

CITY COUNCIL PROCEEDINGS

July 18, 2012

The City Council of the City of David City, Nebraska, met in open public session in the Meeting room of the Hruksa Memorial Public Library, David City, Nebraska, at 6:00 p.m. on 18th of July, 2012. The Public had been advised of the meeting by publication of notice in The Banner Press on July 12th, and an affidavit of the publisher is on file in the office of the City Clerk. The Mayor and members of the City Council acknowledged advance notice of the meeting by signing the Agenda which is a part of these minutes. The advance notice to the Public, Mayor, and Council members conveyed the availability of the agenda, which was kept continuously current in the office of the City Clerk and was available for public inspection during regular office hours. No new items were added to the agenda during the twenty-four hours immediately prior to the opening of the Council meeting.

Mayor Zavodny opened the special meeting at 6:00 p.m.

Present for the meeting were: Mayor Alan Zavodny, Council President Gary Kroesing, Council members Bill Scribner, Gary Smith, John Vandenberg and Ruddy Svoboda, City Attorney Jim Egr, Interim City Administrator Joan Kovar and Interim City Clerk Tami L. Comte. Council member Mike Rogers arrived at 7:00 p.m.

Also present were: Water/Sewer Supervisor Gary Janicek, Water/Sewer employees Gary Hascall, Kevin Betzen and Bill Buntgen, Roger Helgoth, Rich Robinson and Clint Weber representing Kirkham Michael, and Doug Woodbeck, Field Operations Supervisor with the State of Nebraska, Bill Dubs, Lisa Buntgen, Marilyn Hascall, Ray & Luan Metzner, Dale & Carolyn Yates, Eugene Divis and Ken Karenka.

Mayor Zavodny informed the public of the "Open Meetings Act" posted on the west wall.

Roger Helgoth from Kirkham, Michael introduced Rich Robinson and Clint Weber who would be presenting the findings for the Water Treatment Plant Evaluation and Doug Woodbeck, Field Operations Supervisor for the State of Nebraska, Health and Human Services.

The following is the presentation from Kirkham, Michael:

Water Treatment Plant Evaluation City of David City



David City, Nebraska
Presentation – July 18, 2012

Purpose of Review / Evaluation

Review / Evaluation of Water Treatment Plant

- Gathered information / data
- Reviewed /analyzed information
- Comprehensive site visit, May 16, 2012
- Numerous internal team meetings
- Meeting with Nebraska Health and Human Services
- Prepared report

Purpose of Review / Evaluation

Address Drinking Water Taste / Odor Customer

Complaints

- Strong chlorine taste/odor
- Suspended solids
- Rusty colored water

Water Requirements

Table 1
 Historic Water Demands, FY 2009 – FY 2011

	2009	2010	2011
Annual Water Pumpage (mg)	161.9	173.2	169.9
Average Day - Pumpage (gpd)	443,700	474,600	465,500
Per Capita Demand (gpcd)	171	183	179
Peak Day (mg)	1,005	0,905	1,229
Ratio - Peak Day/Ave. Day	2.27	1.91	2.64

mg = million gallons
 gpd = gallons per day
 gpcd = gallons per capita per day (based upon 2010 Census Population from NLM Directory)

Water Requirements

1) Wells

- Six active wells (400 – 435 feet deep)
- 20-year requirement = 970 gpm (maximum day)
- Existing capacity = 4,000 gpm (3,200 gpm firm)

2) Treatment Plant

- Softening plant constructed in 1982
- 20-year requirement = 970 gpm (maximum day)
- Existing capacity = 1,736 gpm

Water Requirements

- 3) Water Storage
 - 750,000 gallon elevated tank
 - 500,000 gallon water treatment plant clearwell
 - 20-year requirement = 500,000 gallons
(average day demand)
 - 20-year requirement = 450,000 gallons
(fireflow – 3 hours)

Water Requirements

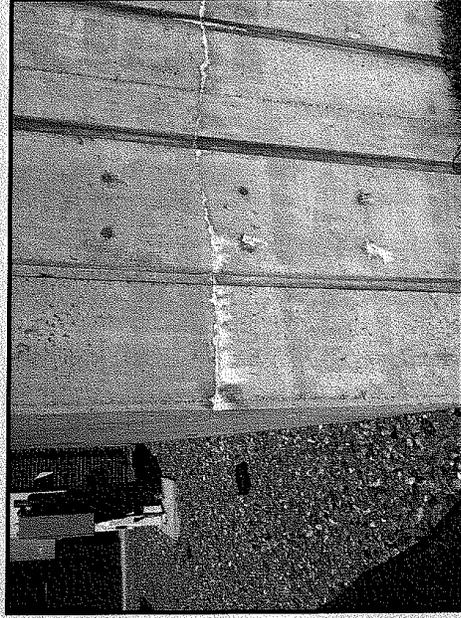
4) Water Mains

2-inch	=	5,955 feet (4.5%)
4-inch	=	43,461 feet (32.6%)
6-inch	=	23,195 feet (17.4%)
8-inch	=	34,509 feet (25.8%)
10-inch	=	6,181 feet (4.6%)
12-inch	=	20,127 feet (15.1%)
Total	=	133,428 feet (25.27 miles)

- Probably most of the 2 to 6-inch diameter mains – unlined cast iron mains
- Contributes to taste/order issues
- Accumulation of organic biofilms/encrustation/mineral deposits
- Fireflows (Insurance Services Office (ISO) Report)
 - 2007 ISO Report
 - Overall classification of 4 (1-10 Scale)
 - Water system – relative classification of 2
 - In 2007, only 66 communities were ≤ 4 (5.6%)
 - Very good!

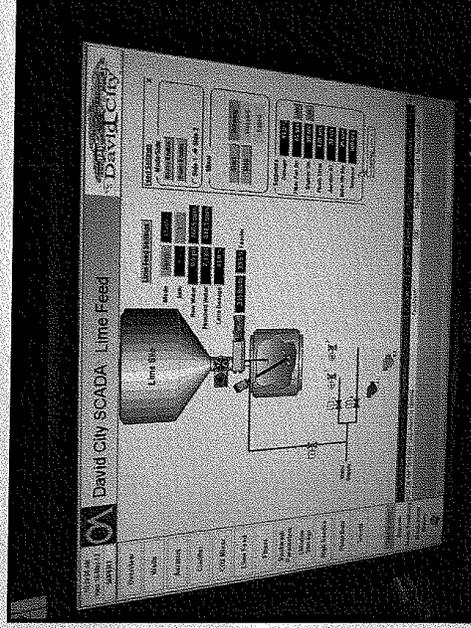
Water Requirements

- Water Treatment Plant Structural Evaluation
 - Review on site on May 16, 2012
 - Several minor structural issues identified
 - Good structural condition



Water Requirements

- **Electrical/SCADA Evaluation**
 - Electrical system good condition
 - Supervisory Control and Data Acquisition (SCADA) 2003
 - SCADA provides control of wells, tank levels, and water treatment plant process
 - SCADA excellent condition and capacity



Water Quality

- Reviewed Available Information / Reports
- Meets State and Federal Standards
- Raw Water High in Arsenic, Iron, Manganese, Hardness, and Total Dissolved Solids
- Treatment Process Removes / Reduces Raw Water Minerals
- Water Quality Effected by Old Unlined Cast Iron Mains

Water Quality

Table 3
 Recent Water Quality Results

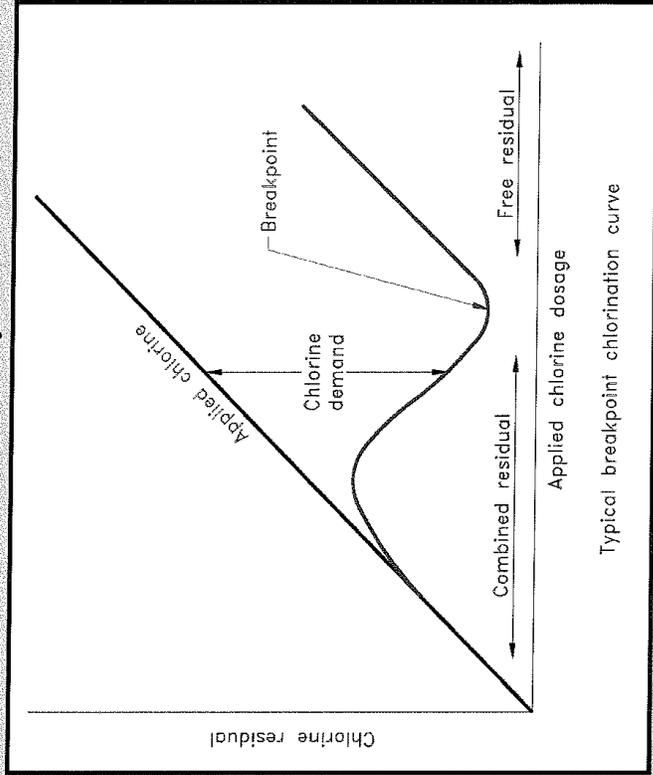
	Raw Water					Well No.		Finished Water		EPA MCL or Caution Level
	Well No. 8	Well No. 9	Well No. 10	Well No. 11	Well No. 12	14	WTP (3-21-2008)	WTP (2-1-2011)		
Sodium	25	18	53	26	18	28	20	24	100	
Calcium	120	96	110	98	91	101	21	41	80	
PH (units)	7.8	8.0	7.8	8.1	8.1	7.2	8.0	8.0	6.5-9.0	
Nitrate (N)	0.16	0.13	0.20	0.29	0.14	N.D.	0.16	0.11	10.0	
Sulfate	40	48	90	26	54	76	60	57	400	
Total Dissolved Solids	573	420	640	497	429	495	211	340	500	
Hardness	445	325	380	350	300	360	110	190	340	
Iron	1.3	0.53	9.5	0.57	0.56	0.95	N.D.	N.D.	0.3	
Manganese	35	19	0.84	0.51	0.44	0.45	N.D.	0.03	0.05	
Chloride	---	---	82	3.9	2.5	3.39	---	---	200	
Fluoride	0.26	0.25	0.89	0.27	0.26	0.32	0.20	0.21	4.0	
Uranium (ug/l)	---	---	---	---	N.D.	N.D.	---	---	30.0	
Arsenic (ug/l)	21.4	8.40	14.7	14.5	10.5	18.3	2.15		10.0	

Recommendations

Generally in Order of Importance:

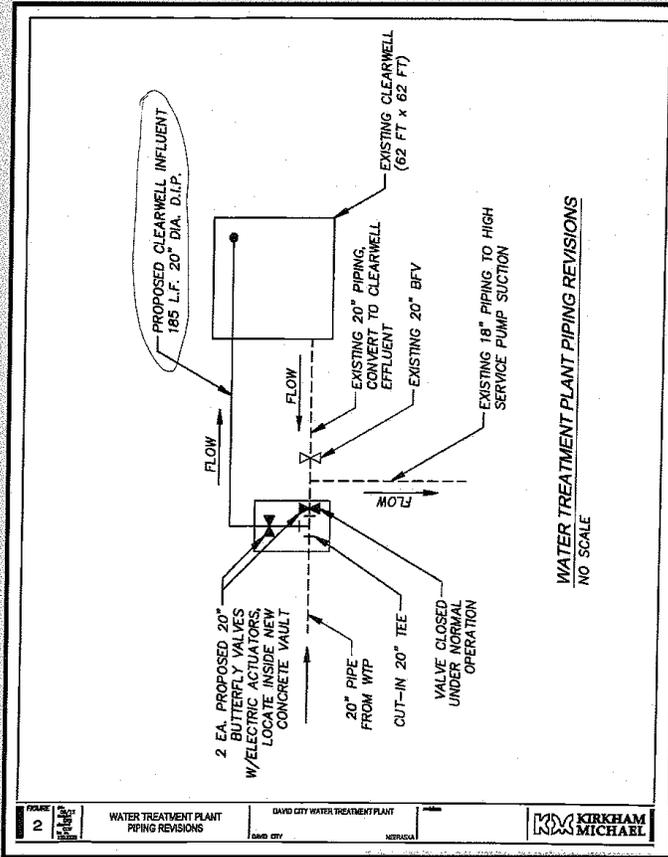
1) “Break-Point” Chlorination

- Add additional chlorine to satisfy chlorine demands



Recommendations

- Clear well piping modifications
- Will provide more chlorine contact time and avoid short circuiting



Recommendations

2) Hydrant / Main Flushing

- More rigorous program
- Concentrate on old unlined cast iron mains
- Flushing velocities with directional flushing
- Pigging should be considered
- Comprehensive cleaning required



Recommendations

- 3) Staffing is Insufficient
 - Four staff currently for water / wastewater
 - Two mechanical plants
 - Comparison to Falls City
 - Recommend, minimum—one lab tech / operator
 - Part-time seasonal employees
 - Contractual assistance

Recommendations

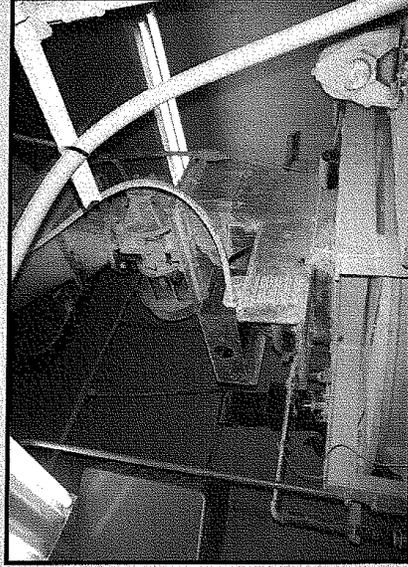
4) Water Main Replacement Program

- Mostly old small diameter unlined cast iron mains
- Distribution system analysis / study



Recommendations

- 5) Well No. 8 – Out of Service
 - Older well (1950 era)
 - Worst water quality
- 6) Water Treatment Plant Equipment/ Modifications
 - Replace lime feeder valving
 - Modify filter backwash piping (improves treatment quality)



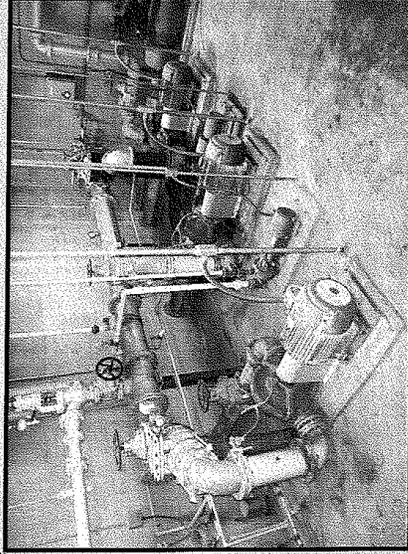
Recommendations

7) Nebraska Health and Human Services Recommendations (January 2011)

- Review with NHHS
- Implement as feasible

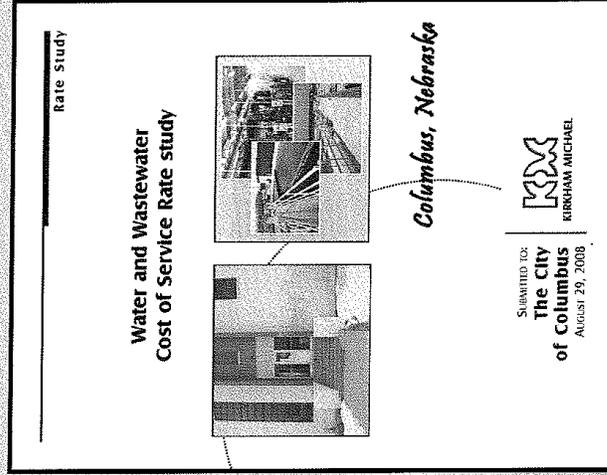
8) Preventative Maintenance Program

- Did not observe comprehensive program
- Preventative maintenance scheduled on pre-determined basis with standards



Recommendations

- 9) **Water Rate Study**
 - Professional comprehensive study
 - Support recommendations, operations, maintenance and debt service



Recommendations

10) Capacity Development

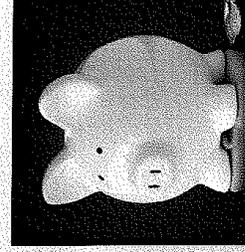
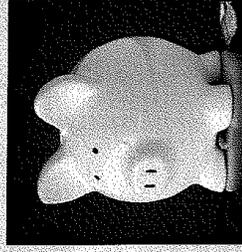
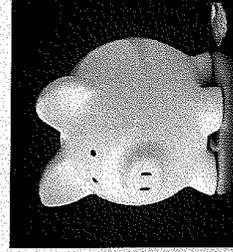
- Required by 1996 SDWA amendments
- Three components
 1. Managerial
 2. Technical
 3. Financial
- “Team” approach – tour
- Public acceptance and familiarity
- Customer complaint system

Recommendations

- 11) Operations & Maintenance (O&M) Manual
 - Existing O&M Manual (1982) outdated
 - Not “operator friendly”
 - Need updated O&M Manual
 - Training guide and reference



Financial Considerations



Recommendation No./Description	Capital Costs	Annual Additional Operation and Maintenance Costs	Comments
1. a) Break-Point Chlorination	\$60,000	\$10,000	Includes chlorination equipment, piping revision and lab testing.
1. b) Clearwell Piping Modifications	\$105,000	\$2,000	Implement only if break-point chlorination is not effective
1. c) Activated Carbon System and Building	\$220,000	\$3,000	Per AWWA Standards-perhaps assistance with part time temp employees
2. a) More Rigorous Hydram/Main Flushing Program	-----	\$3,000	
2. b) Piggng Old Unlined Cast Iron Meats	\$70,000	-----	Estimated for 75,000 linear feet by Contractor
3. Additional Staffing a) Laboratory Technician/Operator b) Two Seasonal Temporary Employees c) Contract Operations Assistance	\$5,000 ----- -----	\$60,000 \$12,000 \$18,000	Provides one day every other week.
4. Detailed Water Distribution System Study	-----	\$27,000	Distribution Study will provide specific prioritized recommendations on main replacements and associated costs
5. Well No. 8 Stand-by	-----	-----	
6. a) Lime Feeder Valving	\$10,000	\$200	Replace lime feeder valving to prevent slugs
6. b) Eliminate Filter Backwash Water to Upflow Basin and Direct to Sanitary Sewer	\$15,000	\$200	Utilize existing pump to direct flow to sanitary sewer and discontinue pumping to the upflow clarifier basin.
7. Nebraska Health & Human Services WTP Report Recommendations	\$6,000	\$500	
8. Design Preventative Maintenance (PM) Program	-----	\$4,500	
9. Water Rate Study	-----	\$9,000	
10. Capacity Development Implementation - Training/Communications	-----	\$4,000	Relates to other recommendations - some assistance provided
11. Operations and Maintenance Manual	-----	\$9,500	

Financial / Funding Sources

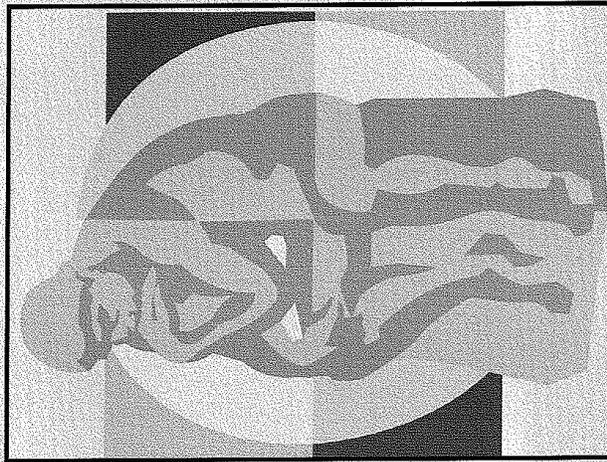
- Revenue Bonds
- General Obligation Bonds
- Community Development Block Grants (CDBG)
- United States Department Agricultural – Rural Development (USDA-RD)
- U.S. Department of Commerce Economic Development Agency (EDA)
- Special Assessment Districts State Drinking Water State Revolving Loan Fund (SRF)

Summary and Conclusions

- Water treatment plant and system in reasonably good condition
- Exception is old unlined cast iron mains
- System operated in professional manner
- Recommendations to improve water quality and sustain system



QUESTIONS?



Mayor Zavodny left the meeting at 7:15 p.m.

The representatives from Kirkham Michael asked the citizens present to put a dot on a poster board to indicate what their two main complaints would be regarding their water.

The poster board stated the following:

Complaints – Register Yours

- Strong Chlorine taste/odor
- Suspended Solids
- Rusty colored water
- Cloudy water
- Rotten egg smell
- Other (write ins)

The two that received the most dots from those present were rusty colored water and cloudy water.

The public was encouraged to ask questions and a question and answer period followed.

Council member Scribner made a motion to accept the Water Treatment Plant evaluation study. Council member Rogers seconded the motion. Voting AYE: Council members Scribner, Smith, Svoboda, Kroesing, Vandenberg and Rogers. Voting NAY: None. The motion carried.

Council member Smith made a motion to adjourn. Council member Scribner seconded the motion. Voting AYE: Council members Smith, Scribner, Rogers, Kroesing, Vandenberg and Svoboda. The motion carried and Council President Gary Kroesing declared the meeting adjourned at 8:05 p.m.



CERTIFICATION OF MINUTES
July 18, 2012

I, Tami L. Comte, duly qualified and acting Interim City Clerk for the City of David City, Nebraska, do hereby certify with regard to all proceedings of July 18, 2012; that all of the subjects included in the foregoing proceedings were contained in the agenda for the meeting, kept continually current and available for public inspection at the office of the City Clerk; that such subjects were contained in said agenda for at least twenty-four hours prior to said meeting; that the minutes of the meeting of the City Council of the City of David City, Nebraska, were in written form and available for public inspection within ten working days and prior to the next convened meeting of said body; that all news media requesting notification concerning meetings of said body were provided with advance notification of the time and place of said meeting and the subjects to be discussed at said meeting.

Tami L. Comte, Interim City Clerk