

# CRUZAN IRRIGATION

SEPTEMBER 22, 2025

WISH-119610

CUSTOMER : SCOTT MAHAFFEY

1999 VALLEY 8000 - 108  
8 TOWER - 1288.71 FT  
SYSTEM 750 GPM @ 50 PSI

LEGAL : NORTH  
P.O. NO. : 5926

SENNINGER UP3 I-WOB  
SENNINGER 10 PSI REGULATORS  
NELSON SR-100 .70 TB  
ELEVATION 30 FT UP, 42 FT DOWN

11049 HIGHWAY 491  
CORTEZ, COLORADO 81321  
(970)565-9409

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## WARRANTY

WATER APPLICATION UNIFORMITY OBTAINED WITH THIS SYSTEM CAN BE ADVERSELY AFFECTED BY MANY VARIABLES INCLUDING THE IMPROPER MAKEUP OR INSTALLATION OF THE SPRINKLER OR SPRAY NOZZLE PACKAGE, OBSTRUCTED NOZZLES, MAINTAINING INCORRECT PIVOT PRESSURE, UNFAVORABLE CLIMATIC CONDITIONS, TIGHT AND/OR SLOPING SOILS, IMPROPER END GUN ARC SETTINGS, ERRATIC AND IMPROPER OPERATING SPEED OF THE SYSTEM, POOR QUALITY OF WATER WITH ABRASIVES, CORROSIVES, AND/OR SOLIDS WHICH CAN CAUSE PLUGGING AND JAMMING, AS WELL AS INHERENT VARIABLES IN THE MANY COMPONENTS COMPRISING THE SYSTEM. THEREFORE WESTERN IRRIGATION SUPPLY HOUSE, INC., MAKES NO WARRANTY AS TO THE UNIFORMITY OF COVERAGE OBTAINED FROM THIS WATER APPLICATION PRINTOUT OTHER THAN ITS MATHEMATICAL ACCURACY.

IT IS THE RESPONSIBILITY OF THE END USER TO DETERMINE IF ANY INCOMPATIBILITY EXISTS BETWEEN THE WATER DISTRIBUTION DEVICES AND THE CROP, THE SOIL, AND THE PHYSICAL STRUCTURE OF THE MECHANICAL MOVE SYSTEM. WESTERN IRRIGATION SUPPLY HOUSE, INC., THEREFORE, DISCLAIMS ANY LIABILITY FOR DAMAGES DUE TO FAILURE OF THE SYSTEM TO PERFORM AS CONTEMPLATED.

FIGURES PRESENTED ON THIS COMPUTER PRINTOUT ARE BASED ON THE FOLLOWING:

1. DATA FURNISHED TO WESTERN IRRIGATION SUPPLY HOUSE, INC., ON PIPE LENGTH, DIAMETER, SURFACE FINISH, OUTLET SPACINGS, WATER FLOW, PIVOT PRESSURE AND ALL OTHER APPLICABLE INFORMATION.
2. THERE IS 100% WATER APPLICATION EFFICIENCY (ZERO WIND VELOCITY AND NO EVAPORATION).
3. PIVOT PRESSURE IS MEASURED ON THE MAIN HORIZONTAL DISTRIBUTION PIPE JUST AFTER THE LAST ELBOW.
4. MAIN PIPE PRESSURE IS CALCULATED AS IF THE PIVOT IS ALWAYS ON LEVEL GROUND.
5. SPRINKLER OR SPRAY NOZZLE BASE PRESSURE MAY BE LESS THAN MAIN LINE PIPE PRESSURE DUE TO THE USE OF PRESSURE REGULATORS. WHERE DROP PIPES ARE USED THE STATIC HEAD IS ADDED TO AND FRICTION LOSS IS SUBTRACTED FROM THE MAIN LINE PIPE PRESSURE TO DETERMINE INLET PSI. REGULATORS ARE CONSIDERED MOUNTED AT THE SAME HEIGHT AS THE SPRINKLING DEVICE UNLESS NOTED.

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DEALER

CRUZAN IRRIGATION  
 11049 HIGHWAY 491  
 CORTEZ, COLORADO 81321

IRRIGATOR

SCOTT MAHAFFEY  
 NORTH  
 5926

				SPAN #	LENGTH	PIPE I.D.	# OF HEADS
TOTAL TARGET GPM	750.00	FRICTION FACTOR USED	140				
TOP OF PIVOT PRESSURE	50.00	TOTAL LENGTH	1288.71	1	160.85	6.415	7
ENDGUN TARGET GPM	115.50	NUMBER OF TOWERS	8	2	160.11	6.415	9
NUMBER OF OUTLETS	145	NUMBER OF SPRINKLERS	125	3	160.11	6.415	18
				4	160.11	6.415	18
				5	160.11	6.415	18
				6	160.11	6.415	18
				7	160.11	6.415	18
				8	139.78	6.415	16
				OH	27.42	6.415	3

## CAUTIONS AND WARNINGS

1. Inadequate crop clearance and/or structural interference may cause poor water distribution, resulting in decreased uniformity and possible streaking.
2. Over watering at beginning of system due to practical limitations on smallest nozzle sizes available and/or allowable for proper operation.

OUTLET NO.	LAST OUTLET	DISTANCE TO PIVOT	GPM NEED	GPM DEL.	PIPE PSI	NOZZLE PSI	SPRINKLER LABEL AND NOZZLE SIZE	SPRK NO.	REG SIZE	PLUG NO.	DROP LENGTH
1		5.40	-	-	-	-	-	-	-	-	1
2		14.40	-	-	-	-	-	-	-	-	2
3		23.40	-	-	-	-	-	-	-	-	3
4	32.40	32.40	0.79	0.85	49.16	11.40	I-WOB2 UP3 6 GOLD	1	SPSR2-10		96
5		41.40	-	-	-	-	-	-	-	-	4
6		49.92	-	-	-	-	-	-	-	-	5
7	25.94	58.34	0.92	0.85	48.57	11.40	I-WOB2 UP3 6 GOLD	2	SPSR2-10		108
8		66.76	-	-	-	-	-	-	-	-	6
9	16.94	75.28	1.01	1.00	48.30	11.40	I-WOB2 UP3 6.5 GOLD	3	SPSR2-10		108
10		84.28	-	-	-	-	-	-	-	-	7
11	18.00	93.28	1.28	1.35	48.11	11.40	I-WOB2 UP3 7.5 LIME	4	SPSR2-10		108
12		102.28	-	-	-	-	-	-	-	-	8
13	18.00	111.28	1.53	1.53	48.02	11.40	I-WOB2 UP3 8 LAVENDER	5	SPSR2-10		102
14		120.22	-	-	-	-	-	-	-	-	9
15	17.94	129.22	1.77	1.73	48.04	11.40	I-WOB2 UP3 8.5 LAVENDER	6	SPSR2-10		96
16		138.22	-	-	-	-	-	-	-	-	10
17	18.00	147.22	2.04	1.93	48.15	11.40	I-WOB2 UP3 9 GREY	7	SPSR2-10		90
18		156.22	-	-	-	-	-	-	-	-	11
TOWER 1	160.85	160.85									
19	18.30	165.52	2.29	2.39	48.04	11.36	I-WOB2 UP3 10 TURQUOISE	8	SPSR2-10		84
20		174.52	-	-	-	-	-	-	-	-	12
21	18.00	183.52	2.52	2.63	47.52	11.34	I-WOB2 UP3 10.5 TURQUOISE	9	SPSR2-10		96
22		192.52	-	-	-	-	-	-	-	-	13
23	18.00	201.52	2.69	2.63	47.05	11.34	I-WOB2 UP3 10.5 TURQUOISE	10	SPSR2-10		102
24		210.04	-	-	-	-	-	-	-	-	14
25	16.94	218.46	2.83	2.89	46.70	11.31	I-WOB2 UP3 11 YELLOW	11	SPSR2-10		108
26		226.88	-	-	-	-	-	-	-	-	15
27	16.94	235.40	3.15	3.15	46.43	11.28	I-WOB2 UP3 11.5 YELLOW	12	SPSR2-10		108
28		244.40	-	-	-	-	-	-	-	-	16
29	18.00	253.40	3.48	3.44	46.26	11.26	I-WOB2 UP3 12 RED	13	SPSR2-10		108
30		262.40	-	-	-	-	-	-	-	-	17
31	18.00	271.40	3.73	3.73	46.18	11.23	I-WOB2 UP3 12.5 RED	14	SPSR2-10		102
32		280.34	-	-	-	-	-	-	-	-	18
33	17.94	289.34	3.97	4.03	46.21	11.20	I-WOB2 UP3 13 WHITE	15	SPSR2-10		96
34		298.34	-	-	-	-	-	-	-	-	19
35	18.00	307.34	4.26	4.34	46.34	11.17	I-WOB2 UP3 13.5 WHITE	16	SPSR2-10		90
36		316.34	-	-	-	-	-	-	-	-	20
TOWER 2	160.11	320.96									
37	18.29	325.63	3.37	3.44	46.25	11.26	I-WOB2 UP3 12 RED	17	SPSR2-10		84
38	9.00	334.63	2.30	2.39	46.01	11.36	I-WOB2 UP3 10 TURQUOISE	18	SPSR2-10		90
39	9.00	343.63	2.36	2.39	45.74	11.36	I-WOB2 UP3 10 TURQUOISE	19	SPSR2-10		96
40	9.00	352.63	2.42	2.39	45.50	11.36	I-WOB2 UP3 10 TURQUOISE	20	SPSR2-10		96
41	9.00	361.63	2.42	2.39	45.29	11.36	I-WOB2 UP3 10 TURQUOISE	21	SPSR2-10		102
42	8.52	370.15	2.39	2.39	45.11	11.36	I-WOB2 UP3 10 TURQUOISE	22	SPSR2-10		102
43	8.42	378.57	2.43	2.39	44.95	11.36	I-WOB2 UP3 10 TURQUOISE	23	SPSR2-10		108
44	8.42	386.99	2.50	2.39	44.82	11.36	I-WOB2 UP3 10 TURQUOISE	24	SPSR2-10		108
45	8.52	395.51	2.65	2.63	44.71	11.34	I-WOB2 UP3 10.5 TURQUOISE	25	SPSR2-10		108
46	9.00	404.51	2.78	2.89	44.61	11.31	I-WOB2 UP3 11 YELLOW	26	SPSR2-10		108

OUTLET NO.	LAST OUTLET	DISTANCE TO PIVOT	GPM NEED	GPM DEL.	PIPE PSI	NOZZLE PSI	SPRINKLER LABEL AND NOZZLE SIZE	SPRK NO.	REG SIZE	PLUG NO.	DROP LENGTH
47	9.00	413.51	2.84	2.89	44.55	11.31	I-WOB2 UP3 11 YELLOW	27	SPSR2-10		108
48	9.00	422.51	2.90	2.89	44.51	11.31	I-WOB2 UP3 11 YELLOW	28	SPSR2-10		108
49	9.00	431.51	2.96	2.89	44.49	11.31	I-WOB2 UP3 11 YELLOW	29	SPSR2-10		102
50	8.94	440.45	3.02	2.89	44.51	11.31	I-WOB2 UP3 11 YELLOW	30	SPSR2-10		102
51	9.00	449.45	3.09	3.15	44.54	11.28	I-WOB2 UP3 11.5 YELLOW	31	SPSR2-10		96
52	9.00	458.45	3.15	3.15	44.61	11.28	I-WOB2 UP3 11.5 YELLOW	32	SPSR2-10		96
53	9.00	467.45	3.21	3.15	44.70	11.28	I-WOB2 UP3 11.5 YELLOW	33	SPSR2-10		90
54	9.00	476.45	3.33	3.44	44.72	11.26	I-WOB2 UP3 12 RED	34	SPSR2-10		84
TOWER 3	160.11	481.07									
55	9.29	485.74	3.39	3.44	44.63	11.26	I-WOB2 UP3 12 RED	35	SPSR2-10		84
56	9.00	494.74	3.40	3.44	44.40	11.26	I-WOB2 UP3 12 RED	36	SPSR2-10		90
57	9.00	503.74	3.46	3.44	44.15	11.26	I-WOB2 UP3 12 RED	37	SPSR2-10		96
58	9.00	512.74	3.52	3.44	43.92	11.26	I-WOB2 UP3 12 RED	38	SPSR2-10		96
59	9.00	521.74	3.49	3.44	43.72	11.26	I-WOB2 UP3 12 RED	39	SPSR2-10		102
60	8.52	530.26	3.43	3.44	43.55	11.26	I-WOB2 UP3 12 RED	40	SPSR2-10		102
61	8.42	538.68	3.46	3.44	43.41	11.26	I-WOB2 UP3 12 RED	41	SPSR2-10		108
62	8.42	547.10	3.54	3.44	43.29	11.26	I-WOB2 UP3 12 RED	42	SPSR2-10		108
63	8.52	555.62	3.72	3.73	43.19	11.23	I-WOB2 UP3 12.5 RED	43	SPSR2-10		108
64	9.00	564.62	3.88	4.03	43.11	11.20	I-WOB2 UP3 13 WHITE	44	SPSR2-10		108
65	9.00	573.62	3.94	4.03	43.06	11.20	I-WOB2 UP3 13 WHITE	45	SPSR2-10		108
66	9.00	582.62	4.00	4.03	43.03	11.20	I-WOB2 UP3 13 WHITE	46	SPSR2-10		108
67	9.00	591.62	4.05	4.03	43.03	11.20	I-WOB2 UP3 13 WHITE	47	SPSR2-10		102
68	8.94	600.56	4.11	4.03	43.06	11.20	I-WOB2 UP3 13 WHITE	48	SPSR2-10		102
69	9.00	609.56	4.19	4.34	43.11	11.17	I-WOB2 UP3 13.5 WHITE	49	SPSR2-10		96
70	9.00	618.56	4.25	4.34	43.19	11.17	I-WOB2 UP3 13.5 WHITE	50	SPSR2-10		96
71	9.00	627.56	4.31	4.34	43.30	11.17	I-WOB2 UP3 13.5 WHITE	51	SPSR2-10		90
72	9.00	636.56	4.44	4.34	43.33	11.17	I-WOB2 UP3 13.5 WHITE	52	SPSR2-10		84
TOWER 4	160.11	641.18									
73	9.29	645.85	4.51	4.66	43.26	11.13	I-WOB2 UP3 14 BLUE	53	SPSR2-10		84
74	9.00	654.85	4.50	4.34	43.05	11.17	I-WOB2 UP3 13.5 WHITE	54	SPSR2-10		90
75	9.00	663.85	4.56	4.66	42.81	11.13	I-WOB2 UP3 14 BLUE	55	SPSR2-10		96
76	9.00	672.85	4.62	4.66	42.60	11.13	I-WOB2 UP3 14 BLUE	56	SPSR2-10		96
77	9.00	681.85	4.56	4.66	42.41	11.13	I-WOB2 UP3 14 BLUE	57	SPSR2-10		102
78	8.52	690.37	4.46	4.34	42.26	11.17	I-WOB2 UP3 13.5 WHITE	58	SPSR2-10		102
79	8.42	698.79	4.49	4.34	42.13	11.17	I-WOB2 UP3 13.5 WHITE	59	SPSR2-10		108
80	8.42	707.21	4.57	4.66	42.03	11.13	I-WOB2 UP3 14 BLUE	60	SPSR2-10		108
81	8.52	715.73	4.79	4.66	41.95	11.13	I-WOB2 UP3 14 BLUE	61	SPSR2-10		108
82	9.00	724.73	4.98	4.99	41.88	11.10	I-WOB2 UP3 14.5 BLUE	62	SPSR2-10		108
83	9.00	733.73	5.04	4.99	41.85	11.10	I-WOB2 UP3 14.5 BLUE	63	SPSR2-10		108
84	9.00	742.73	5.11	4.99	41.84	11.10	I-WOB2 UP3 14.5 BLUE	64	SPSR2-10		108
85	9.00	751.73	5.15	4.99	41.86	11.10	I-WOB2 UP3 14.5 BLUE	65	SPSR2-10		102
86	8.94	760.67	5.21	5.34	41.90	11.04	I-WOB2 UP3 15 DK BROWN	66	SPSR2-10		102
87	9.00	769.67	5.29	5.34	41.97	11.04	I-WOB2 UP3 15 DK BROWN	67	SPSR2-10		96
88	9.00	778.67	5.35	5.34	42.07	11.04	I-WOB2 UP3 15 DK BROWN	68	SPSR2-10		96
89	9.00	787.67	5.42	5.34	42.19	11.04	I-WOB2 UP3 15 DK BROWN	69	SPSR2-10		90
90	9.00	796.67	5.57	5.68	42.24	10.98	I-WOB2 UP3 15.5 DK BROWN	70	SPSR2-10		84
TOWER 5	160.11	801.29									
91	9.29	805.96	5.63	5.68	42.19	10.98	I-WOB2 UP3 15.5 DK BROWN	71	SPSR2-10		84

OUTLET NO.	LAST OUTLET	DISTANCE TO PIVOT	GPM NEED	GPM DEL.	PIPE PSI	NOZZLE PSI	SPRINKLER LABEL AND NOZZLE SIZE	SPRK NO.	REG SIZE	PLUG NO.	DROP LENGTH
92	9.00	814.96	5.60	5.68	42.00	10.98	I-WOB2 UP3 15.5 DK BROWN	72	SPSR2-10		90
93	9.00	823.96	5.66	5.68	41.78	10.98	I-WOB2 UP3 15.5 DK BROWN	73	SPSR2-10		96
94	9.00	832.96	5.72	5.68	41.58	10.98	I-WOB2 UP3 15.5 DK BROWN	74	SPSR2-10		96
95	9.00	841.96	5.63	5.68	41.42	10.98	I-WOB2 UP3 15.5 DK BROWN	75	SPSR2-10		102
96	8.52	850.48	5.50	5.34	41.28	11.04	I-WOB2 UP3 15 DK BROWN	76	SPSR2-10		102
97	8.42	858.90	5.53	5.68	41.17	10.98	I-WOB2 UP3 15.5 DK BROWN	77	SPSR2-10		108
98	8.42	867.32	5.61	5.68	41.08	10.98	I-WOB2 UP3 15.5 DK BROWN	78	SPSR2-10		108
99	8.52	875.84	5.86	5.68	41.02	10.98	I-WOB2 UP3 15.5 DK BROWN	79	SPSR2-10		108
100	9.00	884.84	6.08	6.04	40.97	10.91	I-WOB2 UP3 16 ORANGE	80	SPSR2-10		108
101	9.00	893.84	6.15	6.04	40.96	10.91	I-WOB2 UP3 16 ORANGE	81	SPSR2-10		108
102	9.00	902.84	6.21	6.04	40.97	10.91	I-WOB2 UP3 16 ORANGE	82	SPSR2-10		108
103	9.00	911.84	6.25	6.40	41.00	10.85	I-WOB2 UP3 16.5 ORANGE	83	SPSR2-10		102
104	8.94	920.78	6.31	6.40	41.07	10.85	I-WOB2 UP3 16.5 ORANGE	84	SPSR2-10		102
105	9.00	929.78	6.39	6.41	41.16	10.85	I-WOB2 UP3 16.5 ORANGE	85	SPSR2-10		96
106	9.00	938.78	6.46	6.41	41.27	10.85	I-WOB2 UP3 16.5 ORANGE	86	SPSR2-10		96
107	9.00	947.78	6.52	6.41	41.41	10.85	I-WOB2 UP3 16.5 ORANGE	87	SPSR2-10		90
108	9.00	956.78	6.69	6.78	41.48	10.78	I-WOB2 UP3 17 DK GREEN	88	SPSR2-10		84
TOWER 6	160.11	961.40									
109	9.29	966.07	6.75	6.78	41.45	10.78	I-WOB2 UP3 17 DK GREEN	89	SPSR2-10		84
110	9.00	975.07	6.71	6.78	41.28	10.78	I-WOB2 UP3 17 DK GREEN	90	SPSR2-10		90
111	9.00	984.07	6.77	6.78	41.07	10.78	I-WOB2 UP3 17 DK GREEN	91	SPSR2-10		96
112	9.00	993.07	6.83	6.78	40.90	10.78	I-WOB2 UP3 17 DK GREEN	92	SPSR2-10		96
113	9.00	1002.07	6.71	6.78	40.75	10.78	I-WOB2 UP3 17 DK GREEN	93	SPSR2-10		102
114	8.52	1010.59	6.54	6.41	40.63	10.85	I-WOB2 UP3 16.5 ORANGE	94	SPSR2-10		102
115	8.42	1019.01	6.56	6.41	40.54	10.85	I-WOB2 UP3 16.5 ORANGE	95	SPSR2-10		108
116	8.42	1027.43	6.66	6.78	40.47	10.78	I-WOB2 UP3 17 DK GREEN	96	SPSR2-10		108
117	8.52	1035.95	6.94	6.78	40.42	10.78	I-WOB2 UP3 17 DK GREEN	97	SPSR2-10		108
118	9.00	1044.95	7.19	7.16	40.39	10.71	I-WOB2 UP3 17.5 DK GREEN	98	SPSR2-10		108
119	9.00	1053.95	7.26	7.16	40.39	10.71	I-WOB2 UP3 17.5 DK GREEN	99	SPSR2-10		108
120	9.00	1062.95	7.32	7.16	40.42	10.71	I-WOB2 UP3 17.5 DK GREEN	100	SPSR2-10		108
121	9.00	1071.95	7.36	7.55	40.48	10.64	I-WOB2 UP3 18 PURPLE	101	SPSR2-10		102
122	8.94	1080.89	7.42	7.55	40.56	10.64	I-WOB2 UP3 18 PURPLE	102	SPSR2-10		102
123	9.00	1089.89	7.50	7.55	40.66	10.64	I-WOB2 UP3 18 PURPLE	103	SPSR2-10		96
124	9.00	1098.89	7.56	7.55	40.79	10.64	I-WOB2 UP3 18 PURPLE	104	SPSR2-10		96
125	9.00	1107.89	7.62	7.55	40.95	10.64	I-WOB2 UP3 18 PURPLE	105	SPSR2-10		90
126	9.00	1116.89	7.81	7.95	41.04	10.57	I-WOB2 UP3 18.5 PURPLE	106	SPSR2-10		84
TOWER 7	160.11	1121.51									
127	9.28	1126.17	7.86	7.95	41.02	10.57	I-WOB2 UP3 18.5 PURPLE	107	SPSR2-10		84
128	9.00	1135.17	7.80	7.95	40.84	10.57	I-WOB2 UP3 18.5 PURPLE	108	SPSR2-10		90
129	9.00	1144.17	7.86	7.95	40.65	10.57	I-WOB2 UP3 18.5 PURPLE	109	SPSR2-10		90
130	9.00	1153.17	7.91	7.95	40.49	10.57	I-WOB2 UP3 18.5 PURPLE	110	SPSR2-10		96
131	9.00	1162.17	7.76	7.95	40.37	10.57	I-WOB2 UP3 18.5 PURPLE	111	SPSR2-10		96
132	8.52	1170.69	7.54	7.55	40.27	10.64	I-WOB2 UP3 18 PURPLE	112	SPSR2-10		102
133	8.42	1179.11	7.55	7.55	40.21	10.64	I-WOB2 UP3 18 PURPLE	113	SPSR2-10		102
134	8.42	1187.53	7.44	7.55	40.18	10.64	I-WOB2 UP3 18 PURPLE	114	SPSR2-10		102
135	8.04	1195.57	7.48	7.55	40.17	10.64	I-WOB2 UP3 18 PURPLE	115	SPSR2-10		102
136	8.42	1203.99	7.70	7.55	40.19	10.64	I-WOB2 UP3 18 PURPLE	116	SPSR2-10		102
137	8.42	1212.41	7.81	7.95	40.24	10.57	I-WOB2 UP3 18.5 PURPLE	117	SPSR2-10		102

OUTLET NO.	LAST OUTLET	DISTANCE TO PIVOT	GPM NEED	GPM DEL.	PIPE PSI	NOZZLE PSI	SPRINKLER LABEL AND NOZZLE SIZE	SPRK NO.	REG SIZE	PLUG NO.	DROP LENGTH
138	8.52	1220.93	8.12	7.95	40.32	10.57	I-WOB2 UP3 18.5 PURPLE	118	SPSR2-10		96
139	9.00	1229.93	8.43	8.35	40.43	10.50	I-WOB2 UP3 19 BLACK	119	SPSR2-10		96
140	9.00	1238.93	8.50	8.35	40.58	10.50	I-WOB2 UP3 19 BLACK	120	SPSR2-10		90
141	9.00	1247.93	8.59	8.76	40.75	10.42	I-WOB2 UP3 19.5 BLACK	121	SPSR2-10		90
142	9.00	1256.93	8.58	8.76	40.88	10.42	I-WOB2 UP3 19.5 BLACK	122	SPSR2-10		84
TOWER 8	139.78	1261.29									
143	8.93	1265.86	8.65	8.76	40.88	10.42	I-WOB2 UP3 19.5 BLACK	123	SPSR2-10		84
144	9.14	1275.00	8.76	8.76	40.88	10.42	I-WOB2 UP3 19.5 BLACK	124	SPSR2-10		84
145	9.14	1284.14	8.97	9.17	40.88	10.35	I-WOB2 UP3 20 DK TURQUOISE	125	SPSR2-10		84
OVERHANG	27.42	1288.71		115.41	ENDGUN	( 1 )	NELSON SR-100 .70 TB VALLEY 2HP BOOSTER PUMP				

BOOSTER PUMP AT TOWER ADDS 30.00 PSI TO PIPE PRESSURE FOR A PRESSURE OF 69.87 PSI  
 FRICTION LOSS THROUGH ENDGUN VALVE IS 3.65 PSI - ENDGUN PRESSURE IS 66.22 PSI

TOTAL GPM = 750.26

GPA = 5.30

MINIMUM RECOMMENDED REGULATOR INLET PRESSURE IS 15.00 PSI  
 WITH GRADUATED ELEVATION OF 30.00 FT THE INLET PRESSURE IS 29.80 PSI FOR SPRINKLER 125  
 THIS POSITION IS THE CLOSEST TO THE MINIMUM RECOMMENDED INLET PRESSURE

#### HYDRAULICS SUMMARY

TOWER NUMBER	ACRES UNDER SPAN	GPM NEED	ACTUAL GPM	PERCENT DEVIATION	GPM PER ACRE	AVERAGE IN. PER HR	AVERAGE IN. DELIVERED FOR REVOLUTION TIME		
						DELIVERED UNDER SPAN	36 HR	48 HR	60 HR
1	1.87	9.88	9.89	0%	5.30	0.012	0.42	0.56	0.70
2	5.56	29.47	29.32	-1%	5.27	0.012	0.42	0.56	0.70
3	9.26	49.06	49.41	1%	5.34	0.012	0.42	0.57	0.71
4	12.96	68.65	68.84	0%	5.31	0.012	0.42	0.56	0.70
5	16.66	88.24	87.93	0%	5.28	0.012	0.42	0.56	0.70
6	20.35	107.82	107.69	0%	5.29	0.012	0.42	0.56	0.70
7	24.05	127.41	127.46	0%	5.30	0.012	0.42	0.56	0.70
8	24.02	127.25	127.51	0%	5.31	0.012	0.42	0.56	0.70
OVERHANG	5.04	26.71	26.80	0%	5.31	0.012	0.42	0.56	0.70
ENDGUN	21.02	115.50	115.41	4%	5.49				
TOTAL	140.79	750.00	750.26		5.33				

**SUMMARY OF SPRINKLERS**

2 I-WOB2 UP3 6 GOLD  
1 I-WOB2 UP3 6.5 GOLD  
1 I-WOB2 UP3 7.5 LIME  
1 I-WOB2 UP3 8 LAVENDER  
1 I-WOB2 UP3 8.5 LAVENDER  
1 I-WOB2 UP3 9 GREY  
8 I-WOB2 UP3 10 TURQUOISE  
3 I-WOB2 UP3 10.5 TURQUOISE  
6 I-WOB2 UP3 11 YELLOW  
4 I-WOB2 UP3 11.5 YELLOW  
11 I-WOB2 UP3 12 RED  
2 I-WOB2 UP3 12.5 RED  
6 I-WOB2 UP3 13 WHITE  
8 I-WOB2 UP3 13.5 WHITE  
6 I-WOB2 UP3 14 BLUE  
4 I-WOB2 UP3 14.5 BLUE  
5 I-WOB2 UP3 15 DK BROWN  
9 I-WOB2 UP3 15.5 DK BROWN  
3 I-WOB2 UP3 16 ORANGE  
7 I-WOB2 UP3 16.5 ORANGE  
8 I-WOB2 UP3 17 DK GREEN  
3 I-WOB2 UP3 17.5 DK GREEN  
10 I-WOB2 UP3 18 PURPLE  
8 I-WOB2 UP3 18.5 PURPLE  
2 I-WOB2 UP3 19 BLACK  
4 I-WOB2 UP3 19.5 BLACK  
1 I-WOB2 UP3 20 DK TURQUOISE

**SUMMARY OF DROPS****SUMMARY OF REGULATORS**

16 84 IN DROP  
16 90 IN DROP  
28 96 IN DROP  
29 102 IN DROP  
36 108 IN DROP

125 Senn PSR2 10 psi

**20 PLUGS****TOTAL OF 125 DROPS**

LENGTH OF HOSE: 1026.5 FT.

**TOTAL OF 125 REGULATORS**

## NOZZLE POSITION CHART

I-WOB2 UP3 6 GOLD	1, 2
I-WOB2 UP3 6.5 GOLD	3
I-WOB2 UP3 7.5 LIME	4
I-WOB2 UP3 8 LAVENDER	5
I-WOB2 UP3 8.5 LAVENDER	6
I-WOB2 UP3 9 GREY	7
I-WOB2 UP3 10 TURQUOISE	8, 18, 19, 20, 21, 22, 23, 24
I-WOB2 UP3 10.5 TURQUOISE	9, 10, 25
I-WOB2 UP3 11 YELLOW	11, 26, 27, 28, 29, 30
I-WOB2 UP3 11.5 YELLOW	12, 31, 32, 33
I-WOB2 UP3 12 RED	13, 17, 34, 35, 36, 37, 38, 39, 40, 41, 42
I-WOB2 UP3 12.5 RED	14, 43
I-WOB2 UP3 13 WHITE	15, 44, 45, 46, 47, 48
I-WOB2 UP3 13.5 WHITE	16, 49, 50, 51, 52, 54, 58, 59
I-WOB2 UP3 14 BLUE	53, 55, 56, 57, 60, 61
I-WOB2 UP3 14.5 BLUE	62, 63, 64, 65
I-WOB2 UP3 15 DK BROWN	66, 67, 68, 69, 76
I-WOB2 UP3 15.5 DK BROWN	70, 71, 72, 73, 74, 75, 77, 78, 79
I-WOB2 UP3 16 ORANGE	80, 81, 82
I-WOB2 UP3 16.5 ORANGE	83, 84, 85, 86, 87, 94, 95
I-WOB2 UP3 17 DK GREEN	88, 89, 90, 91, 92, 93, 96, 97
I-WOB2 UP3 17.5 DK GREEN	98, 99, 100
I-WOB2 UP3 18 PURPLE	101, 102, 103, 104, 105, 112, 113, 114, 115, 116
I-WOB2 UP3 18.5 PURPLE	106, 107, 108, 109, 110, 111, 117, 118
I-WOB2 UP3 19 BLACK	119, 120
I-WOB2 UP3 19.5 BLACK	121, 122, 123, 124
I-WOB2 UP3 20 DK TURQUOISE	125

**CRUZAN IRRIGATION**  
**11049 HIGHWAY 491**  
**CORTEZ, COLORADO 81321**

SEPTEMBER 22, 2025  
 WISH-119610  
 SCOTT MAHAFFEY  
 NORTH

1999 VALLEY 8000 - 108  
 SENNINGER UP3 I-WOB2  
 SENNINGER 10 PSI REGULATORS  
 .75 I.D. FLEXIBLE HOSE  
 NELSON SR-100 .70 TB

Rotation time at 100% = 14.07 Hours Or 844 minutes

750 GPM @ 50 PSI

Installation Chart

Page 1

Out #	Drop Len	Sprk #	Noz Size	Reg	Out #	Drop Len	Sprk #	Noz Size	Reg	Out #	Drop Len	Sprk #	Noz Size	Reg	
1	PLUG				4	96	38	12	PSR210	7	108	95	16.5	PSR210	
2	PLUG				5	102	39	12	PSR210	8	108	96	17	PSR210	
3	PLUG				6	102	40	12	PSR210	9	108	97	17	PSR210	
4	96	1	6	PSR210	7	108	41	12	PSR210	10	108	98	17.5	PSR210	
5	PLUG				8	108	42	12	PSR210	11	108	99	17.5	PSR210	
6	PLUG				9	108	43	12.5	PSR210	12	108	100	17.5	PSR210	
7	108	2	6	PSR210	10	108	44	13	PSR210	13	102	101	18	PSR210	
8	PLUG				11	108	45	13	PSR210	14	102	102	18	PSR210	
9	108	3	6.5	PSR210	12	108	46	13	PSR210	15	96	103	18	PSR210	
10	PLUG				13	102	47	13	PSR210	16	96	104	18	PSR210	
11	108	4	7.5	PSR210	14	102	48	13	PSR210	17	90	105	18	PSR210	
12	PLUG				15	96	49	13.5	PSR210	18	84	106	18.5	PSR210	
13	102	5	8	PSR210	16	96	50	13.5	PSR210	TOWER 4	84	107	18.5	PSR210	
14	PLUG				17	90	51	13.5	PSR210		90	108	18.5	PSR210	
15	96	6	8.5	PSR210	18	84	52	13.5	PSR210		2	100	18.5	PSR210	
16	PLUG				TOWER 4				3		90	109	18.5	PSR210	
17	90	7	9	PSR210	1	84	53	14	PSR210		4	96	110	18.5	PSR210
18	PLUG				2	90	54	13.5	PSR210		5	96	111	18.5	PSR210
1	TOWER 1				3	96	55	14	PSR210		6	102	112	18	PSR210
2		84	8	10	PSR210	4	96	56	14	PSR210	7	102	113	18	PSR210
3		PLUG			5	102	57	14	PSR210	8	102	114	18	PSR210	
4		96	9	10.5	PSR210	6	102	58	13.5	PSR210	9	102	115	18	PSR210
5		PLUG			7	108	59	13.5	PSR210	10	102	116	18	PSR210	
6		102	10	10.5	PSR210	8	108	60	14	PSR210	11	102	117	18.5	PSR210
7		PLUG			9	108	61	14	PSR210	12	96	118	18.5	PSR210	
8		108	11	11	PSR210	10	108	62	14.5	PSR210	13	96	119	19	PSR210
9		PLUG			11	108	63	14.5	PSR210	14	90	120	19	PSR210	
10		108	12	11.5	PSR210	12	108	64	14.5	PSR210	15	90	121	19.5	PSR210
11		108	13	12	PSR210	13	102	65	14.5	PSR210	16	84	122	19.5	PSR210
12		PLUG			14	102	66	15	PSR210	TOWER 8	84	123	19.5	PSR210	
13		96	15	13	PSR210	15	96	67	15	PSR210	1	84	124	19.5	PSR210
14		PLUG			16	96	68	15	PSR210	2	84	125	20	PSR210	
15		96	15	13	PSR210	17	90	69	15	PSR210	3	84	125	20	PSR210
16		PLUG			18	84	70	15.5	PSR210	84	125	20	PSR210		
17		90	16	13.5	PSR210	TOWER 5	1	84	71	15.5	PSR210	84	125	20	PSR210
18		PLUG			2	90	72	15.5	PSR210	90	125	20	PSR210		
1	TOWER 2				3	96	73	15.5	PSR210	96	125	20	PSR210		
2		84	17	12	PSR210	4	96	74	15.5	PSR210	96	125	20	PSR210	
3		90	18	10	PSR210	5	102	75	15.5	PSR210	96	125	20	PSR210	
4		96	19	10	PSR210	6	102	76	15	PSR210	96	125	20	PSR210	
5		96	20	10	PSR210	7	108	77	15.5	PSR210	96	125	20	PSR210	
6		102	21	10	PSR210	8	108	78	15.5	PSR210	96	125	20	PSR210	
7		102	22	10	PSR210	9	108	79	15.5	PSR210	96	125	20	PSR210	
8		108	23	10	PSR210	10	108	80	16	PSR210	96	125	20	PSR210	
9		108	24	10	PSR210	11	108	81	16	PSR210	96	125	20	PSR210	
10		108	25	10.5	PSR210	12	108	82	16	PSR210	96	125	20	PSR210	
11		108	26	11	PSR210	13	102	83	16.5	PSR210	96	125	20	PSR210	
12		108	27	11	PSR210	14	102	84	16.5	PSR210	96	125	20	PSR210	
13		108	28	11	PSR210	15	96	85	16.5	PSR210	96	125	20	PSR210	
14		102	29	11	PSR210	16	96	86	16.5	PSR210	96	125	20	PSR210	
15		102	30	11	PSR210	17	90	87	16.5	PSR210	96	125	20	PSR210	
16		96	31	11.5	PSR210	18	84	88	17	PSR210	96	125	20	PSR210	
17		96	32	11.5	PSR210	TOWER 6	1	84	89	17	PSR210	96	125	20	PSR210
18		90	33	11.5	PSR210		2	90	90	17	PSR210	96	125	20	PSR210
1	TOWER 3				3	96	91	17	PSR210	96	125	20	PSR210		
2		84	35	12	PSR210	4	96	92	17	PSR210	96	125	20	PSR210	
3		90	36	12	PSR210	5	102	93	17	PSR210	96	125	20	PSR210	

PRECIPITATION CHART FOR FULL CIRCLE

WISH-119610

SEPTEMBER 22, 2025

DEALER - CRUZAN IRRIGATION

IRRIGATOR - SCOTT MAHAFFEY  
FIELD - NORTH

TOTAL LENGTH PIPE = 1288.71    SYSTEM PRESSURE = 50 PSI  
 GPM UNDER PIPE = 634.84    TOTAL GPM = 750.26  
 ACRES UNDER PIPE = 119.78  
 RANGE OF ENDGUN = 108.50  
 GPM OF ENDGUN = 115.41  
 ACRES UNDER ENDGUN = 21.02  
 WATERING LENGTH = 1397.21

MOTOR SIZE (HP) = .6  
 LOADED MOTOR RPM = 1800  
 CENTER GEAR BOX RATIO = 53  
 WHEEL GEAR BOX RATIO = 52  
 TIRE SIZE = 11.2 X 38  
 LAST TOWER SPEED (FPM) = 9.39

PRECIPITATION DATA FIGURED WITH ENDGUN RUNNING

## PRECIPITATION BASED

## % TIMER BASED

PRECIPITATION INCHES	% TIMER SETTING	TIME HOURS	% TIMER SETTING	PRECIPITATION INCHES	TIME HOURS
.16	100.00	14.07 - 844(min)	100.00	.16	14.07 - 844(min)
.20	82.37	17.08	90.00	.18	15.63
.25	65.89	21.35	80.00	.21	17.58
.30	54.91	25.62	70.00	.24	20.09
.40	41.18	34.16	60.00	.27	23.44
.50	32.95	42.69	50.00	.33	28.13
.60	27.46	51.23	45.00	.37	31.26
.70	23.53	59.77	40.00	.41	35.17
.75	21.96	64.04	35.00	.47	40.19
.80	20.59	68.31	30.00	.55	46.89
.90	18.30	76.85	25.00	.66	56.27
1.00	16.47	85.39	20.00	.82	70.33
1.25	13.18	106.74	15.00	1.10	93.78
1.50	10.98	128.08	10.00	1.65	140.66
1.75	9.41	149.43	5.00	3.29	281.33

CAUTION: The relationship between precipitation rate, timer setting, and hours per revolution provided above are theoretical numbers based on the data list at the top of the page. Actual precipitation rates may vary due to the following field and machine conditions: wind drift; evaporation; tire slippage, tire loaded radius; drive train efficiency; elevation changes; soil type. Due to these varying field and machine conditions the above chart should be used as a guide only.

## DROP CONFIGURATION CHART

DEALER - CRUZAN IRRIGATION  
P.O. - 5926

IRRIGATOR - SCOTT MAHAFFEY  
FIELD - NORTH

<u>SPAN 1 POS/LEN</u>	<u>SPAN 2 POS/LEN</u>	<u>SPAN 3 POS/LEN</u>	<u>SPAN 4 POS/LEN</u>	<u>SPAN 5 POS/LEN</u>	<u>SPAN 6 POS/LEN</u>	<u>SPAN 7 POS/LEN</u>	<u>SPAN 8 POS/LEN</u>	<u>ENDBOOM POS/LEN</u>
1 - 96	8 - 84	17 - 84	35 - 84	53 - 84	71 - 84	89 - 84	107 - 84	123 - 84
2 - 108	9 - 96	18 - 90	36 - 90	54 - 90	72 - 90	90 - 90	108 - 90	124 - 84
3 - 108	10 - 102	19 - 96	37 - 96	55 - 96	73 - 96	91 - 96	109 - 90	125 - 84
4 - 108	11 - 108	20 - 96	38 - 96	56 - 96	74 - 96	92 - 96	110 - 96	
5 - 102	12 - 108	21 - 102	39 - 102	57 - 102	75 - 102	93 - 102	111 - 96	
6 - 96	13 - 108	22 - 102	40 - 102	58 - 102	76 - 102	94 - 102	112 - 102	
7 - 90	14 - 102	23 - 108	41 - 108	59 - 108	77 - 108	95 - 108	113 - 102	
	15 - 96	24 - 108	42 - 108	60 - 108	78 - 108	96 - 108	114 - 102	
	16 - 90	25 - 108	43 - 108	61 - 108	79 - 108	97 - 108	115 - 102	
		26 - 108	44 - 108	62 - 108	80 - 108	98 - 108	116 - 102	
		27 - 108	45 - 108	63 - 108	81 - 108	99 - 108	117 - 102	
		28 - 108	46 - 108	64 - 108	82 - 108	100 - 108	118 - 96	
		29 - 102	47 - 102	65 - 102	83 - 102	101 - 102	119 - 96	
		30 - 102	48 - 102	66 - 102	84 - 102	102 - 102	120 - 90	
		31 - 96	49 - 96	67 - 96	85 - 96	103 - 96	121 - 90	
		32 - 96	50 - 96	68 - 96	86 - 96	104 - 96	122 - 84	
		33 - 90	51 - 90	69 - 90	87 - 90	105 - 90		
		34 - 84	52 - 84	70 - 84	88 - 84	106 - 84		

## SUMMARY OF DROPS

16 - 84 IN DROP  
16 - 90 IN DROP  
28 - 96 IN DROP  
29 - 102 IN DROP  
36 - 108 IN DROP

TOTAL OF 125 DROPS