zone 4	1,500.0	4.5	1,504.5	4,004.5	True	81.8	41.3	J-760
J-419	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	86.5	41.3	J-760
J-420	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	86.1	41.3	J-760
J-421	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	84.8	41.3	J-760
J-424	Zone 4	1,500.0	2.8	1,502.8	3,468.1	True	75.6	41.3	J-760
J-425	Zone 4	1,500.0	1.6	1,501.6	3,037.4	True	72.6	41.3	J-760
J-426	Zone 4	1,500.0	4.5	1,504.5	4,004.5	True	88.4	41.3	J-760
J-428	Zone 4	1,500.0	0.0	1,500.0	3,970.1	True	69.9	41.3	J-760
J-429	Zone 4	1,500.0	0.0	1,500.0	3,890.2	True	72.6	41.3	J-760
J-430	Zone 4	1,500.0	0.0	1,500.0	3,771.2	True	72.6	41.3	J-760
J-431	Zone 4	1,500.0	2.0	1,502.0	3,441.1	True	68.8	41.3	J-760
J-432	Zone 4	1,500.0	1.6	1,501.6	3,153.9	True	63.2	41.3	J-760
J-433	Zone 4	1,500.0	1.6	1,501.6	2,989.1	True	55.4	41.3	J-760
J-434	Zone 4	1,500.0	3.3	1,503.3	2,168.7	True	44.2	41.3	J-760
J-435	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	86.8	41.3	J-760
J-436	Zone 4	1,500.0	5.3	1,505.3	4,005.3	True	79.9	41.3	J-760
J-437	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	76.2	41.3	J-760
J-438	Zone 4	1,500.0	5.3	1,505.3	4,005.3	True	73.0	41.3	J-760
J-439	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	78.2	41.3	J-760
J-440	Zone 4	1,500.0	2.5	1,502.5	3,016.9	True	65.1	41.3	J-760
J-442	Zone 4	1,500.0	4.5	1,504.5	3,623.6	True	64.5	41.3	J-760
J-443	Zone 4	1,500.0	4.1	1,504.1	3,250.9	True	59.4	41.3	J-760
J-441	Zone 4	1,500.0	4.5	1,504.5	4,004.5	True	67.9	41.3	J-760
J-444	Zone 3	1,000.0	0.0	1,000.0	2,314.4	True	65.1	42.4	J-234
J-445	Zone 1	1,500.0	0.0	1,500.0	1,656.4	True	39.7	28.3	J-652
J-446	Zone 1	1,500.0	5.0	1,505.0	1,661.5	True	41.2	28.3	J-652

**GBWC 2024 IRP - Cold Springs Division**  
**Preferred (2044) MDD+Fire Condition Distribution System Junction**  
**Report**  
**Fire Flow - Time: 0.00 hours**

Label	Zone	Fire Flow (Needed) (gpm)	MDD (gpm)	Total Flow Needed (Fire Flow + MDD) (gpm)	Available Flow at 20 psi Min. Residual Pressure (gpm)	Satisfies Fire Flow Constraints ?	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Zone Lower Limit @ Total Flow Needed) (psi)	Junction w/ Minimum Pressure (Zone @ Total Flow Needed)
J-447	Zone 1	1,500.0	5.0	1,505.0	1,635.1	True	29.0	28.3	J-652
J-448	Zone 1	1,500.0	6.9	1,506.9	1,518.5	True	20.9	28.3	J-652
J-423	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	86.4	41.3	J-760
J-449	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	87.6	41.3	J-760
J-452	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	84.1	41.3	J-760
J-453	Zone 4	1,500.0	7.0	1,507.0	4,007.0	True	83.7	41.3	J-760
J-454	Zone 4	1,500.0	4.9	1,504.9	4,004.9	True	83.2	41.3	J-760
J-455	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	82.4	41.3	J-760
J-456	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	82.4	41.3	J-760
BLDG 4 - Village Grill	Zone 4	1,500.0	0.3	1,500.3	4,000.3	True	81.7	41.3	J-760
J-458	Zone 4	1,500.0	4.1	1,504.1	4,004.1	True	83.9	41.3	J-760
J-459	Zone 4	1,500.0	3.7	1,503.7	4,003.7	True	79.9	41.3	J-760
J-460	Zone 4	1,500.0	5.3	1,505.3	4,005.3	True	86.5	41.3	J-760
J-461	Zone 4	1,500.0	6.1	1,506.1	4,006.1	True	86.5	41.3	J-760
J-462	Zone 4	1,500.0	7.4	1,507.4	4,007.4	True	84.9	41.3	J-760
J-470	Zone 4	1,500.0	0.0	1,500.0	3,535.1	True	77.7	41.3	J-760
J-471	Zone 4	1,500.0	6.1	1,506.1	3,629.0	True	76.3	41.3	J-760
J-472	Zone 4	1,500.0	4.5	1,504.5	3,838.5	True	76.9	41.3	J-760
J-473	Zone 4	1,500.0	4.9	1,504.9	3,966.2	True	76.9	41.3	J-760
J-474	Zone 4	1,500.0	3.3	1,503.3	4,003.3	True	82.4	41.3	J-760
J-475	Zone 4	1,500.0	3.7	1,503.7	4,003.7	True	82.5	41.3	J-760
J-476	Zone 4	1,500.0	3.3	1,503.3	4,003.3	True	82.3	41.3	J-760
J-477	Zone 4	1,500.0	3.3	1,503.3	4,003.3	True	80.2	41.3	J-760
J-478	Zone 4	1,500.0	3.3	1,503.3	4,003.3	True	78.2	41.3	J-760
J-479	Zone 4	1,500.0	0.0	1,500.0	3,465.3	True	73.2	41.3	J-760
J-480	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	45.9	41.3	J-760
J-481	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	51.7	41.3	J-760
J-482	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	60.8	41.3	J-760
J-483	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	68.4	41.3	J-760
J-466	Zone 4	1,500.0	6.1	1,506.1	3,824.4	True	71.5	41.3	J-760
J-484	Zone 4	1,500.0	4.5	1,504.5	3,809.5	True	69.6	41.3	J-760
J-485	Zone 4	1,500.0	9.6	1,509.6	4,009.6	True	71.0	41.3	J-760
J-486	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	77.7	41.3	J-760
J-570	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	72.5	41.3	J-760
J-571	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	72.6	41.3	J-760
J-576	Zone 4	1,500.0	4.9	1,504.9	3,272.1	True	58.6	41.3	J-760
J-586	Zone 4	1,500.0	23.1	1,523.1	4,023.1	True	81.7	41.3	J-760

**GBWC 2024 IRP - Cold Springs Division**  
**Preferred (2044) MDD+Fire Condition Distribution System Junction**  
**Report**  
**Fire Flow - Time: 0.00 hours**

Label	Zone	Fire Flow (Needed) (gpm)	MDD (gpm)	Total Flow Needed (Fire Flow + MDD) (gpm)	Available Flow at 20 psi Min. Residual Pressure (gpm)	Satisfies Fire Flow Constraints ?	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Zone Lower Limit @ Total Flow Needed) (psi)	Junction w/ Minimum Pressure (Zone @ Total Flow Needed)
J-587	Zone 4	1,500.0	4.7	1,504.7	2,635.9	True	66.6	41.3	J-760
J-588	Zone 1	1,500.0	5.7	1,505.7	1,623.5	True	47.1	26.5	J-652
J-589	Zone 1	1,500.0	7.6	1,507.6	1,625.7	True	52.9	26.5	J-652
J-590	Zone 1	1,500.0	5.7	1,505.7	1,623.6	True	42.4	26.5	J-652
J-591	Zone 1	1,500.0	0.0	1,500.0	1,617.8	True	54.8	26.5	J-652
J-592	Zone 1	1,500.0	8.2	1,508.2	1,626.4	True	47.7	26.5	J-652
J-595	Zone 1	1,500.0	2.5	1,502.5	1,632.0	True	46.8	27.1	J-652
J-596	Zone 1	1,500.0	0.0	1,500.0	1,633.3	True	45.7	27.3	J-652
J-594	Zone 1	1,500.0	0.0	1,500.0	1,613.5	True	54.0	26.3	J-652
J-597	Zone 1	1,500.0	7.6	1,507.6	1,616.5	True	50.8	26.0	J-652
J-603	Zone 1	1,500.0	6.3	1,506.3	1,615.2	True	34.5	26.0	J-652
J-604	Zone 1	1,500.0	3.8	1,503.8	1,616.4	True	48.5	26.2	J-652
J-606	Zone 1	1,500.0	8.8	1,508.8	1,624.0	True	44.5	26.4	J-652
J-608	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	87.8	41.4	J-760
J-609	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	95.3	41.5	J-760
J-611	Zone 1	1,500.0	4.4	1,504.4	1,766.2	True	55.1	32.8	J-652
J-612	Zone 1	1,500.0	4.2	1,504.2	1,766.2	True	64.2	32.8	J-652
J-613	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	78.5	41.3	J-760
CS MIDDLE SCHOOL	Zone 4	2,750.0	26.2	2,776.2	4,026.2	True	55.7	38.8	J-760
J-639	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	75.8	41.3	J-760
J-644	Zone 1	1,500.0	10.7	1,510.7	1,615.9	True	37.8	25.9	J-652
J-645	Zone 1	1,500.0	0.0	1,500.0	1,596.2	True	36.1	25.4	J-652
J-646	Zone 1	1,500.0	10.1	1,510.1	1,596.9	True	35.7	24.9	J-652
J-647	Zone 1	1,500.0	6.3	1,506.3	1,603.9	True	43.8	25.5	J-652
J-648	Zone 1	1,500.0	3.2	1,503.2	1,600.9	True	38.0	25.5	J-652
J-642	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	72.6	41.3	J-760
J-649	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	72.7	41.3	J-760
J-652	Zone 1	1,500.0	6.3	1,506.3	1,453.2	False	16.6	34.6	J-653
J-653	Zone 1	1,500.0	6.3	1,506.3	1,595.9	True	26.0	25.5	J-652
J-654	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	83.7	41.3	J-760
J-655	Zone 4	1,500.0	4.1	1,504.1	2,625.8	True	62.3	41.3	J-760
J-656	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	83.6	41.3	J-760
J-657	Zone 4	1,500.0	4.1	1,504.1	2,619.3	True	61.6	41.3	J-760
J-658	Zone 4	1,500.0	6.1	1,506.1	4,006.1	True	76.0	41.3	J-760
J-659	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	79.2	41.3	J-760
J-660	Zone 4	1,500.0	3.3	1,503.3	4,003.3	True	76.9	41.3	J-760
J-661	Zone 4	1,500.0	3.7	1,503.7	4,003.7	True	76.9	41.3	J-760

**GBWC 2024 IRP - Cold Springs Division**  
**Preferred (2044) MDD+Fire Condition Distribution System Junction**  
**Report**  
**Fire Flow - Time: 0.00 hours**

Label	Zone	Fire Flow (Needed) (gpm)	MDD (gpm)	Total Flow Needed (Fire Flow + MDD) (gpm)	Available Flow at 20 psi Min. Residual Pressure (gpm)	Satisfies Fire Flow Constraints ?	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Zone Lower Limit @ Total Flow Needed) (psi)	Junction w/ Minimum Pressure (Zone @ Total Flow Needed)
J-662	Zone 4	1,500.0	4.1	1,504.1	2,367.6	True	56.5	41.3	J-760
J-663	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	78.7	41.3	J-760
J-664	Zone 4	1,500.0	3.7	1,503.7	2,637.2	True	62.2	41.3	J-760
J-665	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	73.1	41.3	J-760
J-666	Zone 4	1,500.0	5.3	1,505.3	3,711.9	True	70.1	41.3	J-760
J-667	Zone 4	1,500.0	0.0	1,500.0	3,997.7	True	69.8	41.3	J-760
J-673	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	85.4	41.3	J-760
J-669	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	78.1	41.3	J-760
J-670	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	78.3	41.3	J-760
J-671	Zone 4	1,500.0	0.2	1,500.2	4,000.2	True	77.8	41.3	J-760
J-675	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	67.4	41.3	J-760
J-676	Zone 4	1,500.0	0.0	1,500.0	3,646.4	True	61.9	41.3	J-760
J-677	Zone 4	1,500.0	8.2	1,508.2	2,939.8	True	54.1	41.3	J-760
J-678	Zone 4	1,500.0	0.0	1,500.0	2,932.8	True	53.2	41.3	J-760
J-679	Zone 4	1,500.0	7.0	1,507.0	4,007.0	True	58.1	41.3	J-760
J-680	Zone 4	1,500.0	5.3	1,505.3	4,005.3	True	67.2	41.3	J-760
J-681	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	71.3	41.3	J-760
FH-929	Zone 4	1,500.0	0.0	1,500.0	3,949.6	True	71.0	41.3	J-760
J-683	Zone 4	1,500.0	5.3	1,505.3	4,005.3	True	74.6	41.3	J-760
FH-926	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	63.6	41.3	J-760
J-685	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	60.9	41.3	J-760
J-ph19 IRR1	NO FIRE	0.0	0.0	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-687	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	65.8	41.3	J-760
J-688	Zone 4	1,500.0	2.5	1,502.5	4,002.5	True	65.1	41.3	J-760
J-689	Zone 4	1,500.0	3.7	1,503.7	4,003.7	True	67.5	41.3	J-760
J-690	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	64.6	41.3	J-760
FH-930	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	64.2	41.3	J-760
FH-928	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	67.3	41.3	J-760
FH-927	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	66.9	41.3	J-760
J-674	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	69.6	41.3	J-760
FH-924	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	68.6	41.3	J-760
FH-925	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	60.1	41.3	J-760
FH-923	Zone 4	1,500.0	0.0	1,500.0	3,006.5	True	55.3	41.3	J-760
FH-922	Zone 4	1,500.0	0.0	1,500.0	2,901.9	True	53.2	41.3	J-760
FH-921	Zone 4	1,500.0	0.0	1,500.0	3,228.7	True	54.1	41.3	J-760
FH-920	Zone 4	1,500.0	0.0	1,500.0	3,707.8	True	69.4	41.3	J-760
FH-919	Zone 4	1,500.0	4.9	1,504.9	4,004.9	True	71.4	41.3	J-760
FH-918	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	78.5	41.3	J-760

**GBWC 2024 IRP - Cold Springs Division**  
**Preferred (2044) MDD+Fire Condition Distribution System Junction**  
**Report**  
**Fire Flow - Time: 0.00 hours**

Label	Zone	Fire Flow (Needed) (gpm)	MDD (gpm)	Total Flow Needed (Fire Flow + MDD) (gpm)	Available Flow at 20 psi Min. Residual Pressure (gpm)	Satisfies Fire Flow Constraints ?	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Zone Lower Limit @ Total Flow Needed) (psi)	Junction w/ Minimum Pressure (Zone @ Total Flow Needed)
FH-917	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	75.6	41.3	J-760
FH-915	Zone 4	1,500.0	0.0	1,500.0	3,610.1	True	73.8	41.3	J-760
FH-914	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	79.5	41.3	J-760
FH-913	Zone 4	1,500.0	0.0	1,500.0	3,785.7	True	74.8	41.3	J-760
FH-916	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	79.5	41.3	J-760
J-704	Zone 4	1,500.0	0.4	1,500.4	4,000.4	True	77.5	41.3	J-760
J-705	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	77.8	41.3	J-760
FH-931	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	79.7	41.3	J-760
BLDG 3 - CCCC	Zone 4	1,500.0	0.8	1,500.8	4,000.8	True	77.8	41.3	J-760
J-706	Zone 1	1,500.0	0.0	1,500.0	1,840.8	True	55.4	35.7	J-652
FH-801	Zone 1	1,500.0	0.0	1,500.0	1,840.8	True	51.4	35.7	J-652
J-714	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	78.0	41.3	J-760
J-715	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	76.8	41.3	J-760
J-728	Zone 4	1,500.0	1.7	1,501.7	4,001.7	True	76.5	41.3	J-760
J-729	Zone 4	1,500.0	0.0	1,500.0	3,231.1	True	61.4	41.3	J-760
J-730	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	63.1	41.3	J-760
J-731	Zone 4	1,500.0	0.0	1,500.0	3,206.8	True	63.1	41.3	J-760
J-732	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	62.7	41.3	J-760
J-733	Zone 4	1,500.0	5.7	1,505.7	3,708.1	True	68.4	41.3	J-760
J-734	Zone 4	1,500.0	0.0	1,500.0	3,174.8	True	62.3	41.3	J-760
J-735	Zone 4	1,500.0	0.0	1,500.0	3,188.0	True	61.4	41.3	J-760
J-736	Zone 4	1,500.0	5.7	1,505.7	3,612.8	True	60.9	41.3	J-760
J-742	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	43.1	41.3	J-760
J-743	Zone 4	1,500.0	4.5	1,504.5	4,004.5	True	43.7	41.3	J-760
J-744	Zone 4	1,500.0	0.0	1,500.0	2,421.9	True	37.5	38.8	H-3 - PH19
J-ph19 IRR2	NO FIRE	0.0	0.0	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-746	Zone 4	1,500.0	0.0	1,500.0	2,226.2	True	33.1	34.0	H-7 - PH19
J-747	Zone 4	1,500.0	3.7	1,503.7	2,577.9	True	35.3	37.4	H-8 - PH19
J-749	Zone 4	1,500.0	0.0	1,500.0	2,252.0	True	33.1	33.1	H-8 - PH19
J-751	Zone 4	1,500.0	3.3	1,503.3	2,216.4	True	33.1	33.1	H-7 - PH19
J-752	Zone 4	1,500.0	4.1	1,504.1	2,789.7	True	40.6	38.7	J-746
J-753	Zone 4	1,500.0	4.1	1,504.1	2,763.7	True	39.8	39.8	H-6 - PH19

**GBWC 2024 IRP - Cold Springs Division**  
**Preferred (2044) MDD+Fire Condition Distribution System Junction**  
**Report**  
**Fire Flow - Time: 0.00 hours**

Label	Zone	Fire Flow (Needed) (gpm)	MDD (gpm)	Total Flow Needed (Fire Flow + MDD) (gpm)	Available Flow at 20 psi Min. Residual Pressure (gpm)	Satisfies Fire Flow Constraints ?	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Zone Lower Limit @ Total Flow Needed) (psi)	Junction w/ Minimum Pressure (Zone @ Total Flow Needed)
J-755	Zone 4	1,500.0	4.1	1,504.1	2,867.7	True	43.5	41.3	J-760
J-756	Zone 4	1,500.0	4.1	1,504.1	2,431.3	True	37.9	37.9	H-3 - PH19
J-757	Zone 4	1,500.0	4.1	1,504.1	4,004.1	True	56.4	41.3	J-760
J-758	Zone 4	1,500.0	4.1	1,504.1	4,004.1	True	55.8	41.3	J-760
J-759	Zone 4	1,500.0	0.0	1,500.0	3,465.2	True	38.0	38.0	H-9 - PH19
J-760	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	41.3	41.5	H-9 - PH19
J-761	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	83.5	41.3	J-760
J-762	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	82.4	41.3	J-760
J-763	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	80.7	41.3	J-760
J-764	Zone 4	1,500.0	3.3	1,503.3	4,003.3	True	78.3	41.3	J-760
J-765	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	77.0	41.3	J-760
J-766	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	80.3	41.3	J-760
J-767	Zone 4	1,500.0	1.5	1,501.5	4,001.5	True	79.6	41.3	J-760
J-768	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	77.9	41.3	J-760
J-769	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	75.9	41.3	J-760
J-770	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	69.6	41.3	J-760
J-771	Zone 4	1,500.0	7.8	1,507.8	4,007.8	True	79.8	41.3	J-760
J-773	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	82.6	41.3	J-760
J-774	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	79.1	41.3	J-760
J-775	Zone 4	1,500.0	4.1	1,504.1	4,004.1	True	81.6	41.3	J-760
J-776	Zone 4	1,500.0	4.1	1,504.1	4,004.1	True	80.7	41.3	J-760
J-777	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	81.5	41.3	J-760
J-778	Zone 4	1,500.0	6.1	1,506.1	4,006.1	True	78.2	41.3	J-760
J-779	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	79.8	41.3	J-760
J-780	Zone 4	1,500.0	4.9	1,504.9	4,004.9	True	78.3	41.3	J-760
J-781	Zone 4	1,500.0	4.1	1,504.1	4,004.1	True	78.8	41.3	J-760
J-782	Zone 4	1,500.0	2.9	1,502.9	4,002.9	True	77.1	41.3	J-760
J-783	Zone 4	1,500.0	2.9	1,502.9	4,002.9	True	72.2	41.3	J-760
J-795	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	93.5	41.5	J-760
J-797	Zone 2	1,500.0	9.8	1,509.8	4,009.8	True	53.0	35.8	J-127
J-799	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	78.7	41.3	J-760
J-805	Zone 4	1,500.0	0.0	1,500.0	3,779.7	True	48.6	42.2	J-760
J-806	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	63.3	41.3	J-760
J-807	Zone 4	1,500.0	4.5	1,504.5	4,004.5	True	63.2	41.3	J-760
J-808	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	66.8	41.3	J-760
J-809	Zone 4	1,500.0	4.5	1,504.5	4,004.5	True	68.9	41.3	J-760



**GBWC 2024 IRP - Cold Springs Division**  
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**Report**  
**Fire Flow - Time: 0.00 hours**

Label	Zone	Fire Flow (Needed) (gpm)	MDD (gpm)	Total Flow Needed (Fire Flow + MDD) (gpm)	Available Flow at 20 psi Min. Residual Pressure (gpm)	Satisfies Fire Flow Constraints ?	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Zone Lower Limit @ Total Flow Needed) (psi)	Junction w/ Minimum Pressure (Zone @ Total Flow Needed)
J-810	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	62.9	41.3	J-760
J-811	Zone 4	1,500.0	5.3	1,505.3	4,005.3	True	62.7	41.3	J-760
J-812	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	67.1	41.3	J-760
J-813	Zone 4	1,500.0	4.9	1,504.9	4,004.9	True	68.4	41.3	J-760
J-814	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	70.4	41.3	J-760
J-815	Zone 4	1,500.0	1.1	1,501.1	4,001.1	True	61.5	41.3	J-760
J-816	Zone 4	1,500.0	4.9	1,504.9	4,004.9	True	62.6	41.3	J-760
J-817	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	65.1	41.3	J-760
J-818	Zone 4	1,500.0	4.5	1,504.5	4,004.5	True	68.8	41.3	J-760
J-819	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	60.5	41.3	J-760
J-820	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	61.0	41.3	J-760
J-823	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	69.0	41.3	J-760
J-829	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	60.9	41.3	J-760
J-830	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	62.5	41.3	J-760
J-832	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	70.4	41.3	J-760
J-833	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	69.9	41.3	J-760
J-834	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	69.7	41.3	J-760
J-835	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	69.0	41.3	J-760
J-836	Zone 4	1,500.0	3.7	1,503.7	4,003.7	True	60.8	41.3	J-760
J-839	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	64.4	41.3	J-760
J-840	Zone 4	1,500.0	4.1	1,504.1	4,004.1	True	68.1	41.3	J-760
J-841	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	62.1	41.3	J-760
J-842	Zone 4	1,500.0	3.7	1,503.7	4,003.7	True	67.0	41.3	J-760
J-843	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	66.5	41.3	J-760
J-844	Zone 4	1,500.0	2.0	1,502.0	3,744.0	True	62.8	41.3	J-760
J-845	Zone 4	1,500.0	4.1	1,504.1	4,004.1	True	68.4	41.3	J-760
J-846	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	65.6	41.3	J-760
J-847	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	77.0	41.3	J-760
J22-848	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	75.9	41.3	J-760
J-850	Zone 4	1,500.0	3.3	1,503.3	4,003.3	True	76.3	41.3	J-760
J-851	Zone 4	1,500.0	3.3	1,503.3	4,003.3	True	73.0	41.3	J-760
J-852	Zone 4	1,500.0	3.3	1,503.3	4,003.3	True	72.2	41.3	J-760
J-853	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	75.0	41.3	J-760
J-854	Zone 4	1,500.0	3.7	1,503.7	4,003.7	True	74.5	41.3	J-760
J-855	Zone 4	1,500.0	3.7	1,503.7	4,003.7	True	71.5	41.3	J-760
J-856	Zone 4	1,500.0	3.7	1,503.7	4,003.7	True	70.7	41.3	J-760
J-857	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	74.7	41.3	J-760
J-858	Zone 4	1,500.0	3.3	1,503.3	4,003.3	True	71.0	41.3	J-760
J22-874	Zone 4	1,500.0	0.8	1,500.8	4,000.8	True	77.8	41.3	J-760

**GBWC 2024 IRP - Cold Springs Division**  
**Preferred (2044) MDD+Fire Condition Distribution System Junction**  
**Report**  
**Fire Flow - Time: 0.00 hours**

Label	Zone	Fire Flow (Needed) (gpm)	MDD (gpm)	Total Flow Needed (Fire Flow + MDD) (gpm)	Available Flow at 20 psi Min. Residual Pressure (gpm)	Satisfies Fire Flow Constraints ?	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Zone Lower Limit @ Total Flow Needed) (psi)	Junction w/ Minimum Pressure (Zone @ Total Flow Needed)
CS ELEM SCHOOL	Zone 4	3,125.0	2.8	3,127.8	2,896.6	False	10.0	37.9	J-760
J22-880	Zone 4	1,500.0	1.2	1,501.2	4,001.2	True	78.4	41.3	J-760
J22-882	Zone 4	1,500.0	1.6	1,501.6	4,001.6	True	80.4	41.3	J-760
J22-884	Zone 4	1,500.0	1.2	1,501.2	4,001.2	True	66.4	41.3	J-760
J22-886	Zone 4	1,500.0	1.2	1,501.2	4,001.2	True	67.7	41.3	J-760
J22-887	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	70.6	41.3	J-760
J22-890	Zone 4	1,500.0	0.8	1,500.8	4,000.8	True	70.9	41.3	J-760
J22-892	Zone 4	1,500.0	0.8	1,500.8	4,000.8	True	73.4	41.3	J-760
J22-896	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	75.5	41.3	J-760
J22-898	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	76.1	41.3	J-760
J22-899	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	62.8	41.3	J-760
J22-901	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	61.4	41.3	J-760
J22-902	Zone 4	1,500.0	6.5	1,506.5	4,006.5	True	84.3	41.3	J-760
J22-1069	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	75.4	41.3	J-760
J22-1070	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	76.0	41.3	J-760
J-1071	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	78.4	41.3	J-760
J22-1072	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	79.6	41.3	J-760
J22-1078	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	64.7	41.3	J-760
J22-1079	Zone 4	1,500.0	3.1	1,503.1	4,003.1	True	69.1	41.3	J-760
J22-1080	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	70.5	41.3	J-760
J22-1082	Zone 4	1,500.0	1.9	1,501.9	4,001.9	True	71.5	41.3	J-760
J22-1083	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	72.3	41.3	J-760
J22-1084	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	74.8	41.3	J-760
J22-1085	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	75.8	41.3	J-760
J22-1086	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	76.6	41.3	J-760
J22-1087	Zone 4	1,500.0	20.4	1,520.4	4,020.4	True	78.2	41.3	J-760
J22-1088	Zone 4	1,500.0	3.1	1,503.1	4,003.1	True	79.2	41.3	J-760
J22-1089	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	80.6	41.3	J-760
J22-1090	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	81.4	41.3	J-760
J22-1091	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	82.9	41.3	J-760
J22-1147	Zone 4	1,500.0	0.0	1,500.0	3,000.1	True	63.9	41.3	J-760
J22-1158	Zone 4	1,500.0	1.2	1,501.2	4,001.2	True	68.5	41.3	J-760
J22-1159	Zone 4	1,500.0	1.2	1,501.2	4,001.2	True	69.8	41.3	J-760
J22-1160	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	71.3	41.3	J-760
J22-1161	Zone 4	1,500.0	1.2	1,501.2	4,001.2	True	72.0	41.3	J-760
J22-1163	Zone 4	1,500.0	1.2	1,501.2	4,001.2	True	71.5	41.3	J-760
J22-1164	Zone 4	1,500.0	1.2	1,501.2	4,001.2	True	74.6	41.3	J-760
J22-1165	Zone 4	1,500.0	1.6	1,501.6	4,001.6	True	73.9	41.3	J-760

**GBWC 2024 IRP - Cold Springs Division**  
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**Report**  
**Fire Flow - Time: 0.00 hours**

Label	Zone	Fire Flow (Needed) (gpm)	MDD (gpm)	Total Flow Needed (Fire Flow + MDD) (gpm)	Available Flow at 20 psi Min. Residual Pressure (gpm)	Satisfies Fire Flow Constraints ?	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Zone Lower Limit @ Total Flow Needed) (psi)	Junction w/ Minimum Pressure (Zone @ Total Flow Needed)
J22-1166	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	75.4	41.3	J-760
J22-1168	Zone 4	1,500.0	1.6	1,501.6	4,001.6	True	74.0	41.3	J-760
J22-1169	Zone 4	1,500.0	2.0	1,502.0	4,002.0	True	73.8	41.3	J-760
J22-1170	Zone 4	1,500.0	1.6	1,501.6	3,078.0	True	64.7	41.3	J-760
J22-1171	Zone 4	1,500.0	1.6	1,501.6	3,313.1	True	66.4	41.3	J-760
J22-1172	Zone 4	1,500.0	3.7	1,503.7	4,003.7	True	69.9	41.3	J-760
J22-1173	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	77.9	41.3	J-760
J22-1174	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	78.7	41.3	J-760
J22-1175	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	80.5	41.3	J-760
J22-1092	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	81.0	41.3	J-760
J22-IRR-1178	NO FIRE	0.0	0.0	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-1179	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	67.7	41.3	J-760
J-1183	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	66.1	41.3	J-760
J-1184	Zone 4	1,500.0	0.0	1,500.0	4,000.0	True	62.7	41.3	J-760
J-23-1186	Zone 4	0.0	0.0	1,000.0	4,000.0	True	64.0	41.9	J-760
J-23-1187	Zone 4	0.0	0.8	1,000.8	4,000.8	True	62.7	41.9	J-760
J-23-1188	Zone 4	0.0	1.2	1,001.2	4,001.2	True	62.2	41.9	J-760
J-23-1189	Zone 4	0.0	1.2	1,001.2	3,578.7	True	60.0	41.9	J-760
J-23-1190	Zone 4	0.0	0.8	1,000.8	3,500.8	True	59.2	41.9	J-760
J-23-1191	Zone 4	0.0	0.0	1,000.0	3,517.9	True	60.0	41.9	J-760
J-23-1192	Zone 4	0.0	0.0	1,000.0	3,537.7	True	60.4	41.9	J-760
J-23-1193	Zone 4	0.0	2.9	1,002.9	3,603.9	True	61.4	41.9	J-760
J-23-1194	Zone 4	0.0	2.0	1,002.0	3,793.5	True	63.0	41.9	J-760
J-23-1195	Zone 4	0.0	1.2	1,001.2	3,994.2	True	63.9	41.9	J-760
J-23-1196	Zone 4	0.0	1.6	1,001.6	4,001.6	True	64.9	41.9	J-760
J-23-1197	Zone 4	0.0	1.2	1,001.2	4,001.2	True	65.9	41.9	J-760
J-1198	Zone 4	0.0	0.0	1,000.0	4,000.0	True	66.2	41.9	J-760

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Label	Zone	Fire Flow (Needed) (gpm)	MDD (gpm)	Total Flow Needed (Fire Flow + MDD) (gpm)	Available Flow at 20 psi Min. Residual Pressure (gpm)	Satisfies Fire Flow Constraints ?	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Zone Lower Limit @ Total Flow Needed) (psi)	Junction w/ Minimum Pressure (Zone @ Total Flow Needed)
J-1199	Zone 4	0.0	0.0	1,000.0	4,000.0	True	65.3	41.9	J-760
J-1200	Zone 4	0.0	0.0	1,000.0	4,000.0	True	68.0	41.9	J-760
J-23-1201	Zone 4	0.0	1.6	1,001.6	4,001.6	True	68.1	41.9	J-760
J-23-1202	Zone 4	0.0	2.0	1,002.0	3,748.1	True	66.0	41.9	J-760
J-23-1203	Zone 4	0.0	2.0	1,002.0	4,002.0	True	73.8	41.9	J-760
J-23-1204	Zone 4	0.0	2.0	1,002.0	3,616.5	True	70.8	41.9	J-760
J-23-1205	Zone 4	0.0	1.2	1,001.2	3,869.4	True	71.2	41.9	J-760
J-23-1206	Zone 4	0.0	1.2	1,001.2	3,702.9	True	70.5	41.9	J-760
J-23-1207	Zone 4	0.0	2.0	1,002.0	4,002.0	True	79.4	41.9	J-760
J-23-1208	Zone 4	0.0	2.9	1,002.9	4,002.9	True	77.7	41.9	J-760
J-23-1209	Zone 4	0.0	0.0	1,000.0	4,000.0	True	79.4	41.9	J-760
J-23-1210	Zone 4	0.0	0.0	1,000.0	4,000.0	True	79.9	41.9	J-760
J-23-1212	Zone 4	0.0	1.6	1,001.6	4,001.6	True	79.7	41.9	J-760
J-23-1213	Zone 4	0.0	2.5	1,002.5	4,002.5	True	81.2	41.9	J-760
J-23-1214	Zone 4	0.0	0.4	1,000.4	4,000.4	True	81.1	41.9	J-760
J-23-1215	Zone 4	0.0	0.8	1,000.8	4,000.8	True	81.0	41.9	J-760
J-23-1216	Zone 4	0.0	1.2	1,001.2	4,001.2	True	80.6	41.9	J-760
J-23-1217	Zone 4	0.0	0.0	1,000.0	4,000.0	True	80.6	41.9	J-760
J-23-1219	Zone 4	0.0	0.8	1,000.8	4,000.8	True	80.7	41.9	J-760
J-23-1220	Zone 4	0.0	0.0	1,000.0	4,000.0	True	80.5	41.9	J-760
J-23-1221	Zone 4	0.0	0.0	1,000.0	4,000.0	True	80.4	41.9	J-760

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J-23-1222	Zone 4	0.0	0.0	1,000.0	4,000.0	True	77.8	41.9	J-760
J-23-1223	Zone 4	0.0	0.0	1,000.0	4,000.0	True	77.6	41.9	J-760
J-23-1225	Zone 4	0.0	0.0	1,000.0	3,428.0	True	59.6	41.9	J-760
J-23-1228	Zone 4	0.0	3.3	1,003.3	4,003.3	True	78.2	41.9	J-760
J23-IRR	NO FIRE	0.0	0.0	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-1230 (CS Drive Homes)	Zone 1	1,000.0	2.5	1,002.5	1,706.3	True	85.7	51.9	J-652
J-1233 (CS Drive Homes)	Zone 1	1,000.0	6.3	1,006.3	1,721.7	True	87.2	52.1	J-652
J-1232 (CS Drive Homes)	Zone 1	1,000.0	5.0	1,005.0	1,716.8	True	89.8	52.1	J-652
J-1231 (CS Drive Homes)	Zone 1	1,000.0	5.0	1,005.0	1,711.8	True	87.6	51.9	J-652
J-1236 (CS Drive Homes)	Zone 1	1,000.0	2.5	1,002.5	1,714.4	True	86.7	52.1	J-652
J-1242	Zone 1	1,500.0	0.0	1,500.0	1,698.3	True	58.7	30.2	J-652
J-1245	Zone 2	1,500.0	0.0	1,500.0	4,000.0	True	52.1	37.3	J-127
J-1246	Zone 2	1,500.0	0.0	1,500.0	4,000.0	True	50.2	36.3	J-127
J-1252 IRR	Zone 1	0.0	11.3	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-1255	Zone 4	0.0	3.7	1,003.7	4,003.7	True	82.2	41.9	J-760
J-1256	Zone 4	0.0	2.5	1,002.5	4,002.5	True	83.1	41.9	J-760
J-1257	Zone 4	0.0	4.9	1,004.9	4,004.9	True	82.0	41.9	J-760
J-1258	Zone 4	0.0	0.0	1,000.0	4,000.0	True	81.6	41.9	J-760
J-1259	Zone 4	0.0	2.5	1,002.5	4,002.5	True	80.1	41.9	J-760
J-1260	Zone 4	0.0	0.0	1,000.0	4,000.0	True	79.0	41.9	J-760
J-1262	Zone 1	0.0	0.3	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
J-1266	Zone 4	0.0	1.2	1,001.2	4,001.2	True	81.9	41.9	J-760
J-1272	Zone 4	0.0	2.5	1,002.5	4,002.5	True	79.8	41.9	J-760
J-1274	Zone 4	0.0	0.0	1,000.0	4,000.0	True	83.4	41.9	J-760
J-1275	Zone 4	0.0	0.0	1,000.0	4,000.0	True	79.0	41.9	J-760

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J-1278	Zone 4	0.0	0.0	1,000.0	4,000.0	True	83.4	41.9	J-760
J-1298	Zone 2	0.0	0.0	1,000.0	2,245.6	True	41.1	34.1	J-1309
J-1299	Zone 2	0.0	0.0	1,000.0	2,145.8	True	39.9	33.7	J-1309
J-1300	Zone 2	0.0	4.1	1,004.1	2,000.4	True	38.3	33.1	J-1309
J-1301	Zone 2	0.0	4.1	1,004.1	1,753.6	True	37.4	31.6	J-1309
J-1302	Zone 2	0.0	4.1	1,004.1	1,753.7	True	35.3	31.6	J-1309
J-1303	Zone 2	0.0	4.1	1,004.1	1,635.2	True	33.7	31.6	J-1309
J-1304	Zone 2	0.0	4.1	1,004.1	1,552.8	True	34.5	30.0	J-1309
J-1305	Zone 2	0.0	4.1	1,004.1	1,482.9	True	32.5	29.3	J-1308
J-1306	Zone 2	0.0	4.1	1,004.1	1,448.2	True	32.0	28.9	J-1308
J-1307	Zone 2	0.0	4.1	1,004.1	1,448.2	True	31.5	28.9	J-1308
J-1308	Zone 2	0.0	4.1	1,004.1	1,407.6	True	28.4	28.7	J-1309
J-1309	Zone 2	0.0	4.1	1,004.1	1,374.8	True	28.0	28.9	J-1308
J-1310	Zone 2	0.0	4.1	1,004.1	1,434.8	True	31.4	28.7	J-1309
J-1311	Zone 2	0.0	4.1	1,004.1	1,446.7	True	31.9	28.9	J-1309
J-1312	Zone 2	0.0	4.1	1,004.1	1,463.9	True	33.6	29.1	J-1309
J-1313	Zone 2	0.0	4.1	1,004.1	1,463.9	True	32.3	29.1	J-1309
J-1314	Zone 2	0.0	0.0	1,000.0	1,369.5	True	30.4	29.1	J-1309
J-1315	Zone 2	0.0	0.0	1,000.0	1,330.4	True	29.7	29.1	J-1309
J-1316	Zone 2	0.0	0.0	1,000.0	1,820.0	True	37.5	32.1	J-1309
J-1317	Zone 2	0.0	0.0	1,000.0	1,873.2	True	40.1	32.4	J-1309
J-1320	Zone 2	0.0	0.0	1,000.0	1,951.5	True	41.1	32.8	J-1309
J-1321	Zone 2	0.0	0.0	1,000.0	3,432.3	True	42.8	36.2	J-1309
J-1322 (CS Drive Homes)	<None >	0.0	2.0	1,002.0	1,917.6	True	83.8	83.8	J-1322 (CS Drive Homes)

## GBWC 2024 IRP - Cold Springs Division

### Preferred (2044) PHD Condition Distribution System Junction Report

PHD-NODES - Time: 0.00 hours

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
2894	J-1230 (CS Drive Homes)	5,054.00	Zone 1	4.3	5,306.90	109.4
2898	J-1233 (CS Drive Homes)	5,044.00	Zone 1	10.9	5,306.91	113.8
2900	J-1232 (CS Drive Homes)	5,040.00	Zone 1	8.7	5,306.90	115.5
2902	J-1231 (CS Drive Homes)	5,048.00	Zone 1	8.7	5,306.90	112.0
2908	J-1236 (CS Drive Homes)	5,044.00	Zone 1	4.3	5,306.90	113.7
2982	J-1255	5,086.00	Zone 4	6.6	5,278.54	83.3
2984	J-1256	5,083.00	Zone 4	4.4	5,278.52	84.6
2986	J-1257	5,085.00	Zone 4	8.7	5,278.50	83.7
2989	J-1258	5,088.00	Zone 4	0.0	5,278.56	82.4
2993	J-1259	5,087.00	Zone 4	4.4	5,278.50	82.9
2995	J-1260	5,092.00	Zone 4	0.0	5,278.48	80.7
3009	J-1266	5,087.50	Zone 4	2.2	5,278.56	82.7
3026	J-1272	5,090.00	Zone 4	4.4	5,278.48	81.5
3032	J-1274	5,082.00	Zone 4	0.0	5,278.51	85.0
3090	J-1298	5,063.00	Zone 2	0.0	5,173.48	47.8
3092	J-1299	5,065.00	Zone 2	0.0	5,173.46	46.9
3094	J-1300	5,068.00	Zone 2	7.0	5,173.43	45.6
3096	J-1301	5,069.70	Zone 2	7.0	5,173.37	44.9
3098	J-1302	5,070.70	Zone 2	7.0	5,173.37	44.4
3100	J-1303	5,071.50	Zone 2	7.0	5,173.37	44.1
3102	J-1304	5,072.50	Zone 2	7.0	5,173.34	43.6
3104	J-1305	5,075.10	Zone 2	7.0	5,173.34	42.5
3106	J-1306	5,075.40	Zone 2	7.0	5,173.33	42.4
3108	J-1307	5,075.40	Zone 2	7.0	5,173.33	42.4
3110	J-1308	5,082.70	Zone 2	7.0	5,173.33	39.2
3112	J-1309	5,082.90	Zone 2	7.0	5,173.33	39.1
3114	J-1310	5,075.20	Zone 2	7.0	5,173.33	42.5
3116	J-1311	5,074.20	Zone 2	7.0	5,173.33	42.9
3118	J-1312	5,070.60	Zone 2	7.0	5,173.33	44.4
3120	J-1313	5,069.30	Zone 2	7.0	5,173.33	45.0
3122	J-1314	5,070.00	Zone 2	0.0	5,173.33	44.7
3124	J-1315	5,070.00	Zone 2	0.0	5,173.33	44.7
3127	J-1316	5,069.70	Zone 2	0.0	5,173.38	44.9
3129	J-1317	5,064.00	Zone 2	0.0	5,173.38	47.3
3136	J-1320	5,062.00	Zone 2	0.0	5,173.39	48.2
3138	J-1321	5,066.00	Zone 2	0.0	5,173.45	46.5
3158	J-1322 (CS Drive Homes)	5,049.82	<None>	2.0	5,306.94	111.2
232	J-127	5,090.00	Zone 2	14.0	5,175.94	37.2
142	J-33	5,083.00	Zone 2	0.0	5,171.43	38.3
233	J-128	5,085.00	Zone 2	15.9	5,174.59	38.8

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ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
231	J-126	5,083.00	Zone 2	15.0	5,174.52	39.6
1620	J-760	5,181.43	Zone 4	0.0	5,278.60	42.0
1595	J-759	5,180.85	Zone 4	0.0	5,278.60	42.3
322	J-241	5,180.85	Zone 4	0.0	5,278.60	42.3
183	J-77	5,080.00	Zone 2	12.2	5,173.64	40.5
185	J-79	5,080.00	Zone 2	37.4	5,173.70	40.5
234	J-129	5,080.00	Zone 2	0.0	5,174.21	40.8
1564	J-747	5,177.53	Zone 4	6.6	5,278.58	43.7
171	J-65	5,078.00	Zone 2	10.3	5,174.04	41.6
215	J-110	5,078.00	Zone 2	23.4	5,173.45	41.3
235	J-130	5,078.00	Zone 2	14.0	5,174.21	41.6
1535	J-742	5,176.39	Zone 4	0.0	5,278.59	44.2
1569	J-749	5,176.03	Zone 4	0.0	5,278.58	44.4
181	J-75	5,076.00	Zone 2	7.5	5,173.75	42.3
1562	J-746	5,174.93	Zone 4	0.0	5,278.57	44.8
186	J-80	5,075.00	Zone 2	0.0	5,173.59	42.7
230	J-125	5,075.00	Zone 2	0.0	5,173.78	42.7
1538	J-743	5,174.58	Zone 4	8.0	5,278.58	45.0
1573	J-751	5,174.46	Zone 4	5.8	5,278.57	45.0
184	J-78	5,074.00	Zone 2	0.0	5,173.62	43.1
193	J-87	5,074.00	Zone 2	11.2	5,173.64	43.1
237	J-132	5,073.00	Zone 2	0.0	5,173.81	43.6
236	J-131	5,073.00	Zone 2	18.7	5,173.85	43.6
238	J-133	5,072.00	Zone 2	18.7	5,173.77	44.0
194	J-88	5,072.00	Zone 2	13.1	5,173.64	44.0
204	J-98	5,072.00	Zone 2	0.0	5,173.65	44.0
505	J-480	5,170.56	Zone 4	0.0	5,278.58	46.7
430	J-397	5,170.00	Zone 4	8.7	5,278.56	47.0
195	J-89	5,070.00	Zone 2	0.0	5,173.65	44.8
170	J-64	5,070.00	Zone 2	10.3	5,173.68	44.9
198	J-92	5,070.00	Zone 2	14.0	5,173.68	44.9
205	J-99	5,070.00	Zone 2	0.0	5,173.67	44.9
211	J-105	5,070.00	Zone 2	0.0	5,173.48	44.8
212	J-106	5,070.00	Zone 2	15.9	5,173.47	44.8
213	J-108	5,070.00	Zone 2	13.1	5,173.46	44.8
224	J-119	5,070.00	Zone 2	9.4	5,173.46	44.8
321	J-240	5,070.00	Zone 2	0.0	5,173.85	44.9
182	J-76	5,070.00	Zone 2	4.7	5,173.75	44.9
172	J-66	5,070.00	Zone 2	13.1	5,173.76	44.9
429	J-396	5,169.00	Zone 4	10.2	5,278.56	47.4
202	J-96	5,069.00	Zone 2	15.0	5,173.61	45.3
210	J-104	5,069.00	Zone 2	12.2	5,173.50	45.2
214	J-109	5,069.00	Zone 2	9.4	5,173.49	45.2
239	J-134	5,068.00	Zone 2	0.0	5,173.67	45.7
188	J-82	5,068.00	Zone 2	0.0	5,173.68	45.7
189	J-83	5,068.00	Zone 2	11.2	5,173.68	45.7



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ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
191	J-85	5,068.00	Zone 2	12.2	5,173.68	45.7
190	J-84	5,068.00	Zone 2	13.1	5,173.68	45.7
201	J-95	5,068.00	Zone 2	17.8	5,173.63	45.7
209	J-103	5,068.00	Zone 2	10.3	5,173.56	45.7
223	J-118	5,068.00	Zone 2	10.3	5,173.46	45.6
222	J-117	5,068.00	Zone 2	0.0	5,173.46	45.6
228	J-123	5,068.00	Zone 2	15.0	5,173.47	45.6
199	J-93	5,067.00	Zone 2	0.0	5,173.66	46.1
431	J-398	5,166.00	Zone 4	1.2	5,278.57	48.7
1579	J-753	5,165.91	Zone 4	7.3	5,278.57	48.7
196	J-90	5,066.00	Zone 2	11.2	5,173.66	46.6
221	J-116	5,065.00	Zone 2	13.1	5,173.46	46.9
227	J-122	5,065.00	Zone 2	13.1	5,173.47	46.9
203	J-97	5,065.00	Zone 2	0.0	5,173.57	47.0
216	J-111	5,065.00	Zone 2	16.8	5,173.45	46.9
1560	J-ph19 IRR2	5,164.42	NO FIRE	0.0	5,278.56	49.4
168	J-62	5,065.00	Zone 2	9.4	5,173.73	47.0
1558	J-744	5,164.42	Zone 4	0.0	5,278.56	49.4
148	J-40	5,065.00	Zone 2	17.8	5,173.76	47.1
316	J-235	5,203.00	Zone 3	0.0	5,316.11	48.9
317	J-237	5,203.00	Zone 3	5.3	5,316.11	48.9
315	J-234	5,202.00	Zone 3	4.6	5,315.39	49.1
1576	J-752	5,163.52	Zone 4	7.3	5,278.56	49.8
1586	J-756	5,163.08	Zone 4	7.3	5,278.55	50.0
226	J-121	5,063.00	Zone 2	0.0	5,173.49	47.8
152	J-45	5,063.00	Zone 2	15.0	5,173.57	47.8
269	J-185	5,200.00	Zone 3	0.0	5,315.39	49.9
200	GOMES ELEM SCHOOL	5,062.00	Zone 2	13.6	5,173.65	48.3
220	J-115	5,062.00	Zone 2	12.2	5,173.46	48.2
225	J-120	5,062.00	Zone 2	18.7	5,173.49	48.2
192	J-86	5,062.00	Zone 2	0.0	5,173.71	48.3
229	J-124	5,062.00	Zone 2	0.0	5,173.52	48.3
187	J-81	5,061.00	Zone 2	18.7	5,173.65	48.7
197	J-91	5,061.00	Zone 2	0.0	5,173.67	48.7
219	J-114	5,060.00	Zone 2	15.0	5,173.47	49.1
146	J-38	5,060.00	Zone 2	16.8	5,173.71	49.2
147	J-39	5,060.00	Zone 2	15.0	5,173.72	49.2
415	J-355	5,060.00	Zone 2	0.0	5,173.64	49.2
151	J-44	5,060.00	Zone 2	17.8	5,173.65	49.2
173	J-67	5,060.00	Zone 2	15.0	5,173.76	49.2
178	J-72	5,060.00	Zone 2	20.6	5,173.79	49.2
179	J-73	5,060.00	Zone 2	0.0	5,173.82	49.2
180	J-74	5,060.00	Zone 2	15.9	5,173.84	49.3
176	J-70	5,060.00	Zone 2	6.5	5,173.93	49.3
166	J-60	5,058.00	Zone 2	15.0	5,173.71	50.1

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ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
167	J-61	5,058.00	Zone 2	16.8	5,173.72	50.1
207	J-101	5,058.00	Zone 2	0.0	5,173.86	50.1
506	J-481	5,156.88	Zone 4	0.0	5,278.55	52.6
274	J-192	5,200.00	Zone 1	1.1	5,320.35	52.1
1583	J-755	5,155.60	Zone 4	7.3	5,278.55	53.2
175	J-69	5,056.00	Zone 2	0.0	5,173.82	51.0
353	J-275	5,055.00	Zone 2	13.1	5,173.47	51.3
352	J-274	5,055.00	Zone 2	9.4	5,173.47	51.3
218	J-113	5,055.00	Zone 2	3.7	5,173.47	51.3
217	J-112	5,055.00	Zone 2	19.6	5,173.48	51.3
259	J-157	5,055.00	Zone 2	0.0	5,173.78	51.4
206	J-100	5,055.00	Zone 2	12.2	5,173.86	51.4
136	J-17	5,055.00	Zone 2	0.0	5,174.01	51.5
428	J-395	5,152.00	Zone 4	7.3	5,278.54	54.7
177	J-71	5,052.00	Zone 2	0.0	5,174.01	52.8
135	J-16	5,052.00	Zone 2	0.0	5,174.11	52.8
208	J-102	5,052.00	Zone 2	18.7	5,174.08	52.8
150	J-43	5,052.00	Zone 2	9.4	5,174.08	52.8
174	J-68	5,050.00	Zone 2	13.1	5,173.79	53.6
159	J-53	5,050.00	Zone 2	16.8	5,173.67	53.5
2938	J-1245	5,050.00	Zone 2	0.0	5,173.65	53.5
2946	J-1246	5,050.00	Zone 2	0.0	5,173.65	53.5
145	J-37	5,050.00	Zone 2	0.0	5,173.73	53.5
163	J-57	5,050.00	Zone 2	13.1	5,174.85	54.0
432	J-399	5,147.42	Zone 4	1.5	5,278.53	56.7
165	J-59	5,050.00	Zone 2	9.4	5,175.51	54.3
164	J-58	5,048.00	Zone 2	0.0	5,174.58	54.8
427	J-394	5,146.00	Zone 4	10.2	5,278.52	57.3
1592	J-758	5,145.34	Zone 4	7.3	5,278.53	57.6
162	J-56	5,048.00	Zone 2	16.8	5,175.63	55.2
161	J-55	5,048.00	Zone 2	11.2	5,176.35	55.5
276	J-194	5,046.00	Zone 2	14.0	5,174.63	55.7
1860	J-805	5,046.00	Zone 4	0.0	5,174.82	55.7
156	J-50	5,046.00	Zone 2	11.2	5,174.86	55.8
158	J-52	5,045.00	Zone 2	6.5	5,173.83	55.7
169	J-63	5,045.00	Zone 2	15.3	5,174.66	56.1
680	J-ph19 IRR1	5,143.72	NO FIRE	0.0	5,278.52	58.3
247	J-142	5,180.00	Zone 3	8.6	5,313.03	57.6
333	J-255	5,045.00	Zone 2	0.0	5,175.25	56.4
1589	J-757	5,142.82	Zone 4	7.3	5,278.52	58.7
134	J-15	5,046.00	Zone 2	0.6	5,176.60	56.5
149	J-42	5,045.00	Zone 2	2.5	5,175.68	56.5
245	J-140	5,180.00	Zone 3	17.1	5,314.43	58.2
157	J-51	5,042.00	Zone 2	8.4	5,174.16	57.2
425	J-392	5,140.00	Zone 4	10.2	5,278.52	59.9
426	J-393	5,140.00	Zone 4	8.7	5,278.51	59.9

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ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
423	J-390	5,140.00	Zone 4	0.0	5,278.49	59.9
160	J-54	5,045.00	Zone 2	0.0	5,179.24	58.1
252	J-149 Reno Truss	5,045.00	Zone 2	1.1	5,179.24	58.1
424	J-391	5,138.00	Zone 4	7.3	5,278.52	60.8
422	J-389	5,138.00	Zone 4	2.9	5,278.44	60.8
1806	J-797	5,045.00	Zone 2	16.8	5,181.90	59.2
507	J-482	5,135.00	Zone 4	0.0	5,278.52	62.1
690	FH-925	5,134.00	Zone 4	0.0	5,278.52	62.5
123	J-3	5,175.00	Zone 1	0.0	5,318.13	61.9
2752	J-23-1190	5,133.35	Zone 4	1.5	5,278.48	62.8
679	J-685	5,132.00	Zone 4	0.0	5,278.52	63.4
673	J-679	5,131.00	Zone 4	12.4	5,278.51	63.8
2750	J-23-1189	5,131.90	Zone 4	2.2	5,278.48	63.4
2834	J-23-1225	5,131.90	Zone 4	0.0	5,278.48	63.4
2754	J-23-1191	5,131.52	Zone 4	0.0	5,278.48	63.6
693	FH-921	5,130.00	Zone 4	0.0	5,278.51	64.3
2756	J-23-1192	5,130.50	Zone 4	0.0	5,278.48	64.0
1938	J-819	5,130.00	Zone 4	0.0	5,278.48	64.2
1940	J-820	5,129.04	Zone 4	0.0	5,278.48	64.7
1982	J-829	5,129.00	Zone 4	0.0	5,278.48	64.7
2748	J-23-1188	5,128.90	Zone 4	2.2	5,278.48	64.7
2758	J-23-1193	5,128.40	Zone 4	5.1	5,278.48	64.9
1996	J-836	5,128.20	Zone 4	6.6	5,278.48	65.0
2746	J-23-1187	5,128.18	Zone 4	1.5	5,278.48	65.0
1911	J-815	5,128.00	Zone 4	2.0	5,278.48	65.1
672	J-678	5,126.00	Zone 4	0.0	5,278.51	66.0
2140	J22-901	5,126.71	Zone 4	0.0	5,278.48	65.7
2999	J-1262	5,167.94	Zone 1	0.4	5,317.64	64.8
678	FH-926	5,126.00	Zone 4	0.0	5,278.52	66.0
418	J-352	5,125.00	Zone 4	9.5	5,278.51	66.4
283	J-184	5,125.00	Zone 4	98.9	5,278.41	66.4
2744	J-23-1186	5,125.90	Zone 4	0.0	5,278.48	66.0
692	FH-922	5,125.00	Zone 4	0.0	5,278.51	66.4
2760	J-23-1194	5,125.40	Zone 4	3.6	5,278.48	66.2
1899	J-810	5,125.00	Zone 4	0.0	5,278.48	66.4
1984	J-830	5,124.80	Zone 4	0.0	5,278.48	66.5
2007	J-841	5,124.70	Zone 4	0.0	5,278.48	66.5
1495	J-730	5,124.00	Zone 4	0.0	5,278.49	66.8
1890	J-806	5,124.00	Zone 4	0.0	5,278.48	66.8
1901	J-811	5,124.00	Zone 4	9.5	5,278.48	66.8
1913	J-816	5,124.00	Zone 4	8.7	5,278.48	66.8
2762	J-23-1195	5,124.00	Zone 4	2.2	5,278.48	66.8
248	J-143	5,160.00	Zone 3	5.9	5,312.99	66.2
250	J-145	5,160.00	Zone 3	7.9	5,313.12	66.2
1503	J-732	5,123.61	Zone 4	0.0	5,278.49	67.0

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ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
671	J-677	5,123.00	Zone 4	14.6	5,278.51	67.3
246	J-141	5,160.00	Zone 3	7.3	5,313.35	66.3
2735	J-1184	5,123.50	Zone 4	0.0	5,278.48	67.1
2772	J-1199	5,123.45	Zone 4	0.0	5,278.48	67.1
270	J-187	5,160.00	Zone 3	0.0	5,314.16	66.7
1892	J-807	5,123.00	Zone 4	8.0	5,278.48	67.3
2137	J22-899	5,122.97	Zone 4	0.0	5,278.48	67.3
682	J-688	5,122.00	Zone 4	4.4	5,278.51	67.7
2764	J-23-1196	5,122.20	Zone 4	2.9	5,278.48	67.6
691	FH-923	5,121.00	Zone 4	0.0	5,278.51	68.1
681	J-687	5,121.00	Zone 4	0.0	5,278.51	68.1
2768	J-1198	5,121.33	Zone 4	0.0	5,278.48	68.0
465	J-434	5,120.00	Zone 4	5.8	5,278.39	68.5
284	J-195	5,120.00	Zone 4	0.0	5,278.39	68.5
464	J-433	5,120.00	Zone 4	2.9	5,278.39	68.5
2766	J-23-1197	5,120.77	Zone 4	2.2	5,278.48	68.2
687	FH-927	5,119.00	Zone 4	0.0	5,278.51	69.0
685	FH-930	5,119.00	Zone 4	0.0	5,278.51	69.0
279	J-189	5,160.00	Zone 1	0.0	5,316.73	67.8
124	J-4	5,160.00	Zone 1	8.7	5,317.09	68.0
2436	J22-1078	5,118.46	Zone 4	0.0	5,278.48	69.2
669	J-675	5,118.00	Zone 4	0.0	5,278.51	69.4
244	J-139	5,155.00	Zone 3	0.0	5,313.88	68.7
508	J-483	5,117.00	Zone 4	0.0	5,278.51	69.9
578	J-576	5,117.00	Zone 4	8.7	5,278.51	69.9
2002	J-839	5,117.70	Zone 4	0.0	5,278.48	69.6
2781	J-23-1202	5,117.50	Zone 4	3.6	5,278.48	69.6
2776	J-1200	5,116.98	Zone 4	0.0	5,278.48	69.9
1519	J-736	5,116.72	Zone 4	10.2	5,278.49	70.0
1915	J-817	5,116.00	Zone 4	0.0	5,278.48	70.3
2731	J-1183	5,115.25	Zone 4	0.0	5,278.48	70.6
473	J-443	5,114.00	Zone 4	7.3	5,278.45	71.1
2779	J-23-1201	5,115.00	Zone 4	2.9	5,278.48	70.7
670	J-676	5,114.00	Zone 4	0.0	5,278.51	71.2
281	J-191	5,155.00	Zone 1	8.7	5,315.93	69.6
280	J-190	5,155.00	Zone 1	0.0	5,316.21	69.8
688	J-674	5,113.00	Zone 4	0.0	5,278.51	71.6
684	J-690	5,113.00	Zone 4	0.0	5,278.51	71.6
417	J-348	5,112.00	Zone 4	7.3	5,278.51	72.0
2013	J-844	5,113.00	Zone 4	3.6	5,278.48	71.6
2713	J-1179	5,112.09	Zone 4	0.0	5,278.48	72.0
1894	J-808	5,112.00	Zone 4	0.0	5,278.49	72.0
2018	J-846	5,111.50	Zone 4	0.0	5,278.48	72.2
689	FH-924	5,111.00	Zone 4	0.0	5,278.51	72.5
1903	J-812	5,111.00	Zone 4	0.0	5,278.48	72.5
2011	J-843	5,110.80	Zone 4	0.0	5,278.48	72.5

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**GBWC 2024 IRP - Cold Springs Division**  
**Preferred (2044) PHD Condition Distribution System Junction Report**  
**PHD-NODES - Time: 0.00 hours**

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
2114	J22-884	5,110.48	Zone 4	2.2	5,278.48	72.7
2009	J-842	5,110.40	Zone 4	6.6	5,278.48	72.7
282	J-193	5,150.00	Zone 1	8.7	5,315.82	71.7
2605	J22-1158	5,109.16	Zone 4	2.2	5,278.48	73.3
2439	J22-1079	5,109.01	Zone 4	5.5	5,278.48	73.3
2004	J-840	5,108.90	Zone 4	7.3	5,278.48	73.4
674	J-680	5,108.00	Zone 4	9.5	5,278.51	73.8
1493	J-729	5,108.00	Zone 4	0.0	5,278.49	73.8
1649	J-770	5,108.00	Zone 4	0.0	5,278.48	73.8
2117	J22-886	5,107.93	Zone 4	2.2	5,278.49	73.8
1516	J-735	5,107.24	Zone 4	0.0	5,278.49	74.1
1905	J-813	5,107.00	Zone 4	8.7	5,278.48	74.2
1917	J-818	5,107.00	Zone 4	8.0	5,278.48	74.2
472	J-442	5,106.00	Zone 4	8.0	5,278.45	74.6
649	J-652	5,145.00	Zone 1	10.9	5,307.42	70.3
2609	J22-1159	5,106.83	Zone 4	2.2	5,278.49	74.3
2015	J-845	5,106.70	Zone 4	7.3	5,278.48	74.3
2442	J22-1080	5,106.38	Zone 4	0.0	5,278.49	74.5
686	FH-928	5,106.00	Zone 4	0.0	5,278.51	74.6
575	J-570	5,106.00	Zone 4	0.0	5,278.51	74.6
416	J-346	5,105.00	Zone 4	0.0	5,278.50	75.1
1896	J-809	5,106.00	Zone 4	8.0	5,278.49	74.6
2789	J-23-1206	5,106.00	Zone 4	2.2	5,278.53	74.6
1946	J-823	5,105.90	Zone 4	0.0	5,278.48	74.7
2119	J22-887	5,105.85	Zone 4	0.0	5,278.49	74.7
1988	J-832	5,105.60	Zone 4	0.0	5,278.48	74.8
2123	J22-890	5,105.57	Zone 4	1.5	5,278.50	74.8
683	J-689	5,105.00	Zone 4	6.6	5,278.51	75.1
646	J-649	5,105.00	Zone 4	0.0	5,278.52	75.1
611	CS MIDDLE SCHOOL	5,105.00	Zone 4	46.6	5,278.50	75.1
576	J-571	5,105.00	Zone 4	0.0	5,278.52	75.1
645	J-642	5,105.00	Zone 4	0.0	5,278.52	75.1
1994	J-835	5,105.20	Zone 4	0.0	5,278.48	75.0
2787	J-23-1205	5,105.15	Zone 4	2.2	5,278.53	75.0
2446	J22-1082	5,104.95	Zone 4	3.3	5,278.49	75.1
2613	J22-1160	5,104.92	Zone 4	0.0	5,278.49	75.1
1992	J-834	5,104.80	Zone 4	0.0	5,278.48	75.1
1990	J-833	5,104.80	Zone 4	0.0	5,278.48	75.1
2785	J-23-1204	5,104.50	Zone 4	3.6	5,278.53	75.3
1907	J-814	5,104.28	Zone 4	0.0	5,278.48	75.4
1513	J-734	5,104.16	Zone 4	0.0	5,278.49	75.4
2621	J22-1163	5,104.00	Zone 4	2.2	5,278.50	75.5
364	J-286	5,103.00	Zone 4	19.5	5,278.41	75.9
2617	J22-1161	5,103.84	Zone 4	2.2	5,278.50	75.6
249	J-144	5,140.00	Zone 3	0.0	5,312.94	74.8

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**Preferred (2044) PHD Condition Distribution System Junction Report**  
**PHD-NODES - Time: 0.00 hours**

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
2449	J22-1083	5,103.53	Zone 4	0.0	5,278.50	75.7
695	FH-919	5,103.00	Zone 4	8.7	5,278.51	75.9
1498	J-731	5,103.00	Zone 4	0.0	5,278.49	75.9
474	J-441	5,102.00	Zone 4	8.0	5,278.46	76.3
2041	J-856	5,102.40	Zone 4	6.6	5,278.48	76.2
2783	J-23-1203	5,102.20	Zone 4	3.6	5,278.53	76.3
243	J-138	5,138.00	Zone 3	0.0	5,313.52	75.9
475	J-444	5,138.00	Zone 3	0.0	5,313.52	75.9
327	J-248	5,138.00	Zone 3	9.2	5,313.58	76.0
2039	J-855	5,101.00	Zone 4	6.6	5,278.49	76.8
360	J-282	5,100.00	Zone 4	8.0	5,278.44	77.2
285	J-196	5,100.00	Zone 4	0.0	5,278.38	77.2
463	J-432	5,100.00	Zone 4	2.9	5,278.38	77.2
1730	J-783	5,100.37	Zone 4	5.1	5,278.48	77.1
2031	J-852	5,100.10	Zone 4	5.8	5,278.48	77.2
511	J-485	5,100.00	Zone 4	17.1	5,278.56	77.3
362	J-284	5,099.00	Zone 4	11.6	5,278.42	77.6
2126	J22-892	5,099.98	Zone 4	1.5	5,278.50	77.2
292	J-203	5,099.00	Zone 4	7.3	5,278.36	77.6
125	J-5	5,140.00	Zone 1	8.7	5,315.65	76.0
675	J-681	5,099.00	Zone 4	0.0	5,278.51	77.7
2046	J-858	5,099.00	Zone 4	5.8	5,278.49	77.7
361	J-283	5,098.00	Zone 4	8.0	5,278.44	78.1
2629	J22-1165	5,098.57	Zone 4	2.9	5,278.51	77.8
2643	J22-1169	5,098.46	Zone 4	3.6	5,278.51	77.9
2029	J-851	5,098.30	Zone 4	5.8	5,278.48	78.0
638	J-639	5,098.00	Zone 4	0.0	5,278.55	78.1
2626	J22-1164	5,098.00	Zone 4	2.2	5,278.51	78.1
2452	J22-1084	5,098.00	Zone 4	0.0	5,278.51	78.1
2639	J22-1168	5,098.00	Zone 4	2.9	5,278.52	78.1
2653	J22-1172	5,097.47	Zone 4	6.6	5,278.51	78.3
664	J-667	5,097.00	Zone 4	0.0	5,278.52	78.5
2854	J23-IRR	5,097.29	NO FIRE	0.0	5,278.53	78.4
2037	J-854	5,097.00	Zone 4	6.6	5,278.49	78.5
293	J-204	5,096.00	Zone 4	7.3	5,278.35	78.9
1510	J-733	5,096.68	Zone 4	10.2	5,278.49	78.7
2034	J-853	5,096.50	Zone 4	0.0	5,278.50	78.7
459	J-428	5,095.50	Zone 4	0.0	5,278.35	79.1
2825	J-23-1222	5,097.83	Zone 4	0.0	5,280.22	78.9
2634	J22-1166	5,095.99	Zone 4	0.0	5,278.53	79.0
359	J-281	5,095.00	Zone 4	5.8	5,278.45	79.4
2455	J22-1085	5,095.96	Zone 4	0.0	5,278.53	79.0
2407	J22-1069	5,095.84	Zone 4	0.0	5,278.50	79.0
2132	J22-896	5,095.73	Zone 4	0.0	5,278.51	79.1
2023	J22-848	5,095.00	Zone 4	0.0	5,278.49	79.4
510	J-484	5,095.00	Zone 4	8.0	5,278.56	79.4

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**Preferred (2044) PHD Condition Distribution System Junction Report**  
**PHD-NODES - Time: 0.00 hours**

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
2829	J-23-1223	5,095.00	Zone 4	0.0	5,278.54	79.4
2650	J22-1171	5,094.93	Zone 4	2.9	5,278.51	79.4
2793	J-23-1208	5,094.90	Zone 4	5.1	5,278.54	79.5
2044	J-857	5,094.80	Zone 4	0.0	5,278.49	79.5
2411	J22-1070	5,094.79	Zone 4	0.0	5,278.50	79.5
694	FH-920	5,094.00	Zone 4	0.0	5,278.52	79.8
1648	J-769	5,094.00	Zone 4	0.0	5,278.49	79.8
2647	J22-1170	5,093.97	Zone 4	2.9	5,278.51	79.8
2543	J22-1147	5,093.94	Zone 4	0.0	5,278.51	79.9
2458	J22-1086	5,093.95	Zone 4	0.0	5,278.57	79.9
294	J-205	5,093.00	Zone 4	7.3	5,278.35	80.2
676	FH-929	5,093.00	Zone 4	0.0	5,278.51	80.3
2847	J-23-1228	5,093.33	Zone 4	5.8	5,278.57	80.1
2135	J22-898	5,093.00	Zone 4	0.0	5,278.51	80.3
3035	J-1275	5,092.00	Zone 4	0.0	5,278.48	80.7
2027	J-850	5,092.60	Zone 4	5.8	5,278.49	80.4
663	J-666	5,092.00	Zone 4	9.5	5,278.52	80.7
610	J-613	5,092.00	Zone 4	0.0	5,278.56	80.7
295	J-206	5,091.00	Zone 4	7.3	5,278.34	81.1
2021	J-847	5,091.70	Zone 4	0.0	5,278.49	80.8
251	J-146	5,128.00	Zone 3	0.0	5,313.25	80.1
328	J-249	5,128.00	Zone 3	7.3	5,313.27	80.2
1644	J-765	5,091.57	Zone 4	0.0	5,278.49	80.9
2791	J-23-1207	5,091.65	Zone 4	3.6	5,278.60	80.9
715	J-715	5,091.33	Zone 4	0.0	5,278.50	81.0
1647	J-768	5,091.00	Zone 4	0.0	5,278.50	81.1
337	J-259	5,091.00	Zone 4	4.4	5,278.63	81.2
358	J-280	5,090.00	Zone 4	5.8	5,278.44	81.5
2795	J-23-1209	5,091.00	Zone 4	0.0	5,278.54	81.1
286	J-197	5,090.00	Zone 4	0.0	5,278.37	81.5
462	J-431	5,090.00	Zone 4	3.6	5,278.37	81.5
2099	J22-874	5,091.00	Zone 4	1.5	5,278.61	81.2
2461	J22-1087	5,091.01	Zone 4	36.3	5,278.62	81.2
2656	J22-1173	5,091.00	Zone 4	0.0	5,278.61	81.2
469	J-438	5,090.00	Zone 4	9.5	5,278.38	81.5
471	J-440	5,090.00	Zone 4	4.4	5,278.38	81.5
1726	J-782	5,090.81	Zone 4	5.1	5,278.49	81.2
468	J-437	5,090.00	Zone 4	0.0	5,278.38	81.5
363	J-285	5,090.00	Zone 4	8.7	5,278.38	81.5
1489	J-728	5,090.70	Zone 4	3.0	5,278.50	81.3
702	J-704	5,090.07	Zone 4	0.7	5,278.56	81.5
662	J-665	5,090.00	Zone 4	0.0	5,278.53	81.6
325	J-246	5,090.00	Zone 4	0.0	5,278.63	81.6
343	J-265	5,090.00	Zone 4	0.0	5,278.63	81.6
509	J-466	5,090.00	Zone 4	10.9	5,278.58	81.6
2797	J-23-1210	5,090.00	Zone 4	0.0	5,278.54	81.6

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**PHD-NODES - Time: 0.00 hours**

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
2415	J-1071	5,089.83	Zone 4	0.0	5,278.51	81.6
470	J-439	5,089.00	Zone 4	0.0	5,278.38	81.9
365	J-288	5,089.00	Zone 4	0.0	5,278.38	81.9
705	BLDG 3 - CCCC	5,089.40	Zone 4	1.4	5,278.56	81.8
703	J-705	5,089.40	Zone 4	0.0	5,278.56	81.8
2823	J-23-1221	5,091.00	Zone 4	0.0	5,280.06	81.8
2803	J-23-1212	5,089.64	Zone 4	2.9	5,278.76	81.8
714	J-714	5,089.18	Zone 4	0.0	5,278.52	81.9
668	J-671	5,089.00	Zone 4	0.3	5,278.52	82.0
1643	J-764	5,089.00	Zone 4	5.9	5,278.49	82.0
2821	J-23-1220	5,090.39	Zone 4	0.0	5,279.87	82.0
395	J-325	5,088.00	Zone 4	14.1	5,278.47	82.4
460	J-429	5,088.00	Zone 4	0.0	5,278.35	82.4
296	J-207	5,088.00	Zone 4	7.3	5,278.35	82.4
2108	J22-880	5,089.07	Zone 4	2.2	5,278.76	82.1
2659	J22-1174	5,088.84	Zone 4	0.0	5,278.76	82.2
2464	J22-1088	5,088.72	Zone 4	5.5	5,278.76	82.2
1718	J-780	5,088.22	Zone 4	8.7	5,278.49	82.3
2818	J-23-1219	5,089.50	Zone 4	1.5	5,279.74	82.3
677	J-683	5,088.00	Zone 4	9.5	5,278.51	82.4
2813	J-23-1217	5,089.40	Zone 4	0.0	5,279.74	82.4
1824	J-799	5,088.05	Zone 4	0.0	5,278.49	82.4
666	J-669	5,088.00	Zone 4	0.0	5,278.54	82.4
667	J-670	5,088.00	Zone 4	0.0	5,278.54	82.4
2704	J22-IRR-1178	5,088.35	NO FIRE	0.0	5,278.78	82.4
2811	J-23-1216	5,089.20	Zone 4	2.2	5,279.74	82.4
287	J-198	5,087.00	Zone 4	9.5	5,278.36	82.8
1722	J-781	5,087.65	Zone 4	7.3	5,278.50	82.6
2809	J-23-1215	5,088.75	Zone 4	1.5	5,279.60	82.6
1710	J-778	5,087.53	Zone 4	10.9	5,278.50	82.6
2807	J-23-1214	5,088.50	Zone 4	0.7	5,279.53	82.6
2805	J-23-1213	5,088.20	Zone 4	4.4	5,279.44	82.7
657	J-660	5,087.00	Zone 4	5.8	5,278.54	82.9
512	J-486	5,087.00	Zone 4	0.0	5,278.56	82.9
1646	J-767	5,087.00	Zone 4	2.8	5,278.51	82.9
461	J-430	5,086.00	Zone 4	0.0	5,278.35	83.2
2419	J22-1072	5,086.31	Zone 4	0.0	5,278.51	83.2
338	J-260	5,086.00	Zone 4	4.4	5,278.56	83.3
704	FH-931	5,086.00	Zone 4	0.0	5,278.56	83.3
650	J-653	5,124.00	Zone 1	10.9	5,307.41	79.4
655	J-658	5,086.00	Zone 4	10.9	5,278.57	83.3
659	J-662	5,086.00	Zone 4	7.3	5,278.58	83.3
288	J-199	5,085.00	Zone 4	10.2	5,278.35	83.7
2467	J22-1089	5,086.25	Zone 4	0.0	5,278.90	83.4
1714	J-779	5,085.71	Zone 4	0.0	5,278.50	83.4



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**Preferred (2044) PHD Condition Distribution System Junction Report**  
**PHD-NODES - Time: 0.00 hours**

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
2111	J22-882	5,086.21	Zone 4	2.9	5,278.98	83.4
2662	J22-1175	5,086.17	Zone 4	0.0	5,278.95	83.4
1694	J-774	5,085.54	Zone 4	0.0	5,278.52	83.5
334	J-256	5,085.00	Zone 4	0.0	5,278.56	83.7
1645	J-766	5,085.00	Zone 4	0.0	5,278.53	83.7
697	FH-917	5,085.00	Zone 4	0.0	5,278.57	83.7
654	J-657	5,085.00	Zone 4	7.3	5,278.57	83.7
488	BLDG 4 - Village Grill	5,084.50	Zone 4	0.6	5,278.56	84.0
1642	J-763	5,084.50	Zone 4	0.0	5,278.50	83.9
3045	J-1278	5,084.36	Zone 4	0.0	5,278.56	84.0
1666	J-771	5,084.09	Zone 4	13.8	5,278.52	84.1
487	J-456	5,084.00	Zone 4	0.0	5,278.57	84.2
486	J-455	5,084.00	Zone 4	0.0	5,278.58	84.2
661	J-664	5,084.00	Zone 4	6.6	5,278.63	84.2
289	J-200	5,083.00	Zone 4	10.2	5,278.35	84.5
2105	CS ELEM SCHOOL	5,084.00	Zone 4	4.9	5,278.89	84.3
2470	J22-1090	5,084.00	Zone 4	0.0	5,278.89	84.3
2665	J22-1092	5,084.00	Zone 4	0.0	5,278.89	84.3
1702	J-776	5,083.50	Zone 4	7.3	5,278.51	84.4
652	J-655	5,083.00	Zone 4	7.3	5,278.63	84.6
585	J-586	5,082.00	Zone 4	41.0	5,278.38	85.0
335	J-257	5,082.00	Zone 4	0.0	5,278.47	85.0
340	J-262	5,082.00	Zone 4	0.0	5,278.47	85.0
467	J-436	5,082.00	Zone 4	9.5	5,278.47	85.0
339	J-261	5,082.00	Zone 4	3.6	5,278.56	85.0
1706	J-777	5,082.00	Zone 4	0.0	5,278.51	85.0
642	J-646	5,120.00	Zone 1	17.4	5,307.42	81.1
485	J-454	5,082.00	Zone 4	8.7	5,278.60	85.1
290	J-201	5,081.00	Zone 4	10.2	5,278.35	85.4
291	J-202	5,081.00	Zone 4	8.7	5,278.35	85.4
138	BORDER TOWN CASINO	5,120.00	Zone 1	64.9	5,308.29	81.5
1698	J-775	5,081.61	Zone 4	7.3	5,278.53	85.2
394	J-324	5,081.00	Zone 4	3.6	5,278.50	85.4
1641	J-762	5,081.00	Zone 4	0.0	5,278.51	85.5
641	J-645	5,119.00	Zone 1	0.0	5,307.46	81.5
656	J-659	5,081.00	Zone 4	0.0	5,278.57	85.5
696	FH-918	5,081.00	Zone 4	0.0	5,278.57	85.5
658	J-661	5,081.00	Zone 4	6.6	5,278.59	85.5
698	FH-915	5,081.00	Zone 4	0.0	5,278.59	85.5
484	J-453	5,081.00	Zone 4	12.4	5,278.63	85.5
700	FH-913	5,081.00	Zone 4	0.0	5,278.63	85.5
2473	J22-1091	5,081.00	Zone 4	0.0	5,278.89	85.6

**GBWC 2024 IRP - Cold Springs Division**  
**Preferred (2044) PHD Condition Distribution System Junction Report**  
**PHD-NODES - Time: 0.00 hours**

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
341	J-263	5,080.00	Zone 4	3.3	5,278.47	85.9
660	J-663	5,080.00	Zone 4	0.0	5,278.63	85.9
1689	J-773	5,079.86	Zone 4	0.0	5,278.52	86.0
483	J-452	5,080.00	Zone 4	0.0	5,278.67	86.0
329	J-250	5,080.00	Zone 4	8.0	5,278.73	86.0
330	J-251	5,080.00	Zone 4	14.6	5,278.84	86.0
420	J-387	5,120.00	Zone 1	0.0	5,315.68	84.7
421	J-388	5,120.00	Zone 1	0.0	5,315.66	84.7
1639	J-761	5,079.00	Zone 4	0.0	5,278.53	86.3
701	FH-916	5,079.00	Zone 4	0.0	5,278.57	86.3
301	J-217	5,115.00	Zone 3	0.0	5,312.79	85.6
299	J-214	5,078.00	Zone 4	7.3	5,278.35	86.7
300	J-215	5,078.00	Zone 4	8.9	5,278.35	86.7
297	J-208	5,078.00	Zone 4	7.3	5,278.37	86.7
503	J-478	5,079.00	Zone 4	5.8	5,278.79	86.4
504	J-479	5,079.00	Zone 4	0.0	5,278.79	86.4
479	J-448	5,116.00	Zone 1	11.9	5,306.94	82.6
640	J-644	5,116.00	Zone 1	18.5	5,307.49	82.9
653	J-656	5,078.00	Zone 4	0.0	5,278.57	86.8
699	FH-914	5,078.00	Zone 4	0.0	5,278.63	86.8
499	J-474	5,078.00	Zone 4	5.8	5,278.77	86.9
2141	J22-902	5,078.00	Zone 4	11.5	5,278.89	86.9
498	J-473	5,077.00	Zone 4	8.7	5,278.57	87.2
651	J-654	5,077.00	Zone 4	0.0	5,278.63	87.2
319	J-239	5,076.00	Zone 4	7.3	5,278.35	87.5
440	J-407	5,077.00	Zone 4	3.6	5,278.79	87.3
493	J-462	5,077.00	Zone 4	13.1	5,278.85	87.3
454	J-421	5,077.00	Zone 4	0.0	5,278.89	87.3
500	J-475	5,076.50	Zone 4	6.6	5,278.81	87.5
342	J-264	5,075.00	Zone 4	7.3	5,278.39	88.0
501	J-476	5,075.50	Zone 4	5.8	5,278.83	88.0
441	J-408	5,075.50	Zone 4	8.7	5,278.79	88.0
442	J-409	5,075.50	Zone 4	4.4	5,278.80	88.0
497	J-472	5,075.00	Zone 4	8.0	5,278.58	88.1
298	J-212	5,074.00	Zone 4	6.6	5,278.35	88.4
478	J-447	5,112.50	Zone 1	8.7	5,306.94	84.1
480	J-423	5,075.00	Zone 4	0.0	5,278.89	88.2
502	J-477	5,074.50	Zone 4	5.8	5,278.83	88.4
391	J-320	5,074.00	Zone 4	5.6	5,278.57	88.5
242	J-137	5,110.00	Zone 3	7.3	5,312.54	87.6
665	J-673	5,074.00	Zone 4	0.0	5,278.68	88.6
453	J-420	5,074.00	Zone 4	0.0	5,278.85	88.6
491	J-460	5,074.00	Zone 4	9.5	5,278.87	88.6
492	J-461	5,073.50	Zone 4	10.9	5,278.85	88.8
443	J-410	5,073.50	Zone 4	5.1	5,278.82	88.8
351	J-273	5,073.00	Zone 4	5.1	5,278.58	88.9

**GBWC 2024 IRP - Cold Springs Division**  
**Preferred (2044) PHD Condition Distribution System Junction Report**  
**PHD-NODES - Time: 0.00 hours**

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
496	J-471	5,073.00	Zone 4	10.9	5,278.60	89.0
308	J-226	5,072.00	Zone 4	7.3	5,278.36	89.3
312	J-230	5,072.00	Zone 4	7.3	5,278.38	89.3
313	J-231	5,072.00	Zone 4	7.3	5,278.40	89.3
452	J-419	5,073.00	Zone 4	0.0	5,278.85	89.1
490	J-459	5,073.00	Zone 4	6.6	5,278.85	89.1
262	J-160	5,110.00	Zone 1	9.8	5,306.88	85.2
261	J-159	5,110.00	Zone 1	11.9	5,306.88	85.2
392	J-321	5,072.00	Zone 4	4.4	5,278.57	89.4
349	J-271	5,072.00	Zone 4	8.0	5,278.59	89.4
481	J-449	5,072.00	Zone 4	0.0	5,278.74	89.4
310	J-228	5,071.00	Zone 4	7.3	5,278.37	89.7
450	J-417	5,072.00	Zone 4	8.7	5,278.85	89.5
444	J-411	5,072.00	Zone 4	5.1	5,278.81	89.5
336	J-258	5,071.00	Zone 4	0.0	5,278.42	89.7
456	J-424	5,072.00	Zone 4	5.0	5,278.89	89.5
393	J-323	5,071.00	Zone 4	5.9	5,278.51	89.8
350	J-272	5,071.00	Zone 4	5.1	5,278.58	89.8
320	J-236	5,070.00	Zone 4	0.0	5,278.36	90.1
332	J-254	5,070.00	Zone 4	5.1	5,278.36	90.1
309	J-227	5,070.00	Zone 4	0.0	5,278.37	90.2
451	J-418	5,071.00	Zone 4	8.0	5,278.85	89.9
489	J-458	5,071.00	Zone 4	7.3	5,278.85	89.9
398	J-328	5,108.00	Zone 1	0.0	5,306.95	86.1
449	J-416	5,070.50	Zone 4	0.0	5,278.85	90.1
347	J-269	5,070.00	Zone 4	7.3	5,278.57	90.2
355	J-277	5,070.00	Zone 4	8.7	5,278.58	90.2
348	J-270	5,070.00	Zone 4	8.0	5,278.60	90.2
311	J-229	5,069.00	Zone 4	0.0	5,278.38	90.6
466	J-435	5,069.00	Zone 4	0.0	5,278.40	90.6
314	J-233	5,069.00	Zone 4	11.8	5,278.40	90.6
445	J-412	5,070.00	Zone 4	5.1	5,278.81	90.3
357	J-279	5,069.00	Zone 4	6.6	5,278.58	90.7
307	J-225	5,068.00	Zone 4	0.0	5,278.37	91.0
446	J-413	5,069.00	Zone 4	5.1	5,278.82	90.8
346	J-268	5,068.00	Zone 4	0.0	5,278.58	91.1
354	J-276	5,068.00	Zone 4	10.2	5,278.59	91.1
356	J-278	5,068.00	Zone 4	8.7	5,278.60	91.1
302	J-218	5,067.00	Zone 4	0.0	5,278.36	91.4
439	J-406	5,068.00	Zone 4	0.0	5,278.79	91.2
586	J-587	5,068.00	Zone 4	8.4	5,278.84	91.2
457	J-425	5,068.00	Zone 4	2.9	5,278.84	91.2
447	J-414	5,067.50	Zone 4	0.0	5,278.84	91.4
345	J-267	5,067.00	Zone 4	0.0	5,278.60	91.5
495	J-470	5,067.00	Zone 4	0.0	5,278.60	91.5
369	J-295	5,067.00	Zone 4	9.5	5,278.82	91.6

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**GBWC 2024 IRP - Cold Springs Division**  
**Preferred (2044) PHD Condition Distribution System Junction Report**  
**PHD-NODES - Time: 0.00 hours**

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
370	J-296	5,067.00	Zone 4	8.0	5,278.83	91.6
438	J-405	5,067.00	Zone 4	5.8	5,278.80	91.6
371	J-297	5,067.00	Zone 4	0.0	5,278.85	91.7
448	J-415	5,067.00	Zone 4	0.0	5,278.85	91.7
601	J-603	5,104.00	Zone 1	10.9	5,307.40	88.0
644	J-648	5,104.00	Zone 1	5.4	5,307.41	88.0
368	J-294	5,066.00	Zone 4	6.6	5,278.79	92.1
303	J-219	5,065.00	Zone 4	6.6	5,278.36	92.3
318	J-238	5,065.00	Zone 4	7.3	5,278.37	92.3
306	J-223	5,065.00	Zone 4	7.3	5,278.37	92.3
433	J-400	5,066.00	Zone 4	5.8	5,278.84	92.1
388	J-316	5,065.50	Zone 4	13.5	5,278.85	92.3
380	J-308	5,065.50	Zone 4	11.6	5,278.87	92.3
344	J-266	5,065.00	Zone 4	6.6	5,278.69	92.5
375	J-303	5,065.00	Zone 4	3.6	5,278.68	92.5
305	J-221	5,064.00	Zone 4	7.3	5,278.37	92.7
437	J-404	5,065.00	Zone 4	5.8	5,278.82	92.5
386	J-314	5,065.00	Zone 4	0.0	5,278.85	92.5
387	J-315	5,065.00	Zone 4	10.2	5,278.85	92.5
385	J-313	5,064.50	Zone 4	8.7	5,278.86	92.7
381	J-309	5,064.50	Zone 4	7.3	5,278.87	92.7
643	J-647	5,102.00	Zone 1	10.9	5,307.41	88.9
593	J-596	5,102.00	Zone 1	0.0	5,307.81	89.0
139	J-25	5,102.00	Zone 1	0.0	5,307.91	89.1
436	J-403	5,064.00	Zone 4	5.1	5,278.81	92.9
384	J-312	5,064.00	Zone 4	10.2	5,278.86	93.0
382	J-310	5,064.00	Zone 4	10.2	5,278.87	93.0
304	J-220	5,062.00	Zone 4	7.3	5,278.37	93.6
458	J-426	5,063.00	Zone 4	8.0	5,278.85	93.4
372	J-298	5,063.00	Zone 4	0.0	5,278.86	93.4
383	J-311	5,063.00	Zone 4	0.0	5,278.87	93.4
379	J-307	5,063.00	Zone 4	10.2	5,278.88	93.4
390	J-319	5,063.00	Zone 4	12.6	5,278.93	93.4
404	J-334	5,100.00	Zone 1	0.0	5,306.95	89.5
435	J-402	5,062.00	Zone 4	5.8	5,278.82	93.8
373	J-300	5,062.00	Zone 4	5.8	5,278.87	93.8
389	J-318	5,062.00	Zone 4	0.0	5,278.92	93.9
403	J-333	5,099.00	Zone 1	10.9	5,306.94	90.0
140	J-27	5,099.00	Zone 1	0.0	5,307.25	90.1
605	J-608	5,065.00	Zone 4	0.0	5,282.54	94.1
592	J-595	5,099.00	Zone 1	4.3	5,307.75	90.3
434	J-401	5,061.00	Zone 4	6.6	5,278.82	94.2
241	J-136	5,095.00	Zone 3	19.1	5,309.99	93.0
240	J-135	5,095.00	Zone 3	22.4	5,310.10	93.1
331	J-252	5,060.50	Zone 4	22.8	5,279.03	94.5
137	J-23	5,100.00	Zone 1	6.5	5,314.82	92.9

**GBWC 2024 IRP - Cold Springs Division**  
**Preferred (2044) PHD Condition Distribution System Junction Report**  
**PHD-NODES - Time: 0.00 hours**

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
374	J-302	5,060.00	Zone 4	7.3	5,278.91	94.7
399	J-329	5,097.00	Zone 1	8.7	5,306.95	90.8
326	J-247	5,059.50	Zone 4	18.2	5,278.95	94.9
603	J-606	5,096.00	Zone 1	15.2	5,307.46	91.5
591	J-592	5,096.00	Zone 1	14.1	5,307.55	91.5
477	J-446	5,093.00	Zone 1	8.7	5,306.94	92.6
402	J-332	5,091.00	Zone 1	0.0	5,306.95	93.4
268	J-166	5,090.00	Zone 1	8.7	5,306.88	93.8
406	J-336	5,090.00	Zone 1	8.7	5,306.91	93.8
410	J-341	5,090.00	Zone 1	0.0	5,306.91	93.8
407	J-337	5,090.00	Zone 1	16.3	5,306.92	93.9
476	J-445	5,089.00	Zone 1	0.0	5,306.94	94.3
400	J-330	5,089.00	Zone 1	7.6	5,306.95	94.3
589	J-590	5,089.00	Zone 1	9.8	5,307.51	94.5
602	J-604	5,088.00	Zone 1	6.5	5,307.43	94.9
376	J-304	5,090.00	Zone 1	8.7	5,315.25	97.5
126	J-6	5,090.00	Zone 1	8.7	5,315.55	97.6
595	J-597	5,087.00	Zone 1	13.0	5,307.40	95.4
412	J-343	5,085.00	Zone 1	9.8	5,306.88	96.0
409	J-340	5,085.00	Zone 1	6.5	5,306.88	96.0
411	J-342	5,085.00	Zone 1	0.0	5,306.90	96.0
366	J-289	5,085.00	Zone 1	8.7	5,315.56	99.8
367	J-290	5,085.00	Zone 1	0.0	5,315.61	99.8
588	J-589	5,082.00	Zone 1	13.0	5,307.51	97.6
263	J-161	5,080.00	Zone 1	9.8	5,306.89	98.2
264	J-162	5,080.00	Zone 1	10.9	5,306.89	98.2
408	J-339	5,080.00	Zone 1	7.6	5,306.90	98.2
397	J-327	5,080.00	Zone 1	11.9	5,306.94	98.2
594	J-594	5,080.00	Zone 1	0.0	5,307.39	98.4
377	J-305	5,080.00	Zone 1	8.7	5,315.24	101.8
378	J-306	5,080.00	Zone 1	8.7	5,315.63	101.9
419	J-385	5,077.00	Zone 1	1.9	5,307.44	99.7
590	J-591	5,077.00	Zone 1	0.0	5,307.50	99.7
587	J-588	5,077.00	Zone 1	9.8	5,307.51	99.7
405	J-427	5,076.00	Zone 1	10.9	5,306.95	99.9
1798	J-795	5,045.09	Zone 4	0.0	5,287.89	105.0
401	J-331	5,070.50	Zone 1	9.8	5,306.97	102.3
253	J-150	5,070.00	Zone 1	9.8	5,307.07	102.6
606	J-609	5,041.00	Zone 4	0.0	5,287.78	106.8
254	J-151	5,067.00	Zone 1	6.5	5,307.07	103.9
141	J-28	5,066.00	Zone 1	0.0	5,307.00	104.3
266	J-164	5,062.00	Zone 1	15.2	5,306.98	106.0
260	J-158	5,060.00	Zone 1	21.7	5,306.90	106.8
265	J-163	5,060.00	Zone 1	14.1	5,306.94	106.8
256	J-153	5,060.00	Zone 1	9.8	5,307.07	106.9
2922	J-1242	5,059.84	Zone 1	0.0	5,306.90	106.9

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**GBWC 2024 IRP - Cold Springs Division**  
**Preferred (2044) PHD Condition Distribution System Junction Report**  
**PHD-NODES - Time: 0.00 hours**

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
267	J-165	5,058.00	Zone 1	22.8	5,306.91	107.7
255	J-152	5,058.00	Zone 1	10.9	5,307.07	107.8
129	J-10	5,060.00	Zone 1	8.7	5,314.66	110.2
128	J-9	5,060.00	Zone 1	8.7	5,314.95	110.3
127	J-8	5,060.00	Zone 1	8.7	5,315.48	110.5
258	J-155	5,052.00	Zone 1	8.7	5,307.07	110.4
257	J-154	5,052.00	Zone 1	12.6	5,307.08	110.4
144	J-36	5,050.00	Zone 1	0.0	5,307.19	111.3
413	J-344	5,050.00	Zone 1	0.0	5,307.19	111.3
608	J-611	5,050.00	Zone 1	7.6	5,307.31	111.3
609	J-612	5,048.00	Zone 1	7.3	5,307.31	112.2
2977	J-1252 IRR	5,045.00	Zone 1	19.5	5,308.23	113.9
414	J-350	5,045.00	Zone 1	0.0	5,308.52	114.0
706	J-706	5,045.00	Zone 1	0.0	5,308.52	114.0
707	FH-801	5,045.00	Zone 1	0.0	5,308.52	114.0
154	J-48	5,043.00	Zone 1	16.3	5,307.80	114.6
153	J-47	5,043.00	Zone 1	13.0	5,307.87	114.6
155	J-49	5,040.00	Zone 1	16.3	5,307.78	115.9
133	J-14	5,040.00	Zone 1	29.7	5,308.52	116.2
131	J-12	5,040.00	Zone 1	0.0	5,310.67	117.1
130	J-11	5,040.00	Zone 1	0.0	5,313.04	118.1
143	J-35	5,038.00	Zone 1	11.9	5,308.16	116.9
132	J-13	5,038.00	Zone 1	2.1	5,308.55	117.1

**GBWC 2024 IRP - Cold Springs Division**  
**Preferred (2044) PHD Condition Distribution System Pipe Report**  
**PHD-PIPES - Time: 0.00 hours**

Label	Length (Scaled) (ft)	Diameter (in)	Material	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Hazen- Williams C	Zone
P-333	306	6.0	PVC	-710.7	8.0648	10.51	140.0	Zone 3
P-332	335	6.0	PVC	-710.7	8.0647	11.51	140.0	Zone 2
P-112	817	10.0	PVC	681.3	2.7831	2.16	140.0	Zone 2
P-1320	290	8.0	Asbestos Cement	582.7	3.7195	2.65	110.0	Zone 2
P-69	485	6.0	PVC	276.0	3.1316	2.89	140.0	Zone 2
P-1321	1,295	8.0	Asbestos Cement	446.4	2.8490	7.24	110.0	Zone 2
P-138	1,660	10.0	PVC	604.6	2.4699	3.51	140.0	Zone 4
P-139	2,481	10.0	PVC	604.6	2.4699	5.25	140.0	Zone 4
P-1319	50	10.0	PVC	604.6	2.4699	0.11	140.0	Zone 4
P-1504	71	8.0	PVC	-307.3	1.9615	0.13	140.0	Zone 4
P-1505	107	8.0	PVC	-307.3	1.9615	0.19	140.0	Zone 4
P-1506	87	8.0	PVC	-307.3	1.9615	0.16	140.0	Zone 4
P-1502(1)(1)	81	8.0	PVC	-303.7	1.9382	0.14	140.0	Zone 4
P-67	955	8.0	Asbestos Cement	305.7	1.9511	2.65	110.0	Zone 2
P-1501	41	8.0	PVC	-302.2	1.9289	0.07	140.0	Zone 4
P-48	331	8.0	Asbestos Cement	305.1	1.9474	0.91	110.0	Zone 2
P-1500	49	8.0	PVC	-301.5	1.9243	0.08	140.0	Zone 4
P-447	249	8.0	PVC	302.6	1.9314	0.43	140.0	Zone 2
P-153	374	6.0	PVC	156.1	1.7715	0.78	140.0	Zone 2
P-1499	278	8.0	PVC	-297.1	1.8964	0.47	140.0	Zone 4
P-1345	228	8.0	PVC	300.7	1.9195	0.39	140.0	Zone 2
P22-N-7-2	16	8.0	PVC	-294.2	1.8778	0.03	140.0	Zone 4
P22-N-7-1	32	8.0	PVC	-294.2	1.8778	0.05	140.0	Zone 4
P-191	451	8.0	PVC	-406.4	2.5942	1.36	140.0	Zone 2
P-187	165	10.0	PVC	434.2	1.7737	0.19	140.0	Zone 2
P-398	279	10.0	PVC	672.2	2.7459	0.72	140.0	Zone 3
P-73	392	8.0	PVC	256.7	1.6387	0.50	140.0	Zone 2
P-299	377	10.0	PVC	667.6	2.7271	0.96	140.0	Zone 3
P-206	1,236	10.0	PVC	597.1	2.4389	2.55	140.0	Zone 3
P-76	544	6.0	PVC	133.5	1.5148	0.84	140.0	Zone 2
P-70	484	6.0	PVC	131.3	1.4894	0.73	140.0	Zone 2
P-75	486	6.0	PVC	124.1	1.4086	0.66	140.0	Zone 2
P-450	267	10.0	PVC	213.9	0.8738	0.08	140.0	Zone 4
P-452	285	10.0	PVC	205.9	0.8411	0.08	140.0	Zone 4
P-26	2,117	8.0	PVC	412.1	2.6305	6.53	140.0	Zone 1
P-190	887	8.0	PVC	290.3	1.8526	1.43	140.0	Zone 2
P-454	198	10.0	PVC	193.1	0.7889	0.05	140.0	Zone 4
P-110	186	10.0	PVC	153.2	0.6259	0.03	140.0	Zone 2
P-71	665	6.0	PVC	114.4	1.2983	0.78	140.0	Zone 2
P-147	346	8.0	PVC	174.0	1.1108	0.22	140.0	Zone 2
P-189	506	8.0	PVC	275.3	1.7571	0.74	140.0	Zone 2

**GBWC 2024 IRP - Cold Springs Division**  
**Preferred (2044) PHD Condition Distribution System Pipe Report**  
**PHD-PIPES - Time: 0.00 hours**

Label	Length (Scaled) (ft)	Diameter (in)	Material	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Hazen-Williams C	Zone
P-148	342	8.0	PVC	174.1	1.1111	0.21	140.0	Zone 2
P-84	1,489	10.0	PVC	307.6	1.2564	0.90	140.0	Zone 2
P-1346	384	8.0	PVC	187.4	1.1961	0.27	140.0	Zone 2
P-1173	51	6.0	PVC	-28.8	0.3264	0.00	140.0	Zone 4
P-1174	219	6.0	PVC	-28.8	0.3264	0.02	140.0	Zone 4
P-317	1,062	12.0	Ductile Iron	832.4	2.3613	2.22	120.0	Zone 1
P-4(1)	233	12.0	Ductile Iron	832.4	2.3613	0.49	120.0	Zone 1
P-4(2)	263	12.0	Ductile Iron	831.9	2.3600	0.55	120.0	Zone 1
P-370	267	8.0	PVC	297.7	1.9001	0.45	140.0	Zone 3
P-433	151	8.0	PVC	-297.7	1.9001	0.25	140.0	Zone 3
P-210	864	10.0	PVC	454.5	1.8565	1.08	140.0	Zone 3
P-438	442	10.0	PVC	246.0	1.0047	0.18	140.0	Zone 4
P-780	474	12.0	PVC	355.5	1.0085	0.15	140.0	Zone 4
P-436	302	10.0	PVC	231.4	0.9453	0.11	140.0	Zone 4
P-676	519	10.0	PVC	525.9	2.1485	0.85	140.0	Zone 1
P-434	311	10.0	PVC	223.4	0.9126	0.10	140.0	Zone 4
P-759	489	6.0	PVC	34.1	0.3870	0.06	140.0	Zone 4
P-178	531	6.0	PVC	60.5	0.6861	0.19	140.0	Zone 2
P22-N-15-11-1	50	10.0	PVC	-256.1	1.0462	0.02	140.0	Zone 4
P22-N-15-11-2	276	10.0	PVC	-256.1	1.0462	0.12	140.0	Zone 4
P-760	152	6.0	PVC	28.3	0.3207	0.01	140.0	Zone 4
P-152	351	6.0	PVC	80.1	0.9088	0.21	140.0	Zone 2
P-560	374	6.0	PVC	-24.6	0.2794	0.03	140.0	Zone 4
P22-N-15-10	349	10.0	PVC	-245.5	1.0028	0.14	140.0	Zone 4
P-146	441	6.0	PVC	67.9	0.7704	0.20	140.0	Zone 2
P-813	196	6.0	PVC	69.4	0.7879	0.09	140.0	Zone 4
P-331	217	8.0	PVC	297.3	1.8976	0.37	140.0	Zone 1
P-515	275	6.0	PVC	61.6	0.6988	0.10	140.0	Zone 4
P-1350	198	6.0	PVC	-102.1	1.1587	0.19	140.0	Zone 2
P-1349	40	6.0	PVC	-102.1	1.1587	0.04	140.0	Zone 2
P-192	503	8.0	PVC	193.0	1.2316	0.38	140.0	Zone 2
P-193	229	8.0	PVC	193.0	1.2316	0.17	140.0	Zone 2
P-122	186	10.0	PVC	110.3	0.4507	0.02	140.0	Zone 2
P-334	250	8.0	PVC	155.2	0.9906	0.13	140.0	Zone 2
P-335	246	8.0	PVC	155.2	0.9906	0.12	140.0	Zone 3
P-462	208	8.0	PVC	106.5	0.6795	0.05	140.0	Zone 4
P-783	256	12.0	PVC	268.3	0.7612	0.05	140.0	Zone 4
P-1082	330	10.0	PVC	-30.3	0.1239	0.00	140.0	Zone 4
P-1090	59	10.0	PVC	-30.3	0.1239	0.00	140.0	Zone 4
P-1091	303	10.0	PVC	-30.3	0.1239	0.00	140.0	Zone 4
P-1094	120	10.0	PVC	-30.3	0.1239	0.00	140.0	Zone 4
P-1095	190	10.0	PVC	-30.3	0.1239	0.00	140.0	Zone 4
P-1213	62	10.0	PVC	-30.3	0.1239	0.00	140.0	Zone 4



**GBWC 2024 IRP - Cold Springs Division**  
**Preferred (2044) PHD Condition Distribution System Pipe Report**  
 PHD-PIPES - Time: 0.00 hours

Label	Length (Scaled) (ft)	Diameter (in)	Material	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Hazen- Williams C	Zone
P-151	876	6.0	PVC	65.2	0.7394	0.36	140.0	Zone 2
P-1228	13	14.0	PVC	-397.1	0.8277	0.00	140.0	Zone 4
P-188	379	8.0	PVC	182.7	1.1659	0.26	140.0	Zone 2
P-1215	424	10.0	PVC	-37.6	0.1536	0.01	140.0	Zone 4
P-1216	325	10.0	PVC	-44.9	0.1834	0.01	140.0	Zone 4
P-324	661	6.0	PVC	-88.1	0.9994	0.47	140.0	Zone 2
P-673	351	4.0	PVC	65.5	1.6718	1.05	140.0	Zone 1
P-128	1,094	10.0	PVC	93.9	0.3834	0.07	140.0	Zone 2
P-1102	779	6.0	PVC	-8.0	0.0912	0.01	140.0	Zone 4
P-460	354	10.0	PVC	-88.1	0.3599	0.02	140.0	Zone 4
P-214	339	10.0	PVC	329.0	1.3441	0.23	140.0	Zone 3
P-954	190	10.0	PVC	-80.8	0.3301	0.01	140.0	Zone 4
P-63	545	6.0	PVC	-79.7	0.9039	0.33	140.0	Zone 2
P-826	114	14.0	PVC	-254.2	0.5297	0.01	140.0	Zone 4
P-40	302	8.0	PVC	257.7	1.6451	0.39	140.0	Zone 1
P-782	389	12.0	PVC	246.1	0.6983	0.06	140.0	Zone 4
P-530	325	10.0	PVC	226.4	0.9246	0.11	140.0	Zone 4
P-1092	47	6.0	PVC	8.8	0.0993	0.00	140.0	Zone 4
P-1097	73	6.0	PVC	-8.8	0.0993	0.00	140.0	Zone 4
P-1096	284	6.0	PVC	-8.8	0.0993	0.00	140.0	Zone 4
P-1093	209	6.0	PVC	8.8	0.0993	0.00	140.0	Zone 4
P-938	490	6.0	PVC	0.7	0.0080	0.00	140.0	Zone 4
P-74	581	6.0	PVC	69.3	0.7868	0.27	140.0	Zone 2
P-217	668	10.0	PVC	306.6	1.2525	0.40	140.0	Zone 3
P-194	482	8.0	PVC	-197.6	1.2611	0.38	140.0	Zone 2
P-66	328	6.0	PVC	-73.1	0.8296	0.17	140.0	Zone 2
P-1026	141	10.0	PVC	75.0	0.3065	0.00	140.0	Zone 4
P-1033	79	10.0	PVC	75.0	0.3065	0.00	140.0	Zone 4
P-1032	697	10.0	PVC	75.0	0.3065	0.03	140.0	Zone 4
P-306	354	8.0	PVC	196.0	1.2509	0.28	140.0	Zone 3
P-307	351	8.0	PVC	196.0	1.2509	0.27	140.0	Zone 3
P-429	390	8.0	PVC	196.0	1.2509	0.30	140.0	Zone 3
P-698	172	14.0	PVC	-206.0	0.4293	0.01	140.0	Zone 4
P-825	175	14.0	PVC	-255.2	0.5319	0.02	140.0	Zone 4
P-675	2,121	12.0	PVC	525.9	1.4920	1.43	140.0	Zone 1
P-756	757	6.0	PVC	55.1	0.6248	0.23	140.0	Zone 4
P-337	480	8.0	PVC	231.8	1.4796	0.51	140.0	Zone 1
P-338	266	8.0	PVC	231.8	1.4796	0.28	140.0	Zone 1
P-824	112	14.0	PVC	-284.0	0.5920	0.01	140.0	Zone 4
P-784	253	12.0	PVC	204.6	0.5805	0.03	140.0	Zone 4
P-83	1,068	8.0	Asbestos Cement	123.5	0.7880	0.55	110.0	Zone 2
P-93	252	8.0	PVC	123.5	0.7880	0.08	140.0	Zone 2
P-1121	176	6.0	PVC	16.0	0.1813	0.01	140.0	Zone 4
P-823	184	14.0	PVC	-300.9	0.6272	0.02	140.0	Zone 4

**GBWC 2024 IRP - Cold Springs Division**  
**Preferred (2044) PHD Condition Distribution System Pipe Report**  
**PHD-PIPES - Time: 0.00 hours**

Label	Length (Scaled) (ft)	Diameter (in)	Material	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Hazen-Williams C	Zone
P-953	197	10.0	PVC	-39.8	0.1627	0.00	140.0	Zone 4
P-431	76	8.0	PVC	186.7	1.1920	0.06	140.0	Zone 3
P-219	387	8.0	PVC	-186.7	1.1919	0.28	140.0	Zone 3
P-195	527	8.0	PVC	-183.5	1.1715	0.36	140.0	Zone 2
P-97	290	8.0	PVC	116.9	0.7462	0.09	140.0	Zone 2
P-27	506	10.0	PVC	347.2	1.4185	0.38	140.0	Zone 1
P-963	123	10.0	PVC	347.2	1.4185	0.09	140.0	Zone 1
P-965	86	10.0	PVC	347.2	1.4185	0.06	140.0	Zone 1
P-216	351	10.0	PVC	280.9	1.1473	0.18	140.0	Zone 3
P-962	260	10.0	PVC	342.9	1.4007	0.19	140.0	Zone 1
P-1099	76	6.0	PVC	5.8	0.0658	0.00	140.0	Zone 4
P-1100	205	6.0	PVC	5.8	0.0658	0.00	140.0	Zone 4
P-1101	237	6.0	PVC	5.8	0.0658	0.00	140.0	Zone 4
P-1098	233	6.0	PVC	5.8	0.0658	0.00	140.0	Zone 4
P-121	649	10.0	PVC	100.0	0.4083	0.05	140.0	Zone 2
P-677	93	8.0	PVC	-132.2	0.8437	0.04	140.0	Zone 4
P-1066	230	8.0	PVC	109.4	0.6980	0.06	140.0	Zone 4
P-1067	180	8.0	PVC	109.4	0.6980	0.05	140.0	Zone 4
P-1079	259	6.0	PVC	6.5	0.0739	0.00	140.0	Zone 4
P-1080	299	6.0	PVC	6.5	0.0739	0.00	140.0	Zone 4
P-1049	264	8.0	PVC	102.1	0.6515	0.06	140.0	Zone 4
P-1041	189	10.0	PVC	-28.5	0.1163	0.00	140.0	Zone 4
P-1042	81	10.0	PVC	28.5	0.1163	0.00	140.0	Zone 4
P-1059	326	6.0	PVC	18.9	0.2141	0.01	140.0	Zone 4
P-1065	183	6.0	PVC	18.9	0.2141	0.01	140.0	Zone 4
P-1120	119	6.0	PVC	18.2	0.2062	0.00	140.0	Zone 4
P-11	1,692	10.0	Asbestos Cement	309.0	1.2623	1.61	110.0	Zone 1
P-12	2,491	10.0	Asbestos Cement	309.0	1.2623	2.38	110.0	Zone 1
P-13	2,215	10.0	Asbestos Cement	309.0	1.2623	2.11	110.0	Zone 1
P-534	401	8.0	PVC	194.8	1.2437	0.31	140.0	Zone 1
P22-N-15-8	289	10.0	PVC	-139.4	0.5694	0.04	140.0	Zone 4
P22-N-15-9	366	10.0	PVC	-139.4	0.5694	0.05	140.0	Zone 4
P-785	249	12.0	PVC	161.3	0.4575	0.02	140.0	Zone 4
P-85	738	10.0	PVC	120.0	0.4902	0.08	140.0	Zone 2
P-345	215	8.0	PVC	-40.9	0.2610	0.01	140.0	Zone 4
P-982	583	8.0	PVC	200.2	1.2777	0.47	140.0	Zone 1
P-57	497	8.0	PVC	194.5	1.2417	0.38	140.0	Zone 1
P-814	214	6.0	PVC	43.7	0.4964	0.04	140.0	Zone 4
P-344	182	8.0	PVC	-44.5	0.2842	0.01	140.0	Zone 4
P-109	865	8.0	PVC	55.1	0.3514	0.06	140.0	Zone 2
P-343	273	8.0	PVC	-47.4	0.3028	0.01	140.0	Zone 4
P-993	398	10.0	PVC	66.0	0.2695	0.01	140.0	Zone 4

**GBWC 2024 IRP - Cold Springs Division**  
**Preferred (2044) PHD Condition Distribution System Pipe Report**  
**PHD-PIPES - Time: 0.00 hours**

Label	Length (Scaled) (ft)	Diameter (in)	Material	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Hazen- Williams C	Zone
P-1105	64	6.0	PVC	9.4	0.1068	0.00	140.0	Zone 4
P-1106	192	6.0	PVC	9.4	0.1068	0.00	140.0	Zone 4
P-1107	199	6.0	PVC	9.4	0.1068	0.00	140.0	Zone 4
P-752	244	6.0	PVC	5.2	0.0591	0.00	140.0	Zone 4
P-533	460	8.0	PVC	177.5	1.1327	0.30	140.0	Zone 1
P-342	195	8.0	PVC	-56.2	0.3586	0.02	140.0	Zone 4
P-1071	271	10.0	PVC	-21.1	0.0862	0.00	140.0	Zone 4
P-985	165	8.0	PVC	185.3	1.1826	0.12	140.0	Zone 1
P-320	265	8.0	PVC	-142.4	0.9086	0.11	140.0	Zone 1
P-786	189	12.0	PVC	135.2	0.3836	0.01	140.0	Zone 4
P-107	354	8.0	PVC	42.9	0.2738	0.02	140.0	Zone 2
P-204	929	10.0	PVC	-132.8	0.5425	0.12	140.0	Zone 3
P-1235	254	8.0	PVC	85.8	0.5476	0.04	140.0	Zone 4
P-749	758	6.0	PVC	21.9	0.2481	0.04	140.0	Zone 4
P-1108	65	6.0	PVC	0.7	0.0077	0.00	140.0	Zone 4
P-443	307	8.0	PVC	28.5	0.1817	0.01	140.0	Zone 4
P-197	353	6.0	PVC	31.0	0.3517	0.04	140.0	Zone 2
P-198	362	6.0	PVC	31.0	0.3517	0.04	140.0	Zone 2
P-561	267	8.0	PVC	-55.6	0.3550	0.02	140.0	Zone 4
P-516	261	6.0	PVC	32.8	0.3722	0.03	140.0	Zone 4
P-742	145	8.0	PVC	62.4	0.3984	0.01	140.0	Zone 4
P-1084	169	10.0	PVC	-32.9	0.1342	0.00	140.0	Zone 4
P-1085	154	10.0	PVC	-32.9	0.1342	0.00	140.0	Zone 4
P-827	159	12.0	PVC	-125.9	0.3571	0.01	140.0	Zone 4
P-444	65	8.0	PVC	23.4	0.1492	0.00	140.0	Zone 4
P-407	362	8.0	PVC	-23.4	0.1492	0.01	140.0	Zone 4
P-751	718	6.0	PVC	19.0	0.2160	0.03	140.0	Zone 4
P-453	236	10.0	PVC	105.0	0.4290	0.02	140.0	Zone 4
P-118	384	8.0	PVC	57.9	0.3693	0.03	140.0	Zone 2
P-1053	336	6.0	PVC	25.0	0.2832	0.02	140.0	Zone 4
P-503	206	8.0	PVC	-58.2	0.3713	0.02	140.0	Zone 4
P22-1460	16	8.0	PVC	-69.8	0.4456	0.00	140.0	Zone 4
P22-1461	31	8.0	PVC	-69.8	0.4456	0.00	140.0	Zone 4
P-1058	209	6.0	PVC	47.3	0.5362	0.05	140.0	Zone 4
P-1141	95	6.0	PVC	-13.9	0.1574	0.00	140.0	Zone 4
P-91	556	10.0	Asbestos Cement	123.5	0.5043	0.10	110.0	Zone 2
P-1491	87	8.0	PVC	68.4	0.4363	0.01	140.0	Zone 4
P-508	823	8.0	PVC	146.7	0.9367	0.37	140.0	Zone 1
P-1546	196	3.0	PVC	19.5	0.8835	0.29	130.0	Zone 1
P-755	625	6.0	PVC	35.3	0.4010	0.08	140.0	Zone 4
P-108	789	10.0	PVC	92.5	0.3778	0.05	140.0	Zone 2
P-1492(1)(1)	300	8.0	PVC	64.7	0.4131	0.03	140.0	Zone 4
P-124	309	8.0	PVC	34.7	0.2215	0.01	140.0	Zone 2
P-125	406	8.0	PVC	34.7	0.2215	0.01	140.0	Zone 2

**GBWC 2024 IRP - Cold Springs Division**  
**Preferred (2044) PHD Condition Distribution System Pipe Report**  
**PHD-PIPES - Time: 0.00 hours**

Label	Length (Scaled) (ft)	Diameter (in)	Material	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Hazen- Williams C	Zone
P-1069	91	6.0	PVC	19.1	0.2171	0.00	140.0	Zone 4
P-199	382	8.0	PVC	-23.7	0.1514	0.01	140.0	Zone 2
P-1064	172	6.0	PVC	29.9	0.3388	0.02	140.0	Zone 4
P-1492(1)(2)	348	8.0	PVC	58.9	0.3759	0.03	140.0	Zone 4
P-1492(2)	16	8.0	PVC	58.9	0.3759	0.00	140.0	Zone 4
P-529	262	10.0	PVC	137.7	0.5626	0.04	140.0	Zone 4
P-821	492	6.0	PVC	37.3	0.4236	0.07	140.0	Zone 4
P-1056	243	6.0	PVC	40.7	0.4619	0.04	140.0	Zone 4
P-500	308	8.0	PVC	-22.9	0.1461	0.00	140.0	Zone 4
P-680	376	10.0	PVC	-135.1	0.5518	0.05	140.0	Zone 4
P-432	71	8.0	PVC	110.9	0.7081	0.02	140.0	Zone 3
P22-N-15-7	279	10.0	PVC	-92.4	0.3775	0.02	140.0	Zone 4
P-552	307	8.0	PVC	78.8	0.5028	0.05	140.0	Zone 4
P-1493	54	8.0	PVC	53.8	0.3434	0.00	140.0	Zone 4
P-1494	48	8.0	PVC	53.8	0.3434	0.00	140.0	Zone 4
P-1497	137	8.0	PVC	53.8	0.3434	0.01	140.0	Zone 4
P-984	987	10.0	PVC	210.4	0.8595	0.30	140.0	Zone 1
P-791	169	10.0	PVC	146.4	0.5982	0.03	140.0	Zone 4
P-699	143	12.0	PVC	-159.6	0.4529	0.01	140.0	Zone 4
P-685	472	10.0	PVC	-86.7	0.3540	0.03	140.0	Zone 4
P-123	425	8.0	PVC	21.6	0.1379	0.01	140.0	Zone 2
P-492	270	8.0	PVC	-38.5	0.2456	0.01	140.0	Zone 4
P-820	222	6.0	PVC	31.5	0.3576	0.03	140.0	Zone 4
P-1072	186	10.0	PVC	-2.5	0.0103	0.00	140.0	Zone 4
P-202	717	6.0	PVC	-36.0	0.4086	0.10	140.0	Zone 2
P-693	462	10.0	PVC	-96.8	0.3956	0.03	140.0	Zone 4
P-1088	127	6.0	PVC	-0.4	0.0041	0.00	140.0	Zone 4
P-1089	189	6.0	PVC	-0.4	0.0041	0.00	140.0	Zone 4
P-393	238	8.0	PVC	41.5	0.2646	0.01	140.0	Zone 4
P-49	847	6.0	PVC	-65.5	0.7432	0.35	140.0	Zone 2
P-1352	250	10.0	PVC	26.5	0.1082	0.00	140.0	Zone 4
P-1192	405	10.0	PVC	-88.2	0.3603	0.03	140.0	Zone 4
P-129	767	10.0	PVC	-31.2	0.1276	0.01	140.0	Zone 2
P-600	395	10.0	PVC	148.1	0.6051	0.06	140.0	Zone 2
P-601	92	10.0	PVC	148.1	0.6051	0.01	140.0	Zone 2
P-134	892	10.0	PVC	8.2	0.0333	0.00	140.0	Zone 2
P-95	405	8.0	PVC	56.2	0.3585	0.03	140.0	Zone 2
P-98	316	8.0	PVC	56.2	0.3585	0.02	140.0	Zone 2
P-80	414	10.0	PVC	-104.4	0.4265	0.03	140.0	Zone 2
P-258	602	8.0	PVC	-84.1	0.5369	0.10	140.0	Zone 1
P-1189	119	10.0	PVC	-96.2	0.3930	0.01	140.0	Zone 4
P-1191	132	10.0	PVC	-96.2	0.3930	0.01	140.0	Zone 4
P-1054	233	6.0	PVC	26.9	0.3050	0.02	140.0	Zone 4
P-196	421	8.0	PVC	133.8	0.8543	0.16	140.0	Zone 2
P-803	510	6.0	PVC	30.2	0.3425	0.05	140.0	Zone 4

**GBWC 2024 IRP - Cold Springs Division**  
**Preferred (2044) PHD Condition Distribution System Pipe Report**  
**PHD-PIPES - Time: 0.00 hours**

Label	Length (Scaled) (ft)	Diameter (in)	Material	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Hazen- Williams C	Zone
P-828	141	12.0	PVC	-107.7	0.3055	0.01	140.0	Zone 4
P-201	483	10.0	PVC	52.0	0.2126	0.01	140.0	Zone 2
P-127	317	10.0	PVC	-69.8	0.2853	0.01	140.0	Zone 2
P-499	253	8.0	PVC	-39.0	0.2488	0.01	140.0	Zone 4
P-815	219	6.0	PVC	25.5	0.2898	0.02	140.0	Zone 4
P-763	307	6.0	PVC	-22.2	0.2521	0.02	140.0	Zone 4
P-355	669	8.0	PVC	-14.2	0.0904	0.00	140.0	Zone 4
P-120	876	8.0	PVC	38.7	0.2472	0.03	140.0	Zone 2
P-523	460	6.0	PVC	27.3	0.3093	0.04	140.0	Zone 4
P-30	1,146	10.0	PVC	174.8	0.7139	0.24	140.0	Zone 1
P-770	184	10.0	PVC	174.8	0.7139	0.04	140.0	Zone 1
P-961	682	10.0	PVC	174.8	0.7139	0.15	140.0	Zone 1
P-439	822	10.0	PVC	109.6	0.4475	0.07	140.0	Zone 4
P-389	407	6.0	PVC	23.5	0.2671	0.02	140.0	Zone 4
P-1077	191	6.0	PVC	-9.8	0.1115	0.00	140.0	Zone 4
P-502	255	8.0	PVC	-13.1	0.0838	0.00	140.0	Zone 4
P-743	85	10.0	PVC	62.4	0.2550	0.00	140.0	Zone 4
P-126	757	8.0	PVC	13.1	0.0838	0.00	140.0	Zone 2
P-469	289	10.0	PVC	67.2	0.2745	0.01	140.0	Zone 4
P-395	238	8.0	PVC	19.8	0.1261	0.00	140.0	Zone 4
P-1254	320	8.0	PVC	25.6	0.1636	0.01	140.0	Zone 4
P-1253	65	8.0	PVC	25.6	0.1636	0.00	140.0	Zone 4
P-753	68	8.0	PVC	5.2	0.0333	0.00	140.0	Zone 4
P-1239	278	8.0	PVC	52.0	0.3320	0.02	140.0	Zone 4
P-829	144	12.0	PVC	-68.5	0.1944	0.00	140.0	Zone 4
P-346	233	8.0	PVC	38.3	0.2446	0.01	140.0	Zone 4
P-394	240	8.0	PVC	28.1	0.1791	0.00	140.0	Zone 4
P22-N-15-6	280	10.0	PVC	-68.8	0.2811	0.01	140.0	Zone 4
P-468	229	10.0	PVC	86.9	0.3548	0.02	140.0	Zone 4
P-119	270	10.0	PVC	57.9	0.2363	0.01	140.0	Zone 2
P-257	392	8.0	PVC	-68.9	0.4398	0.04	140.0	Zone 1
P-169	344	8.0	PVC	15.2	0.0968	0.00	140.0	Zone 2
P-750	68	8.0	PVC	-21.9	0.1396	0.00	140.0	Zone 4
P-467	405	10.0	PVC	111.6	0.4558	0.04	140.0	Zone 4
P-1237-1	172	8.0	PVC	54.7	0.3490	0.01	140.0	Zone 4
P-936	411	10.0	PVC	91.4	0.3732	0.03	140.0	Zone 4
P-764	520	6.0	PVC	-30.2	0.3430	0.04	140.0	Zone 4
P-94	894	8.0	PVC	35.6	0.2272	0.03	140.0	Zone 2
P-835	389	6.0	PVC	19.3	0.2186	0.02	140.0	Zone 4
P-1243	77	8.0	PVC	44.5	0.2841	0.00	140.0	Zone 4
P-430	860	10.0	PVC	118.2	0.4828	0.09	140.0	Zone 3
P-89	692	8.0	PVC	44.8	0.2861	0.04	140.0	Zone 2
P-96	414	8.0	PVC	44.8	0.2861	0.02	140.0	Zone 2
P-1122	116	6.0	PVC	6.9	0.0780	0.00	140.0	Zone 4
P-475	337	8.0	PVC	11.4	0.0729	0.00	140.0	Zone 2

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**GBWC 2024 IRP - Cold Springs Division**  
**Preferred (2044) PHD Condition Distribution System Pipe Report**  
**PHD-PIPES - Time: 0.00 hours**

Label	Length (Scaled) (ft)	Diameter (in)	Material	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Hazen-Williams C	Zone
P-819	597	6.0	PVC	24.8	0.2810	0.04	140.0	Zone 4
P-809	432	6.0	PVC	21.1	0.2399	0.02	140.0	Zone 4
P-461	195	10.0	PVC	5.1	0.0209	0.00	140.0	Zone 4
P-101	388	10.0	PVC	-39.3	0.1603	0.01	140.0	Zone 2
P-55	1,098	6.0	PVC	51.3	0.5816	0.29	140.0	Zone 1
P-765	439	6.0	PVC	-22.3	0.2532	0.03	140.0	Zone 4
P-525	268	10.0	PVC	-87.5	0.3575	0.02	140.0	Zone 4
P-1357	267	10.0	PVC	28.3	0.1156	0.00	140.0	Zone 4
P-1257	276	8.0	PVC	11.8	0.0753	0.00	140.0	Zone 4
P-1256	109	8.0	PVC	11.8	0.0753	0.00	140.0	Zone 4
P-520	403	6.0	PVC	23.0	0.2611	0.02	140.0	Zone 4
P-553	155	10.0	PVC	78.8	0.3218	0.00	140.0	Zone 4
P-959	339	10.0	PVC	134.5	0.5496	0.04	140.0	Zone 1
P-788(1)(1)	195	8.0	PVC	87.5	0.5585	0.01	140.0	Zone 4
P-788(1)(2)	78	8.0	PVC	11.8	0.0756	0.00	140.0	Zone 4
P-215	518	6.0	PVC	40.3	0.4568	0.09	140.0	Zone 3
P-378	249	8.0	PVC	21.5	0.1374	0.00	140.0	Zone 4
P-133	154	10.0	PVC	-67.3	0.2749	0.01	140.0	Zone 2
P-1127	187	8.0	PVC	11.2	0.0717	0.00	140.0	Zone 4
P-1128	250	8.0	PVC	11.2	0.0717	0.00	140.0	Zone 4
P-1130	79	8.0	PVC	11.2	0.0717	0.00	140.0	Zone 4
P22-N-15-5	196	10.0	PVC	-58.1	0.2372	0.01	140.0	Zone 4
P-103	329	10.0	PVC	-31.8	0.1298	0.00	140.0	Zone 2
P-1129	52	8.0	PVC	9.8	0.0625	0.00	140.0	Zone 4
P-1428-1	191	8.0	PVC	-36.8	0.2348	0.01	140.0	Zone 4
P-1131	480	8.0	PVC	9.1	0.0579	0.00	140.0	Zone 4
P-406	238	8.0	PVC	-3.3	0.0210	0.00	140.0	Zone 4
P22-N-12-1	54	8.0	PVC	35.3	0.2256	0.00	140.0	Zone 4
P22-N-12-2	125	8.0	PVC	35.3	0.2256	0.00	140.0	Zone 4
P-260	364	8.0	PVC	-54.8	0.3496	0.03	140.0	Zone 1
P-1209	329	6.0	PVC	1.1	0.0122	0.00	140.0	Zone 4
P-1070	204	6.0	PVC	30.1	0.3418	0.02	140.0	Zone 4
P-79	344	10.0	PVC	-67.0	0.2736	0.01	140.0	Zone 2
P-1087	227	6.0	PVC	0.3	0.0037	0.00	140.0	Zone 4
P-1103	133	6.0	PVC	0.3	0.0037	0.00	140.0	Zone 4
P-1104	71	6.0	PVC	0.3	0.0037	0.00	140.0	Zone 4
P-551	246	8.0	PVC	-42.5	0.2713	0.01	140.0	Zone 4
P-1178	220	6.0	PVC	18.1	0.2054	0.01	140.0	Zone 4
P22-N-12-4	299	8.0	PVC	32.4	0.2070	0.01	140.0	Zone 4
P-347	241	8.0	PVC	25.6	0.1635	0.00	140.0	Zone 4
P-403	232	8.0	PVC	22.7	0.1448	0.00	140.0	Zone 4
P-339	845	8.0	PVC	76.4	0.4875	0.11	140.0	Zone 1
P-246	352	8.0	PVC	31.7	0.2025	0.01	140.0	Zone 2
P-247	591	8.0	PVC	31.7	0.2025	0.02	140.0	Zone 2
P-1168	93	6.0	PVC	-4.6	0.0520	0.00	140.0	Zone 4

**GBWC 2024 IRP - Cold Springs Division**  
**Preferred (2044) PHD Condition Distribution System Pipe Report**  
 PHD-PIPES - Time: 0.00 hours

Label	Length (Scaled) (ft)	Diameter (in)	Material	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Hazen- Williams C	Zone
P-1035	567	10.0	PVC	120.4	0.4919	0.06	140.0	Zone 1
P22-1455	55	8.0	PVC	28.8	0.1838	0.00	140.0	Zone 4
P22-N-12-3	119	8.0	PVC	28.8	0.1838	0.00	140.0	Zone 4
P-1238	90	8.0	PVC	35.8	0.2282	0.00	140.0	Zone 4
P-1265	60	8.0	PVC	22.9	0.1463	0.00	140.0	Zone 4
P-1268	331	8.0	PVC	22.9	0.1463	0.00	140.0	Zone 4
P-130	206	10.0	PVC	-37.0	0.1513	0.00	140.0	Zone 2
P-766	605	6.0	PVC	-30.3	0.3440	0.05	140.0	Zone 4
P-1244	260	8.0	PVC	39.1	0.2496	0.01	140.0	Zone 4
P-495	282	8.0	PVC	-50.2	0.3203	0.02	140.0	Zone 4
P-1271	61	8.0	PVC	23.8	0.1519	0.00	140.0	Zone 4
P-1274	128	8.0	PVC	23.8	0.1519	0.00	140.0	Zone 4
P-1277	211	8.0	PVC	29.7	0.1896	0.00	140.0	Zone 4
P-143	148	8.0	PVC	-67.8	0.4325	0.02	140.0	Zone 2
P-150	570	6.0	PVC	7.8	0.0890	0.00	140.0	Zone 2
P-517	262	6.0	PVC	15.0	0.1702	0.01	140.0	Zone 4
P-978	661	8.0	PVC	73.8	0.4712	0.09	140.0	Zone 1
P-9	2,238	6.0	Ductile Iron	41.6	0.4722	0.53	120.0	Zone 1
P-767	581	6.0	PVC	-22.4	0.2547	0.04	140.0	Zone 4
P-808	102	6.0	PVC	10.2	0.1161	0.00	140.0	Zone 4
P-810	449	6.0	PVC	10.2	0.1161	0.01	140.0	Zone 4
P-132	179	8.0	PVC	54.8	0.3495	0.01	140.0	Zone 2
P-834	706	6.0	PVC	20.8	0.2362	0.04	140.0	Zone 4
P-359	668	8.0	PVC	-13.5	0.0863	0.00	140.0	Zone 4
P-576	264	8.0	PVC	85.7	0.5468	0.04	140.0	Zone 1
P-1211	428	6.0	PVC	-6.2	0.0704	0.00	140.0	Zone 4
P-1364	257	10.0	PVC	20.0	0.0816	0.00	140.0	Zone 4
P-212	379	6.0	PVC	31.7	0.3596	0.04	140.0	Zone 3
P-700	237	6.0	PVC	32.3	0.3667	0.03	140.0	Zone 4
P-831	691	6.0	PVC	13.8	0.1568	0.02	140.0	Zone 4
P-340	1,510	8.0	PVC	67.7	0.4320	0.16	140.0	Zone 1
P-377	290	8.0	PVC	15.3	0.0974	0.00	140.0	Zone 4
P-25	1,879	10.0	PVC	107.3	0.4383	0.16	140.0	Zone 1
P-1327	187	8.0	PVC	37.7	0.2408	0.01	140.0	Zone 4
P-1328	50	8.0	PVC	37.7	0.2408	0.00	140.0	Zone 4
P-1278	187	8.0	PVC	22.4	0.1431	0.00	140.0	Zone 4
P-818	507	6.0	PVC	19.2	0.2174	0.02	140.0	Zone 4
P-65	607	8.0	PVC	-65.5	0.4180	0.06	140.0	Zone 2
P-365	680	6.0	PVC	-4.8	0.0541	0.00	140.0	Zone 4
P-168	1,253	8.0	PVC	25.7	0.1638	0.02	140.0	Zone 2
P-1275	294	8.0	PVC	15.1	0.0961	0.00	140.0	Zone 4
P-674	465	8.0	PVC	65.5	0.4179	0.05	140.0	Zone 1
P-348	237	8.0	PVC	13.8	0.0879	0.00	140.0	Zone 4
P-1428-2	149	8.0	PVC	-31.9	0.2034	0.00	140.0	Zone 4
P-1429-1	86	8.0	PVC	-31.9	0.2034	0.00	140.0	Zone 4

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**GBWC 2024 IRP - Cold Springs Division**  
**Preferred (2044) PHD Condition Distribution System Pipe Report**  
 PHD-PIPES - Time: 0.00 hours

Label	Length (Scaled) (ft)	Diameter (in)	Material	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Hazen- Williams C	Zone
P-1269	227	8.0	PVC	12.0	0.0766	0.00	140.0	Zone 4
P-137	332	8.0	PVC	23.2	0.1482	0.00	140.0	Zone 2
P-155	513	8.0	PVC	23.2	0.1482	0.01	140.0	Zone 2
P-200	189	10.0	PVC	88.1	0.3597	0.01	140.0	Zone 2
P-56	478	6.0	PVC	38.2	0.4337	0.07	140.0	Zone 1
P-794	258	10.0	PVC	84.3	0.3443	0.01	140.0	Zone 4
P-1036	470	10.0	PVC	101.9	0.4164	0.04	140.0	Zone 1
P-1037	444	10.0	PVC	101.9	0.4164	0.03	140.0	Zone 1
P-102	341	10.0	PVC	65.4	0.2671	0.01	140.0	Zone 2
P-957	669	10.0	PVC	101.9	0.4165	0.05	140.0	Zone 1
P-958	197	10.0	PVC	101.9	0.4165	0.02	140.0	Zone 1
P-1356	698	8.0	PVC	-17.8	0.1137	0.01	140.0	Zone 4
P22-1459	221	10.0	PVC	-42.0	0.1715	0.00	140.0	Zone 4
P-1179	232	6.0	PVC	7.9	0.0898	0.00	140.0	Zone 4
P-1180	85	6.0	PVC	7.9	0.0898	0.00	140.0	Zone 4
P-1182	225	6.0	PVC	7.9	0.0898	0.00	140.0	Zone 4
P-1183	55	6.0	PVC	7.9	0.0898	0.00	140.0	Zone 4
P-1184	225	6.0	PVC	7.9	0.0898	0.00	140.0	Zone 4
P-964	655	10.0	PVC	100.0	0.4085	0.05	140.0	Zone 1
P-688	364	8.0	PVC	-30.7	0.1959	0.01	140.0	Zone 4
P-376	339	8.0	PVC	8.7	0.0556	0.00	140.0	Zone 4
P-116	377	8.0	PVC	1.5	0.0095	0.00	140.0	Zone 2
P-87	461	8.0	PVC	-16.8	0.1070	0.00	140.0	Zone 2
P-817	430	6.0	PVC	18.0	0.2045	0.02	140.0	Zone 4
P-401	407	6.0	PVC	13.7	0.1554	0.01	140.0	Zone 4
P-1068	75	6.0	PVC	11.0	0.1246	0.00	140.0	Zone 4
P-687	773	8.0	PVC	-26.5	0.1690	0.01	140.0	Zone 4
P-768	684	6.0	PVC	-29.7	0.3373	0.06	140.0	Zone 4
P22-N-15-3	381	10.0	PVC	-37.6	0.1536	0.00	140.0	Zone 4
P-545	142	10.0	PVC	-48.2	0.1967	0.00	140.0	Zone 4
P-716	202	6.0	PVC	-11.0	0.1251	0.00	140.0	Zone 4
P-6	887	8.0	Ductile Iron	59.0	0.3766	0.10	120.0	Zone 1
P-701	262	6.0	PVC	26.5	0.3006	0.02	140.0	Zone 4
P-259(1)	44	8.0	PVC	-32.0	0.2040	0.00	140.0	Zone 1
P-259(2)	358	8.0	PVC	-32.0	0.2040	0.01	140.0	Zone 1
P-1280	70	8.0	PVC	21.8	0.1391	0.00	140.0	Zone 4
P-1197	283	6.0	PVC	-11.1	0.1264	0.00	140.0	Zone 4
P-1203	55	6.0	PVC	-11.1	0.1264	0.00	140.0	Zone 4
P-485	481	6.0	PVC	2.2	0.0252	0.00	140.0	Zone 4
P-213	693	6.0	PVC	25.8	0.2923	0.05	140.0	Zone 3
P-1262	240	8.0	PVC	-17.3	0.1103	0.00	140.0	Zone 4
P-1430	52	8.0	PVC	28.9	0.1846	0.00	140.0	Zone 4
P-1051	197	6.0	PVC	9.0	0.1021	0.00	140.0	Zone 4
P-975	482	8.0	PVC	58.6	0.3742	0.04	140.0	Zone 1
P-1196	300	6.0	PVC	-13.5	0.1530	0.01	140.0	Zone 4



**GBWC 2024 IRP - Cold Springs Division**  
**Preferred (2044) PHD Condition Distribution System Pipe Report**  
**PHD-PIPES - Time: 0.00 hours**

Label	Length (Scaled) (ft)	Diameter (in)	Material	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Hazen-Williams C	Zone
P-1212	50	6.0	PVC	-13.5	0.1530	0.00	140.0	Zone 4
P-537	398	6.0	PVC	26.3	0.2983	0.03	140.0	Zone 4
P-832	475	6.0	PVC	11.2	0.1266	0.01	140.0	Zone 4
P-507	725	8.0	PVC	56.8	0.3625	0.06	140.0	Zone 1
P-536	169	8.0	PVC	56.8	0.3625	0.01	140.0	Zone 1
P-1422	226	8.0	PVC	-20.6	0.1317	0.00	140.0	Zone 4
P-145	918	6.0	PVC	-23.1	0.2620	0.06	140.0	Zone 2
P-715	198	6.0	PVC	39.7	0.4509	0.03	140.0	Zone 4
P-546	255	10.0	PVC	-54.5	0.2226	0.01	140.0	Zone 4
P-1354	247	8.0	PVC	-9.8	0.0626	0.00	140.0	Zone 4
P-1355	272	8.0	PVC	-9.8	0.0626	0.00	140.0	Zone 4
P-1424	61	8.0	PVC	24.8	0.1584	0.00	140.0	Zone 4
P-811	97	6.0	PVC	5.8	0.0659	0.00	140.0	Zone 4
P-349	225	8.0	PVC	2.5	0.0159	0.00	140.0	Zone 4
P-1379	47	10.0	PVC	13.4	0.0549	0.00	140.0	Zone 4
P-1380	131	10.0	PVC	13.4	0.0549	0.00	140.0	Zone 4
P-1400	89	10.0	PVC	13.4	0.0549	0.00	140.0	Zone 4
P22-N-11-1	30	8.0	PVC	23.6	0.1506	0.00	140.0	Zone 4
P-366	676	6.0	PVC	-5.6	0.0637	0.00	140.0	Zone 4
P22-N-15-2-2	247	10.0	PVC	-27.7	0.1133	0.00	140.0	Zone 4
P-550	274	8.0	PVC	-29.3	0.1873	0.01	140.0	Zone 4
P-1283	381	8.0	PVC	16.7	0.1066	0.00	140.0	Zone 4
P-476	337	8.0	PVC	-4.1	0.0259	0.00	140.0	Zone 2
P22-N-11-2	138	8.0	PVC	21.4	0.1367	0.00	140.0	Zone 4
P-691	615	8.0	PVC	-40.9	0.2609	0.02	140.0	Zone 4
P-414	233	8.0	PVC	16.3	0.1038	0.00	140.0	Zone 4
P-747	562	6.0	PVC	11.3	0.1284	0.01	140.0	Zone 4
P-1431	293	8.0	PVC	22.4	0.1428	0.00	140.0	Zone 4
P-816	215	6.0	PVC	12.2	0.1384	0.00	140.0	Zone 4
P-1263	164	8.0	PVC	-10.0	0.0639	0.00	140.0	Zone 4
P-8	833	8.0	Ductile Iron	50.3	0.3211	0.07	120.0	Zone 1
P-974	338	8.0	PVC	52.1	0.3326	0.02	140.0	Zone 1
P-404	683	6.0	PVC	-6.2	0.0702	0.00	140.0	Zone 4
P22-N-11-3	212	8.0	PVC	18.5	0.1181	0.00	140.0	Zone 4
P-1425	253	8.0	PVC	19.0	0.1212	0.00	140.0	Zone 4
P-114	366	8.0	PVC	-9.7	0.0622	0.00	140.0	Zone 2
P-115	298	8.0	PVC	-9.7	0.0622	0.00	140.0	Zone 2
P-144	722	6.0	PVC	-21.6	0.2456	0.04	140.0	Zone 2
P-167	964	8.0	PVC	8.8	0.0563	0.00	140.0	Zone 2
P-1284	271	8.0	PVC	11.6	0.0741	0.00	140.0	Zone 4
P22-1454	71	8.0	PVC	17.1	0.1088	0.00	140.0	Zone 4
P-1202	218	6.0	PVC	-17.0	0.1925	0.01	140.0	Zone 4
P-1204	296	6.0	PVC	-17.0	0.1925	0.01	140.0	Zone 4
P-991	261	6.0	PVC	10.6	0.1202	0.00	140.0	Zone 4

**GBWC 2024 IRP - Cold Springs Division**  
**Preferred (2044) PHD Condition Distribution System Pipe Report**  
**PHD-PIPES - Time: 0.00 hours**

Label	Length (Scaled) (ft)	Diameter (in)	Material	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Hazen- Williams C	Zone
P-1353	71	8.0	PVC	-1.8	0.0115	0.00	140.0	Zone 4
P-405	245	8.0	PVC	10.2	0.0649	0.00	140.0	Zone 4
P-572	331	8.0	PVC	45.0	0.2869	0.02	140.0	Zone 1
P-1382	191	8.0	PVC	-9.9	0.0631	0.00	140.0	Zone 4
P-1383	280	8.0	PVC	-9.9	0.0631	0.00	140.0	Zone 4
P-140	707	8.0	PVC	-46.1	0.2943	0.04	140.0	Zone 2
P-142	304	8.0	PVC	-46.1	0.2943	0.02	140.0	Zone 2
P-487	343	6.0	PVC	0.7	0.0081	0.00	140.0	Zone 4
P-253	377	8.0	PVC	-36.8	0.2350	0.01	140.0	Zone 1
P-994	221	8.0	PVC	46.6	0.2972	0.01	140.0	Zone 4
P-1038	363	10.0	PVC	73.7	0.3011	0.02	140.0	Zone 1
P-185	232	10.0	PVC	-133.0	0.5435	0.03	140.0	Zone 2
P-186	396	10.0	PVC	133.0	0.5435	0.05	140.0	Zone 2
P-1432	242	8.0	PVC	15.8	0.1009	0.00	140.0	Zone 4
P-1185	186	6.0	PVC	-2.3	0.0258	0.00	140.0	Zone 4
P-1362	371	6.0	PVC	-13.8	0.1569	0.01	140.0	Zone 4
P-1426	214	8.0	PVC	13.2	0.0841	0.00	140.0	Zone 4
P22-N-15-2-1(2)	253	10.0	PVC	-21.9	0.0894	0.00	140.0	Zone 4
P22-N-15-2-1(1)(2)	139	10.0	PVC	-21.9	0.0894	0.00	140.0	Zone 4
P-966	185	10.0	PVC	74.7	0.3053	0.01	140.0	Zone 1
P-154	412	8.0	PVC	-73.8	0.4709	0.05	140.0	Zone 2
P-582	296	8.0	PVC	46.8	0.2989	0.01	140.0	Zone 1
P-812	84	6.0	PVC	-2.4	0.0274	0.00	140.0	Zone 4
P-81	433	8.0	PVC	-28.1	0.1792	0.01	140.0	Zone 2
P-1368	379	8.0	PVC	-12.2	0.0779	0.00	140.0	Zone 4
P-512	243	6.0	PVC	5.5	0.0623	0.00	140.0	Zone 4
P-726	1,019	8.0	PVC	38.8	0.2475	0.04	140.0	Zone 4
P-1412	267	8.0	PVC	-12.7	0.0813	0.00	140.0	Zone 4
P-1361	134	6.0	PVC	-3.9	0.0447	0.00	140.0	Zone 4
P-538	436	6.0	PVC	16.1	0.1827	0.01	140.0	Zone 4
P-1260	237	8.0	PVC	0.9	0.0056	0.00	140.0	Zone 4
P-705	285	6.0	PVC	22.6	0.2560	0.02	140.0	Zone 4
P-830	158	12.0	PVC	-67.8	0.1924	0.00	140.0	Zone 4
P22-N-15-1(2)	177	10.0	PVC	-15.3	0.0627	0.00	140.0	Zone 4
P22-N-15-2-1(1)(1)	119	10.0	PVC	-15.3	0.0627	0.00	140.0	Zone 4
P-1251	259	6.0	PVC	-16.6	0.1882	0.01	140.0	Zone 4
P-1360	241	8.0	PVC	-1.1	0.0073	0.00	140.0	Zone 4
P-1359	267	8.0	PVC	-1.1	0.0073	0.00	140.0	Zone 4
P-702	259	6.0	PVC	14.8	0.1685	0.01	140.0	Zone 4
P-1433	214	8.0	PVC	9.3	0.0591	0.00	140.0	Zone 4
P-1110	45	6.0	PVC	-1.9	0.0218	0.00	140.0	Zone 4

**GBWC 2024 IRP - Cold Springs Division**  
**Preferred (2044) PHD Condition Distribution System Pipe Report**  
 PHD-PIPES - Time: 0.00 hours

Label	Length (Scaled) (ft)	Diameter (in)	Material	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Hazen- Williams C	Zone
P-1109	111	6.0	PVC	-1.9	0.0218	0.00	140.0	Zone 4
P-1111	243	6.0	PVC	-1.9	0.0218	0.00	140.0	Zone 4
P-1427	195	8.0	PVC	7.3	0.0469	0.00	140.0	Zone 4
P22-N-15-12	345	10.0	PVC	38.1	0.1556	0.00	140.0	Zone 4
P-1401	287	10.0	PVC	12.3	0.0504	0.00	140.0	Zone 4
P-1418	162	8.0	PVC	-13.1	0.0835	0.00	140.0	Zone 4
P-171	477	8.0	PVC	24.1	0.1539	0.01	140.0	Zone 2
P-1405	198	6.0	PVC	7.2	0.0820	0.00	140.0	Zone 4
P-1217	168	6.0	PVC	-23.5	0.2668	0.01	140.0	Zone 4
P-1230	89	6.0	PVC	-23.5	0.2668	0.01	140.0	Zone 4
P-363	304	8.0	PVC	36.7	0.2345	0.01	140.0	Zone 4
P-568	515	8.0	PVC	34.4	0.2193	0.02	140.0	Zone 1
P22-N-15-13	366	10.0	PVC	33.2	0.1356	0.00	140.0	Zone 4
P22-N-15-14	162	10.0	PVC	33.2	0.1356	0.00	140.0	Zone 4
P-758	454	6.0	PVC	1.9	0.0221	0.00	140.0	Zone 4
P-541	372	6.0	PVC	1.1	0.0129	0.00	140.0	Zone 4
P-1367	216	8.0	PVC	-4.2	0.0268	0.00	140.0	Zone 4
P-1366	278	8.0	PVC	-4.2	0.0268	0.00	140.0	Zone 4
P-1411	267	8.0	PVC	-5.5	0.0348	0.00	140.0	Zone 4
P-1410	254	8.0	PVC	-5.5	0.0348	0.00	140.0	Zone 4
P-583	233	8.0	PVC	38.1	0.2434	0.01	140.0	Zone 1
P-584	195	8.0	PVC	38.1	0.2434	0.00	140.0	Zone 1
P-14	1,017	10.0	Asbestos Cement	49.2	0.2010	0.03	110.0	Zone 1
P-183	356	8.0	PVC	36.1	0.2307	0.01	140.0	Zone 2
P-234	370	8.0	PVC	30.7	0.1961	0.01	140.0	Zone 1
P-1259	165	8.0	PVC	8.2	0.0520	0.00	140.0	Zone 4
P-544	499	6.0	PVC	4.4	0.0502	0.00	140.0	Zone 4
P-184	940	10.0	PVC	50.3	0.2056	0.02	140.0	Zone 2
P-1404	308	6.0	PVC	-2.0	0.0231	0.00	140.0	Zone 4
P-117	409	8.0	PVC	-24.1	0.1541	0.01	140.0	Zone 2
P-177	352	8.0	PVC	24.7	0.1577	0.01	140.0	Zone 2
P22-1452	205	8.0	PVC	-12.8	0.0815	0.00	140.0	Zone 4
P22-N-10-1	157	8.0	PVC	-12.8	0.0815	0.00	140.0	Zone 4
P22-N-10-2	39	8.0	PVC	-12.8	0.0815	0.00	140.0	Zone 4
P-1417	411	8.0	PVC	-5.8	0.0370	0.00	140.0	Zone 4
P-1406	166	6.0	PVC	-5.8	0.0663	0.00	140.0	Zone 4
P-1462	105	6.0	PVC	-5.8	0.0663	0.00	150.0	Zone 4
P-570	186	8.0	PVC	28.1	0.1793	0.00	140.0	Zone 1
P-1358	82	8.0	PVC	8.3	0.0531	0.00	140.0	Zone 4
P-793	517	6.0	PVC	15.4	0.1743	0.01	140.0	Zone 4
P-548	480	6.0	PVC	3.9	0.0438	0.00	140.0	Zone 4
P-479	855	8.0	PVC	6.1	0.0391	0.00	140.0	Zone 2
P-720	219	10.0	PVC	-25.1	0.1027	0.00	140.0	Zone 4
P-235	404	6.0	PVC	14.9	0.1691	0.01	140.0	Zone 1

**GBWC 2024 IRP - Cold Springs Division**  
**Preferred (2044) PHD Condition Distribution System Pipe Report**  
**PHD-PIPES - Time: 0.00 hours**

Label	Length (Scaled) (ft)	Diameter (in)	Material	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Hazen- Williams C	Zone
P-1403	366	6.0	PVC	3.4	0.0380	0.00	140.0	Zone 4
P-748	757	6.0	PVC	2.5	0.0285	0.00	140.0	Zone 4
P-1451	48	10.0	PVC	21.7	0.0887	0.00	140.0	Zone 4
P-542	178	6.0	PVC	4.0	0.0449	0.00	140.0	Zone 4
P-1407	75	8.0	PVC	1.1	0.0070	0.00	140.0	Zone 4
P-262	304	8.0	PVC	26.5	0.1689	0.01	140.0	Zone 1
P-1040	339	10.0	PVC	46.5	0.1901	0.01	140.0	Zone 1
P-1415	117	8.0	PVC	-2.2	0.0138	0.00	140.0	Zone 4
P22-N-15-1(1)	100	10.0	PVC	-2.2	0.0091	0.00	140.0	Zone 4
P22-1458(2)(2)	203	10.0	PVC	-2.2	0.0091	0.00	140.0	Zone 4
P-1208	345	6.0	PVC	16.9	0.1917	0.01	140.0	Zone 4
P-573	350	8.0	PVC	24.0	0.1535	0.01	140.0	Zone 1
P-579	418	8.0	PVC	30.5	0.1949	0.01	140.0	Zone 1
P-797	242	10.0	PVC	42.4	0.1732	0.00	140.0	Zone 4
P-1365	84	8.0	PVC	4.5	0.0290	0.00	140.0	Zone 4
P-180	307	6.0	PVC	13.9	0.1575	0.01	140.0	Zone 2
P-181	538	6.0	PVC	13.9	0.1575	0.01	140.0	Zone 2
P22-1458(2)(1)	21	10.0	PVC	7.9	0.0325	0.00	140.0	Zone 4
P-1450	160	10.0	PVC	-7.9	0.0325	0.00	140.0	Zone 4
P22-1458(1)	44	10.0	PVC	7.9	0.0325	0.00	140.0	Zone 4
P-484	397	8.0	PVC	6.5	0.0416	0.00	140.0	Zone 4
P-757	478	8.0	PVC	-12.0	0.0765	0.00	140.0	Zone 4
P22-N-2-1	29	8.0	PVC	10.7	0.0686	0.00	140.0	Zone 4
P-723	247	10.0	PVC	-17.6	0.0719	0.00	140.0	Zone 4
P-384	420	6.0	PVC	6.1	0.0694	0.00	140.0	Zone 4
P-78	1,317	8.0	PVC	-11.2	0.0717	0.00	140.0	Zone 2
P-172	806	8.0	PVC	12.0	0.0763	0.00	140.0	Zone 2
P-617	298	12.0	PVC	-30.2	0.0857	0.00	140.0	Zone 4
P-176	701	8.0	PVC	-14.6	0.0930	0.00	140.0	Zone 2
P-135	652	10.0	PVC	-61.8	0.2527	0.02	140.0	Zone 2
P-254	575	8.0	PVC	-20.2	0.1292	0.01	140.0	Zone 1
P22-N-2-2	138	8.0	PVC	8.6	0.0547	0.00	140.0	Zone 4
P-149	548	6.0	PVC	0.0	0.0004	0.00	140.0	Zone 2
P-706	300	6.0	PVC	12.4	0.1404	0.01	140.0	Zone 4
P-717	277	6.0	PVC	3.2	0.0362	0.00	140.0	Zone 4
P-136	334	8.0	PVC	-42.6	0.2721	0.02	140.0	Zone 2
P-1413	54	8.0	PVC	4.4	0.0280	0.00	140.0	Zone 4
P-1414	266	8.0	PVC	4.4	0.0280	0.00	140.0	Zone 4
P-833	516	6.0	PVC	14.9	0.1689	0.02	140.0	Zone 4
P-703	274	6.0	PVC	-3.9	0.0446	0.00	140.0	Zone 4
P-730	242	6.0	PVC	11.3	0.1280	0.00	140.0	Zone 4
P22-N-2-3	141	8.0	PVC	6.4	0.0407	0.00	140.0	Zone 4

**GBWC 2024 IRP - Cold Springs Division**  
**Preferred (2044) PHD Condition Distribution System Pipe Report**  
**PHD-PIPES - Time: 0.00 hours**

Label	Length (Scaled) (ft)	Diameter (in)	Material	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Hazen- Williams C	Zone
P-486	352	8.0	PVC	5.8	0.0373	0.00	140.0	Zone 4
P-1483	113	8.0	PVC	-13.1	0.0838	0.00	140.0	Zone 4
P-59	1,409	8.0	PVC	21.9	0.1399	0.02	140.0	Zone 1
P-539	263	6.0	PVC	-4.5	0.0505	0.00	140.0	Zone 4
P22-N-6-2	35	4.0	PVC	4.9	0.1254	0.00	140.0	Zone 4
P-731	255	6.0	PVC	3.4	0.0391	0.00	140.0	Zone 4
P-569	245	8.0	PVC	18.1	0.1153	0.00	140.0	Zone 1
P-162	343	8.0	PVC	-18.4	0.1178	0.00	140.0	Zone 2
P22-1456	44	8.0	PVC	-18.9	0.1208	0.00	140.0	Zone 4
P22-N-13-4	290	8.0	PVC	-18.9	0.1208	0.00	140.0	Zone 4
P22-1453	66	8.0	PVC	4.9	0.0314	0.00	140.0	Zone 4
P-790	254	6.0	PVC	8.8	0.1000	0.00	140.0	Zone 4
P-480	476	8.0	PVC	18.2	0.1161	0.01	140.0	Zone 4
P-382	416	6.0	PVC	-1.0	0.0116	0.00	140.0	Zone 4
P-1482	116	8.0	PVC	-10.9	0.0698	0.00	140.0	Zone 4
P-1429-2	190	8.0	PVC	-14.8	0.0946	0.00	140.0	Zone 4
P-535	590	6.0	PVC	8.7	0.0986	0.01	140.0	Zone 1
P-540	452	6.0	PVC	9.1	0.1028	0.00	140.0	Zone 4
P-1242	187	8.0	PVC	15.7	0.1003	0.00	140.0	Zone 4
P-708	225	6.0	PVC	8.7	0.0991	0.00	140.0	Zone 4
P-231	377	8.0	PVC	14.0	0.0894	0.00	140.0	Zone 1
P-955	100	6.0	PVC	8.4	0.0950	0.00	140.0	Zone 4
P-543	499	6.0	PVC	-5.8	0.0654	0.00	140.0	Zone 4
P-1481	110	8.0	PVC	-8.0	0.0512	0.00	140.0	Zone 4
P-478	798	8.0	PVC	-7.0	0.0445	0.00	140.0	Zone 2
P-481	438	6.0	PVC	8.0	0.0908	0.00	140.0	Zone 4
P-179	335	8.0	PVC	-50.1	0.3199	0.02	140.0	Zone 2
P-1207	410	6.0	PVC	9.6	0.1092	0.00	140.0	Zone 4
P-482	372	8.0	PVC	13.8	0.0883	0.00	140.0	Zone 4
P-595	534	10.0	Asbestos Cement	19.5	0.0795	0.00	110.0	Zone 1
P-1132	78	10.0	PVC	19.5	0.0795	0.00	140.0	Zone 1
P-232	566	6.0	PVC	6.9	0.0787	0.00	140.0	Zone 1
P-721	381	6.0	PVC	-7.5	0.0856	0.00	140.0	Zone 4
P-772	353	8.0	PVC	12.1	0.0772	0.00	140.0	Zone 1
P-775	543	8.0	PVC	11.9	0.0763	0.00	140.0	Zone 1
P-383	331	6.0	PVC	7.3	0.0826	0.00	140.0	Zone 4
P-385	355	6.0	PVC	7.3	0.0826	0.00	140.0	Zone 4
P-387	338	6.0	PVC	7.3	0.0826	0.00	140.0	Zone 4
P-390	335	6.0	PVC	7.3	0.0826	0.00	140.0	Zone 4
P-733	208	6.0	PVC	7.3	0.0826	0.00	140.0	Zone 4
P-735	208	6.0	PVC	7.3	0.0826	0.00	140.0	Zone 4
P-737	198	6.0	PVC	7.3	0.0826	0.00	140.0	Zone 4
P-1112	52	6.0	PVC	7.3	0.0826	0.00	140.0	Zone 4
P-1113	254	6.0	PVC	7.3	0.0826	0.00	140.0	Zone 4

**GBWC 2024 IRP - Cold Springs Division**  
**Preferred (2044) PHD Condition Distribution System Pipe Report**  
**PHD-PIPES - Time: 0.00 hours**

Label	Length (Scaled) (ft)	Diameter (in)	Material	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Hazen-Williams C	Zone
P-1114	64	6.0	PVC	7.3	0.0826	0.00	140.0	Zone 4
P-1115	253	6.0	PVC	7.3	0.0826	0.00	140.0	Zone 4
P-1118	61	6.0	PVC	7.3	0.0826	0.00	140.0	Zone 4
P-1119	258	6.0	PVC	7.3	0.0826	0.00	140.0	Zone 4
P-1480	174	8.0	PVC	-5.8	0.0373	0.00	140.0	Zone 4
P-255	474	8.0	PVC	-5.7	0.0365	0.00	140.0	Zone 1
P-236	410	6.0	PVC	6.2	0.0705	0.00	140.0	Zone 1
P-973	572	8.0	PVC	10.9	0.0693	0.00	140.0	Zone 1
P-1045	569	8.0	PVC	10.9	0.0693	0.00	140.0	Zone 1
P-1046	565	8.0	PVC	10.9	0.0693	0.00	140.0	Zone 1
P-156	364	8.0	PVC	-86.7	0.5534	0.06	140.0	Zone 2
P-1116	59	6.0	PVC	6.6	0.0743	0.00	140.0	Zone 4
P-1117	190	6.0	PVC	6.6	0.0743	0.00	140.0	Zone 4
P22-13-HL	12	6.0	PVC	6.6	0.0743	0.00	140.0	Zone 4
P-1487(1)	39	8.0	PVC	11.6	0.0743	0.00	140.0	Zone 4
P-1487(2)	144	8.0	PVC	11.6	0.0743	0.00	140.0	Zone 4
P-787	682	10.0	PVC	18.2	0.0745	0.00	140.0	Zone 4
P-547	480	6.0	PVC	-6.3	0.0718	0.00	140.0	Zone 4
P-261	304	8.0	PVC	11.3	0.0718	0.00	140.0	Zone 1
P-574	521	8.0	PVC	10.0	0.0641	0.00	140.0	Zone 1
P-686	303	8.0	PVC	-48.4	0.3091	0.02	140.0	Zone 4
P-776	1,465	8.0	PVC	22.5	0.1439	0.02	140.0	Zone 1
P-585	544	8.0	PVC	9.8	0.0624	0.00	140.0	Zone 1
P-931	540	8.0	PVC	9.8	0.0624	0.00	140.0	Zone 1
P-935	507	8.0	PVC	9.8	0.0624	0.00	140.0	Zone 1
P-164	885	8.0	PVC	-30.8	0.1967	0.02	140.0	Zone 2
P-799	629	6.0	PVC	3.7	0.0422	0.00	140.0	Zone 4
P-697	372	8.0	PVC	-27.6	0.1760	0.01	140.0	Zone 4
P-741	300	6.0	PVC	5.8	0.0661	0.00	140.0	Zone 4
P-362	237	8.0	PVC	23.1	0.1472	0.00	140.0	Zone 4
P-251	376	8.0	PVC	-8.3	0.0530	0.00	140.0	Zone 1
P-745	218	8.0	PVC	9.5	0.0604	0.00	140.0	Zone 4
P-565	218	8.0	PVC	8.7	0.0555	0.00	140.0	Zone 1
P-581	180	8.0	PVC	8.7	0.0555	0.00	140.0	Zone 1
P-774	319	8.0	PVC	8.7	0.0555	0.00	140.0	Zone 1
P-173	528	8.0	PVC	-1.1	0.0073	0.00	140.0	Zone 2
P-174	570	8.0	PVC	-1.1	0.0073	0.00	140.0	Zone 2
P-773	387	8.0	PVC	8.5	0.0545	0.00	140.0	Zone 1
P-483	342	6.0	PVC	5.1	0.0578	0.00	140.0	Zone 4
P-710	271	6.0	PVC	5.1	0.0578	0.00	140.0	Zone 4
P-711	278	6.0	PVC	5.1	0.0578	0.00	140.0	Zone 4
P-712	288	6.0	PVC	5.1	0.0578	0.00	140.0	Zone 4
P-713	304	6.0	PVC	5.1	0.0578	0.00	140.0	Zone 4
P-1479	272	8.0	PVC	-2.2	0.0141	0.00	140.0	Zone 4
P-986	561	8.0	PVC	7.6	0.0485	0.00	140.0	Zone 1

**GBWC 2024 IRP - Cold Springs Division**  
**Preferred (2044) PHD Condition Distribution System Pipe Report**  
 PHD-PIPES - Time: 0.00 hours

Label	Length (Scaled) (ft)	Diameter (in)	Material	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Hazen-Williams C	Zone
P-228	709	6.0	PVC	4.2	0.0481	0.00	140.0	Zone 1
P-1167	224	6.0	PVC	25.7	0.2913	0.02	140.0	Zone 4
P-555	146	10.0	PVC	23.9	0.0975	0.00	140.0	Zone 4
P-455	165	6.0	PVC	4.4	0.0496	0.00	140.0	Zone 4
P-456	180	6.0	PVC	4.4	0.0496	0.00	140.0	Zone 4
P-709	256	6.0	PVC	4.4	0.0496	0.00	140.0	Zone 4
P-754	108	6.0	PVC	4.4	0.0496	0.00	140.0	Zone 4
P-77	354	8.0	PVC	3.7	0.0239	0.00	140.0	Zone 2
P-350	510	8.0	PVC	-7.3	0.0465	0.00	140.0	Zone 4
P-354	506	8.0	PVC	7.3	0.0465	0.00	140.0	Zone 4
P-732	306	8.0	PVC	7.3	0.0465	0.00	140.0	Zone 4
P-734	299	8.0	PVC	7.3	0.0465	0.00	140.0	Zone 4
P-736	304	8.0	PVC	7.3	0.0465	0.00	140.0	Zone 4
P-580	483	8.0	PVC	6.5	0.0416	0.00	140.0	Zone 1
P-1485	115	8.0	PVC	6.6	0.0418	0.00	140.0	Zone 4
P-457	111	6.0	PVC	3.6	0.0413	0.00	140.0	Zone 4
P-532	100	6.0	PVC	3.6	0.0413	0.00	140.0	Zone 4
P-707	195	6.0	PVC	3.6	0.0413	0.00	140.0	Zone 4
P-738	104	6.0	PVC	3.6	0.0413	0.00	140.0	Zone 4
P-992	259	6.0	PVC	6.9	0.0780	0.00	140.0	Zone 4
P-459	149	6.0	PVC	3.3	0.0378	0.00	140.0	Zone 4
P-1039	340	8.0	PVC	5.4	0.0347	0.00	140.0	Zone 1
P-1434	66	8.0	PVC	5.8	0.0372	0.00	140.0	Zone 4
P-1435	130	8.0	PVC	5.8	0.0372	0.00	140.0	Zone 4
P22-N-13-3	312	8.0	PVC	-5.8	0.0372	0.00	140.0	Zone 4
P-789	252	6.0	PVC	7.7	0.0878	0.00	140.0	Zone 4
P-739	111	6.0	PVC	2.9	0.0330	0.00	140.0	Zone 4
P-740	141	6.0	PVC	2.9	0.0330	0.00	140.0	Zone 4
P22-N-1-1	32	8.0	PVC	5.1	0.0325	0.00	140.0	Zone 4
P22-N-1-2	16	8.0	PVC	5.1	0.0325	0.00	140.0	Zone 4
P-724	394	6.0	PVC	6.0	0.0682	0.00	140.0	Zone 4
P-729	690	8.0	PVC	5.0	0.0322	0.00	140.0	Zone 4
P-396	302	8.0	PVC	4.6	0.0295	0.00	140.0	Zone 3
P22-N-6-1	32	8.0	PVC	4.9	0.0313	0.00	140.0	Zone 4
P-229	477	6.0	PVC	2.3	0.0259	0.00	140.0	Zone 1
P22-N-5-1	35	8.0	PVC	4.4	0.0279	0.00	140.0	Zone 4
P22-N-3-1	33	8.0	PVC	4.4	0.0279	0.00	140.0	Zone 4
P-1489	191	8.0	PVC	4.4	0.0279	0.00	140.0	Zone 4
P-1247	147	8.0	PVC	10.0	0.0638	0.00	140.0	Zone 4
P-1421	63	8.0	PVC	10.0	0.0638	0.00	140.0	Zone 4
P-1476	147	8.0	PVC	2.9	0.0184	0.00	140.0	Zone 4
P-1477	52	8.0	PVC	2.9	0.0184	0.00	140.0	Zone 4
P-1478	157	8.0	PVC	2.9	0.0184	0.00	140.0	Zone 4
P-1420	143	8.0	PVC	3.6	0.0232	0.00	140.0	Zone 4
P-1486	148	8.0	PVC	3.6	0.0232	0.00	140.0	Zone 4

**GBWC 2024 IRP - Cold Springs Division**  
**Preferred (2044) PHD Condition Distribution System Pipe Report**  
**PHD-PIPES - Time: 0.00 hours**

Label	Length (Scaled) (ft)	Diameter (in)	Material	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Hazen- Williams C	Zone
P-1488	288	8.0	PVC	3.6	0.0232	0.00	140.0	Zone 4
P-1419	53	8.0	PVC	3.6	0.0232	0.00	150.0	Zone 4
P-798	244	10.0	PVC	6.4	0.0262	0.00	140.0	Zone 4
P-1472	75	8.0	PVC	10.2	0.0649	0.00	140.0	Zone 4
P-1484	65	8.0	PVC	-10.2	0.0649	0.00	140.0	Zone 4
P22-N-13-2	147	8.0	PVC	-2.9	0.0186	0.00	140.0	Zone 4
P-1498	109	8.0	PVC	2.9	0.0186	0.00	140.0	Zone 4
P-1475	157	8.0	PVC	4.3	0.0277	0.00	140.0	Zone 4
P-1502(1)(2)	27	8.0	PVC	2.2	0.0139	0.00	140.0	Zone 4
P22-N-5-2	106	8.0	PVC	2.2	0.0139	0.00	140.0	Zone 4
P22-N-3-2	117	8.0	PVC	2.2	0.0139	0.00	140.0	Zone 4
P-1490	56	8.0	PVC	2.2	0.0139	0.00	140.0	Zone 4
P-1502(2)	14	8.0	PVC	2.2	0.0139	0.00	140.0	Zone 4
P-704	265	6.0	PVC	6.3	0.0710	0.00	140.0	Zone 4
P-779	692	10.0	PVC	22.1	0.0903	0.00	140.0	Zone 4
P-1473	47	8.0	PVC	8.7	0.0556	0.00	140.0	Zone 4
P-44	1,015	10.0	PVC	-13.3	0.0542	0.00	140.0	Zone 2
P-694	281	8.0	PVC	-18.8	0.1203	0.00	140.0	Zone 4
P-157	617	8.0	PVC	-34.4	0.2193	0.02	140.0	Zone 2
P-158	370	8.0	PVC	-34.4	0.2193	0.01	140.0	Zone 2
P-1205	55	6.0	PVC	2.3	0.0266	0.00	140.0	Zone 4
P-718	243	6.0	PVC	0.5	0.0053	0.00	140.0	Zone 4
P-182	586	6.0	PVC	-0.8	0.0089	0.00	140.0	Zone 2
P-225	375	12.0	Asbestos Cement	-1.1	0.0031	0.00	110.0	Zone 2
P-1474	489	8.0	PVC	6.5	0.0417	0.00	140.0	Zone 4
P-796	571	6.0	PVC	6.2	0.0704	0.00	140.0	Zone 4
P-165	278	8.0	PVC	-40.2	0.2564	0.01	140.0	Zone 2
P-586	56	8.0	PVC	0.0	0.0000	0.00	140.0	Zone 1
P-771	252	8.0	PVC	0.0	0.0000	0.00	140.0	Zone 1
P-769	98	8.0	PVC	0.0	0.0000	0.00	140.0	Zone 3
P-412	563	8.0	PVC	0.0	0.0000	0.00	140.0	Zone 2
P-322(2)(1)	454	8.0	PVC	0.0	0.0000	0.00	140.0	Zone 2
P-322(2)(2)	215	8.0	PVC	-61.3	0.3912	0.02	140.0	Zone 2
P-587	41	8.0	PVC	0.0	0.0000	0.00	140.0	Zone 1
P-322(1)	39	8.0	PVC	0.0	0.0000	0.00	140.0	Zone 2
P-411	64	8.0	PVC	0.0	0.0000	0.00	140.0	Zone 2
P-596	195	10.0	Asbestos Cement	0.0	0.0000	0.00	110.0	Zone 1
P-1512	26	8.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P22-6-HL	11	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P22-N-22-HL	12	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1255-HL	18	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P22-23-HL	12	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P22-20-HL	12	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4



**GBWC 2024 IRP - Cold Springs Division**  
**Preferred (2044) PHD Condition Distribution System Pipe Report**  
**PHD-PIPES - Time: 0.00 hours**

Label	Length (Scaled) (ft)	Diameter (in)	Material	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Hazen- Williams C	Zone
P-1261-HL	22	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1508	50	8.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1276-HL	19	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1282-HL	37	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P22-15-HL	13	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1226-HL	21	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1227-HL	27	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1279-HL	34	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1219-HL	24	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1223-HL	23	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1193-HL	30	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1446-HL	30	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1285-HL	35	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1267-HL	39	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P22-8-HL	12	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1372-HL	40	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1225-HL	18	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1468	30	8.0	PVC	0.0	0.0000	0.00	150.0	Zone 4
P22-1-HL	13	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1440-HL	23	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1371-HL	24	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1436-HL	24	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1222-HL	21	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1224-HL	23	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P22-10-HL	46	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1469	37	8.0	PVC	0.0	0.0000	0.00	150.0	Zone 4
P-1220-HL	26	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1376-HL	39	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1467	34	6.0	PVC	0.0	0.0000	0.00	150.0	Zone 4
P-1441-HL	35	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1445-HL	32	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1351-HL	24	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 2
P-1444-HL	34	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1270-HL	28	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1448-HL	29	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1511	35	8.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-571	181	8.0	PVC	0.0	0.0000	0.00	140.0	Zone 1
P22-N-24-HL	29	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1447-HL	40	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P22-N-21-HL	12	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P22-9-HL	12	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P22-12-HL	12	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P22-11-HL	12	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P22-7-HL	12	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1438-HL	26	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4

**GBWC 2024 IRP - Cold Springs Division**  
**Preferred (2044) PHD Condition Distribution System Pipe Report**  
**PHD-PIPES - Time: 0.00 hours**

Label	Length (Scaled) (ft)	Diameter (in)	Material	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Hazen- Williams C	Zone
P-1273-HL	34	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-92	238	10.0	PVC	0.0	0.0000	0.00	140.0	Zone 2
P-1175-HL	30	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1437-HL	30	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1369-HL	35	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1439-HL	35	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1449-HL	35	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1377-HL	39	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1373-HL	34	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P22-14-HL	13	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1375-HL	38	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1370-HL	31	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1442-HL	31	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1443-HL	31	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1176-HL	36	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1177-HL	39	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1513	54	8.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1374-HL	33	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-399	159	8.0	PVC	0.0	0.0000	0.00	140.0	Zone 3
P-746	256	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1221-HL	14	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1264-HL	27	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-822	81	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-714	113	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1258-HL	30	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P22-N-13-1	53	8.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1553(1)	193	8.0	PVC	-45.1	0.2878	0.01	140.0	Zone 4
P-1134	68	6.0	PVC	0.0	0.0000	0.00	140.0	Zone 1
P-564	414	8.0	PVC	0.0	0.0000	0.00	140.0	Zone 1
P-330	277	10.0	Asbestos Cement	0.0	0.0000	0.00	110.0	Zone 2
P-408	68	8.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1514	348	8.0	PVC	-4.0	0.0258	0.00	140.0	Zone 1
P-1517	401	8.0	PVC	30.1	0.1922	0.01	140.0	Zone 1
P-1518	447	8.0	PVC	17.1	0.1090	0.00	140.0	Zone 1
P-1519	192	8.0	PVC	8.4	0.0535	0.00	140.0	Zone 1
P-1520	205	8.0	PVC	4.3	0.0277	0.00	140.0	Zone 1
P-1548	176	8.0	PVC	66.9	0.4272	0.02	140.0	Zone 4
P-1552	142	8.0	PVC	4.4	0.0279	0.00	140.0	Zone 4
P-1551(2)	107	8.0	PVC	73.5	0.4690	0.01	140.0	Zone 4
P-1560	13	8.0	PVC	0.0	0.0000	0.00	140.0	Zone 4
P-1554(1)	24	8.0	PVC	-45.1	0.2878	0.00	140.0	Zone 4
P-1554(2)	272	8.0	PVC	-49.5	0.3157	0.02	140.0	Zone 4
P-1549(1)	108	8.0	PVC	62.6	0.3993	0.01	140.0	Zone 4
P-1549(2)	153	8.0	PVC	62.6	0.3993	0.01	140.0	Zone 4

**GBWC 2024 IRP - Cold Springs Division**  
**Preferred (2044) PHD Condition Distribution System Pipe Report**  
 PHD-PIPES - Time: 0.00 hours

Label	Length (Scaled) (ft)	Diameter (in)	Material	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Hazen-Williams C	Zone
P-1553(2)	23	8.0	PVC	-45.1	0.2878	0.00	140.0	Zone 4
P-1581	1,808	8.0	PVC	61.3	0.3912	0.16	140.0	Zone 2
P-1582	219	8.0	PVC	61.3	0.3912	0.02	140.0	Zone 2
P-1583	383	8.0	PVC	61.3	0.3912	0.03	140.0	Zone 2
P-1584	803	8.0	PVC	54.3	0.3464	0.06	140.0	Zone 2
P-1585	231	8.0	PVC	14.0	0.0896	0.00	140.0	Zone 2
P-1586	183	8.0	PVC	7.0	0.0448	0.00	140.0	Zone 2
P-1587	222	8.0	PVC	70.2	0.4479	0.03	140.0	Zone 2
P-1588	229	8.0	PVC	35.9	0.2289	0.01	150.0	Zone 2
P-1589	132	8.0	PVC	28.8	0.1841	0.00	140.0	Zone 2
P-1590	71	8.0	PVC	7.0	0.0448	0.00	140.0	Zone 2
P-1591	180	8.0	PVC	14.8	0.0945	0.00	140.0	Zone 2
P-1592	343	8.0	PVC	7.8	0.0497	0.00	140.0	Zone 2
P-1593	489	8.0	PVC	0.8	0.0049	0.00	140.0	Zone 2
P-1594	97	8.0	PVC	-6.2	0.0399	0.00	140.0	Zone 2
P-1595	137	8.0	PVC	-13.3	0.0847	0.00	140.0	Zone 2
P-1596	278	8.0	PVC	7.0	0.0448	0.00	140.0	Zone 2
P-1597	226	8.0	PVC	0.0	0.0000	0.00	140.0	Zone 2
P-1598	104	8.0	PVC	0.0	0.0000	0.00	140.0	Zone 2
P-1599	530	8.0	PVC	-27.3	0.1742	0.01	140.0	Zone 2
P-1600	221	8.0	PVC	-36.9	0.2358	0.01	140.0	Zone 2
P-1601	153	8.0	PVC	-36.9	0.2358	0.01	140.0	Zone 2
P-1605	205	8.0	PVC	-36.9	0.2358	0.01	140.0	Zone 2
P-1606	1,622	8.0	PVC	-36.9	0.2358	0.06	140.0	Zone 2
P-1607	190	8.0	PVC	-36.9	0.2358	0.01	140.0	Zone 2
P-1516(1)	17	8.0	PVC	42.9	0.2740	0.00	140.0	Zone 1
P-1516(2)	504	8.0	PVC	41.0	0.2615	0.02	140.0	Zone 1

***Great Basin Water Company – Spanish Springs Division (Volume V)***

WaterCAD Modeling Scenarios

**GBWC 2024 IRP - Spanish Springs Division**  
**Existing (2022) MDD Condition Distribution System Junction Report**  
MDD - Time: 0.00 hours

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
104	J-51	4,565.50	Lower Zone	0.0	4,672.57	46.3
117	J-60	4,658.90	Upper Zone	13.8	4,766.14	46.4
44	J-12	4,562.70	Lower Zone	0.0	4,672.04	47.3
66	Ger-Tran	4,648.00	Upper Zone	1.1	4,766.19	51.1
306	J-101	4,554.50	Lower Zone	0.0	4,673.09	51.3
281	J-92	4,553.00	Lower Zone	0.0	4,673.63	52.2
116	J-59	4,644.40	Upper Zone	3.6	4,766.16	52.7
67	J-27	4,643.80	Upper Zone	0.0	4,766.19	53.0
46	J-13	4,640.30	Upper Zone	0.0	4,766.30	54.5
84	J-38	4,543.70	Lower Zone	0.0	4,673.41	56.1
448	J-126	4,544.40	Lower Zone	8.3	4,673.85	56.0
303	J-100	4,542.80	Lower Zone	0.0	4,674.14	56.8
91	J-43	4,631.10	Upper Zone	7.8	4,765.87	58.3
29	J-4	4,537.50	Lower Zone	0.0	4,673.56	58.9
100	J-49	4,535.70	Lower Zone	6.7	4,675.51	60.5
90	J-42	4,625.40	Upper Zone	5.6	4,765.87	60.8
361	Tra-Omni	4,623.90	Upper Zone	6.7	4,765.71	61.4
150	J-80	4,531.30	Lower Zone	6.2	4,673.76	61.6
445	J-125	4,531.30	Lower Zone	10.5	4,674.08	61.8
99	J-48	4,532.00	Lower Zone	5.6	4,675.51	62.1
39	J-10	4,620.90	Upper Zone	3.4	4,765.72	62.7
88	j-40	4,529.00	Lower Zone	11.3	4,674.23	62.8
114	J-58	4,525.30	Lower Zone	11.0	4,674.04	64.4
356	J-111	4,527.00	Lower Zone	0.0	4,676.29	64.6
102	J-50	4,525.70	Lower Zone	4.6	4,675.51	64.8
69	BPC-BPCT	4,523.00	Lower Zone	3.3	4,674.01	65.3
36	J-8	4,523.00	Lower Zone	0.0	4,676.29	66.3
70	J-29	4,519.70	Lower Zone	1.0	4,674.01	66.8
94	J-45	4,519.00	Lower Zone	8.5	4,674.01	67.1
42	J-11	4,518.50	Lower Zone	12.9	4,673.99	67.3
87	J-40	4,519.00	Lower Zone	4.2	4,674.24	67.2
113	J-57	4,518.00	Lower Zone	6.7	4,674.03	67.5
97	J-47	4,607.80	Upper Zone	8.4	4,765.40	68.2
93	J-44	4,515.50	Lower Zone	6.9	4,674.01	68.6
324	Well SS1A	4,523.00	Lower Zone	4.7	4,682.48	69.0
81	OMN-SKYR	4,515.00	Lower Zone	4.0	4,674.27	68.9
442	J-124	4,605.00	Upper Zone	13.5	4,765.55	69.5
78	Rock-Sky	4,515.00	Lower Zone	2.6	4,674.47	69.0
147	J-79	4,514.00	Lower Zone	1.8	4,674.24	69.3
96	J-46	4,604.00	Upper Zone	16.6	4,765.41	69.8
451	J-127	4,512.00	Lower Zone	12.3	4,674.34	70.2
141	J-75	4,510.50	Lower Zone	4.7	4,674.48	70.9
153	J-81	4,599.70	Upper Zone	16.2	4,765.39	71.7
82	J-37	4,509.00	Lower Zone	2.3	4,674.27	71.5
422	J-117	4,599.00	Upper Zone	11.0	4,765.39	72.0

**GBWC 2024 IRP - Spanish Springs Division**  
**Existing (2022) MDD Condition Distribution System Junction Report**  
MDD - Time: 0.00 hours

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
268	J-91	4,508.00	Lower Zone	3.3	4,674.27	71.9
79	J-35	4,508.00	Lower Zone	0.9	4,674.47	72.0
259	J-90	4,508.00	Lower Zone	0.0	4,674.48	72.0
454	J-128	4,507.00	Lower Zone	5.9	4,674.58	72.5
146	J-78	4,505.00	Lower Zone	3.0	4,674.48	73.3
75	Sun-Omni	4,592.60	Upper Zone	4.3	4,765.20	74.7
143	J-76	4,502.00	Lower Zone	7.8	4,674.65	74.7
32	J-6	4,502.00	Lower Zone	6.3	4,674.76	74.7
477	J-133	4,502.00	Lower Zone	0.0	4,674.77	74.8
248	J-89	4,500.80	Lower Zone	12.0	4,674.53	75.2
108	J-54	4,590.70	Upper Zone	15.0	4,765.19	75.5
245	J-88	4,500.80	Lower Zone	15.8	4,674.55	75.2
54	Her-Omni	4,500.00	Lower Zone	9.1	4,674.76	75.6
457	J-129	4,499.00	Lower Zone	5.0	4,674.78	76.1
460	J-130	4,499.00	Lower Zone	5.3	4,674.82	76.1
155	J-82	4,588.40	Upper Zone	9.6	4,765.21	76.5
137	J-73	4,498.00	Lower Zone	3.7	4,674.59	76.4
135	J-72	4,498.00	Lower Zone	8.6	4,674.66	76.4
76	J-33	4,587.30	Upper Zone	7.9	4,765.20	77.0
49	J-15	4,500.00	Lower Zone	4.9	4,677.31	76.7
315	J-104	4,500.00	Lower Zone	0.0	4,677.32	76.7
48	J-14	4,498.00	Lower Zone	0.8	4,675.19	76.7
107	J-53	4,587.00	Upper Zone	18.3	4,765.20	77.1
428	J-119	4,586.00	Upper Zone	9.5	4,765.20	77.5
314	Well SS-6	4,500.00	Lower Zone	4.5	4,679.42	77.6
126	J-66	4,496.00	Lower Zone	8.7	4,675.16	77.5
144	J-77	4,495.00	Lower Zone	12.5	4,674.59	77.7
34	J-7	4,495.00	Lower Zone	11.1	4,674.78	77.8
55	J-19	4,495.00	Lower Zone	4.7	4,674.76	77.8
31	J-5	4,494.00	Lower Zone	9.2	4,674.76	78.2
425	J-118	4,582.00	Upper Zone	10.1	4,765.20	79.3
60	Her-Rockw	4,492.50	Lower Zone	0.9	4,675.02	79.0
139	J-74	4,492.00	Lower Zone	7.2	4,674.78	79.1
474	J-132	4,492.00	Lower Zone	0.0	4,674.77	79.1
125	J-65	4,492.00	Lower Zone	13.8	4,675.00	79.2
26	J-2	4,491.00	Lower Zone	1.8	4,675.02	79.6
134	J-71	4,490.00	Lower Zone	8.2	4,675.05	80.1
160	J-85	4,489.00	Lower Zone	1.2	4,675.02	80.5
162	J-87	4,488.00	Lower Zone	1.8	4,675.02	80.9
25	J-1	4,488.00	Lower Zone	0.0	4,675.02	80.9
352	J-109	4,488.00	Lower Zone	0.0	4,675.02	80.9
354	J-110	4,488.00	Lower Zone	0.0	4,675.02	80.9
131	J-69	4,486.00	Lower Zone	6.1	4,675.01	81.8
436	J-122	4,575.00	Upper Zone	19.1	4,765.11	82.2

**GBWC 2024 IRP - Spanish Springs Division**  
**Existing (2022) MDD Condition Distribution System Junction Report**  
MDD - Time: 0.00 hours

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
51	Moon-Tranq	4,572.00	Upper Zone	4.7	4,765.01	83.5
110	J-55	4,571.40	Upper Zone	7.7	4,765.00	83.8
72	J-30	4,570.00	Upper Zone	2.0	4,765.00	84.4
73	J-31	4,570.00	Upper Zone	7.0	4,765.00	84.4
157	J-83	4,569.00	Upper Zone	4.2	4,764.99	84.8
52	J-17	4,568.00	Upper Zone	9.9	4,765.01	85.2
111	J-56	4,567.30	Upper Zone	21.2	4,765.00	85.5
63	Moonbeam	4,566.00	Upper Zone	8.5	4,764.98	86.1
430	J-120	4,565.00	Upper Zone	17.0	4,764.99	86.5
433	J-121	4,565.00	Upper Zone	20.5	4,764.98	86.5
467	J-131	4,565.00	Upper Zone	0.0	4,764.94	86.5
105	J-52	4,562.80	Upper Zone	8.8	4,764.93	87.5
292	J-96	4,562.70	Upper Zone	9.6	4,764.94	87.5
64	J-25	4,561.50	Upper Zone	6.2	4,764.98	88.0
289	J-95	4,555.00	Upper Zone	9.3	4,764.94	90.8
57	Des-Brid	4,554.00	Upper Zone	3.3	4,764.92	91.3
128	J-67	4,554.00	Upper Zone	9.3	4,764.94	91.3
129	J-68	4,553.00	Upper Zone	18.0	4,764.94	91.7
414	J-115	4,553.00	Upper Zone	3.8	4,764.93	91.7
85	J-39	4,552.80	Upper Zone	12.6	4,764.93	91.8
363	J-113	4,552.00	Upper Zone	3.0	4,764.94	92.1
58	J-21	4,549.00	Upper Zone	3.3	4,764.92	93.4
119	J-61	4,548.80	Upper Zone	9.3	4,764.92	93.5
123	J-64	4,548.60	Upper Zone	17.6	4,764.93	93.6
439	J-123	4,547.00	Upper Zone	17.2	4,764.92	94.3
346	J-107	4,543.70	Upper Zone	7.0	4,764.94	95.7
310	J-102	4,542.80	Upper Zone	12.8	4,764.93	96.1
122	J-63	4,542.30	Upper Zone	19.1	4,764.90	96.3
120	J-62	4,538.70	Upper Zone	11.3	4,764.92	97.9
286	J-94	4,538.00	Upper Zone	12.1	4,764.94	98.2

**GBWC 2024 IRP - Spanish Springs Division**  
**Existing (2022) MDD+Fire Condition Distribution System Junction**  
**Report**  
**Fire Flow - Time: 0.00 hours**

Label	Zone	Satisfies Fire Flow Constraints?	Fire Flow (Needed) (gpm)	MDD (gpm)	Total Flow Needed (MDD+Fire) (gpm)	Available Flow @ 20psi Residual (gpm)	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Zone Lower Limit @ Total Flow Needed) (psi)
J-1	Lower Zone	True	1,000.0	0.0	1,000.0	2,826.0	71.7	44.1
J-2	Lower Zone	True	1,000.0	1.8	1,001.8	3,077.7	71.9	44.1
J-4	Lower Zone	True	1,000.0	0.0	1,000.0	3,500.0	55.3	44.0
J-5	Lower Zone	True	1,000.0	9.2	1,009.2	2,091.3	62.7	44.1
J-6	Lower Zone	True	1,000.0	6.3	1,006.3	1,818.3	55.9	44.1
J-7	Lower Zone	True	1,000.0	11.1	1,011.0	3,438.6	71.6	44.1
J-8	Lower Zone	True	1,000.0	0.0	1,000.0	3,060.0	60.1	44.1
J-10	Upper Zone	True	1,000.0	3.4	1,003.4	2,111.2	48.7	33.8
J-11	Lower Zone	True	1,000.0	12.9	1,012.9	3,512.9	63.4	44.1
J-12	Lower Zone	True	1,000.0	0.0	1,000.0	3,500.0	45.2	44.3
J-13	Upper Zone	True	1,000.0	0.0	1,000.0	2,010.9	42.4	34.2
J-14	Lower Zone	True	1,000.0	0.8	1,000.8	3,308.2	70.3	44.1
J-15	Lower Zone	True	1,000.0	4.9	1,004.9	1,028.8	22.4	44.2
Moon-Tranq	Upper Zone	True	1,000.0	4.7	1,004.7	2,278.0	65.5	33.8
J-17	Upper Zone	True	1,000.0	9.9	1,009.9	2,385.0	67.8	33.8
Her-Omni	Lower Zone	True	1,000.0	9.1	1,009.1	1,929.8	58.4	44.1
J-19	Lower Zone	True	1,000.0	4.7	1,004.7	2,005.6	61.2	44.1
Des-Brid	Upper Zone	True	1,000.0	3.3	1,003.2	2,292.1	71.6	33.8
J-21	Upper Zone	True	1,000.0	3.3	1,003.3	2,394.2	74.4	33.8
Her-Rockw	Lower Zone	True	1,000.0	0.9	1,000.9	2,661.8	69.0	44.1
Moonbeam	Upper Zone	True	1,000.0	8.5	1,008.5	2,116.6	65.6	33.8
J-25	Upper Zone	True	1,000.0	6.2	1,006.2	2,210.9	68.2	33.8
Ger-Tran	Upper Zone	True	1,000.0	1.1	1,001.1	1,762.9	37.9	33.9
J-27	Upper Zone	True	1,000.0	0.0	1,000.0	1,918.7	40.5	33.9
BPC-BPCT	Lower Zone	True	1,000.0	3.3	1,003.3	3,503.3	61.0	44.1
J-29	Lower Zone	True	1,000.0	1.0	1,001.0	3,501.0	62.6	44.1
J-30	Upper Zone	True	1,000.0	2.0	1,002.0	2,263.1	66.1	33.8
J-31	Upper Zone	True	1,000.0	7.0	1,007.0	2,351.8	66.9	33.8
Sun-Omni	Upper Zone	True	1,000.0	4.3	1,004.3	2,151.1	57.7	33.8
J-33	Upper Zone	True	1,000.0	7.9	1,007.9	2,300.8	60.8	33.8
Rock-Sky	Lower Zone	True	1,000.0	2.6	1,002.6	1,810.4	52.0	44.1
J-35	Lower Zone	True	1,000.0	0.9	1,000.9	1,938.3	56.1	44.1



**GBWC 2024 IRP - Spanish Springs Division**  
**Existing (2022) MDD+Fire Condition Distribution System Junction**  
**Report**  
**Fire Flow - Time: 0.00 hours**

Label	Zone	Satisfies Fire Flow Constraints?	Fire Flow (Needed) (gpm)	MDD (gpm)	Total Flow Needed (MDD+Fire) (gpm)	Available Flow @ 20psi Residual (gpm)	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Zone Lower Limit @ Total Flow Needed) (psi)
OMN-SKYR	Lower Zone	True	1,000.0	4.0	1,004.0	2,836.5	61.4	44.1
J-37	Lower Zone	True	1,000.0	2.3	1,002.2	3,188.8	65.1	44.1
J-38	Lower Zone	True	1,000.0	0.0	1,000.0	3,500.0	52.8	44.0
J-39	Upper Zone	True	1,000.0	12.6	1,012.6	1,826.8	64.5	33.8
J-40	Lower Zone	True	1,000.0	4.2	1,004.2	1,251.7	35.4	31.1
j-40	Lower Zone	True	1,000.0	11.3	1,011.3	1,032.1	21.5	35.4
J-42	Upper Zone	True	1,000.0	5.6	1,005.6	2,102.9	47.3	33.8
J-43	Upper Zone	True	1,000.0	7.8	1,007.8	1,379.3	35.3	33.8
J-44	Lower Zone	True	1,000.0	6.9	1,006.9	2,014.1	54.6	44.1
J-45	Lower Zone	True	1,000.0	8.5	1,008.5	3,508.5	62.9	44.1
J-46	Upper Zone	True	1,000.0	16.6	1,016.6	2,216.3	54.6	33.8
J-47	Upper Zone	True	1,000.0	8.4	1,008.4	1,500.0	43.0	33.8
J-48	Lower Zone	True	1,000.0	5.6	1,005.6	3,505.6	57.9	44.1
J-49	Lower Zone	True	1,000.0	6.7	1,006.7	1,747.7	45.4	44.1
J-50	Lower Zone	True	1,000.0	4.6	1,004.6	1,830.3	49.6	44.1
J-51	Lower Zone	True	1,000.0	0.0	1,000.0	3,500.0	44.0	45.2
J-52	Upper Zone	True	1,000.0	8.8	1,008.8	1,496.5	52.6	33.8
J-53	Upper Zone	True	1,000.0	18.3	1,018.3	2,317.1	60.9	33.8
J-54	Upper Zone	True	1,000.0	15.0	1,015.0	1,545.5	47.8	33.8
J-55	Upper Zone	True	1,000.0	7.7	1,007.7	1,601.3	54.1	33.8
J-56	Upper Zone	True	1,000.0	21.2	1,021.2	2,400.1	68.1	33.8
J-57	Lower Zone	True	1,000.0	6.7	1,006.7	1,680.2	48.6	44.0
J-58	Lower Zone	True	1,000.0	11.0	1,011.0	3,511.0	60.2	44.0
J-59	Upper Zone	True	1,000.0	3.6	1,003.6	1,902.8	40.1	33.8
J-60	Upper Zone	False	1,000.0	13.8	1,013.8	985.9	18.7	38.6
J-61	Upper Zone	True	1,000.0	9.3	1,009.2	2,402.2	74.5	33.8
J-62	Upper Zone	True	1,000.0	11.3	1,011.3	1,655.2	63.8	33.8
J-63	Upper Zone	True	1,000.0	19.1	1,019.1	1,643.8	62.2	33.8
J-64	Upper Zone	True	1,000.0	17.6	1,017.6	2,425.1	74.7	33.8
J-65	Lower Zone	True	1,000.0	13.8	1,013.8	2,698.8	69.3	44.1
J-66	Lower Zone	True	1,000.0	8.7	1,008.6	3,319.1	71.0	44.1
J-67	Upper Zone	True	1,000.0	9.3	1,009.3	1,516.4	55.3	33.8
J-68	Upper Zone	True	1,000.0	18.0	1,018.0	2,421.8	73.2	33.8
J-69	Lower Zone	True	1,000.0	6.1	1,006.1	2,342.4	68.5	44.1
J-71	Lower Zone	True	1,000.0	8.2	1,008.2	3,227.1	72.9	44.1
J-72	Lower Zone	True	1,000.0	8.6	1,008.6	2,586.7	66.2	44.1
J-73	Lower Zone	True	1,000.0	3.7	1,003.7	1,536.9	50.3	44.1
J-74	Lower Zone	True	1,000.0	7.2	1,007.2	2,846.3	70.2	44.1
J-75	Lower Zone	True	1,000.0	4.7	1,004.7	1,476.6	45.5	44.1

**GBWC 2024 IRP - Spanish Springs Division**  
**Existing (2022) MDD+Fire Condition Distribution System Junction**  
**Report**  
**Fire Flow - Time: 0.00 hours**

Label	Zone	Satisfies Fire Flow Constraints?	Fire Flow (Needed) (gpm)	MDD (gpm)	Total Flow Needed (MDD+Fire) (gpm)	Available Flow @ 20psi Residual (gpm)	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Zone Lower Limit @ Total Flow Needed) (psi)
J-76	Lower Zone	True	1,000.0	7.8	1,007.8	2,443.8	63.7	44.1
J-77	Lower Zone	True	1,000.0	12.5	1,012.5	2,023.4	61.3	44.1
J-78	Lower Zone	True	1,000.0	3.0	1,002.9	1,372.1	43.0	44.1
J-79	Lower Zone	True	1,000.0	1.8	1,001.8	1,001.8	20.0	31.1
J-80	Lower Zone	True	1,000.0	6.2	1,006.2	3,506.2	57.9	44.0
J-81	Upper Zone	True	1,000.0	16.2	1,016.2	2,247.8	56.3	33.8
J-82	Upper Zone	True	1,000.0	9.6	1,009.6	2,298.1	60.4	33.8
J-83	Upper Zone	True	1,000.0	4.2	1,004.2	2,356.4	67.3	33.8
J-85	Lower Zone	True	1,000.0	1.2	1,001.2	2,944.5	72.0	44.1
J-87	Lower Zone	True	1,000.0	1.8	1,001.8	2,823.9	71.7	44.1
J-88	Lower Zone	True	1,000.0	15.8	1,015.8	1,940.6	58.2	44.1
J-89	Lower Zone	True	1,000.0	12.0	1,012.0	3,512.0	69.5	44.1
J-90	Lower Zone	True	1,000.0	0.0	1,000.0	1,950.3	56.3	44.1
J-91	Lower Zone	True	1,000.0	3.3	1,003.2	3,503.2	67.0	44.1
J-92	Lower Zone	True	1,000.0	0.0	1,000.0	3,500.0	49.2	44.0
J-94	Upper Zone	True	1,000.0	12.1	1,012.1	2,318.2	77.2	33.8
J-95	Upper Zone	True	1,000.0	9.3	1,009.3	2,424.2	72.6	33.8
J-96	Upper Zone	True	1,000.0	9.6	1,009.6	1,871.9	62.6	33.8
J-100	Lower Zone	True	1,000.0	0.0	1,000.0	3,500.0	53.6	44.0
J-101	Lower Zone	True	1,000.0	0.0	1,000.0	3,500.0	48.7	44.0
J-102	Upper Zone	True	1,000.0	12.8	1,012.8	2,475.1	77.2	33.8
Well SS-6	Lower Zone	True	1,000.0	4.5	1,004.5	2,689.0	68.1	44.2
J-104	Lower Zone	True	1,000.0	0.0	1,000.0	2,906.6	68.7	44.2
Well SS1A	Lower Zone	True	1,000.0	4.7	1,004.7	2,900.1	60.9	44.2
J-107	Upper Zone	True	1,000.0	7.0	1,007.0	2,337.7	75.6	33.8
J-109	Lower Zone	True	1,000.0	0.0	1,000.0	2,510.2	69.5	44.1
J-110	Lower Zone	True	1,000.0	0.0	1,000.0	2,308.4	67.6	44.1
J-111	Lower Zone	True	1,000.0	0.0	1,000.0	3,500.0	59.9	44.1
Tra-Omni	Upper Zone	True	1,000.0	6.7	1,006.7	1,880.5	45.6	33.8
J-113	Upper Zone	True	1,000.0	3.0	1,003.0	2,412.5	73.6	33.8
J-115	Upper Zone	True	1,000.0	3.8	1,003.8	2,395.6	73.0	33.8
J-117	Upper Zone	True	1,000.0	11.0	1,011.0	2,156.0	55.8	33.8
J-118	Upper Zone	True	1,000.0	10.1	1,010.1	2,205.2	61.7	33.8
J-119	Upper Zone	True	1,000.0	9.5	1,009.5	2,062.7	58.8	33.8
J-120	Upper Zone	True	1,000.0	17.0	1,017.0	2,240.5	67.3	33.8
J-121	Upper Zone	True	1,000.0	20.5	1,020.5	2,241.8	67.2	33.8
J-122	Upper Zone	True	1,000.0	19.1	1,019.1	2,371.8	65.4	33.8

**GBWC 2024 IRP - Spanish Springs Division**  
**Existing (2022) MDD+Fire Condition Distribution System Junction**  
**Report**  
 Fire Flow - Time: 0.00 hours

Label	Zone	Satisfies Fire Flow Constraints?	Fire Flow (Needed) (gpm)	MDD (gpm)	Total Flow Needed (MDD+Fire) (gpm)	Available Flow @ 20psi Residual (gpm)	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Zone Lower Limit @ Total Flow Needed) (psi)
J-123	Upper Zone	True	1,000.0	17.2	1,017.2	2,428.6	75.3	33.8
J-124	Upper Zone	True	1,000.0	13.5	1,013.5	2,227.9	54.5	33.8
J-125	Lower Zone	True	1,000.0	10.5	1,010.5	3,510.5	57.9	44.0
J-126	Lower Zone	True	1,000.0	8.3	1,008.3	2,950.4	50.7	44.1
J-127	Lower Zone	True	1,000.0	12.3	1,012.3	1,975.3	55.2	44.1
J-128	Lower Zone	True	1,000.0	5.9	1,005.9	2,331.1	61.1	44.1
J-129	Lower Zone	True	1,000.0	5.0	1,005.0	2,217.6	62.7	44.1
J-130	Lower Zone	True	1,000.0	5.3	1,005.3	2,301.6	63.6	44.1
J-131	Upper Zone	True	1,000.0	0.0	1,000.0	2,079.4	65.4	33.8
J-132	Lower Zone	True	1,000.0	0.0	1,000.0	2,381.7	66.7	44.1
J-133	Lower Zone	True	1,000.0	0.0	1,000.0	2,177.5	61.3	44.1

**GBWC 2024 IRP - Spanish Springs Division**  
**Existing (2022) PHD Condition Distribution System Junction Report**  
**PHD-NODES - Time: 0.00 hours**

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
104	J-51	4,565.50	Lower Zone	0.0	4,670.33	45.4
117	J-60	4,658.90	Upper Zone	24.1	4,758.22	43.0
44	J-12	4,562.70	Lower Zone	0.0	4,670.06	46.4
66	Ger-Tran	4,648.00	Upper Zone	1.9	4,758.34	47.7
306	J-101	4,554.50	Lower Zone	0.0	4,670.59	50.2
281	J-92	4,553.00	Lower Zone	0.0	4,670.97	51.0
116	J-59	4,644.40	Upper Zone	6.3	4,758.25	49.3
67	J-27	4,643.80	Upper Zone	0.0	4,758.34	49.6
46	J-13	4,640.30	Upper Zone	0.0	4,758.66	51.2
84	J-38	4,543.70	Lower Zone	0.0	4,670.69	54.9
448	J-126	4,544.40	Lower Zone	14.6	4,670.81	54.7
303	J-100	4,542.80	Lower Zone	0.0	4,671.31	55.6
91	J-43	4,631.10	Upper Zone	13.6	4,757.45	54.7
29	J-4	4,537.50	Lower Zone	0.0	4,670.73	57.6
100	J-49	4,535.70	Lower Zone	11.7	4,672.68	59.3
90	J-42	4,625.40	Upper Zone	9.8	4,757.46	57.1
361	Tra-Omni	4,623.90	Upper Zone	11.7	4,757.01	57.6
150	J-80	4,531.30	Lower Zone	10.8	4,670.78	60.3
445	J-125	4,531.30	Lower Zone	18.3	4,671.15	60.5
99	J-48	4,532.00	Lower Zone	9.8	4,672.69	60.9
39	J-10	4,620.90	Upper Zone	6.0	4,757.01	58.9
88	j-40	4,529.00	Lower Zone	19.8	4,670.79	61.3
114	J-58	4,525.30	Lower Zone	19.3	4,671.01	63.0
356	J-111	4,527.00	Lower Zone	0.0	4,673.50	63.4
102	J-50	4,525.70	Lower Zone	8.0	4,672.68	63.6
69	BPC-BPCT	4,523.00	Lower Zone	5.8	4,670.93	64.0
36	J-8	4,523.00	Lower Zone	0.0	4,673.50	65.1
70	J-29	4,519.70	Lower Zone	1.8	4,670.93	65.4
94	J-45	4,519.00	Lower Zone	14.8	4,670.93	65.7
42	J-11	4,518.50	Lower Zone	22.6	4,670.86	65.9
87	J-40	4,519.00	Lower Zone	7.4	4,670.80	65.7
113	J-57	4,518.00	Lower Zone	11.8	4,671.00	66.2
97	J-47	4,607.80	Upper Zone	14.7	4,756.13	64.2
93	J-44	4,515.50	Lower Zone	12.0	4,670.92	67.2
324	Well SS1A	4,523.00	Lower Zone	8.3	4,679.99	67.9
81	OMN-SKYR	4,515.00	Lower Zone	7.0	4,670.89	67.4
442	J-124	4,605.00	Upper Zone	23.7	4,756.55	65.6
78	Rock-Sky	4,515.00	Lower Zone	4.5	4,670.93	67.5
147	J-79	4,514.00	Lower Zone	3.2	4,670.80	67.8
96	J-46	4,604.00	Upper Zone	29.1	4,756.14	65.8
451	J-127	4,512.00	Lower Zone	21.6	4,670.90	68.7
141	J-75	4,510.50	Lower Zone	8.2	4,670.93	69.4
153	J-81	4,599.70	Upper Zone	28.3	4,756.08	67.7
82	J-37	4,509.00	Lower Zone	3.9	4,670.89	70.0
422	J-117	4,599.00	Upper Zone	19.3	4,756.10	68.0

**GBWC 2024 IRP - Spanish Springs Division**  
**Existing (2022) PHD Condition Distribution System Junction Report**  
**PHD-NODES - Time: 0.00 hours**

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
268	J-91	4,508.00	Lower Zone	5.7	4,670.90	70.5
79	J-35	4,508.00	Lower Zone	1.5	4,670.93	70.5
259	J-90	4,508.00	Lower Zone	0.0	4,670.93	70.5
454	J-128	4,507.00	Lower Zone	10.4	4,671.00	71.0
146	J-78	4,505.00	Lower Zone	5.2	4,670.93	71.8
75	Sun-Omni	4,592.60	Upper Zone	7.5	4,755.56	70.5
143	J-76	4,502.00	Lower Zone	13.7	4,671.02	73.1
32	J-6	4,502.00	Lower Zone	11.0	4,671.07	73.1
477	J-133	4,502.00	Lower Zone	0.0	4,671.10	73.2
248	J-89	4,500.80	Lower Zone	21.0	4,670.99	73.6
108	J-54	4,590.70	Upper Zone	26.2	4,755.54	71.3
245	J-88	4,500.80	Lower Zone	27.7	4,670.96	73.6
54	Her-Omni	4,500.00	Lower Zone	16.0	4,671.07	74.0
457	J-129	4,499.00	Lower Zone	8.8	4,671.12	74.5
460	J-130	4,499.00	Lower Zone	9.3	4,671.15	74.5
155	J-82	4,588.40	Upper Zone	16.8	4,755.59	72.3
137	J-73	4,498.00	Lower Zone	6.4	4,670.97	74.8
135	J-72	4,498.00	Lower Zone	15.0	4,671.03	74.9
76	J-33	4,587.30	Upper Zone	13.9	4,755.56	72.8
49	J-15	4,500.00	Lower Zone	8.5	4,673.74	75.2
315	J-104	4,500.00	Lower Zone	0.0	4,673.75	75.2
48	J-14	4,498.00	Lower Zone	1.4	4,671.53	75.1
107	J-53	4,587.00	Upper Zone	32.0	4,755.57	72.9
428	J-119	4,586.00	Upper Zone	16.6	4,755.57	73.4
314	Well SS-6	4,500.00	Lower Zone	7.9	4,675.98	76.1
126	J-66	4,496.00	Lower Zone	15.1	4,671.49	75.9
144	J-77	4,495.00	Lower Zone	21.9	4,670.97	76.1
34	J-7	4,495.00	Lower Zone	19.3	4,671.15	76.2
55	J-19	4,495.00	Lower Zone	8.2	4,671.07	76.2
31	J-5	4,494.00	Lower Zone	16.2	4,671.08	76.6
425	J-118	4,582.00	Upper Zone	17.8	4,755.57	75.1
60	Her-Rockw	4,492.50	Lower Zone	1.5	4,671.33	77.4
139	J-74	4,492.00	Lower Zone	12.6	4,671.13	77.5
474	J-132	4,492.00	Lower Zone	0.0	4,671.10	77.5
125	J-65	4,492.00	Lower Zone	24.2	4,671.31	77.6
26	J-2	4,491.00	Lower Zone	3.1	4,671.34	78.0
134	J-71	4,490.00	Lower Zone	14.4	4,671.37	78.5
160	J-85	4,489.00	Lower Zone	2.1	4,671.33	78.9
162	J-87	4,488.00	Lower Zone	3.2	4,671.33	79.3
25	J-1	4,488.00	Lower Zone	0.0	4,671.33	79.3
352	J-109	4,488.00	Lower Zone	0.0	4,671.33	79.3
354	J-110	4,488.00	Lower Zone	0.0	4,671.33	79.3
131	J-69	4,486.00	Lower Zone	10.7	4,671.31	80.2
436	J-122	4,575.00	Upper Zone	33.5	4,755.29	78.0

**GBWC 2024 IRP - Spanish Springs Division**  
**Existing (2022) PHD Condition Distribution System Junction Report**  
**PHD-NODES - Time: 0.00 hours**

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
51	Moon-Tranq	4,572.00	Upper Zone	8.3	4,755.02	79.2
110	J-55	4,571.40	Upper Zone	13.5	4,754.99	79.4
72	J-30	4,570.00	Upper Zone	3.5	4,754.99	80.0
73	J-31	4,570.00	Upper Zone	12.2	4,754.99	80.0
157	J-83	4,569.00	Upper Zone	7.4	4,754.98	80.5
52	J-17	4,568.00	Upper Zone	17.3	4,755.02	80.9
111	J-56	4,567.30	Upper Zone	37.2	4,755.00	81.2
63	Moonbeam	4,566.00	Upper Zone	14.9	4,754.95	81.8
430	J-120	4,565.00	Upper Zone	29.7	4,754.96	82.2
433	J-121	4,565.00	Upper Zone	36.0	4,754.95	82.2
467	J-131	4,565.00	Upper Zone	0.0	4,754.82	82.1
105	J-52	4,562.80	Upper Zone	15.4	4,754.81	83.1
292	J-96	4,562.70	Upper Zone	16.7	4,754.82	83.1
64	J-25	4,561.50	Upper Zone	10.9	4,754.95	83.7
289	J-95	4,555.00	Upper Zone	16.2	4,754.83	86.5
57	Des-Brid	4,554.00	Upper Zone	5.7	4,754.78	86.9
128	J-67	4,554.00	Upper Zone	16.3	4,754.82	86.9
129	J-68	4,553.00	Upper Zone	31.4	4,754.84	87.3
414	J-115	4,553.00	Upper Zone	6.6	4,754.80	87.3
85	J-39	4,552.80	Upper Zone	22.0	4,754.80	87.4
363	J-113	4,552.00	Upper Zone	5.2	4,754.81	87.7
58	J-21	4,549.00	Upper Zone	5.8	4,754.78	89.0
119	J-61	4,548.80	Upper Zone	16.2	4,754.78	89.1
123	J-64	4,548.60	Upper Zone	30.7	4,754.79	89.2
439	J-123	4,547.00	Upper Zone	30.0	4,754.78	89.9
346	J-107	4,543.70	Upper Zone	12.3	4,754.81	91.3
310	J-102	4,542.80	Upper Zone	22.4	4,754.79	91.7
122	J-63	4,542.30	Upper Zone	33.4	4,754.72	91.9
120	J-62	4,538.70	Upper Zone	19.8	4,754.76	93.5
286	J-94	4,538.00	Upper Zone	21.1	4,754.81	93.8

**GBWC 2024 IRP - Spanish Springs Division**  
**Existing (2022) PHD Condition Distribution System Pipe Report**  
 PHD-PIPES - Time: 0.00 hours

Label	Length (Scaled) (ft)	Diameter (in)	Material	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Hazen-Williams C
P-24	490.11	12.0	PVC	472.4	1.34	0.27	140.0
P-129	479.78	12.0	PVC	472.4	1.34	0.26	140.0
P-125	472.44	10.0	PVC	340.7	1.39	0.35	140.0
P-128	507.91	10.0	PVC	340.7	1.39	0.37	140.0
P-152	456.11	10.0	PVC	552.2	2.26	0.82	140.0
P-124	850.78	10.0	PVC	522.7	2.14	1.37	140.0
P-103	790.46	10.0	PVC	-81.6	0.33	0.04	140.0
P-69	344.79	10.0	PVC	-131.7	0.54	0.04	140.0
P-70	441.70	10.0	PVC	-131.7	0.54	0.06	140.0
P-130	720.46	10.0	PVC	-131.7	0.54	0.09	140.0
P-104	691.08	10.0	PVC	-133.4	0.55	0.09	140.0
P-36	864.87	10.0	PVC	-108.8	0.44	0.08	140.0
P-88	874.57	10.0	PVC	-158.6	0.65	0.16	140.0
P-10	967.11	10.0	PVC	243.7	1.00	0.38	140.0
P-99	688.83	6.0	PVC	36.1	0.41	0.09	140.0
P-192	832.07	6.0	PVC	16.7	0.19	0.03	140.0
P-193	886.99	6.0	PVC	-4.9	0.06	0.00	140.0
P-190	736.59	8.0	PVC	-33.8	0.22	0.02	140.0
P-191	986.91	8.0	PVC	-48.4	0.31	0.06	140.0
P-60	105.38	10.0	PVC	-217.7	0.89	0.03	140.0
P-198	709.31	6.0	PVC	54.6	0.62	0.21	140.0
P-199	590.51	6.0	PVC	45.3	0.51	0.12	140.0
P-196	863.51	6.0	PVC	49.4	0.56	0.21	140.0
P-197	573.18	6.0	PVC	40.6	0.46	0.10	140.0
P-194	614.49	6.0	PVC	21.1	0.24	0.03	140.0
P-195	607.04	6.0	PVC	10.8	0.12	0.01	140.0
P-32	1,055.69	6.0	PVC	39.4	0.45	0.17	140.0
P-89	572.95	6.0	PVC	-57.5	0.65	0.19	140.0
P-59	847.96	10.0	PVC	-145.1	0.59	0.13	140.0
P-19	995.01	6.0	PVC	41.2	0.47	0.18	140.0
P-84	625.52	6.0	PVC	-12.9	0.15	0.01	140.0
P-86	1,229.61	6.0	PVC	14.9	0.17	0.03	140.0
P-92	662.61	8.0	PVC	24.6	0.16	0.01	140.0
P-33	645.15	10.0	PVC	-76.1	0.31	0.03	140.0
P-55	902.68	10.0	PVC	-98.2	0.40	0.07	140.0
P-66	616.49	10.0	PVC	-132.6	0.54	0.08	140.0
P-188	748.62	10.0	PVC	-163.7	0.67	0.14	140.0
P-189	716.46	10.0	PVC	-182.0	0.74	0.16	140.0
P-17	565.19	6.0	PVC	-9.1	0.10	0.01	140.0
P-21	592.19	6.0	PVC	-16.8	0.19	0.02	140.0
P-31	845.46	6.0	PVC	6.1	0.07	0.00	140.0
P-2	570.17	10.0	PVC	-23.6	0.10	0.00	140.0
P-186	626.57	10.0	PVC	366.0	1.49	0.46	150.0
P-187	718.55	10.0	PVC	342.3	1.40	0.47	150.0
P-4	870.42	10.0	PVC	-431.6	1.76	0.87	150.0

**GBWC 2024 IRP - Spanish Springs Division**  
**Existing (2022) PHD Condition Distribution System Pipe Report**  
 PHD-PIPES - Time: 0.00 hours

Label	Length (Scaled) (ft)	Diameter (in)	Material	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Hazen-Williams C
P-37	745.38	10.0	PVC	346.7	1.42	0.50	150.0
P-78	917.83	10.0	PVC	-335.7	1.37	0.57	150.0
P-180	655.53	8.0	PVC	39.3	0.25	0.03	140.0
P-181	769.96	8.0	PVC	3.4	0.02	0.00	140.0
P-179	658.22	8.0	PVC	-52.1	0.33	0.04	140.0
P-178	663.87	8.0	PVC	-22.4	0.14	0.01	140.0
P-182	613.93	10.0	PVC	277.9	1.14	0.27	150.0
P-183	856.08	10.0	PVC	244.4	1.00	0.30	150.0
P-77	1,268.45	10.0	PVC	-273.8	1.12	0.54	150.0
P-175	847.69	8.0	PVC	30.6	0.20	0.02	140.0
P-176	990.54	8.0	PVC	-3.8	0.02	0.00	140.0
P-173	552.49	8.0	PVC	-32.7	0.21	0.02	140.0
P-174	645.67	8.0	PVC	-52.0	0.33	0.04	140.0
P-119	720.32	10.0	PVC	-181.9	0.74	0.15	150.0
P-167	413.54	10.0	PVC	-66.4	0.27	0.01	140.0
P-185	624.86	10.0	PVC	13.9	0.06	0.00	150.0
P-184	631.05	10.0	PVC	43.9	0.18	0.01	150.0
P-79	727.45	10.0	PVC	-33.6	0.14	0.01	150.0
P-80	811.79	10.0	PVC	-97.7	0.40	0.05	150.0
P-62	1,257.92	10.0	PVC	-145.4	0.59	0.17	150.0
P-206	4,931.65	12.0	PVC	-870.9	2.47	9.68	130.0
P-58	163.50	12.0	PVC	-870.9	2.47	0.32	130.0
P-41	565.16	12.0	PVC	-838.6	2.38	0.79	150.0
P-15	335.41	12.0	PVC	-815.2	2.31	0.45	150.0
P-20	344.00	6.0	PVC	6.4	0.07	0.00	140.0
P-203	470.02	8.0	PVC	51.3	0.33	0.03	140.0
P-204	443.47	8.0	PVC	51.3	0.33	0.03	140.0
P-47	879.65	6.0	PVC	30.4	0.34	0.09	140.0
P-200	397.91	8.0	PVC	32.2	0.21	0.01	140.0
P-114	333.43	6.0	PVC	19.8	0.22	0.02	140.0
P-48	624.91	6.0	PVC	3.2	0.04	0.00	140.0
P-27	431.77	6.0	PVC	-13.5	0.15	0.01	140.0
P-16	526.92	6.0	PVC	19.8	0.23	0.02	140.0
P-115	346.70	6.0	PVC	-12.0	0.14	0.01	140.0
P-23	611.83	6.0	PVC	-16.3	0.18	0.02	140.0
P-38	525.32	6.0	PVC	24.1	0.27	0.03	140.0
P-146	249.47	6.0	PVC	22.0	0.25	0.01	140.0
P-18	526.49	6.0	PVC	-33.4	0.38	0.06	140.0
P-202	422.64	6.0	Ductile Iron	15.4	0.18	0.01	130.0
P-118	392.25	6.0	PVC	-8.0	0.09	0.00	140.0
P-35	335.44	6.0	PVC	13.6	0.15	0.01	140.0
P-34	351.99	6.0	PVC	14.7	0.17	0.01	140.0
P-14	384.58	6.0	PVC	11.7	0.13	0.01	140.0
P-148	774.36	10.0	PVC	-55.4	0.23	0.02	140.0
P-29	431.56	10.0	PVC	35.2	0.14	0.00	140.0



**GBWC 2024 IRP - Spanish Springs Division**  
**Existing (2022) PHD Condition Distribution System Pipe Report**  
 PHD-PIPES - Time: 0.00 hours

Label	Length (Scaled) (ft)	Diameter (in)	Material	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Hazen-Williams C
P-95	518.14	6.0	PVC	-5.2	0.06	0.00	140.0
P-28	402.43	6.0	PVC	26.2	0.30	0.03	140.0
P-100	345.14	6.0	PVC	8.2	0.09	0.00	140.0
P-116	523.05	6.0	PVC	-11.8	0.13	0.01	140.0
P-150	272.24	8.0	PVC	0.0	0.00	0.00	140.0
P-201	540.87	8.0	PVC	16.7	0.11	0.00	140.0
P-1	305.80	10.0	PVC	0.0	0.00	0.00	140.0
P-149	948.13	10.0	PVC	0.0	0.00	0.00	140.0
P-151	679.54	10.0	PVC	0.0	0.00	0.00	140.0
P-147	342.20	10.0	PVC	-21.1	0.09	0.00	140.0
P-30	939.81	10.0	PVC	11.0	0.04	0.00	140.0

**GBWC 2024 IRP - Spanish Springs Division**  
**Action & Preferred (2027 & 2044) MDD Condition Distribution System**  
**Junction Report**  
MDD - Time: 0.00 hours

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
104	J-51	4,565.50	Lower Zone	0.0	4,676.34	48.0
117	J-60	4,658.90	Upper Zone	0.0	4,770.50	48.3
44	J-12	4,562.70	Lower Zone	0.0	4,675.37	48.7
66	Ger-Tran	4,648.00	Upper Zone	0.0	4,770.50	53.0
306	J-101	4,554.50	Lower Zone	0.0	4,677.29	53.1
281	J-92	4,553.00	Lower Zone	0.0	4,678.20	54.2
116	J-59	4,644.40	Upper Zone	0.0	4,770.50	54.6
67	J-27	4,643.80	Upper Zone	0.0	4,770.50	54.8
46	J-13	4,640.30	Upper Zone	0.0	4,770.50	56.3
84	J-38	4,543.70	Lower Zone	0.0	4,677.95	58.1
448	J-126	4,544.40	Lower Zone	0.0	4,678.85	58.2
303	J-100	4,542.80	Lower Zone	0.0	4,679.06	59.0
91	J-43	4,631.10	Upper Zone	0.0	4,770.50	60.3
29	J-4	4,537.50	Lower Zone	0.0	4,678.26	60.9
100	J-49	4,535.70	Lower Zone	0.0	4,680.38	62.6
90	J-42	4,625.40	Upper Zone	0.0	4,770.50	62.8
361	Tra-Omni	4,623.90	Upper Zone	0.0	4,770.50	63.4
150	J-80	4,531.30	Lower Zone	0.0	4,678.67	63.8
445	J-125	4,531.30	Lower Zone	0.0	4,679.07	63.9
99	J-48	4,532.00	Lower Zone	0.0	4,680.38	64.2
39	J-10	4,620.90	Upper Zone	0.0	4,770.50	64.7
88	j-40	4,529.00	Lower Zone	0.0	4,679.99	65.3
114	J-58	4,525.30	Lower Zone	0.0	4,679.08	66.5
356	J-111	4,527.00	Lower Zone	0.0	4,681.09	66.7
102	J-50	4,525.70	Lower Zone	0.0	4,680.38	66.9
69	BPC-BPCT	4,523.00	Lower Zone	0.0	4,679.09	67.5
36	J-8	4,523.00	Lower Zone	0.0	4,681.09	68.4
70	J-29	4,519.70	Lower Zone	0.0	4,679.09	69.0
94	J-45	4,519.00	Lower Zone	0.0	4,679.09	69.3
42	J-11	4,518.50	Lower Zone	0.0	4,679.10	69.5
87	J-40	4,519.00	Lower Zone	0.0	4,679.99	69.7
113	J-57	4,518.00	Lower Zone	0.0	4,679.08	69.7
97	J-47	4,607.80	Upper Zone	0.0	4,770.50	70.4
93	J-44	4,515.50	Lower Zone	0.0	4,679.09	70.8
324	Well SS1A	4,523.00	Lower Zone	0.0	4,686.74	70.8
81	OMN-SKYR	4,515.00	Lower Zone	0.0	4,679.99	71.4
442	J-124	4,605.00	Upper Zone	0.0	4,770.50	71.6
78	Rock-Sky	4,515.00	Lower Zone	0.0	4,680.62	71.7
147	J-79	4,514.00	Lower Zone	0.0	4,679.99	71.8
96	J-46	4,604.00	Upper Zone	0.0	4,770.50	72.0
451	J-127	4,512.00	Lower Zone	0.0	4,680.31	72.8
141	J-75	4,510.50	Lower Zone	0.0	4,680.64	73.6
153	J-81	4,599.70	Upper Zone	0.0	4,770.50	73.9

**GBWC 2024 IRP - Spanish Springs Division**  
**Action & Preferred (2027 & 2044) MDD Condition Distribution System**  
**Junction Report**  
MDD - Time: 0.00 hours

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
82	J-37	4,509.00	Lower Zone	0.0	4,679.99	74.0
422	J-117	4,599.00	Upper Zone	0.0	4,770.50	74.2
268	J-91	4,508.00	Lower Zone	0.0	4,679.99	74.4
79	J-35	4,508.00	Lower Zone	0.0	4,680.62	74.7
259	J-90	4,508.00	Lower Zone	0.0	4,680.64	74.7
454	J-128	4,507.00	Lower Zone	0.0	4,680.73	75.2
146	J-78	4,505.00	Lower Zone	0.0	4,680.64	76.0
75	Sun-Omni	4,592.60	Upper Zone	0.0	4,770.50	77.0
143	J-76	4,502.00	Lower Zone	0.0	4,680.89	77.4
32	J-6	4,502.00	Lower Zone	0.0	4,681.04	77.5
477	J-133	4,502.00	Lower Zone	0.0	4,681.04	77.5
248	J-89	4,500.80	Lower Zone	0.0	4,680.57	77.8
108	J-54	4,590.70	Upper Zone	0.0	4,770.50	77.8
245	J-88	4,500.80	Lower Zone	0.0	4,680.75	77.9
54	Her-Omni	4,500.00	Lower Zone	0.0	4,681.04	78.3
457	J-129	4,499.00	Lower Zone	0.0	4,681.06	78.8
460	J-130	4,499.00	Lower Zone	0.0	4,681.10	78.8
155	J-82	4,588.40	Upper Zone	0.0	4,770.50	78.8
137	J-73	4,498.00	Lower Zone	0.0	4,680.85	79.1
135	J-72	4,498.00	Lower Zone	0.0	4,680.90	79.1
76	J-33	4,587.30	Upper Zone	0.0	4,770.50	79.3
49	J-15	4,500.00	Lower Zone	0.0	4,683.38	79.3
315	J-104	4,500.00	Lower Zone	0.0	4,683.38	79.3
48	J-14	4,498.00	Lower Zone	0.0	4,681.45	79.4
107	J-53	4,587.00	Upper Zone	0.0	4,770.50	79.4
428	J-119	4,586.00	Upper Zone	0.0	4,770.50	79.8
314	Well SS-6	4,500.00	Lower Zone	0.0	4,685.24	80.1
126	J-66	4,496.00	Lower Zone	0.0	4,681.43	80.2
144	J-77	4,495.00	Lower Zone	0.0	4,680.85	80.4
34	J-7	4,495.00	Lower Zone	0.0	4,681.00	80.5
55	J-19	4,495.00	Lower Zone	0.0	4,681.04	80.5
31	J-5	4,494.00	Lower Zone	0.0	4,681.04	80.9
425	J-118	4,582.00	Upper Zone	0.0	4,770.50	81.6
60	Her-Rockw	4,492.50	Lower Zone	0.0	4,681.32	81.7
139	J-74	4,492.00	Lower Zone	0.0	4,681.04	81.8
474	J-132	4,492.00	Lower Zone	0.0	4,681.04	81.8
125	J-65	4,492.00	Lower Zone	0.0	4,681.31	81.9
26	J-2	4,491.00	Lower Zone	0.0	4,681.32	82.3
134	J-71	4,490.00	Lower Zone	0.0	4,681.34	82.8
160	J-85	4,489.00	Lower Zone	0.0	4,681.32	83.2
162	J-87	4,488.00	Lower Zone	0.0	4,681.32	83.6
25	J-1	4,488.00	Lower Zone	0.0	4,681.32	83.6
352	J-109	4,488.00	Lower Zone	0.0	4,681.32	83.6

**GBWC 2024 IRP - Spanish Springs Division**  
**Action & Preferred (2027 & 2044) MDD Condition Distribution System**  
**Junction Report**  
 MDD - Time: 0.00 hours

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
354	J-110	4,488.00	Lower Zone	0.0	4,681.32	83.6
131	J-69	4,486.00	Lower Zone	0.0	4,681.31	84.5
436	J-122	4,575.00	Upper Zone	0.0	4,770.50	84.6
51	Moon-Tranq	4,572.00	Upper Zone	0.0	4,770.50	85.9
110	J-55	4,571.40	Upper Zone	0.0	4,770.50	86.1
72	J-30	4,570.00	Upper Zone	0.0	4,770.50	86.7
73	J-31	4,570.00	Upper Zone	0.0	4,770.50	86.7
157	J-83	4,569.00	Upper Zone	0.0	4,770.50	87.2
52	J-17	4,568.00	Upper Zone	0.0	4,770.50	87.6
111	J-56	4,567.30	Upper Zone	0.0	4,770.50	87.9
63	Moonbeam	4,566.00	Upper Zone	0.0	4,770.50	88.5
430	J-120	4,565.00	Upper Zone	0.0	4,770.50	88.9
433	J-121	4,565.00	Upper Zone	0.0	4,770.50	88.9
467	J-131	4,565.00	Upper Zone	0.0	4,770.50	88.9
105	J-52	4,562.80	Upper Zone	0.0	4,770.50	89.9
292	J-96	4,562.70	Upper Zone	0.0	4,770.50	89.9
64	J-25	4,561.50	Upper Zone	0.0	4,770.50	90.4
289	J-95	4,555.00	Upper Zone	0.0	4,770.50	93.2
57	Des-Brid	4,554.00	Upper Zone	0.0	4,770.50	93.7
128	J-67	4,554.00	Upper Zone	0.0	4,770.50	93.7
129	J-68	4,553.00	Upper Zone	0.0	4,770.50	94.1
414	J-115	4,553.00	Upper Zone	0.0	4,770.50	94.1
85	J-39	4,552.80	Upper Zone	0.0	4,770.50	94.2
363	J-113	4,552.00	Upper Zone	0.0	4,770.50	94.5
58	J-21	4,549.00	Upper Zone	0.0	4,770.50	95.8
119	J-61	4,548.80	Upper Zone	0.0	4,770.50	95.9
123	J-64	4,548.60	Upper Zone	0.0	4,770.50	96.0
439	J-123	4,547.00	Upper Zone	0.0	4,770.50	96.7
346	J-107	4,543.70	Upper Zone	0.0	4,770.50	98.1
310	J-102	4,542.80	Upper Zone	0.0	4,770.50	98.5
122	J-63	4,542.30	Upper Zone	0.0	4,770.50	98.7
120	J-62	4,538.70	Upper Zone	0.0	4,770.50	100.3
286	J-94	4,538.00	Upper Zone	0.0	4,770.50	100.6

**GBWC 2024 IRP - Spanish Springs Division**  
**Action & Preferred (2027 & 2044) MDD+Fire Condition Distribution**  
**System Junction Report**  
**Fire Flow - Time: 0.00 hours**

Label	Zone	Satisfies Fire Flow Constraints?	Fire Flow (Needed) (gpm)	MDD (gpm)	Total Flow Needed (MDD+Fire) (gpm)	Available Flow @ 20psi Residual (gpm)	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Zone Lower Limit @ Total Flow Needed) (psi)
J-1	Lower Zone	True	1,000.0	0.0	1,000.0	2,805.1	71.4	44.0
J-2	Lower Zone	True	1,000.0	2.0	1,002.0	3,053.1	71.6	44.0
J-4	Lower Zone	True	1,000.0	0.0	1,000.0	3,500.0	55.2	44.0
J-5	Lower Zone	True	1,000.0	10.4	1,010.4	2,077.4	62.3	44.0
J-6	Lower Zone	True	1,000.0	7.1	1,007.1	1,807.0	55.6	44.0
J-7	Lower Zone	True	1,000.0	12.4	1,012.4	3,409.0	71.3	44.0
J-8	Lower Zone	True	1,000.0	0.0	1,000.0	3,045.1	60.0	44.0
J-10	Upper Zone	True	1,000.0	3.8	1,003.8	2,051.3	47.5	32.7
J-11	Lower Zone	True	1,000.0	14.5	1,014.5	3,514.5	63.3	44.0
J-12	Lower Zone	True	1,000.0	0.0	1,000.0	3,500.0	45.2	44.2
J-13	Upper Zone	True	1,000.0	0.0	1,000.0	1,950.2	41.3	33.2
J-14	Lower Zone	True	1,000.0	0.9	1,000.9	3,279.2	70.0	44.0
J-15	Lower Zone	True	1,000.0	5.5	1,005.4	1,025.8	22.1	44.1
Moon-Tranq	Upper Zone	True	1,000.0	5.3	1,005.3	2,225.5	64.1	32.7
J-17	Upper Zone	True	1,000.0	11.1	1,011.1	2,330.4	66.4	32.7
Her-Omni	Lower Zone	True	1,000.0	10.2	1,010.2	1,917.3	58.1	44.0
J-19	Lower Zone	True	1,000.0	5.3	1,005.2	1,992.4	60.8	44.0
Des-Brid	Upper Zone	True	1,000.0	3.6	1,003.6	2,243.4	70.1	32.7
J-21	Upper Zone	True	1,000.0	3.7	1,003.7	2,343.2	72.9	32.7
Her-Rockw	Lower Zone	True	1,000.0	1.0	1,001.0	2,642.5	68.7	44.0
Moonbeam	Upper Zone	True	1,000.0	9.5	1,009.5	2,072.5	64.1	32.7
J-25	Upper Zone	True	1,000.0	7.0	1,007.0	2,164.4	66.8	32.7
Ger-Tran	Upper Zone	True	1,000.0	1.2	1,001.2	1,707.5	36.8	32.8
J-27	Upper Zone	True	1,000.0	0.0	1,000.0	1,858.1	39.4	32.8
BPC-BPCT	Lower Zone	True	1,000.0	3.7	1,003.7	3,503.7	60.9	44.0
J-29	Lower Zone	True	1,000.0	1.2	1,001.2	3,501.2	62.4	44.0
J-30	Upper Zone	True	1,000.0	2.2	1,002.2	2,211.4	64.6	32.7
J-31	Upper Zone	True	1,000.0	7.8	1,007.8	2,297.1	65.4	32.7
Sun-Omni	Upper Zone	True	1,000.0	4.8	1,004.8	2,097.8	56.3	32.7
J-33	Upper Zone	True	1,000.0	8.9	1,008.9	2,243.9	59.4	32.7
Rock-Sky	Lower Zone	True	1,000.0	2.9	1,002.9	1,798.9	51.7	44.0
J-35	Lower Zone	True	1,000.0	1.0	1,001.0	1,925.7	55.8	44.0

**GBWC 2024 IRP - Spanish Springs Division**  
**Action & Preferred (2027 & 2044) MDD+Fire Condition Distribution**  
**System Junction Report**  
**Fire Flow - Time: 0.00 hours**

Label	Zone	Satisfies Fire Flow Constraints?	Fire Flow (Needed) (gpm)	MDD (gpm)	Total Flow Needed (MDD+Fire) (gpm)	Available Flow @ 20psi Residual (gpm)	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Zone Lower Limit @ Total Flow Needed) (psi)
OMN-SKYR	Lower Zone	True	1,000.0	4.5	1,004.5	2,814.2	61.2	44.0
J-37	Lower Zone	True	1,000.0	2.5	1,002.5	3,162.3	64.9	44.0
J-38	Lower Zone	True	1,000.0	0.0	1,000.0	3,500.0	52.7	43.9
J-39	Upper Zone	True	1,000.0	14.1	1,014.1	1,795.8	63.0	32.7
J-40	Lower Zone	True	1,000.0	4.8	1,004.8	1,245.8	35.0	30.7
j-40	Lower Zone	True	1,000.0	12.7	1,012.7	1,028.1	21.2	35.0
J-42	Upper Zone	True	1,000.0	6.3	1,006.3	2,043.1	46.2	32.7
J-43	Upper Zone	True	1,000.0	8.7	1,008.7	1,349.1	34.2	32.7
J-44	Lower Zone	True	1,000.0	7.7	1,007.7	2,005.5	54.4	44.0
J-45	Lower Zone	True	1,000.0	9.5	1,009.5	3,509.5	62.7	44.0
J-46	Upper Zone	True	1,000.0	18.6	1,018.6	2,159.0	53.3	32.7
J-47	Upper Zone	True	1,000.0	9.4	1,009.4	1,469.6	41.7	32.7
J-48	Lower Zone	True	1,000.0	6.3	1,006.3	3,506.3	57.8	44.0
J-49	Lower Zone	True	1,000.0	7.5	1,007.5	1,741.9	45.3	44.0
J-50	Lower Zone	True	1,000.0	5.1	1,005.1	1,824.4	49.5	44.0
J-51	Lower Zone	True	1,000.0	0.0	1,000.0	3,500.0	43.9	45.2
J-52	Upper Zone	True	1,000.0	9.9	1,009.9	1,472.7	51.1	32.7
J-53	Upper Zone	True	1,000.0	20.5	1,020.5	2,261.4	59.6	32.7
J-54	Upper Zone	True	1,000.0	16.8	1,016.8	1,517.2	46.3	32.7
J-55	Upper Zone	True	1,000.0	8.7	1,008.7	1,573.5	52.6	32.7
J-56	Upper Zone	True	1,000.0	23.8	1,023.8	2,346.9	66.7	32.7
J-57	Lower Zone	True	1,000.0	7.5	1,007.5	1,674.2	48.4	44.0
J-58	Lower Zone	True	1,000.0	12.4	1,012.4	3,512.4	60.1	44.0
J-59	Upper Zone	True	1,000.0	4.0	1,004.0	1,842.6	39.0	32.7
J-60	Upper Zone	False	1,000.0	15.5	1,015.5	962.3	17.6	37.6
J-61	Upper Zone	True	1,000.0	10.4	1,010.4	2,351.9	73.0	32.7
J-62	Upper Zone	True	1,000.0	12.7	1,012.7	1,631.1	62.3	32.7
J-63	Upper Zone	True	1,000.0	21.4	1,021.4	1,620.1	60.6	32.7
J-64	Upper Zone	True	1,000.0	19.7	1,019.7	2,375.4	73.2	32.7
J-65	Lower Zone	True	1,000.0	15.5	1,015.5	2,680.1	69.0	44.0
J-66	Lower Zone	True	1,000.0	9.7	1,009.7	3,291.1	70.7	44.0
J-67	Upper Zone	True	1,000.0	10.4	1,010.4	1,493.7	53.8	32.7
J-68	Upper Zone	True	1,000.0	20.1	1,020.1	2,371.3	71.7	32.7
J-69	Lower Zone	True	1,000.0	6.9	1,006.9	2,327.9	68.2	44.0
J-71	Lower Zone	True	1,000.0	9.2	1,009.2	3,201.3	72.6	44.0
J-72	Lower Zone	True	1,000.0	9.6	1,009.6	2,568.5	65.9	44.0
J-73	Lower Zone	True	1,000.0	4.1	1,004.1	1,528.7	49.9	44.0
J-74	Lower Zone	True	1,000.0	8.1	1,008.1	2,824.4	69.9	44.0
J-75	Lower Zone	True	1,000.0	5.2	1,005.2	1,469.0	45.2	44.0

**GBWC 2024 IRP - Spanish Springs Division**  
**Action & Preferred (2027 & 2044) MDD+Fire Condition Distribution**  
**System Junction Report**  
**Fire Flow - Time: 0.00 hours**

Label	Zone	Satisfies Fire Flow Constraints?	Fire Flow (Needed) (gpm)	MDD (gpm)	Total Flow Needed (MDD+Fire) (gpm)	Available Flow @ 20psi Residual (gpm)	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Zone Lower Limit @ Total Flow Needed) (psi)
J-76	Lower Zone	True	1,000.0	8.8	1,008.8	2,426.5	63.4	44.0
J-77	Lower Zone	True	1,000.0	14.1	1,014.1	2,011.3	60.9	44.0
J-78	Lower Zone	True	1,000.0	3.3	1,003.3	1,366.1	42.7	44.0
J-79	Lower Zone	False	1,000.0	2.0	1,002.0	997.8	19.7	30.7
J-80	Lower Zone	True	1,000.0	6.9	1,006.9	3,506.9	57.7	44.0
J-81	Upper Zone	True	1,000.0	18.1	1,018.1	2,190.8	55.0	32.7
J-82	Upper Zone	True	1,000.0	10.8	1,010.8	2,241.2	59.0	32.7
J-83	Upper Zone	True	1,000.0	4.7	1,004.7	2,301.4	65.8	32.7
J-85	Lower Zone	True	1,000.0	1.4	1,001.4	2,922.0	71.7	44.0
J-87	Lower Zone	True	1,000.0	2.0	1,002.0	2,803.2	71.4	44.0
J-88	Lower Zone	True	1,000.0	17.8	1,017.8	1,929.9	57.8	44.0
J-89	Lower Zone	True	1,000.0	13.5	1,013.5	3,506.8	69.3	44.0
J-90	Lower Zone	True	1,000.0	0.0	1,000.0	1,937.3	56.0	44.0
J-91	Lower Zone	True	1,000.0	3.6	1,003.6	3,503.6	66.8	44.0
J-92	Lower Zone	True	1,000.0	0.0	1,000.0	3,500.0	49.1	43.9
J-94	Upper Zone	True	1,000.0	13.5	1,013.5	2,274.8	75.7	32.7
J-95	Upper Zone	True	1,000.0	10.4	1,010.4	2,371.6	71.1	32.7
J-96	Upper Zone	True	1,000.0	10.7	1,010.7	1,837.0	61.1	32.7
J-100	Lower Zone	True	1,000.0	0.0	1,000.0	3,500.0	53.5	44.0
J-101	Lower Zone	True	1,000.0	0.0	1,000.0	3,500.0	48.6	43.9
J-102	Upper Zone	True	1,000.0	14.4	1,014.4	2,424.9	75.8	32.7
Well SS-6	Lower Zone	True	1,000.0	5.1	1,005.1	2,672.7	67.8	44.1
J-104	Lower Zone	True	1,000.0	0.0	1,000.0	2,885.4	68.4	44.1
Well SS1A	Lower Zone	True	1,000.0	5.3	1,005.3	2,890.6	60.8	44.1
J-107	Upper Zone	True	1,000.0	7.9	1,007.9	2,291.3	74.1	32.7
J-109	Lower Zone	True	1,000.0	0.0	1,000.0	2,493.4	69.2	44.0
J-110	Lower Zone	True	1,000.0	0.0	1,000.0	2,293.6	67.3	44.0
J-111	Lower Zone	True	1,000.0	0.0	1,000.0	3,500.0	59.8	44.0
Tra-Omni	Upper Zone	True	1,000.0	7.5	1,007.5	1,830.7	44.3	32.7
J-113	Upper Zone	True	1,000.0	3.3	1,003.3	2,360.2	72.1	32.7
J-115	Upper Zone	True	1,000.0	4.2	1,004.2	2,343.7	71.6	32.7
J-117	Upper Zone	True	1,000.0	12.4	1,012.4	2,103.4	54.5	32.7
J-118	Upper Zone	True	1,000.0	11.4	1,011.4	2,155.4	60.3	32.7
J-119	Upper Zone	True	1,000.0	10.6	1,010.6	2,016.9	57.4	32.7
J-120	Upper Zone	True	1,000.0	19.0	1,019.0	2,193.5	65.8	32.7
J-121	Upper Zone	True	1,000.0	23.0	1,023.0	2,195.2	65.8	32.7
J-122	Upper Zone	True	1,000.0	21.5	1,021.4	2,317.7	64.0	32.7

**GBWC 2024 IRP - Spanish Springs Division**  
**Action & Preferred (2027 & 2044) MDD+Fire Condition Distribution**  
**System Junction Report**  
 Fire Flow - Time: 0.00 hours

Label	Zone	Satisfies Fire Flow Constraints?	Fire Flow (Needed) (gpm)	MDD (gpm)	Total Flow Needed (MDD+Fire) (gpm)	Available Flow @ 20psi Residual (gpm)	Pressure (Calculated Residual @ Total Flow Needed) (psi)	Pressure (Calculated Zone Lower Limit @ Total Flow Needed) (psi)
J-123	Upper Zone	True	1,000.0	19.3	1,019.2	2,379.3	73.8	32.7
J-124	Upper Zone	True	1,000.0	15.2	1,015.2	2,170.7	53.3	32.7
J-125	Lower Zone	True	1,000.0	11.8	1,011.8	3,511.8	57.8	44.0
J-126	Lower Zone	True	1,000.0	9.3	1,009.3	2,926.2	50.6	44.0
J-127	Lower Zone	True	1,000.0	13.8	1,013.8	1,963.5	55.0	44.0
J-128	Lower Zone	True	1,000.0	6.7	1,006.6	2,315.2	60.8	44.0
J-129	Lower Zone	True	1,000.0	5.6	1,005.6	2,203.4	62.4	44.0
J-130	Lower Zone	True	1,000.0	6.0	1,006.0	2,286.1	63.3	44.0
J-131	Upper Zone	True	1,000.0	0.0	1,000.0	2,035.0	64.0	32.7
J-132	Lower Zone	True	1,000.0	0.0	1,000.0	2,364.4	66.4	44.0
J-133	Lower Zone	True	1,000.0	0.0	1,000.0	2,161.5	61.0	44.0



**GBWC 2024 IRP - Spanish Springs Division**  
**Action & Preferred (2027 & 2044) PHD Condition Distribution System**  
**Junction Report**  
**PHD-NODES - Time: 0.00 hours**

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
104	J-51	4,565.50	Lower Zone	0.0	4,669.80	45.1
117	J-60	4,658.90	Upper Zone	27.1	4,755.30	41.7
44	J-12	4,562.70	Lower Zone	0.0	4,669.59	46.2
66	Ger-Tran	4,648.00	Upper Zone	2.1	4,755.46	46.5
306	J-101	4,554.50	Lower Zone	0.0	4,670.01	50.0
281	J-92	4,553.00	Lower Zone	0.0	4,670.35	50.8
116	J-59	4,644.40	Upper Zone	7.1	4,755.34	48.0
67	J-27	4,643.80	Upper Zone	0.0	4,755.46	48.3
46	J-13	4,640.30	Upper Zone	0.0	4,755.85	50.0
84	J-38	4,543.70	Lower Zone	0.0	4,670.05	54.7
448	J-126	4,544.40	Lower Zone	16.4	4,670.10	54.4
303	J-100	4,542.80	Lower Zone	0.0	4,670.66	55.3
91	J-43	4,631.10	Upper Zone	15.2	4,754.35	53.3
29	J-4	4,537.50	Lower Zone	0.0	4,670.07	57.4
100	J-49	4,535.70	Lower Zone	13.1	4,672.02	59.0
90	J-42	4,625.40	Upper Zone	11.0	4,754.36	55.8
361	Tra-Omni	4,623.90	Upper Zone	13.1	4,753.81	56.2
150	J-80	4,531.30	Lower Zone	12.2	4,670.10	60.1
445	J-125	4,531.30	Lower Zone	20.6	4,670.47	60.2
99	J-48	4,532.00	Lower Zone	11.0	4,672.03	60.6
39	J-10	4,620.90	Upper Zone	6.7	4,753.81	57.5
88	j-40	4,529.00	Lower Zone	22.2	4,670.01	61.0
114	J-58	4,525.30	Lower Zone	21.6	4,670.30	62.7
356	J-111	4,527.00	Lower Zone	0.0	4,672.86	63.1
102	J-50	4,525.70	Lower Zone	8.9	4,672.03	63.3
69	BPC-BPCT	4,523.00	Lower Zone	6.5	4,670.21	63.7
36	J-8	4,523.00	Lower Zone	0.0	4,672.86	64.8
70	J-29	4,519.70	Lower Zone	2.1	4,670.21	65.1
94	J-45	4,519.00	Lower Zone	16.6	4,670.21	65.4
42	J-11	4,518.50	Lower Zone	25.3	4,670.14	65.6
87	J-40	4,519.00	Lower Zone	8.3	4,670.03	65.3
113	J-57	4,518.00	Lower Zone	13.2	4,670.29	65.9
97	J-47	4,607.80	Upper Zone	16.5	4,752.72	62.7
93	J-44	4,515.50	Lower Zone	13.5	4,670.20	66.9
324	Well SS1A	4,523.00	Lower Zone	9.3	4,679.41	67.7
81	OMN-SKYR	4,515.00	Lower Zone	7.8	4,670.14	67.1
442	J-124	4,605.00	Upper Zone	26.6	4,753.24	64.1
78	Rock-Sky	4,515.00	Lower Zone	5.1	4,670.14	67.1
147	J-79	4,514.00	Lower Zone	3.6	4,670.03	67.5
96	J-46	4,604.00	Upper Zone	32.6	4,752.74	64.4
451	J-127	4,512.00	Lower Zone	24.2	4,670.13	68.4
141	J-75	4,510.50	Lower Zone	9.1	4,670.14	69.1
153	J-81	4,599.70	Upper Zone	31.8	4,752.66	66.2

**GBWC 2024 IRP - Spanish Springs Division**  
**Action & Preferred (2027 & 2044) PHD Condition Distribution System**  
**Junction Report**  
**PHD-NODES - Time: 0.00 hours**

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
82	J-37	4,509.00	Lower Zone	4.4	4,670.14	69.7
422	J-117	4,599.00	Upper Zone	21.7	4,752.68	66.5
268	J-91	4,508.00	Lower Zone	6.4	4,670.15	70.2
79	J-35	4,508.00	Lower Zone	1.7	4,670.14	70.2
259	J-90	4,508.00	Lower Zone	0.0	4,670.14	70.2
454	J-128	4,507.00	Lower Zone	11.6	4,670.21	70.6
146	J-78	4,505.00	Lower Zone	5.8	4,670.14	71.4
75	Sun-Omni	4,592.60	Upper Zone	8.5	4,752.02	69.0
143	J-76	4,502.00	Lower Zone	15.3	4,670.22	72.8
32	J-6	4,502.00	Lower Zone	12.3	4,670.23	72.8
477	J-133	4,502.00	Lower Zone	0.0	4,670.27	72.8
248	J-89	4,500.80	Lower Zone	23.6	4,670.20	73.3
108	J-54	4,590.70	Upper Zone	29.4	4,751.99	69.8
245	J-88	4,500.80	Lower Zone	31.1	4,670.14	73.3
54	Her-Omni	4,500.00	Lower Zone	17.9	4,670.23	73.7
457	J-129	4,499.00	Lower Zone	9.8	4,670.31	74.1
460	J-130	4,499.00	Lower Zone	10.5	4,670.34	74.1
155	J-82	4,588.40	Upper Zone	18.9	4,752.05	70.8
137	J-73	4,498.00	Lower Zone	7.2	4,670.15	74.5
135	J-72	4,498.00	Lower Zone	16.8	4,670.23	74.5
76	J-33	4,587.30	Upper Zone	15.6	4,752.02	71.3
49	J-15	4,500.00	Lower Zone	9.6	4,672.93	74.8
315	J-104	4,500.00	Lower Zone	0.0	4,672.95	74.8
48	J-14	4,498.00	Lower Zone	1.5	4,670.70	74.7
107	J-53	4,587.00	Upper Zone	35.9	4,752.02	71.4
428	J-119	4,586.00	Upper Zone	18.6	4,752.02	71.8
314	Well SS-6	4,500.00	Lower Zone	8.9	4,675.20	75.8
126	J-66	4,496.00	Lower Zone	17.0	4,670.67	75.6
144	J-77	4,495.00	Lower Zone	24.6	4,670.15	75.8
34	J-7	4,495.00	Lower Zone	21.7	4,670.33	75.9
55	J-19	4,495.00	Lower Zone	9.2	4,670.23	75.8
31	J-5	4,494.00	Lower Zone	18.1	4,670.24	76.3
425	J-118	4,582.00	Upper Zone	19.9	4,752.02	73.6
60	Her-Rockw	4,492.50	Lower Zone	1.7	4,670.50	77.0
139	J-74	4,492.00	Lower Zone	14.2	4,670.31	77.1
474	J-132	4,492.00	Lower Zone	0.0	4,670.27	77.1
125	J-65	4,492.00	Lower Zone	27.1	4,670.47	77.2
26	J-2	4,491.00	Lower Zone	3.5	4,670.51	77.7
134	J-71	4,490.00	Lower Zone	16.2	4,670.54	78.1
160	J-85	4,489.00	Lower Zone	2.4	4,670.50	78.5
162	J-87	4,488.00	Lower Zone	3.6	4,670.50	79.0
25	J-1	4,488.00	Lower Zone	0.0	4,670.50	79.0
352	J-109	4,488.00	Lower Zone	0.0	4,670.50	79.0

**GBWC 2024 IRP - Spanish Springs Division**  
**Action & Preferred (2027 & 2044) PHD Condition Distribution System**  
**Junction Report**  
**PHD-NODES - Time: 0.00 hours**

ID	Label	Elevation (ft)	Zone	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
354	J-110	4,488.00	Lower Zone	0.0	4,670.50	79.0
131	J-69	4,486.00	Lower Zone	12.0	4,670.48	79.8
436	J-122	4,575.00	Upper Zone	37.5	4,751.68	76.4
51	Moon-Tranq	4,572.00	Upper Zone	9.3	4,751.35	77.6
110	J-55	4,571.40	Upper Zone	15.2	4,751.32	77.8
72	J-30	4,570.00	Upper Zone	3.9	4,751.31	78.4
73	J-31	4,570.00	Upper Zone	13.7	4,751.31	78.4
157	J-83	4,569.00	Upper Zone	8.3	4,751.29	78.9
52	J-17	4,568.00	Upper Zone	19.4	4,751.35	79.3
111	J-56	4,567.30	Upper Zone	41.7	4,751.33	79.6
63	Moonbeam	4,566.00	Upper Zone	16.7	4,751.26	80.2
430	J-120	4,565.00	Upper Zone	33.3	4,751.27	80.6
433	J-121	4,565.00	Upper Zone	40.3	4,751.26	80.6
467	J-131	4,565.00	Upper Zone	0.0	4,751.10	80.5
105	J-52	4,562.80	Upper Zone	17.3	4,751.08	81.5
292	J-96	4,562.70	Upper Zone	18.8	4,751.10	81.5
64	J-25	4,561.50	Upper Zone	12.2	4,751.26	82.1
289	J-95	4,555.00	Upper Zone	18.2	4,751.11	84.8
57	Des-Brid	4,554.00	Upper Zone	6.4	4,751.05	85.3
128	J-67	4,554.00	Upper Zone	18.3	4,751.10	85.3
129	J-68	4,553.00	Upper Zone	35.3	4,751.12	85.7
414	J-115	4,553.00	Upper Zone	7.4	4,751.08	85.7
85	J-39	4,552.80	Upper Zone	24.7	4,751.07	85.8
363	J-113	4,552.00	Upper Zone	5.8	4,751.09	86.1
58	J-21	4,549.00	Upper Zone	6.5	4,751.05	87.4
119	J-61	4,548.80	Upper Zone	18.1	4,751.05	87.5
123	J-64	4,548.60	Upper Zone	34.5	4,751.06	87.6
439	J-123	4,547.00	Upper Zone	33.7	4,751.05	88.3
346	J-107	4,543.70	Upper Zone	13.8	4,751.09	89.7
310	J-102	4,542.80	Upper Zone	25.2	4,751.06	90.1
122	J-63	4,542.30	Upper Zone	37.5	4,750.98	90.3
120	J-62	4,538.70	Upper Zone	22.2	4,751.02	91.9
286	J-94	4,538.00	Upper Zone	23.7	4,751.09	92.2

**GBWC 2024 IRP - Spanish Springs Division**  
**Action & Preferred (2027 & 2044) PHD Condition Distribution System**  
**Pipe Report**  
**PHD-PIPES - Time: 0.00 hours**

Label	Length (Scaled) (ft)	Diameter (in)	Material	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Hazen-Williams C
P-24	490.11	12.0	PVC	411.3	1.17	0.21	140.0
P-129	479.78	12.0	PVC	411.3	1.17	0.20	140.0
P-125	472.44	10.0	PVC	323.9	1.32	0.31	140.0
P-128	507.91	10.0	PVC	323.9	1.32	0.34	140.0
P-152	456.11	10.0	PVC	555.2	2.27	0.82	140.0
P-124	850.78	10.0	PVC	522.2	2.13	1.37	140.0
P-103	790.46	10.0	PVC	-37.1	0.15	0.01	140.0
P-69	344.79	10.0	PVC	-87.4	0.36	0.02	140.0
P-70	441.70	10.0	PVC	-87.4	0.36	0.03	140.0
P-130	720.46	10.0	PVC	-87.4	0.36	0.04	140.0
P-104	691.08	10.0	PVC	-103.5	0.42	0.06	140.0
P-36	864.87	10.0	PVC	-79.2	0.32	0.04	140.0
P-88	874.57	10.0	PVC	-143.2	0.58	0.13	140.0
P-10	967.11	10.0	PVC	240.6	0.98	0.37	140.0
P-99	688.83	6.0	PVC	32.3	0.37	0.08	140.0
P-192	832.07	6.0	PVC	10.5	0.12	0.01	140.0
P-193	886.99	6.0	PVC	-13.7	0.16	0.02	140.0
P-190	736.59	8.0	PVC	-20.4	0.13	0.01	140.0
P-191	986.91	8.0	PVC	-36.7	0.23	0.03	140.0
P-60	105.38	10.0	PVC	-222.7	0.91	0.04	140.0
P-198	709.31	6.0	PVC	53.3	0.60	0.20	140.0
P-199	590.51	6.0	PVC	42.8	0.49	0.11	140.0
P-196	863.51	6.0	PVC	47.9	0.54	0.20	140.0
P-197	573.18	6.0	PVC	38.1	0.43	0.09	140.0
P-194	614.49	6.0	PVC	16.5	0.19	0.02	140.0
P-195	607.04	6.0	PVC	4.8	0.05	0.00	140.0
P-32	1,055.69	6.0	PVC	38.1	0.43	0.16	140.0
P-89	572.95	6.0	PVC	-58.9	0.67	0.20	140.0
P-59	847.96	10.0	PVC	-146.8	0.60	0.13	140.0
P-19	995.01	6.0	PVC	42.0	0.48	0.18	140.0
P-84	625.52	6.0	PVC	-10.2	0.12	0.01	140.0
P-86	1,229.61	6.0	PVC	20.9	0.24	0.06	140.0
P-92	662.61	8.0	PVC	33.7	0.22	0.02	140.0
P-33	645.15	10.0	PVC	-77.4	0.32	0.03	140.0
P-55	902.68	10.0	PVC	-104.1	0.43	0.07	140.0
P-66	616.49	10.0	PVC	-142.8	0.58	0.09	140.0
P-188	748.62	10.0	PVC	-177.7	0.73	0.16	140.0
P-189	716.46	10.0	PVC	-198.2	0.81	0.19	140.0
P-17	565.19	6.0	PVC	-9.5	0.11	0.01	140.0
P-21	592.19	6.0	PVC	-18.3	0.21	0.02	140.0
P-31	845.46	6.0	PVC	6.3	0.07	0.00	140.0
P-2	570.17	10.0	PVC	-26.0	0.11	0.00	140.0
P-186	626.57	10.0	PVC	410.5	1.68	0.57	150.0

**GBWC 2024 IRP - Spanish Springs Division**  
**Action & Preferred (2027 & 2044) PHD Condition Distribution System**  
**Pipe Report**  
**PHD-PIPES - Time: 0.00 hours**

Label	Length (Scaled) (ft)	Diameter (in)	Material	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Hazen-Williams C
P-187	718.55	10.0	PVC	384.0	1.57	0.58	150.0
P-4	870.42	10.0	PVC	-484.1	1.98	1.07	150.0
P-37	745.38	10.0	PVC	388.9	1.59	0.61	150.0
P-78	917.83	10.0	PVC	-376.7	1.54	0.71	150.0
P-180	655.53	8.0	PVC	44.1	0.28	0.03	140.0
P-181	769.96	8.0	PVC	3.8	0.02	0.00	140.0
P-179	658.22	8.0	PVC	-58.4	0.37	0.05	140.0
P-178	663.87	8.0	PVC	-25.1	0.16	0.01	140.0
P-182	613.93	10.0	PVC	311.7	1.27	0.33	150.0
P-183	856.08	10.0	PVC	274.2	1.12	0.37	150.0
P-77	1,268.45	10.0	PVC	-307.1	1.25	0.67	150.0
P-175	847.69	8.0	PVC	34.3	0.22	0.03	140.0
P-176	990.54	8.0	PVC	-4.2	0.03	0.00	140.0
P-173	552.49	8.0	PVC	-36.7	0.23	0.02	140.0
P-174	645.67	8.0	PVC	-58.4	0.37	0.05	140.0
P-119	720.32	10.0	PVC	-204.1	0.83	0.18	150.0
P-167	413.54	10.0	PVC	-74.5	0.30	0.02	140.0
P-185	624.86	10.0	PVC	15.6	0.06	0.00	150.0
P-184	631.05	10.0	PVC	49.3	0.20	0.01	150.0
P-79	727.45	10.0	PVC	-37.6	0.15	0.01	150.0
P-80	811.79	10.0	PVC	-109.6	0.45	0.06	150.0
P-62	1,257.92	10.0	PVC	-163.1	0.67	0.21	150.0
P-206	4,931.65	12.0	PVC	-977.1	2.77	11.97	130.0
P-58	163.50	12.0	PVC	-977.1	2.77	0.40	130.0
P-41	565.16	12.0	PVC	-940.8	2.67	0.98	150.0
P-15	335.41	12.0	PVC	-914.5	2.59	0.55	150.0
P-20	344.00	6.0	PVC	7.2	0.08	0.00	140.0
P-203	470.02	8.0	PVC	57.6	0.37	0.04	140.0
P-204	443.47	8.0	PVC	57.6	0.37	0.04	140.0
P-47	879.65	6.0	PVC	34.1	0.39	0.11	140.0
P-200	397.91	8.0	PVC	36.1	0.23	0.01	140.0
P-114	333.43	6.0	PVC	22.2	0.25	0.02	140.0
P-48	624.91	6.0	PVC	3.6	0.04	0.00	140.0
P-27	431.77	6.0	PVC	-15.2	0.17	0.01	140.0
P-16	526.92	6.0	PVC	22.2	0.25	0.03	140.0
P-115	346.70	6.0	PVC	-13.5	0.15	0.01	140.0
P-23	611.83	6.0	PVC	-18.3	0.21	0.02	140.0
P-38	525.32	6.0	PVC	27.1	0.31	0.04	140.0
P-146	249.47	6.0	PVC	24.7	0.28	0.02	140.0
P-18	526.49	6.0	PVC	-37.5	0.43	0.08	140.0
P-202	422.64	6.0	Ductile Iron	17.3	0.20	0.02	130.0
P-118	392.25	6.0	PVC	-8.9	0.10	0.00	140.0
P-35	335.44	6.0	PVC	15.2	0.17	0.01	140.0

**GBWC 2024 IRP - Spanish Springs Division**  
**Action & Preferred (2027 & 2044) PHD Condition Distribution System**  
**Pipe Report**  
 PHD-PIPES - Time: 0.00 hours

Label	Length (Scaled) (ft)	Diameter (in)	Material	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Hazen-Williams C
P-34	351.99	6.0	PVC	16.5	0.19	0.01	140.0
P-14	384.58	6.0	PVC	13.1	0.15	0.01	140.0
P-148	774.36	10.0	PVC	-62.2	0.25	0.02	140.0
P-29	431.56	10.0	PVC	39.5	0.16	0.01	140.0
P-95	518.14	6.0	PVC	-5.8	0.07	0.00	140.0
P-28	402.43	6.0	PVC	29.4	0.33	0.04	140.0
P-100	345.14	6.0	PVC	9.1	0.10	0.00	140.0
P-116	523.05	6.0	PVC	-13.2	0.15	0.01	140.0
P-150	272.24	8.0	PVC	0.0	0.00	0.00	140.0
P-201	540.87	8.0	PVC	18.8	0.12	0.01	140.0
P-1	305.80	10.0	PVC	0.0	0.00	0.00	140.0
P-149	948.13	10.0	PVC	0.0	0.00	0.00	140.0
P-151	679.54	10.0	PVC	0.0	0.00	0.00	140.0
P-147	342.20	10.0	PVC	-23.7	0.10	0.00	140.0
P-30	939.81	10.0	PVC	12.3	0.05	0.00	140.0

APPENDIX I  
Capital Improvement Projects

***Great Basin Water Company – Pahrump Division (Volume II)***

Capital Improvement Projects



**GBWC-PD 2024 CONSOLIDATED INTEGRATED RESOURCE PLAN  
CAPITAL IMPROVEMENT PROJECT LIST**

<b>GBWC-PD ACTION PLAN PROJECTS</b>
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***CIP Year 2025***

Time Frame	Project Description	Cost
Jun 2025 thru Dec 2026	New Well in High Zone at Well 13 Property	
	Mobilization	\$ 80,000
	Production well drilling and construction	\$ 911,300
	Discharge Assembly Tie into existing infrastructure	\$ 60,000
	Well House & Site Improvements	\$ 300,000
	Generator	\$ 135,000
	Electrical and Controls	\$ 200,000
	<i>Subtotal</i>	<i>\$ 1,686,300</i>
	Design	\$ 145,000
	Permitting	\$ 15,000
	Survey	\$ 8,000
	Geotech	\$ 10,000
	Construction Management	\$ 110,000
	Testing & Inspection	\$ 110,000
	GBWC Internal Capital Time	\$ 45,390
	Contingency (20%)	\$ 422,908
	<b>Total Project Cost</b>	<b>\$ 2,552,598</b>

**GBWC-PD 2024 CONSOLIDATED INTEGRATED RESOURCE PLAN  
CAPITAL IMPROVEMENT PROJECT LIST**

<b>GBWC-PD ACTION PLAN PROJECTS</b>
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**CIP YEAR 2026**

Time Frame	Project Description	Cost
Jan 2026 thru Dec 2026	<b>WWTP-3 Influent Pre-EQ Building, Repair Tanks</b>	
	Mobilization	\$ 100,000
	Temporary Bypass (Max Influent Flow = 1.5 MGD)	\$ 100,000
	Prep & Lining of EQ Basins (63'-6"x17' Tank, 55'-6"x17' Tank, 13' Deep Walls)	\$ 650,000
	Misc. Metal Piping Replacement (Pipe Supports, Process Pipe Runs)	\$ 100,000
	Section Replacement/Rehabilitation of Building (Wall, Doors, Hardware) and Concrete Walkways -	\$ 500,000
	<i>Subtotal</i>	<i>\$ 1,450,000</i>
	Structural Inspection	\$ 15,000
	Engineering Services During Design	\$ 100,000
	Construction Management	\$ 50,000
	Testing & Inspection	\$ 50,000
	GBWC Internal Capital Time	\$ 82,737
	Contingency (25%)	\$ 436,934
	<b>Total Project Cost</b>	<b>\$ 2,184,671</b>
Jan 2026 thru Dec 2026	<b>OR WWTP-3 Convert Marwood Digester Tanks to Pre-EQ Basin</b>	
	Mobilization	\$ 100,000
	Abandon/Demolish Existing Concrete Tanks	\$ 200,000
	Prep & Line Marwood Digester Tanks/Existing WAS Tank (73'x17' Tank, 55'-6"x17' Tank, 13' Deep Walls)	\$ 808,000
	Reconfiguration of Process Piping	\$ 500,000
	Building for New Pre-EQ Basin	\$ 640,000
	New Lift Station	\$ 1,200,000
	HVAC, Mechanical, Pumping Systems	\$ 300,000
	Electrical & Control Improvements	\$ 535,000
	<i>Subtotal</i>	<i>\$ 4,283,000</i>
	Design	\$ 428,000
	Survey	\$ 15,000
	Geotech	\$ 10,000
	Construction Management	\$ 214,000
	Testing & Inspection	\$ 214,000
	GBWC Internal Capital Time	\$ 82,737
	Contingency (25%)	\$ 1,311,684
	<b>Total Project Cost</b>	<b>\$ 6,558,421</b>
Jun 2026 thru Dec 2027	<b>Pipeline from Mesquite Booster Station (Ave of the Stars) to Calvada Meadows</b>	
	Mobilization	\$ 30,000
	Traffic Control	\$ 9,000
	12" Transmission Main, Valves, and Fittings (9,600 LF) w/Pressure Reducing Station	\$ 1,903,030
	Tie In to Existing Mains	\$ 10,000
	<i>Subtotal</i>	<i>\$ 1,952,030</i>
	Design	\$ 107,000
	Survey	\$ 15,000
	Geotech	\$ 12,000
	Construction Management	\$ 93,625
	Testing & Inspection	\$ 128,000
	GBWC Internal Capital Time	\$ 45,390
	Contingency (20%)	\$ 344,675
	<b>Total Project Cost</b>	<b>\$ 2,697,720</b>
Jun 2026 thru Dec 2027	<b>OR Pipeline from Country View Estates to Calvada Meadows</b>	
	Mobilization	\$ 60,000
	Traffic Control	\$ 18,000
	12" Transmission Main, Valves, and Fittings (14,450 LF) w/Pressure Reducing Station	\$ 2,678,570
	Tie In to Existing Mains	\$ 10,000
	<i>Subtotal</i>	<i>\$ 2,766,570</i>
	Design	\$ 277,000
	Survey	\$ 18,000
	Geotech	\$ 15,000
	Construction Management	\$ 138,000
	Testing & Inspection	\$ 138,000
	GBWC Internal Capital Time	\$ 45,390
	Contingency (20%)	\$ 679,592
	<b>Total Project Cost</b>	<b>\$ 4,077,552</b>
Jun 2025 thru Dec 2026	<b>Sand Filter Rehab</b>	
	Mobilization	\$ 37,250
	Cleaning, Blasting, Coating, and Repair of Sand Filter Tanks	\$ 480,000
	Sand Filter Media Replacement	\$ 100,000
	Replace Gearbox Motors (New Style)	\$ 165,000
	<i>Subtotal</i>	<i>\$ 782,250</i>
	Design	\$ 39,200
	Construction Management	\$ 39,200
	Testing & Inspection	\$ 39,200
	GBWC Internal Capital Time	\$ 30,452
	Contingency (20%)	\$ 156,450
	<b>Total Project Cost</b>	<b>\$ 1,086,752</b>

GBWC-PD 2024 CONSOLIDATED INTEGRATED RESOURCE PLAN  
CAPITAL IMPROVEMENT PROJECT LIST

GBWC-PD ACTION PLAN PROJECTS
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***CIP YEAR 2027***

*No Proposed Projects in 2027*

GBWC-PD 2024 CONSOLIDATED INTEGRATED RESOURCE PLAN  
CAPITAL IMPROVEMENT PROJECT LIST

GBWC-PD PREFERRED PLAN PROJECTS
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***CIP YEAR 2028***

Time Frame	Project Description	2023 Cost
2028	Well Replacement (Well-9, Calvada North Well or Other Wells etc.)	
	Total Project Cost (Lump Sum Budget)	\$ 800,000
2028	New location for High Zone Booster Station	
	Total Project Cost (Lump Sum Budget)	\$ 666,667
2028	Pipeline Improvement Projects	
	Total Project Cost (Lump Sum Budget)	\$ 1,000,000
2028	New Office	
	Total Project Cost (Lump Sum Budget)	\$ 750,000
2028	WWTP Infrastructure Rehabilitation / Replacement	
	Total Project Cost (Lump Sum Budget)	\$ 500,000
2028	On-Site Hypochlorite Generation Systems	
	Total Project Cost (Lump Sum Budget)	\$ 537,044
2028	Collection System Refurbish / Replacement	
	Total Project Cost (Lump Sum Budget)	\$ 500,000
<b>TOTAL CIP YEAR 2028</b>		<b>\$ 4,753,711</b>

GBWC-PD 2024 CONSOLIDATED INTEGRATED RESOURCE PLAN  
CAPITAL IMPROVEMENT PROJECT LIST

<b>GBWC-PD PREFERRED PLAN PROJECTS</b>
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***CIP YEAR 2029***

Time Frame	Project Description	2023 Cost
2029	Well Replacement (Well-9, Calvada North Well or Other Wells etc.)	
	Total Project Cost (Lump Sum Budget)	\$ 800,000
2029	New location for High Zone Booster Station	
	Total Project Cost (Lump Sum Budget)	\$ 666,667
2029	Pipeline Improvement Projects	
	Total Project Cost (Lump Sum Budget)	\$ 1,000,000
2029	New Office	
	Total Project Cost (Lump Sum Budget)	\$ 750,000
2029	WWTP Infrastructure Rehabilitation / Replacement	
	Total Project Cost (Lump Sum Budget)	\$ 500,000
2029	On-Site Hypochlorite Generation Systems	
	Total Project Cost (Lump Sum Budget)	\$ 537,044
2029	Collection System Refurbish / Replacement	
	Total Project Cost (Lump Sum Budget)	\$ 500,000
2029	AMI Installation	
	Total Project Cost (Lump Sum Budget)	\$ 463,650
<b>TOTAL CIP YEAR 2029</b>		<b>\$ 5,217,361</b>

**GBWC-PD 2024 CONSOLIDATED INTEGRATED RESOURCE PLAN  
CAPITAL IMPROVEMENT PROJECT LIST**

<b>GBWC-PD PREFERRED PLAN PROJECTS</b>
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***CIP YEAR 2030***

Time Frame	Project Description	2023 Cost
2030	New location for High Zone Booster Station	
	Total Project Cost (Lump Sum Budget)	\$ 666,667
<hr/>		
2030	Pipeline Improvement Projects	
	Total Project Cost (Lump Sum Budget)	\$ 1,000,000
<hr/>		
2030	WWTP Infrastructure Rehabilitation / Replacement	
	Total Project Cost (Lump Sum Budget)	\$ 500,000
<hr/>		
2030	On-Site Hypochlorite Generation Systems	
	Total Project Cost (Lump Sum Budget)	\$ 537,044
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2030	Collection System Refurbish / Replacement	
	Total Project Cost (Lump Sum Budget)	\$ 500,000
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2030	AMI Installation	
	Total Project Cost (Lump Sum Budget)	\$ 363,650
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2030	Calvada Meadows Replacement Well Project	
	Total Project Cost (Lump Sum Budget)	\$ 2,000,000
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2030	Water Tank Rehabilitations	
	Total Project Cost (Lump Sum Budget)	\$ 500,000
<b>TOTAL CIP YEAR 2030</b>		<b>\$ 6,067,361</b>

***CIP YEAR 2031***

Time Frame	Project Description	2023 Cost
2031	Pipeline Improvement Projects	
	Total Project Cost (Lump Sum Budget)	\$ 1,000,000
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2031	WWTP Infrastructure Rehabilitation / Replacement	
	Total Project Cost (Lump Sum Budget)	\$ 500,000
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2031	Collection System Refurbish / Replacement	
	Total Project Cost (Lump Sum Budget)	\$ 500,000
<hr/>		
2031	AMI Installation	
	Total Project Cost (Lump Sum Budget)	\$ 363,650
<b>TOTAL CIP YEAR 2031</b>		<b>\$ 2,363,650</b>

**GBWC-PD 2024 CONSOLIDATED INTEGRATED RESOURCE PLAN  
CAPITAL IMPROVEMENT PROJECT LIST**

<b>GBWC-PD PREFERRED PLAN PROJECTS</b>
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***CIP YEAR 2032***

Time Frame	Project Description	2023 Cost
2032	Well Replacement (Well-9, Calvada North Well or Other Wells etc.)	
	Total Project Cost (Lump Sum Budget)	\$ 800,000
2032	Pipeline Improvement Projects	
	Total Project Cost (Lump Sum Budget)	\$ 1,000,000
2032	WWTP Infrastructure Rehabilitation / Replacement	
	Total Project Cost (Lump Sum Budget)	\$ 500,000
2032	Collection System Refurbish / Replacement	
	Total Project Cost (Lump Sum Budget)	\$ 500,000
2031	AMI Installation	
	Total Project Cost (Lump Sum Budget)	\$ 363,650
<b>TOTAL CIP YEAR 2032</b>		<b>\$ 3,163,650</b>

***CIP YEAR 2033***

Time Frame	Project Description	2023 Cost
2033	Well Replacement (Well-9, Calvada North Well or Other Wells etc.)	
	Total Project Cost (Lump Sum Budget)	\$ 800,000
2033	Pipeline Improvement Projects	
	Total Project Cost (Lump Sum Budget)	\$ 1,000,000
2033	WWTP Infrastructure Rehabilitation / Replacement	
	Total Project Cost (Lump Sum Budget)	\$ 500,000
2033	Collection System Refurbish / Replacement	
	Total Project Cost (Lump Sum Budget)	\$ 500,000
2033	AMI Installation	
	Total Project Cost (Lump Sum Budget)	\$ 363,650
2033	Water Tank Rehabilitations	
	Total Project Cost (Lump Sum Budget)	\$ 500,000
<b>TOTAL CIP YEAR 2033</b>		<b>\$ 3,663,650</b>

**GBWC-PD 2024 CONSOLIDATED INTEGRATED RESOURCE PLAN  
CAPITAL IMPROVEMENT PROJECT LIST**

<b>GBWC-PD PREFERRED PLAN PROJECTS</b>
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***CIP YEAR 2034***

Time Frame	Project Description	2023 Cost
2034	Pipeline Improvement Projects	
	Total Project Cost (Lump Sum Budget)	\$ 1,000,000
2034	WWTP Infrastructure Rehabilitation / Replacement	
	Total Project Cost (Lump Sum Budget)	\$ 500,000
2034	Collection System Refurbish / Replacement	
	Total Project Cost (Lump Sum Budget)	\$ 500,000
2034	AMI Installation	
	Total Project Cost (Lump Sum Budget)	\$ 363,650
<b>TOTAL CIP YEAR 2034</b>		<b>\$ 2,363,650</b>

***CIP YEAR 2035***

Time Frame	Project Description	2023 Cost
2035	Pipeline Improvement Projects	
	Total Project Cost (Lump Sum Budget)	\$ 1,000,000
2035	WWTP Infrastructure Rehabilitation / Replacement	
	Total Project Cost (Lump Sum Budget)	\$ 500,000
2035	Collection System Refurbish / Replacement	
	Total Project Cost (Lump Sum Budget)	\$ 500,000
<b>TOTAL CIP YEAR 2035</b>		<b>\$ 2,000,000</b>

***CIP YEAR 2036***

Time Frame	Project Description	2023 Cost
2036	Well Replacement (Well-9, Calvada North Well or Other Wells etc.)	
	Total Project Cost (Lump Sum Budget)	\$ 800,000
2036	Pipeline Improvement Projects	
	Total Project Cost (Lump Sum Budget)	\$ 1,000,000
2036	WWTP Infrastructure Rehabilitation / Replacement	
	Total Project Cost (Lump Sum Budget)	\$ 500,000
2036	Collection System Refurbish / Replacement	
	Total Project Cost (Lump Sum Budget)	\$ 500,000
2036	Water Tank Rehabilitations	
	Total Project Cost (Lump Sum Budget)	\$ 500,000
<b>TOTAL CIP YEAR 2036</b>		<b>\$ 3,300,000</b>



**GBWC-PD 2024 CONSOLIDATED INTEGRATED RESOURCE PLAN  
CAPITAL IMPROVEMENT PROJECT LIST**

<b>GBWC-PD PREFERRED PLAN PROJECTS</b>
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***CIP YEAR 2037***

Time Frame	Project Description	2023 Cost
2037	Well Replacement (Well-9, Calvada North Well or Other Wells etc.)	
	Total Project Cost (Lump Sum Budget)	\$ 800,000
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2037	Pipeline Improvement Projects	
	Total Project Cost (Lump Sum Budget)	\$ 1,000,000
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2037	WWTP Infrastructure Rehabilitation / Replacement	
	Total Project Cost (Lump Sum Budget)	\$ 500,000
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2037	Collection System Refurbish / Replacement	
	Total Project Cost (Lump Sum Budget)	\$ 500,000
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<b>TOTAL CIP YEAR 2037</b>		<b>\$ 2,800,000</b>

***CIP YEAR 2038***

Time Frame	Project Description	2023 Cost
2038	Pipeline Improvement Projects	
	Total Project Cost (Lump Sum Budget)	\$ 1,000,000
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2038	WWTP Infrastructure Rehabilitation / Replacement	
	Total Project Cost (Lump Sum Budget)	\$ 500,000
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2038	Collection System Refurbish / Replacement	
	Total Project Cost (Lump Sum Budget)	\$ 500,000
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<b>TOTAL CIP YEAR 2038</b>		<b>\$ 2,000,000</b>

***CIP YEAR 2039***

Time Frame	Project Description	2023 Cost
2039	Pipeline Improvement Projects	
	Total Project Cost (Lump Sum Budget)	\$ 1,000,000
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2039	WWTP Infrastructure Rehabilitation / Replacement	
	Total Project Cost (Lump Sum Budget)	\$ 500,000
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2039	Collection System Refurbish / Replacement	
	Total Project Cost (Lump Sum Budget)	\$ 500,000
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2039	Water Tank Rehabilitations	
	Total Project Cost (Lump Sum Budget)	\$ 500,000
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<b>TOTAL CIP YEAR 2039</b>		<b>\$ 2,500,000</b>

**GBWC-PD 2024 CONSOLIDATED INTEGRATED RESOURCE PLAN  
CAPITAL IMPROVEMENT PROJECT LIST**

<b>GBWC-PD PREFERRED PLAN PROJECTS</b>
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***CIP YEAR 2040***

Time Frame	Project Description	2023 Cost
2040	Well Replacement (Well-9,Calvada North Well or Other Wells etc.)	
	Total Project Cost (Lump Sum Budget)	\$ 800,000
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2040	Pipeline Improvement Projects	
	Total Project Cost (Lump Sum Budget)	\$ 1,000,000
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2040	WWTP Infrastructure Rehabilitation / Replacement	
	Total Project Cost (Lump Sum Budget)	\$ 500,000
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2040	Collection System Refurbish / Replacement	
	Total Project Cost (Lump Sum Budget)	\$ 500,000
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<b>TOTAL CIP YEAR 2040</b>		<b>\$ 2,800,000</b>

***CIP YEAR 2041***

Time Frame	Project Description	2023 Cost
2041	Well Replacement (Well-9,Calvada North Well or Other Wells etc.)	
	Total Project Cost (Lump Sum Budget)	\$ 800,000
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2041	Pipeline Improvement Projects	
	Total Project Cost (Lump Sum Budget)	\$ 1,000,000
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2041	WWTP Infrastructure Rehabilitation / Replacement	
	Total Project Cost (Lump Sum Budget)	\$ 500,000
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2041	Collection System Refurbish / Replacement	
	Total Project Cost (Lump Sum Budget)	\$ 500,000
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<b>TOTAL CIP YEAR 2041</b>		<b>\$ 2,800,000</b>

***CIP YEAR 2042***

Time Frame	Project Description	2023 Cost
2042	Pipeline Improvement Projects	
	Total Project Cost (Lump Sum Budget)	\$ 1,000,000
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2042	WWTP Infrastructure Rehabilitation / Replacement	
	Total Project Cost (Lump Sum Budget)	\$ 500,000
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2042	Collection System Refurbish / Replacement	
	Total Project Cost (Lump Sum Budget)	\$ 500,000
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2042	Water Tank Rehabilitations	
	Total Project Cost (Lump Sum Budget)	\$ 500,000
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<b>TOTAL CIP YEAR 2042</b>		<b>\$ 2,500,000</b>

**GBWC-PD 2024 CONSOLIDATED INTEGRATED RESOURCE PLAN  
CAPITAL IMPROVEMENT PROJECT LIST**

<b>GBWC-PD PREFERRED PLAN PROJECTS</b>
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***CIP YEAR 2043***

Time Frame	Project Description	2023 Cost
2043	Well Replacement (Well-9,Calvada North Well or Other Wells etc.)	
	Total Project Cost (Lump Sum Budget)	\$ 800,000
<hr/>		
2043	Pipeline Improvement Projects	
	Total Project Cost (Lump Sum Budget)	\$ 1,000,000
<hr/>		
2043	WWTP Infrastructure Rehabilitation / Replacement	
	Total Project Cost (Lump Sum Budget)	\$ 500,000
<hr/>		
2043	Collection System Refurbish / Replacement	
	Total Project Cost (Lump Sum Budget)	\$ 500,000
<b>TOTAL CIP YEAR 2043</b>		<b>\$ 2,800,000</b>

***CIP YEAR 2044***

Time Frame	Project Description	2023 Cost
2044	Well Replacement (Well-9,Calvada North Well or Other Wells etc.)	
	Total Project Cost (Lump Sum Budget)	\$ 800,000
<hr/>		
2044	Pipeline Improvement Projects	
	Total Project Cost (Lump Sum Budget)	\$ 1,000,000
<hr/>		
2044	WWTP Infrastructure Rehabilitation / Replacement	
	Total Project Cost (Lump Sum Budget)	\$ 500,000
<hr/>		
2044	Collection System Refurbish / Replacement	
	Total Project Cost (Lump Sum Budget)	\$ 500,000
<b>TOTAL CIP YEAR 2044</b>		<b>\$ 2,800,000</b>

***Great Basin Water Company – Spring Creek Division (Volume III)***

Capital Improvement Projects

**GBWC-SCD 2024 CONSOLIDATED INTEGRATED RESOURCE PLAN  
CAPITAL IMPROVEMENT PROJECT LIST**

<b>GBWC - SCD ACTION PLAN PROJECTS</b>
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**CIP YEAR 2025**

Category	Time Frame	Project Description	Cost
<b>Water Storage</b>	<b>2025-2026</b>	<b>High Tank Replacement</b>	
		Mobilization	\$ 20,000
		Demo of Existing Tank, Foundation, and Appurtenances	\$ 45,000
		Site Work (Grading, AC Paving, Erosion Control)	\$ 15,000
		Piping Improvements and Connections	\$ 25,000
		Tank Foundation (Concrete Ring Type with Aggregate Base)	\$ 30,000
		500,000 Gallon Tank, Appurtenances, Coatings, and Cathodic Protection	\$ 500,000
		Cathodic Protection	\$ 35,000
		Fencing and Gates	\$ 11,000
		<i>Construction Subtotal</i>	<i>\$ 681,000</i>
		Design/Water Project Submittal (Including Geotech and Survey) - Completed in 2016	\$ 77,000
		Construction Management	\$ 35,000
		Testing and Inspection	\$ 55,000
		GBWC Internal Capital Time	\$ 64,351
		Contingency (20%)	\$ 182,471
		<b>Total Project Cost</b>	<b>\$ 1,094,822</b>
<b>Water Storage</b>	<b>2025-2026</b>	<b>OR High Tank Rehabilitation</b>	
		Mobilization	\$ 20,000
		Rehabilitation of Piping exterior of tank	\$ 100,000
		Liner Material	\$ 75,000
		Liner Installation	\$ 68,000
		Cathodic Protection/OSHA Requirement	\$ 50,000
		Sand blast and cost exterior of tank	\$ 45,000
		<i>Construction Subtotal</i>	<i>\$ 358,000</i>
		Design/Water Project Submittal	\$ 40,000
		Construction Management	\$ 24,000
		Testing and Inspection	\$ 25,000
		GBWC Internal Capital Time	\$ 64,351
		Contingency (20%)	\$ 102,271
		<b>Total Project Cost</b>	<b>\$ 613,622</b>
<b>Water Storage</b>	<b>2025-2026</b>	<b>OR Booster Pump Station Modifications</b>	
		Mobilization	\$ 20,000
		Demolition of High Tank	\$ 45,000
		Piping Material Modifications	\$ 24,000
		VFD & Electrical Upgrades for Pumping Systems	\$ 75,000
		Maintenance Pump	\$ 15,000
		Construction Costs	\$ 106,000
		<i>Construction Subtotal</i>	<i>\$ 285,000</i>
		Design/Water Project Submittal	\$ 68,000
		Survey	\$ 9,000
		Geotechnical	\$ 10,000
		Construction Management	\$ 26,000
		Testing and Inspection	\$ 55,000
		GBWC Internal Capital Time	\$ 64,351
		Contingency (20%)	\$ 103,471
		<b>Total Project Cost</b>	<b>\$ 620,822</b>
<b>Wastewater</b>	<b>2025-2026</b>	<b>SCADA Wastewater System Upgrades</b>	
		SCADA Wastewater System Upgrades	\$ 84,000
		Contingency (20%)	\$ 16,000
		<b>Total Project Cost</b>	<b>\$ 100,000</b>
<b>Water Distribution</b>	<b>2025</b>	<b>Pipeline Replacement Project</b>	
		Pipeline Replacement (Construction & Non-Construction Costs)	\$ 1,250,000
		Contingency (20%)	\$ 250,000
		<b>Total Project Cost</b>	<b>\$ 1,500,000</b>

**GBWC-SCD 2024 CONSOLIDATED INTEGRATED RESOURCE PLAN  
CAPITAL IMPROVEMENT PROJECT LIST**

<b>GBWC - SCD ACTION PLAN PROJECTS</b>
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**CIP YEAR 2026**

Category	Time Frame	Project Description	Cost
Water Resource	2026-2027	<b>Well 12 Replacement</b>	
		Drilling Contractor Mobilization/Demob	\$ 130,000
		Production well drilling and construction (14-inch completion 900 ft deep)	\$ 911,300
		Prime Contractor Mobilization	\$ 10,000
		Discharge Assembly Reconfiguration into existing infrastructure	\$ 55,000
		Fencing and Gate	\$ 11,000
		<i>Construction Subtotal</i>	<i>\$ 1,117,300</i>
		Design/Water Project Submittal	\$ 58,000
		Construction Management	\$ 24,000
		Testing & Inspection	\$ 35,000
		GBWC Internal Capital Time	\$ 51,136
		Contingency (20%)	\$ 257,088
		<b>Total Project Cost</b>	<b>\$ 1,542,524</b>
Wastewater	Jan26- Dec26	<b>WWTP Lift Station Rehabilitation</b>	
		Mobilization	\$ 10,800
		Rehabilitation of Lift Station	\$ 133,488
		Electrical Upgrades	\$ 15,000
		<i>Construction Subtotal</i>	<i>\$ 159,288</i>
		Design/Wastewater Project Submittal	\$ 20,000
		Construction Management	\$ 10,000
		Testing and Inspections	\$ 18,000
		GBWC Internal Capital Time	\$ 32,175
		Contingency (20%)	\$ 47,893
		<b>Total Project Cost</b>	<b>\$ 287,356</b>
Wastewater	2026-2027	<b>WWTP De-Ragging and Lft Station Rehabilitation</b>	
		Mobilization	\$ 15,000
		Rehabilitation of Lift Station	\$ 133,488
		De-Ragging System (Duperon Dual Auger System (Equipment)	\$ 94,000
		Installation of De-Ragging System and Electrical Upgrades	\$ 180,000
		<i>Construction Subtotal</i>	<i>\$ 422,488</i>
		Design/Wastewater Project Submittal	\$ 20,000
		Construction Management	\$ 13,000
		Testing and Inspections	\$ 20,000
		GBWC Internal Capital Time	\$ 32,175
		Contingency (20%)	\$ 101,533
		<b>Total Project Cost</b>	<b>\$ 609,196</b>
Water Distribution	2026	<b>Pipeline Replacement Project</b>	
		Pipeline Replacement (Construction & Non-Construction Costs)	\$ 1,250,000
		Contingency (20%)	\$ 250,000
		<b>Total Project Cost</b>	<b>\$ 1,500,000</b>

GBWC-SCD 2024 CONSOLIDATED INTEGRATED RESOURCE PLAN  
CAPITAL IMPROVEMENT PROJECT LIST

GBWC - SCD ACTION PLAN PROJECTS
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**CIP YEAR 2027**

Category	Time Frame	Project Description	Cost
Water Distribution	2027	Pipeline Replacement Project	
		Pipeline Replacement (Construction & Non-Construction Costs)	\$ 1,250,000
		Contingency (20%)	\$ 250,000
		Total Project Cost	\$ 1,500,000

**GBWC-SCD 2024 CONSOLIDATED INTEGRATED RESOURCE PLAN  
CAPITAL IMPROVEMENT PROJECT LIST**

<b>GBWC - SCD PREFERRED PLAN PROJECTS</b>
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**CIP YEAR 2028**

Category	Time Frame	Project Description	Cost
Water Resources	2028-2029	<b>Future Well Replacement (Every 3-years)</b>	
		Drilling Contractor Mobilization/Demob	\$ 130,000
		Production well drilling and construction (14-inch completion 900 ft deep)	\$ 922,000
		Prime Contractor Mobilization	\$ 15,000
		Discharge Assembly Reconfiguration into existing infrastructure	\$ 55,200
		Fencing and Gate	\$ 15,000
		<i>Construction Subtotal</i>	<i>\$ 1,137,200</i>
		Design/Water Project Submittal	\$ 70,000
		Construction Management	\$ 30,000
		Testing & Inspection	\$ 45,000
		GBWC Internal Capital Time	\$ 51,136
		Contingency (20%)	\$ 266,668
		<b>Total Project Cost</b>	<b>\$ 1,600,004</b>
		 2028 Total Annual Project Expenditure	 \$ 800,000
Water Distribution	2028	<b>Pipeline Replacement Project (Annual)</b>	
		<b>Total Project Cost (Lump Sum Budget)</b>	<b>\$ 1,500,000</b>
Wastewater	2028-2031	<b>WWTP Replacement</b>	
		Site Preparation, Excavation, and Grading	\$ 35,000
		75,000 gpd Package Plant	\$ 1,995,000
		Leachfield Upgrades	\$ 33,000
		Pipeline Improvements	\$ 46,000
		Electrical Improvements	\$ 40,000
		<i>Construction Subtotal</i>	<i>\$ 2,149,000</i>
		Preliminary Design Report	\$ 30,000
		Design, Plans, and Specifications	\$ 25,000
		Construction Management	\$ 40,000
		Permitting	\$ 10,000
		Geotechnical Investigation	\$ 9,000
		Topographic Survey (Easements not Included)	\$ 8,000
		Testing and Inspection	\$ 140,000
		GBWC Internal Capital Time	\$ 89,631
		Contingency (20%)	\$ 500,126
		<b>Total Project Cost</b>	<b>\$ 3,000,757</b>
		 2028 Total Annual Project Expenditure	 \$ 300,000
Wastewater	2028-2029	<b>Sewer Main Replacement/Manhole Lining for I&amp;I</b>	
		<b>Total Project Cost (Lump Sum Budget)</b>	<b>\$ 500,000</b>
		<b>Total Estimated 2028 Project Cost (Lump Sump)</b>	<b>\$ 100,000</b>
		 <b>TOTAL CIP YEAR 2028</b>	 <b>\$ 2,700,000</b>



**GBWC-SCD 2024 CONSOLIDATED INTEGRATED RESOURCE PLAN  
CAPITAL IMPROVEMENT PROJECT LIST**

<b>GBWC - SCD PREFERRED PLAN PROJECTS</b>
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**CIP YEAR 2029**

Category	Time Frame	Project Description	Cost
Water Resources	2028-2029	<b>Future Well Replacement (Every 3-years)</b>	
		Drilling Contractor Mobilization/Demob	\$ 130,000
		Production well drilling and construction (14-inch completion 900 ft deep)	\$ 922,000
		Prime Contractor Mobilization	\$ 15,000
		Discharge Assembly Reconfiguration into existing infrastructure	\$ 55,200
		Fencing and Gate	\$ 15,000
		<i>Construction Subtotal</i>	<i>\$ 1,137,200</i>
		Design/Water Project Submittal	\$ 70,000
		Construction Management	\$ 30,000
		Testing & Inspection	\$ 45,000
		GBWC Internal Capital Time	\$ 51,136
		Contingency (20%)	\$ 266,668
		<b>Total Project Cost</b>	<b>\$ 1,600,004</b>
		<b>2029 Total Annual Project Expenditure</b>	<b>\$ 800,004</b>
Water Distribution	2029	<b>Pipeline Replacement Project (Annual)</b>	
		<b>Total Project Cost (Lump Sum Budget)</b>	<b>\$ 1,500,000</b>
Water Distribution	2029-2033	<b>AMI Installation (Over 5-Year Period)</b>	
		<b>Total Project Cost (Lump Sum Budget)</b>	<b>\$ 1,630,600</b>
		<b>2029 Total Annual Project Expenditure</b>	<b>\$ 404,120</b>
Wastewater	2028-2031	<b>WWTP Replacement</b>	
		Site Preparation, Excavation, and Grading	\$ 35,000
		75,000 gpd Package Plant	\$ 1,995,000
		Leachfield Upgrades	\$ 33,000
		Pipeline Improvements	\$ 46,000
		Electrical Improvements	\$ 40,000
		<i>Construction Subtotal</i>	<i>\$ 2,149,000</i>
		Preliminary Design Report	\$ 30,000
		Design, Plans, and Specifications	\$ 25,000
		Construction Management	\$ 40,000
		Permitting	\$ 10,000
		Geotechnical Investigation	\$ 9,000
		Topographic Survey (Easements not Included)	\$ 8,000
		Testing and Inspection	\$ 140,000
		GBWC Internal Capital Time	\$ 89,631
		Contingency (20%)	\$ 500,126
		<b>Total Project Cost</b>	<b>\$ 3,000,757</b>
		<b>2029 Total Annual Project Expenditure</b>	<b>\$ 300,000</b>
Wastewater	2028-2029	<b>Sewer Main Replacement/Manhole Lining for I&amp;I</b>	
		<b>Total Project Cost (Lump Sum Budget)</b>	<b>\$ 500,000</b>
		<b>Total Estimated 2029 Project Cost (Lump Sump)</b>	<b>\$ 400,000</b>
		<b>TOTAL CIP YEAR 2029</b>	<b>\$ 3,404,124</b>

**GBWC-SCD 2024 CONSOLIDATED INTEGRATED RESOURCE PLAN  
CAPITAL IMPROVEMENT PROJECT LIST**

<b>GBWC - SCD PREFERRED PLAN PROJECTS</b>
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**CIP YEAR 2030**

Category	Time Frame	Project Description	Cost
Water Resource	2030	Well Rehabilitation Project	
Total Project Cost (Lump Sum Budget)			\$ 500,000
Water Distribution	2030	Pipeline Replacement Project (Annual)	
Total Project Cost (Lump Sum Budget)			\$ 1,500,000
Water Distribution	2029-2033	AMI Installation (Over 5-Year Period)	
Total Project Cost (Lump Sum Budget)			\$ 1,630,600
2030 Total Annual Project Expenditure			\$ 306,120
Water Storage	2030	Storage Tank Rehabilitation (Every 3 Years)	
Total Project Cost (Lump Sum Budget)			\$ 500,000
Wastewater	2028-2031	WWTP Replacement	
		Site Preparation, Excavation, and Grading	\$ 35,000
		75,000 gpd Package Plant	\$ 1,995,000
		Leachfield Upgrades	\$ 33,000
		Pipeline Improvements	\$ 46,000
		Electrical Improvements	\$ 40,000
		<i>Construction Subtotal</i>	<i>\$ 2,149,000</i>
		Preliminary Design Report	\$ 30,000
		Design, Plans, and Specifications	\$ 25,000
		Construction Management	\$ 40,000
		Permitting	\$ 10,000
		Geotechnical Investigation	\$ 9,000
		Topographic Survey (Easements not Included)	\$ 8,000
		Testing and Inspection	\$ 140,000
		GBWC Internal Capital Time	\$ 89,631
		Contingency (20%)	\$ 500,126
Total Project Cost			\$ 3,000,757
2029 Total Annual Project Expenditure			\$ 1,200,000
<b>TOTAL CIP YEAR 2030</b>			<b>\$ 4,006,120</b>

**GBWC-SCD 2024 CONSOLIDATED INTEGRATED RESOURCE PLAN  
CAPITAL IMPROVEMENT PROJECT LIST**

<b>GBWC - SCD PREFERRED PLAN PROJECTS</b>
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**CIP YEAR 2031**

Category	Time Frame	Project Description	Cost
Water Resource	2031	Well Rehabilitation Project	
Total Project Cost (Lump Sum Budget)			\$ 500,000
Water Distribution	2031	Pipeline Replacement Project (Annual)	
Total Project Cost (Lump Sum Budget)			\$ 1,500,000
Water Distribution	2029-2033	AMI Installation (Over 5-Year Period)	
Total Project Cost (Lump Sum Budget)			\$ 1,630,600
2031 Total Annual Project Expenditure			\$ 306,120
Wastewater	2028-2031	WWTP Replacement	
Site Preparation, Excavation, and Grading			\$ 35,000
75,000 gpd Package Plant			\$ 1,995,000
Leachfield Upgrades			\$ 33,000
Pipeline Improvements			\$ 46,000
Electrical Improvements			\$ 40,000
<i>Construction Subtotal</i>			<i>\$ 2,149,000</i>
Preliminary Design Report			\$ 30,000
Design, Plans, and Specifications			\$ 25,000
Construction Management			\$ 40,000
Permitting			\$ 10,000
Geotechnical Investigation			\$ 9,000
Topographic Survey (Easements not Included)			\$ 8,000
Testing and Inspection			\$ 140,000
GBWC Internal Capital Time			\$ 89,631
Contingency (20%)			\$ 500,126
Total Project Cost			\$ 3,000,757
2031 Total Annual Project Expenditure			\$ 1,200,757
<b>TOTAL CIP YEAR 2031</b>			<b>\$ 3,506,877</b>

**CIP YEAR 2032**

Category	Time Frame	Project Description	Cost
Water Resources	2032	Future Well Replacement (See project breakout in 2028)	
Total Project Cost			\$ 1,600,000
2032 Total Annual Project Expenditure			\$ 800,000
Water Distribution	2032	Pipeline Replacement Project (Annual)	
Total Project Cost (Lump Sum Budget)			\$ 1,500,000
Water Distribution	2029-2033	AMI Installation (Over 5-Year Period)	
Total Project Cost (Lump Sum Budget)			\$ 1,630,600
2032 Total Annual Project Expenditure			\$ 306,120
<b>TOTAL CIP YEAR 2032</b>			<b>\$ 2,606,120</b>

**GBWC-SCD 2024 CONSOLIDATED INTEGRATED RESOURCE PLAN  
CAPITAL IMPROVEMENT PROJECT LIST**

<b>GBWC - SCD PREFERRED PLAN PROJECTS</b>
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**CIP YEAR 2033**

Category	Time Frame	Project Description	Cost
Water Resources	2033	Future Well Replacement (See project breakout in 2028)	
		Total Project Cost	\$ 1,600,000
		2033 Total Annual Project Expenditure	\$ 800,000
Water Distribution	2033	Pipeline Replacement Project (Annual)	
		Total Project Cost (Lump Sum Budget)	\$ 1,500,000
Water Distribution	2029-2033	AMI Installation (Over 5-Year Period)	
		Total Project Cost (Lump Sum Budget)	\$ 1,630,600
		2033 Total Annual Project Expenditure	\$ 306,120
Water Storage	2033	Storage Tank Rehabilitation (Every 3 Years)	
		Total Project Cost (Lump Sum Budget)	\$ 500,000
<b>TOTAL CIP YEAR 2033</b>			<b>\$ 3,106,120</b>

**CIP YEAR 2034**

Category	Time Frame	Project Description	Cost
Water Resource	2034	Well Rehabilitation Project (Every 3 Years)	
		Total Project Cost (Lump Sum Budget)	\$ 500,000
Water Distribution	2034	Booster Stations (Rehab/Replace Ever 10 Years)	
		Total Project Cost (Lump Sum Budget)	\$ 500,000
Water Distribution	2034	Pipeline Replacement Project (Annual)	
		Total Project Cost (Lump Sum Budget)	\$ 1,500,000
<b>TOTAL CIP YEAR 2034</b>			<b>\$ 2,500,000</b>

**CIP YEAR 2035**

Category	Time Frame	Project Description	Cost
Water Resource	2035	Well Rehabilitation Project (Every 3 Years)	
		Total Project Cost (Lump Sum Budget)	\$ 500,000
Water Distribution	2035	Pipeline Replacement Project (Annual)	
		Total Project Cost (Lump Sum Budget)	\$ 1,500,000
<b>TOTAL CIP YEAR 2035</b>			<b>\$ 2,000,000</b>

**CIP YEAR 2036**

Category	Time Frame	Project Description	Cost
Water Resources	2036	Future Well Replacement (See project breakout in 2028)	
		Total Project Cost	\$ 1,600,000
		2036 Total Annual Project Expenditure	\$ 800,000
Water Distribution	2036	Pipeline Replacement Project (Annual)	
		Total Project Cost (Lump Sum Budget)	\$ 1,500,000
Water Storage	2036	Storage Tank Rehabilitation (Every 3 Years)	
		Total Project Cost (Lump Sum Budget)	\$ 500,000
<b>TOTAL CIP YEAR 2036</b>			<b>\$ 2,800,000</b>

**GBWC-SCD 2024 CONSOLIDATED INTEGRATED RESOURCE PLAN  
CAPITAL IMPROVEMENT PROJECT LIST**

<b>GBWC - SCD PREFERRED PLAN PROJECTS</b>
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**CIP YEAR 2037**

Category	Time Frame	Project Description	Cost
Water Resources	2037	Future Well Replacement (See project breakout in 2028)	
		Total Project Cost	\$ 1,600,000
		2037 Total Annual Project Expenditure	\$ 800,000
Water Distribution	2037	Pipeline Replacement Project (Annual)	
		Total Project Cost (Lump Sum Budget)	\$ 1,500,000
<b>TOTAL CIP YEAR 2037</b>			<b>\$ 2,300,000</b>

**CIP YEAR 2038**

Category	Time Frame	Project Description	Cost
Water Distribution	2038	Pipeline Replacement Project (Annual)	
		Total Project Cost (Lump Sum Budget)	\$ 1,500,000
<b>TOTAL CIP YEAR 2038</b>			<b>\$ 1,500,000</b>

**CIP YEAR 2039**

Category	Time Frame	Project Description	Cost
Water Distribution	2039	Pipeline Replacement Project (Annual)	
		Total Project Cost (Lump Sum Budget)	\$ 1,500,000
Water Storage	2039	Storage Tank Rehabilitation (Every 3 Years)	
		Total Project Cost (Lump Sum Budget)	\$ 500,000
<b>TOTAL CIP YEAR 2039</b>			<b>\$ 2,000,000</b>

**CIP YEAR 2040**

Category	Time Frame	Project Description	Cost
Water Resources	2040	Future Well Replacement (See project breakout in 2028)	
		Total Project Cost	\$ 1,600,000
		2040 Total Annual Project Expenditure	\$ 800,000
Water Distribution	2040	Pipeline Replacement Project (Annual)	
		Total Project Cost (Lump Sum Budget)	\$ 1,500,000
<b>TOTAL CIP YEAR 2040</b>			<b>\$ 2,300,000</b>

**GBWC-SCD 2024 CONSOLIDATED INTEGRATED RESOURCE PLAN  
CAPITAL IMPROVEMENT PROJECT LIST**

<b>GBWC - SCD PREFERRED PLAN PROJECTS</b>
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**CIP YEAR 2041**

Category	Time Frame	Project Description	Cost
Water Resources	2041	Future Well Replacement (See project breakout in 2028)	
		Total Project Cost	\$ 1,600,000
		2041 Total Annual Project Expenditure	\$ 800,000
Water Distribution	2041	Pipeline Replacement Project (Annual)	
		Total Project Cost (Lump Sum Budget)	\$ 1,500,000
<b>TOTAL CIP YEAR 2041</b>			<b>\$ 2,300,000</b>

**CIP YEAR 2042**

Category	Time Frame	Project Description	Cost
Water Distribution	2042	Pipeline Replacement Project (Annual)	
		Total Project Cost (Lump Sum Budget)	\$ 1,500,000
Water Storage	2042	Storage Tank Rehabilitation (Every 3 Years)	
		Total Project Cost (Lump Sum Budget)	\$ 500,000
<b>TOTAL CIP YEAR 2042</b>			<b>\$ 2,000,000</b>

**CIP YEAR 2043**

Category	Time Frame	Project Description	Cost
Water Resources	2043	Future Well Replacement (See project breakout in 2028)	
		Total Project Cost	\$ 1,600,000
		2043 Total Annual Project Expenditure	\$ 800,000
Water Distribution	2043	Pipeline Replacement Project (Annual)	
		Total Project Cost (Lump Sum Budget)	\$ 1,500,000
Water Storage	2043	Storage Tank Replacement Project	
		Total Project Cost (Lump Sum Budget)	\$ 2,000,000
<b>TOTAL CIP YEAR 2043</b>			<b>\$ 4,300,000</b>

**CIP YEAR 2044**

Category	Time Frame	Project Description	Cost
Water Resources	2044	Future Well Replacement (See project breakout in 2028)	
		Total Project Cost	\$ 1,600,000
		2044 Total Annual Project Expenditure	\$ 800,000
Water Distribution	2044	Booster Stations (Rehab/Replace Ever 10 Years)	
		Total Project Cost (Lump Sum Budget)	\$ 500,000
Water Distribution	2044	Pipeline Replacement Project (Annual)	
		Total Project Cost (Lump Sum Budget)	\$ 1,500,000
<b>TOTAL CIP YEAR 2044</b>			<b>\$ 2,800,000</b>

***Great Basin Water Company – Cold Springs Division (Volume IV)***

Capital Improvement Projects

GBWC-CSD 2024 CONSOLIDATED INTEGRATED RESOURCE PLAN  
CAPITAL IMPROVEMENT PROJECT LIST

GBWC - CSD ACTION PLAN PROJECTS

***CIP Year 2025***

Time Frame	Project Description	Cost
Jan 2025 thru Jun 2026	PRV Installation to Assist with Fire Flows (PZ 3 to PZ 4)	
	Mobilization	\$ 30,000
	Site Work, Clearing, Grubbing	\$ 11,000
	Precast Vault & Mechanical Piping & Controls Install	\$ 190,000
	Connection to Existing (one connection to Tank 3 and one 14"x8" hot tap)	\$ 12,000
	<i>Subtotal</i>	<i>\$ 243,000</i>
	Design	\$ 45,000
	Survey	\$ 10,000
	Geotech	\$ 8,000
	Construction Management	\$ 15,000
	Testing & Inspection	\$ 15,000
	GBWC Internal Capital Time	\$ 42,517
	Contingency (20%)	\$ 75,703
	Total Project Cost	\$ 454,221
Oct 2025 thru Dec 2026	Rehabilitation of Tank 1	
	Mobilization	\$ 20,000
	Interior Renovation	\$ 300,000
	Exterior Repairs	\$ 79,000
	Upgrades and Repairs	\$ 17,000
	<i>Subtotal</i>	<i>\$ 396,000</i>
	Design	\$ 17,000
	Survey	\$ -
	Geotech	\$ -
	Construction Management	\$ 16,000
	Testing & Inspection	\$ 15,000
	GBWC Internal Capital Time	\$ 35,623
	Contingency (20%)	\$ 95,925
	Total Project Cost	\$ 575,547



**CIP YEAR 2026**

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Oct 2026 thru Dec 2027	Factory Rehabilitation of Tank 2		
	Mobilization	\$	20,000
	Tank Dismantling	\$	70,000
	Tank Fabrication and Erection	\$	420,000
	Foundation Steel Grade Band with gavel replacement	\$	10,000
	Cathodic Protection/OSHA Requirements	\$	25,000
		<i>Subtotal</i> \$	<i>525,000</i>
	Design and Permitting	\$	35,000
	Survey	\$	-
	Geotech	\$	-
	Construction Management	\$	14,000
	Testing & Inspection	\$	15,000
	GBWC Internal Capital Time	\$	35,623
	Contingency (20%)	\$	124,925
		Total Project Cost \$	749,548

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Oct 2026 thru Dec 2027	OR Replacement of Tank 2		
	Mobilization	\$	25,000
	Demolition and reconditioning of existing infrastructure	\$	50,000
	Tank Site Earthwork, Grading, Foundation	\$	45,000
	Surface Improvements (Agg Base, Riprap, etc.)	\$	20,000
	495,000 (Nominal) Gallon Bolted Steel Tank & Accessories	\$	475,000
	Interior Coating	\$	-
	Exterior Coating	\$	-
	Cathodic Protection	\$	30,000
	Instrumentation & Controls	\$	45,000
		<i>Subtotal</i> \$	<i>690,000</i>
	Design	\$	65,000
	Survey	\$	6,000
	Geotech	\$	8,000
	Construction Management	\$	45,000
	Testing & Inspection	\$	36,000
	GBWC Internal Capital Time	\$	35,623
	Contingency (20%)	\$	177,125
		Total Project Cost \$	1,062,747

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**CIP YEAR 2027**

***No projects will be started in 2027***

See Section 7 in Report for Yearly Cost Breakdown from 2025-2027

PREFERRED PLAN PROJECTS

**CIP YEAR 2028**

Time Frame	Project Description	2023 Cost
2028	Pipeline Replacement - Pipeline, Service Lines, Meter Pits	
	Pipeline Replacement	\$ 250,000
	Total Project Cost	\$ 250,000
2028	Well Replacement	
	Well Replacement	\$ 2,000,000
	Total Project Cost	\$ 2,000,000
<b>TOTAL CIP YEAR 2028</b>		<b>\$ 2,250,000</b>

**CIP YEAR 2029**

Time Frame	Project Description	2023 Cost
2029	Pipeline Replacement - Pipeline, Service Lines, Meter Pits	
	Pipeline Replacement	\$ 250,000
	Total Project Cost	\$ 250,000
2029	AMI Installation	
	AMI Installation	\$ 356,140
	Total Project Cost	\$ 356,140
<b>TOTAL CIP YEAR 2029</b>		<b>\$ 606,140</b>

**CIP YEAR 2030**

Time Frame	Project Description	2023 Cost
2030	Pipeline Replacement - Pipeline, Service Lines, Meter Pits	
	Pipeline Replacement	\$ 250,000
	Total Project Cost	\$ 250,000
2030	AMI Installation	
	AMI Installation	\$ 256,140
	Total Project Cost	\$ 256,140
2030	Rehab/Replace Tank	
	Rehab/Replace Tank	\$ 500,000
	Total Project Cost	\$ 500,000
<b>TOTAL CIP YEAR 2030</b>		<b>\$ 1,006,140</b>

**CIP YEAR 2031**

Time Frame	Project Description	2023 Cost
2031	Pipeline Replacement - Pipeline, Service Lines, Meter Pits	
	Pipeline Replacement	\$ 250,000
	Total Project Cost	\$ 250,000
2031	AMI Installation	
	AMI Installation	\$ 256,140
	Total Project Cost	\$ 256,140
<b>TOTAL CIP YEAR 2031</b>		<b>\$ 506,140</b>

**CIP YEAR 2032**

Time Frame	Project Description	2023 Cost
2032	Pipeline Replacement - Pipeline, Service Lines, Meter Pits	
	Pipeline Replacement	\$ 250,000
	Total Project Cost	\$ 250,000
2032	AMI Installation	
	AMI Installation	\$ 256,140
	Total Project Cost	\$ 256,140
<b>TOTAL CIP YEAR 2032</b>		<b>\$ 506,140</b>

**CIP YEAR 2033**

Time Frame	Project Description	2023 Cost
2033	Onsite Hypochlorite Systems	
	Mobilization	\$ 23,600
	Hypochlorite Generation System (Equipment & Install)	\$ 350,000
	Electrical and Instrumentation	\$ 100,000
	Pre-Fabricated Building	\$ 22,000
	Generator	\$ 57,000
	<i>Subtotal</i>	<i>\$ 552,600</i>
	Design (8%)	\$ 44,208
	Survey	\$ 7,000
	Geotech	\$ 6,000
	Construction Management (5%)	\$ 27,630
	Testing & Inspection (5%)	\$ 27,630
	GBWC Internal Capital Time	\$ 30,452
	Contingency (20%)	\$ 110,520
	Total Project Cost	\$ 806,040
2033	Pipeline Replacement - Pipeline, Service Lines, Meter Pits	
	Pipeline Replacement	\$ 250,000
	Total Project Cost	\$ 250,000
2033	AMI Installation	
	AMI Installation	\$ 256,140
	Total Project Cost	\$ 256,140
2033	Rehab/Replace Tank	
	Rehab/Replace Tank	\$ 500,000
	Total Project Cost	\$ 500,000
<b>TOTAL CIP YEAR 2033</b>		<b>\$ 1,812,180</b>

**CIP YEAR 2034**

Time Frame	Project Description	2023 Cost
2034	Pipeline Replacement - Pipeline, Service Lines, Meter Pits	
	Pipeline Replacement	\$ 250,000
	Total Project Cost	\$ 250,000
<b>TOTAL CIP YEAR 2034</b>		<b>\$ 250,000</b>

**CIP YEAR 2035**

Time Frame	Project Description	2023 Cost
2035	Pipeline Replacement - Pipeline, Service Lines, Meter Pits	
	Pipeline Replacement	\$ 250,000
	Total Project Cost	\$ 250,000
<b>TOTAL CIP YEAR 2035</b>		<b>\$ 250,000</b>

**CIP YEAR 2036**

Time Frame	Project Description	2023 Cost
2036	Pipeline Replacement - Pipeline, Service Lines, Meter Pits	
	Pipeline Replacement	\$ 250,000
	Total Project Cost	\$ 250,000
2036	Rehab/Replace Tank	
	Rehab/Replace Tank	\$ 500,000
	Total Project Cost	\$ 500,000
<b>TOTAL CIP YEAR 2036</b>		<b>\$ 750,000</b>

**CIP YEAR 2037**

Time Frame	Project Description	2023 Cost
2037	Pipeline Replacement - Pipeline, Service Lines, Meter Pits	
	Pipeline Replacement	\$ 250,000
	Total Project Cost	\$ 250,000
<b>TOTAL CIP YEAR 2037</b>		<b>\$ 250,000</b>

**CIP YEAR 2038**

Time Frame	Project Description	2023 Cost
2038	Pipeline Replacement - Pipeline, Service Lines, Meter Pits	
	Pipeline Replacement	\$ 250,000
	Total Project Cost	\$ 250,000
<b>TOTAL CIP YEAR 2038</b>		<b>\$ 250,000</b>

**CIP YEAR 2039**

Time Frame	Project Description	2023 Cost
2039	Pipeline Replacement - Pipeline, Service Lines, Meter Pits	
	Pipeline Replacement	\$ 250,000
	Total Project Cost	\$ 250,000
2039	Rehab/Replace Tank	
	Rehab/Replace Tank	\$ 500,000
	Total Project Cost	\$ 500,000
<b>TOTAL CIP YEAR 2039</b>		<b>\$ 750,000</b>

**CIP YEAR 2040**

Time Frame	Project Description	2023 Cost
2040	Pipeline Replacement - Pipeline, Service Lines, Meter Pits	
	Pipeline Replacement	\$ 250,000
	Total Project Cost	\$ 250,000
<b>TOTAL CIP YEAR 2040</b>		<b>\$ 250,000</b>

**CIP YEAR 2041**

Time Frame	Project Description	2023 Cost
2041	Pipeline Replacement - Pipeline, Service Lines, Meter Pits	
	Pipeline Replacement	\$ 250,000
	Total Project Cost	\$ 250,000
<b>TOTAL CIP YEAR 2041</b>		<b>\$ 250,000</b>

**CIP YEAR 2042**

Time Frame	Project Description	2023 Cost
2042	Pipeline Replacement - Pipeline, Service Lines, Meter Pits	
	Pipeline Replacement	\$ 250,000
	Total Project Cost	\$ 250,000
2042	Rehab/Replace Tank	
	Rehab/Replace Tank	\$ 500,000
	Total Project Cost	\$ 500,000
<b>TOTAL CIP YEAR 2042</b>		<b>\$ 750,000</b>

**CIP YEAR 2043**

Time Frame	Project Description	2023 Cost
2043	Pipeline Replacement - Pipeline, Service Lines, Meter Pits	
	Pipeline Replacement	\$ 250,000
	Total Project Cost	\$ 250,000
<b>TOTAL CIP YEAR 2043</b>		<b>\$ 250,000</b>

**CIP YEAR 2044**

Time Frame	Project Description	2023 Cost
2044	Pipeline Replacement - Pipeline, Service Lines, Meter Pits	
	Pipeline Replacement	\$ 250,000
	Total Project Cost	\$ 250,000
<b>TOTAL CIP YEAR 2044</b>		<b>\$ 250,000</b>

***Great Basin Water Company – Spanish Springs Division (Volume V)***

Capital Improvement Projects

# GBWC-SSD 2024 CONSOLIDATED INTEGRATED RESOURCE PLAN CAPITAL IMPROVEMENT PROJECT LIST

<b>GBWC - SSD ACTION PLAN PROJECTS</b>
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## CIP Year 2025

Time Frame	Project Description	Cost
2025-2026	Rehabilitation of Suki well	
	Mobilization	\$ 20,000
	Rehabilitation of Suki well	\$ 250,000
	Installation of Liner	\$ 60,000
	Water Disposal	\$ 50,000
	<i>Construction Subtotal</i>	<i>\$ 380,000</i>
	Design/Water Project Submittal	\$ 15,000
	Construction Management	\$ 15,000
	GBWC Internal Capital Time	\$ 29,877
	Contingency (20%)	\$ 87,976
	<b>Total Project Cost</b>	<b>\$ 527,853</b>
2025-2027	AMI Installation	
	<b>Total Project Cost</b>	<b>\$ 283,000</b>

## CIP Year 2026

Time Frame	Project Description	Cost
2026-2027	Rehabilitation of Tank -2 Interior & Exterior	
	Mobilillation	\$ 30,000
	Rehabilitation of Piping exterior of tank	\$ 15,000
	Sand blast and coat interior of tank	\$ 105,000
	Cathodic Protection/OSHA Requirements	\$ 25,000
	Sand blast and coat exterior of tank	\$ 105,000
	<i>Construction Subtotal</i>	<i>\$ 280,000</i>
	Design/Water Project Submittal	\$ 32,000
	Construction Management	\$ 13,500
	Testing and Inspection	\$ 25,000
	GBWC Internal Capital Time	\$ 18,386
	Contingency (20%)	\$ 73,778
	<b>Total Project Cost</b>	<b>\$ 442,664</b>

## CIP Year 2027

Time Frame	Project Description	Cost
2027-2028	No new projects during this year	

	<b>3-YEAR ACTION PLAN TOTAL</b>	<b>\$ 1,253,517</b>
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**GBWC-SSD 2024 CONSOLIDATED INTEGRATED RESOURCE PLAN  
CAPITAL IMPROVEMENT PROJECT LIST**

<b>GBWC - SSD PREFERRED PLAN PROJECTS</b>
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**CIP YEAR 2028**

Time Frame	Project Description	Cost
2028	Reconditioning of Tank 1A interior and Exterior	
	Pressure Wash and Coat Interior/Exterior	\$ 225,102
	Replacement of Center Column	\$ 191,336
	GBWC Internal Capital Time	\$ 21,600
	Contingency (20%)	\$ 83,288
	<b>Total Project Cost</b>	<b>\$ 521,326</b>
2028	Pipeline and Meter Pit Replacement	
	Pipeline Replacement Projects, Laterals, and Meter Pits	\$ 200,000
	Contingency (25%)	\$ 50,000
	<b>Total Project Cost</b>	<b>\$ 250,000</b>
<b>TOTAL CIP YEAR 2028</b>		<b>\$ 771,326</b>

**CIP YEAR 2029**

Time Frame	Project Description	Cost
2029	Replacement of waterline on Sunset Springs Lane (4000' LF of 12" pipe)	
	Design	\$ 50,000
	Geotech	\$ 12,000
	Survey	\$ 7,000
	Construction Management	\$ 34,000
	Construction	\$ 886,117
	Inspection Testing	\$ 42,000
	County Road Cut Permit	\$ 3,500
	GBWC Capital Time	\$ 14,400
	Contingency	\$ 150,982
	<b>Total Project Cost</b>	<b>\$ 1,200,000</b>
2029	Pipeline and Meter Pit Replacement	
	Pipeline Replacement Projects, Laterals, and Meter Pits	\$ 200,000
	Contingency (25%)	\$ 50,000
	<b>Total Project Cost</b>	<b>\$ 250,000</b>
<b>TOTAL CIP YEAR 2029</b>		<b>\$ 1,450,000</b>



# GBWC-SSD 2024 CONSOLIDATED INTEGRATED RESOURCE PLAN CAPITAL IMPROVEMENT PROJECT LIST

<b>GBWC - SSD PREFERRED PLAN PROJECTS</b>
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## CIP YEAR 2030

Time Frame	Project Description	Cost
2030	<b>Replacement of Bridle Path (Well 1)</b>	
	Production well drilling, construction, and testing	\$ 728,000
	Production well design, permitting, specifications, bid review, construction assistance, drilling oversight, test pump analysis, well analysis report	\$ 104,000
	<i>Production Well Subtotal</i>	<i>\$ 832,000.00</i>
	14'x24' Precast Building w/ Chlorine Storage Room	\$ 83,000
	Reconfiguration of Well Head Piping	\$ 61,500
	New Fence	\$ 9,800
	Pump Controls	\$ 18,000
	Electrical	\$ 61,500
	Mechanical (Heating and Cooling)	\$ 18,000
	<i>Well House Construction Subtotal</i>	<i>\$ 259,354.00</i>
	Geotech	\$ 10,000
	Survey	\$ 12,000
	Permitting	\$ 15,000
	Engineering Design	\$ 61,000
	Construction Management	\$ 61,000
	Inspection Testing	\$ 50,000
	Record Drawings	\$ 3,500
	<i>Non Construction Subtotal</i>	<i>\$ 212,500</i>
	GBWC Internal Capital Time	\$ 14,400
	Contingency (20%)	\$ 281,746
	<b>Total Project Cost</b>	<b>\$ 1,600,000</b>
2030	<b>Pipeline and Meter Pit Replacement</b>	
	Pipeline Replacement Projects, Laterals, and Meter Pits	\$ 200,000
	Contingency (25%)	\$ 50,000
	<b>Total Project Cost</b>	<b>\$ 250,000</b>
2030	<b>Arsenic Pilot Test and PER</b>	
	Pilot test and PER	\$ 110,131
	GBWC Capital Time	\$ 5,400
	Contingency (20%)	\$ 23,106
	<b>Total Project Cost</b>	<b>\$ 160,000</b>
<b>TOTAL CIP YEAR 2030</b>		<b>\$ 2,010,000</b>

**GBWC-SSD 2024 CONSOLIDATED INTEGRATED RESOURCE PLAN  
CAPITAL IMPROVEMENT PROJECT LIST**

<b>GBWC - SSD PREFERRED PLAN PROJECTS</b>
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**CIP YEAR 2031**

Time Frame	Project Description	Cost
2031	Pipeline and Meter Pit Replacement	
	Pipeline Replacement Projects, Laterals, and Meter Pits	\$ 200,000
	Contingency (25%)	\$ 50,000
	<b>Total Project Cost</b>	<b>\$ 250,000</b>
2031	Arsenic Treatment Plant	
	Design/Bid Doc.	\$ 185,000
	Geotech	\$ 12,000
	Survey/Easement	\$ 15,000
	Construction Management	\$ 75,000
	Construction	\$ 1,475,849
	Inspection Testing	\$ 90,000
	Permit	\$ 25,000
	GBWC Capital Time	\$ 28,800
	Contingency	\$ 593,352
	<b>Total Project Cost</b>	<b>\$ 2,500,000</b>
<b>TOTAL CIP YEAR 2031</b>		<b>\$ 2,750,000</b>

**CIP YEAR 2032**

Time Frame	Project Description	Cost
2032	Pipeline and Meter Pit Replacement	
	Pipeline Replacement Projects, Laterals, and Meter Pits	\$ 200,000
	Contingency (25%)	\$ 50,000
	<b>Total Project Cost</b>	<b>\$ 250,000</b>
2032	PRV between Upper and Lower Pressure Zones	
	Design/Spec's/Bid Doc	\$ 15,000
	Geotech	\$ 8,000
	Survey/Easement	\$ 10,000
	Construction Management	\$ 7,000
	Construction	\$ 103,000
	Inspection Testing	\$ 7,000
	Permit	\$ 3,000
	GBWC Capital Time	\$ 7,200
	Contingency	\$ 30,600
	<b>Total Project Cost</b>	<b>\$ 250,000</b>
<b>TOTAL CIP YEAR 2032</b>		<b>\$ 500,000</b>

**GBWC-SSD 2024 CONSOLIDATED INTEGRATED RESOURCE PLAN  
CAPITAL IMPROVEMENT PROJECT LIST**

<b>GBWC - SSD PREFERRED PLAN PROJECTS</b>
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**CIP YEAR 2033**

Time Frame	Project Description	Cost
2033	Pipeline and Meter Pit Replacement	
	Pipeline Replacement Projects, Laterals, and Meter Pits	\$ 200,000
	Contingency (25%)	\$ 50,000
	Total Project Cost	\$ 250,000

**TOTAL CIP YEAR 2033** \$ 250,000

**CIP YEAR 2034**

Time Frame	Project Description	Cost
2034	Pipeline and Meter Pit Replacement	
	Pipeline Replacement Projects, Laterals, and Meter Pits	\$ 200,000
	Contingency (25%)	\$ 50,000
	Total Project Cost	\$ 250,000

**TOTAL CIP YEAR 2034** \$ 250,000

**CIP YEAR 2035**

Time Frame	Project Description	Cost
2035	Pipeline and Meter Pit Replacement	
	Pipeline Replacement Projects, Laterals, and Meter Pits	\$ 200,000
	Contingency (25%)	\$ 50,000
	Total Project Cost	\$ 250,000

**TOTAL CIP YEAR 2035** \$ 250,000

**CIP YEAR 2036**

Time Frame	Project Description	Cost
2036	Pipeline and Meter Pit Replacement	
	Pipeline Replacement Projects, Laterals, and Meter Pits	\$ 200,000
	Contingency (25%)	\$ 50,000
	Total Project Cost	\$ 250,000

**TOTAL CIP YEAR 2036** \$ 250,000

**GBWC-SSD 2024 CONSOLIDATED INTEGRATED RESOURCE PLAN  
CAPITAL IMPROVEMENT PROJECT LIST**

<b>GBWC - SSD PREFERRED PLAN PROJECTS</b>
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**CIP YEAR 2037**

Time Frame	Project Description	Cost
2037	Pipeline and Meter Pit Replacement	
	Pipeline Replacement Projects, Laterals, and Meter Pits	\$ 200,000
	Contingency (25%)	\$ 50,000
	Total Project Cost	\$ 250,000
<b>TOTAL CIP YEAR 2037</b>		<b>\$ 250,000</b>

**CIP YEAR 2038**

Time Frame	Project Description	Cost
2038	Pipeline and Meter Pit Replacement	
	Pipeline Replacement Projects, Laterals, and Meter Pits	\$ 200,000
	Contingency (25%)	\$ 50,000
	Total Project Cost	\$ 250,000
2038	Booster 1 & 2 Pump and Motor Replacement	
	Pumps and Motors and Installation	\$ 200,000
	Contingency (25%)	\$ 50,000
	Total Project Cost	\$ 250,000
<b>TOTAL CIP YEAR 2038</b>		<b>\$ 500,000</b>

**CIP YEAR 2039**

Time Frame	Project Description	Cost
2039	Pipeline and Meter Pit Replacement	
	Pipeline Replacement Projects, Laterals, and Meter Pits	\$ 200,000
	Contingency (25%)	\$ 50,000
	Total Project Cost	\$ 250,000
<b>TOTAL CIP YEAR 2039</b>		<b>\$ 250,000</b>

**CIP YEAR 2040**

Time Frame	Project Description	Cost
2040	Pipeline and Meter Pit Replacement	
	Pipeline Replacement Projects, Laterals, and Meter Pits	\$ 200,000
	Contingency (25%)	\$ 50,000
	Total Project Cost	\$ 250,000
<b>TOTAL CIP YEAR 2040</b>		<b>\$ 250,000</b>

**GBWC-SSD 2024 CONSOLIDATED INTEGRATED RESOURCE PLAN  
CAPITAL IMPROVEMENT PROJECT LIST**

<b>GBWC - SSD PREFERRED PLAN PROJECTS</b>
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**CIP YEAR 2041**

Time Frame	Project Description	Cost
2041	Pipeline and Meter Pit Replacement	
	Pipeline Replacement Projects, Laterals, and Meter Pits	\$ 200,000
	Contingency (25%)	\$ 50,000
	Total Project Cost	\$ 250,000
<b>TOTAL CIP YEAR 2041</b>		<b>\$ 250,000</b>

**CIP YEAR 2042**

Time Frame	Project Description	Cost
2042	Pipeline and Meter Pit Replacement	
	Pipeline Replacement Projects, Laterals, and Meter Pits	\$ 200,000
	Contingency (25%)	\$ 50,000
	Total Project Cost	\$ 250,000
<b>TOTAL CIP YEAR 2042</b>		<b>\$ 250,000</b>

**CIP YEAR 2043**

Time Frame	Project Description	Cost
2043	Pipeline and Meter Pit Replacement	
	Pipeline Replacement Projects, Laterals, and Meter Pits	\$ 200,000
	Contingency (25%)	\$ 50,000
	Total Project Cost	\$ 250,000
<b>TOTAL CIP YEAR 2043</b>		<b>\$ 250,000</b>

**CIP YEAR 2044**

Time Frame	Project Description	Cost
2044	Pipeline and Meter Pit Replacement	
	Pipeline Replacement Projects, Laterals, and Meter Pits	\$ 200,000
	Contingency (25%)	\$ 50,000
	Total Project Cost	\$ 250,000
<b>TOTAL CIP YEAR 2044</b>		<b>\$ 250,000</b>

<b>20 Year Total</b>	<b>\$ 10,731,326</b>
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