

DIRECTORS

Steve Strickland
PRESIDENT

Alan Hanger
VICE PRESIDENT

Eileen Utthe-Smith
DIRECTOR

Gary Hensley
DIRECTOR

Jim Miles
DIRECTOR



STAFF

Patrick Sweeney
GENERAL MANAGER

Ashwin Swenson
Exec Asst./Treas

RICK TRITES
METER READING/BACKFLOW

NANCY VEERKAMP
BOARD CLERK/ADMIN

SOLANO IRRIGATION DISTRICT
OPERATOR & MAINTENANCE

BRENDA KANE
BILLING MANAGER

RURAL NORTH VACAVILLE WATER DISTRICT BOARD OF DIRECTORS REGULAR MEETING

Tuesday, January 14, 2025

7:00 P.M

Vacaville Fire Protection District, Fire Station #67,
4135 Cantelow Road, Vacaville, CA 95688

“The Mission of the Rural North Vacaville Water District is to deliver, efficiently and reliably for many years, quality water for domestic use and fire protection.”

AGENDA

(Anyone wishing to address the Board is asked to fill out a “Public Comment Card” prior to the start of the meeting, or during if necessary, and give it to the Board Clerk.)

- 1. Call Meeting to Order (Board President)**
- 2. Roll Call (Board Clerk)**
- 3. Approval of the Agenda (Board President)**
- 4. Public Comment (Non-Agenda Items)**

Opportunity for the public to speak to the Board on any subject matter within the district’s jurisdiction but not appearing on today’s agenda. Speaker times are limited to three (3) minutes per person.

Please submit a Public Comment Card to the Board Clerk prior to the commencement of this Public Comment section. Only those who have submitted speaker cards or have expressed an interest in speaking prior to the conclusion of the Public Comment section will be called upon to speak.

Public comments on agenda or non-agenda items during a Board of Directors meeting are for the purpose of informing the Board to assist Board members in making decisions. Please address your comments to the President of the Board.

Please note that State law prevents the Board from discussing or acting on items not listed on the agenda. Public comments relating to matters listed on the agenda are called for by the Board President at the appropriate agenda item when requested by a Public Comment Card.

Public comments during Board meetings are not for questions and answers. Should you have questions, please do not ask them as part of your public comments to the Board. Answers will not be provided during Board meetings. Please present your questions to the RNVWD General Manager or a Board Member via email, phone call, letter, or in-person at a time other than during a Board meeting.

5. Consent Items (Public Comment)

Items appearing on the Consent Calendar are considered routine and may be acted upon by the Board by one motion, without discussion; however, any item may be considered separately at the request of any Board member.

a) Consider for Approval the **Meeting Minutes** of the **Regular December 10, 2024, meeting**.

b) Consider for Approval the **Monthly Financial Reports and Adjustments for November 2024**

(Action Item is for all at one time)

6. General Manager's Report (Verbal Update) (Public Comment)

a) Transition

b) Eaton – Paid off

c) Ghillotti – Pending negotiation for terms

7. Executive Assistant/Treasurer's Report (Verbal Update) (Public Comment)

a) Transition

8. Continuing Business (Public Comment)

a) Discuss and provide direction on the following options for solar power: a) Negotiate and sign a power purchase agreement, PPA; b) Drop the solar project NEM 2 completely; c) Evaluate outside funding to do the solar installation without a PPA or d) Evaluate other reduced scope scenarios such as for only Well 1 and 2 and obtain additional bids. Consider for approval selection of two Board members for "Ad Hoc" committee to review Solar Project **(Action Item)**

9. New Business (Public Comment)

a) Consider for approval Electronic Communications Policy 3300 **(Action Item)**

b) Consider for approval Coastland Hydraulic Model 1-2-2025 **(Action Item)**

10. Adjourn

The next Regular Meeting is scheduled for **Tuesday February 11, 2025**, at 7:00 pm at the Vacaville Fire Protection District, Fire Station #67, 4135 Cantelow Road, Vacaville, CA 95688.

The Board of Directors of the Rural North Vacaville Water District holds its Regular Board Meetings on the second Tuesday of every month at 7:00 p.m. The Board may discuss any item on the agenda and may act on any of those items. Agenda items are numbered for identification purposes only and will not necessarily be considered in the indicated order.

In compliance with the American with Disabilities Act, if you have a disability and need a disability-related modification or accommodation to participate in this meeting, please contact the General Manager. Upon request, the District will provide written agenda materials in appropriate alternative formats, or disability-related modification or accommodation to enable individuals with disabilities to participate in and provide comments. Please submit a request, including your name, phone number and/or email address, and a description of the modification, accommodation, or alternative format requested at least two days before the meeting. Requests should be emailed to the General Manager at gm@rnvwd.com or submitted by phone at 707-447-8420. Requests made by mail (sent to P.O. Box 5097, Vacaville, CA 95696) must be received at least two days before the meeting. Requests will be granted whenever possible and resolved in favor of accessibility.

Directors

Steven Strickland, President
 Alan Hanger, Vice President
 Gary Hensley, Director
 James R. Miles, Director
 Eileen Uthe-Smith, Director

**Staff**

Weston Stankowski, Interim General Mgr.
 Brenda Kane, Billing Manager
 Rick Trites, Meter Reading/Backflow
 Nancy Veerkamp, Clerk/Admin
 Solano Irrigation District, Operation
 & Maintenance

BOARD OF DIRECTORS
REGULAR MEETING MINUTES
DECEMBER 10, 2024 at 7:00 pm

The Rural North Vacaville Board of Directors met in Regular Meeting session on this date.

Roll Call: Steven Strickland, President; Alan Hanger, Director; Gary Hensley, Director; James Miles, Director; Weston Stankowski and Gordon Stankowski, Interim General Manager; Nancy Veerkamp, Clerk/Admin; Brenda Kane, Billing Manager, Carrie Blacklock, County Counsel.

Absent: None

Public (Speaking): David Stevens, Elizabeth Miles, Mark Welch

1. Call Meeting to Order

The meeting was called to order by the President, Steven Strickland, at 7:02 pm.

2. Administer Oath of Office for two newly elected District board members: James R. Miles and Gary K. Hensley for four-year terms and for one District board member by appointment in lieu of election for Alan Hanger for a two-year term. (Board Clerk)

3. Roll Call (Board Clerk)

4. Approval of the Agenda (Board President) Director Alan made a motion to approve the Agenda and the motion was seconded by Director Gary.
 All approved.

5. Consider and appoint a district member to fill vacant seat on the District Board for the remaining term ending in December 2026 (Action Item) Director Alan made a motion to appoint Eileen Uthe-Smith to fill the vacant seat ending in December 2026. Director James seconded the motion. Discussion: There was one application

received from Eileen Uthe-Smith.

Vote: All approved. The Oath of Office was administered by the Board Clerk.

6. Nominate and elect Board Vice President for remaining officer term ending in December 2025 (Action Item) Director Eileen made a motion to elect Alan Hanger as Vice President. Director James seconded the motion. Discussion: None

Vote: All approved.

7. Public Comments (Non Agenda Items): James Miles doesn't believe that public comments cards are required. David Stevens, President of Pleasants Valley Fire Safe Council, made a presentation regarding potential grants though collaboration with other local entities though partnerships. Many neighbors are having problems maintaining or getting insurance. This could be a future source of additional revenue for the district infrastructure. He is available in the future to work with the district. His email is: dstevens@jps.net

8. Consent Items: Public Comment: None

a) Consider for Approval the Meeting Minutes of the Regular Meeting November 12, 2024.

b) Consider for Approval the Monthly financial reports and adjustments for October 2024.

Director Gary made a motion to approve items a & b. Director Alan seconded the motion.
Yes: Gary, Alan, Steven, Eileen
Noes: James

9. General Managers Report (verbal update)- Public Comment: None

a) Interim GM Gordon thanked the Board for the opportunity to be of service over the last 6 months and past 13 years.

b) Final FEMA monies have been received for the Cantelow Road flooding and erosion totally approximately \$50,000.

10. Continuing Business: Public Comment: None

a) Discuss and provide direction on the following options for solar power: a) Negotiate and sign a power purchase agreement, PPA; b) Drop the solar application completely; c) Evaluate outside funding to do the solar installation without a PPA or d) Evaluate other reduced scope scenarios such as for only Well 1 and 2 and obtain additional bids. (Action Item) President Steve asked to table this item until the next meeting as we don't have all the information we need. Director Alan passed out a spreadsheet to be used for potential financing amounts and rates that can be updated as we get more information. Alan made a motion to table this item. Director Gary seconded the motion.

Vote: All approved.

11. New Business- Public Comments: None

a) Consider for approval the agreement with Patrick Sweeney (Sweeney Construction Company) to act as the independent contractor District General Manager (GM). (Action Item) Director Alan made a motion to approve the contract for GM. Director Eileen seconded the motion. Discussion: Director James asked for this item to be moved to the January meeting as he had not reviewed the contract, there are new board members, he doesn't know who wrote the contract and did not understand the budgeting for the position. I may have questions. How did we get where we are now. Steve: All prior board members had approved the contract. Alan: All five prior board members reviewed the contract. Alan explained the whole process of interviewing candidates. James: Is this legal? Carrie: Yes. Public Comment: Elizabeth Miles asked to push the contract approval off to the next meeting, it feels like you are rushing this through. Allow the public to review the contract. Eileen: I have been to all the meetings and the former board interviewed and reviewed the contract as did the RNVWD attorney. This has been discussed for months. Mark Welch requested the same. Alan gave a time line of all the work that had gone into selecting the candidate and preparing the contract with the Attorney approval. Steve and Alan reviewed all resumes for both positions. Patrick and another were the finalist. There were three candidates for Executive Assistant. Ken had to resign during contract negotiations. Transitions period is ½ time Patrick with Gordon training. Same with Ashwin. Neither contract was negotiated by the prior board members, Patrick and Ken who resigned. New board Directors Gary and Eileen had been aware of the selection process.

Vote:

Yea: Steven, Gary, Eileen, Alan

Noe: James

b). Consider for approval the agreement with Ashwin Swenson (KASCO) to act as independent contractor District Executive Assistant Treasurer (ETA). (Action Item) Director Alan made a motion to approve the contract for the Executive Assistant/ Treasurer position. Director Eileen seconded the motion. Discussion: Alan: Explained the process to create the Executive Assistant position. She is directly responsible to Board for her some of her duties and some to the General Manager-those tasks are defined in the contract. This is to provide check and balances. Elizabeth Miles: How did board members get copies of the contracts? The packet was sent out Friday. President: By email. Elizabeth: the email you used for James is incorrect. No one contacted him for his district email. He cannot receive a district email until he receives the oath. The email used was in the RNVWD billing program. Nancy: The district does not receive detailed info i.e. emails or addresses from the ROV when people sign up to run for office. Patrick: The information has been on the website since Friday. Mark Welch: I agree with the lady sitting next to me: time to figure out the next steps forward and be very careful. 30 days is not asking much to review this. Alan suggested a meeting on December 17th if others agree. No motion or action on this.

Vote:

Yea: Steven, Gary, Eileen, Alan

Noe: James

a.) **Consider for Approval the District Financial Audit for Fiscal Year July 1, 2023, to June 30, 2024 (Action Item)** Director Gary made a motion to approve the District Financial Audit. Director Alan seconded the motion. Discussion: GM: It was a two page cover letter with favorable report. Eileen: A few comments that had already been addressed by the Board and Staff.

Vote:

Yea: Steven, Alan, Gary, Eileen, James

Noes: None

12. Adjourn

The meeting was adjourned at 7:50 pm.

The next Regular Meeting is scheduled for Tuesday, January 14, 2024, at 7:00 pm at the Vacaville Fire Protection District, Fire Station #67, 4135 Cantelow Road, Vacaville, CA 95688.

Minutes submitted by Nancy Veerkamp, Clerk of the Board

Minutes approved by President:

President

Date

RNVWD - Operating Fund
Balance Sheet
As of November 30, 2024

ASSETS	
Current Assets	
Checking/Savings	
160.027 · Cash -Vendor Deposits Held acct	57,195
160.020 · Cash WFB Checking #3799	260,074
160.025 · Cash PayPal Account	5,706
160.029 · Cash in Treasury - Fund 164	68,387
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Total Checking/Savings	391,362
Other Current Assets	
160.110 · Water Svc Accounts Rec.	159,827
160.139 · Accrued Interest Receivable	20,808
160.199 · LT Rec Principal Due Next 12 Mo	49,831
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Total Other Current Assets	230,466
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Total Current Assets	621,828
Fixed Assets	
160.315 · Infrastructure	15,161,692
160.340 · Equipment	546,827
160.370 · Allowance For Depreciation	(9,467,767)
	<hr/>
Total Fixed Assets	6,240,752
Other Assets	
160.244 · LT Receivable - Dove Creek Tr	35,000
160.243 · LT Receivable - Forfang	36,586
164.242 · LT Receivable - Fade	36,586
164.241 · LT Receivable - Sondrol	35,129
164.240 · LT Receivable - Mojas	35,128
164.239 · LT Receivable - Martin	35,129
164.238 · LT Receivable - DelCampo	129,423
164.236 · LT Receivable - Anguiano	31,183
164.235 · LT Receivable - Hamilton	33,629
164.230 · LT Receivable-Morgan	469,414
164.231 · LT Receivable - Demyan	33,772
164.233 · LT Receivable - Pitcavage	28,499
164.299 · Current Portion of LT Rec.	(49,831)
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Total Other Assets	889,647
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TOTAL ASSETS	7,752,227
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LIABILITIES & EQUITY	
Liabilities	
Current Liabilities	
Accounts Payable	
160.500 · Deposit Payables	49,128

**RNVWD - Operating Fund
Balance Sheet
As of November 30, 2024**

	Nov 30, 24
160.505 · Hydrant Customer Deposits	1,500
Total Accounts Payable	50,628
Credit Cards	
160.601 · Wells Fargo Visa Card-New	114
Total Credit Cards	114
Other Current Liabilities	
164.599 · Current Portion of Loan Payable	120,617
160.510 · Accounts Payable	58,408
160.515 · Accrued Liabilities	
160.516 · Accrued Liab - Eaton Pump	29,468
160.517 · Accrued Liab - Ghillotti	85,000
Total 160.515 · Accrued Liabilities	114,468
Total Other Current Liabilities	293,493
Total Current Liabilities	344,235
Long Term Liabilities	
164.600 · Loan Payable	1,025,881
164.699 · Less Current Port. of Loan Pay	(120,617)
Total Long Term Liabilities	905,264
Total Liabilities	1,249,498
Equity	
160.749 · County Reserve Funds	68,387
160.770 · Investment in Fixed Assets	5,137,722
32000 · Retained Earnings	1,089,309
Net Income	207,310
Total Equity	6,502,728
TOTAL LIABILITIES & EQUITY	7,752,227

RNVWD - Operating Fund
Profit & Loss Budget Performance
November 2024

	<u>Nov 24</u>	<u>Budget</u>	<u>Over B...</u>	<u>Jul - Nov ...</u>	<u>YTD Bud...</u>	<u>Over B...</u>	<u>Annual B...</u>
Ordinary Income/Expense							
Income							
60.9000 · Revenues							
60.9005 · Base Fee	33,097	33,018	79	161,835	158,611	3,224	389,737
60.9010 · Supplemental Fees	13,031	13,504	(473)	64,991	61,668	3,323	156,196
60.9015 · Tier 1	10,770	13,536	(2,766)	64,987	69,969	(4,982)	113,520
60.9020 · Tier 2	2,347	6,153	(3,806)	27,693	31,803	(4,110)	51,600
60.9025 · Tier 3	539	4,922	(4,383)	32,634	25,444	7,190	41,280
60.9027 · Capital Recovery Charge	49,635	49,398	237	243,844	223,286	20,558	569,072
60.9030 · Hydrant Water Usage	2,460	1,000	1,460	6,556	5,000	1,556	10,000
60.9065 · Princ & Int from Sale WR	0	0	0	53,578	51,132	2,446	107,366
60.9070 · FEMA	0	0	0	47,347	52,000	(4,653)	52,000
60.9075 · Admin Fees, Late Fees	1,011	650	361	6,170	3,250	2,920	7,800
60.9095 · Trans fees earned by GM	0	500	(500)	0	2,500	(2,500)	6,000
Total 60.9000 · Revenues	<u>112,889</u>	<u>122,681</u>	<u>(9,792)</u>	<u>709,635</u>	<u>684,663</u>	<u>24,972</u>	<u>1,504,571</u>
Total Income	112,889	122,681	(9,792)	709,635	684,663	24,972	1,504,571
Expense							
60.2000 · Operating Expenses							
60.2005 · General Manager	10,000	12,000	(2,000)	51,450	60,000	(8,550)	144,000
60.2010 · Administration & Board Clerk	1,024	917	107	6,451	4,584	1,867	11,000
60.2015 · Billing Manager	4,000	4,167	(167)	19,100	20,834	(1,734)	50,000
60.2020 · Meter Reading	1,463	1,167	296	6,529	5,834	695	14,000
60.2025 · Backflow Testing	0	0	0	21,050	22,000	(950)	22,000
60.2028 · Plant & Facilities Operations	17,723	18,333	(610)	93,002	91,666	1,336	220,000
60.2033 · Weed Abatement	0	0	0	0	0	0	2,765
60.2035 · Legal	1,740	0	1,740	3,810	8,000	(4,190)	15,000
60.2040 · Engineering	2,161	833	1,328	7,284	4,166	3,118	10,000
60.2045 · Audit	10,038	4,500	5,538	11,061	12,700	(1,639)	12,700
60.2050 · Accountant CPA	1,210	1,208	2	7,540	6,041	1,499	14,500
60.2065 · USA Marking	0	367	(367)	4,019	1,834	2,185	4,400
60.2070 · Webmaster	0	792	(792)	4,375	3,959	416	9,500
60.2075 · Office Supplies	265	375	(110)	2,086	1,875	211	4,500
60.2090 · Postage & PO Box Rental	0	417	(417)	690	2,084	(1,394)	5,000
60.2105 · Ins. Gen. Liab., Prop., & Bond	0	750	(750)	9,314	3,750	5,564	9,000
60.2115 · Electricity, PGE	9,592	10,687	(1,095)	63,402	57,616	5,786	92,000
60.2125 · Office Equipment	1,191	500	691	2,469	2,500	(31)	6,000

RNVWD - Operating Fund
Profit & Loss Budget Performance
November 2024

	Nov 24	Budget	Over B...	Jul - Nov ...	YTD Bud...	Over B...	Annual B...
60.2130 · Bank & Bankcard Fees	349	417	(68)	2,532	2,084	448	5,000
60.2135 · Princ & Interest on CoBank Loan	0	0	0	89,286	89,286	0	178,578
60.2145 · Phone Service	99	100	(1)	562	500	62	1,200
60.2150 · Tank Access Rd. Maint. & Gate	0	500	(500)	0	2,500	(2,500)	6,000
60.2160 · CORE SW Lic., Data Stg, Trng.	0	292	(292)	2,362	1,459	903	3,500
60.2175 · Publications & Legal Notices	0	42	(42)	824	209	615	500
60.2185 · Trade Memberships & Training	0	4,000	(4,000)	7,920	12,000	(4,080)	12,000
60.2190 · Licenses, Permits & Fees	0	2,000	(2,000)	359	6,000	(5,641)	6,000
60.2195 · Elections	300	0	300	300	0	300	10,000
60.2200 · ITRON Moble Reader SW & Warr.	0	233	(233)	2,469	1,166	1,303	2,800
60.2205 · Fees & Administration	500	83	417	500	416	84	1,000
60.2208 · Underground Leak Repairs	18,003	13,085	4,918	37,367	65,426	(28,059)	157,022
60.2210 · Routine Maintenance & Minor Rep	13,928	8,312	5,616	57,653	41,561	16,092	99,746
60.2235 · Contingency	0	1,667	(1,667)	0	8,334	(8,334)	20,000
60.2300 · Capital Improvements, CRC Resv.	0	4,167	(4,167)	0	20,834	(20,834)	50,000
60.2480 · Funding for Reserves	0	0	0	0	0	0	96,392
60.2485 · Cantelow Bridge Replacement	0	7,083	(7,083)	12,487	35,416	(22,929)	85,000
60.2505 · Engineering Assmt Rept	0	1,167	(1,167)	0	5,834	(5,834)	14,000
60.2510 · Eaton Spare Pump/Shaft	15,000	15,000	0	70,000	70,000	0	109,468
Total 60.2000 · Operating Expenses	108,586	115,161	(6,575)	598,253	672,468	(74,215)	1,504,571
Total Expense	108,586	115,161	(6,575)	598,253	672,468	(74,215)	1,504,571
Net Ordinary Income	4,303	7,520	(3,217)	111,381	12,195	99,186	0
Other Income/Expense							
Other Income							
60.9670 · Princ Pymts on CoBank Loan	0	0	0	59,652	59,652	0	120,618
60.9660 · County Bridge Pymts Capitali ed	0	7,083	(7,083)	0	35,416	(35,416)	85,000
60.9650 · Eaton Pump Pymts Capitali ed	15,000	15,000	0	70,000	70,000	0	109,468
Total Other Income	15,000	22,083	(7,083)	129,652	165,068	(35,416)	315,086
Other Expense							
60.9710 · Water Rights Princ Pmts Recd	0	0	0	33,723	31,288	2,435	76,118
Total Other Expense	0	0	0	33,723	31,288	2,435	76,118

RNVWD - Operating Fund
Profit & Loss Budget Performance
 November 2024

	<u>Nov 24</u>	<u>Budget</u>	<u>Over B...</u>	<u>Jul - Nov ...</u>	<u>YTD Bud...</u>	<u>Over B...</u>	<u>Annual B...</u>
Net Other Income	15,000	22,083	(7,083)	95,929	133,780	(37,851)	238,968
Net Income	<u>19,303</u>	<u>29,603</u>	<u>10,300</u>	<u>207,310</u>	<u>145,975</u>	<u>61,335</u>	<u>238,968</u>

8:55 AM

12/17/24

Accrual Basis

RNVD - Operating Fund Check Register November 2024

Type	Date	Num	Name	Memo	Account	Clr	Split	Debit	Credit
Nov 24									
Check	11/01/2024	3129	RG West Builders, Inc	657	160.020 · Cash WFB Checking #3799	X	-SPLIT-		12,000.00
Check	11/01/2024	3129	RG West Builders, Inc	657	60.2005 · General Manager		160.020 · Cash WFB Checking #3799	10,000.00	
Check	11/01/2024	3129	NorCal	Check 3129 R...	160.500 · Deposit Payables		160.020 · Cash WFB Checking #3799	1,000.00	
Check	11/01/2024	3129	Morgan	Check 3129 R...	160.999 · AR Adjustments Clearing Account		160.020 · Cash WFB Checking #3799	500.00	
Check	11/01/2024	3129	Sellers	Check 3129 R...	160.999 · AR Adjustments Clearing Account		160.020 · Cash WFB Checking #3799	500.00	
Check	11/04/2024		Postalia		160.020 · Cash WFB Checking #3799	X	60.2125 · Office Equipment		250.00
Check	11/04/2024		Postalia		60.2125 · Office Equipment		160.020 · Cash WFB Checking #3799	250.00	
Check	11/04/2024		Postalia		160.020 · Cash WFB Checking #3799	X	60.2125 · Office Equipment		350.00
Check	11/04/2024		Postalia		60.2125 · Office Equipment		160.020 · Cash WFB Checking #3799	350.00	
Check	11/04/2024		PG & E		160.020 · Cash WFB Checking #3799	X	60.2115 · Electricity, PGE		3,018.20
Check	11/04/2024		PG & E		60.2115 · Electricity, PGE		160.020 · Cash WFB Checking #3799	3,018.20	
Check	11/06/2024		BK Bookkeeping Inc	10101 July	160.020 · Cash WFB Checking #3799	X	-SPLIT-		4,841.19
Check	11/06/2024		BK Bookkeeping Inc	10101 July	60.2015 · Billing Manager		160.020 · Cash WFB Checking #3799	4,000.00	
Check	11/06/2024		BK Bookkeeping Inc	Ink	60.2075 · Office Supplies		160.020 · Cash WFB Checking #3799	249.97	
Check	11/06/2024		BK Bookkeeping Inc	Mailer Lease	60.2125 · Office Equipment		160.020 · Cash WFB Checking #3799	591.22	
Check	11/06/2024		Wells Fargo		160.020 · Cash WFB Checking #3799	X	160.601 · Wells Fargo Visa Card-New		4,301.21
Check	11/06/2024		Wells Fargo		160.601 · Wells Fargo Visa Card-New	X	160.020 · Cash WFB Checking #3799	4,301.21	
Check	11/12/2024	3135	Eaton Drilling Co LLC	payment #6-re...	160.020 · Cash WFB Checking #3799	X	60.2510 · Eaton Spare Pump/Shaft		15,000.00
Check	11/12/2024	3135	Eaton Drilling Co LLC	Eaton Spare P...	60.2510 · Eaton Spare Pump/Shaft		160.020 · Cash WFB Checking #3799	15,000.00	
Check	11/12/2024	3136	Meter, Valve & Control	006873	160.020 · Cash WFB Checking #3799	X	60.2210 · Routine Maintenance & Minor ...		2,282.34
Check	11/12/2024	3136	Meter, Valve & Control	7320	60.2210 · Routine Maintenance & Minor Rep		160.020 · Cash WFB Checking #3799	2,282.34	
Check	11/12/2024	3137	Meter, Valve & Control	007318	160.020 · Cash WFB Checking #3799	X	60.2210 · Routine Maintenance & Minor ...		2,864.19
Check	11/12/2024	3137	Meter, Valve & Control	7320	60.2210 · Routine Maintenance & Minor Rep		160.020 · Cash WFB Checking #3799	2,864.19	
Check	11/12/2024	3134	Trites Backflow Svc Inc	16769	160.020 · Cash WFB Checking #3799	X	60.2020 · Meter Reading		1,463.00
Check	11/12/2024	3134	Trites Backflow Svc Inc	16769	60.2020 · Meter Reading		160.020 · Cash WFB Checking #3799	1,463.00	
Check	11/12/2024	3131	County of Solano	County Counsel	160.020 · Cash WFB Checking #3799	X	60.2035 · Legal		1,740.00
Check	11/12/2024	3131	County of Solano	County Counsel	60.2035 · Legal		160.020 · Cash WFB Checking #3799	1,740.00	
Check	11/12/2024	3132	Shaw & Associates	October	160.020 · Cash WFB Checking #3799	X	60.2050 · Accountant CPA		1,210.00
Check	11/12/2024	3132	Shaw & Associates	Monthly	60.2050 · Accountant CPA		160.020 · Cash WFB Checking #3799	1,210.00	
Check	11/12/2024	3133	Neal Larry	Hydrant Refund	160.020 · Cash WFB Checking #3799	X	-SPLIT-		1,185.00
Check	11/12/2024	3133	Neal, Larry	Hydrant Refund	160.505 · Hydrant Customer Deposits		160.020 · Cash WFB Checking #3799	1,500.00	
Check	11/12/2024	3133	Neal Larry	Hydrant Refund	60.9030 · Hydrant Water Usage		160.020 · Cash WFB Checking #3799		315.00
Check	11/12/2024	3130	Nancy Veerkamp	October	160.020 · Cash WFB Checking #3799	X	60.2010 · Administration & Board Clerk		1,023.75
Check	11/12/2024	3130	Nancy Veerkamp	October	60.2010 · Administration & Board Clerk		160.020 · Cash WFB Checking #3799	1,023.75	
Check	11/12/2024		Client Analysis Servic...		160.020 · Cash WFB Checking #3799	X	60.2130 · Bank & Bankcard Fees		26.28
Check	11/12/2024		Client Analysis Servic...		60.2130 · Bank & Bankcard Fees		160.020 · Cash WFB Checking #3799	26.28	
Check	11/13/2024		WFB Bankcard Fees	Bankcard Fee	160.020 · Cash WFB Checking #3799	X	60.2130 · Bank & Bankcard Fees		85.93
Check	11/13/2024		WFB Bankcard Fees	Bankcard Fee	60.2130 · Bank & Bankcard Fees		160.020 · Cash WFB Checking #3799	85.93	
Check	11/13/2024		Bancard Discount Fee	Bankcard Inter...	160.020 · Cash WFB Checking #3799	X	60.2130 · Bank & Bankcard Fees		115.67
Check	11/13/2024		Bancard Discount Fee	Bankcard Inter...	60.2130 · Bank & Bankcard Fees		160.020 · Cash WFB Checking #3799	115.67	
Check	11/13/2024		Bancard Discount Fee	Bankcard Disc...	160.020 · Cash WFB Checking #3799	X	60.2130 · Bank & Bankcard Fees		121.23
Check	11/13/2024		Bancard Discount Fee	Bankcard Disc...	60.2130 · Bank & Bankcard Fees		160.020 · Cash WFB Checking #3799	121.23	
Check	11/13/2024		PG & E		160.020 · Cash WFB Checking #3799	X	60.2115 · Electricity, PGE		379.49
Check	11/13/2024		PG & E		60.2115 · Electricity, PGE		160.020 · Cash WFB Checking #3799	379.49	
Check	11/14/2024	3138	Robert Kane	Election Paym...	160.020 · Cash WFB Checking #3799	X	60.2195 · Elections		100.00
Check	11/14/2024	3138	Robert Kane	Election Paym...	60.2195 · Elections		160.020 · Cash WFB Checking #3799	100.00	
Check	11/14/2024	3139	James Miles	Election Paym...	160.020 · Cash WFB Checking #3799	X	60.2195 · Elections		100.00
Check	11/14/2024	3139	James Miles	Election Paym...	60.2195 · Elections		160.020 · Cash WFB Checking #3799	100.00	
Check	11/14/2024	3140	Gary Hensley	Election Paym...	160.020 · Cash WFB Checking #3799	X	60.2195 · Elections		100.00
Check	11/14/2024	3140	Gary Hensley	Election Paym...	60.2195 · Elections		160.020 · Cash WFB Checking #3799	100.00	
Check	11/15/2024	3142	Fechter & Company	3155	160.020 · Cash WFB Checking #3799	X	60.2045 · Audit		8,000.00
Check	11/15/2024	3142	Fechter & Company	6/30/24 audit	60.2045 · Audit		160.020 · Cash WFB Checking #3799	8,000.00	
Check	11/19/2024		PG & E		160.020 · Cash WFB Checking #3799	X	60.2115 · Electricity, PGE		112.00
Check	11/19/2024		PG & E		60.2115 · Electricity, PGE		160.020 · Cash WFB Checking #3799	112.00	
Check	11/20/2024	3145	BK Builders - Brian K...	Hydrant Water...	160.020 · Cash WFB Checking #3799		-SPLIT-		510.00

8:55 AM

12/17/24

Accrual Basis

RNVD - Operating Fund Check Register November 2024

Type	Date	Num	Name	Memo	Account	Clr	Split	Debit	Credit
Check	11/20/2024	3145	BK Builders - Brian E...	Hydrant Water...	60.9030 · Hydrant Water Usage		160.020 · Cash WFB Checking #3799		990.00
Check	11/20/2024	3145	BK Builders (V)	Hydrant Water...	160.505 · Hydrant Customer Deposits		160.020 · Cash WFB Checking #3799	1,500.00	
Check	11/20/2024	3146	Ghilotti	Hydrant Meter ...	160.020 · Cash WFB Checking #3799		-SPLIT-		345.00
Check	11/20/2024	3146	Ghilotti (c)	Hydrant Meter ...	60.9030 · Hydrant Water Usage		160.020 · Cash WFB Checking #3799		1,155.00
Check	11/20/2024	3146	Ghilotti	Hydrant Meter ...	160.505 · Hydrant Customer Deposits		160.020 · Cash WFB Checking #3799	1,500.00	
Check	11/20/2024	3143	Fechter & Company	3245	160.020 · Cash WFB Checking #3799	X	60.2045 · Audit		2,037.80
Check	11/20/2024	3143	Fechter & Company	6/30/24 audit	60.2045 · Audit		160.020 · Cash WFB Checking #3799	2,037.80	
Check	11/20/2024	3144	NBS	202409-3062	160.020 · Cash WFB Checking #3799	X	60.2205 · Fees & Administration		500.00
Check	11/20/2024	3144	NBS	Cost of Collect...	60.2205 · Fees & Administration		160.020 · Cash WFB Checking #3799	500.00	
Check	11/25/2024		ACH Return	Bradley NSF	160.020 · Cash WFB Checking #3799	X	60.9075 · Admin Fees, Late Fees		207.27
Check	11/25/2024		ACH Return	Bradley NSF	60.9075 · Admin Fees, Late Fees		160.020 · Cash WFB Checking #3799	207.27	
Check	11/25/2024		PG & E		160.020 · Cash WFB Checking #3799	X	60.2115 · Electricity, PGE		2,379.00
Check	11/25/2024		PG & E		60.2115 · Electricity, PGE		160.020 · Cash WFB Checking #3799	2,379.00	
Check	11/26/2024	3147	PACE Supply Corp	39903034	160.020 · Cash WFB Checking #3799		60.2210 · Routine Maintenance & Minor ...		2,852.22
Check	11/26/2024	3147	PACE Supply Corp	39903034	60.2210 · Routine Maintenance & Minor Rep		160.020 · Cash WFB Checking #3799	2,852.22	
Check	11/26/2024	3148	Solano Irrigation Distr...	43944	160.020 · Cash WFB Checking #3799		-SPLIT-		58,599.33
Check	11/26/2024	3148	Solano Irrigation Distr...	Maintenance	60.2210 · Routine Maintenance & Minor Rep		160.020 · Cash WFB Checking #3799	5,928.91	
Check	11/26/2024	3148	Solano Irrigation Distr...	OPS	60.2028 · Plant & Facilities Operations		160.020 · Cash WFB Checking #3799	17,722.77	
Check	11/26/2024	3148	Solano Irrigation Distr...	USA	60.2065 · USA Marking		160.020 · Cash WFB Checking #3799		
Check	11/26/2024	3148	Solano Irrigation Distr...	ENG	60.2040 · Engineering		160.020 · Cash WFB Checking #3799	2,161.13	
Check	11/26/2024	3148	Solano Irrigation Distr...	43944	60.2150 · Tank Access Rd. Maint. & Gate		160.020 · Cash WFB Checking #3799	0.00	
Check	11/26/2024	3148	Solano Irrigation Distr...	Leaks	60.2208 · Underground Leak Repairs		160.020 · Cash WFB Checking #3799	18,003.44	
Check	11/26/2024	3148	Morgan (Vendor)	SID check #31...	160.500 · Deposit Payables		160.020 · Cash WFB Checking #3799	9,008.84	
Check	11/26/2024	3148	Sellers	SID check #31...	160.550 · Deposits Clearing Account		160.020 · Cash WFB Checking #3799	5,774.24	
Check	11/29/2024		PG & E		160.020 · Cash WFB Checking #3799	X	60.2115 · Electricity, PGE		3,703.14
Check	11/29/2024		PG & E		60.2115 · Electricity, PGE		160.020 · Cash WFB Checking #3799	3,703.14	
								134,263.24	134,263.24

Nov 24

Evaluation of Solar Power Options

for the Rural North Vacaville Water District

In no particular order:

Option a: Negotiate and Sign a Power Purchase Agreement (PPA)

Pros:

1. **No Upfront Costs:** The District doesn't need to invest capital to install the solar system.
2. **No Maintenance Responsibilities:** The solar company handles all repairs and upkeep.
3. **Predictable Energy Rates:** Locks in energy prices with a fixed 3% annual increase, offering protection against PG&E's historically higher and more variable rate increases.

Cons:

1. **No Ownership:** The District doesn't own the system and cannot make future changes or upgrades.
2. **Long-Term Commitment:** A 25-year contract ties the District down for a significant period.
3. **Potentially Outdated Technology:** Proposed system design is 2 years old; newer, more efficient technology is available.
4. **Expensive Buyout Option:** Buying the system after 6 years would cost more than purchasing it outright now.
5. **No Battery Storage Included:** Initial setup doesn't include batteries for backup power during outages.

Option b: Drop the Solar Project NEM 2 Completely

Pros:

1. **No Immediate Costs:** Avoids spending money or taking on new debt.
2. **Flexibility:** Allows the District to wait for better technology or an improved financial situation.
3. **No Contracts or Obligations:** Not tied to any agreements with third parties.

Cons:

1. **Rising Energy Costs:** Continues to face increasing PG&E rates without any reduction.

2. **Missed Savings Opportunities:** Loses out on potential savings from generating own electricity.
 3. **Loss of Current Incentives:** Misses out on benefits like favorable net energy metering rates (NEM 2).
-

Option c: Evaluate Outside Funding to Do the Solar Installation Without a PPA

Pros:

1. **Full Ownership:** The District owns the system and can upgrade or modify it as needed.
2. **Long-Term Savings:** After any loans are paid off, the District saves more over the system's lifespan.
3. **Access to Latest Technology:** Can install up-to-date and efficient solar panels and batteries.
4. **Energy Independence:** By integrating battery storage the District can bypass PG&E during periods of low solar production, providing greater control and savings over energy usage and reducing reliance on the grid.
5. **No Long-Term Contracts:** Not locked into agreements with third parties.

Cons:

1. **Financing Challenges:** Securing funding may be difficult due to existing debts and financial situation.
 2. **Upfront Costs:** Requires a significant initial investment.
 3. **Maintenance Responsibilities:** Responsible for all upkeep, repairs, and insurance costs (estimated at about \$10,000 annually).
 4. **Equipment Replacement Costs:** Components like inverters may need replacing every 10 years, adding to expenses.
-

Option d: Evaluate Other Reduced Scope Scenarios Such as for Only Well 1 and 2 and Obtain Additional Bids

Pros:

1. **Lower Initial Costs:** Smaller system is less expensive, making it easier to finance.
2. **Focus on Critical Needs:** Addresses the most important energy requirements of Wells 1 and 2.
3. **Potential for Better Deals:** New bids might offer more competitive pricing and terms.

4. **Access to Newer Technology:** Updated proposals could include more efficient and advanced equipment.

Cons:

1. **Reduced Overall Savings:** Offsetting a smaller portion of energy use means less total savings.
2. **Time-Consuming Process:** Seeking new bids and evaluating options delays potential benefits.
3. **Financing Still Required:** May still face challenges securing funds due to financial health.
4. **Maintenance Responsibilities:** If owned, the District would handle upkeep and associated costs.

Summary

- **Option a (PPA)** no upfront costs but lacks ownership and involves a long-term contract with potentially outdated technology.
- **Option b (Drop the Project)** avoids immediate expenses and obligations but continues to face rising energy costs and misses out on savings and incentives.
- **Option c (Outside Funding without PPA)** provides ownership and long-term savings with the latest technology but presents financing challenges and adds maintenance responsibilities.
- **Option d (Reduced Scope and New Bids)** lowers initial costs and targets critical facilities with potential access to better deals but results in less overall savings and requires additional time and effort to implement.

Action Item: The District needs to discuss these options to provide direction on how to proceed with the solar power project.



RURAL NORTH VACAVILLE WATER DISTRICT

POLICY TITLE: Electronic Communications
POLICY NUMBER: 3300
ADOPTED: 1.14.25
REVISIONS: None

3300.1 Introduction. The District recognizes that access to and use of the internet, email, and other electronic communications resources enhances its operations and contributes to its success as a local public agency. To this end, the District supports and provides interactive electronic communications services and facilities for tele-communications and mail. However, the misuses of these resources have the potential to harm the District's short and long-term success(es). Accordingly, the District Electronic Communications Policy establishes principles, rules, and procedures applying to all Board members, employees and contractors of the district (collectively referred to in this Policy as "Users") to specifically address issues particular to the use of electronic communications.

3300.2. Purpose. The purposes of this Policy are to:

- a. Establish policy on privacy, confidentiality, and security in electronic communications.
- b. Ensure that District electronic communications resources are used for purposes appropriate to the District's mission.
- c. Inform Users about the applicability of laws and District policies to electronic communications.
- d. Ensure that electronic communications resources are used in compliance with those laws and District policies; and
- e. Prevent disruptions to and misuse of District electronic communications resources, services, and activities.

3300.3. Scope. This Policy applies to:

- a. All electronic communications resources owned or managed by the District;
- b. All electronic communications resources provided by the District through contracts and other agreements with the District.
- c. All users and uses of District electronic communications resources; and
- d. All District electronic communications records in the possession of Users or other users of electronic communications resources provided by the District.

This Policy applies to the contents of electronic communications and to the electronic attachments and transactional information associated with such communications.

3300.4. Policy

- a. Use of any District electronic media system is not private, and users of these systems should not expect their communications to be private. Users should not have an expectation of personal privacy when using any form of District electronic communications or media. Users and certain contractors will be given an RNVWD.com email for all District communications. All Board members are required to have an official Rural North Vacaville Water District email address. RNVWD requires all Board members to use their designated RNVWD email address for all official communication, meaning it is mandatory for Board members to utilize their RNVWD email for District-related interactions and updates; this is considered the primary method of communication by and within the District. Board members shall not use personal accounts to conduct District business. District communication is not permitted by text, except in emergencies.
- b. Care must be exercised when staff communicates with Board members by email because of the ease of using the "Reply All" function may inadvertently result in a violation of the Brown Act. The Brown Act prohibits any discussion or deliberation by a majority of the members from outside of a noticed public meeting of a matter within the Board's subject-matter jurisdiction. Consequently, when staff send an email to most of the Board members, staff should send the email to themselves and blind copy the Board members. The Board members will then receive the email but the use of the "Reply All" will only send a response to the sender and not to the other members of the legislative body. Similarly, the "Reply All" function shall not be used to respond to any email communication that includes a majority of the Board members as recipients of the email and Board members shall not communicate with more than one other Board member.

3300.5 Rules Regarding Prohibited Use. Users should not use District email in an inappropriate manner. Prohibited use of the internet, electronic communication resources, and email includes, but is not limited to:

- a. Engaging in any profane, defamatory, harassing, illegal, discriminatory, or offensive conduct or any conduct that is otherwise inconsistent in any way with the District policies.
- b. Email used for non-business communications, including exchanges of jokes, stories, or antidotes is a prohibited practice and violates this Policy set.
- c. Distributing copyrighted materials.
- d. Users should keep in mind that they represent the District with their communication and shall distinguish opinion from District policy.
- e. District Board members must remember they cannot make decisions for the District as an individual when communicating with customers, clients or contractors.
- f. Use of another person's name or account is strictly prohibited.
- g. Using the District's email for personal social media, online shopping, and other similar online commercial activity.
- h. Users must respect all copyright and licensed agreements regarding software or publication they access from the internet. The District does not condone violations of copyright laws and licenses and Board member(s) contractor(s) will be personally liable for any fines or sanctions caused by the Board member's or contractor's license or copyright infringement.
- i. Transmittal of any material or communication in violation of any federal, state or local law, ordinance or regulation.
- j. Use of security code or password other than as authorized.
- k. Disclosing your username and password to anyone for any purpose.

3300.6 Additional Guidelines

- a. All email transmissions are District records and subject to disclosure under the California Public Records Act, discovery proceedings in litigation or other legal processes. The District has the right to access and disclose all messages sent over its email system, and to monitor the use of the email system.
- b. Deleting an email message does not necessarily mean the message cannot be retrieved from the District's computer system. Backup copies of all documents, including email messages, that are produced, sent, and received on the District's computer system, can be retrieved.
- c. Email and any attachments are subject to the same ethical standards, and standards of good conduct, as are memos, letters, and other paper-based documents.
- d. Currently all District email sent is not encrypted. Unencrypted email is not a secure way of exchanging information or files. Accordingly, Users are cautioned against transmitting information in an email message that should not be written in a letter, memorandum, or document available to the public.
- e. Email, once transmitted, can be printed, forwarded, and disclosed by the receiving party without the consent of the sender. Use caution in addressing messages to ensure that messages are not inadvertently sent to the wrong person.
- f. It is advisable for all Users to remind customers, clients, and contractor(s) of security issues when sending confidential emails or documents to the District via email. If applicable, our customers, clients, or contractors should be reminded to implement a security policy and make sure they understand the ramifications of sending confidential information via email.

January 2, 2025

Mr. Gordon Stankowski
 General Manager
 Rural North Vacaville Water District
 P.O. Box 5097
 Vacaville, CA 95696-5097
 Via email: gordon@rnvwd.com

Subject: **FINAL** Engineering Modeling of Distribution System (rev1)

Dear Mr. Stankowski,

Coastland | DCCM is pleased to provide the following engineering evaluation of Rural North Vacaville Water District's existing potable water distribution system. Coastland | DCCM was contracted by the District to evaluate the capability of the existing potable water distribution system to supply potable water and firewater to parcels within the District's sphere of influence. The following is a description of the methods used to evaluate the existing system and the sources of data used in the evaluation methods.

Solano Local Area Formation Organization (LAFCO) uses a current capacity rating for the existing distribution system of 533 services. However, this capacity rating of 533 is actually the number of properties included in the original annexation to form the Rural North Vacaville Water District and support a bond issue for capital improvements. Recently, Coastland | DCCM issued an opinion letter dated February 09, 2023, that determined that the District's water supply could support 873 connections given the yield of the existing wells combined with the amount of available storage in the system. Coastland | DCCM's higher estimated connection capacity was the result of following the methodology outlined in Title 22, Section 64554. In general, Coastland | DCCM estimated a well production capacity of 442MGD and existing system storage capacity of 611 MG.

SUMMARY OF APPROACH

This modeling effort estimates the pressure throughout the current distribution piping system for various steady state conditions, for example average day, peak day and pressure at specific fire hydrant locations. This approach assumes an unlimited supply of water is available at all locations in the distribution system, ie the pipes and reservoirs are always full of water. The goals are to evaluate the system pressures for the current number of services using the system and then predict a potential maximum hydraulic capacity of the current piping system. This potential maximum hydraulic capacity is an estimate based on current conditions. If desired by the District, future modifications to the existing piping system could increase the piping and the pumping systems hydraulic capacities. Recommendations for increasing the capacity of piping pumping systems is not part of this effort.

Santa Rosa
 1400 Neotomas Avenue
 Santa Rosa, CA 95405
 Tel: 707.571.8005

Auburn
 11641 Blocker Drive, Ste. 170
 Auburn, CA 95603
 Tel: 530.888.9929

Pleasant Hill
 3478 Buskirk Avenue, Ste. 1000
 Pleasant Hill, CA 94523
 Tel: 925.233.5333

Fairfield
 420 Executive Court North, Ste. G
 Fairfield, CA 94534
 Tel: 707.702.1961

Our engineering evaluation of the potable water distribution system was prepared in three steps. First, confirm required performance criteria. Second, build a computer model of the District's distribution system; Third, compare the model predictions for residual pressure to the required performance criteria. Performance criteria was developed from meetings with Solano County Local Formation Committee (LAFCO) and Vacaville Fire Protection District (VFPD). The District provided historical water consumption data as well as digital files of the distribution system facilities that were used to setup a computer model. With this model, predictions were made to locate areas within the existing distribution system where residual pressure and/or flow rate was insufficient to meet the performance requirements.

The District primarily serves rural properties with significant topographic elevation changes throughout the service area. Pressures in the system are affected by these topography changes. These changes in elevation were included in the model.

Please note that potable water consumption in many smaller community water systems in California is significantly less than the flow rate requirements for fire water supply. Therefore, it is generally true that if the distribution system can meet the performance requirement for fire supply, then the distribution system is typically, but not always, also capable of providing potable water supply.

DISTRIBUTION SYSTEM PERFORMANCE CRITERIA

Coastland | DCCM and the District met with LAFCO in August 2023. LAFCO approved the use of modeling to evaluate the distribution system for fire supply and also requested hydrant testing of the current system to establish current residual pressure in the service area. LAFCO agreed that the performance requirements for fire water supply are established by the Vacaville Fire Protection (VFPD) fire marshal. LAFCO also expressed a concern that accessory dwelling units could increase the demand for potable water within the District's distribution system.

The District has also had discussions with the VFPD regarding minimum fire water supply performance requirements. VFPD allows residents to receive fire water by connecting directly to the District's distribution system provided to pressure outside occupied structures is a minimum of 20 psi. When the pressure at the exterior of a structure is less than 20 psi, VFPD will allow residents to store fire water onsite. VFPD requires a minimum of 5,000 gallons of water stored on the resident's property. Fire water supply can also be achieved via hydrants throughout the service area if the hydrant can provide 250 gpm at 20 psi and is located within 300 feet of a structure. It is not a requirement of the District to construct, maintain or operated fire water storage tanks. Rather, the District only needs to provide 40 psi in the distribution system at the frontage property line, which is sufficient to fill the private supply tank located at the frontage.

Most 5,000-gallon capacity tanks that are NSF/ANSI 61 approved for potable water use have a typical fill height of 10 – 20 feet. For modeling purposes, the pressure loss through a water meter and backflow prevention device is 10 psi. Therefore, approximately 20 psi residual pressure in the distribution pipes is necessary to fill a water storage tank for properties using a private fire water storage system. However, this system pressure is inadequate for potable water service.

DISTRIBUTION SYSTEM SUMMARY

The District operates a distribution system composed of wells supplying potable water to an elevated storage system with pump stations to lift water between the elevated storage and users located at elevations above the elevation of the storage system. There are two wells supplying potable water. In general, water from the supply wells are pumped to storage reservoir #3. Pump station 3 then pumps water from reservoir #3 to reservoir #4. Pump station 4 then lifts water from Reservoir #4 to the higher elevations in the service area with the help of booster pump station 5. Water pressure in the system is maintained by a combination of pump pressure and gravity flow out of the reservoirs. Water pressure in the system is solely provided by gravity flow out of the reservoirs when the pumps are off except for services located above the elevation of 665 feet mean sea level. Services above this elevation require pumps 4 and pump 5 to provide service pressure at all times.

The following is a summary of the distribution components. The pump in Well #1 can provide approximately 500 gpm. Well #2 pump can provide approximately 350 gpm and water supplied by this well flows through a system to remove arsenic. Supply wells 1 & 2 fill reservoir #3 to a maximum elevation of 427 feet.

Pump station 3 is located adjacent to Reservoir #3. Two pumps at Pump station 3 can each provide approximately 250 gpm. These pumps fill reservoir 4 to a maximum elevation of 710 feet. These pumps also provide water directly to the distribution piping when operating.

Like pump station 3, pump station 4 is located adjacent to a reservoir, in this case Reservoir #4. Pump station 4 is equipped with two pumps that can each provide approximately 250 gpm. Pumps at this station pump water directly into the distribution piping providing pressure for services above elevation 665 feet mean sea level.

Pump station 5 is located at an elevation of approximately 755 feet and is connected directly to the piping system. Pump station 5 is not located adjacent to a reservoir. Pump station 5 has two pumps. Each pump can provide approximately 65 gpm. Pumps at this station boost the pressure in the piping system for services above elevation 755 feet.

Reservoir #3 has a 300,000-gallon capacity. The fill elevation is approximately 407 feet in elevation and an overflow outlet of 427 feet. Reservoir #4 also has a 300,000-gallon capacity. The fill elevation for Reservoir #4 is approximately 694 feet and an overflow outlet of 720 feet.

DISTRIBUTION SYSTEM COMPUTER MODEL

Several steps are required to develop a model for evaluating a distribution system. Components of the distribution system are added to the engineering model to provide the horizontal and vertical layout of piping system. Components that produce pressure to operate the system such as reservoirs and pumps are also added to the model along with the characteristics of how pressure changes with changes in flow rates in the system. Water consumption is also added at each service location throughout the service area. However, the water consumption data is typically first evaluated to determine trends or patterns in the consumption data. Figure 1 shows the layout of the existing distribution system. Figure 2 provides a graphical presentation of the pressure zones in the system that was prepared by Solano Irrigation District (SID).

These basic steps result in an engineering representation of the physical distribution system but do not exactly reproduce the as-built system. Some simplifying assumptions about how to mathematically represent components such as pumps and pressure regulating valves are needed to insure the software mathematical iterations can converge to an acceptable answer. The inputs for the engineering model and some of the simplifying assumptions are summarized in the following paragraphs.

Piping, Valves, Meters

The distribution system computer model was prepared using WaterCAD software developed by Bentley Systems. Much of the system components in the model used record information provided by the District. RNVWD also provided electronic files containing Graphical Information System (GIS) data that provided the horizontal layout of the system. Horizontal coordinates for the GIS data imported into the model were referenced to California State Plane Zone 2 – feet (NAD83 State Plane IIF).

Pumps

Record information for pump curves for pumps in supply wells 1 & 2 were retrieved from manufacturers websites by using the pump model and the number of pump stages provided by Luhdorff & Scalmanini Civil Engineers. Record information for the pumps installed at pump stations 3 & 4 first required recording the make and model for each pump in the field and then retrieving historical pump curves. Manufacturers for these pumps have merged with other manufacturers and the historical information is not available from the original manufacturers nor the current manufacturer. However, general pump curves for the make and model of pumps at stations 3 and 4 were available from the US Department of Agriculture. Solano Irrigation District provided record information for the new pumps at station 5 and the operating conditions for the arsenic treatment system at Pump Station 1.

Design operating points for each of the pumps were converted to total dynamic head (TDH). As the modeling effort evaluated the ability of the distribution to serve water at a steady state with flow in the system determined by consumption, pumps were replaced in the model by reservoirs with a fixed hydraulic elevation and the reservoir provides an unlimited quantity of water. The hydraulic elevation was calculated by adding the TDH to the ground elevation of the pump station. Pumps stations 3 and 4 were simply eliminated from the model as these stations were represented by existing reservoirs 3 and 4. Pump stations 3 and 4 are located immediately adjacent to reservoirs 3 and 4.

Pump stations 1 and 2 were represented by a single reservoir with a fixed hydraulic elevation of 430 feet. Pump station 3 was eliminated and represented by reservoir 3 as previously mentioned. The fixed elevation for reservoir was set at half of the tanks operating range added to elevation of inlet/outlet; 407 feet. The fixed elevation for reservoir 4 was calculated like reservoir 3 with the elevation set at 706 feet.

Pump station 5 was replaced with a reservoir with a fixed elevation equivalent to maintaining at least 70 psi in the hydropneumatic tank; which is 950 feet. Replacing pump station 5 with a reservoir supplying an unlimited supply of water assumes that the distribution system is capable of continuously producing the net positive suction head (NPSH) required for the pumps at pump station 5.

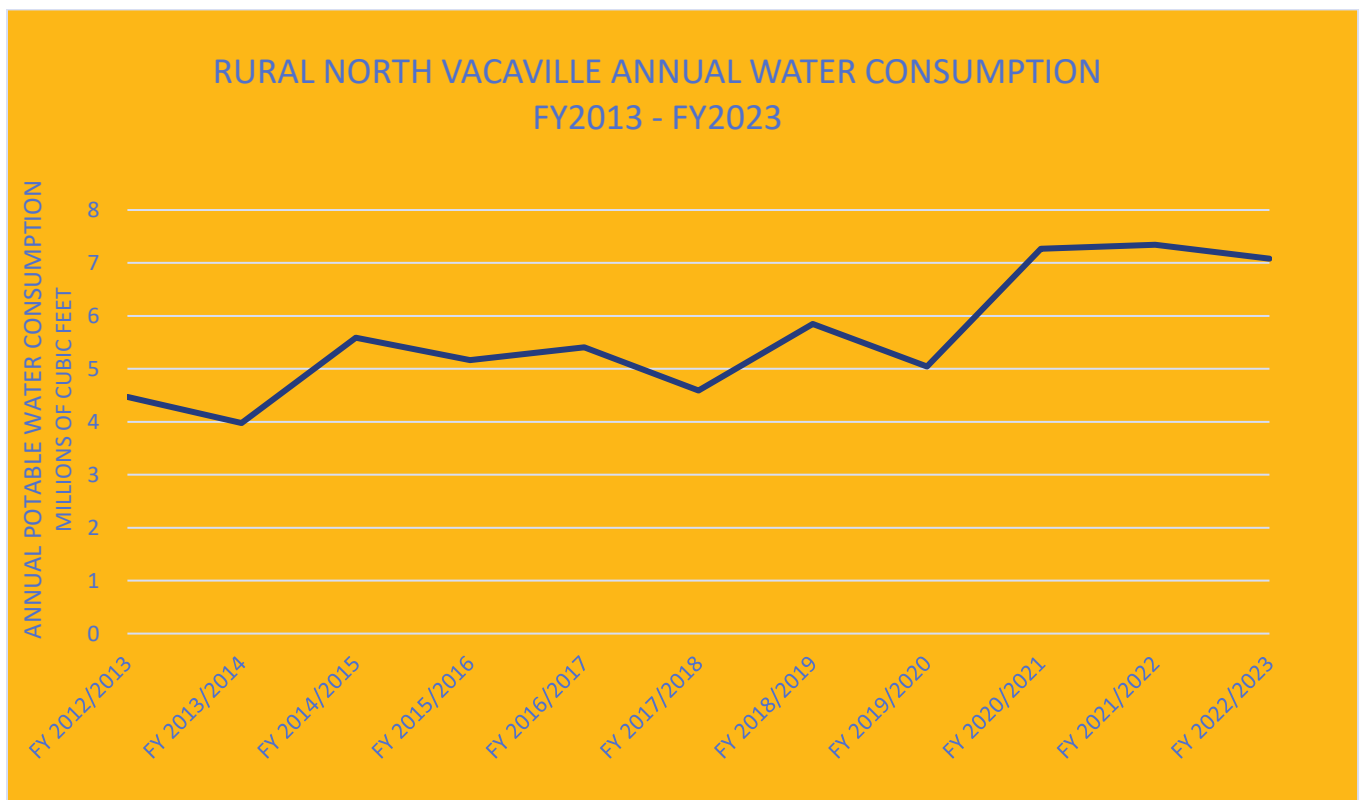
Reservoirs

Record information for existing reservoirs 3 and 4 was provided by the District. The record information included elevations for the tank inlet and tank overflow height from design drawings prepared by California Water Service Company in 2003. Coastland | DCCM confirmed the record information using topography. Water level recordings for the reservoirs was provided by Solano Irrigation District. These readings confirmed that the water levels in the reservoirs are generally maintained between 12 and 29 feet above the inlet of the reservoir. Twelve feet above the inlet/outlet was used in the model for the fixed elevation in reservoirs 3 and 4.

Water Consumption

The District provided the total annual water consumption based on meter readings for 10 calendar years 2013 - 2023. Partial data for 2024 through August was also evaluated. This data was used to evaluate the overall trend of water consumption within the District and identify years of peak annual consumption. Trends identified a significant gain in water consumption from 2019 to 2020 with a leveling in demand during the period between 2020 – 2022. Annual consumption declined in 2023. The trend in 2024 is on track to increase consumption compared to the consumption pattern in 2023. See Figure 1.

FIGURE 1

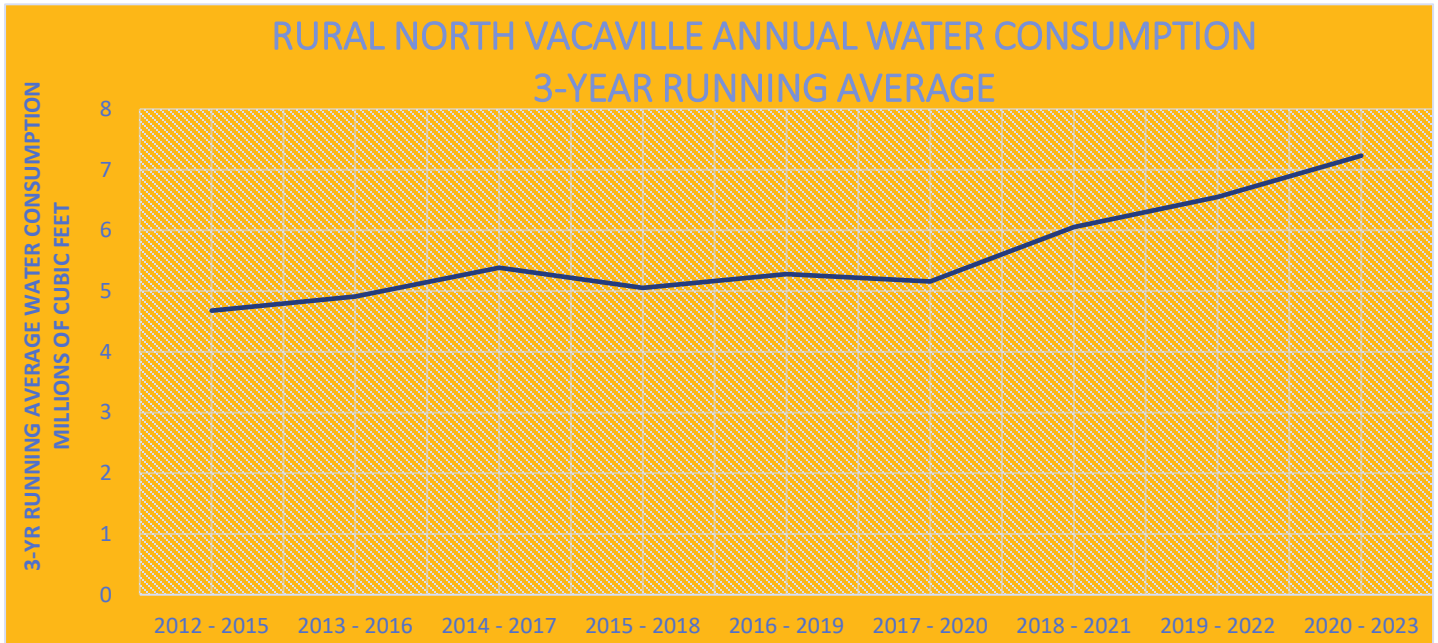


It is assumed that observed increases in potable water consumption during the period 2020 – 2022 were due to the LMU fire reconstruction and possibly due to COVID-19 restrictions. Coastland | DCCM has observed increases of water consumption during 2021 – 2022 in other water district’s consumption data that correspond to COVID.

Annual water consumption was then averaged over a running three-year period to evaluate the trend in water consumption and smooth out year to year differences for weather and other

variables that affect consumption. No effort was made to account for increases in water consumption due to unusual events such as the LNU Lightning Complex Fire in 2020.

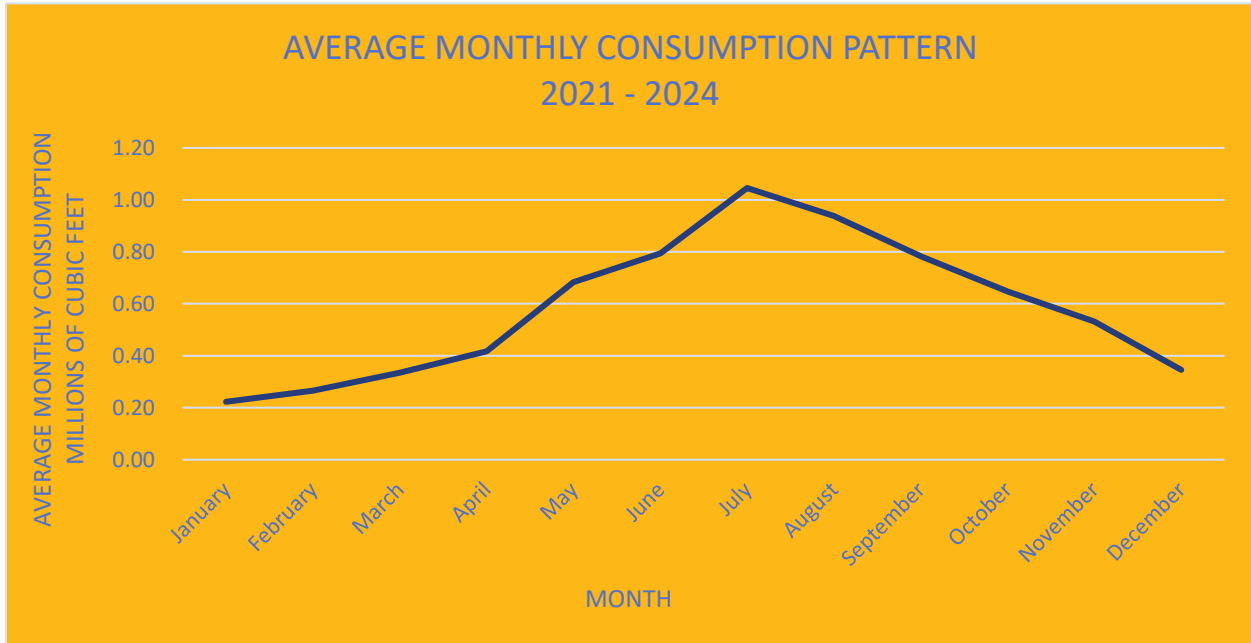
FIGURE 2



The trend shows an increase in consumption year by year within the District through 2021. Annual consumption levels off through 2023 around 7.1 million cubic feet. The running 3-year average also shows a steady increase in consumption. See Figure 2.

Water consumption within each year varies month to month due to weather related uses and user agreements by the District. There are 287 users every month of the year. In addition to these 287 users, there are another 50 users during the months starting May through October. Water consumption patterns averaged each month from 2021 through August of 2024 showed average consumption peaks in July for the District. See Figure 3.

FIGURE 3



Water demand for the model was developed from monthly consumption for January 2021 through August 2024. Because the number of users changed during the year, daily consumption per user (water service) was estimated for months with the 287 annual users separate for the months May through October when that additional 50 users consume water. Then the daily consumption per user for the two sets of users were averaged together to get the average daily consumption based on the total annual consumption that is typical for most municipal water systems. This later average was the daily consumption value used in the model to represent a typical user in the system.

The following tables 1 through 3 summarize the procedure.

TABLE 1

AVERAGE CONSUMPTION January - April & November - December

	2021	2022	2023	2024	Average
Jan - Apr & Nov - Dec Total (gallons)	15,355,692	21,187,100	12,178,936	8,082,140	15,840,458
Total Days	181	181	181	120	
Ave Daily Demand (gallons)	84,838	117,056	67,287	67,351	84,133
Daily Users	287	287	287	287	287
Ave Daily Demand Per User (gpd)	296	408	234	235	293
Ave Daily Demand Per User (gpm)	0.205	0.283	0.163	0.163	0.204

TABLE 2**AVERAGE CONSUMPTION May - October**

	2021	2022	2023	2024	Average
May - Oct Total (gallons)	37,470,312	36,711,840	35,370,676	26,082,760	33,908,897
Total Days	184	184	184	123	
Ave Daily Demand	203,643	199,521	192,232	212,055	201,863
Daily Users	337	337	337	337	
Ave Daily Demand Per User (gpd)	604	592	570	629	599
Ave Daily Demand Per User (gpm)	0.420	0.411	0.396	0.437	0.416

TABLE 3**OVERALL AVERAGE ANNUAL CONSUMPTION**

	2021	2022	2023	2024	Average
Annual Average per user (gpd)	450	500	402	432	446
Annual Average per user (gpm)	0.31	0.35	0.28	0.30	0.31

Peak daily demand was also estimated based on the peak month demand. July has the highest average monthly consumption. The maximum number of users also consume water during the

month of July. Therefore, 337 users were included in the calculation to determine the peak daily consumption per user summarized in Table 4.

TABLE 4

PEAK CONSUMPTION - JULY

	2021	2022	2023	2024	Average
July Total (gallons)	7,674,480	7,505,432	7,693,928	8,409,764	7,820,901
Total Days	31	31	31	31	
Ave Peak Demand (gpd)	247,564	242,111	248,191	271,283	252,287
Daily Users	337	337	337	337	
Ave Peak Demand per User (gpd)	735	718	736	805	749
Ave Peak Demand per User (gpm)	0.51	0.50	0.51	0.56	0.52

The final model input related to consumption is the peaking factor. This factor is the ratio of the average peak daily demand to the average daily demand. Table 5 summarizes the calculation.

TABLE 5

MODEL PEAKING FACTOR ESTIMATE

	2021	2022	2023	2024	Average
Annual Average per user (gpm)	0.31	0.35	0.28	0.30	0.31
Ave Peak Demand per User (gpm/d)	0.51	0.50	0.51	0.56	0.52
Peaking Factor	1.6	1.4	1.8	1.9	1.7

Distribution Model Data Import

The model for the District’s distribution system was developed in WaterCAD software. Components from the GIS data were first extracted into CAD software and then imported into WaterCAD modeling software using the ModelBuilder application in WaterCAD. ModelBuilder was then used to verify that all of the components were connected together forming a unified distribution system.

GIS records lacked elevation data for system components. Two approaches were used to assign elevation data. There are relatively few reservoir and pump components. Therefore, it was quickest to assign elevation data by hand to these components. Hand input data came from record drawing information.

While reservoir and pump elevations were assigned by hand, elevations for other distribution system components such as pipes, valves, hydrants, pressure reducing valves, and meter locations were assigned automatically using the TerrainBuilder application of WaterCAD. This process required importing a freely available digital elevation model (DEM) created by the USGS in 2018 and then ‘draping’ the distribution model components onto the DEM. These elevations reference North American Vertical Datum (NAVD88). Elevations derived from the DEM should be considered accurate to plus or minus 1/2 meter (1.6 feet) as the source of data is satellite LiDAR (1 meter resolution).

Water Consumption Values Assigned to Meters

Evaluation of month-to-month water consumption for meters throughout the system varied significantly. However, the changes in monthly consumption did not seem to correlate with predictable patterns of use such as irrigating crops or landscaping, cold versus warm weather patterns, or morning versus evening uses. To compensate for the apparent lack of water consumption patterns, the average monthly consumption from 2020 through August of 2024 was converted to an average daily demand in the overall system and then converted to an

average demand per day per service. Peak daily demand for the District services were estimated by examining the total consumption per month to identify the highest month of consumption and then convert that average monthly consumption to an average peak day demand per service.

MODELING SCENARIOS

WaterCAD evaluates the performance of the distribution system for potable water supply by distributing the potable water demand to each service location in the system and then calculating the residual pressure at each node/junction defined in the network. Fire water supply to hydrants was evaluated differently. WaterCAD sets a minimum pressure for all hydrants in the system, sets the potable water demand at the defined flow rates for all potable water service locations and then calculates the flow rate that the system can supply at each fire hydrant location. Model results identify locations in the distribution system where the required flow rate for a hydrant is less than 250 gpm at 20 psi.

Two scenarios were used to evaluate the system's capacity to provide potable water at 40 psi residual pressure: average day consumption per water service location and peak day demand per location. Two additional fire water scenarios were evaluated as a companion to the potable water scenarios; 250 gpm at a hydrant with 20 psi residual for fire flow supply and the average day water potable water consumption in the piping system and 250 gpm at a hydrant with 20 psi residual for fire flow and the peak day water potable water consumption in the piping system.

One additional scenario was performed to determine the maximum hydraulic capacity of the piping system (maximum flow rate of water) at 40 psi while also delivering fire water to hydrants in the system at a flow rate of 250 gpm with a pressure of 20 psi. This was an iterative process. The consumption for the services in the model was incrementally increased until the potable water pressures dropped below 40 psi in a pipe segment other than pipe segments identified in the average day and peak day scenarios described in previous paragraphs. For example, there are locations in the piping system where 4-inch diameter pipes exceed 150 lineal feet in length that are estimated to be less than 40 psi and there are a couple of services at high elevations in the system that receive potable water at less than 40 psi pressure. The maximum hydraulic capacity condition occurred when 471,750 gallons per day flowed through the piping system.

DISTRIBUTION CAPACITY CONCLUSIONS

Model results for the distribution system identified limited areas where estimated pressure in the piping system would fall below 40 psi during average day water consumption. These areas also correspond to areas where hydrant fire flow would drop below 250 gpm when the pressure reaches 20 psi at than individual hydrant during average day water consumption. The aerial extent of the locations increases slightly when the peak day water consumption is used in the model. There are also areas where the distribution system can provide a residual pressure of 40 psi but fall short of the need fire flow at 20 psi. Areas where the distribution system pressure is below requirements are shown in Figure 3.

It should be noted that the pressures in the water system were calculated for the elevation of the water meter. Pressures at habitable structures on a property could be higher or lower than the

estimated pressures at the meter if the finished floor of the structure is higher or lower in elevation relative to the service meter.

It should also be noted that the residual pressures are calculated values based on several assumptions about water use in the system and friction characteristics of the pipe material. There could also be small errors in the topographic elevation for components. Five percent should be considered the assumed accuracy of the model. Therefore, three areas identified on Figure 1a may provide the required residual pressure when measured in the field.

An estimate of the maximum hydraulic capacity of the current piping system is predicted to be 471,750 gallons. Because the hydraulic capacity is a maximum capacity, the maximum number of available services for the piping system was estimated using the average peak day demand per service. Therefore, the piping system can supply 630 services consuming 749 gallons per day during the peak month of consumption of July.

Modeling of fire hydrants demands throughout the distribution system identified hydrants at or below the required flow rate for fire hydrants. Results identified hydrants in geographical areas that are below the 250-gpm flow rate when the residual pressure is 20 psi. These areas are generally located near the perimeter areas of the system or at the end of short distribution runs serving areas with higher topographic elevations.

Extending the existing hydrant network beyond its current aerial extent has limited possibilities. Mains in many locations within the distribution system are 4-inch diameter pipes. Adding hydrants beyond the current extent of the distribution system would not likely meet the minimum flow criteria for a hydrant of 250 gpm when the residual pressure is 20 psi if extending an existing 4-inch pipe. High flow rates through small diameter pipes resulting in significant friction head loss due to high velocities in the pipes. Therefore, extending 4-inch diameter pipes would fail to provide needed pressures and flow rates. The variability of the topography also limits expanding into areas outside the current service area that are high in elevation. Opportunities to extend the network of hydrants might be possible further west on Cantelow Road and further south on Gibson Canyon Road. These locations have 6-inch distribution mains.

Within the limits of the current service area, sufficient pressure is available to provide service for both potable water and fire water to 630 services. This estimated number of services is the capacity of the buried distribution piping for the estimated peak average day demand. As stated previously, the ultimate capacity of the District was 873 services based solely on the current available supply of water for the District. While there is water to supply 873 connections, the buried piping system can only distribute water to 630 services.

Because the terrain varies within the District, the County and VFPD will likely require that owners of new service connections demonstrate that residual pressure and flow rate requirements are met given the available pressure in the distribution main. The District's current distribution system model can be used to predict the pressure in the distribution main at the property frontage. Owners of the new connections will need to demonstrate compliance with regulations between the distribution main and structures on the parcel.

We appreciate the opportunity to provide this evaluation of your distribution. If you have any questions regarding the report and its conclusions, please contact me.

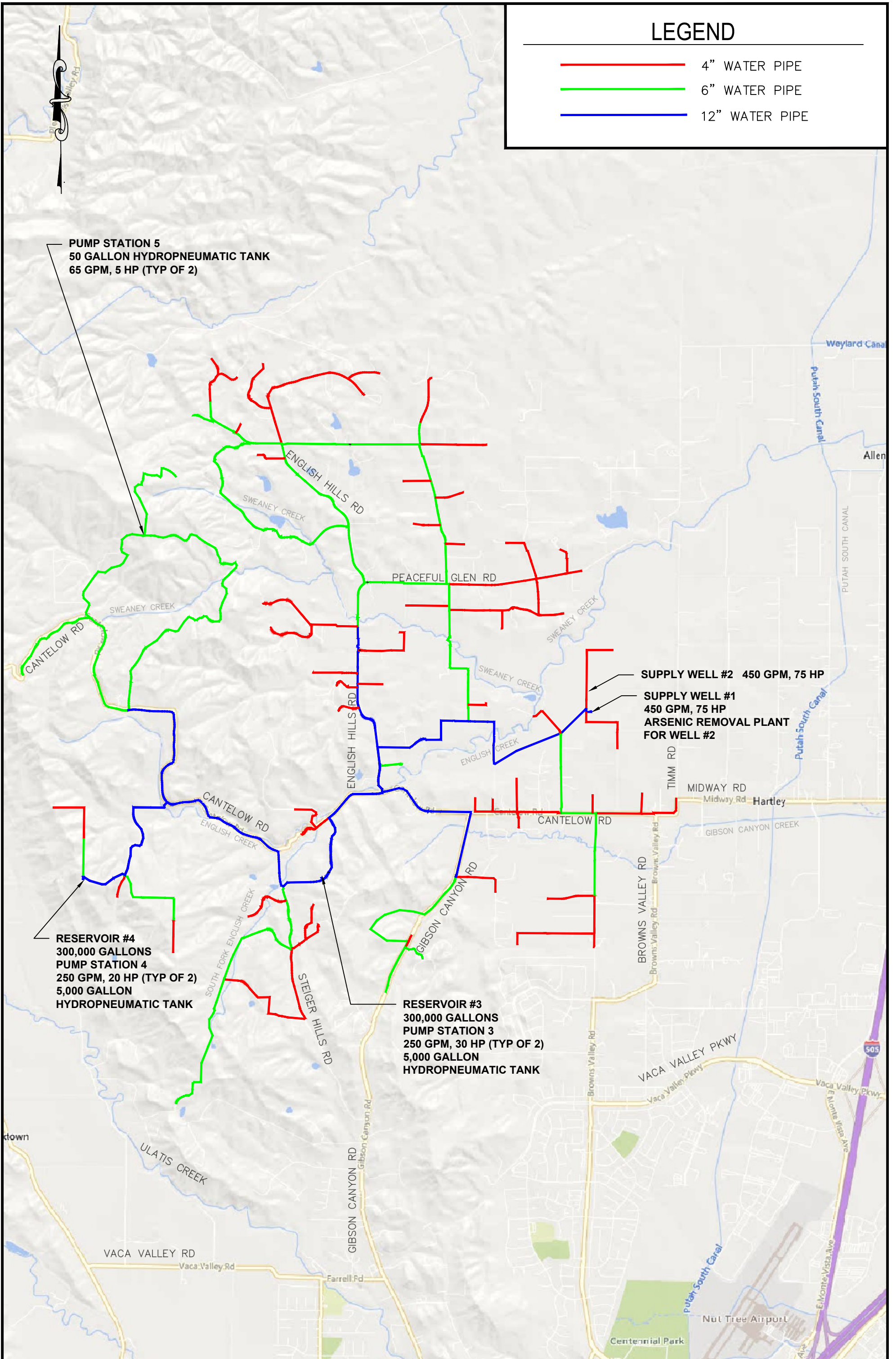
Sincerely,

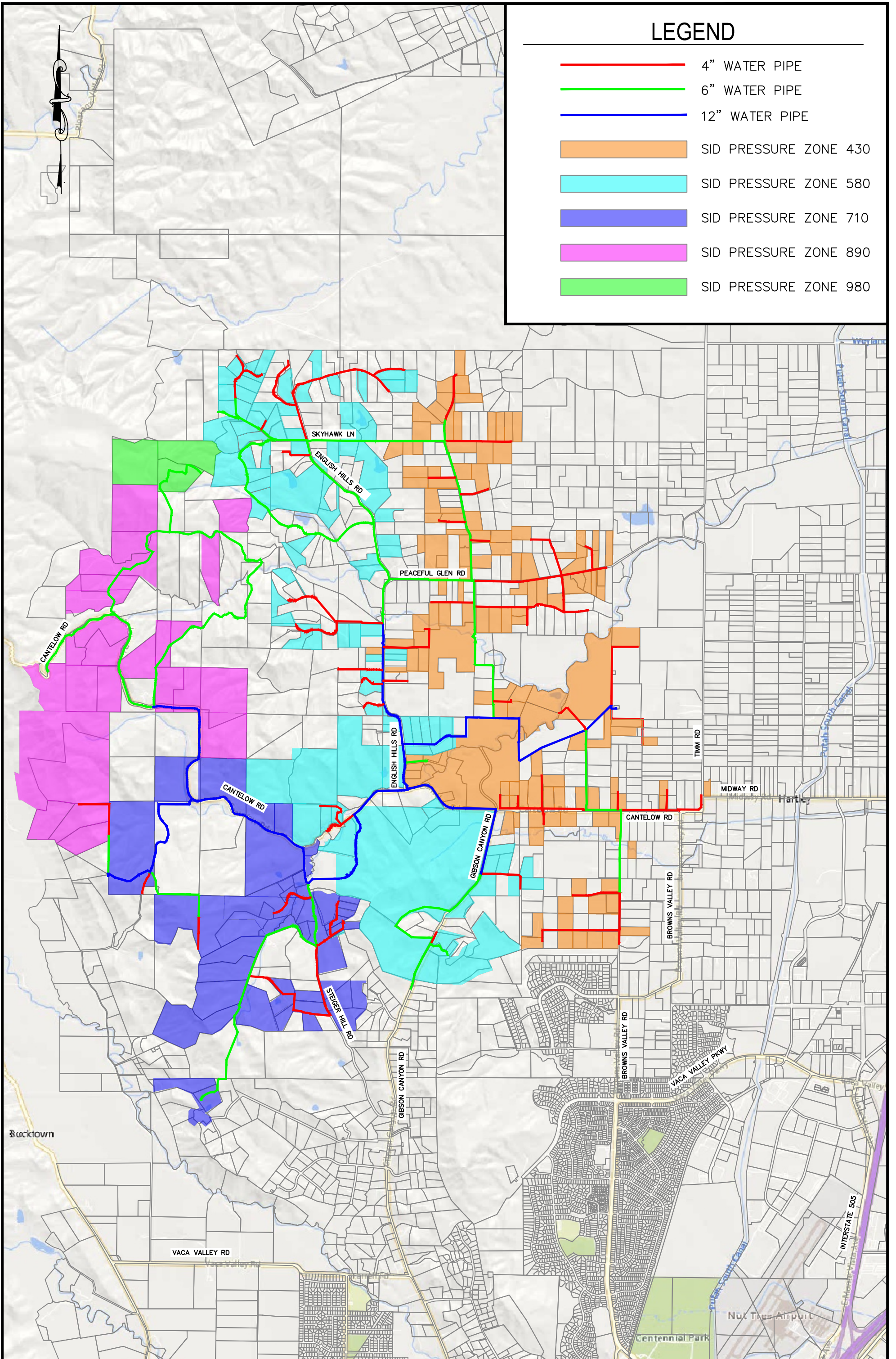
A handwritten signature in blue ink that reads "Hugh Miles". The signature is written in a cursive, flowing style.

Hugh Miles, PE C49427
Supervising Engineer

LEGEND

- 4" WATER PIPE
- 6" WATER PIPE
- 12" WATER PIPE





LEGEND

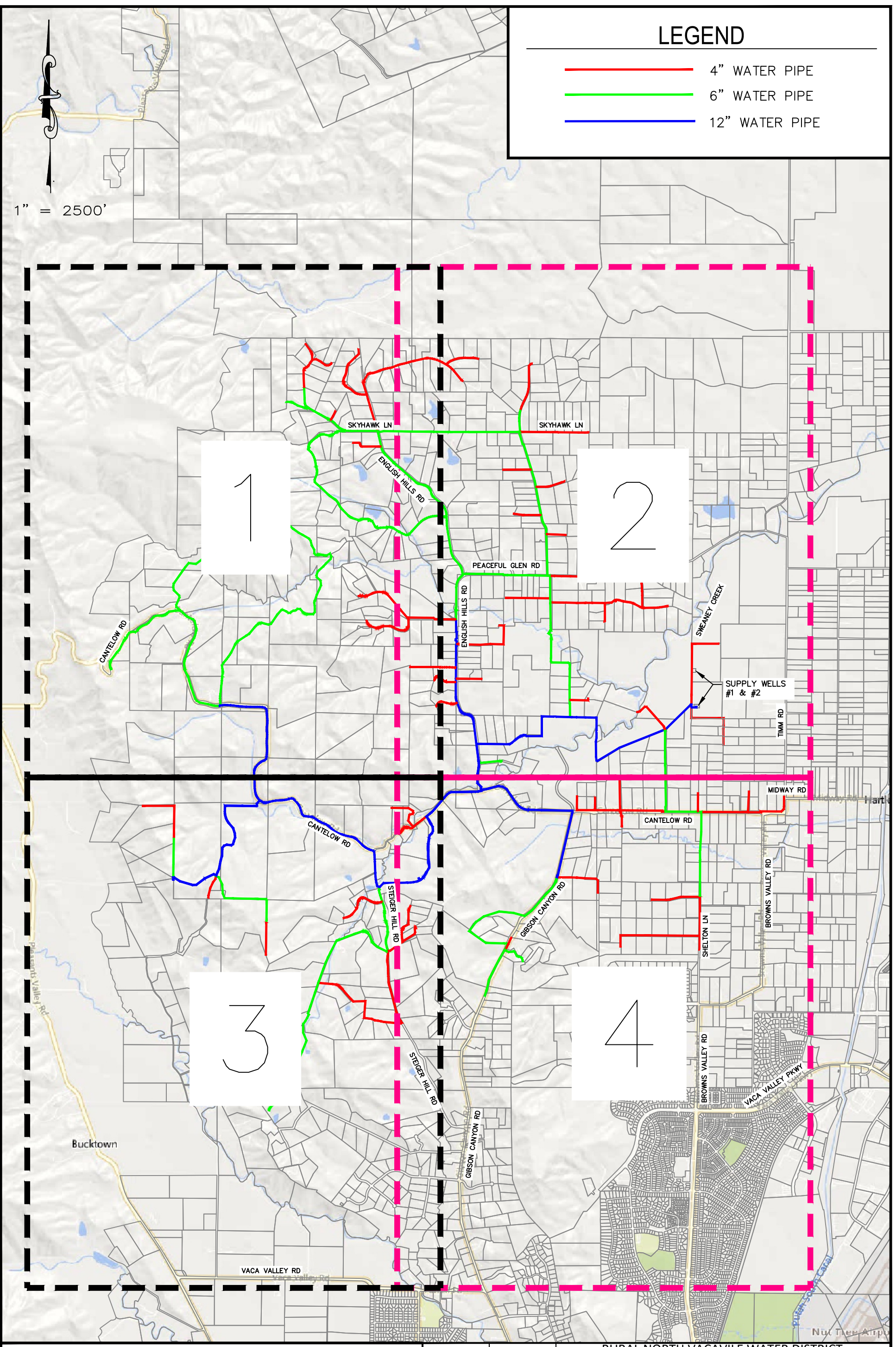
- 4" WATER PIPE
- 6" WATER PIPE
- 12" WATER PIPE
- SID PRESSURE ZONE 430
- SID PRESSURE ZONE 580
- SID PRESSURE ZONE 710
- SID PRESSURE ZONE 890
- SID PRESSURE ZONE 980

LEGEND

- 4" WATER PIPE
- 6" WATER PIPE
- 12" WATER PIPE



1" = 2500'





1" = 1500'

CALCULATED FIRE FLOW TO HYDRANTS IN AREA LESS THAN 250 GPM @ 20 PSI FOR AVERAGE DAY & PEAK DAY.

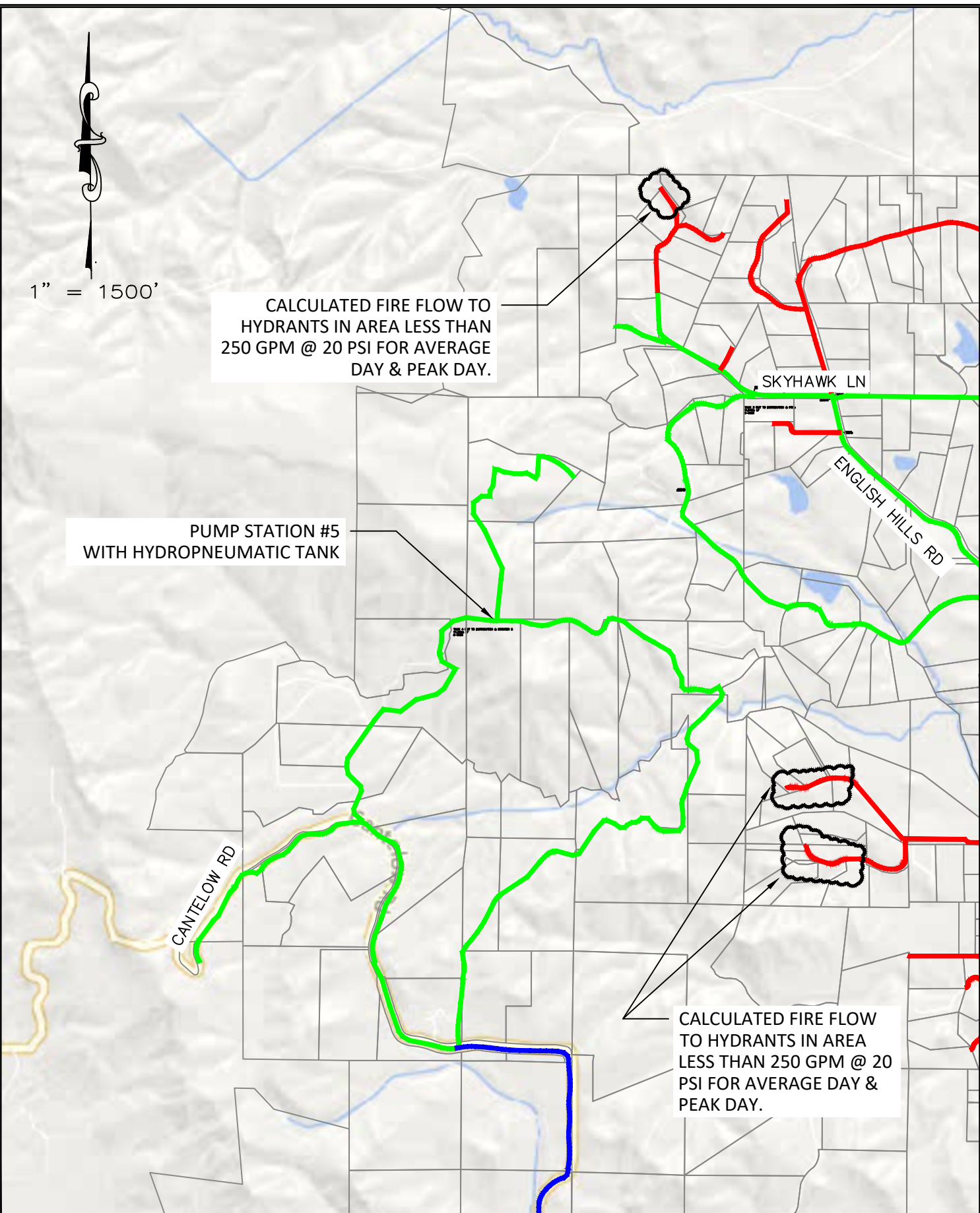
PUMP STATION #5 WITH HYDROPNEUMATIC TANK

SKYHAWK LN

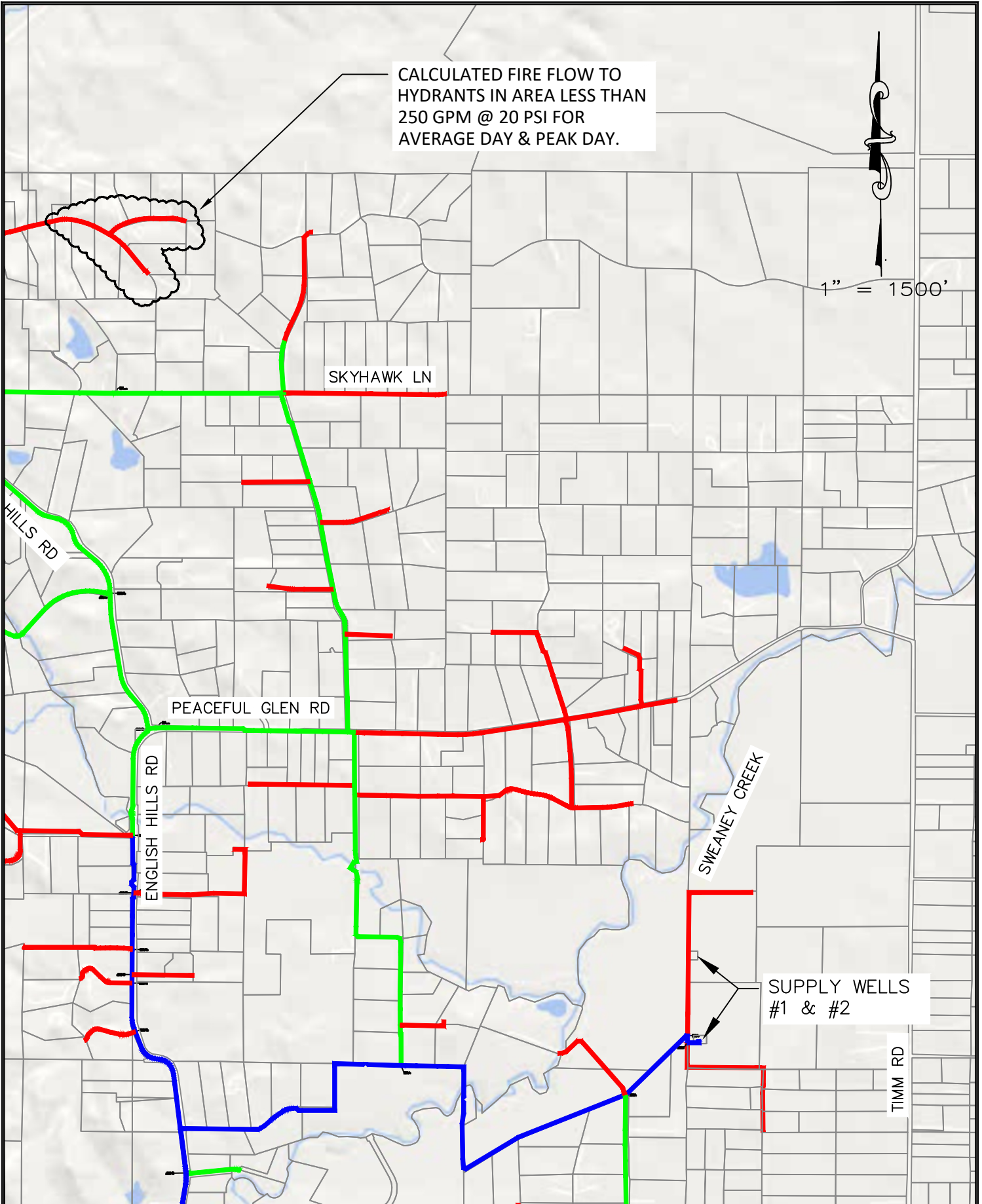
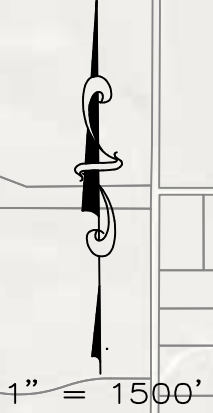
ENGLISH HILLS RD

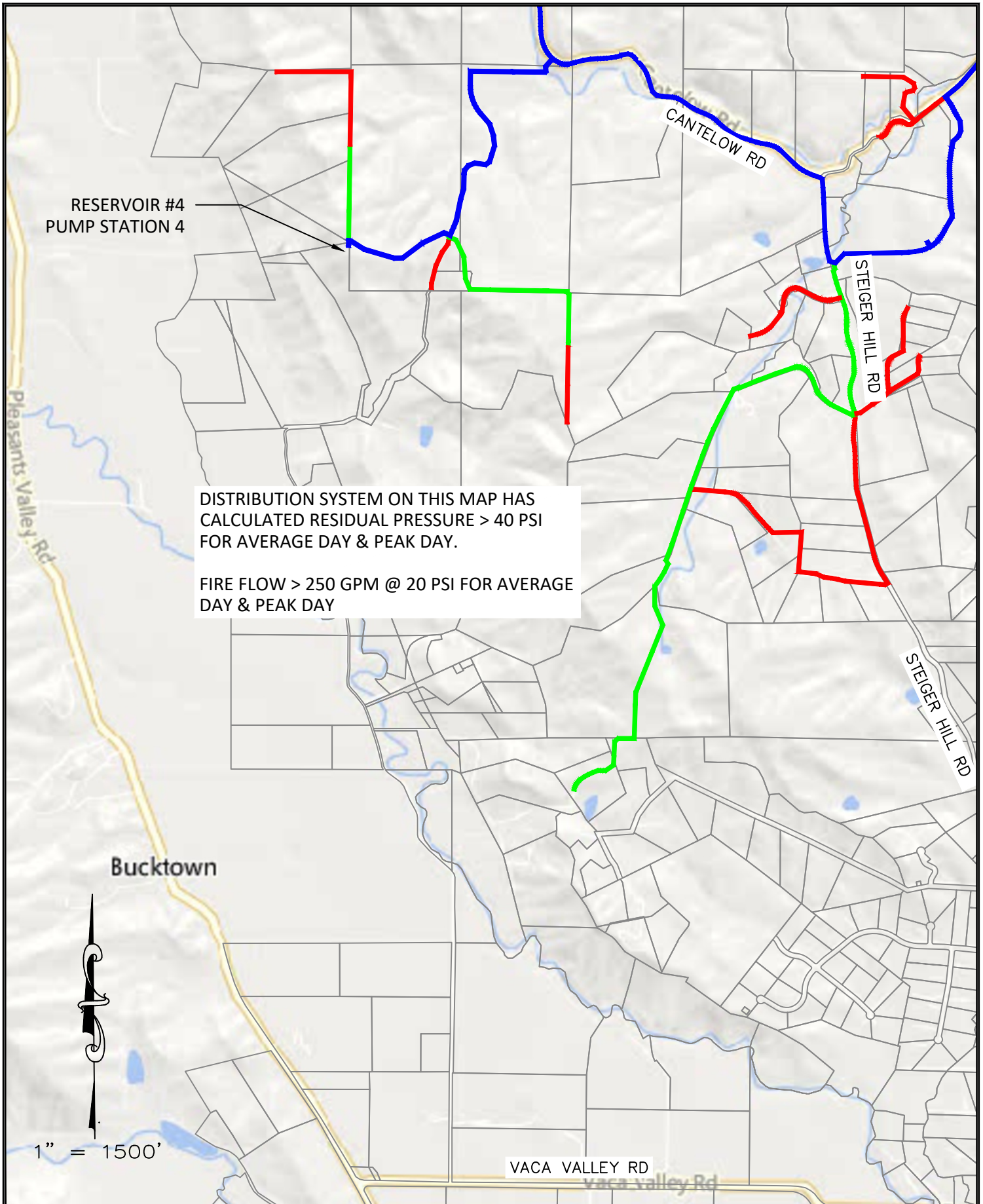
CANTELOW RD

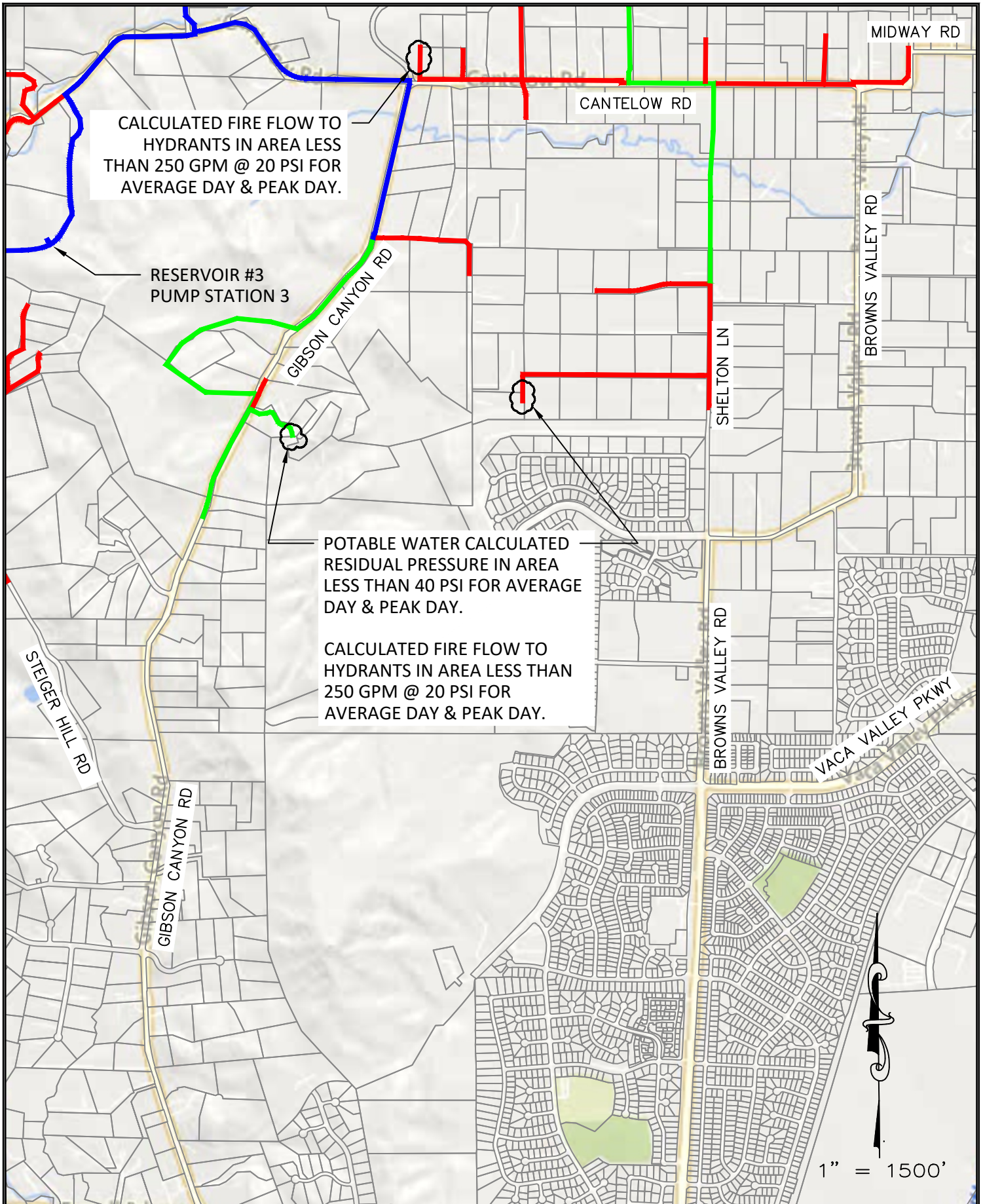
CALCULATED FIRE FLOW TO HYDRANTS IN AREA LESS THAN 250 GPM @ 20 PSI FOR AVERAGE DAY & PEAK DAY.



CALCULATED FIRE FLOW TO
HYDRANTS IN AREA LESS THAN
250 GPM @ 20 PSI FOR
AVERAGE DAY & PEAK DAY.







CALCULATED FIRE FLOW TO HYDRANTS IN AREA LESS THAN 250 GPM @ 20 PSI FOR AVERAGE DAY & PEAK DAY.

RESERVOIR #3
PUMP STATION 3

POTABLE WATER CALCULATED RESIDUAL PRESSURE IN AREA LESS THAN 40 PSI FOR AVERAGE DAY & PEAK DAY.

CALCULATED FIRE FLOW TO HYDRANTS IN AREA LESS THAN 250 GPM @ 20 PSI FOR AVERAGE DAY & PEAK DAY.

1" = 1500'