

**MOST RECENT FIRE TESTING DATA AS PROVIDED TO
A HIGHLANDS MUTUAL WATER COMPANY SHAREHOLDER**

After a shareholder requested fire hydrant testing data from Highlands Mutual Water Company a few years ago, Highlands provided them with the following spreadsheet. Highlands Water told them it was the most current information they had about testing their fire hydrants.

The same shareholder followed up in 2024 with a request for updated data, but was told there is no new information available.

The report shows the reported state of Highlands Water's fire hydrants in their service area and a cover sheet of totals is included as page one, prior to Highlands's data. From what the data indicated, there is a **strong likelihood that a wildfire in Highlands's service area will cause catastrophic impacts to the entire City of Clearlake.**

Highlands Water's hydrant testing data shows:

- 193 total hydrants reported within their service area
- **16 (8%) apparently do not function at all**, with zero recorded for the flow.
- **Close to 7 in 10 hydrants do not meet common residential standards** of 1,000 gallons per minute (68% = 132 hydrants)
- 822 is the average gallons per minute of all hydrants in Highlands's area, well below typical standards for residential areas, and far below standards for commercial development.
- 1,000 gallons per minute is a common minimum residential standard for hydrant flow; much higher flow rates are required for commercial development depending on building size and construction materials.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
1	Highlands Water Company Hydrant Data Listed by Street Name																
2	Location of Hydrants:				Hydrant and Connection Data:						Test Data:						
3	Street Name where Hydrant is Located:	Street Number:	Cross Street or Location where Hydrant is Located:	Distance Feet:	Direction:	Hydrant Brand:	Hydrant Type:	Pressure Zone: Plant #1, Fillmore #2, Spruce #3, 20th #4	Fire Dept. No.	Fire Dept. No. of adjacent Hydrant:	Main Size Inch:	Static Pressure:	Static Pressure of adjacent Hydrant:	Pressure of adjacent Hydrant during Test:	Pitot Gauge Pressure:	Flow GPM:	Supply Main Pressure Drop at Flow:
4	18th St.	15630	In Front of Redbud Hospital			Rich	Dry Barrel										
5	18th St.	15630	Redbud Hospital Lower Parking Lot			Amer. Darling	Dry Barrel	4	H-186	H210	8"	57	34	31	38	1149	3
6	20th St.		Oak Ave.			Amer. Darling	Dry Barrel	4	H-205		12"	34			50	1318	
7	Airport Rd.		20th St. Tank Pump Station			Rich	Dry Barrel	3	H-184		6"				18	791	
8	Alvita Ave.	3825	Uhl Ave.			Waterous	Dry Barrel	1	H-054		6"	66			23	894	
9	Alvita Ave.		Bayliss Ave.			Greenberg	Wet Barrel	1	H-045		6"	60			24	913	
10	Anchor Dr.	7312				Muller	Dry Barrel	3	H-175		6"	60			26	951	
11	Austin Rd.	14215	Evans Ave.			Greenberg	Wet Barrel	1	H-042		4"	64			12	813	
12	Austin Rd.	14551	Mullen Ave.			Rich	Dry Barrel	1	H-039		4"	60			28	987	
13	Austin Rd.	14745	Manchester Ave.			Rich	Dry Barrel	1	H-037		6"	62			30	1021	
14	Austin Rd.	14875	Vista Robles			Rich	Dry Barrel	1	H-036		6"	60			20	834	
15	Austin Rd.	15061	Old Hwy 53			Rich	Dry Barrel	1	H-031		6"	56			22	874	
16	Austin Rd.	15160	New Commons			Waterous	Dry Barrel	2	H-090		6"	48			20	834	
17	Austin Rd.	15170	McKinley Dr.			Amer. Darling	Dry Barrel	2	H-030		6"	48			30	1021	
18	Ballpark Ave.	14960	Old Hwy 53			Amer. Darling	Dry Barrel	1	H-127		10"	58			38	1149	
19	Bartrum Circle	3158	Garner Lane			Amer. Darling	Dry Barrel	2	H-103		6"	72			23	894	
20	Bartrum Circle	3177	Rumsey Rd.	500'	East	Amer. Darling	Dry Barrel	2	H-097		6"	70			23	894	
21	Bartrum Circle	3206	Rumsey Rd.			Amer. Darling	Dry Barrel	2	H-098		6"	70			26	951	
22	Bay St.		Lakeside Dr.	200'	South	Clow	Dry Barrel	3	H-199		8"				33	1071	
23	Bay St.		Lakeview Way	100'	North	Clow	Dry Barrel	3	H-198		8"				38	1149	
24	Bayliss Ave.	14360	Robinson Ave.	50'	East	Waterous	Dry Barrel	1	H-044		6"	60			20	834	
25	Bowers Rd.	3271	Burns Valley Rd. (Senior Center)	100'	East	Amer. Darling	Dry Barrel	2			6"				0		
26	Burns Valley Rd	14785	Redbud Library			Clow	Dry Barrel	2	H-034		8"	70			22	874	
27	Burns Valley Rd	14900	Bowers Rd			Waterous	Dry Barrel	2	H-012		6"	63			32	1055	
28	Burns Valley Rd.	14900	Rumsey Rd.	300'	West	Amer. Darling	Dry Barrel	2	H-011		6"	68			20	834	
29	Burns Valley Rd.	14910	Sharp Lane			Amer. Darling	Dry Barrel	2	H-104		6"	60			21	854	
30	Burns Valley Rd.	14930	Rumsey Rd. (Inside Autumn Village)			Amer. Darling	Dry Barrel	2	H-010		6"	64			20	834	
31	Burns Valley Rd.	15000	Olympic Dr.	100'	North	Rich	Dry Barrel	2	H-013		6"	80			45	1251	
32	Cache Creek Way		End of Rainbow			Jones	Worthead	3	H-208		8"				6	457	
33	Cache Creek Way		Shaws Resort			Amer. Darling	Dry Barrel	3	H-209		8"				10	590	
34	Clement Ave.	14900	End		West	Greenberg	Worthead	3	H-142		4"				10	590	
35	Clement Ave.	14940	Old Hwy 53	500'	West	Jones	Worthead	3	H-143		4"				9	559	
36	Cottage Ave.		Cass Ave	500'	South	Rich	Dry Barrel	3	H-147		6"				16	746	
37	Cottage Ave.		Mohican Ave.			Rich	Dry Barrel	3	H-149		6"				8	527	
38	Crawford Ave.		Elk's Lodge			Clow	Dry Barrel	3	H-152		6"				22	874	
39	Dam Rd.	15945	Jack in the Box			Clow	Wet Barrel	4	H-217		10"	70			60	1444	
40	Dam Rd. Extension	15960	Wal Mart Center (Entry)	100'	North	Amer. Darling	Dry Barrel	4	H-192	H217	10"	70	70	67	60	1444	3
41	Dam Rd. Extension	15960	Wal Mart Center (McDonald's)			Amer. Darling	Dry Barrel	4	H-200		10"	60			60	1444	
42	Dam Rd. Extension	15960	Wal Mart Center (Ray's Market Front)			Amer. Darling	Dry Barrel	4	H-201		10"	60			60	1444	
43	Dam Rd. Extension	15960	Wal Mart Center (Ray's Market Rear)			Amer. Darling	Dry Barrel	4	H-202		10"	60			60	1444	

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1	Highlands Water Company Hydrant Data Listed by Street Name																
2	Location of Hydrants:				Hydrant and Connection Data:					Test Data:							
3	Street Name where Hydrant is Located:	Street Number:	Cross Street or Location where Hydrant is Located:	Distance Feet:	Direction:	Hydrant Brand:	Hydrant Type:	Pressure Zone/Plant # 1, Fillmore #2, Spruce #3, 20th #4	Fire Dept. No.	Fire Dept. No. of adjacent Hydrant:	Main Size Inch:	Static Pressure:	Static Pressure of adjacent Hydrant:	Pressure of adjacent Hydrant during Test:	Pitot Gauge Pressure:	Flow GPM:	Supply Main Pressure Drop at Flow:
44	Dam Rd. Extension	15960	Wal Mart Center (Wal Mart Parking)		Southwest	Amer. Darling	Dry Barrel	4	H-193		10"	60			52	1344	
45	Dam Rd. Extension	15960	Wal Mart Center (Wal Mart Parking)		West	Amer. Darling	Dry Barrel	4	H-194		10"	60			44	1237	
46	Dam Rd. Extension	15960	Wal Mart Center (Wal Mart Parking)		East	Amer. Darling	Dry Barrel	4	H-195		10"	60			60	1444	
47	Dam Rd. Extension		Yuba Collage Rd.			Amer. Darling	Dry Barrel	4	H-189		6"				46	1264	
48	Denton Lane		East End			Rich	Dry Barrel	4	H-005		8"	5.4			22	874	
49	Dexter Ln.		Austin Rd.			Amer. Darling	Dry Barrel	4	H-093		6"	48			30	1021	
50	Dexter Ln.		Austin Rd.	500'	South	Amer. Darling	Dry Barrel	4	H-094		6"	42			24	913	
51	Duncan Ave		Fillmore Ave.			Rich	Dry Barrel	2	H-029		6"	30			15	722	
52	El Camino Real		Saroni Parkway			Waterous	Dry Barrel	1	H-035		6"	60			22	874	
53	Garner Lane		Rumsey Rd.			Amer. Darling	Dry Barrel	2	H-102		6"	72			24	913	
54	Ghiorzi Lane		Burns Valley Rd.	400'	North	Greenberg	Worthead	2			2"					0	
55	Golf Ave.	5020	Brandlin Ave	100'	South	Greenberg	Wet Barrel	1	H-128		8"				15	722	
56	Harbor Lane	15147				Muller	Dry Barrel	3	H-170		6"				20	834	
57	Highlands Harbor Dr.	7235				Muller	Dry Barrel	3	H-180		6"				10	590	
58	Highlands Harbor Dr.	15200				Muller	Dry Barrel	3	H-172		6"				24	913	
59	Highlands Harbor Dr.	15275				Muller	Dry Barrel	3	H-173		6"				23	894	
60	Highlands Harbor Dr.	15364				Muller	Dry Barrel	3	H-174		6"				20	834	
61	Highlands Harbor Dr.	15474				Muller	Dry Barrel	3	H-176		6"				24	913	
62	Highlands Harbor Dr.	15534				Muller	Dry Barrel	3	H-179		6"				20	834	
63	Highlands Harbor Dr.		End		West	Muller	Dry Barrel	3	H-169		6"				22	874	
64	Highlands Harbor Dr.		Riverview Dr		100'	West	Muller	Dry Barrel	3	H-171		6"			24	913	
65	Highlands Way		Vista Robles Way			Clow	Dry Barrel	1	H-033		6"	54			30	1021	
66	Hillcrest Ave.	14691	40th Ave			Rich	Dry Barrel	1	H-079		10"	38			12	646	
67	Hillcrest Ave.	14855	Carrol Ave.			Greenberg	Wet Barrel	1	H-081		10"	26			20	834	
68	Hillcrest Ave.	14999	Lansing Ave.			Waterous	Dry Barrel	1	H-082		10"	34			26	951	
69	Howard Ave.	14415	Ridge Rd.			Amer. Darling	Dry Barrel	1	H-047		8"	48			20	834	
70	Howard Ave.		Pearl Ave			Rich	Dry Barrel	1	H-052		6"	62			26	951	
71	Huron Ave.	4877	Crawford Ave.	100'	North	Amer. Darling	Dry Barrel	3	H-211		8"				12	646	
72	Huron Ave.		Cass Ave	500'	South	Rich	Dry Barrel	3	H-146		6"				11	618	
73	Jefferson Ave.		Olympic Dr.	300'	South	Rich	Dry Barrel	2	H-026		6"	48			16	746	
74	Jones Ave		Cass Ave.			Greenberg	Worthead	3	H-145		4"				4	373	
75	Kent		Putman			Rich	Dry Barrel	1	H-204		10"				18	791	
76	Konocti View	15001	Old Hwy 53			Greenberg	Worthead	1			4"					0	
77	Konocti View	15170	Old Hwy 53	800'	East	Rich	Dry Barrel	1	H-133		6"				6	457	
78	Konocti View	15275	Spruce St			Greenberg	Worthead	1	H-134		4"				2	264	
79	Laddell Ave.	3737	Austin Rd			Waterous	Dry Barrel	1	H-040		6"	60			28	987	
80	Laddell Ave.	3863				Greenberg	Dry Barrel	1	H-092		6"	58			27	969	
81	Laguna Ave.	14920	Kent Ave.	100'	West	Greenberg	Worthead	1	H-129		4"				14	698	
82	Lakeland Dr.	7398				Muller	Dry Barrel	3	H-178		6"				18	791	
83	Lakeshore Dr	14050	Austin Dr.			Greenberg	Wet Barrel	1	H-055		8"	70			25	932	

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84	Lakeshore Dr.	14094				Greenberg	Wet Barrel	1	H-056		8"	62			28	987	
85	Lakeshore Dr.	14120				Greenberg	Wet Barrel	1	H-057		8"	69			27	969	
86	Lakeshore Dr.	14165	Alvita Ave.			Greenberg	Wet Barrel	1	H-058		8"	68			30	1021	
87	Lakeshore Dr.	14235				Greenberg	Wet Barrel	1	H-059		8"	68			31	1038	
88	Lakeshore Dr.	14355	Howard Ave			Greenberg	Wet Barrel	1	H-060		8"	62			30	1021	
89	Lakeshore Dr.	14355				Greenberg	Wet Barrel	1	H-061		8"	60			30	1021	
90	Lakeshore Dr.	14530	Mullen Ave.	200'	East	Greenberg	Wet Barrel	1	H-062		8"	60			40	1179	
91	Lakeshore Dr.	14585	Highlands Water Dist.			Greenberg	Wet Barrel	1	H-063		8"	62			45	1251	
92	Lakeshore Dr.	14656	Redbud Park			Greenberg	Wet Barrel	1	H-064		8"	64			42	1208	
93	Lakeshore Dr.	14732	Emery Ave		East	Waterous	Dry Barrel	1	H-065		8"	64			42	1208	
94	Lakeshore Dr.	14852				Greenberg	Wet Barrel	1	H-066		8"	60			38	1149	
95	Lakeshore Dr.	14952	Auto Lot			Greenberg	Wet Barrel	1	H-067		8"	48			34	1087	
96	Lakeshore Dr.	15130	Foods Etc Rear of Restaurant			Rich	Dry Barrel	1	H-083		8"	40			20	834	
97	Lakeshore Dr.	15135	El Grande South East Corner			Amer Darling	Dry Barrel	1	H-087		6"	40			24	913	
98	Lakeshore Dr.	15135	El Grande South West Corner			Amer Darling	Dry Barrel	1	H-088		6"	40			24	913	
99	Lakeshore Dr.	15140	Foods Etc. Front of Sprouce Reitz			Rich	Dry Barrel	1	H-084		8"	43			20	834	
100	Lakeshore Dr.	15145	Back of Bank next to BK			Greenberg	Wet Barrel	1	H-096		6"	25			0	0	
101	Lakeshore Dr.	15150	Foods Etc North West Rear Corner			Rich	Dry Barrel	1	H-085		8"	42			13	672	
102	Lakeshore Dr.	15185	Wendy's			Waterous	Dry Barrel	1	H-086		6"	34			17	769	
103	Lakeside Dr.	6223				Greenberg	Wet Barrel	3	H-156		6"				20	834	
104	Lakeside Dr.	6303				Greenberg	Wet Barrel	3	H-157		6"				20	834	
105	Lakeside Dr.	Bay Dr.				Waterous	Dry Barrel	3	H-153		6"				27	969	
106	Lakeview Ave	15255	Spruce St.	100'	West	Greenberg	Worthead	3	H-137		4"				1	186	
107	Lakeview Ave.	Jones Ave.		100'	West	Greenberg	Worthead	3	H-138		4"				0	0	
108	Lakeview Way	Bay Dr.		50'	East	Waterous	Dry Barrel	3	H-160		6"				33	1071	
109	Lakeview Way	Meadowbrook Dr.				Greenberg	Wet Barrel	3	H-191		6"				25	932	
110	Lakeview Way	Ridgeview Dr				Greenberg	Wet Barrel	3	H-159		6"				30	1021	
111	Lelabelle Ave.	14830	Golf Ave.			Greenberg	Worthead	1	H-130		4"				2	264	
112	Lelabelle Ave.	14940	Old Hwy 53	600'	West	Greenberg	Worthead	1	H-131		4"				7	493	
113	Madison Dr.	Austin Rd		300'	East	Rich	Dry Barrel	2	H-028		6"	60			28	987	
114	Marina Dr.	7314				Muller	Dry Barrel	3	H-177		6"				19	813	
115	Meadowbrook Ct.	End				Rich	Dry Barrel	3	H-168		6"				10	590	
116	Meadowbrook Dr.	6830				Rich	Dry Barrel	3	H-166		6"				24	913	
117	Meadowbrook Dr.	Riverview Dr				Rich	Dry Barrel	3	H-167		6"				22	874	
118	Meadowbrook Dr.	Stonybrook Dr				Rich	Dry Barrel	3	H-164		6"				20	834	
119	Meadowbrook Dr	Woodside Dr				Rich	Dry Barrel	3	H-163		6"				17	769	
120	Mullen Ave	3850	Austin Rd	300'	South	Rich	Dry Barrel	1	H-048		6"	60			22	874	
121	Mullen Ave	3950	Valley Ave.	300'	South	Rich	Dry Barrel	1	H-049		6"	42			16	746	
122	Mullen Ave	3985	Uhl Ave			Rich	Dry Barrel	1	H-050		8"	50			20	834	
123	Mullen Ave	4286	Emery Ave			Rich	Dry Barrel	1	H-068		8"	58			30	1021	

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124	Oak Ave.		19th St.			Amer. Darling	Dry Barrel	4	H-206	12"					26	951	
125	Old Hwy 53	3191	Bowers Rd.			Rich	Dry Barrel	2	H-004	8"	62				30	1021	
126	Old Hwy 53	3680	Ron Lane's			Jones	Worthead	1	H-025	6"	54				18	791	
127	Old Hwy 53	3820	Clearlake Commons			Waterous	Dry Barrel	2	H-038	6"	62				31	1038	
128	Old Hwy 53	4750	Lakeshore Dr.	50'	North	Greenberg	Wet Barrel	1	H-089	10"	45				34	1087	
129	Old Hwy 53	4765	Lakeshore Dr. (Kragen Auto)	50'	South	Amer. Darling	Dry Barrel	1		10"						0	
130	Old Hwy 53	5245	Lulabelle Ave.			Greenberg	Wet Barrel	3	H-141	10"					30	1021	
131	Old Hwy 53	5535	Lottowana Rd.			Greenberg	Wet Barrel	3	H-144	10"					30	1021	
132	Old Hwy 53	5735	Highlander Resort			Greenberg	Wet Barrel	3	H-148	10"					22	874	
133	Old Hwy 53	6035	Garners Resort			Greenberg	Wet Barrel	3	H-151	10"					22	874	
134	Old Hwy 53	6215	Seniors Apartments			Rich	Dry Barrel	3	H-158	10"					14	698	
135	Old Hwy 53	6885	Side of Water Park		West	Waterous	Dry Barrel	3	H-185	6"					52	1344	
136	Old Hwy 53	7145	Clearlake Apts. (On Site)		South	Waterous	Dry Barrel	3	H-181	6"	40				20	834	
137	Old Hwy 53	7145	Clearlake Apts. (On Site)		West	Waterous	Dry Barrel	3	H-182	6"	40				10	590	
138	Old Hwy 53	7145	Clearlake Apts. (On Site)		North	Waterous	Dry Barrel	3	H-183	6"	40				35	1103	
139	Old Hwy 53		Konocti View			Greenberg	Worthead	3	H-132	4"						0	
140	Old Hwy 53		Saroni Parkway			Rich	Dry Barrel	1	H-032	6"	40				15	722	
141	Olympic Dr.	14560	Madrone St.			Amer. Darling	Dry Barrel	2	H-019	6"	72				31	1038	
142	Olympic Dr.	14580	Olympic Villa Apartments			Amer. Darling	Dry Barrel	2	H-020	6"	72				31	1038	
143	Olympic Dr.	14580	Olympic Villa Apartments in Back	300'	North	Jones	Worthead	2	H-106	4"	76				13	672	
144	Olympic Dr.	14670	Sycamore St.			Amer. Darling	Dry Barrel	2	H-018	6"	72				32	1055	
145	Olympic Dr.	14730	PG&E			Rich	Dry Barrel	2	H-017	6"	72				31	1038	
146	Olympic Dr.	14815	Fire House Court	300'	South	Waterous	Worthead	2	H-022	4"	72				38	1149	
147	Olympic Dr.	14815	Fire House Front Ramp			Mueller	Worthead	2	H-023	4"	70				21	854	
148	Olympic Dr.	14860	Pay & Save			L. B. Iron	Dry Barrel	2	H-016	6"	76				40	1179	
149	Olympic Dr.	14900	Old Hwy 53	400'	West	Rich	Dry Barrel	2	H-024	6"	78				31	1038	
150	Olympic Dr.	14922	Safeway			L. B. Iron	Dry Barrel	2	H-015	6"	76				40	1179	
151	Olympic Dr.	14922	Safeway Rear Parking Area			L. B. Iron	Dry Barrel	2	H-014	6"	60				32	1055	
152	Olympic Dr.	15100	Emerson St.			Amer. Darling	Dry Barrel	2	H-021	6"	70				44	1237	
153	Olympic Dr.	15210	Harrison Ave.			Waterous	Dry Barrel	2	H-007	6"	58				34	1087	
154	Olympic Dr.	15600	Amber Ave.			Waterous	Dry Barrel	2	H-006	6"	54				30	1021	
155	Palmer Ave.	14600				Rich	Dry Barrel	1	H-069	6"	58				26	951	
156	Palmer Ave.	14667				Rich	Dry Barrel	1	H-070	6"	60				20	834	
157	Palmer Ave.		Frye Ave.	250'	West	Rich	Dry Barrel	1	H-076	6"	54				18	791	
158	Palmer Ave.		Golf Ave.			Rich	Dry Barrel	1	H-071	6"	61				28	987	
159	Park St.		End		West	Greenberg	Worthead	3	H-150	4"					4	373	
160	Pearl Ave.	3680	Division Ave.			Amer. Darling	Dry Barrel	1	H-043	8"	64				4	373	
161	Pearl Ave.	3790	Bayliss Ave.	200'	North	Amer. Darling	Dry Barrel	1	H-168	8"					15	722	
162	Pearl Ave.		Mullen Ave.			Rich	Dry Barrel	1	H-051	6"	49				26	951	
163	Pearl Ave.		Mullen Ave.	350'	East	Rich	Dry Barrel	1	H-073	6"	55				30	1021	

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
1	Highlands Water Company Hydrant Data Listed by Street Name																
2	Location of Hydrants:					Hydrant and Connection Data:					Test Data:						
3	Street Name where Hydrant is Located:	Street Number:	Cross Street or Location where Hydrant is Located:	Distance Feet:	Direction:	Hydrant Brand:	Hydrant Type:	Pressure Zone: Plant #1, Fillmore P.A. Spruce #1, 20th #4	Fire Dept. No.	Fire Dept. No. of adjacent Hydrant:	Main Size Incht:	Static Pressure:	Static Pressure of adjacent Hydrant:	Pressure of adjacent Hydrant during Test:	Pitot Gauge Pressure:	Flow GPM:	Supply Main Pressure Drop at Flow:
164	Polk Ave.		McKinley Dr.			Rich	Dry Barrel	2	H-027		6"	60					
165	Ridge Rd.	14260				Amer. Darling	Dry Barrel	1	H-046		8"	46			30	1021	
166	Ridgeview Dr.	14480	Oakland Ave.	50'	West	Amer. Darling	Dry Barrel	1	H-107		8"				25	932	
167	Ridgeview Dr.		Lakeside Dr.	75'	North	Greenberg	Wet Barrel	3	H-154		6"				30	1021	
168	Ridgeview Dr.		Lakeside Dr.	250'	South	Greenberg	Wet Barrel	3	H-155		6"				27	969	
169	Rumsey Rd.	14975	Sylvia Court			Amer. Darling	Dry Barrel	2	H-100		6"	60			25	932	
170	Rumsey Rd.	14985	Sylvia Court			Amer. Darling	Dry Barrel	2	H-099		6"	70			15	722	
171	Rumsey Rd.	15001	Garner Lane	300'	West	Amer. Darling	Dry Barrel	2	H-101		6"	70			12	646	
172	Sharp Lane		Burns Valley Rd.			Amer. Darling	Dry Barrel	2	H-101		6"	70			15	722	
173	Smith Lane	2851	End of Smith Lane		200'	Amer. Darling	Dry Barrel	2	H-105		6"	60			24	913	
174	Smith Lane	2955	Halfway down		North	Waterous	Dry Barrel	2	H-001		6"	60			14	698	
175	Smith Lane	3150	Rumsey Rd.		North	Waterous	Dry Barrel	2	H-002		6"	70			16	746	
176	South Center Dr		Dam Rd. Extension			Waterous	Dry Barrel	2	H-003		6"	62			20	834	
177	South Center Dr.		Oak Hill School Annex (Entry)			Rich	Dry Barrel	4	H-188		6"				38	1149	
178	South Center Dr.		Oak Hill School Annex (Inside)			Amer. Darling	Dry Barrel	4	H-196		8"				48	1292	
179	South Center Dr.		State Hwy 53			Amer. Darling	Dry Barrel	4	H-197		8"				40	1179	
180	Spruce St.	5754	Huston St.	100'	East	Rich	Dry Barrel	4	H-187		6"				42	1208	
181	Spruce St.		Lakeview Ave.			Rich	Dry Barrel	3	H-135		6"				2	264	
182	Stonybrook Dr.	6855				Greenberg	Wet Barrel	3	H-136		4"				2	264	
183	Turner Ave.		Harrison Ave.			Rich	Dry Barrel	3	H-165		6"					0	
184	Uhl Ave	14325	Alvita Ave	300'	East	Greenberg	Worthead	2	H-008		4"	57			10	590	
185	Uhl Ave.	14000	Veterans Lane			Amer. Darling	Dry Barrel	1	H-053		6"	60			32	1055	
186	Uhl Ave.		Mullen Ave	600'	East	Amer. Darling	Dry Barrel	1	H-091		6"	49			29	1004	
187	Uhl Ave.		Palmer Ave			Rich	Dry Barrel	1	H-074		6"					0	
188	Uhl Ave.		Pearl Ave.			Rich	Dry Barrel	1	H-072		6"	55			28	987	
189	Valley Ave		Manchester Ave.			Rich	Dry Barrel	1	H-075		6"	46			25	932	
190	Washington Ave.		Olympic Dr.			Rich	Dry Barrel	1	H-080		6"	40			18	791	
191	Wayland Way	5355	West End	300'	North	Waterous	Dry Barrel	2	H-009		6"	72			30	1021	
192	Wayland Way		Old Hwy 53			Greenberg	Wet Barrel	3	H-140		4"				5	417	
193	West 40th Ave.	4670	Hillcrest Ave.	500'	West	Greenberg	Worthead	3	H-139		4"				6	457	
194	West 40th Ave.	4712	Carrol Ave.	300'	East	Rich	Dry Barrel	1	H-078		6"	31			18	791	
195	West 40th Ave.		Palm Ave.			Valve	2" Gate	1	H-077		2"					0	
196	Woodside Dr.		Medowbrook Dr.			Greenberg	Worthead	1	H-095		4"	25			0	0	
197	Woodside Dr.		Stonybrook Dr.	500'	West	Greenberg	Wet Barrel	3	H-162		6"				24	913	
198	Youngs Lane		Burns Valley Rd.			Greenberg	Wet Barrel	3	H-161		6"				26	951	
199	Yuba Collage Rd.		Oak Hill School Gym	300'	North	Greenberg	Worthead	2			2"					0	
200	Yuba Collage Rd.		Yuba Collage 1 (Entrance)	100'	North	Clow	Dry Barrel	4	H-203		6"				37	1134	
201	Yuba Collage Rd.		Yuba Collage 2 (Right Side Back)			Waterous	Dry Barrel	4	H-190		6"				54	1370	
202	Yuba Collage Rd.		Yuba Collage 3 (Right Side 1st)	200'	East	Amer. Darling	Dry Barrel	4	H-112		8"					0	
203	Yuba Collage Rd.		Yuba Collage 4 (Front Parking)	200'	East	Amer. Darling	Dry Barrel	4	H-113		8"					0	
				150'	East	Amer. Darling	Dry Barrel	4	H-114		8"					0	

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	
1	Highlands Water Company Hydrant Data Listed by Street Name																	
2	Location of Hydrants:					Hydrant and Connection Data:					Test Data:							
3	Street Name where Hydrant is Located:	Street Number:	Cross Street or Location where Hydrant is Located:		Distance Feet:	Direction:	Hydrant Brand:	Hydrant Type:	Pressure Zone: Plant #1, Fillmore #2, Spruce #3, 20th #4	Fire Dept. No.	Fire Dept. No. of adjacent Hydrant:	Main Size inch:	Static Pressure:	Static Pressure of adjacent Hydrant:	Pressure of adjacent Hydrant during Test:	Pitot Gauge Pressure:	Flow GPM:	Supply Main Pressure Drop at Flow:
204	Yuba Collage Rd.		Yuba Collage 5 (Left in Back)		200'	East	Amer. Darling	Dry Barrel	4	H-115	8"							0
205																		

Highlands Water Company Hydrant Data

Highlands Water Company Hydrant Data																							
Hydrant Locations					Hydrant & Connection Data								Hydrant Flow Test Data										
Street Name & Number		Cross Street or Location of Hydrant			Hydrant Data				Connectio		Test Hydrant Data				Adjacent Hydrant				Flows				
Street Name	Number	Cross Street or Location	Distance in Feet	Location Direction	Brand Name of Hydrant	Type of Hydrant	Model Number of Hydrant	Date of Manufacture	Zone 1, Fillmore Spruce 20th	Main Size in Inches	Fire Dept. # of Hydrant	Hydrant Coefficient NA	Static Pressure PSI	Fire Dept. # of Hydrant	Static Pressure PSI	Residual Line Pressure Set at 20 Flow Test	Residual Line Pressure during Flow Test	Pressure Drop during Flow Test	2.5" Nozzle Hydrant Flow Observed during	2.5" Nozzle Flow Color Code	Total Available Hydrant Flow		
1	18th St.	15630	In Front of Redbud Hospital		Rich	Dry Barrel			4	8"	H-186	0.95	57	38	H210	34	20	31	3	1037	Green	1394	Green
2	18th St.	15630	Redbud Hospital Lower Parking Lot		Amer. Darling	Dry Barrel			4	8"	H-210	0.95		50						1190	Green		
3	20th St.		Oak Ave.		Amer. Darling	Dry Barrel			4	12"	H-205	0.95	34	18			10			714	Orange		
4	Airport Rd.		20th St. Tank Pump Station		Rich	Dry Barrel			3	6"	H-184	0.95		23						807	Orange		
5	Alvita Ave.	3825	Uhl Ave.		Waterous	Dry Barrel			1	6"	H-054	0.95	66	24			20			824	Orange		
6	Alvita Ave.		Bayliss Ave.		Greenberg	Wet Barrel			1	6"	H-045	0.95	60	26			20			858	Orange		
7	Anchor Dr.	7312			Muller	Dry Barrel			3	6"	H-175	0.95		19						733	Orange		
8	Austin Rd.	14215	Evans Ave.		Greenberg	Wet Barrel			1	4"	H-042	0.95	64	12			20			583	Orange		
9	Austin Rd.	14551	Mullen Ave.		Rich	Dry Barrel			1	4"	H-039	0.95	60	28			20			890	Orange		
10	Austin Rd.	14745	Manchester Ave.		Rich	Dry Barrel			1	6"	H-037	0.95	62	30			20			922	Orange		
11	Austin Rd.	14875	Vista Robles		Rich	Dry Barrel			1	6"	H-036	0.95	60	20			20			752	Orange		
12	Austin Rd.	15061	Old Hwy 53		Rich	Dry Barrel			1	6"	H-031	0.95	55	22			20			789	Orange		
13	Austin Rd.	15160	New Commons		Waterous	Dry Barrel			2	6"	H-090	0.95	48	20			10			752	Orange		
14	Austin Rd.	15170	McKinley Dr.		Amer. Darling	Dry Barrel	B-62-B	1990	2	6"	H-030	0.95	48	30			10			922	Orange		
15	Ballpark Ave.	14960	Old Hwy 53		Amer. Darling	Dry Barrel			1	10"	H-127	0.95	58	38			20			1037	Green		
16	Bartrum Circle	3158	Garner Lane		Amer. Darling	Dry Barrel			2	6"	H-103	0.95	72	23			20			807	Orange		
17	Bartrum Circle	3177	Rumsey Rd.	500' East	Amer. Darling	Dry Barrel			2	6"	H-097	0.95	70	23			20			807	Orange		
18	Bartrum Circle	3206	Rumsey Rd.		Amer. Darling	Dry Barrel			2	6"	H-098	0.95	70	26			20			858	Orange		
19	Bay St.		Lakeside Dr.	200' South	Clow	Dry Barrel			3	8"	H-199	0.95		33						967	Orange		
20	Bay St.		Lakeview Way	100' North	Clow	Dry Barrel			3	8"	H-198	0.95		38						1037	Green		
21	Bayliss Ave.	14360	Robinson Ave.	50' East	Waterous	Dry Barrel			1	6"	H-044	0.95	60	20			20			752	Orange		
22	Bowers Rd.	3271	Burns Valley Rd. (Senior Center)	100' East	Amer. Darling	Dry Barrel			2	6"		0.95											
23	Burns Valley Rd.	14785	Redbud Library		Clow	Dry Barrel			2	8"	H-034	0.95	70	22			20			789	Orange		
24	Burns Valley Rd.	14900	Bowers Rd		Waterous	Dry Barrel			2	6"	H-012	0.95	63	32			20			952	Orange		
25	Burns Valley Rd.	14900	Rumsey Rd.	300' West	Amer. Darling	Dry Barrel			2	6"	H-011	0.95	68	20			20			752	Orange		
26	Burns Valley Rd.	14910	Sharp Lane		Amer. Darling	Dry Barrel			2	6"	H-104	0.95	60	21			20			771	Orange		
27	Burns Valley Rd.	14930	Rumsey Rd. (Inside Autumn Village)		Amer. Darling	Dry Barrel			2	6"	H-010	0.95	64	20			20			752	Orange		
28	Burns Valley Rd.	15000	Olympic Dr.	100' North	Rich	Dry Barrel			2	6"	H-013	0.95	80	45			20			1129	Green		
29	Cache Creek Way		End of Rainbow		Jones	Worthead			3	8"	H-206	0.95		6						412	Red		
30	Cache Creek Way		Shaws Resort		Amer. Darling	Dry Barrel			3	8"	H-209	0.95		10						532	Orange		
31	Clement Ave.	14900	End	West	Greenberg	Worthead			3	4"	H-142	0.95		10						532	Orange		
32	Clement Ave.	14940	Old Hwy 53	500' West	Jones	Worthead			3	4"	H-143	0.95		9						505	Orange		
33	Cottage Ave.		Cass Ave.	500' South	Rich	Dry Barrel			3	6"	H-147	0.95		16						673	Orange		
34	Cottage Ave.		Mohican Ave.		Rich	Dry Barrel			3	6"	H-149	0.95		8						476	Red		
35	Crawford Ave.		Elk's Lodge		Clow	Dry Barrel			3	6"	H-152	0.95		22						789	Orange		
36	Dam Rd.	15945	Jack in the Box		Clow	Wet Barrel			4	10"	H-217	0.95	70	60			20			1303	Green		
37	Dam Rd. Extension	15960	Wal Mart Center (Entry)	100' North	Amer. Darling	Dry Barrel			4	10"	H-192	0.95	70	60	H217	70	20	67	3	1303	Green	2281	Blue

34	West 40th Ave.	Palm Ave.			Greenberg	Worthead			1	4"	H-095	0.95	25	0		10		0	Red
35	Woodside Dr.	Medowbrook Dr.	500'	West	Greenberg	Wet Barrel			3	6"	H-162	0.95		24				824	Orange
36	Woodside Dr.	Stonybrook Dr.			Greenberg	Wet Barrel			3	6"	H-161	0.95		26				858	Orange
37	Youngs Lane	Burns Valley Rd.	300'	North	Greenberg	Worthead			2	2"		0.95							
38	Yuba Collage Rd.	Oak Hill School Gym	100'	North	Clow	Dry Barrel			4	6"	H-203	0.95		37				1023	Green
39	Yuba Collage Rd.	Yuba Collage 1 (Entrance)			Waterous	Dry Barrel			4	6"	H-190	0.95		54				1236	Green
40	Yuba Collage Rd.	Yuba Collage 2 (Right Side Back)	200'	East	Amer. Darling	Dry Barrel			4	8"	H-112	0.95							
41	Yuba Collage Rd.	Yuba Collage 3 (Right Side 1st)	200'	East	Amer. Darling	Dry Barrel			4	8"	H-113	0.95							
42	Yuba Collage Rd.	Yuba Collage 4 (Front Parking)	150'	East	Amer. Darling	Dry Barrel			4	8"	H-114	0.95							
43	Yuba Collage Rd.	Yuba Collage 5 (Left in Back)	200'	East	Amer. Darling	Dry Barrel			4	8"	H-115	0.95							

Pressure Zone		Supply Source Location		Hydrant Counts				Flow Formula Using Pitot Gauge 2.5" Nozzle		Available Flow Hazen-Williams Formula		
Zone #1		Hillcrest Ave. Treatment Pla		Hydrant Type		Pressure Zone		$Q = 29.83 \text{ cd}^2 \text{ SQRT } p$ $Q_r = Q_f \times \frac{h_r^{0.54}}{h_f^{0.54}}$				
Zone #2		Fillmore St. Storage Tank		Worthead		22	Zone #1					73
Zone #3		Spruce St. Storage Tanks		Wet Barrel		33	Zone #2					46
Zone #4		20th Street Storage Tank		Dry Barrel		147	Zone #3					58
Color Codes for Nozzle & Hydrant Flows		Other Types		1		Zone #4	26					
Color Code		Color Code Flow		Totals		203	Totals	203				
Blue		1,500 gpm or Greater							Q = Observed Flow		Qr = Available Flow	
Green		1000 to 1499 gpm							c = Coefficient		Qf = Observed Flow	
Orange		500 to 999 gpm							d = Outlet Diameter of Nozzle		hr = Pressure Drop from Static to Base Line	
Red		Less then 500 gpm							p = Pitot Pressure		hf = Pressure Drop from Static to Residual	

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