M. C. SCHAFF
& ASSOCIATES, INC.

Preliminary Engineering Report

Village of HENRY, Nebraska

Prepared by:
M. C. SCHAFF & ASSOCIATES, INC.
818 South Beltline Highway East
Scottsbluff, Nebraska 69361

Project No.:
1HN072001

May 2008

CERTIFICATE OF ENGINEER

The technical material and data contained in this document were prepared under the supervision and direction of the undersigned, whose seal, as a professional engineer licensed to practice as such, is affixed below.

Prepared by

Checked by

Table of Contents Page Number

I General 1
II Area to Serve 1
III Existing Facilities 1
IV Design Criteria 4
V Alternatives 6
VI Proposed Improvements 7
VII Annual Operating Budget 8
VIII Recommendations 9
IX Project Schedule 9

Appendices

Appendix A-1 ..... Topographic Map
Appendix A-2 ..... Existing Water System
Appendix A-3 ..... Proposed Distribution System Improvement
Appendix A-4 ..... Financial Records
Appendix A-5 ..... Lead/Copper Exceedance Advisory

I General

This Preliminary Engineering Report has been prepared by M.C. Schaff & Associates, Inc. in conjunction with the Village of Henry. The scope of this report is to evaluate the condition and the ability of the existing public water system to supply a sufficient quality and quantity of potable water to the users of the system and to present recommendations of needed improvements.

The public water system that serves the Village of Henry was first constructed in the 1920's. The system has been expanded and repaired through the years to meet the needs of the Village.

II Area to Serve

The Village of Henry and the surrounding areas that are served are located in Sections 3 and 4, Township 23 North, Range 58 West in Scotts Bluff County, Nebraska. The Village of Henry lies 4040 feet above mean sea level. A topographic map of the Village of Henry is included in the Appendix.

III Existing Facilities

The water system consists of two wells, a 17,500 gallon ground level storage tank and the distribution system. A map of the existing water system is included in the Appendix.

A Water Source

Well 221, "Fire Hall Well", is a 250 gpm well that was constructed in 1922. The last arsenic sample was 8.73 µg/l. The Village just started compliance monitoring for gross alpha. Well 221 is in poor condition and is in need of reconstruction to meet current design standards.

Well 221

Well 931, "Park Well", is a 550 gpm well that was constructed in 1993. The last arsenic sample was 8.0 µg/l. The village completed the gross alpha monitoring last year and are not required to do any further uranium monitoring.

Well 931

The Village of Henry is currently under a Lead/Copper Exceedence Advisory for Copper. Water samples have been collected to determine the source of the copper levels. Both wells have been determined to produce corrosive water causing the corrosion of the copper water lines and increasing the copper levels in the water supplied to the users of the system. A copy of the Lead/Copper Excedence Advisory is located in the appendix.

B Storage

The Village of Henry has a single, 17,500 gallon above ground tank. It is a steel plate riveted design. The interior and exterior coating systems are in good condition with only minor repairs needed. The water tank foundation is in poor condition and will require replacement. The water tank provides a static pressure in the system of 42 to 64 psi. The static pressure provided by the main water tank meets the recommended working pressure of 60-80 psi.

The tank does not have capacity to provide a minimum of an average day's water use. An average day's worth of storage is needed to meet peak summer demands and provide water to the users of the system during well failures.

C Distribution System

The distribution system is a non-metered system which consists of approximately 250 feet of two inch pipe, 3,700 feet of four inch pipe, 2,350 feet of six inch pipe and 2,250 feet of 8 inch pipe for a total of 8,550 feet of water main. A Map of the existing distribution system is located in the appendix.

The distribution system is in fair condition with exception of the transmission main to the storage tank. The existing 6 inch transmission main from the storage tank to the distribution system is in poor condition and needs replacement. There have been two repairs made to this section in the last two years. The repairs done to this main revealed that the main is shallow and the breaks appear to be caused by settling.

The distribution system does not have a sufficient number of valves to allow for proper operation and maintenance of the system. Repairs to water mains and service lines can require the entire system to be shut down.

IV Design Criteria

Any and all improvements must be designed in accordance with the State of Nebraska Health and Human Services Title 179 "Regulations Governing Public Supply Systems" and The Recommended Standards for Water Works (Ten State Standards).

The population of the Village has experienced an increase but has stabilized in recent years.

Year	Population
1990	145
2000	162
2006	161
2008	162
2018	166
2028	170

The Village anticipates only modest growth in the future because of its midway proximity to the City of Scottsbluff, Nebraska and the City of Torrington Wyoming. The projected population of 200 people in the year 2026 will be used as the basis for the development of the new water source and the design of the improvements within the distribution system.

Village Water Use

	Average Day
2002	171,500
2003	189,200
2004	143,800
2005	150,300
2006	130,000*
2007	105,200

* Base on partial year data

Based on a population of 161 people, the average daily use by the Village was 653 gallons per capita per day. This rate of water use is very high because the system is not metered.

To determine the design residential water use, we surveyed area water systems with water meters. The following table shows the water usage of area communities:

	Population	Average Day gpcpd	Max Day gpcpd	Peaking Factor
Gering	8,000	385	1000	2.6
Scottsbluff	14,800	300	600	2.0
Mitchell	1,830	321	732	2.3
Sidney	6,282	275	432	1.6

The information provided by Sidney is the amount billed and does not include water loss and public use. The design water usage for the village should be 300 gallons per capita per day with a summer peaking factor of 3.0. The lower per capital used is based on increase water conservation from the installation of water meters. A higher summer peak factor should be used because the majority of the irrigation systems in the Village are not on automatic timers.

A Water Source

All new water sources should be capable of supplying the projected maximum day demand and the average day demand with the largest pump out of service. For the design year 2026, new groundwater wells should be designed for the following criteria:

	Average day	Maximum Day
Residential Daily Demand	51,000 gpd	153,000
Hourly Demand	2,125 gph (35 gpm)	6,375 gph (106 gpm)
Peak Hour	4,250 gph (70 gpm)	12,750 gph (213 gpm)

All new water sources should produce water with quality that meets all current and known upcoming regulations of the State of Nebraska Health and Human Services.

B Storage

The new water storage tank shall provide an amount equal to or exceed the average day demand, which is 50,000 gallons. The tower should be constructed to provide a minimum working pressure within the distribution system of 35 psi.

C Water Mains

All new water mains should be sized to meet the projected demands. The water mains should be designed to maintain a minimum pressure of 20 psi during all flow conditions and to maintain a working pressure not less than 35 psi.

All pressure calculations should be based on the existing main water tank 2/3 empty and no wells running.

The system should provide a minimum fire flow capacity of 1000 gpm during the average day. The fire flow capacity of 1000 gpm is based on ISO guidelines for one and two family dwellings. Also, the Village volunteer fire department has pumper trucks capable of pumping 1000 gpm. If the system is not sized for this fire flow, the pressure would drop below 20 psi during fire fighting operations.

V Alternatives

A Water Source

Alternatives for a new water source were evaluated as part of the Western Regional Water System Feasibility Study. The study evaluated Henry treating its own wells, development of new well fields and the connection to surrounding communities. The recommendation of the study was to connect to a common well field to serve Morrill, Lyman and Henry.

B Storage

There are two alternatives to correct the foundation of the existing storage tank. One alternative is to reconstruct the deteriorated existing foundation. However this would not address the undersized tank capacity.

The construction of a new, larger ground level storage tank is more economical than an elevated storage tank and will provide the needed storage. The new tank would be at the same elevation as the existing tank and will provide a static pressure from 42 to 62 psi.

C Transmission Main

The only alternative for the deteriorated transmission main from the storage tank is replacement.

VI Proposed Improvements

The proposed improvements are the connection to the proposed regional water system, construction of a new 50,000 gallon above ground storage tank, 600 feet of 8 inch water transmission main, water meters and additional main line water valves. Maps showing the proposed improvements are located in the appendix.

Distribution System Improvements

Item	Description	Quantity		Unit Price			Extension Price
A	50,000 Water Tower	1	LS	$250,000.00	/	LS	$250,000.00
B	Water Meters in Pits						
	¾-inch	63	Each	$1050.00	/	Each	$66,150.00
C	Meter Radio Transmitter	63	Each	$165.00	/	Each	$10,395.00
D	PVC Water Main						
	8-inch	600	LF	$20.00	/	Each	$12,000.00
E	Valve & Valve Box						
	4-inch	2	Each	$685.00	/	LF	$1,370.00
	6-inch	1	Each	$790.00	/	LF	$790.00
	8-inch	4	Each	$1000.00	/	LF	$4,000.00
F	Fittings	300	Lbs	$3.60	/	Lbs	$1,080.00
G	Remove & Replace Pavement	1000	SF	$6.00	/	SF	$6,000.00
H	Gravel Surfacing and Turf Restoration	600	LF	$1.00	/	LF	$600.00
		Subtotal					$352,385.00
		10% Contingency					$35,238.50
		Legal, Engineering & Misc.					$70,477.00
		Total Cost					$458,100.50

Regional Water System Improvements

Total Construction Cost	$278,652.17
Land	$25,341.61
10% Contingency	$27,865.22
Legal, Engineering & Misc.	$55,730.44
Total Cost	$387,589.44

Total Project Cost = $845,689.94

VII Annual Operating Budget

The following tables show the budget, revenues and expenses for the last three fiscal years and the budget for the current fiscal year:

Budget

	O&M	Revenue
FY04-05	$630	Unknown
FY 05-06	$3,000	Unknown
FY 06-07	$0	Unknown

Actual

	O&M	Revenue
FY04-05	$0	Unknown
FY 05-06	$0	$1642
FY 06-07	$0	$0

Proposed Project Cost

Capital Cost	Monthly Debt Payment	Monthly Reserve	Monthly Total
$845,689.94.00	$3,829.79	$382.98	$4,212.77

Monthly debt repayment amounts are based on an annual interest rate of 4.5% and a 40 year payback.

Existing Water System Revenue

	Water Rates			
	Base	Rate per 1000 gal	Number of Connections	Monthly Revenue
Residential units	$25.50	$0.00	63	$1,606.50

Projected Revenue

	Water Rates			Projected	Projected	Projected
Meter	Base	Rate per 1000 gal	Number of Connections	Average Water Use	Average Monthly	Monthly Revenue
¾-inch	$30.00	$2.15	63	24,650	$83.00	$5,229

Projected Monthly Cost

	O & M	Projected Debt	Reserve	Projected Monthly Cost
Phase 1	$945	$3,829.79	$382.98	$5157.77

VIII Recommendations

We recommend the proposed improvements to the distribution system and the connection the Regional Water System begin immediately to provide the additional storage needed and to provide reliable water source that meets current drinking water standards.

IX Project Schedule

The following is the project schedule:

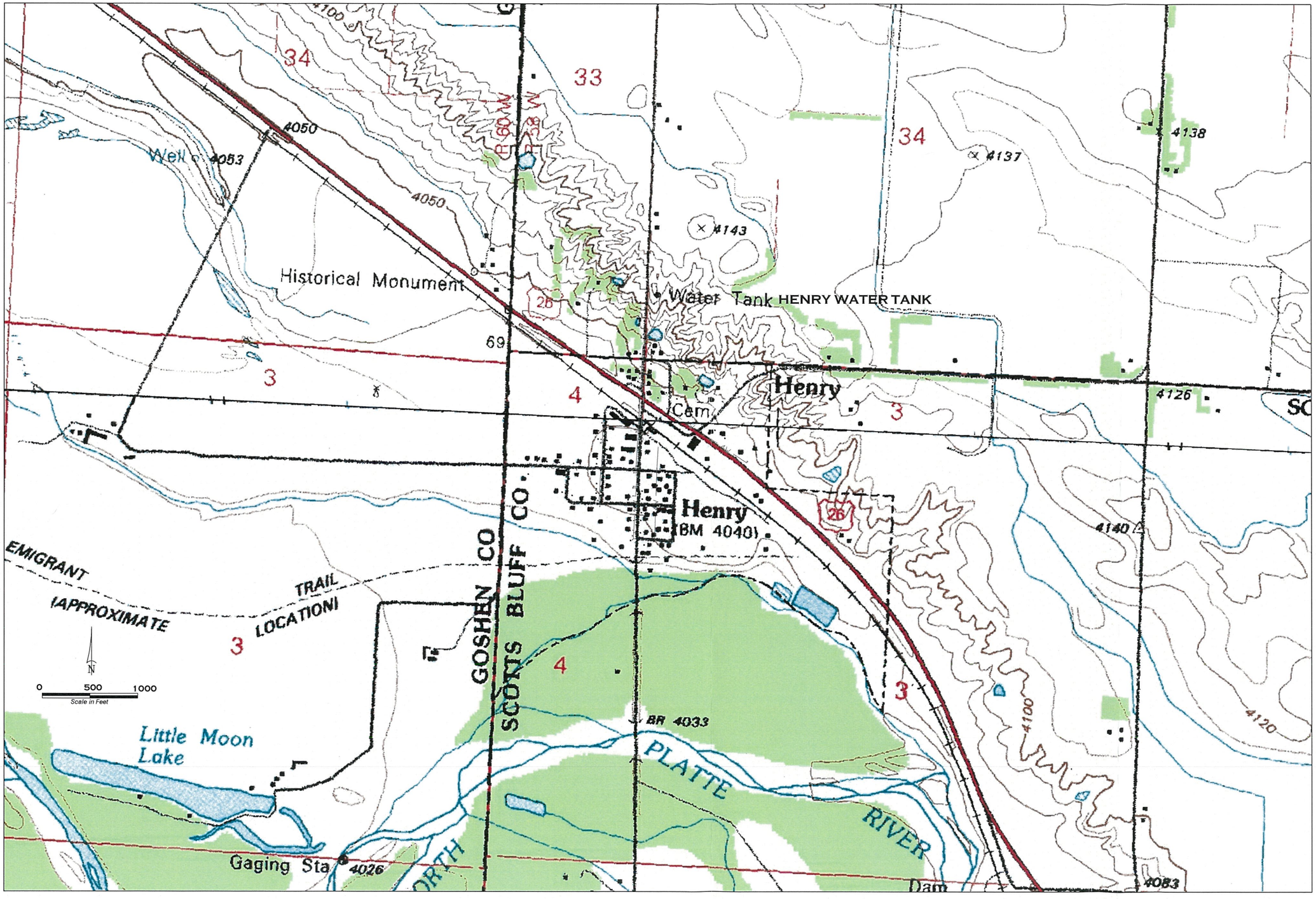
Distribution System Improvements

June 2008-	Approval to begin design of distribution system improvements
August 2008-	Submission of plans and specification for distribution system improvements
January 2009-	Award of distribution system improvement
August 2009-	Completion of distribution system improvements

Appendix

A-1
Topographic Map

TOPOGRAHIC MAP - VILLAGE OF HENRY, NEBRASKA



M. C. SCHAFF & ASSOCIATES, INC.
818 SOUTH BELTLINE HIGHWAY EAST
SCOTTSBLUFF, NEBRASKA 69361
ENGINEERS ◆ PLANNERS ◆ DESIGNERS ◆ LAND SURVEYORS
PH: 308-635-1926 FAX: 308-635-7807 INTERNET: WWW.MCSCHAFF.COM

PROJECT: 1HN072001
TOPOGRAPHIC MAP
HENRY, NEBRASKA

CLIENT: VILLAGE OF HENRY

PROJECT NUMBER: 1HN072001
PROJECT DATE: 01-15-08
PROJECT MGR: F.A.S.
PROJECT TEAM: CR

SEAL

DATE	REVISION

SHEET X OF X

T-1

A-2
Existing Water System

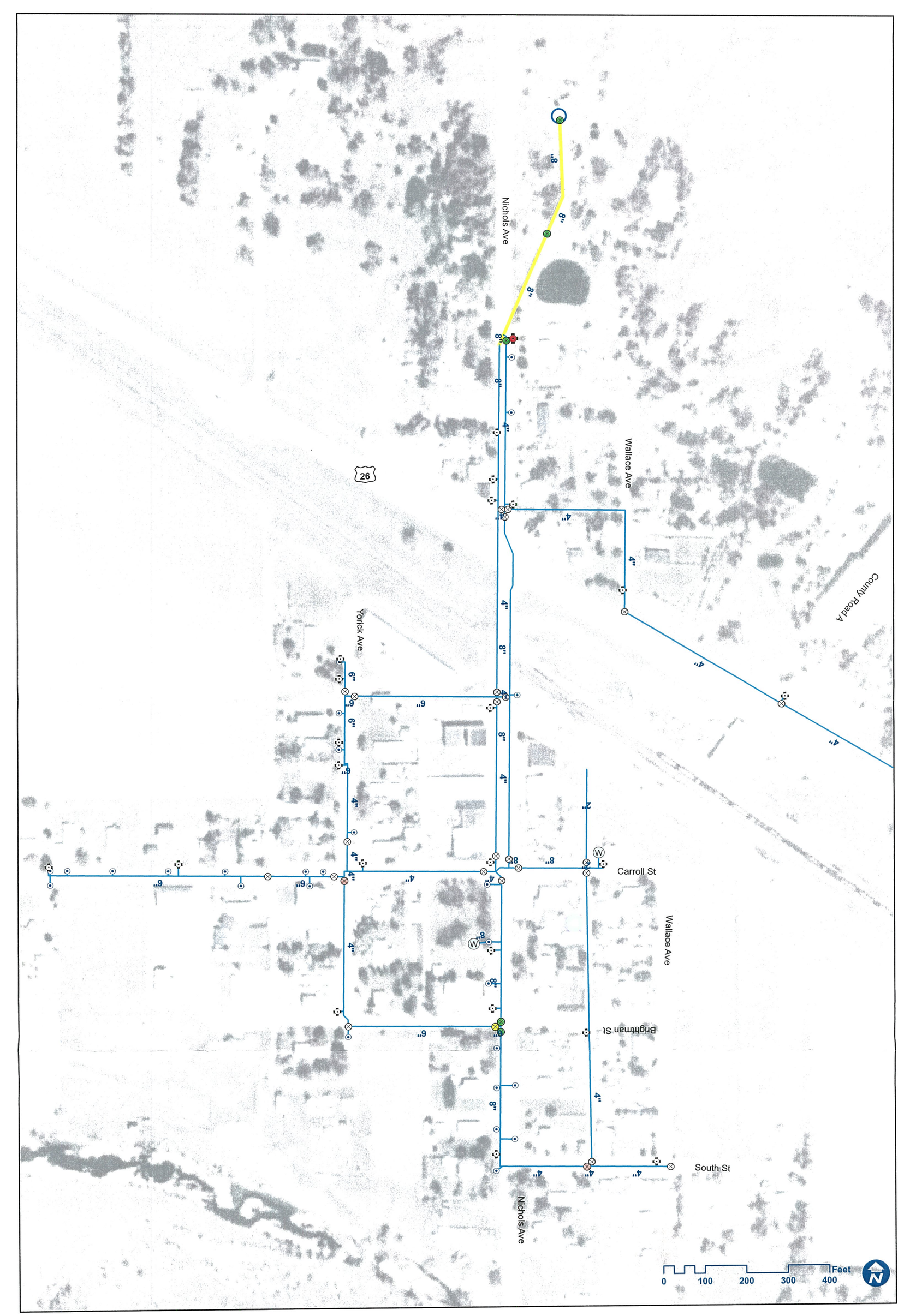
1HN072001

M.C. SCHAFF AND ASSOCIATES, INC.

2" Water Main
4" Water Main
6" Water Main
8" Water Main
Service/Hydrant Lateral
Valve
Hydrant
Water Tower
Well
Curb Stop

Existing Water System
Henry, Nebraska

A-3
Proposed Distribution System Improvements



1HN072001

M.C. SCHAFF AND ASSOCIATES, INC.

- Existing Water Main/Lateral
- Replace 6" Main with 8" Main
- New 50,000 Gallon Storage Tank
- Existing Valve (No Change)
- Install 4" Valve w/Valve Box
- Install 6" Valve W/Valve Box
- Install 8" Valve W/Valve Box
- Existing Hydrant
- Install 5-1/4" Fire Hydrant w/Aux. Valve & Valve Box
- Existing Well
- Existing Curb Stop

Proposed Improvements
Water System
Henry, Nebraska

A-4
Financial Records

Village of Henry in Scotts Bluff County

Line No.	2006-2007 ADOPTED BUDGET Disbursements & Transfers	Operating Expenses (A)	Capital Improvements (B)	Other Capital Outlay (C)	Debt Service (D)	Other (E)	TOTAL
1	Governmental:						
2	General Government	$ 57,500.00		$ 7,000.00		$ 9,000.00	$ 73,500.00
3	Public Safety - Police and Fire	$ 5,000.00					$ 5,000.00
4	Public Safety - Other	$ 3,000.00					$ 3,000.00
5	Public Works - Streets	$ 23,000.00	$ 8,000.00				$ 31,000.00
6	Public Works - Other	$ 3,000.00					$ 3,000.00
7	Public Health and Social Services						$ -
8	Culture and Recreation	$ 2,000.00					$ 2,000.00
9	Community Development			$ 4,000.00			$ 4,000.00
10	Miscellaneous						$ -
11	Business-Type Activities:						
12	Airport						$ -
13	Nursing Home						$ -
14	Hospital						$ -
15	Electric Utility						$ -
16	Solid Waste	$ 11,000.00					$ 11,000.00
17	Transportation						$ -
18	Wastewater						$ -
19	Water						$ -
20	Other						$ -
21	Proprietary Function Funds (Page 6)					$ -	$ -
22	**Total Disbursements & Transfers** (Lns 2 thru 21)	$ 104,500.00	$ 8,000.00	$ 11,000.00	$ -	$ 9,000.00	$ 132,500.00

(A) **Operating Expenses** should include Personal Services, Operating Expenses, Supplies and Materials, and Equipment Rental.

(B) **Capital Improvements** should include acquisition of real property or acquisition, construction, or extension of any improvements on real property.

(C) **Other Capital Outlay** should include other items to be inventoried (i.e. equipment, vehicles, etc.).

(D) **Debt Service** should include Bond Principal and Interest Payments, Payments to Retirement Interest-Free Loans from NDA (Airports) and other debt payments.

(E) **Other** should include Judgments, Transfers, Transfers of Surplus Fees, and Proprietary Function Funds if a separate budget is filed.

Village of Henry, Nebraska

Exhibit A
(Page 2 of 2)

STATEMENT OF CASH RECEIPTS AND DISBURSEMENTS - ALL FUNDS - FOR THE PERIOD 10/1/06 THROUGH 9/30/07

Funds should be accumulated and reported using the fund types listed below. **See Note 4. On Memo.**

		General Fund	Special Revenue Funds	Capital Projects Funds	Debt Service Funds	Enterprise Funds	Internal Service Funds	TOTAL
DISBURSEMENTS:		xxxxxxxx	xxxxxxxx	xxxxxxxx	xxxxxxxx	xxxxxxxx	xxxxxxxx	xxxxxxxx
	Governmental:	xxxxxxxx	xxxxxxxx	xxxxxxxx	xxxxxxxx	xxxxxxxx	xxxxxxxx	xxxxxxxx
27	General Government	30,686.00	6,820.00					37,506.00
28	Public Safety - Police & Fire	3,316.00						3,316.00
29	Public Safety - Other	400.00						400.00
30	Public Works - Streets							-
31	Public Works - Other							-
32	Public Health & Social Services							-
33	Capital Improvements	20,858.00						20,858.00
34	Other Capital Outlay							-
35	Culture & Recreation							-
36	Community Development							-
37	Debt Service							-
38	Miscellaneous							-
	Business-Type Activities:	xxxxxxxx	xxxxxxxx	xxxxxxxx	xxxxxxxx	xxxxxxxx	xxxxxxxx	xxxxxxxx
39	Airport							-
40	Nursing Home							-
41	Hospital							-
42	Electric Utility							-
43	Solid Waste	9,303.00						9,303.00
44	Transportation							-
45	Wastewater							-
46	Water	3,107.00						3,107.00
47	**Transfers Out of Surplus Fees (Should = Page 1, Line 17)**							-
48	Transfers Out Other Than Surplus Fees (Should = Page 1, Li	5,317.00						5,317.00
49	Other (Judgments, etc.)							-
50	**Total Disbursements & Transfers** (Lines 27 through 49)	72,987.00	6,820.00	-	-	-	-	79,807.00

Village of Henry
Sales by Item Summary
October 2006 through September 2007

	Oct '06 - Sep '07			
	Qty	Amount	% of Sales	Avg Price
Service				
Garbage	711	9,403.84	26.5%	13.23
Refund	4	-6.08	-0.0%	-1.52
Sewage	713	3,552.66	10.0%	4.98
Utility Depos	11	447.32	1.3%	40.67
Water	741	21,603.44	60.8%	29.15
Total Service		35,001.18	98.5%	
Other Charges				
Misc	12	411.00	1.2%	34.25
Past Due	1	3.61	0.0%	3.61
Penalty	27	136.00	0.4%	5.04
Total Other Charges		550.61	1.5%	
Discounts				
Credit		-0.10	-0.0%	
Total Discounts		-0.10	-0.0%	
TOTAL		**35,551.69**	**100.0%**	

Village of Henry in Scotts Bluff County

Line No.	2005-2006 ACTUAL/ESTIMATED Disbursements & Transfers	Operating Expenses (A)	Capital Improvements (B)	Other Capital Outlay (C)	Debt Service (D)	Other (E)	TOTAL
1	Governmental:						
2	General Government	$ 28,000.00		$ 4,125.00		$ 9,000.00	$ 41,125.00
3	Public Safety - Police and Fire	$ 650.00					$ 650.00
4	Public Safety - Other	$ 2,250.00					$ 2,250.00
5	Public Works - Streets		$ 8,600.00				$ 8,600.00
6	Public Works - Other						$ -
7	Public Health and Social Services						$ -
8	Culture and Recreation						$ -
9	Community Development						$ -
10	Miscellaneous						$ -
11	Business-Type Activities:						
12	Airport						$ -
13	Nursing Home						$ -
14	Hospital						$ -
15	Electric Utility						$ -
16	Solid Waste	$ 9,500.00					$ 9,500.00
17	Transportation						$ -
18	Wastewater						$ -
19	Water						$ -
20	Other						$ -
21	Proprietary Function Funds						$ -
22	**Total Disbursements & Transfers** (Ln 2 thru 21)	$ 40,400.00	$ 8,600.00	$ 4,125.00	$ -	$ 9,000.00	$ 62,125.00

(A) **Operating Expenses** should include Personal Services, Operating Expenses, Supplies and Materials, and Equipment Rental.

(B) **Capital Improvements** should include acquisition of real property or acquisition, construction, or extension of any improvements on real property.

(C) **Other Capital Outlay** should include other items to be inventoried (i.e. equipment, vehicles, etc.).

(D) **Debt Service** should include Bond Principal and Interest Payments, Payments to Retirement Interest-Free Loans from NDA (Airports) and other debt payments.

(E) **Other** should include Judgments, Transfers, Transfers of Surplus Fees, and Proprietary Function Funds if a separate budget is filed.

Village of Henry, Nebraska

STATEMENT OF CASH RECEIPTS AND DISBURSEMENTS - ALL FUNDS - FOR THE PERIOD 10/1/05 THROUGH 9/30/06

Funds should be accumulated and reported using the fund types listed below. **See Note 4. On Memo.**

		General Fund	Special Revenue Funds	Capital Projects Funds	Debt Service Funds	Enterprise Funds	Internal Service Funds	TOTAL
DISBURSEMENTS:		xxxxxxxx	xxxxxxxx	xxxxxxxx	xxxxxxxx	xxxxxxxx	xxxxxxxx	xxxxxxxx
	Governmental:	xxxxxxxx	xxxxxxxx	xxxxxxxx	xxxxxxxx	xxxxxxxx	xxxxxxxx	xxxxxxxx
27	General Government	22,793.00	6,601.00					29,394.00
28	Public Safety - Police & Fire	591.00						591.00
29	Public Safety - Other	640.00						640.00
30	Public Works - Streets							-
31	Public Works - Other							-
32	Public Health & Social Services							-
33	Capital Improvements	4,125.00	8,562.00					12,687.00
34	Other Capital Outlay							-
35	Culture & Recreation							-
36	Community Development							-
37	Debt Service	4,066.00						4,066.00
38	Miscellaneous							-
	Business-Type Activities:	xxxxxxxx	xxxxxxxx	xxxxxxxx	xxxxxxxx	xxxxxxxx	xxxxxxxx	xxxxxxxx
39	Airport							-
40	Nursing Home							-
41	Hospital							-
42	Electric Utility							-
43	Solid Waste	9,979.00						9,979.00
44	Transportation							-
45	Wastewater							-
46	Water	1,642.00						1,642.00
47	Transfers Out of Surplus Fees **(Should = Page 1, Line 17)**							-
48	Transfers Out Other Than Surplus Fees **(Should = Page 1, Li**	5,683.00						5,683.00
49	Other (Judgments, etc.)							-
50	**Total Disbursements & Transfers** (Lines 27 through 49)	49,519.00	15,163.00	-	-	-	-	64,682.00

Village of Henry in Scotts Bluff County

Line No.	2004-2005 ACTUAL Disbursements & Transfers	Operating Expenses (A)	Capital Improvements (B)	Other Capital Outlay (C)	Debt Service (D)	Other (E)	TOTAL
1	Governmental:						
2	General Government	$ 25,392.00				$ 9,192.00	$ 34,584.00
3	Public Safety - Police and Fire	$ 345.00					$ 345.00
4	Public Safety - Other	$ 880.00					$ 880.00
5	Public Works - Streets		$ 9,327.00				$ 9,327.00
6	Public Works - Other						$ -
7	Public Health and Social Services						$ -
8	Culture and Recreation						$ -
9	Community Development						$ -
10	Miscellaneous						$ -
11	Business-Type Activities:						
12	Airport						$ -
13	Nursing Home						$ -
14	Hospital						$ -
15	Electric Utility						$ -
16	Solid Waste	$ 9,980.00					$ 9,980.00
17	Transportation						$ -
18	Wastewater						$ -
19	Water						$ -
20	Other						$ -
21	Proprietary Function Funds						$ -
22	**Total Disbursements & Transfers** (Ln 2 thru 21)	$ 36,597.00	$ 9,327.00	$ -	$ -	$ 9,192.00	$ 55,116.00

(A) **Operating Expenses** should include Personal Services, Operating Expenses, Supplies and Materials, and Equipment Rental.

(B) **Capital Improvements** should include acquisition of real property or acquisition, construction, or extension of any improvements on real property.

(C) **Other Capital Outlay** should include other items to be inventoried (i.e. equipment, vehicles, etc.).

(D) **Debt Service** should include Bond Principal and Interest Payments, Payments to Retirement Interest-Free Loans from NDA (Airports) and other debt payments.

(E) **Other** should include Judgments, Transfers, Transfers of Surplus Fees, and Proprietary Function Funds if a separate budget is filed.

Village of Henry, Nebraska

STATEMENT OF CASH RECEIPTS AND DISBURSEMENTS - ALL FUNDS - FOR THE PERIOD 10/1/04 THROUGH 9/30/05

Funds should be accumulated and reported using the fund types listed below. **See Note 4. On Memo.**

		General Fund	Special Revenue Funds	Capital Projects Funds	Debt Service Funds	Enterprise Funds	Internal Service Funds	TOTAL
DISBURSEMENTS:		xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx
	Governmental:	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx
27	General Government	19,283.00	6,109.00					25,392.00
28	Public Safety - Police & Fire	345.00						345.00
29	Public Safety - Other	880.00						880.00
30	Public Works - Streets							-
31	Public Works - Other							-
32	Public Health & Social Services							-
33	Capital Improvements		8,327.00					8,327.00
34	Other Capital Outlay	1,000.00						1,000.00
35	Culture & Recreation							-
36	Community Development							-
37	Debt Service							-
38	Miscellaneous							-
	Business-Type Activities:	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx
39	Airport							-
40	Nursing Home							-
41	Hospital							-
42	Electric Utility							-
43	Solid Waste	9,980.00						9,980.00
44	Transportation							-
45	Wastewater							-
46	Water							-
47	Transfers Out of Surplus Fees **(Should = Page 1, Line 17)**							-
48	Transfers Out Other Than Surplus Fees **(Should = Page 1, Lir**	9,192.00						9,192.00
49	Other (Judgments, etc.)							-
50	**Total Disbursements & Transfers** (Lines 27 through 49)	40,680.00	14,436.00	-	-	-	-	55,116.00

A-5
Lead/Copper Exceedance Advisory

NEBRASKA HEALTH AND HUMAN SERVICES SYSTEM

DEPARTMENT OF SERVICES • DEPARTMENT OF REGULATION AND LICENSURE
DEPARTMENT OF FINANCE AND SUPPORT

STATE OF NEBRASKA
MIKE JOHANNS, GOVERNOR

DAVID DERR, BOARD CHAIRPERSON
Village of Henry
1565 Nichols Ave
PO Box 76
HENRY, NE 69349-0076

February 11, 2005

RE: Public Water System - Village of Henry - ID # NE3115706 -
LEAD/COPPER EXCEEDANCE ADVISORY

The results of your most recent water samples tested for copper yielded a 90th percentile value in excess of the EPA/Nebraska Action Level of 1.3 mg/l (same as parts per million, ppm) for copper. Nebraska's Regulations Governing Public Water Supply Systems requires that you take steps to reduce the levels of copper in drinking water at users' taps. Those steps are outlined in this letter, along with deadlines for completion. Since your water system serves less than 500 persons, you must choose one of the 3 options listed below.

THIS NOTICE REQUIRES THAT YOU TAKE SPECIFIC ACTION IN A TIMELY MANNER. PLEASE READ THIS ADVISORY CAREFULLY AND CALL IF YOU HAVE ANY QUESTIONS. Failure to comply with any required step or item within the specified time frame will result in a *violation* order being issued which may, in turn, result in a fine or other penalty.

You are invited to call Program Specialist Steve Drda in Lincoln at (402) 471-1008 to discuss your option to try to "sample-out" of the treatment requirements. This additional sampling is optional, not required. However we highly recommend it to either *confirm* or *eliminate* the need for corrosion control treatment. **If each of two full rounds of 10 samples each, collected at least two months but not more than twelve months apart, yields 90th percentile results below the Action Levels for both lead and copper, then the requirements for corrosion control, public notification, etc. will terminate, and your System would return to compliance.** If you wish to try to sample-out, you should begin *this year* (2005). Contact Steve Drda or your field representative, DOUG ALLEN at 308-535-8216 before doing any re-sampling, to review proper sampling procedures, and to review your sample sites. Lead and copper test results are very sensitive to sampling technique.

The owner of the water System must perform a corrosion control study and recommend optimal corrosion control treatment (OCCT) to the Nebraska Department of Health and Human Services Regulation and Licensure (NHHS R&L). The NHHS R&L require that a registered professional engineer perform the corrosion control study. Prior to installation of OCCT, the treatment will have to be reviewed and approved by NHHS R&L. The time frames shown on the next page will apply.

You may elect to try to 'sample-out' by taking additional lead and copper samples while these requirements are in effect. Should each of two consecutive full rounds of samples, collected at least two months but not more than twelve months apart, test below the action level for copper, then enforcement of these requirements will cease.
The requirements detailed in this letter will remain in effect until all have been fully implemented, or until 'sampling-out' is both successful and complete.

Please note that the above requirements are in accordance with those set forth in Nebraska's Regulations Governing Public Water Supply Systems, Title 179 NAC 2. Should you have questions about the content of this letter, please call Program Specialist Steve Drda at 402-471-1008.

Sincerely,

Jack L. Daniel, Section Administrator
Environmental Health Services Section

c: GARY M. SCOTT, WATER OPERATOR
SENATOR LEROY J. LOUDEN, 49
DOUG ALLEN, HHS R&L
Steve Drda, HHS R&L
NE Rural Water Association

NOTE: While pursuing either Option #1, #2, or #3, your System may elect to continue sampling for Lead and Copper. If 90th percentile test results for two full rounds of samples drawn at least two months but not more than twelve months apart are below the Action Levels, then your System will be returned to compliance and a routine monitoring schedule.

Option #1:

The owner of the water System must perform a corrosion control study and recommend optimal corrosion control treatment (OCCT) to the Nebraska Department of Health and Human Services Regulation and Licensure (NHHS R&L). The NHHS R&L requires that the corrosion control study be performed by a registered professional engineer. Prior to installation of OCCT, the treatment will have to be reviewed and approved by NHHS R&L. The following time frames will apply to Option #1:

DUE BY	ACTION
July 1, 2005	Collect one Lead and Copper sample from each Point of Entry (POE) to determine if source water treatment is necessary.
July 1, 2005	Collect 2 Water Quality Parameter (WQP) samples from each POE to the distribution system. [WQPs are: Temperature, pH, Alkalinity, Calcium Hardness, and Conductivity.] Also collect 2 WQP samples from 1 site representative of your distribution system. (Total coliform sampling sites may be used for WQP sampling locations.) WQP results are intended to show seasonal changes in water quality. **These sampling requirements for WQPs must be repeated at least twice per year until corrosion control treatment is installed**. pH and Temperature must be measured immediately upon sample collection. Other WQPs may be measured using your own equipment, or you may order sample kits from the Nebraska HHS Lab at (402) 471-3935.
July 1, 2006	Submit recommended OCCT to NHHS R&L based on the study performed for you by a registered professional engineer.
January 1, 2007	NHHS R&L designates OCCT for the PWS.
January 1, 2009	PWS completes installation of OCCT
January 1, 2009	PWS will have completed two full rounds of follow up sampling for lead and copper within 12 month period. Once the System maintains optimal corrosion control for this period, they may then proceed to a reduced monitoring plan. If the System exceeds an action level during the follow-up monitoring, the State will designate the water quality parameter ranges defining optimal corrosion control treatment.
July 1, 2010	NHHS R&L designates water quality parameters for optimal corrosion control. Once the System maintains State specified water quality parameters reflecting optimal corrosion control for two consecutive six-month monitoring periods, they may proceed to a reduced monitoring plan. If the System continues to exceed an action level but meets the State specified water quality parameters, they may be allowed to reduce lead and copper tap water sampling and water quality parameter monitoring frequencies. This criteria is determined by system size and will be addressed on a case by case basis.

Option #2

PWS's with populations less than 500 may use Point Of Entry (POE) treatment devices or Point Of Use (POU) treatment devices at all sites used for drinking water in lieu of chemical corrosion control to protect public health as required by Sections 1412(4)(E)(ii) and (12)(B)(ii) of the Safe Drinking Water Act.

The following conditions will be required for POE or POU treatment devices at all service connections served by the PWS. (1) POE/POU treatment devices must be owned, controlled and maintained by the PWS; (2) POE/POU treatment devices must be equipped with mechanical warnings to ensure that customers are automatically notified of operational problems; (3) POE/POU treatment devices must be independently certified as meeting an ANSI standard for the particular type of POE/POU treatment device used; and (4) A NHHS R&L approved sampling and maintenance plan for the POU/ POU treatment devices must be implemented. The time frame for implementation of Option #2 is as follows:

DUE BY	ACTION
July 1, 2005	Collect one Lead and Copper sample from each Point of Entry (POE) to determine if source water treatment is necessary.
July 1, 2005	Collect 2 Water Quality Parameter (WQP) samples from each POE to the distribution system. [WQPs are: Temperature, pH, Alkalinity, Calcium Hardness, and Conductivity.] Also collect 2 WQP samples from 1 site representative of your distribution system. (Total coliform sampling sites may be used for WQP sampling locations.) WQP results are intended to show seasonal changes in water quality. **These sampling requirements for WQPs must be repeated at least twice per year until corrosion control treatment is installed, or until Option #2 or Option #3 is officially chosen**. pH and Temperature must be measured immediately upon sample collection. Other WQPs may be measured using your own equipment, or you may order sample kits from the Nebraska HHS Lab at (402) 471-3935.
January 1, 2006	PWS submits their decision to NHHS R&L to implement Option #2.
July 1, 2006	PWS and NHHS R&L determine: (1) which POE/POU treatment device to install; and (2) the sampling plan for the POE/POU treatment devices.
July 1, 2007	PWS installs and begins operating POE/POU treatment devices.
January 1, 2008	PWS completes a round of sampling for lead and copper at sites representative of those POE/POU treatment devices. System will sample on an annual basis there after.

If the System continues to exceed either the lead or copper action level, the System will need to re-evaluate and fall into a schedule to meet either Option #1 or #3 criteria.

NHHS R&L will address issues on a case by case basis for circumstances that arise during or after implementation of Option #2. (i.e., the System population becomes >500.)

Option #3

PWS's with populations less than 500 may supply bottled water at all sites used in lieu of chemical corrosion control in order to be protective of public health as required by Sections 1412(4)(E)(ii) and (12)(B)(ii) of the Safe Drinking Water Act. PWS's must supply bottled water (or other NHHS R&L approved alternative water) for drinking to all service connections served by the PWS. Bottled water must be certified that it meets FDA regulations or determined by NHHS R&L to meet all applicable National Primary Drinking Water Regulations. The time frame for Option #3 is as follows:

DUE BY	ACTION
July 1, 2005	Collect one Lead and Copper sample from each Point of Entry (POE) to determine if source water treatment is necessary.
July 1, 2005	Collect 2 Water Quality Parameter (WQP) samples from each POE to the distribution system. [WQPs are: Temperature, pH, Alkalinity, Calcium Hardness, and Conductivity.] Also collect 2 WQP samples from each of 1 sites representative of your distribution system. (Total coliform sampling sites may be used for WQP sampling locations.) WQP results are intended to show seasonal changes in water quality. **These sampling requirements for WQPs must be repeated at least twice per year until corrosion control treatment is installed, or until Option #2 or Option #3 is officially chosen**. pH and Temperature must be measured immediately upon sample collection. Other WQPs may be measured using your own equipment, or you may order sample kits from the Nebraska HHS Lab at (402) 471-3935.
January 1, 2006	PWS submits their decision to NHHS R&L to implement Option #3.
July 1, 2006	PWS arranges for NHHS R&L approved bottled water delivery method.
July 1, 2007	PWS begins delivery of bottled water.

NHHS R&L will address issues on a case by case basis for circumstances that arise during or after implementation of Option #3 (i.e., the System population becomes >500.)