Rural Water District No. 1
Ellsworth County, Kansas a/k/a Post Rock Rural Water District
Regular Board Meeting Minutes
January 19, 2021

At 6:36 pm, Chairman Brad Miller noting a quorum called the regular board meeting to order and Ms. Condit took roll call of attendance.

Directors present were Brad Miller, Kayla Errebo, Ralph Larson, Martin Bland, Howard Wehrman, Butch Teppe, (present in the District Office). Joel Christy (Virtual)

Directors not Present: John Dolezal

Others Present: Louis Funk, Doug Janssen, Matt Talbott and Sharon Condit (present in the District Office)

Guest: Steve Wirth

At 6:37 pm, Chairman Miller called for a motion to amend the agenda to add Mr. Steve Wirth. Director Larson made a motion to add Mr. Steve Wirth to the agenda. Seconded by Director Teppe. Motion carried.

At 6:38 pm, Chairman Miller called for a motion to approve the consent agenda items. Director Larson made a motion to approve the consent agenda items. Seconded by Director Teppe. Motion carried.

At 6:45 pm, Chairman Miller asked Mr. Wirth to introduce himself to the board of directors. Mr. Wirth is a customer that has a water bill in the amount of $10,776.33 and his purpose for attending the meeting is to request a payment schedule to pay out his bill. After a brief discussion, Director Bland made a motion requesting that Mr. Wirth pay $2,000 up front and pay $300 monthly plus his current usage. Mr. Wirth is to contact the Post Rock RWD office on the 1st day of each month with a current reading. Upon receiving a current reading a customer service representative will inform Mr. Wirth of the total amount due each month. Seconded by Director Christy. Motion carried.

At 7:02 pm, Chairman Miller called for Item #3 on the agenda. After a brief discussion, the board of directors agreed to pay the two invoices from Schwab-Eaton.

At 7:04 pm, Chairman Miller called for the Financial Report and approval of the bills. Ms. Condit explained the two past due invoices from Schwab Eaton and requested the opinion from the Board of Directors as to payment of the two invoices. Director Larson made a motion to accept the financial report and to pay the bills to include the two invoices from Schwab Eaton.

The amount approved for payment is not to exceed Two hundred seventy thousand three hundred forty-seven and 74 cents ($270,347.74). Seconded by Director Teppe. Motion carried.

At 7:10 pm, Chairman Miller called for Item #4 on the agenda. Mr. Louis Funk, with Bartlett & West, the District Engineer, briefed the board of directors on the proposed Water Treatment Plant Study. After a brief discussion about the three options presented for the Water Treatment Plant Study and a secondary water source, it was determined to look for a secondary water source and revisit the water treatment study at a later date. (Attachment A) Director Wehrman made a motion for Mr. Funk, the districts engineer, to do research in various areas around the district for a secondary water source and to table the Water Treatment Capacity Study until a later date. Seconded by Director Teppe. Motion carried.

Vice Chairman Errebo joined the meeting at 7:12 pm.

At 8:00 pm, Chairman Miller called for Item #5 on the agenda. Mr. Funk and Ms. Condit briefed the board of directors on the virtual meeting held with a couple of board members, staff of Osborne Rural Water District #2, and Mr. Stuart Porter, engineer with Schwab Eaton. Osborne RWD #2 plans to put a check valve in to reduce the water pressure for four (4) of the Post Rock RWD customers served in the area. Osborne RWD #2 plans to set up a re-chlorination station to chlorinate the water at the south end of their district. Osborne RWD #2 sent a letter requesting that Post Rock Rural Water District provide a discount rate on the water they need to flush their system. Osborne RWD #2 is requesting a discount rate on 15, 000 to 20,000 gallons of water per month during the times of low chlorine residual at the south end of their system. After a brief discussion by the Post Rock RWD's board of directors that a discount rate is not offered to any of the wholesale customers, the board of director's decision was to follow policy to not offer the requested discount rate. Director Teppe made a motion to not grant the discount rate to Osborne RWD #2 for flushing purposes. Seconded by Director Bland. Motion carried.

At 8:15 pm, Chairman Miller called for Item #6 on the agenda. Mr. Funk and Ms. Condit briefed the board of directors on the Water Purchase Agreement and the Construction Agreement for Kanapolis State Park Marina. After a brief discussion, Vice Chairman Errebo made a motion to send the two current agreements to KDWPT for any changes or suggestions with the Post Rock RWD board of directors having final approval on the two agreements. Seconded by Director Teppe. Motion carried.

At 8:25 pm, Chairman Miller called for Item #7 on the agenda. Ms. Condit briefed the board of directors on the quote presented by Mr. Quintin Vague on the replacement of the 4" line North of Waldo. After a brief discussion with the District's engineer Mr. Funk, about the process and

requirements to replace this line, Director Bland made a motion to obtain quotes in writing from three contractors. Seconded by Secretary Treasurer Larson. Motion carried.

At 8:40 pm, Chairman Miller called for a fifteen (15) minute break.

Mr. Louis Funk departed the meeting at 8:40 pm.

The meeting reconvened at 8:55 pm.

At 8:55 pm, Chairman Miller called for Item # 8 on the agenda. Mr. Condit briefed the board of directors on a customer inquiry about Share Cost. After a brief discussion about the district not having a Share Cost Plan in place, Chairman Miller called for a motion to put a plan in place. Secretary Treasurer made a motion for Ms. Rivarola, Mr. Luckman, and Ms. Condit to review the issue and to design a plan to be presented at the February 16, 2021 meeting. Seconded by Director Errebo. Motion carried.

At 9:00 pm, Chairman Miller called for Item #9 on the agenda. Ms. Condit briefed the board of directors that in the absence and request by Ms. Rivarola that the Annual Compensation be presented to the board of directors. The following data is the same that was presented at the December 15,2020 meeting.

Administrative (General Manager, Office Manager, Customer Service, Administrative Assistant)

Current	3% Increase	4% Increase
$219,716	$223,907	$225,305

Water Treatment Plant (Operator and Seasonal)

Current	3% Increase	4% Increase
$205,424	$211,587	$213,641

Distribution (Operator Full-Time and Part-Time)

Current	3% Increase	4% Increase
$215,778	$222,251	$224,409

The recommendation was to receive input from the Board of Directors on potential base compensation increases for employees of the District and to increase the base compensation

authorized by the Board of Directors to become effective on January 1, 2021. It is also recommended any adjustment to base compensation be effective for full and part-time employees employed before December 12, 2020. Chairman Miller called for a motion to increase the base compensation for the District employees. For lack of a motion the decision was tabled to the January 19, 2021, meeting.

After a brief discussion, it was determined the employees in distribution and at the water treatment plant would be compensated by passing levels of certification. For lack of a motion the decision was tabled until the February 16, 2021, meeting with the option, if Ms. Rivarola chose to revisit the annual compensation at the February meeting.

At 9:15 pm, Chairman Miller called for Item # 10 on the agenda. After a brief discussion, Chairman Miller called for a motion. Director Teppe made a motion to authorize Quintin Vague to purchase a vacuum trailer if he finds a vacuum trailer not to exceed the amount of $25,000. Seconded by Director Bland. Motion carries.

At 9:25 pm, Chairman Miller called for Item #11 on the agenda. Ms. Condit briefed the board of directors on the letter that was sent from Kansas Rural Water District about holding the annual meeting at the regular scheduled time or postponing the meeting due to COVID-19. After a brief discussion, Chairman Miller called for a motion. Director Bland made a motion to hold the annual meeting the regular scheduled time, which is February 27, 2021. Seconded by Director Teppe. Motion carried.

At 9:36 pm, Chairman Miller called for a motion to recess into Executive Session. Director Bland made a motion to recess into Executive Session for fifteen (15) minutes to discuss non-elected personnel pursuant to K.S.A 75-4319(b) (1); further that all board members and Ms. Condit were included in the Executive Session. Seconded by Director Teppe. Motion carried.

At 9:51 pm, the meeting reconvened into open session.

At 9:51 pm, Chairman Miller called for a motion to fill the open position in the distribution department. Secretary Treasurer Larson made a motion requesting Chairman Miller, Ms. Rivarola, and Mr. Vague discuss the matter and make an offer to a candidate to fill the open position. Seconded by Vice Chairman Errebo. Motion carried.

At 9:53 pm, Chairman Miller called for discussion on the company vehicle situation in distribution and the water treatment plant. After a brief discussion about employees driving company vehicles home, Chairman Miller called for a motion. Director Bland made a motion effective February 1, 2021, to leave both vehicles driven by the water treatment employees at the

water treatment plant except for when an employee is on call, he would be allowed to drive the vehicle home. Seconded by Director Teppe. Motion carried.

At 10:13 pm, Chairman Miller called for a motion to adjourn the meeting. Director Teppe made a motion to adjourn the meeting. Seconded by Director Bland. Motion carried.

Meeting adjourned at 10:13 pm.

Respectfully Submitted:

Ralph Larson, Secretary/Treasurer

2-27-24
Date

Attachment A

Bartlett & West

1200 SW Executive Drive
Topeka, KS 66615
ph (785) 272-2252
www.bartwest.com

January 6, 2021

Board of Directors
Post Rock RWD
103 N. Douglas
Ellsworth, KS 67439

Dear Board Members:

I appreciate the opportunity that I have been given to work with Post Rock over the last year. As I gradually learn more about your District's facilities, I am able to better advise you on engineering issues. In particular, the updated hydraulic model of your distribution system has allowed me to be confident in evaluating the addition of several potential new customers, including several large wholesale customers. Unfortunately, I have not been able to give you decisive recommendations on some of these potential wholesale customers because of apparent limitations in your water supply capacity. It appears that your treatment plant is very close to capacity. This issue needs to be studied at greater depth and options need to be presented to the Board.

A formal engineering study could be performed at various levels, focusing on just the water supply capacity, or encompassing the entire water district, which would include pump stations, water towers, and all waterlines. Additional value could be provided by expanding the analysis to include future projections. This long-range plan would incorporate capacity limitations, annual maintenance expenses and facility life expectancies. The specific scope and lump sum cost of each option is provided below.

Option 1 – Water supply capacity only

A. Scope: site visit, treatment staff consultation, review and tabulation of historic production records, groundwater availability research, water quality and quantity analysis, surface water rights sufficiency analysis, treatment plant expansion evaluation, focus on drastically reducing DBP levels, identification of repairs needed, transmission capacity evaluation – new waterline vs. intermediate storage and re-pumping, life-cycle cost comparison of options.

B. Deliverable: letter report with exhibits, tables, and cost estimates and a presentation to the Board through a video conference.

C. Cost: $11,000

Option 2 – Comprehensive report based on current conditions only

A. Scope: all items included, above, in Option 1, plus the following:

1. The performance of the existing system will be scrutinized. We will study the sufficiency of the water supply, storage, pumping, transmission and distribution facilities in terms of their ability to meet peak day demands during drought conditions. We will also address the condition of facilities that may be near the end of their expected life span. Finally, we will evaluate the District's vulnerability to emergency situations, identifying options for added redundancy and emergency responses. Any deficiency will be addressed and any customer with modeled minimum service pressures below 20 psi will be identified.

2. Cost estimates will be developed for proposed improvements. We will address the financial impact of the costs of these improvements in terms of water rates and will present a comparison of funding options.

B. Deliverable: A report will be prepared that summarizes the design criteria, performance of the system, proposed improvements, cost estimates and financial impact to water rates. Various full-color figures and tables will be included. Twelve copies of the report will be furnished and presented to the Board in person.

C. Cost: $24,500

Option 3 – Comprehensive long-range plan

A. Scope: all items included, above, in Options 1 and 2, plus the following:

1. Annual and peak day usage growth projections for the District will be developed for the next 20 years based on historical growth of the District, and with consideration for projected growth trends. We will work with the District to identify anticipated high-growth areas and consider potential large agricultural operations and wholesale customers. If appropriate, we will develop separate growth projections for various parts of the District.

2. Utilizing these projections, we will analyze the sufficiency of District facilities under future demands. We will study the major components of the supply/treatment, pumping, storage, transmission and distribution systems. We will identify and outline the timetable for needed improvements, as well as addressing the preliminary sizing of proposed facilities. Improvements will be prioritized in a series of phases over the next 20 years. As appropriate, a life-cycle analysis will be prepared in cases where multiple options are available to address specific problems.

3. Cost estimates will be developed for each phase of proposed improvements. These estimates will be preliminary in nature and will be based on today's construction prices. We will address the financial impact of the costs of these improvements in terms of water rates and benefit unit fees. Annual budgets will be developed for projections at 2 years, 5 years, and 10 years, based on expected construction costs, while utilizing audits from the past 4 years to project future operational costs. We will present a comparison of funding options, including the option of not obtaining new loans, but rather fund improvements through a dedicated capital improvement account.

B. Deliverable: A report will be prepared that summarizes the design criteria, growth projections, performance of the system, proposed improvements, future projects anticipated, cost estimates and financial impact to water rates. Various full-color figures and tables will be included. Twelve copies of the report will be furnished and presented to the Board in person.

C. Cost: $31,000

As a part of the analysis process, we anticipate that two to three meetings with District staff will be necessary to gather data and review the draft report.

If the District is receptive to proceeding with one of the options outlined in this letter, I will follow up with a formal engineering agreement.

Sincerely,

Louis Funk

Louis Funk, P.E.

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2.0 WATER USE CRITERIA

Water demand criteria are necessary to accurately develop a hydraulic model of any system. To this end, Rural Water District No. 3 water usage data from the past ten years was analyzed. The trend has been increased water production, consistent with the steady increase of both agricultural-based industries and new residential customers.

Over the last 20 years, sales to the agricultural-based industry have nearly doubled. Comparatively, residential sales have only increased by about 30%, buoyed by the merger with RWD No. 2. Although there had been a 17% growth of meters over 17 years, prior to the merger with RWD No. 2, the annual residential volume sold stayed fairly constant, as the average usage per customer decreased accordingly. Table 2-1 illustrates the significant high-demand usage.

Table 2-1. Customer average monthly usage ranges

Usage range, gallons/month	# Cust.	Usage range, gallons/month	# Cust.	Usage range, gallons/month	# Cust.
0	172	90,000 - 100,000	8	190,000 - 200,000	2
1 - 10,000	795	100,000 - 110,000	10	200,000 - 300,000	4
10,000 - 20,000	134	110,000 - 120,000	3	300,000 - 400,000	4
20,000 - 30,000	48	120,000 - 130,000	4	400,000 - 500,000	5
30,000 - 40,000	24	130,000 - 140,000	2	500,000 - 600,000	1
40,000 - 50,000	21	140,000 - 150,000	4	600,000 - 700,000	0
50,000 - 60,000	13	150,000 - 160,000	3	700,000 - 800,000	1
60,000 - 70,000	12	160,000 - 170,000	3	800,000 - 900,000	0
70,000 - 80,000	5	170,000 - 180,000	2	900,000 - 1,000,000	1
80,000 - 90,000	1	180,000 - 190,000	0		

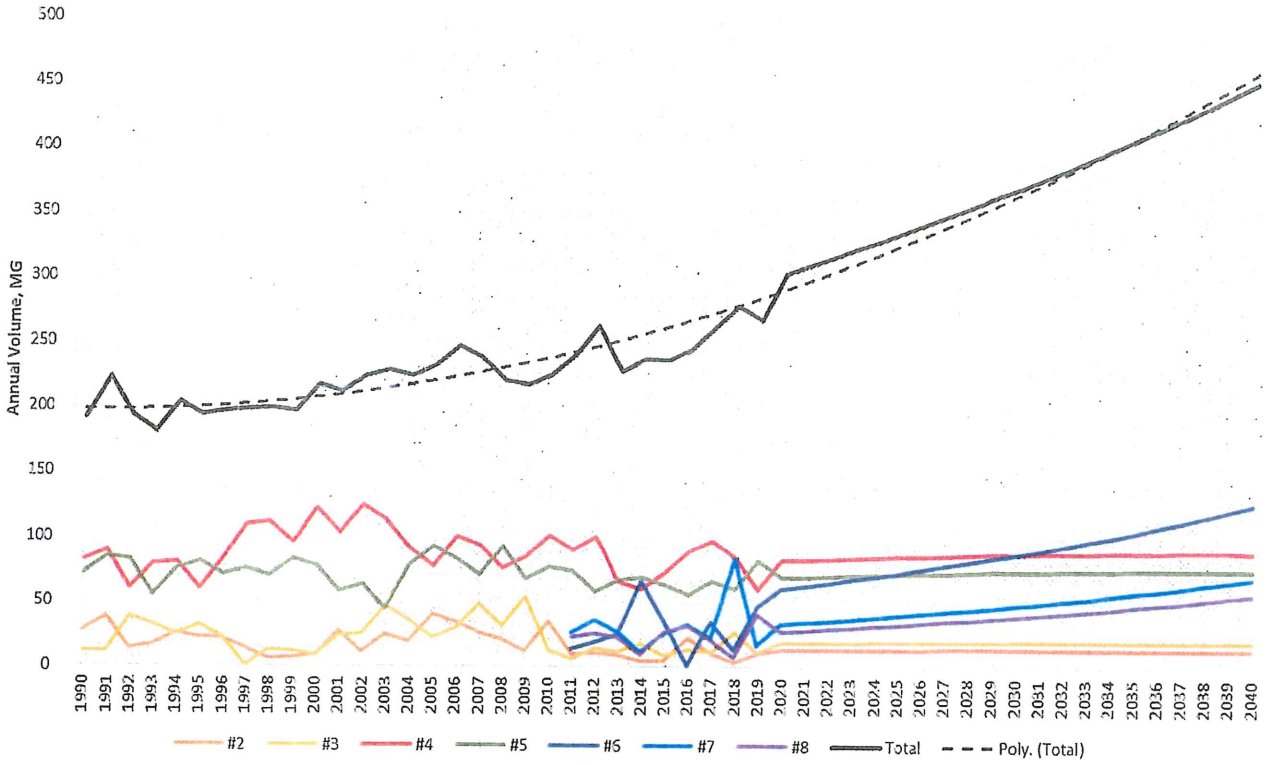
Water demands over the past 20 years are summarized in Table 2-2, followed by 20-year projections that are based on the trends provided by the historic data. Driven primarily by the growth in agricultural industry, the average growth rate of annual water sales over 20 years is 2.0%. Skewed somewhat by the RWD No. 2 merger, the 10-year and 5-year growth rates are 2.9% and 4.2% respectively. When considering the 17-year period immediately preceding the 2017 merger, the average annual growth rate was only 1.2%. There seems to be a recent trend, however, of increased agricultural customer use, not attributed to the RWD No. 2 merger.

Since 2016, the increase in residential use has been about 10 MGY (19%), roughly equal to the 16% increase in the number of meters that can be attributed to the RWD No. 2 merger. Agricultural use for the entire District has increased by about 55 MGY, or 23%, over that same three-year span, with about 15 MGY being attributed to the merger. Discounting for the merger, then, the 3-year increase in agricultural use for the rest of the District has been 40 MGY, or 17%, which equates to nearly 6% annually. So, although the 17-year trend prior to the RWD No. 2 merger

Table 2-3. Water Usage by Service Area

	Annual Water Sold and Lost in 1000 gal.								Estimated Peak Day Demand, MGD							
Year	A	B	C	D	E	F	G	TOTAL	A	B	C	D	E	F	G	TOTAL
1999	73,409	27,027	30,043	33,201	21,653	11,558	0	197,042	0.33	0.12	0.14	0.15	0.10	0.05	0.00	0.89
2000	77,198	32,426	34,311	37,791	22,816	12,832	0	217,525	0.35	0.15	0.16	0.17	0.10	0.06	0.00	0.99
2001	75,004	30,365	35,526	35,148	24,715	11,445	0	212,208	0.34	0.14	0.16	0.16	0.11	0.05	0.00	0.95
2002	78,600	30,723	36,899	39,367	25,781	12,348	0	223,718	0.35	0.14	0.16	0.18	0.12	0.06	0.00	1.00
2003	78,354	33,144	38,303	40,712	25,193	12,941	0	228,647	0.35	0.15	0.17	0.18	0.11	0.06	0.00	1.03
2004	77,211	35,020	34,320	40,147	25,740	11,824	0	224,262	0.35	0.16	0.15	0.18	0.12	0.05	0.00	1.01
2005	78,843	37,300	35,103	42,252	27,182	11,411	0	232,091	0.36	0.17	0.16	0.19	0.12	0.05	0.00	1.05
2006	83,309	40,316	36,286	46,666	27,490	12,955	511	247,533	0.38	0.19	0.17	0.21	0.13	0.06	0.00	1.14
2007	80,239	41,729	34,499	43,286	26,576	12,165	1,204	238,840	0.37	0.19	0.16	0.20	0.12	0.06	0.01	1.09
2008	73,857	36,826	35,492	38,152	25,180	10,982	1,208	221,219	0.34	0.17	0.16	0.18	0.12	0.05	0.01	1.02
2009	72,840	35,166	33,897	37,750	26,719	10,843	914	216,196	0.34	0.16	0.16	0.17	0.12	0.05	0.00	1.00
2010	76,800	35,656	34,036	40,460	27,560	10,415	1,124	228,645	0.34	0.16	0.15	0.18	0.12	0.05	0.01	1.02
2011	80,356	36,190	39,571	42,383	30,550	10,100	1,072	239,370	0.36	0.16	0.18	0.19	0.14	0.05	0.00	1.08
2012	85,530	42,373	45,415	47,612	32,190	10,232	1,661	265,224	0.38	0.19	0.20	0.21	0.14	0.05	0.01	1.19
2013	73,715	37,157	39,458	39,945	26,802	9,183	1,379	227,151	0.35	0.18	0.19	0.19	0.13	0.04	0.01	1.09
2014	73,030	37,257	43,013	41,449	31,627	10,663	1,640	238,694	0.34	0.17	0.20	0.19	0.15	0.05	0.01	1.12
2015	72,592	38,694	41,172	41,195	31,365	9,883	1,196	234,867	0.34	0.18	0.19	0.19	0.15	0.05	0.01	1.11
2016	78,782	40,024	41,484	41,401	33,254	10,378	1,358	248,183	0.37	0.19	0.19	0.19	0.15	0.05	0.01	1.15
2017	86,393	42,448	41,511	44,903	33,286	12,008	27,226	291,716	0.41	0.20	0.20	0.21	0.16	0.06	0.13	1.38
2018	95,237	47,080	45,353	45,521	33,866	11,804	31,252	308,032	0.45	0.22	0.21	0.21	0.16	0.06	0.15	1.44
2019	102,006	41,124	41,996	43,166	29,810	11,201	24,725	298,483	0.44	0.18	0.18	0.19	0.13	0.05	0.11	1.28
Avg. Annual	1.3%	2.1%	1.4%	1.3%	1.9%	-0.1%	NA	2.0%								
Projections (based on drought year)																
2021	105,788	50,027	47,238	47,218	35,763	11,941	33,126	331,100	0.49	0.23	0.22	0.22	0.17	0.06	0.15	1.53
2022	107,331	51,170	47,996	47,909	36,505	11,947	33,855	337,300	0.50	0.24	0.22	0.22	0.17	0.06	0.16	1.56
2023	109,111	52,442	48,862	48,707	37,335	11,976	34,667	343,700	0.50	0.24	0.23	0.23	0.17	0.06	0.16	1.59
2024	110,912	53,741	49,740	49,514	38,181	12,004	35,497	350,200	0.51	0.25	0.23	0.23	0.18	0.06	0.16	1.62
2025	112,733	55,068	50,629	50,330	39,043	12,032	36,343	356,800	0.52	0.25	0.23	0.23	0.18	0.06	0.17	1.65
2026	114,605	56,438	51,544	51,169	39,932	12,061	37,216	363,600	0.53	0.26	0.24	0.24	0.18	0.06	0.17	1.68
2027	116,497	57,836	52,470	52,017	40,837	12,090	38,107	370,500	0.54	0.27	0.24	0.24	0.19	0.06	0.18	1.71
2028	118,408	59,263	53,408	52,874	41,758	12,117	39,015	377,500	0.55	0.27	0.25	0.24	0.19	0.06	0.18	1.74
2029	120,337	60,719	54,356	53,739	42,695	12,143	39,940	384,600	0.56	0.28	0.25	0.25	0.20	0.06	0.18	1.78
2030	122,316	62,220	55,330	54,626	43,660	12,172	40,893	391,900	0.57	0.29	0.26	0.25	0.20	0.06	0.19	1.82
2031	124,314	63,750	56,314	55,522	44,642	12,198	41,865	399,300	0.58	0.30	0.26	0.26	0.21	0.06	0.20	1.86
2032	126,360	65,327	57,323	56,439	45,651	12,227	42,864	406,900	0.59	0.31	0.27	0.26	0.21	0.06	0.20	1.90
2033	128,454	66,950	58,357	57,378	46,689	12,256	43,893	414,700	0.60	0.31	0.27	0.27	0.22	0.06	0.21	1.94
2034	130,565	68,604	59,401	58,325	47,744	12,285	44,940	422,600	0.61	0.32	0.28	0.27	0.22	0.06	0.21	1.98
2035	132,724	70,306	60,470	59,293	48,827	12,314	46,017	430,700	0.62	0.33	0.28	0.28	0.23	0.06	0.22	2.02
2036	134,929	72,055	61,563	60,282	49,939	12,345	47,123	439,000	0.63	0.34	0.29	0.28	0.23	0.06	0.22	2.06
2037	137,150	73,837	62,667	61,278	51,068	12,373	48,248	447,400	0.64	0.35	0.29	0.29	0.24	0.06	0.23	2.10
2038	139,386	75,652	63,780	62,281	52,215	12,400	49,393	455,900	0.65	0.36	0.30	0.29	0.25	0.06	0.23	2.14
2039	141,667	77,516	64,917	63,304	53,391	12,428	50,568	464,600	0.66	0.36	0.30	0.30	0.25	0.06	0.24	2.18
2040	144,024	79,447	66,092	64,361	54,608	12,459	51,785	473,600	0.68	0.37	0.31	0.30	0.26	0.06	0.24	2.22
2041	146,425	81,428	67,291	65,438	55,854	12,490	53,032	482,800	0.69	0.38	0.31	0.31	0.26	0.06	0.25	2.26

Figure 3-2. Annual Historic Well Production



3.2 Pumping/Transmission

Pumping and transmission capacities are heavily related to each other, as flow rates are generally limited by the maximum pressure rating of existing pipeline, which is a function of the friction loss in the pipe. Therefore, replacing small pumps with larger pumps typically will not suffice as a means to increase flow unless existing pipe is also replaced or paralleled with larger pipe.

The District's groundwater supply is chlorinated then pumped to the north through a 10-inch transmission line from the Centralia wells, to the System A water tower, and the combination of an 8-inch line (to System B) and a 12-inch line (to System C) from the Kelly wells. Pump stations and control valves allow for water from the two well fields to supplement to the east and west, as required. Systems D through G are supplied through System A. As the Centralia wells were constructed long before the Kelly wells, the transmission line design reflects the primary dependence on them. As the water demands continue to increase in the future, transmission and pumping facilities will be required to transport more water from Systems B and C, west to System A.

Table 3-3 provides a summary of the capacities of the existing pump stations, along with the wells, under projected 2020 peak day demands. Capacities for all pumping facilities, including well

pumps, exceed the estimated peak day demand. While the Centralia wells only have about 50% excess capacity, the Kelly wells could provide three times the projected demand. By virtue of the pump rates being sufficient, the transmission pipeline is also sufficient. The pump station and transmission line closest to being at capacity is pump station E, supplied in the northwest corner of System A. Recent modifications to the pump and discharge transmission line at pump station F provides for nearly double the expected peak day demand.

Table 3-3. Capacity assessment under current peak day demands

Pumping/Process	Flow Rate, gpm	Maximum Daily Production, gal.	2020 Peak Day Demand, gal.	% of 2020 Peak Day
Centralia Wells				
#2	175	252,000		
#3	275	396,000		
#4	385	554,400		
#5	400	576,000		
Subtotal	850	1,224,000	836,600	146%
Kelly Wells				
#6	350	504,000		
#7	400	576,000		
#8	400	576,000		
Subtotal	1,150	1,656,000	513,800	322%
WELLS TOTAL	2,000	2,880,000	1,360,600	212%
Pump Station A	100	144,000	80,000	180%
Pump Station B	120	172,800	60,000	288%
Pump Station C	120	172,800	0	NA
Pump Station D	240	345,600	223,300	155%
Pump Station E	200	288,000	220,800	130%
Pump Station F	80	115,200	58,500	197%
Pump Station G	200	288,000	139,400	207%
** Note -- all pump station capacities reflect a backup pump*				

Although capacities are adequate, the condition of the facilities vary, as reflected by photos on the following pages. Generally, the facilities have been well maintained but some of the pump stations, such as C and G, are very cramped and would not meet today's electrical code for clear space in front of panels. The control and treatment building for wells 2 and 3 is 45 years old and near the end of its life. There may not be an immediate need to replace it though since wells 2 and 3 are relatively low producing and likely approaching the end of their lives.

4.0 ANALYSIS OF SYSTEM UNDER FUTURE DEMANDS

4.1 Water Supply

By 2031, the projected peak day demand could potentially be 50% higher than the historic high of nearly 1.2 mgd in 2012. The wells will need to produce a combined 1,000 gpm for 20 hours to meet 2031 demands. A decade later those peak day demands will exceed 2.3 mgd, requiring nearly 2,000 gpm over 20 hours. The existing facilities will be hard-pressed to meet those demands.

Within the 20-year scope of this study, if growth is still constant and significant, the District will need to develop an additional supply. Wells # 2 and # 3 will likely be at the end of their useful life and the five other wells will slowly degrade in production capacity. At the time that wells # 2 and # 3 are nearing the end of their life, a single new well could be added to replace them, with an anticipated production capacity of 400 – 500 gpm. Another new well could also be added to the Kelly well field, as the 2008 geological study indicated the aquifer can support a fourth well, for a total well field production of 1,600 gpm. The groundwater quality at well # 6 is considerably better than at other locations. The District may want to consider constructing a battery of 2 or 3 wells within a 600-foot circumference, hopefully producing up to the maximum permissible 800 gpm.

Additional water rights are available at the existing well sites and can be justified based on the growth projections provided in this report. It is advisable that the District apply for more rights before they are allocated to competing uses, such as irrigation.

4.2 Pumping/Transmission

Well capacity is irrelevant if the transmission lines cannot accommodate the flow. The current transmission line associated with the Centralia well field is limited to about 850 gpm, with 125 gpm being available to supply System B through Pump Station B. For the Kelly well field, the 8-inch transmission line to the System B water tower has a capacity of 225 gpm. The 12-inch line to the System C water tower, and also branching west to Pump Station A, is designed for 1,150 gpm but is limited by the low flow through Pump Station A (as it is currently just gravity flow) and the undersized transmission line close to the System C water tower.

By 2031, the Centralia wells, pump station A, and pump station E will all essentially be at capacity, as indicated in Table 4-1. Additional water from the Kelly well field will need to be diverted to System A through pump station A. Pump station A is currently gravity flow only, with provisions made for future pumps. The supply side of the pump station is fed by a 12-inch line,

capable of supporting 700 gpm. The downstream transmission line will need to be upgraded to supply both the System A water tower and pump station D. Figure 4-1 illustrates the various supply and transmission capacities, as well as the critical time for required improvements.

With a greater flow required through the 12-inch line north of the Kelly wells for pump station A and a flow of 275-300 gpm to the System C water tower, the 5-inch and 6-inch lines west of the water tower will need to be upgraded to prevent over-pressurizing the line.

The 200 gpm flow through pump station E will need to be increased to 250-300 gpm. Upgrades will be required to both the System A transmission lines leading to this pump station, as well as the transmission lines between this pump station and the System E water tower.

Figure 4-1. Peak day supply analysis

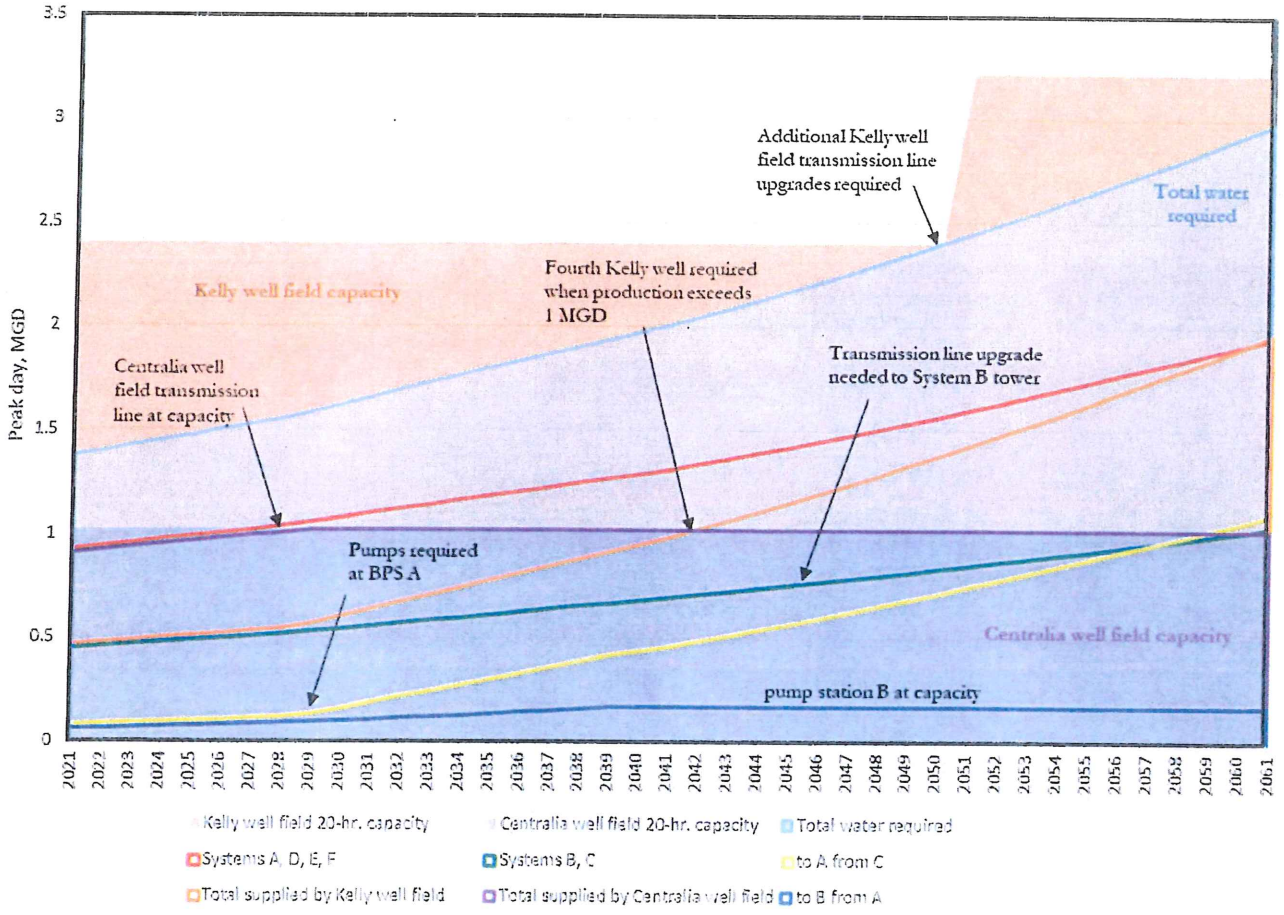


Table 4-1. Capacity assessment under projected peak day demands

Pumping/Process	Flow Rate, gpm	Maximum Daily Production, gal.	2031 Peak Day Demand, gal.	% of 2031 Peak Day	2041 Peak Day Demand, gal.	% of 2041 Peak Day
Centralia Wells						
#2	100	144,000				
#3	150	216,000				
#4	325	468,000				
#5	350	504,000				
Subtotal	850	1,224,000	1,150,000	106%	933,200	131%
Kelly Wells						
#6	300	432,000				
#7	375	540,000				
#8	375	540,000				
Subtotal	1,150	1,656,000	528,100	314%	1,119,400	148%
WELLS TOTAL	2,000	2,880,000	1,678,100	172%	2,068,200	139%
Pump Station A	100	144,000	190,000	76%	460,000	31%
Pump Station B	120	172,800	110,000	157%	172,800	100%
Pump Station C	120	172,800	0	NA	0	NA
Pump Station D	240	345,600	275,400	125%	339,400	102%
Pump Station E	200	288,000	272,400	106%	335,700	86%
Pump Station F	80	115,200	72,200	160%	89,000	129%
Pump Station G	200	288,000	171,900	168%	211,800	136%
** Note -- all pump station capacities reflect a backup pump*						

Water Towers	Useable Volume, gal.	Equalization Storage, gal.	2031 Peak Equal. Storage Required, gal.	% of 2031 Requirement	2041 Peak Equal. Storage Required, gal.	% of 2041 Requirement
Tower A	500,000	167,000	74,000	226%	91,000	184%
Tower B	150,000	50,000	34,000	147%	42,000	119%
Tower C	100,000	33,000	34,000	97%	41,000	80%
Tower D	200,000	67,000	35,000	191%	43,000	156%
Tower E	100,000	33,000	25,000	132%	31,000	106%
Standpipe F (12' x 100')	28,000	9,000	9,000	100%	11,000	82%
Standpipe G (12' x 90')	25,000	8,000	22,000	36%	27,000	30%

Finally, pump station D will be at capacity by 2041, when the existing flow of 240 gpm will need to be increased to about 300 gpm. Transmission line improvements will be required on both the suction and discharge sides. Upgrades on the suction side should accommodate the significant flow that would likely be supplied from pump station A.

Three of the pump stations (B, D and F) involve a combination of a submersible vertical pump in a buried steel casing, with a pitless unit at ground level for access and a brick building nearby for housing electrical equipment, meters, and valves. Pump station E was similarly

5.0 PROPOSED IMPROVEMENTS

Several improvements are recommended over the next several years to address the deficiencies noted. These are prioritized based on the apparent need at this time. Projects could be bundled and funded through 20-year to 40-year loans or could be constructed periodically and funded out of the annual budget, given adequate rates. Cost estimates are provided in Section 6 and the financial impact to the budget and water rates is addressed in Section 7. Figure 5-1, at the end of this Section, illustrates these improvements.

5.1 0 to 5 Year Improvements

Various waterline and operational improvements are recommended for the near future, as itemized below.

1. System A:
    a. Install ¼-mile of 3" south of 144th on F Rd., completing a loop, and make an interconnection between the 2" and 4" at 120th & F Rd., increasing minimum pressures by 15-25 psi to 8 customers.
    b. Install 1 mile of 4" along 96th Road from 31st Rd. to B Rd., increasing modeled minimum pressures by 30 psi to 7 service units.
    c. Install 1 mile of 4" on Meadowlark, 31st Rd. to B Rd., providing 30 psi modeled improvements to 6 customers.
2. System B: install 1 mile of 4" along O Road between Hwy 9 and 56th Rd., increasing modeled minimum pressures by 20-25 psi to 15 customers.
3. System D: install 2½ miles of 4" along 176th Rd. between St. Benedict and Hwy 63, looping three dead end lines and increasing minimum pressures in the area by 10-60 psi, with the greatest improvement being along Hwy 63.
4. System E: connect 2" to 4" at 29th & Harvest – abandon exposed stream crossing at 30th & Harvest. This improvement does not change pressures but eliminates an expensive new stream crossing.
5. System E: install 1½ miles of 4" on 184th from ½-mile east of B Rd to Baileyville Rd, increasing minimum modeled pressures by 50 psi or more east of Baileyville Rd.

0 TO 5 YEAR PROJECTS

SYSTEM A: 3" ON F RD., SOUTH OF 144th RD.

Item	Description	Unit	Quantity	Unit Price	Extension
1	3" PVC Pipe	L.F.	1,400	$ 5.00	$ 7,000
2	Installation in Road R/W	L.F.	100	2.00	200
3	3" Valve & Box	EA.	2	800	1,600
4	Connect to Existing Pipeline	EA.	2	2,000	4,000
5	Post Hydrant	EA.	1	1,600	1,600
6	Contingencies	LUMP SUM			2,000
	Total Construction Cost				$ **16,400**
	Engineering, Inspection, Legal, Easements, Etc.				$ 4,000
	Total Project Cost				$ **20,400**

SYSTEM A: 4" ON 96th RD., BETWEEN 31st & B RD.

Item	Description	Unit	Quantity	Unit Price	Extension
1	4" PVC Pipe	L.F.	5,400	$ 4.50	$ 24,300
2	Installation in Road R/W	L.F.	500	2.00	1,000
3	4" Road Crossing	EA.	2	3,500	7,000
4	4" Valve & Box	EA.	2	900	1,800
5	4" Stream Crossing	EA.	2	4,500	9,000
6	Connect to Existing Pipeline	EA.	2	2,000	4,000
7	Air Release Valve	EA.	2	1,000	2,000
8	Post Hydrant	EA.	1	1,600	1,600
9	Contingencies	LUMP SUM			8,000
	Total Construction Cost				$ **58,700**
	Engineering, Inspection, Legal, Easements, Etc.				$ 15,000
	Total Project Cost				$ **73,700**

SYSTEM A: 4" ON MEADOWLARK RD., BETWEEN 31st & B RD.

Item	Description	Unit	Quantity	Unit Price	Extension
1	4" PVC Pipe	L.F.	5,300	$ 4.50	$ 23,850
2	Installation in Road R/W	L.F.	500	2.00	1,000
3	4" Road Crossing	EA.	1	3,500	3,500
4	4" Valve & Box	EA.	2	900	1,800
5	4" Stream Crossing	EA.	3	4,500	13,500
6	Connect to Existing Pipeline	EA.	2	2,000	4,000
7	Re-connect existing service	EA.	2	800	1,600
8	Air Release Valve	EA.	1	1,000	1,000
9	Post Hydrant	EA.	1	1,600	1,600
10	Contingencies	LUMP SUM			8,000
	Total Construction Cost				$ **59,850**
	Engineering, Inspection, Legal, Easements, Etc.				$ 15,000
	Total Project Cost				$ **74,850**

7.0 FINANCIAL IMPACT

With $9.6 million in improvements recommended over the next 20 years, the District should have a plan to fund these improvements. Although the District may not be adverse to a long-term loan, it will likely be feasible to construct these projects on an annual basis by properly managing a capital improvement fund. Water rates should be increased annually to fund an escalating allocation to the fund over the next 20 years. Table 7-1 summarizes the recommended projects, their cost, annual deposits to a capital improvement fund, and the impact on water rates.

Currently the District's budget provides for about $300,000 annually for capital improvements. That amount will need to grow incrementally by $20,000 to $35,000 every year, ultimately approaching $900,000 per year in 20 years ($585,000 more than currently). Because of the extraordinarily high usage by several large customers, it is recommended that the improvements be funded through the rate per 1,000 gallons, versus an increase in the monthly minimum rate. The District's water rate schedule reflects a decrease for high-use customers. The first 10,000 gallons is sold at $2.85 per 1,000 gallons. Thereafter, the rate is $2.00 per 1,000 gallons. The wholesale rate to cities and RWD No. 4 is $1.52 per 1,000 gallons.

As illustrated in Table 7-1, an average annual rate increase of about 2.5%, dedicated to capital improvements, would fund all of these projects. If growth in the District slows from the 20-year average rate, the actual annual increase to rates might need to be closer to 3% - 4% to keep up with inflation related to labor, materials, chemicals, and utilities. The District's existing savings will be needed to fund the large System A transmission line project in about 10 years. The savings will be replenished in the following years. As noted in the table, it is assumed that $50,000 of the annual capital improvement budget will be allocated for well and water tower periodic maintenance and repair, and $100,000 will be used for other improvements not included in this analysis, such as replacing small waterlines where local growth is concentrated or replacing facilities that are failing.

Table 7-2 details the projected revenue and expenses, with the basis of the projections being the audited values from the last few years. The weighted average water rate per 1,000 gallons has been adjusted in accordance with the Table 7-1 projections. Wholesale rates are shown as increasing proportionate to RWD No. 3 rates to their customers. Projected 2.0% annual water sales growth and 2.5% annual inflation are factored into the revenue and expense estimates for 2021, 2023, 2026, and 2031. Annual water sales are conservatively calculated based on an assumed 90% of the projected peak demand potential under drought conditions.

Allocations to the capital improvement account is shown near the bottom. As previously mentioned, $150,000 is budgeted separately for water tower and well maintenance along with other unidentified waterline improvements. New construction funded by developers or individual customers are excluded from budget estimates, as this is a break-even scenario for the District. The District's two existing loans will be retired in 2025 and 2036. With the retirement of each debt, it is assumed that the annual amount of those debt payments could be applied to the capital improvement fund, minimizing the need for rate increases.

If the District chooses to construct several of the projects at one time, rather than annually, new long-term debt could be considered. Because of the time that it takes from loan application to completion of construction, the highest-priority items should not be included, and instead constructed through immediate and continuing annual rate increases. The projects shown as recommended in the 2028 – 2041 timeline would be a reasonable group to finance and construct in one or two large projects. Those projects would total $9.8 million in 2028-adjusted costs, a reasonable estimate of when they might be constructed. The equivalent increase to water rates would be about $1.20 per 1,000 gallons if financed over 20 years and $0.83 if financed over 40 years. These rates reflect a $1.1 million cash contribution by the District, corresponding to the cash-flow scenario presented in Table 7-1 (capital improvement fund balance in 2028 compared to 2041). As a comparison, the sum of the recommended water rate increases for those 13 years total $1.09 per 1,000 gallons. The benefits to constructing these projects annually is that the rate increases can be gradual and there is no future loan liability. A loan for a large project would require a significant increase initially but only minor inflationary increases over subsequent years.

In addition to water rate increases, revenues can also be generated through increased benefit unit fees. A reasonable method to establish those fees is through a proportionate valuation of the system, such as a company would through stock valuations. As illustrated in Figure 7-3, a rough estimate of all RWD No. 3 assets, primarily depreciated facilities, is $15 million. The capacity of each facility differs, but 2,500 meters is used as an average. The resulting value per meter, then, is $6,250. The current benefit unit fee is $3,000 so it would be justifiable for this to gradually increase. A fee of $6,000 to $7,000 is not unreasonable based on the pro-rata assessment of value, but is likely above the market tolerance. A 5% annual increase for several years is recommended, approaching $5,000 in 10 years and $8,000 in 20 years. It is also important for the District to have a tiered-rate schedule, where the large-usage customers are paying a higher benefit unit fee for a large meter.

Table 7-1. Improvement and Budgeting Schedule

Year	Improvement Project	Estimated Construction Cost, Present Day Values	Estimated Construction Cost, Future Values	Additional Deposit to Capital Improvement Fund	Year-End Capital Improvement Fund Balance	Rate per 1,000 gallon increase required	Cumulative Water Rate Increase above Present	Annual Water Rate Increase as %
	assumes $300,000 available for annual improvements with existing rates. $100,000 used for misc. improvements and $50,000 deposited to well/tower maintenance fund				$1,500,000	(from current savings)		
2021	Kelly trt. bldg. modifications, generators, VFDs at wells 2 & 3	$135,000	$135,000	$20,000	$1,535,000	$0.06	$0.06	2.8%
2022	4" on 176th, St. Benedict to Hwy 63	$185,950	$189,700	$40,000	$1,535,300	$0.06	$0.13	2.6%
2023	4" on O Rd., 56th to Hwy 9 & 3" on F Rd. south of 144th	$71,900	$74,800	$60,000	$1,670,500	$0.06	$0.19	2.5%
2024	4" 1-mile segments on Meadowlark and 96th Roads	$148,550	$157,600	$80,000	$1,742,900	$0.06	$0.25	2.4%
2025	4" on 184th, west of Baileyville Rd.	$116,600	$126,200	$100,000	$1,866,700	$0.06	$0.31	2.3%
2026	4" on 27th, Frontier to Harvest & 4" on Hwy 63, 216th to Hwy 11	$152,850	$168,800	$125,000	$2,122,900	$0.07	$0.39	2.8%
2027	4" on O Rd., 40th to Hwy 9, and V Rd., 160th to 168th	$125,350	$141,200	$150,000	$2,431,700	$0.07	$0.46	2.6%
2028	12" west of System C water tower, 2 miles, & replace well # 6	$856,500	$983,800	$175,000	$1,922,900	$0.07	$0.53	2.5%
2029	System A transmission line upgrades -- 12", 10" & 8"	$1,929,800	$2,261,100	$200,000	$161,800	$0.07	$0.60	2.4%
2030	6" System E transmission line, 4 miles, & P.S. E upgrade	$456,550	$545,600	$225,000	$141,200	$0.07	$0.67	2.3%
2031	8" System D transmission line, 3 miles, & P.S. D upgrade	$536,800	$654,400	$255,000	$41,800	$0.08	$0.75	2.7%
2032	New telemetry controls	$400,000	$497,300	$285,000	$129,500	$0.08	$0.83	2.6%
2033	Replace wells # 2 & # 3 with one new well	$561,500	$712,100	$315,000	$32,400	$0.08	$0.91	2.4%
2034	8" on E Rd., 144th to Hwy 36 & 4" on Hwy 63, 168th to 176th	$203,600	$263,400	$345,000	$414,000	$0.08	$0.98	2.3%
2035	4th well at Kelly well field	$598,500	$789,700	$375,000	$299,300	$0.07	$1.06	2.2%
2036	10" South of Pump Station D, 2 miles	$473,100	$636,700	$410,000	$372,600	$0.09	$1.14	2.5%
2037	10" on P Rd., 144th to Hwy 36	$179,800	$246,800	$445,000	$920,800	$0.08	$1.23	2.4%
2038	8" north of pump station D, 2 miles	$239,300	$335,100	$480,000	$1,415,700	$0.08	$1.31	2.3%
2039	4" & 6" on H Rd., 30th Rd., 192nd Rd. & Jayhawk Rd.	$367,650	$525,100	$515,000	$1,755,600	$0.08	$1.39	2.2%
2040	6" northwest of pump station E & 6" east of standpipe F	$455,800	$664,000	$550,000	$1,991,600	$0.08	$1.47	2.1%
2041	8" from Kelly well field to System B water tower	$1,410,500	$2,095,900	$585,000	$830,700	$0.08	$1.55	2.0%
	Totals	**$9,605,600**	**$12,204,300**		**Averages**	**$0.07**		**2.6%**

Table 7-2. Cash-Basis Annual Budget Analysis

Projections are based on average precipitation and temperature

Statistics

	2016	2017	2018	2019	Projected 2021	Projected 2023	Projected 2026	Projected 2031
No. of Customers, avg.	1,068	1,230	1,233	1,246	1,269	1,318	1,394	1,530
Wholesale Sold, MG	23.1	20.4	21.1	19.2	19.8	19.8	19.8	19.8
Residential & Ag. Sold, MG	212.1	264.6	278.8	247.3	257.9	268.4	284.9	314.8

Revenue

Item	Factor	2016	Factor	2017	Factor	2018	Factor	2019	Factor	Projected 2021	Factor	Projected 2023	Factor	Projected 2026	Factor	Projected 2031
Monthly Minimums	$ 26.00	$ 333,216	$ 26.00	$ 383,760	$ 26.00	$ 384,696	$ 26.00	$ 388,752	$ 26.00	$ 396,070	$ 26.00	$ 411,123	$ 26.00	$ 434,782	$ 26.00	$ 477,276
Wholesale Water Sales	$ 1.52	$ 35,689	$ 1.52	$ 31,636	$ 1.52	$ 32,599	$ 1.52	$ 29,817	$ 1.58	$ 31,358	$ 1.67	$ 32,996	$ 1.79	$ 35,532	$ 2.03	$ 40,241
Residential & Ag. Water Sales	$ 2.32	$ 492,922	$ 2.26	$ 597,962	$ 2.35	$ 653,793	$ 2.32	$ 573,064	$ 2.41	$ 622,876	$ 2.54	$ 681,928	$ 2.74	$ 779,663	$ 3.10	$ 975,576
Benefit Unit Sales	$ 2,500	$ 12,500	$ 2,500	$ 20,000	$ 3,000	$ 18,000	$ 3,000	$ 15,000	$ 3,000	$ 72,000	$ 3,300	$ 83,000	$ 3,800	$ 104,000	$ 5,000	$ 136,000
Interest		$ 8,133		$ 11,597		$ 24,215		$ 42,050		$ 23,200		$ 24,300		$ 26,200		$ 29,600
Aide-in-Construction		$ 17,830		$ 29,943		$ 25,406		$ 21,789		$ 25,600		$ 26,900		$ 28,900		$ 32,700
Other Income		$ 13,297		$ 14,495		$ 15,572		$ 13,445		$ 15,300		$ 16,100		$ 17,300		$ 19,600
Total Revenues		$ 913,587		$ 1,089,393		$ 1,154,281		$ 1,083,917		$ 1,186,405		$ 1,276,346		$ 1,426,377		$ 1,710,993

Expenses

Item	2016	2017	2018	2019	Projected 2021	Projected 2023	Projected 2026	Projected 2031
Personnel	$ 166,294	$ 169,020	$ 176,595	$ 187,288	$ 196,800	$ 206,800	$ 222,700	$ 252,000
Chemical	$ 32,451	$ 39,052	$ 36,708	$ 36,706	$ 40,400	$ 42,400	$ 45,700	$ 51,700
Supplies	$ 3,156	$ 5,310	$ 6,578	$ 7,149	$ 6,800	$ 7,200	$ 7,700	$ 8,700
Utilities	$ 95,952	$ 103,801	$ 110,955	$ 105,364	$ 114,900	$ 120,700	$ 130,000	$ 147,100
Professional Services	$ 15,052	$ 18,144	$ 12,835	$ 9,647	$ 14,600	$ 15,300	$ 16,500	$ 18,700
Transportation	$ 9,919	$ 12,515	$ 10,059	$ 12,156	$ 12,500	$ 13,100	$ 14,100	$ 16,000
Office and Shop	$ 14,645	$ 14,276	$ 16,137	$ 14,215	$ 16,000	$ 16,800	$ 18,100	$ 20,500
Insurance	$ 22,288	$ 21,823	$ 21,853	$ 21,866	$ 23,500	$ 24,700	$ 26,600	$ 30,100
Repairs	$ 95,755	$ 92,296	$ 75,964	$ 131,066	$ 107,400	$ 112,900	$ 121,600	$ 137,500
Misc. and Lab	$ 5,800	$ 5,726	$ 6,553	$ 5,384	$ 6,300	$ 6,700	$ 7,200	$ 8,100
Cost of Water Purchased	$ 2,617	$ 44,069	$ 50,319	$ 39,302	$ 48,000	$ 50,400	$ 54,300	$ 61,400
Water Use Fees	$ 16,281	$ 16,192	$ 21,916	$ 19,928	$ 20,800	$ 21,900	$ 23,600	$ 26,700
Annual budget for tower repainting					$ 40,000	$ 42,000	$ 45,000	$ 51,000
Annual budget for well treatment					$ 10,000	$ 11,000	$ 12,000	$ 14,000
Capital Improvements	$ 27,299	$ 110,076	$ 72,051	$ 312,939	$ 100,000	$ 105,000	$ 113,000	$ 128,000
Capital Improvement Fund Deposit					$ 170,000	$ 210,000	$ 425,000	$ 555,000
Debt (expires in 2025 & 2036)	$ 137,457	$ 202,660	$ 204,476	$ 194,536	$ 202,745	$ 207,232	$ 49,700	$ 49,700
Total Expenses	$ 644,966	$ 854,960	$ 822,999	$ 1,097,546	$ 1,130,745	$ 1,214,132	$ 1,332,800	$ 1,576,200
NET OPERATING MARGIN	$ 268,621	$ 234,433	$ 331,282	$ (13,629)	$ 55,660	$ 62,214	$ 93,577	$ 134,793

Table 7-3. Benefit Unit Value

DESCRIPTION	FACTOR		VALUE
Pipeline	*assumed avg. of 50% depreciated*		
12-inch pipe	11.5	miles	$ 800,000
10-inch pipe	10.5	miles	$ 500,000
8-inch pipe	24.2	miles	$ 800,000
6-inch pipe	64.6	miles	$ 1,500,000
5-inch pipe	28.3	miles	$ 600,000
4-inch pipe	128.5	miles	$ 2,000,000
3-inch pipe	33.5	miles	$ 400,000
2½-inch pipe	51.7	miles	$ 500,000
2-inch pipe	260.0	miles	$ 2,300,000
service line	45.0	miles	$ 400,000
Pipeline Subtotal	658	miles	$ 9,800,000
Storage Tanks	*assumed avg. of 40% depreciated*		
	100k Elevated		$ 360,000
	100k Elevated		$ 360,000
	150k Elevated		$ 390,000
	200k Elevated		$ 420,000
	500k Elevated		$ 600,000
	12' x 90' Standpipe		$ 100,000
	12' x 100' Standpipe		$ 90,000
Storage Tanks Subtotal			$ 2,320,000
Pump Stations	*assumed avg. of 75% depreciated*		
	Pump Station A		$ 60,000
	Pump Station B		$ 50,000
	Pump Station C		$ 60,000
	Pump Station D		$ 50,000
	Pump Station E		$ 40,000
	Pump Station F		$ 50,000
	Pump Station G		$ 30,000
Pump Stations Subtotal			$ 340,000
Water Supply	*assumed avg. of 50% depreciated*		
	Wells (7)		$ 350,000
	Treatment Building		$ 300,000
Water Supply Subtotal			$ 650,000
Controls			$ 150,000
Office/Vehicles/Misc. Assets			$ 350,000
Service Meters (Customers)	1350		$ 473,000
Total Value of Depreciated Infrastructure			$ 14,083,000
Cash/CDs			$ 2,300,000
Outstanding Debt			$ 1,400,000
Net Position (Assets minus Liabilities)			$ 14,983,000

	Range	
Estimated customer capacity of existing facilities	2,000	3,000
Infrastructure Value per Customer	$ 7,492	$ 4,994