

Appendix : Water Resources and Utilities

Water Supply Plan

Prepared by: Bolton & Menk, Inc.
Transportation Plan

Appendix 1: Well Records

Minnesota Unique Well No.

201245

County Scott
 Quad Belle Plaine South
 Quad ID 91D

MINNESOTA DEPARTMENT OF HEALTH
**WELL AND BORING
 RECORD**

Entry Date 05/05/1989
 Update Date 05/22/2014
 Received Date

Minnesota Statutes Chapter 103I

Well Name BELLE PLAINE 1 WEST WELL Township Range Dir Section Subsections Elevation 866 ft. 113 24 W 6 CACDCA Elevation Method Calc from DEM (USGS 7.5 min or equiv.)		<table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:33%;">Well Depth</td> <td style="width:33%;">Depth Completed</td> <td colspan="2">Date Well Completed</td> </tr> <tr> <td>280 ft.</td> <td>280 ft.</td> <td colspan="2">00/00/1949</td> </tr> <tr> <td colspan="4">Drilling Method --</td> </tr> </table>			Well Depth	Depth Completed	Date Well Completed		280 ft.	280 ft.	00/00/1949		Drilling Method --																																																																														
Well Depth	Depth Completed	Date Well Completed																																																																																									
280 ft.	280 ft.	00/00/1949																																																																																									
Drilling Method --																																																																																											
Well Address BELLE PLAINE MN		<table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%;">Drilling Fluid --</td> <td colspan="3">Well Hydrofractured? <input type="checkbox"/> Yes <input type="checkbox"/> No From Ft. to Ft.</td> </tr> <tr> <td colspan="4">Use Community Supply PWS ID Source</td> </tr> <tr> <td colspan="4">Casing Type Joint No Information Drive Shoe? <input type="checkbox"/> Yes <input type="checkbox"/> No No Above/Below 0 ft.</td> </tr> <tr> <td colspan="2">Casing Diameter</td> <td>Weight</td> <td>Hole Diameter</td> </tr> <tr> <td colspan="2">16 in. to 261 ft.</td> <td>lbs./ft.</td> <td></td> </tr> <tr> <td colspan="4">Open Hole from ft. to ft.</td> </tr> <tr> <td colspan="4">Screen YES Make JOHNSON EVERDUR Type</td> </tr> <tr> <td>Diameter</td> <td>Slot/Gauze</td> <td>Length</td> <td>Set Between</td> </tr> <tr> <td>16</td> <td></td> <td>20</td> <td>260 ft. and 280 ft.</td> </tr> </table>			Drilling Fluid --	Well Hydrofractured? <input type="checkbox"/> Yes <input type="checkbox"/> No From Ft. to Ft.			Use Community Supply PWS ID Source				Casing Type Joint No Information Drive Shoe? <input type="checkbox"/> Yes <input type="checkbox"/> No No Above/Below 0 ft.				Casing Diameter		Weight	Hole Diameter	16 in. to 261 ft.		lbs./ft.		Open Hole from ft. to ft.				Screen YES Make JOHNSON EVERDUR Type				Diameter	Slot/Gauze	Length	Set Between	16		20	260 ft. and 280 ft.																																																			
Drilling Fluid --	Well Hydrofractured? <input type="checkbox"/> Yes <input type="checkbox"/> No From Ft. to Ft.																																																																																										
Use Community Supply PWS ID Source																																																																																											
Casing Type Joint No Information Drive Shoe? <input type="checkbox"/> Yes <input type="checkbox"/> No No Above/Below 0 ft.																																																																																											
Casing Diameter		Weight	Hole Diameter																																																																																								
16 in. to 261 ft.		lbs./ft.																																																																																									
Open Hole from ft. to ft.																																																																																											
Screen YES Make JOHNSON EVERDUR Type																																																																																											
Diameter	Slot/Gauze	Length	Set Between																																																																																								
16		20	260 ft. and 280 ft.																																																																																								
Geological Material <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:60%;"></th> <th style="width:10%;">Color</th> <th style="width:10%;">Hardness</th> <th style="width:10%;">From</th> <th style="width:10%;">To</th> </tr> </thead> <tbody> <tr><td>HARDPAN</td><td></td><td></td><td>0</td><td>22</td></tr> <tr><td>SAND & GRAVEL</td><td></td><td></td><td>22</td><td>58</td></tr> <tr><td>HARDPAN & BOULDERS</td><td></td><td></td><td>58</td><td>64</td></tr> <tr><td>CLAY</td><td></td><td></td><td>64</td><td>110</td></tr> <tr><td>FINE SAND & CLAY</td><td></td><td></td><td>110</td><td>115</td></tr> <tr><td>HARDPAN & BOULDERS</td><td></td><td></td><td>115</td><td>185</td></tr> <tr><td>VERY FINE SAND</td><td></td><td></td><td>185</td><td>201</td></tr> <tr><td>SAND</td><td></td><td></td><td>201</td><td>218</td></tr> <tr><td>HARDPAN</td><td></td><td></td><td>218</td><td>241</td></tr> <tr><td>SAND & GRAVEL</td><td></td><td></td><td>241</td><td>280</td></tr> </tbody> </table>			Color	Hardness	From	To	HARDPAN			0	22	SAND & GRAVEL			22	58	HARDPAN & BOULDERS			58	64	CLAY			64	110	FINE SAND & CLAY			110	115	HARDPAN & BOULDERS			115	185	VERY FINE SAND			185	201	SAND			201	218	HARDPAN			218	241	SAND & GRAVEL			241	280	<table style="width:100%; border-collapse: collapse;"> <tr> <td colspan="4">Static Water Level</td> </tr> <tr> <td colspan="4">134 ft. from Land surface Date Measured 00/00/1949</td> </tr> <tr> <td colspan="4">PUMPING LEVEL (below land surface)</td> </tr> <tr> <td colspan="4">146.5 ft. after hrs. pumping 663 g.p.m.</td> </tr> <tr> <td colspan="4">Well Head Completion</td> </tr> <tr> <td colspan="4">Pitless adapter manufacturer Model</td> </tr> <tr> <td colspan="4"><input type="checkbox"/> Casing Protection <input type="checkbox"/> 12 in. above grade</td> </tr> <tr> <td colspan="4"><input type="checkbox"/> At-grade (Environmental Wells and Borings ONLY)</td> </tr> </table>			Static Water Level				134 ft. from Land surface Date Measured 00/00/1949				PUMPING LEVEL (below land surface)				146.5 ft. after hrs. pumping 663 g.p.m.				Well Head Completion				Pitless adapter manufacturer Model				<input type="checkbox"/> Casing Protection <input type="checkbox"/> 12 in. above grade				<input type="checkbox"/> At-grade (Environmental Wells and Borings ONLY)			
	Color	Hardness	From	To																																																																																							
HARDPAN			0	22																																																																																							
SAND & GRAVEL			22	58																																																																																							
HARDPAN & BOULDERS			58	64																																																																																							
CLAY			64	110																																																																																							
FINE SAND & CLAY			110	115																																																																																							
HARDPAN & BOULDERS			115	185																																																																																							
VERY FINE SAND			185	201																																																																																							
SAND			201	218																																																																																							
HARDPAN			218	241																																																																																							
SAND & GRAVEL			241	280																																																																																							
Static Water Level																																																																																											
134 ft. from Land surface Date Measured 00/00/1949																																																																																											
PUMPING LEVEL (below land surface)																																																																																											
146.5 ft. after hrs. pumping 663 g.p.m.																																																																																											
Well Head Completion																																																																																											
Pitless adapter manufacturer Model																																																																																											
<input type="checkbox"/> Casing Protection <input type="checkbox"/> 12 in. above grade																																																																																											
<input type="checkbox"/> At-grade (Environmental Wells and Borings ONLY)																																																																																											
<p style="text-align: center;">NO REMARKS</p> <p>Located by: Minnesota Department of Health Method: GPS Differentially Corrected</p> <p>Unique Number Verification: Info/GPS from data source Input Date: 06/27/1994</p> <p>System: UTM - Nad83, Zone15, Meters X: 439666 Y: 4940964</p>		<table style="width:100%; border-collapse: collapse;"> <tr> <td colspan="4">Grouting Information Well Grouted? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Specified</td> </tr> <tr> <td colspan="4">Nearest Known Source of Contamination</td> </tr> <tr> <td colspan="4">_feet _direction _type</td> </tr> <tr> <td colspan="4">Well disinfected upon completion? <input type="checkbox"/> Yes <input type="checkbox"/> No</td> </tr> <tr> <td colspan="4">Pump <input type="checkbox"/> Not Installed Date Installed</td> </tr> <tr> <td colspan="4">Manufacturer's name Model number __ HP _ Volts</td> </tr> <tr> <td colspan="4">Length of drop Pipe _ft. Capacity _g.p.m Type Material</td> </tr> </table>			Grouting Information Well Grouted? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Specified				Nearest Known Source of Contamination				_feet _direction _type				Well disinfected upon completion? <input type="checkbox"/> Yes <input type="checkbox"/> No				Pump <input type="checkbox"/> Not Installed Date Installed				Manufacturer's name Model number __ HP _ Volts				Length of drop Pipe _ft. Capacity _g.p.m Type Material																																																														
Grouting Information Well Grouted? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Specified																																																																																											
Nearest Known Source of Contamination																																																																																											
_feet _direction _type																																																																																											
Well disinfected upon completion? <input type="checkbox"/> Yes <input type="checkbox"/> No																																																																																											
Pump <input type="checkbox"/> Not Installed Date Installed																																																																																											
Manufacturer's name Model number __ HP _ Volts																																																																																											
Length of drop Pipe _ft. Capacity _g.p.m Type Material																																																																																											
<p>First Bedrock</p> <p>Last Strat sand +larger</p>		<table style="width:100%; border-collapse: collapse;"> <tr> <td colspan="4">Abandoned Wells Does property have any not in use and not sealed well(s)? <input type="checkbox"/></td> </tr> <tr> <td colspan="4">Yes <input type="checkbox"/> No</td> </tr> <tr> <td colspan="4">Variance Was a variance granted from the MDH for this well? <input type="checkbox"/> Yes <input type="checkbox"/> No</td> </tr> <tr> <td colspan="4">Well Contractor Certification</td> </tr> <tr> <td colspan="2"><u>Keys Well Co.</u></td> <td><u>62012</u></td> <td><u>KEYS WELL</u></td> </tr> <tr> <td colspan="2">License Business Name</td> <td>Lic. Or Reg. No.</td> <td>Name of Driller</td> </tr> </table>			Abandoned Wells Does property have any not in use and not sealed well(s)? <input type="checkbox"/>				Yes <input type="checkbox"/> No				Variance Was a variance granted from the MDH for this well? <input type="checkbox"/> Yes <input type="checkbox"/> No				Well Contractor Certification				<u>Keys Well Co.</u>		<u>62012</u>	<u>KEYS WELL</u>	License Business Name		Lic. Or Reg. No.	Name of Driller																																																															
Abandoned Wells Does property have any not in use and not sealed well(s)? <input type="checkbox"/>																																																																																											
Yes <input type="checkbox"/> No																																																																																											
Variance Was a variance granted from the MDH for this well? <input type="checkbox"/> Yes <input type="checkbox"/> No																																																																																											
Well Contractor Certification																																																																																											
<u>Keys Well Co.</u>		<u>62012</u>	<u>KEYS WELL</u>																																																																																								
License Business Name		Lic. Or Reg. No.	Name of Driller																																																																																								
<p>County Well Index Online Report</p>		<p>201245</p>		Printed 1/21/2015 HE-01205-07																																																																																							

Minnesota Unique Well No.

538038

County Scott
 Quad Belle Plaine South
 Quad ID 91D

MINNESOTA DEPARTMENT OF HEALTH
**WELL AND BORING
 RECORD**

Entry Date 07/15/1994
 Update Date 03/10/2014
 Received Date

Minnesota Statutes Chapter 103I

Well Name BELLE PLAINE 3 Township Range Dir Section Subsections Elevation 860 ft. 113 24 W 6 DBCBCA Elevation Method 7.5 minute topographic map (+/- 5 feet)		Well Depth 330 ft. Depth Completed 330 ft. Date Well Completed 06/10/1994
Well Address LAREDO ST BELLE PLAINE MN 56011		Drilling Method Cable Tool Drilling Fluid Bentonite Well Hydrofractured? <input type="checkbox"/> Yes <input type="checkbox"/> No From Ft. to Ft.
Geological Material Color Hardness From To SAND & GRAVEL BROWN MEDIUM 0 25 BIG BOULDERS VARIED HARD 25 55 SANDY CLAY/STONE BROWN MEDIUM 55 85 SANDY CLAY/STONE GRAY MEDIUM 85 117 FINE SAND BROWN SOFT 117 150 WET SAND BROWN SOFT 150 273 WET SAND/GRAVEL GRY/BRN SOFT 273 289 SAND & GRAVEL VARIED SOFT 289 330		Use Community Supply PWS ID 1700001 Source S03 Casing Type Steel (black or low carbon) Joint Welded Drive Shoe? <input type="checkbox"/> Yes <input type="checkbox"/> No No Above/Below ft.
		Casing Diameter Weight Hole Diameter 24 in. to 155 ft. 94.6 lbs./ft. 30 in. to 63 ft. 18 in. to 239 ft. 70.6 lbs./ft. 24 in. to 180 ft.
		Open Hole from ft. to ft. Screen YES Make JOHNSON Type stainless steel
		Diameter Slot/Gauze Length Set Between 12 70 85.2 240 ft. and 325 ft.
		Static Water Level 126 ft. from Land surface Date Measured 05/24/1994
		PUMPING LEVEL (below land surface) 164 ft. after 8 hrs. pumping 2030 g.p.m.
NO REMARKS		Well Head Completion Pitless adapter manufacturer Model <input type="checkbox"/> Casing Protection <input checked="" type="checkbox"/> 12 in. above grade <input type="checkbox"/> At-grade (Environmental Wells and Borings ONLY)
Located by: Minnesota Department of Health Method: GPS Differentially Corrected Unique Number Verification: N/A Input Date: 01/25/1995 System: UTM - Nad83, Zone15, Meters X: 440010 Y: 4941053		Grouting Information Well Grouted? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Specified Grout Material: Neat Cement from 0 to 155 ft. 6 yds. Grout Material: Neat Cement from 0 to 120 ft. 6 yds.
		Nearest Known Source of Contamination _feet _direction _type Well disinfected upon completion? <input type="checkbox"/> Yes <input type="checkbox"/> No
		Pump <input type="checkbox"/> Not Installed Date Installed 09/00/1994 Manufacturer's name AMERICAN TURBINE Model number 12-M-150 HP 125 Volts 460 Length of drop Pipe 180 ft. Capacity 1000 g.p.m Type Turbine Material
First Bedrock Last Strat sand +larger		Abandoned Wells Does property have any not in use and not sealed well(s)? <input type="checkbox"/> Yes <input type="checkbox"/> No
Aquifer Quat. Buried Unconf. Aquife Depth to Bedrock ft.		Variance Was a variance granted from the MDH for this well? <input type="checkbox"/> Yes <input type="checkbox"/> No
		Well Contractor Certification Renner E.H. Well 71015 SIGAFOOS, R. License Business Name Lic. Or Reg. No. Name of Driller
County Well Index Online Report		538038 Printed 1/21/2015 HE-01205-07

Minnesota Unique Well No.

651697

County Scott
 Quad Belle Plaine South
 Quad ID 91D

MINNESOTA DEPARTMENT OF HEALTH
**WELL AND BORING
 RECORD**

Entry Date 01/30/2002
 Update Date 03/10/2014
 Received Date

Minnesota Statutes Chapter 103I

Well Name BELLE PLAINE 4 Township Range Dir Section Subsections Elevation 860 ft. 113 24 W 6 DBCBAC Elevation Method 7.5 minute topographic map (+/- 5 feet)		Well Depth 331 ft.	Depth Completed 331 ft.	Date Well Completed 10/09/2001
Well Address 205 LAREDO ST BELLE PLAINE MN 56011		Drilling Method Driven		
Geological Material		Drilling Fluid --		
TOPSOIL SAND SAND CLAY ROCKS SAND CLAY ROCKS FINE SAND MEDIUM SAND FINE SAND MEDIUM COARSE SAND FINE MEDIUM SAND COARSE SAND GRAVEL COARSE SAND & CLAY LAYERS COARSE SAND MEDIUM SAND MEDIUM SAND GRAVEL COARSE SAND GRAVEL SILT		Well Hydrofractured? <input type="checkbox"/> Yes <input type="checkbox"/> No From Ft. to Ft.		
Color BLACK BROWN BROWN GRAY BROWN GRY/BRN BROWN BROWN BROWN BROWN BROWN BROWN BROWN BROWN BROWN BROWN BROWN BLACK		Use Community Supply PWS ID 1700001 Source S04		
Hardness SOFT SOFT MEDIUM MEDIUM SOFT SOFT SOFT SOFT SOFT SOFT SOFT SOFT SOFT SOFT SOFT SOFT SOFT SOFT SOFT SOFT		Casing Type Steel (black or low carbon) Joint Welded Drive Shoe? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No No Above/Below ft.		
From To 0 3 3 44 44 79 79 110 110 216 216 235 235 260 260 270 270 275 275 280 280 295 295 300 300 315 315 330 330 331		Casing Diameter Weight Hole Diameter 24 in. to 217 ft. lbs./ft. 23 in. to 217 ft. 18 in. to 245 ft. lbs./ft. 17 in. to 245 ft.		
		Open Hole from ft. to ft.		
		Screen YES Make JOHNSON Type stainless steel		
		Diameter Slot/Gauze Length Set Between 18 86 245 ft. and 331 ft.		
		Static Water Level 121 ft. from Land surface Date Measured 10/09/2001		
		PUMPING LEVEL (below land surface) 128 ft. after 1 hrs. pumping 500 g.p.m.		
REMARKS M.G.S. NO. 4152. Located by: Minnesota Department of Health Method: GPS SA Off (averaged) Unique Number Verification: N/A Input Date: 11/26/2001 System: UTM - Nad83, Zone15, Meters X: 440024 Y: 4941080		Well Head Completion Pitless adapter manufacturer Model <input type="checkbox"/> Casing Protection <input checked="" type="checkbox"/> 12 in. above grade <input type="checkbox"/> At-grade (Environmental Wells and Borings ONLY)		
		Grouting Information Well Grouted? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Specified Grout Material: Neat Cement from 0 to 217 ft. 11.5 yds.		
		Nearest Known Source of Contamination ___feet ___direction ___type Well disinfected upon completion? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
		Pump <input type="checkbox"/> Not Installed Date Installed Manufacturer's name Model number ___ HP ___ Volts Length of drop Pipe ft. Capacity g.p.m. Type Material		
		Abandoned Wells Does property have any not in use and not sealed well(s)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
		Variance Was a variance granted from the MDH for this well? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
Cuttings Yes First Bedrock Last Strat silt-black		Well Contractor Certification Traut M.J. Well Co. 71536 TONY/CHARLIE License Business Name Lic. Or Reg. No. Name of Driller		
County Well Index Online Report		651697		Printed 1/21/2015 HE-01205-07

McCARTHY WELL COMPANY



590 Citation Drive - Suite I, Shakopee MN 55379-1862

Phone 952-854-5333 ~ Fax 952-445-1950

"THERE'S NO SUBSTITUTE FOR EXPERIENCE"



"18 POINT PUMP PERFORMANCE INSPECTION REPORT"

City of Belle Plaine

Date: 8/6/2013

Belle Plaine MN

Well/Pump Name: 4

This report is not to be used to determine compliance with any codes, regulations, laws, or rules. Its sole purpose is to attempt to evaluate the operating performance of the well and pump at the time of the inspection.

1. Check Wiring & Connections- Good Good Fair Poor
2. Check Starter Overload Protection- Good Good Fair Poor
3. Check Voltage Supply- L 1-4 491 L 2-5 493 L 3-6 495 Good Fair Poor
4. Check Voltage Running- L 1-4 380 L 2-5 381 L 3-6 380 Hertz 52 Good Fair Poor
5. Check Motor Amps- L1 122.0 L2 123.0 L3 124.0 Utilization 71% Good Fair Poor
6. Check Resistance Between Line & Ground- L1 Good L2 Good L3 Good Good Fair Poor
7. Check Resistance Between Motor Windings- L1-2 Good L2-3 Good L1-3 Good Good Fair Poor
8. Check Pump & Motor Operating R.P.M.- Variable Good Fair Poor
9. Check Temperature-Motor Good Well Room Good Good Fair Poor
10. Check Bearing Lube-Motor Top Good Bottom Good Pump Prelube NA Good Fair Poor
11. Check Bearing Noise-Motor Good Pump Good Right Angle Dr NA Good Fair Poor
12. Check Vibration-Motor Good Pump Good Right Angle Dr NA Good Fair Poor
13. Check Discharge Head Packing Box Bearing- NA Good Fair Poor
14. Check Discharge Line Check Valve- Good Pump Foot Valve Good Good Fair Poor
15. Check Start/Stop Cycle- Good Air Relief/Vacuum Breaker Good Good Fair Poor
16. Check Condition Of Water- Good Good Fair Poor
17. Check Pumping Rate- 1200 G.P.M. C.F.P.M. Is The Pump Throttled? Yes Good Fair Poor
18. Check Water Levels-Static 134' Pumping 153' Yield Good GPM Per Foot of Draw Down Good Fair Poor

Comments:

This pump appears to be operating satisfactorily at this time. The motor manufacturer suggests a minimum motor speed of 55 hertz.

Report By: Tim McCarthy

McCARTHY WELL COMPANY

590 Citation Drive - Suite I, Shakopee MN 55379-1862

Phone 952-854-5333 ~ Fax 952-445-1950

"SINCE 1860"

"THERE'S NO SUBSTITUTE FOR EXPERIENCE"

"18 POINT PUMP PERFORMANCE INSPECTION REPORT"

City of Belle Plaine

Date: 7/18/2011

Belle Plaine MN

Well/Pump Name: 4

This report is not to be used to determine compliance with any codes, regulations, laws, or rules. Its sole purpose is to attempt to evaluate the operating performance of the well and pump at the time of the inspection.

1. Check Wiring & Connections-	Good			<input checked="" type="radio"/> Good	<input type="radio"/> Fair	<input type="radio"/> Poor			
2. Check Starter Overload Protection-	Good			<input checked="" type="radio"/> Good	<input type="radio"/> Fair	<input type="radio"/> Poor			
3. Check Voltage Supply-	L 1-4 <u>488</u>	L 2-5 <u>489</u>	L 3-6 <u>488</u>		<input checked="" type="radio"/> Good	<input type="radio"/> Fair	<input type="radio"/> Poor		
4. Check Voltage Running-	L 1-4 <u>406</u>	L 2-5 <u>407</u>	L 3-6 <u>406</u>	Hertz <u>52</u>	<input checked="" type="radio"/> Good	<input type="radio"/> Fair	<input type="radio"/> Poor		
5. Check Motor Amps-	L1 <u>119.0</u>	L2 <u>120.0</u>	L3 <u>122.0</u>	Utilization <u>69%</u>	<input checked="" type="radio"/> Good	<input type="radio"/> Fair	<input type="radio"/> Poor		
6. Check Resistance Between Line & Ground-	L1 <u>Good</u>	L2 <u>Good</u>	L3 <u>Good</u>		<input checked="" type="radio"/> Good	<input type="radio"/> Fair	<input type="radio"/> Poor		
7. Check Resistance Between Motor Windings-	L1-2 <u>Good</u>	L2-3 <u>Good</u>	L1-3 <u>Good</u>		<input checked="" type="radio"/> Good	<input type="radio"/> Fair	<input type="radio"/> Poor		
8. Check Pump & Motor Operating R.P.M.-	Variable				<input checked="" type="radio"/> Good	<input type="radio"/> Fair	<input type="radio"/> Poor		
9. Check Temperature-Motor	<u>Good</u>	Well Room	<u>Good</u>		<input checked="" type="radio"/> Good	<input type="radio"/> Fair	<input type="radio"/> Poor		
10. Check Bearing Lube-Motor Top	<u>Good</u>	Bottom	<u>Good</u>	Pump Prelube	<u>NA</u>	<input checked="" type="radio"/> Good	<input type="radio"/> Fair	<input type="radio"/> Poor	
11. Check Bearing Noise-Motor	<u>Good</u>	Pump	<u>Good</u>	Right Angle Dr	<u>NA</u>	<input checked="" type="radio"/> Good	<input type="radio"/> Fair	<input type="radio"/> Poor	
12. Check Vibration-Motor	<u>Good</u>	Pump	<u>Good</u>	Right Angle Dr	<u>NA</u>	<input checked="" type="radio"/> Good	<input type="radio"/> Fair	<input type="radio"/> Poor	
13. Check Discharge Head Packing Box Bearing-	<u>NA</u>				<input checked="" type="radio"/> Good	<input type="radio"/> Fair	<input type="radio"/> Poor		
14. Check Discharge Line Check Valve-	<u>Good</u>	Pump Foot Valve	<u>Good</u>		<input checked="" type="radio"/> Good	<input type="radio"/> Fair	<input type="radio"/> Poor		
15. Check Start/Stop Cycle-	<u>Good</u>	Air Relief/Vacuum Breaker	<u>Good</u>		<input checked="" type="radio"/> Good	<input type="radio"/> Fair	<input type="radio"/> Poor		
16. Check Condition Of Water-	<u>Good</u>				<input checked="" type="radio"/> Good	<input type="radio"/> Fair	<input type="radio"/> Poor		
17. Check Pumping Rate-	<u>1180</u>	<input checked="" type="radio"/> G.P.M.	<input type="radio"/> C.F.P.M.	Is The Pump Throttled? <u>Yes</u>	<input checked="" type="radio"/> Good	<input type="radio"/> Fair	<input type="radio"/> Poor		
18. Check Water Levels-Static	<u>Good</u>	Pumping	<u>Good</u>	Yield	<u>Good</u>	GPM Per Foot of Draw Down	<input checked="" type="radio"/> Good	<input type="radio"/> Fair	<input type="radio"/> Poor

Comments:

This unit appears to be operating properly at this time.

Report By: Tim McCarthy



McCarthy WELL COMPANY



MAIN OFFICE, SHOP, YARD & WAREHOUSE • 590 CITATION DRIVE • SHAKOPEE, MN 55379-1887

"There is No Substitute for Experience"

Phone: (952) 854-5333 or (888) 854-5333 • Fax: (952) 445-1950

"18 POINT PUMP PERFORMANCE INSPECTION REPORT"

Belle Plaine, MN, City of

Date: 6/18/2008

Belle Plaine MN

Well/Pump Name: 4

This report is not to be used to determine compliance with any codes, regulations, laws, or rules. Its sole purpose is to attempt to evaluate the operating performance of the well and pump at the time of the inspection.

1. Check Wiring & Connections- Good Good Fair Poor
2. Check Starter Overload Protection- Good Good Fair Poor
3. Check Voltage Supply- L 1-4 500 L 2-5 502 L 3-6 504  52 Hertz Good Fair Poor
4. Check Voltage Running- L 1-4 407 L 2-5 407 L 3-6 407 Good Fair Poor
5. Check Motor Amps- L1 121.0 L2 122.0 L3 122.0 Utilization 73% Good Fair Poor
6. Check Resistance Between Line & Ground- L1 Good L2 Good L3 Good Good Fair Poor
7. Check Resistance Between Motor Windings- L1-2 Good L2-3 Good L1-3 Good Good Fair Poor
8. Check Pump & Motor Operating R.P.M.- Variable Good Fair Poor
9. Check Temperature-Motor Good Well Room Good Good Fair Poor
10. Check Bearing Lube-Motor Top Good Bottom Good Pump Prelube NA Good Fair Poor
11. Check Bearing Noise-Motor Good Pump Good Right Angle Dr NA Good Fair Poor
12. Check Vibration-Motor Good Pump Good Right Angle Dr NA Good Fair Poor
13. Check Discharge Head Packing Box Bearing- NA Good Fair Poor
14. Check Discharge Line Check Valve- Good Pump Foot Valve Good Good Fair Poor
15. Check Start/Stop Cycle- Good Air Relief/Vacuum Breaker Good Good Fair Poor
16. Check Condition Of Water- Good Good Fair Poor
17. Check Pumping Rate- 1120 G.P.M. C.F.P.M. Pump Throttled? Yes Good Fair Poor
18. Check Water Levels-Static 136' Pumping 169' Yield Good Is The of Draw Down Good Fair Poor

Comments:

This unit appears to be operating properly at this time, however, the pump has been in service over 5 years since it was installed in the well.

Your 24 Hour Full Service Well & Pump Company

Report By: Tim McCarthy

Nation's Oldest • Northwest's Largest Water Producers

WELL #4

MINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING RECORD

MINNESOTA UNIQUE WELL NO.

651697

Minnesota Statutes Chapter 103I

WELL LOCATION
County Name
Scott

Well Name: **Belle Plaine** Township No. **113** Range No. **24** Section No. **6** Fraction **SE NW 1/4 SE 1/4**

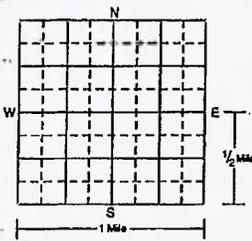
WELL DEPTH (completed) **332** ft. Date Work Completed **10-9-01**

House Number, Street Name, City, and Zip Code of Well Location
205 Loredo Street

DRILLING METHOD
 Cable Tool Driven Dug
 Auger Rotary Jetted

Show exact location of well in section grid with "X".

Sketch map of well location. Showing property lines, roads and buildings.



DRILLING FLUID **None** WELL HYDROFRACTURED? YES NO
FROM _____ ft. to _____ ft.

USE
 Domestic Monitoring Heating/Cooling
 Irrigation Community PWS Industry/Commercial
 Environ. Bore Hole Noncommunity PWS Remedial
 Dewatering

CASING Drive Shoe? Yes No HOLE DIAM.
 Steel Threaded Welded
 Plastic

CASING DIAMETER WEIGHT
18 in. to **245** ft. _____ lbs./ft. _____ in. to _____ ft.
24 in. to **217** ft. _____ lbs./ft. _____ in. to _____ ft.
_____ in. to _____ ft. _____ lbs./ft. _____ in. to _____ ft.

PROPERTY OWNER'S NAME
City of Belle Plaine

SCREEN **Stainless** OPEN HOLE
Make **Johnston** from _____ ft. to _____ ft.
Type **v-slot** Diam. **18" Telescope**
Slot/Gauze _____ Length **86'**
Set between **245** ft. and **331** ft. FITTINGS: _____

Property owner's mailing address if different than well location address indicated above.
**420 East Main
PO Box 129
Belle Plaine, MN 56011**

STATIC WATER LEVEL
121' ft. below above land surface Date measured **10-9-01**

WELL OWNER'S NAME
Same as Above

PUMPING LEVEL (below land surface)
128 ft. after **1hr** hrs. pumping **500** g.p.m.

Owner's mailing address if different than property owner's address indicated above.

WELL HEAD COMPLETION
 Pitless adapter manufacturer _____ Model _____
 Casing Protection _____ 12 in. above grade
 At-grade (Environmental Wells and Borings ONLY)

GROUTING INFORMATION
Well grouted? Yes No
Grout Material Neat cement Bentonite Concrete High Solids Bentonite
from **0** to **217** ft. **11.5** yds. bags
_____ from _____ to _____ ft. _____ yds. bags
_____ from _____ to _____ ft. _____ yds. bags

GEOLOGICAL MATERIALS	COLOR	HARDNESS OF MATERIAL	FROM	TO
Topsoil	Blk	S	0	3
Sand	Brn	S	3	44
Sand Clay Rocks	Brn	M	44	79
sand Clay Rocks	Grey	M	79	110
Fine Sand	Brn	S	110	216
Med Sand	Grey Brn	S	216	235
Fine Sand	Brn	S	235	260
Med Course Sand	Brn	S	260	265
Fine med sand	Brn	S	265	270
Coarse Sand Gravel	Brn	S	270	275
Coarse sand & Clay layers	Rx Brn	S	275	280
Coarse Sand	Rx Brn	S	280	295
Med Sand	Brn	S	295	300
Med Sand Gravel	Brn	S	300	315
Coarse Sand Gravel	Brn	S	315	330
Silt	Blk	S	330	331

NEAREST KNOWN SOURCE OF CONTAMINATION
N/A feet _____ direction _____ type _____

Well disinfected upon completion? Yes No

PUMP
 Not installed Date installed _____
Manufacturer's name _____
Model number _____ HP _____ Volts _____
Length of drop pipe _____ ft. Capacity _____ g.p.m.
Type: Submersible L.S. Turbine Reciprocating Jet

ABANDONED WELLS
Does property have any not in use and not sealed well(s)? Yes No

VARIANCE
Was a variance granted from the MDH for this well? Yes No T# _____

WELL CONTRACTOR CERTIFICATION
This well was drilled under my supervision and in accordance with Minnesota Rules, Chapter 4725. The information contained in this report is true to the best of my knowledge.

Mark J Traut Wells Inc. 71536
Licensee Business Name Lic. or Reg. No.
Mark J Traut 12/26/01
Authorized Representative Signature Date
Tony Traut & Charlie McCool 10-9-01
Name of Driller Date

REMARKS, ELEVATION, SOURCE OF DATA, etc.

LOCAL COPY 651697

McCARTHY WELL COMPANY



590 Citation Drive - Suite I, Shakopee MN 55379-1862

Phone 952-854-5333 ~ Fax 952-445-1950

"THERE'S NO SUBSTITUTE FOR EXPERIENCE"



"18 POINT PUMP PERFORMANCE INSPECTION REPORT"

City of Belle Plaine

Date: 8/6/2013

Belle Plaine MN

Well/Pump Name: 3 (South)

This report is not to be used to determine compliance with any codes, regulations, laws, or rules. Its sole purpose is to attempt to evaluate the operating performance of the well and pump at the time of the inspection.

1. Check Wiring & Connections- Good Good Fair Poor
2. Check Starter Overload Protection- Good Good Fair Poor
3. Check Voltage Supply- L 1-4 497 L 2-5 495 L 3-6 498 Good Fair Poor
4. Check Voltage Running- L 1-4 490 L 2-5 494 L 3-6 496 Hertz 60 Good Fair Poor
5. Check Motor Amps- L1 95.0 L2 86.0 L3 95.0 Utilization 64% Good Fair Poor
6. Check Resistance Between Line & Ground- L1 Good L2 Good L3 Good Good Fair Poor
7. Check Resistance Between Motor Windings- L1-2 Good L2-3 Good L1-3 Good Good Fair Poor
8. Check Pump & Motor Operating R.P.M.- 1800 Good Fair Poor
9. Check Temperature-Motor Good Well Room Good Good Fair Poor
10. Check Bearing Lube-Motor Top Good Bottom Good Pump Prelube OK Good Fair Poor
11. Check Bearing Noise-Motor Good Pump Good Right Angle Dr NA Good Fair Poor
12. Check Vibration-Motor Good Pump Good Right Angle Dr NA Good Fair Poor
13. Check Discharge Head Packing Box Bearing- Good Good Fair Poor
14. Check Discharge Line Check Valve- Good Pump Foot Valve NA Good Fair Poor
15. Check Start/Stop Cycle- Good Air Relief/Vacuum Breaker Good Good Fair Poor
16. Check Condition Of Water- Good Good Fair Poor
17. Check Pumping Rate- 1084 G.P.M. C.F.P.M. Is The Pump Throttled? NO Good Fair Poor
18. Check Water Levels-Static 134' Pumping 174' Yield Good GPM Per Foot of Draw Down Good Fair Poor

Comments:

This unit is operating properly at this time however, the pump has been in service over 5 years since it was repaired by McCarthy Well Co.

Report By: Tim McCarthy

McCARTHY WELL COMPANY

590 Citation Drive - Suite I, Shakopee MN 55379-1862

Phone 952-854-5333 ~ Fax 952-445-1950

"SINCE 1860"

"THERE'S NO SUBSTITUTE FOR EXPERIENCE"

"18 POINT PUMP PERFORMANCE INSPECTION REPORT"

City of Belle Plaine

Date: 7/25/2012

Belle Plaine MN

Well/Pump Name: 3 (South)

This report is not to be used to determine compliance with any codes, regulations, laws, or rules. Its sole purpose is to attempt to evaluate the operating performance of the well and pump at the time of the inspection.

1. Check Wiring & Connections-	<u>Good</u>	<input checked="" type="radio"/> Good	<input type="radio"/> Fair	<input type="radio"/> Poor
2. Check Starter Overload Protection-	<u>Good</u>	<input checked="" type="radio"/> Good	<input type="radio"/> Fair	<input type="radio"/> Poor
3. Check Voltage Supply- L 1-4 <u>Not</u> L 2-5 <u>Turned</u> L 3-6 <u>Off</u>		<input checked="" type="radio"/> Good	<input type="radio"/> Fair	<input type="radio"/> Poor
4. Check Voltage Running- L 1-4 <u>483</u> L 2-5 <u>490</u> L 3-6 <u>486</u>		<input checked="" type="radio"/> Good	<input type="radio"/> Fair	<input type="radio"/> Poor
5. Check Motor Amps- L1 <u>96.0</u> L2 <u>86.0</u> L3 <u>94.0</u> Utilization <u>64%</u>	Hertz <u>60</u>	<input checked="" type="radio"/> Good	<input type="radio"/> Fair	<input type="radio"/> Poor
6. Check Resistance Between Line & Ground- L1 <u>Good</u> L2 <u>Good</u> L3 <u>Good</u>		<input checked="" type="radio"/> Good	<input type="radio"/> Fair	<input type="radio"/> Poor
7. Check Resistance Between Motor Windings- L1-2 <u>Good</u> L2-3 <u>Good</u> L1-3 <u>Good</u>		<input checked="" type="radio"/> Good	<input type="radio"/> Fair	<input type="radio"/> Poor
8. Check Pump & Motor Operating R.P.M.-	<u>1800</u>	<input checked="" type="radio"/> Good	<input type="radio"/> Fair	<input type="radio"/> Poor
9. Check Temperature-Motor <u>Good</u> Well Room <u>Good</u>		<input checked="" type="radio"/> Good	<input type="radio"/> Fair	<input type="radio"/> Poor
10. Check Bearing Lube-Motor Top <u>Good</u> Bottom <u>Good</u> Pump Prelube <u>OK</u>		<input checked="" type="radio"/> Good	<input type="radio"/> Fair	<input type="radio"/> Poor
11. Check Bearing Noise-Motor <u>Good</u> Pump <u>Good</u> Right Angle Dr <u>NA</u>		<input checked="" type="radio"/> Good	<input type="radio"/> Fair	<input type="radio"/> Poor
12. Check Vibration-Motor <u>Good</u> Pump <u>Good</u> Right Angle Dr <u>NA</u>		<input checked="" type="radio"/> Good	<input type="radio"/> Fair	<input type="radio"/> Poor
13. Check Discharge Head Packing Box Bearing-	<u>Good</u>	<input checked="" type="radio"/> Good	<input type="radio"/> Fair	<input type="radio"/> Poor
14. Check Discharge Line Check Valve-	<u>Good</u> Pump Foot Valve <u>NA</u>	<input checked="" type="radio"/> Good	<input type="radio"/> Fair	<input type="radio"/> Poor
15. Check Start/Stop Cycle-	<u>Good</u> Air Relief/Vacuum Breaker <u>Good</u>	<input checked="" type="radio"/> Good	<input type="radio"/> Fair	<input type="radio"/> Poor
16. Check Condition Of Water-	<u>Good</u>	<input checked="" type="radio"/> Good	<input type="radio"/> Fair	<input type="radio"/> Poor
17. Check Pumping Rate- <u>1230</u>	<input checked="" type="radio"/> G.P.M. <input type="radio"/> C.F.P.M. Pump Throttled? <u>NO</u>	<input checked="" type="radio"/> Good	<input type="radio"/> Fair	<input type="radio"/> Poor
18. Check Water Levels-Static <u>142'</u> Pumping <u>174'</u> Yield <u>Good</u>	GPM Per Foot of Draw Down	<input checked="" type="radio"/> Good	<input type="radio"/> Fair	<input type="radio"/> Poor

Comments:

This unit is operating properly at this time however, the pump has been in service over 5 years since it was repaired by McCarthy Well Co.

Report By: Tim McCarthy

McCARTHY WELL COMPANY

590 Citation Drive - Suite I, Shakopee MN 55379-1862

Phone 952-854-5333 ~ Fax 952-445-1950

"SINCE 1860"

"THERE'S NO SUBSTITUTE FOR EXPERIENCE"

"18 POINT PUMP PERFORMANCE INSPECTION REPORT"

City of Belle Plaine

Date: 7/18/2011

Belle Plaine MN

Well/Pump Name: 3 (South)

This report is not to be used to determine compliance with any codes, regulations, laws, or rules. Its sole purpose is to attempt to evaluate the operating performance of the well and pump at the time of the inspection.

- | | | | | |
|---|------------------|---|--------------------------------|---|
| 1. Check Wiring & Connections- | <u>Good</u> | | | <input checked="" type="radio"/> Good <input type="radio"/> Fair <input type="radio"/> Poor |
| 2. Check Starter Overload Protection- | <u>Good</u> | | | <input checked="" type="radio"/> Good <input type="radio"/> Fair <input type="radio"/> Poor |
| 3. Check Voltage Supply- | L 1-4 <u>488</u> | L 2-5 <u>489</u> | L 3-6 <u>488</u> | <input checked="" type="radio"/> Good <input type="radio"/> Fair <input type="radio"/> Poor |
| 4. Check Voltage Running- | L 1-4 <u>485</u> | L 2-5 <u>488</u> | L 3-6 <u>488</u> | <input checked="" type="radio"/> Good <input type="radio"/> Fair <input type="radio"/> Poor |
| 5. Check Motor Amps- | L1 <u>97.0</u> | L2 <u>88.0</u> | L3 <u>88.0</u> | Utilization <u>63%</u> <input checked="" type="radio"/> Good <input type="radio"/> Fair <input type="radio"/> Poor |
| 6. Check Resistance Between Line & Ground- | L1 <u>Good</u> | L2 <u>Good</u> | L3 <u>Good</u> | <input checked="" type="radio"/> Good <input type="radio"/> Fair <input type="radio"/> Poor |
| 7. Check Resistance Between Motor Windings- | L1-2 <u>Good</u> | L2-3 <u>Good</u> | L1-3 <u>Good</u> | <input checked="" type="radio"/> Good <input type="radio"/> Fair <input type="radio"/> Poor |
| 8. Check Pump & Motor Operating R.P.M.- | <u>1800</u> | | | <input checked="" type="radio"/> Good <input type="radio"/> Fair <input type="radio"/> Poor |
| 9. Check Temperature-Motor | <u>Good</u> | Well Room | <u>Good</u> | <input checked="" type="radio"/> Good <input type="radio"/> Fair <input type="radio"/> Poor |
| 10. Check Bearing Lube-Motor Top | <u>Good</u> | Bottom <u>Good</u> | Pump Prelube <u>OK</u> | <input checked="" type="radio"/> Good <input type="radio"/> Fair <input type="radio"/> Poor |
| 11. Check Bearing Noise-Motor | <u>Good</u> | Pump <u>Good</u> | Right Angle Dr <u>NA</u> | <input checked="" type="radio"/> Good <input type="radio"/> Fair <input type="radio"/> Poor |
| 12. Check Vibration-Motor | <u>Good</u> | Pump <u>Good</u> | Right Angle Dr <u>NA</u> | <input checked="" type="radio"/> Good <input type="radio"/> Fair <input type="radio"/> Poor |
| 13. Check Discharge Head Packing Box Bearing- | <u>Good</u> | | | <input checked="" type="radio"/> Good <input type="radio"/> Fair <input type="radio"/> Poor |
| 14. Check Discharge Line Check Valve- | <u>Good</u> | Pump Foot Valve | <u>NA</u> | <input checked="" type="radio"/> Good <input type="radio"/> Fair <input type="radio"/> Poor |
| 15. Check Start/Stop Cycle- | <u>Good</u> | Air Relief/Vacuum Breaker | <u>Good</u> | <input checked="" type="radio"/> Good <input type="radio"/> Fair <input type="radio"/> Poor |
| 16. Check Condition Of Water- | <u>Good</u> | | | <input checked="" type="radio"/> Good <input type="radio"/> Fair <input type="radio"/> Poor |
| 17. Check Pumping Rate- | <u>1081</u> | <input checked="" type="radio"/> G.P.M. | <input type="radio"/> C.F.P.M. | Is The Pump Throttled? <u>NO</u> <input checked="" type="radio"/> Good <input type="radio"/> Fair <input type="radio"/> Poor |
| 18. Check Water Levels-Static | <u>139'</u> | Pumping | <u>154'</u> | Yield <u>Good</u> GPM Per Foot of Draw Down <input checked="" type="radio"/> Good <input type="radio"/> Fair <input type="radio"/> Poor |



Hertz
60

Comments:

This unit is operating properly at this time, however, the pump has been in service for over 5 years since it was removed for repairs by McCarthy Well Co.

Report By: **Tim McCarthy**



McCarthy Well Company



MAIN OFFICE, SHOP & YARD • 590 CITATION DR. - SUITE I • SHAKOPEE, MN 55379-1862

"There is No Substitute for Experience"

Phone: (952) 854-5333 or (888) 854-5333 • Fax: (952) 445-1950

"18 POINT PUMP PERFORMANCE INSPECTION REPORT"

City of Belle Plaine

Date: 7/7/2010

Belle Plaine MN

Well/Pump Name: 3 (South)

This report is not to be used to determine compliance with any codes, regulations, laws, or rules. Its sole purpose is to attempt to evaluate the operating performance of the well and pump at the time of the inspection.

1. Check Wiring & Connections-	<u>Good</u>			<input checked="" type="radio"/> Good	<input type="radio"/> Fair	<input type="radio"/> Poor
2. Check Starter Overload Protection-	<u>Good</u>			<input checked="" type="radio"/> Good	<input type="radio"/> Fair	<input type="radio"/> Poor
3. Check Voltage Supply-	L 1-4 <u>498</u>	L 2-5 <u>502</u>	L 3-6 <u>593</u>		Hertz <u>60</u>	<input checked="" type="radio"/> Good <input type="radio"/> Fair <input type="radio"/> Poor
4. Check Voltage Running-	L 1-4 <u>497</u>	L 2-5 <u>500</u>	L 3-6 <u>501</u>			<input checked="" type="radio"/> Good <input type="radio"/> Fair <input type="radio"/> Poor
5. Check Motor Amps-	L1 <u>95.0</u>	L2 <u>89.0</u>	L3 <u>95.0</u>	Utilization <u>65%</u>		<input checked="" type="radio"/> Good <input type="radio"/> Fair <input type="radio"/> Poor
6. Check Resistance Between Line & Ground-	L1 <u>Good</u>	L2 <u>Good</u>	L3 <u>Good</u>			<input checked="" type="radio"/> Good <input type="radio"/> Fair <input type="radio"/> Poor
7. Check Resistance Between Motor Windings-	L1-2 <u>Good</u>	L2-3 <u>Good</u>	L1-3 <u>Good</u>			<input checked="" type="radio"/> Good <input type="radio"/> Fair <input type="radio"/> Poor
8. Check Pump & Motor Operating R.P.M.-	<u>1800</u>					<input checked="" type="radio"/> Good <input type="radio"/> Fair <input type="radio"/> Poor
9. Check Temperature-Motor	<u>Good</u>	Well Room	<u>Good</u>			<input checked="" type="radio"/> Good <input type="radio"/> Fair <input type="radio"/> Poor
10. Check Bearing Lube-Motor Top	<u>Good</u>	Bottom	<u>Good</u>	Pump Prelube	<u>NA</u>	<input checked="" type="radio"/> Good <input type="radio"/> Fair <input type="radio"/> Poor
11. Check Bearing Noise-Motor	<u>Good</u>	Pump	<u>Good</u>	Right Angle Dr	<u>NA</u>	<input checked="" type="radio"/> Good <input type="radio"/> Fair <input type="radio"/> Poor
12. Check Vibration-Motor	<u>Good</u>	Pump	<u>Good</u>	Right Angle Dr	<u>NA</u>	<input checked="" type="radio"/> Good <input type="radio"/> Fair <input type="radio"/> Poor
13. Check Discharge Head Packing Box Bearing-	<u>NA</u>					<input checked="" type="radio"/> Good <input type="radio"/> Fair <input type="radio"/> Poor
14. Check Discharge Line Check Valve-	<u>Good</u>	Pump Foot Valve	<u>NA</u>			<input checked="" type="radio"/> Good <input type="radio"/> Fair <input type="radio"/> Poor
15. Check Start/Stop Cycle-	<u>Good</u>	Air Relief/Vacuum Breaker	<u>Good</u>			<input checked="" type="radio"/> Good <input type="radio"/> Fair <input type="radio"/> Poor
16. Check Condition Of Water-	<u>Good</u>					<input checked="" type="radio"/> Good <input type="radio"/> Fair <input type="radio"/> Poor
17. Check Pumping Rate-	<u>1270</u>	<input checked="" type="radio"/> G.P.M.	<input type="radio"/> C.F.P.M.	Pump Throttled?	<u>NO</u>	<input checked="" type="radio"/> Good <input type="radio"/> Fair <input type="radio"/> Poor
18. Check Water Levels-Static	<u>132'</u>	Pumping	<u>165'</u>	Yield	<u>Good</u>	<input checked="" type="radio"/> Good <input type="radio"/> Fair <input type="radio"/> Poor

Comments:

This unit appears to be operating properly at this time, however, the pump has been in service over 5 years since it was last removed from the well for repair by McCarthy Well Company.

Report By: **Tim McCarthy**

Your 24 Hour Full Service Well & Pump Company

Nation's Oldest • Northwest's Largest Water Producers



McCarthy WELL COMPANY



MAIN OFFICE, SHOP, YARD & WAREHOUSE • 590 CITATION DRIVE • SHAKOPEE, MN 55379-1887

"There is No Substitute for Experience"

Phone: (952) 854-5333 or (888) 854-5333 • Fax: (952) 445-1950

"18 POINT PUMP PERFORMANCE INSPECTION REPORT"

Belle Plaine, MN, City of

Date: 6/18/2008

Belle Plaine MN

Well/Pump Name: 3

This report is not to be used to determine compliance with any codes, regulations, laws, or rules. Its sole purpose is to attempt to evaluate the operating performance of the well and pump at the time of the inspection.

- | | | |
|--|---|---|
| 1. Check Wiring & Connections- | <u>Good</u> | <input checked="" type="radio"/> Good <input type="radio"/> Fair <input type="radio"/> Poor |
| 2. Check Starter Overload Protection- | <u>Good</u> | <input checked="" type="radio"/> Good <input type="radio"/> Fair <input type="radio"/> Poor |
| 3. Check Voltage Supply- L 1-4 <u>500</u> L 2-5 <u>503</u> L 3-6 <u>505</u> |  | <input type="radio"/> Good <input checked="" type="radio"/> Fair <input type="radio"/> Poor |
| 4. Check Voltage Running- L 1-4 <u>492</u> L 2-5 <u>496</u> L 3-6 <u>492</u> | Hertz <u>60</u> | <input checked="" type="radio"/> Good <input type="radio"/> Fair <input type="radio"/> Poor |
| 5. Check Motor Amps- L1 <u>81.0</u> L2 <u>81.0</u> L3 <u>91.0</u> Utilization <u>59%</u> | | <input checked="" type="radio"/> Good <input type="radio"/> Fair <input type="radio"/> Poor |
| 6. Check Resistance Between Line & Ground- L1 <u>Good</u> L2 <u>Good</u> L3 <u>Good</u> | | <input checked="" type="radio"/> Good <input type="radio"/> Fair <input type="radio"/> Poor |
| 7. Check Resistance Between Motor Windings- L1-2 <u>Good</u> L2-3 <u>Good</u> L1-3 <u>Good</u> | | <input checked="" type="radio"/> Good <input type="radio"/> Fair <input type="radio"/> Poor |
| 8. Check Pump & Motor Operating R.P.M.- <u>1800</u> | | <input checked="" type="radio"/> Good <input type="radio"/> Fair <input type="radio"/> Poor |
| 9. Check Temperature-Motor <u>Good</u> Well Room <u>Good</u> | | <input checked="" type="radio"/> Good <input type="radio"/> Fair <input type="radio"/> Poor |
| 10. Check Bearing Lube-Motor Top <u>Good</u> Bottom <u>Good</u> Pump Prelube <u>OK</u> | | <input checked="" type="radio"/> Good <input type="radio"/> Fair <input type="radio"/> Poor |
| 11. Check Bearing Noise-Motor <u>Good</u> Pump <u>Good</u> Right Angle Dr <u>NA</u> | | <input checked="" type="radio"/> Good <input type="radio"/> Fair <input type="radio"/> Poor |
| 12. Check Vibration-Motor <u>Good</u> Pump <u>Good</u> Right Angle Dr <u>NA</u> | | <input checked="" type="radio"/> Good <input type="radio"/> Fair <input type="radio"/> Poor |
| 13. Check Discharge Head Packing Box Bearing- <u>Good</u> | | <input checked="" type="radio"/> Good <input type="radio"/> Fair <input type="radio"/> Poor |
| 14. Check Discharge Line Check Valve- <u>Good</u> Pump Foot Valve <u>NA</u> | | <input checked="" type="radio"/> Good <input type="radio"/> Fair <input type="radio"/> Poor |
| 15. Check Start/Stop Cycle- <u>Good</u> Air Relief/Vacuum Breaker <u>Good</u> | | <input checked="" type="radio"/> Good <input type="radio"/> Fair <input type="radio"/> Poor |
| 16. Check Condition Of Water- <u>Good</u> | | <input checked="" type="radio"/> Good <input type="radio"/> Fair <input type="radio"/> Poor |
| 17. Check Pumping Rate- <u>1065</u> <input checked="" type="radio"/> G.P.M. <input type="radio"/> C.F.P.M. Pump Throttled? <u>NO</u> | Is The | <input checked="" type="radio"/> Good <input type="radio"/> Fair <input type="radio"/> Poor |
| 18. Check Water Levels-Static <u>134'</u> Pumping <u>166'</u> Yield <u>Good</u> GPM Per Foot of Draw Down | | <input checked="" type="radio"/> Good <input type="radio"/> Fair <input type="radio"/> Poor |

Comments:

This unit appears to be operating properly at this time, however, the pump has been in service over 5 years since it was last removed from the well for repair by McCarthy Well Company.

Report By: **Tim McCarthy**

Your 24 Hour Full Service Well & Pump Company

Nation's Oldest • Northwest's Largest Water Producers

Appendix 2: Water Level Monitoring Plan

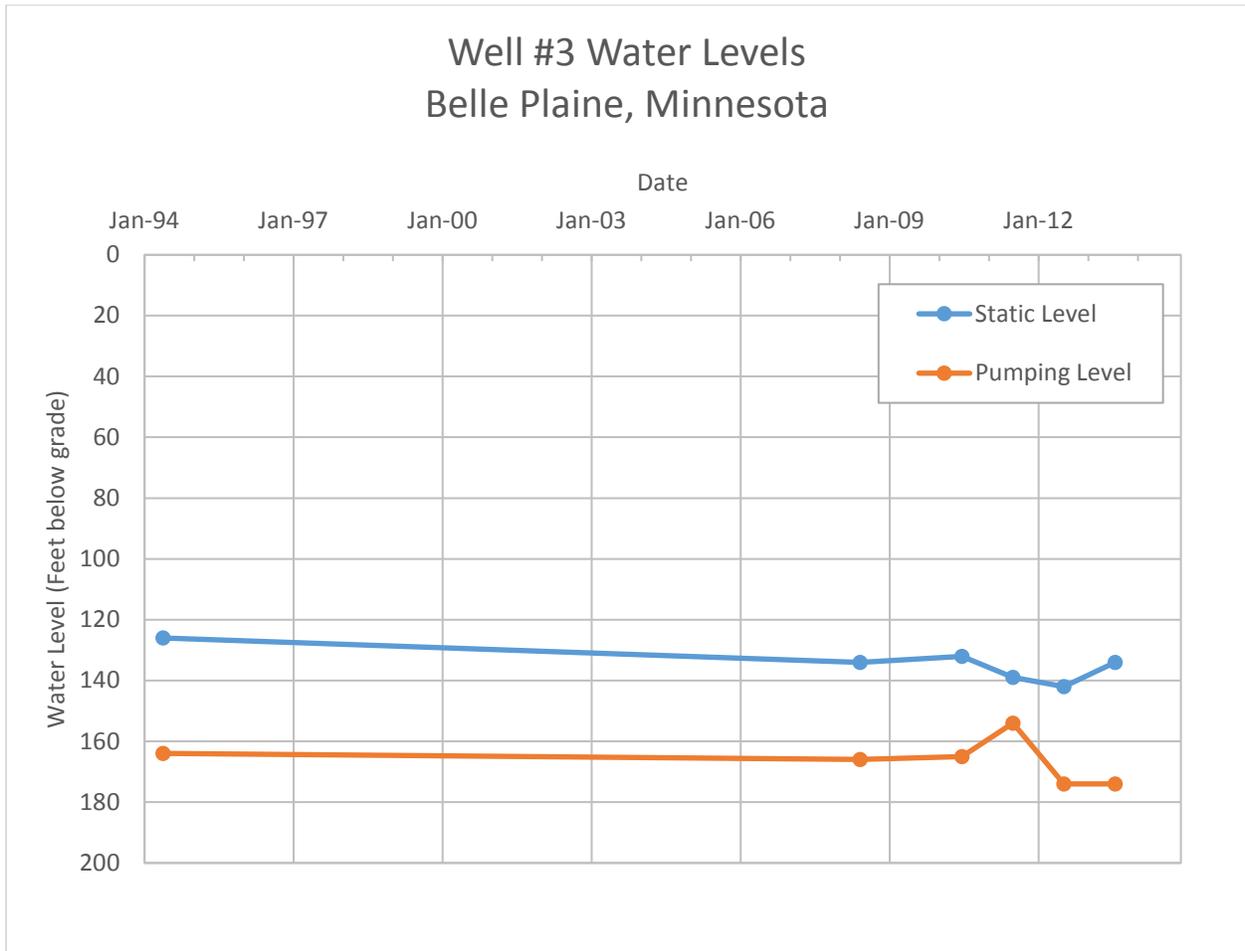
WATER LEVEL MONITORING PLAN

At this point, the City of Belle Plaine does not currently measure water levels at production or observation wells. In the future, the City plans to record water levels at the two existing production wells and any future production wells. Water level measurements will be taken on a monthly basis using a to-be-determined measurement method.

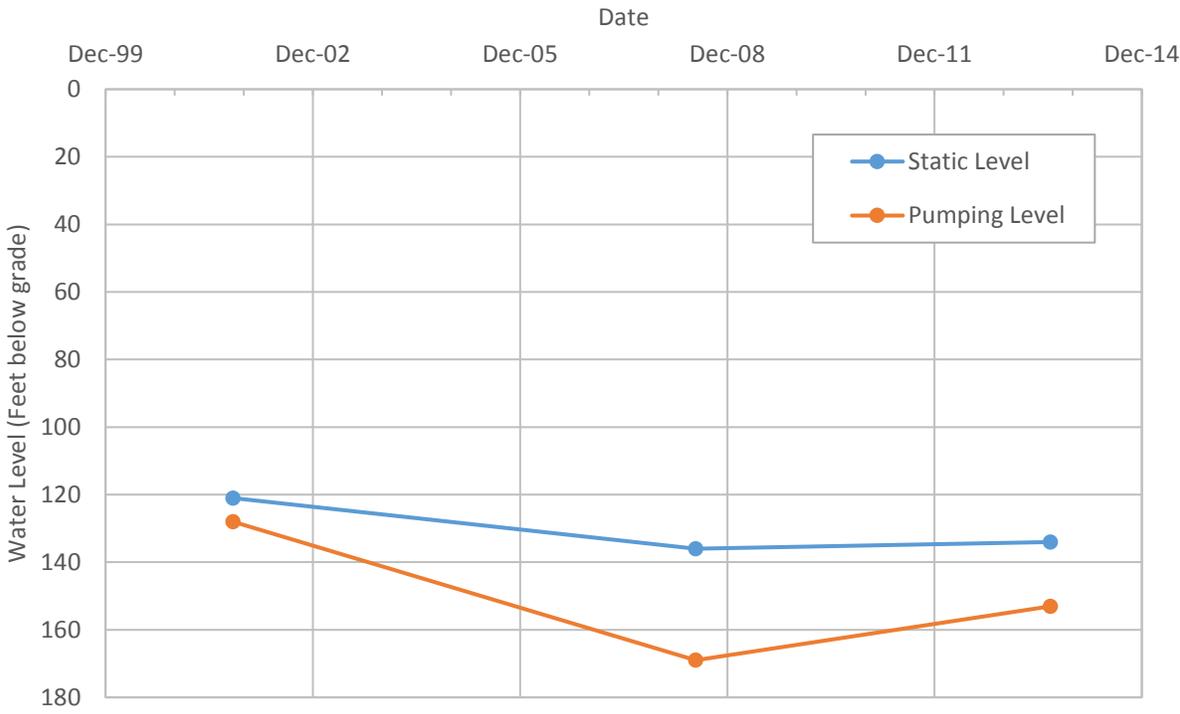
Appendix 3: Water Level Graphs

WATER LEVEL HYDROGRAPHS

The following charts represent the well hydrograph for each of Belle Plaine's active production wells.



Well #4 Water Levels Belle Plaine, Minnesota



Appendix 4: Capital Improvement Plan

Belle Plaine Capital Improvement Plan-2018(5 Year Plan)

* Plus
\$200,000/yr
in main
and hydrant
replacement

Project	Year	Est. Cost	Source of Funding			Debt Amt.
			Cash Amt.	Fund	Other's \$	
Water Utility Projects						
Upper Pressure Water Main	2023	\$ 1,200,000				1,200,000
Well #5	2023	\$ 500,000				500,000
WTF Reverse Osmosis	2023	\$ 2,000,000				2,000,000
Subtotal Water Projects		\$ 3,700,000	\$ -	0 \$	- \$	\$ 3,700,000
Sewer Utility Projects						
Sewer Infrastructure	2023	\$ 1,700,000			\$ 500,000	1,200,000 PFA
WWTF - Expansion	2023	\$ 7,000,000		Sewer /Debt		7,000,000 Blower/LUV/lift
Subtotal Sewer Projects		\$ 8,700,000	\$ -	\$	500,000	\$ 8,200,000
Stormwater Projects						
Blaha Ravine	2018	\$ 135,000		209	\$ 135,000	Joint Grant Funds
Buffalo Ravine	2018	\$ 280,000		209	\$ 280,000	Joint Grant Funds
MS4 Cities	2023	\$ 250,000		209	\$ 250,000	Other funding sources/dlls
Subtotal Stormwater Projects		\$ 665,000	\$ -	\$	665,000	\$ -

Street/Sidewalk/Trail Projects						
Project	Year	Est. Cost	Cash Amt.	Fund	Other's \$	Debt Amt.
2018 Street Project	2018	\$ 2,200,000				2,200,000 Oakwood
Handicap Curb Cuts	2018	\$ 15,000	\$ 15,000			
Sealcoating	2018	\$ 90,000	\$ 90,000	General		
Handicap Curb Cuts	2019	\$ 15,000	\$ 15,000	General		
Parks - Trail	2019	\$ 25,000	25,000	Park Fund (205)		Big Circle
Sealcoating	2019	\$ 90,000	\$ 90,000	General		
2019 Street Project	2019	\$ 2,200,000				2,200,000 Hillcrest/Prairie
2020 Street Project	2020	\$ 2,000,000				2,000,000 Park/ W.Prairie
Handicap Curb Cuts	2020	\$ 15,000	\$ 15,000	General		
Sealcoating	2020	\$ 90,000	\$ 90,000	General		
2021 Street Project	2021	\$ 2,000,000				2,000,000 Unspecified
Handicap Curb Cuts	2021	\$ 15,000	\$ 15,000	General		
Sealcoating	2021	\$ 90,000	\$ 90,000	General		
2022 Street Project	2022	\$ 2,100,000				2,100,000 Unspecified
Handicap Curb Cuts	2022	\$ 15,000	\$ 15,000	General		
Sealcoating	2022	\$ 100,000	\$ 100,000	General		
2023 Street Project	2023	\$ 2,100,000				2,100,000 Unspecified
Handicap Curb Cuts	2023	\$ 15,000	\$ 15,000	General		
Sealcoating	2023	\$ 100,000	\$ 100,000	General		
Subtotal Street/Pedestrian Projects		\$ 13,275,000	\$ 675,000	\$ -	\$ -	\$ 12,600,000

Appendix 5: Emergency Telephone List

Appendix 5
City of Belle Plaine, MN
Emergency Telephone List

Emergency Response Team	Name	Work Telephone	Alternate Telephone
Emergency Response Lead	Al Fahey	952-873-6742	612-366-2110
Alternate Emergency Response Lead	Tom Stolee	952-873-4307	952-292-8754
Water Operator	Al Fahey	952-873-6742	612-366-2110
Alternate Water Operator	Mike Hermann	952-873-6742	952-207-9471
Public Communications	Dawn Meyer	952-873-5553	612-850-5394

State and Local Emergency Response Contacts	Name	Work Telephone	Alternate Telephone
State Incident Duty Officer	Minnesota Duty Officer	800/422-0798 Out State	651-649-5451 Metro
County Emergency Director	Scott Haas	952-445-1411	911
National Guard	Minnesota Duty Officer	800/422-0798 Out State	651-649-5451 Metro
Mayor/Board Chair	Chris Meyer	612-756-0662	
Fire Chief	Matt Stier	952-873-6820	911
Sheriff	Luke Hennen, Scott County	952-496-8715	911
Police Chief	Tom Stolee	952-873-6742	911
Ambulance	Ridgeview Medical Center	952-873-4506	911
Hospital	Ridgeview Medical Center	952-442-2191	911
Doctor or Medical Facility			

State and Local Agencies	Name	Work Telephone	Alternate Telephone
MDH District Engineer	Simon McCormack	651-201-4683	651-336-0101
MDH	Drinking Water Protection	651-201-4700	
State Testing Laboratory	Minnesota Duty Officer	800/422-0798 Out State	651-649-5451 Metro
MPCA	Environmental Emergencies	800-422-0798	
DNR Area Hydrologist	Jennie Skancke	651-259-5790	
County Water Planner	Scott County	952-496-8177	

Utilities	Name	Work Telephone	Alternate Telephone
Electric Company	Xcel Energy	800-895-4999	
	MN Valley Electric Cooperative	952-492-8255	
Gas Company	CenterPoint Energy	800-895-2999	800-245-2377
Telephone Company	Frontier Communication	952-435-1504	
Gopher State One Call	Utility Locations	800-252-1166	651-454-0002
Highway Department	MNDOT		

Mutual Aid Agreements	Name	Work Telephone	Alternate Telephone
Neighboring Water System	N/A		
Emergency Water Connection	N/A		
Materials	N/A		

Technical/Contracted Services/Supplies	Name	Work Telephone	Alternate Telephone
MRWA Technical Services	MN Rural Water Association	800-367-6792	
Well Driller/Repair	Thein Well	800-450-8000	320-796-2111
Pump Repair	WW Goetsch	952-831-4340	
Electrician	Gregory Electric	952-873-5563	
Plumber	Lange's	952-873-2730	
Backhoe	Chard Tiling	952-873-6152	

Chemical Feed	Hawkins	800-328-5460	
Meter Repair	Automatic Systems Co.	651-631-9005	
Generator	Zeigler CAT	800-352-2812	952-888-4121
Valves	Vessco	952-941-2678	
Pipe & Fittings	Core & Main	320-258-3010	
Water Storage	Bolton & Menk, Inc.	507-625-4171	
Laboratory	MVTL	800-782-3557	
Engineering firm	Bolton & Menk, Inc.	507-625-4171	

Communications	Name	Work Telephone	Alternate Telephone
News Paper	Belle Plaine Herald	952-873-2261	belleplaineherald@icloud.com
Radio Station	KRBI KNUJ	507-345-4646 800-444-5685	robert.rose@alphamediausa.com 507-359-2921
School Superintendent	Chad Straight	319-444-3611	
Property & Casualty Insurance	Canopy Group	800-967-3389	

Critical Water Users	Name	Work Telephone	Alternate Telephone
Hospital Critical Use:	Ridgeview Medical Center	952-442-2191	911
Nursing Home Critical Use:	Lutheran Home	952-873-2100	
Public Shelter Critical Use:	N/A		

Appendix 6: Cooperative Agreements for Emergency Services

COOPERATIVE AGREEMENTS

The City of Belle Plaine has no cooperative agreements for emergency water supply.

Appendix 7: Operational Contingency Plan

OPERATIONAL CONTINGENCY PLAN

I. PROCEDURE FOR AUGMENTING WATER SUPPLIES

The following alternatives existing for additional supplies of water:

1. **Interconnect with Adjacent Communities:** There are presently no connections to other communities. There are no other municipal water systems within six miles of the City of Belle Plaine. Also, there are no potential acceptable private water sources near the City.
2. **Conjunctive Use of Surface and Ground Waters:** There are no economically viable sources of surface water available to the City of Belle Plaine.
3. **Alternative Sources of Water:** Many of the potential sources of groundwater contamination can be treated at the water treatment plant. In a relatively short period of time, the City could install reverse osmosis filters to treat the water to drinking water standards. During installation of the reverse osmosis filters, demand reduction measures may be required as described below to reduce the demand to the level of remaining well capacity.

II. DEMAND REDUCTION MEASURES

1. **Demand Reduction Potential:** In an emergency, sprinkling bans could easily be instituted. These sprinkling bans would have the potential for significant demand reduction. The City has a year-round odd/even day sprinkling ordinance that is enforced consistently.
2. **Short-Term Demand Reduction Procedures:** The following short-term demand reduction measures are a part of Belle Plaine's conservation plan. The measures are progressively more stringent for use as the length or seriousness of the emergency warrants. Triggers for each of these measures are outlined in the following sections.
 - a. Voluntarily Reduction Measures: Public service announcements, "bill stuffers", notices in local paper.
 - b. Sprinkling Bans: The City presently has no set sprinkling bans. A ban can be adopted quickly if the need arises.
 - c. Water Allocation Restrictions: Based on severity of emergency and water use priorities established in next section.

III. PROCEDURES FOR WATER ALLOCATION

Initial emergency response will include actions to augment supplies and/or reduce demands. However, severe water shortages may require Belle Plaine to allocate water based on the following priorities. These priorities are established by Minnesota Statutes 103G.261.

Non-essential uses of water are the lowest use priority and will be the first water use subject to allocation restrictions. Quick responses to restrict non-essential uses of water during periods of limited supplies will help protect domestic and economic uses of water. Therefore, the City of Belle Plaine will be quick to step in and limit the non-essential use of water according to the priorities below.

1. **First Priority:** Domestic water supply, excluding industrial and commercial use of municipal water supply, and use for power production that meets contingency requirements.
2. **Second Priority:** Water uses involving consumption of less than 10,000 gallons per day.
3. **Third Priority:** Agricultural irrigation and processing of agricultural products.
4. **Fourth Priority:** Power production in excess of the use provided for in the contingency plan under first priority.
5. **Fifth Priority:** Uses other than agricultural irrigation, processing of agricultural products, and power production.
6. **Sixth Priority:** Non-essential uses defined by Minnesota Statutes 1030.291 as lawn sprinkling, vehicle washing, golf course and park irrigation, and other non-essential uses.

While initial emergency responses may include actions to augment supplies and/or reduce demands, severe water shortages would require water allocation in accordance with these priorities.

Triggers for Implementing Plan Components

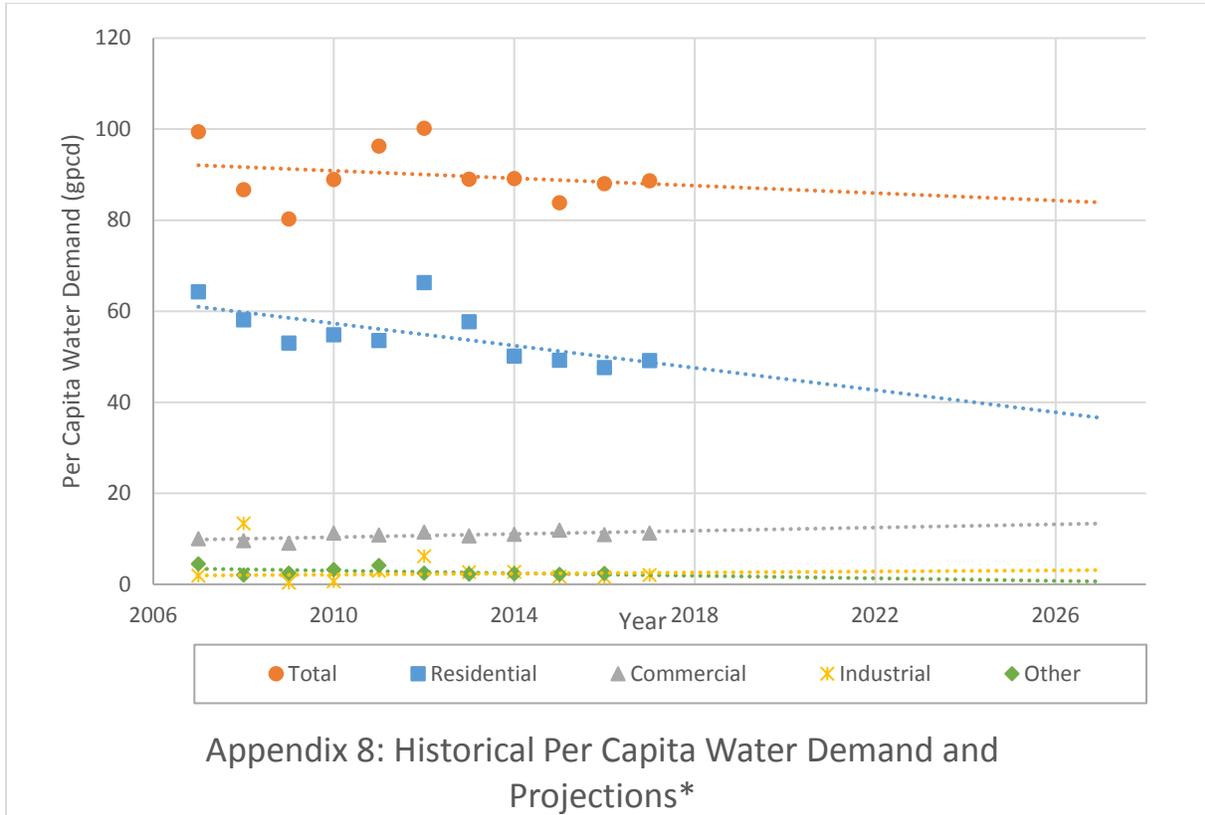
The critical factor in the Belle Plaine water system is the well pump supply capacity. For reliability, the system must always have one well pump in the standby or backup position. Therefore, the capacity of the supply-facilities is the capacity with the largest well pump out of service. This capacity is defined as the "firm capacity". As the demand reaches the firm capacity of the supply facilities, demand reduction measures must be initiated. The following triggers are initiated based on the percentage demand is to firm capacity.

Measure	Trigger % of Firm Capacity
Voluntary Reduction Measures	Always
Odd/Even Sprinkling Ban	Always
Total Sprinkling Ban	90
Eliminate 6 th Priority Allocation	95
Eliminate 5 th Priority Allocation	97
Eliminate 4 th Priority Allocation	98
Eliminate 3 rd Priority Allocation	99
Eliminate 2 nd Priority Allocation	100

Appendix 8: Per Capita Water Demand Graph

PER CAPITA WATER DEMAND

The chart below shows the historical total per capita water demand for the City of Belle Plaine, as well as the historical per capita demand for each of the following categories: residential, commercial, industrial, and other. The chart also shows the linear trendline for each category projected through 2027. Note that, due to a very high peak outlier in 2008, the linear trendline for the industrial category would have implied negative per capita industrial demand through 2027. As a result, the trendline for the industrial category was generated without the outlier of 2008.



Appendix 9: Water Rate Structure

7. WATER AND SEWER UTILITY FEES.

Water & Sewer Monthly Base Fee	Meter Size	Monthly Water Fee Per Unit*	Low Income Senior ** Monthly Water Fee Per Unit*	Monthly Sewer Fee Per Unit*	Low Income Senior** Monthly Sewer Fee Per Unit*
	¾"	\$10.16	\$4.83	\$16.09	\$7.73
	1"	\$10.16		\$16.09	
	1 ½"	\$28.97		\$45.82	
	2"	\$44.61		\$69.95	
	3"	\$66.03		\$104.53	
	4"	\$101.59		\$160.79	

Residential Water Usage Rates <i>All Usage Rates Are Per 1,000 Gallons</i>		
Up to 2,000		\$3.79
2,001 to 4,000		\$5.70
4,001 and above		\$10.38
Residential Sewer Usage Rates (based on water usage)		
Up to 2,000		\$7.52
2,001 to 4,000		\$8.83
4,001 and above		\$17.83

Commercial Water Usage Rates <i>All Usage Rates Are Per 1,000 Gallons</i>		
Up to 4,000		\$3.84
4,001 to 24,000		\$5.76
24,001 and above		\$10.51
Commercial Sewer Usage Rates (based on water usage)		
Up to 4,000		\$7.62
4,001 to 24,000		\$8.92
24,001 and above		\$18.16

*Unit is defined as each dwelling, business, or industry. (City Code 700.05 (A)).

**Low Income Senior Citizen Rates - Head of Household, age 65 years & older, meeting Section 8 Low Income Guidelines.

Note: Delinquent bills shall be assessed monthly with a penalty of ten percent (10%) of the unpaid balance.

Note: The Minnesota Department of Health requires a monthly surcharge of \$.53 per account.

Belle Plaine City Code
 Chapter 1, Section 108 Fee Schedule

Non-Metered - Water and Sewer Monthly Rates Monthly charge for water service shall be based upon the usage of 5,000 gallons per month at the current base rate and usage charge. Monthly charge for sewer service shall be based upon the usage of 5,000 gallons per month at the current base rate and usage charge.	
Water Meter Test, Service Call, or Call to Check Meter Service	\$50.00
Water Meter & Radio Read Unit (to be added as a cost to building permits for new construction only)	As determined by the City
Water Meter Replacement	As determined by the City
Water Shut Off (at the curb box)	\$30.00
Water Turn On (at the curb box)	\$30.00
Water Fee for Water Sold to Contractors	\$25.00 fee per fill plus the current irrigation water rate for the amount of water purchased.

<p>Non-Metered - Water and Sewer Monthly Rates Monthly charge for water service shall be based upon the usage of 5,000 gallons per month at the current base rate and usage charge. Monthly charge for sewer service shall be based upon the usage of 5,000 gallons per month at the current base rate and usage charge.</p>	
Water Meter Test, Service Call, or Call to Check Meter Service	\$50.00
Water Meter & Radio Read Unit (to be added as a cost to building permits for new construction only)	As determined by the City
Water Meter Replacement	As determined by the City
Water Shut Off (at the curb box)	\$30.00
Water Turn On (at the curb box)	\$30.00
Water Fee for Water Sold to Contractors	\$25.00 fee per fill plus the current irrigation water rate for the amount of water purchased.

8. IRRIGATION/SECOND WATER METER RATES/SWIMMING POOL FILL

Irrigation Water Rate per 1,000 Gallons	\$10.38
Water Meter IRRIGATION/SECOND METER	Customer pays the City's cost for the water meter
Irrigation/Second Water Meter Service Fee	\$3.66 per month (12 months per year)
Swimming Pool Water Fill – Temporary Meter Only Pool must be at least 24 inches in depth and over 5,000 gallons in size.	Current Irrigation Rate

9. ++WATER AND SEWER CONNECTION FEES.

Water Connection Fee \$4,040.00 per unit as identified below.		
Sewer Connection Fee \$5,090.00 per unit as identified below.		
Type of Facility	Parameter	Unit
Residential		
Single family houses, townhouses and duplex units	each dwelling unit	1
Condominiums and apartment units	each dwelling unit	.8
Mobile homes	each dwelling unit	1
Non-Residential Properties (at the discretion of the City Council)		
GUIDELINE		
Automobile Service	2 service bays	1
Banquet room	1,000 sq. feet	1
Barbershop/hair salon	each	1
Bowling alley	3 alleys	1
Car wash – self service	1 stall	3
Car wash – service station	each	4
Churches	250 seats	1
Fast-service restaurant	600 sq. feet	1
General office building	4000 sq. feet	1
Hospitals	1 bed	1
Laundromats	4 washing machines	1
Manufacturing	As determined by City Council	
Motels and hotels	2 rooms	1
Nursing home	3 beds	1
Restaurant, drive-in	10 parking spaces	1
Restaurant	600 sq. feet	1
Retail store	3000 sq. feet	1
Rooming house	7 beds	1
Schools (elementary)	20 students	1
Schools (secondary)	15 students	1
Service station - gas pumping only	each	1
Service station with service center	each	1
Service Station with service center & car wash	each	8
Swimming pool	each	1
Theater	50 seats	1
Theater, drive-in	50 parking spaces	1
Warehouses	15 employees	1

10. WATER RESTRICTION AND WATER BAN VIOLATIONS.

Water Restriction and Water Ban Violation	
First Offense	\$50.00
Each Subsequent Offense	\$100.00

11. STREET LIGHTING FEE.

Monthly Street Lighting Fee – Residential	\$2.35
Monthly Street Lighting Fee – Commercial/Industrial	\$6.56

12. STORM WATER MONTHLY FEE.

Monthly Storm Water Fee	\$3.49
-------------------------	--------

13. PER DIEM.

Design Committee	\$40.00 per meeting
Economic Development Authority	\$40.00 per meeting
Housing & Redevelopment Authority	\$40.00 per meeting
Park Board	\$40.00 per meeting
Planning & Zoning Commission	\$40.00 per meeting
The Mayor or member(s) of the City Council shall receive a per diem for attending meetings of subcommittees of the City Council to which a Council Member has been appointed, City Advisory Committees, meetings of bodies to which a Council Member has been appointed, City Council workshops or Special Council Meetings.	\$40.00 per meeting

14. STIPENDS.

Fire Department Stipend for Building Permit Review of Fire Codes.	\$15.00 per person per hour (up to three people for up to four hours per person)
Fire Department Stipend for Subdivision and PUD review of Fire Codes.	\$15.00 per person per plan (up to three people)

Appendix 10: Ordinances Related to Water Use

SECTION 700.00 WATER AND SEWER.

- 700.01 Water and Sewer Department.
- 700.02 Use of Water or Sewer Systems Restricted.
- 700.03 Application for Service - Procedure.
- 700.04 Charges for Service Connections.
- 700.05 Account Billing and Collecting.
- 700.06 Right of Entry.

700.01 WATER AND SEWER DEPARTMENT.

There shall be continued within the Department of Public Works a division to be known as the Water and Sewer Department which shall be under the supervision of the Superintendent of Public Works. The Superintendent shall be responsible for the management, maintenance, care and the operation of the water works, and the storm and sanitary sewerage system of the City.

700.02 USE OF WATER OR SEWER SYSTEMS RESTRICTED.

No person shall make, use, or repair any water or sewer service connected to the City water or sewer system except pursuant to application and permit as provided in this Chapter. No person shall make, use, or repair any installation contrary to the regulatory provisions of this Chapter.

700.03 APPLICATION FOR SERVICE - PROCEDURE.

Application for water or sewer service installation shall be made to the City Administrator on forms prescribed and furnished by the City. By his or her signature, the applicant shall agree to conform to this Chapter and to rules and regulations that may be established by the City as conditions for the use of water and sewers. Application for service installation or for continuation of service in another name shall be made by the owner of the property to be served or by his or her agent, provided, however, that whenever a transfer of ownership for property to be served is made, the transferor shall remain liable for all utility costs and charges until proper application is made and accepted by the City.

700.04 CHARGES FOR SERVICE CONNECTIONS.

Subd. 1. Permit Fee. No connection shall be made to the City water or sanitary sewer without a permit received from the City Administrator or his/her designee. The fee for the permit for both water main connections and the permit for sewer connections shall be as set by the Council from time to time by resolution. These fees shall be in addition to any fees required under Subdivisions 2 and 3.

Subd. 2. Connection Fees. When a connection requires installation of a service line from the main to the property line, the applicant shall pay to the City an amount set by Council resolution not less than the cost of making the necessary connections, taps, and installation of pipe and appurtenances to provide service to the property and the necessary street repairs before a permit shall be issued.

Subd. 3. Certification. No permit shall be issued to connect with any water or sanitary sewer main unless the City Administrator certifies to the truth of one of the following or the payment required under Subdivision 4 is made:

- A. That the lot or tract to be served has been assessed for the cost of construction of the main with which the connection is made or that proceedings for levying the assessment have been made or shall be commenced in due course; or
- B. That the cost of construction of the main has been paid by the developer or builder platting the lot or tract; or
- C. That, if neither of the foregoing is true, a sum equal to the portion of the cost of constructing the main which would be assessable against the lot or parcel has been paid to the City.

Subd. 4. Additional Connection Fee. If no such certificate can be issued, the applicant shall pay an additional connection fee equal to the portion of the cost of construction of the main upon the same basis as any assessment previously levied against other property for the main. The determination shall be made by the City Administrator. If no such assessment has been levied, the assessable cost shall be determined upon the basis of the uniform charge which may have been or will be charged for similar connection with the main. The amount shall be determined on the basis of the total assessable cost of the main as regulated in Section 602. Where the assessable cost cannot be determined, the charge shall be fixed by resolution of the Council.

Subd. 5. Excavation of Public Streets. If excavation of public streets or alleys is required in order to connect to existing water and sewer lines, an applicant shall pay to the City Administrator a sum sufficient to insure proper repair of the excavation and replacement of surface materials to restore the condition of a street or alley to its original condition.

700.05 ACCOUNT BILLING AND COLLECTING.

Subd. 1 Water and Sewer Rates. The City Council shall have authority to prescribe by resolution the rates to be charged for water and sewer service to the property owner from time to time and may prescribe the date of billing, a discount for payment within a prescribed period and/or

penalty for failure to pay within the period and such further rules and regulations relative to the use and operation of such the system as it may deem necessary from time to time.

A. Where there is more than one dwelling, business, or industry served through one water meter, the minimum charge shall apply to each such dwelling, business, or industry unit served through that meter.

B. Mobile homes shall be charged in accordance with the meter rate stated above. However, mobile homes shall be charged not less than a sum derived by applying the minimum charge stated herein to each unit while open for rental and operating. (Ord. 05-02, Section 700.05, Subd. 1, B, Adopted on March 21, 2005.)

Subd. 2. Accounts Responsibility of Property Owner. All accounts shall be the responsibility of the property owner unless the owner informs the City in writing that the account shall be carried in the name of another person. In any case, the owner shall remain liable for water supplied to the owner's property, whether the owner is occupying the property or not, and any charges unpaid shall be assessed to the property tax statement and be a lien on the property.

Subd. 3. Bills for Service. Water service charges shall be billed with sewer service charges. Bills shall specify the water consumed in accordance with the rates established by City Council resolution.

Subd. 4. Delinquent Accounts. All charges for water and sewer shall be due on the date specified by the City in its bill for the respective account and shall be delinquent ten days thereafter. The City shall endeavor to collect delinquent accounts promptly. In any case, where satisfactory arrangements for payment have not been made, the Public Works Department may, after the procedural requirements of Subdivision 5 of this Section have been complied with, discontinue service to the delinquent customer by shutting off the water at the stop box. When water service to any premises has been discontinued, service shall not be restored except upon the payment of all delinquent bills and a fee for turning off and turning on the water as set by Council resolution. Delinquent accounts shall be certified to the City Administrator who shall prepare an assessment roll each year providing for assessment of the delinquent amounts against the respective properties served. The assessment roll shall be delivered to the Council for adoption. Such action is optional and may be subsequent to taking legal action to collect delinquent accounts. A penalty for delinquent payments is authorized and shall be established by Council resolution.

Subd. 5. Procedure for Shut-Off or Service. Water shall not be shut off under Subdivision 4 or for a violation of rules and regulations affecting utility service until notice and an opportunity for a hearing have first been given the owner of the premises involved. The notice shall be served by first-class mail or personally and shall state that if payment is not made before a day stated in the notice but not less than five (5) days after the date on which the notice is given, the water supply to the premises will be shut off. The Notice shall also state that the owner may, before such date demand a hearing on the matter, in which case the supply will not be cut off until after the hearing is held. If the owner requests a hearing before the date specified, a hearing shall be held on the matter by a hearing officer appointed by the Mayor at least one week after the date on which the request is made. If as a result of the hearing, the hearing officer finds that the amount claimed to be owing is actually due and unpaid and that there is not legal reason why the water

supply of delinquent customer may not be shut off in accordance with this Part, the City may shut off the supply. (Ord. 03-22, Section 700, Adopted November 3, 2003.)

Subd. 6. No service of a residential customer shall be disconnected if the disconnection affects the primary heat source for the residential unit when the disconnection would occur during the period between October 15 and April 15, the customer has declared inability to pay on forms provided by the City, the household income of the customer is less than 185 percent of the federal poverty level as documented by the customer to the City, and the customer's account is current for the billing period immediately prior to October 15 or the customer has entered into a payment schedule and is reasonably current with payments under the schedule. The City shall, between August 15 and October 15, of each year, notify all residential customers of these provisions.

700.06 RIGHT OF ENTRY.

The City has the right to enter in and upon private property, including buildings and dwelling houses, in or upon which is installed a municipal utility or connection, at all times reasonable under the circumstances for the purpose of reading, inspection and repair of meters or utility system, and for the purpose of connecting and disconnecting service.

(Ord. 02-12, Section 700.06, Adopted June 3, 2002.)

SECTION 701.00 WATER USE.

- 701.01 General Water Provisions.
- 701.02 Water Meters.
- 701.03 Plumbing Regulations.
- 701.04 Liability Provisions.

701.01 GENERAL WATER PROVISIONS.

Subd. 1. Use of Public Water Service Required. It shall be unlawful for any person to install a private water system which is intended to provide water for human consumption in the City except in cases where the public water is not accessible to the premises where the private systems are requested. To determine whether or not the public water is available for connection, each person or corporation desiring, to install a private water system shall first make application for connection to a public system. Upon determination by the City that it is not feasible to connect the applicant's premises to the public water system the applicant shall then be granted a permit to install a private water system in accordance with all appropriate State and local regulations. When public water becomes available to the in premises, connection with that public system shall be required.

Subd. 2. Discontinuance of Service. The City may discontinue service to any water consumer without notice for necessary repairs or, upon notice as provided in this Chapter for nonpayment of charges, or for violation of rules and regulations affecting utility service.

Subd. 3. Turning on Water, Tapping Mains. No person except an authorized City employee shall turn on any water supply at the stop box, or tap any distributing main or pipe of the water supply system, or insert a stop cork or other appurtenants therein.

Subd. 4. Repair of Leaks. The property owner shall be responsible for maintaining the service pipe from the main into the building served. If the property owner fails to repair any leak in the service pipe within 24 hours after notice by the City, the City may turn the water off. The water shall not then be turned on again until a fee in an amount that is set from time to time by Council resolution has been paid to the City. When the waste of water is great or damage is likely to result from the leak, the City shall turn the water off immediately upon the giving of notice if repair is not commenced immediately.

Subd. 5. Use of Fire Hydrants. No person other than an authorized City employee or fire fighter shall operate a fire hydrant or interfere in any way with the City water system without first obtaining authority to do so from the City Administrator or Public Works Superintendent.

Subd. 6. Private Water Supply. No water pipe of the City water supply system shall be connected with any pump, well, or tank that is connected with any other source of water supply. When any such connection is found, the City Administrator or Public Works Superintendent shall notify the owner to sever the connection and if this is not done immediately, the City shall turn off the water supply forthwith. Before any new connection to the City system shall be permitted, City employees shall ascertain that no cross-connection shall exist when a new connection is made.

Subd. 7. Water Restriction and Ban.

A. Water Restriction. To encourage water conservation, there will be no outdoor watering permitted between the hours of 9:00 a.m. and 5:00 p.m. (Ord. 03-17, Section 701, Adopted October 20, 2003).

1. This section shall not pertain to the Public Works Department nor to individuals performing duties of City-related projects. (Ord. 05-10, Section 701, Subd. 7, Adopted November 21, 2005).

B. Water Ban.

1. When the Public Works Superintendent determines that a shortage of water supply threatens the City, the Public Works Superintendent may, with the approval of the Mayor and City Administrator, place a city-wide 24-hour per day water ban.
 - a. A public notice shall be published in the official newspaper of the City immediately. Public notices shall be placed at City Hall, newspaper office, community library and any place so deemed as to inform the public of the water ban.
 - b. There shall be no watering or outside usage of water while a water ban is in effect.
2. The Public Works Superintendent shall publish a notice in the official newspaper when the water ban is no longer in effect.

C. Enforcement and Citations. City staff shall enforce this Ordinance and are authorized to issue City penalty citations to violators. A penalty may be issued to a property owner as set by the City's Annual Fee Schedule. The penalty shall be added to the property owner's city water bill.

D. Private Wells. This ordinance shall pertain to private wells.

(Ord. 02-04, Section 701.01, Subd. 7, Adopted January 30, 2002.)

Subd. 8. Violations. Violators of this Subsection shall be guilty of a petty misdemeanor and upon conviction thereof shall be punished by a penalty as set by State Statute.

Subd. 9. Appeals. An aggrieved person may appeal the administrative decision according to Section 103.05. (Ord. 02-12, Section 701.01, Subd. 9, Adopted June 3, 2002.)

701.02 WATER METERS.

Subd. 1. Meters Required. Except for extinguishing of fires, no person other than an authorized City employee shall use water from the City water supply system or permit water to be drawn therefrom unless the water passes through a meter supplied or approved by the City. No person not authorized by the City Administrator or Public Works Superintendent shall connect, disconnect, take apart, or in any manner chance or interfere with any meter or its use.

Subd. 2. Installation, Ownership and Control. Water meters shall be installed by authorized City personnel. The City shall maintain ownership and control of the water meter. The City may require a nonrefundable deposit for the cost of the meter.

Subd. 3. Remote and Radio Meter Reading Registers.

A. Policy of the City. It is the policy of the City to require remote and/or radio water meter reading registers on all premises. The water meter reading register shall be in conformity with all other registers within the City. As such, all property owners shall be required to install conforming water meter reading registers within a period of time as designated by the City Council. The City shall not be obligated to furnish water to an residence which does not provide a remote and/or radio water meter reading register in conformity with all other water meter reading registers. If the parties to a sale and purchase do not provide for responsibility for such installation, it shall be the responsibility of the new owner to provide for the required installation.

B. Installation and Cost. Installation of remote and/or radio water meter reading registers shall be performed by authorized City personnel. The property owner shall be responsible for the cost of installation by said personnel. The radio read unit shall be added as a fee upon the issuance of a building permit for new construction. The fee shall be as set by Council resolution. In all cases, connection of the remote register and the water meter shall be performed by the City.

C. Location. The location of the remote register on the exterior of a building shall be near an existing electric or gas meter in such a location as to minimize any potential and unsightly aspects of the installation. If the user and the Public Works Department cannot agree on the location of the remote register, the question of the City requirement shall be appealed to the City Administrator and to the City Council, in that order.

D. General Provisions. All provisions of this Code applicable to ownership, maintenance, reading and testing of water meters shall also apply to remote water meter reading registers.

E. Meter Maintenance. The City shall maintain and repair at its expense any meter that has become unserviceable through ordinary wear and tear and shall replace it if necessary. Where repair or replacement is made necessary by act or neglect of the owner or occupant of the premises it serves, any City expense caused thereby shall be charged against and collected from the property owner, and water service may be disconnected until the cause is corrected and the amount charged is paid. The property owner or consumer shall notify the City of any injury to or the nonworking of any meter as soon as it comes to his or her knowledge.

F. Complaints; meter testing. When a property owner complains that the bill for any past service period is excessive, the City shall have the meter reread on request. If still dissatisfied, the consumer may, on written request and the deposit of an amount set from time to time by Council resolution, have the meter tested. If the test shows an error in the City's favor exceeding five percent of the water consumed, the register shall be deemed inaccurate, the meter testing deposit shall be refunded and an accurate meter shall be installed, and the bill shall be adjusted accordingly. The adjustment shall not extend back more than one service period from the date of the written request. If the meter is found to be accurate, the deposit of the property owner shall be forfeited.

G. Meter reading and inspection. Authorized meter readers shall have free access at reasonable hours of the day to all parts of every building and premises connected with the City water supply system in order to read meters and make inspections. Property owner or occupant shall be prohibited from obstructing the water meter so as to prohibit the reading or repairing of the meter.

H. Meter readings. City Council may provide for a system of water meter reading, by any method deemed suitable for that purpose by the Council. The Council may also establish billing, areas or districts and provide for the reading of meters and billing, monthly charges or such period intervals as the Council shall determine suitable and necessary from time to time.

Subd. 4 Water Meter Regulations

A. All applications for installation, maintenance and repair of water meters shall be made to the City and the City shall proceed to comply with the application within a reasonable time thereafter.

B. No person, other than the City or its designee, shall maintain or repair any water meter used within the City limits. Every water meter connected to the water system shall be sealed by or under the direction of the City, and no other person shall break or remove the seal; provided however, that a plumber licensed to do business in the State of Minnesota may break such the seal to remove such the meter for necessary repairs. In all cases where a seal is broken or a meter is removed by a licensed plumber, the plumber shall notify the City of the fact within 24 hours after the seal is broken or the meter is removed. Whenever any seal attached to a water meter by or under the direction of the City is found broken, the broken condition of the seal shall be prima facie evidence that the seal was broken contrary to the terms and provisions of and in violation of this Chapter.

Subd. 5.

A. It shall be unlawful for any person to tamper with, alter, bypass, or in any manner whatsoever interfere with the proper use and functioning of any water meter within the City.

B. Enforcement and Citations. The Public Works Superintendent, with the approval of the City Administrator, shall be authorized to issue a citation for violation of this Section. The penalty will be set as according to the City's Annual Fee Schedule and may be added to the property owner's city utility bill.

(Ord. 02-12, Section 701.02, Subd. 5, Adopted June 3, 2002.)

Subd. 6. Compliance Required.

A. Connections. No connection of water services shall be made to any house or other building unless the plumbing therein has been installed pursuant to the State Plumbing Code and the provisions of this Chapter, and inspected, provided that this shall apply only to construction which has not been completed prior to adoption of this Chapter.

B. Consumers. Every person applying for water service, every owner of property for which any such application is made, every person where such service is accepted subsequent to the effective date hereof of the enactment of this Code shall be deemed, upon making such the application or accepting the service, to consent to all rules, regulations and rates as established by this Chapter and as may hereafter be set forth and adopted by the Council by resolution or ordinance.

Subd. 7. Water Meter Seal Required. Each water meter shall be sealed by the Public Works Superintendent, or his/her designee. No Certificate of Occupancy shall be issued by the City's Building Official until the water meter is sealed.

Subd. 8. Enforcement and Citations. The Public Works Superintendent, with the approval of the City Administrator, shall be authorized to issue a citation for violation of this Section. The penalty will be set as according to the City's Annual Fee Schedule and may be added to the property owner's city utility bill.

(Ord. 02-12, Section 701.01, Subd. 7 & 8, Adopted June 3, 2002.)

701.03 PLUMBING REGULATIONS.

Subd. 1. Service Pipes. Every service pipe shall be laid with sufficient bend to allow not less than one foot of extra length and in such manner as to prevent rupture by settlement. The service pipe shall be placed not less than six feet below the surface and be so arranged as to prevent rupture by freezing. A shut-off or other stop cork with waste valve of the size and strength required shall be placed close to the inside wall of the building and be well protected from freezing. Copper tubing or polyethylene pipe SDR 9, copper tube size (CTS) with a minimum pressure rating of 200 p.s.i., accompanied by a #10 copper wire shall be used for all services of two inches or less. The polyethylene pipe shall conform to ASTM Number D-2737 and NSF Number 3408. Ford Insert Stiffeners made of solid 304-tubular stainless steel, dimpled and flanged to retain placement within polyethylene service pipe. Joints on copper tubing shall be as few as possible and not more than one joint shall be used for service up to seventy (70) feet in

length. Each joint shall be left uncovered until inspected by the City. Every service over two inches shall be cast iron or ductal iron. Other material may be approved by the Superintendent of Public Works. Connections with the mains for domestic supply shall be at least three-fourths of an inch per residential unit, or equivalent. (Ord. 06-10, Section 701.03, Adopted August 21, 2006).

Subd. 2. Water Meter Setting. Every water meter shall be installed in accordance with the following provisions:

A. Service pipe from the water main to the meter shall be brought through the floor in vertical position where the pipe enters the building. The stop and waste valve shall be 12 inches above the floor.

B. The bottom of the meter shall be between six (6) and twelve (12) inches above the finished floor line. The meter shall be set not more than 12 inches horizontally from the inside line of the basement wall unless a different position is approved by the City Administrator or the City Administrator's designee. A suitable bracket shall be provided to support the meter in a proper vertical position and prevent noise from vibration.

C. Each meter installation shall have a stop and waste valve on the street side of the meter. In no case shall more than 12 inches of pipe be exposed between a point of entrance through the basement floor and the stop and waste valve. A stop and waste valve shall also be installed in the house side of the meter.

D. The water pipe connecting with the main shall not exceed two feet under the basement floor from the inside of the basement wall to the water meter connection.

E. Deviation from the installation specifications in this Subdivision shall be by variance pursuant to the City Code.

701.04 LIABILITY PROVISIONS.

Subd. 1. Repairs. After the initial connection has been made to the water main the applicant, owner, occupant or user of the premises shall be liable for all repairs required to any water line necessary for connection of the premises to the street main including any repairs necessary to the main itself and any necessary street repairs. It shall be the responsibility of the applicant, owner, occupant and user to maintain the stop box at such height as shall insure that it remains above the finished grade of the property.

Subd. 2. For Failure to System. The City shall not be held liable at any time for any deficiency or failure in the supply of water to any customer whether the same be occasioned by shutting off the water for repairs or connections or for any cause whatsoever.

Appendix 11: Implementation Checklist

Minnesota Water Supply Plan Instructions & Checklist 2016-2018



Public Water Suppliers

All public water suppliers in Minnesota that operate a public water distribution system, serve more than 1,000 people and/or all cities in the seven-county metropolitan area, must have a water supply plan approved by the Department of Natural Resources (DNR). Water supply plans must be updated and submitted to the DNR for approval every ten years. This requirement, in place since the 1990s, is designed to encourage communities to deal proactively with providing sustainable drinking water for citizens, businesses, and industry.¹

These plan updates will be due between 2016 and 2018; the DNR will be notifying communities of the due date for each specific city water plan. All sections of the water supply plan must be completed in order for the plan to be approved. A checklist is included with these instructions on pages 4 and 5.

What is New?

- Plans can be submitted through Minnesota DNR Permitting and Reporting System (MPARS).
- DNR Hydrologists will be meeting with clusters of communities rather than individually. In the Twin Cities metropolitan area, Metropolitan Council staff will also provide technical assistance and in Greater MN, staff from MN Rural Waters Association will join us.
- There is a greater emphasis on water conservation/demand reduction and on developing rate structures that encourage conservation.
- Simplified reporting: More tables with check boxes; less writing required.
- Part 4 of the plan, required for communities in the seven-county metropolitan area, now reflects the Twin Cities metropolitan area Master Water Supply Plan
- Resources - can be found at www.mndnr.gov/watersupplyplans including copies of sample rate structures, conservation ordinances, education programs, water level recording forms, certificate of adoption, and other items as well as links to useful conservation web pages.

Submitting a Plan for DNR Approval

Preferably, please submit plans electronically to:

<https://webapps11.dnr.state.mn.us/mpars/public/authentication/login>

Steps for electronic submission:

1. Follow the above link and log into MPARS.
2. From your Account Overview Permits Tab, click on your primary Water Supply Permit Number.
3. Then click on Communication Tab.
4. Click New Message to Hydrologist (under Communication heading)

¹ see [Minn. Stat. 103G.291](#)

Individual Permit: 1958-0647
Status: Active

Overview Parties Attachments History Financial Water Use Communication

Communication
New Message to Hydrologist

Actions
Communicate With Hydrologist
Request a Change to Permit

5. Type in the Subject heading and a brief message

Communicate with Hydrologist

To: Julie Aadland
CC'd Staff:

If you want to cc any other Parties that are affiliated with this application/permit, select them from the list below:

Serocki, Tony
Parties must have an email address in our database to be in this list.
(Use Ctrl to select multiple)

Subject
Water Supply Plan

Message
Here's our latest plan

Attachments

Document Type File
Add attachment

Send Cancel

6. Click Add Attachment
7. Under Document Type drop down, select Water Supply Plan
8. Click choose file and attach your Water Supply Plan - **Naming convention: WSP_cityname_permitnumber_date.doc**
Please include list of all permit numbers associated with this Water Supply in the message field
9. Hit Send at the bottom of the page

Or submit completed plans to:
DNR Waters
Water Permit Programs Supervisor
500 Lafayette Road
St. Paul, MN 55155-4025

Plans for communities in the seven-county metropolitan area will be automatically shared with the Metropolitan Council.

If you have questions regarding water supply plans, please call (651) 259-5034 or e-mail questions to wateruse.dnr@state.mn.us

Twin Cities Metropolitan Area Requirements

All communities that operate a public water supply system within the seven county Twin Cities metropolitan area, even those with fewer than 1,000 people, must complete a local water supply plan and submit it to the Metropolitan Council, adjacent communities, and the county for review and comment. These plans include completion of Part 4 of the local water supply plan template.



Please submit plans to DNR Ecological and Water Resources Division as described above. Plans for communities in the seven-county metropolitan area will be shared with the Metropolitan Council.

Final Plan Adoption by City or Board

Communities give the plan preliminary approval subject to DNR review and, for communities in the seven-county metropolitan area, by Metropolitan Council review.

If the DNR or Metropolitan Council have recommended changes, the community should incorporate them into the plan or respond before the plan is finally adopted.

Communities and utility boards must officially adopt the plan after it is approved by the DNR and, for metro communities, reviewed by Metropolitan Council.

A template of a city certification of adoption is found at www.mndnr.gov/watersupplyplans

Water Supply Plan Checklist

All sections of the plan must be completed in order for the plan to be approved. The following checklist can be used to make sure all elements of the plan have been completed.

Part 1. Water Supply System Description and Evaluation

	Table 1. DNR Water Appropriation Permit Number & Utility Contact Information
	Table 2. Historic Water Demand (Part 1, A)
	Table 1. Large volume users (Part 1, A)
	Table 2. Water treatment capacity and treatment processes (Part 1, B)
	Table 3. Storage capacity, as of the end of the last calendar year (Part 1, B)) & discussion of current and future storage capacity needs
	Table 4. Water sources & status (Part 1, C) & discussion of limitations
	Table 5. Projected annual water demand (Part 1, D) & discussion of water use trends & projection method
	Table 6. Source water quality monitoring (Part 1, E)
	Table 9. Water level data (Part 1, E)
	Table 10. Natural resource impacts (Part 1, E)
	Table 11. Status of Wellhead Protection and Source Water Protection Plans (Part 1, E)
	Table 12. Adequacy of Water Supply System (Part 1, F)
	Table 13. Proposed future installations/sources (Part 1, F)
	Table 14. Alternative water sources (Part 1, F)
	Appendix 1: Well records and maintenance summaries
	Appendix 2: Water level monitoring plan
	Appendix 3: Water level graphs for each water supply well
	Appendix 4: Capital Improvement Plan

Part 2. Emergency Planning and Response Procedures

	Table 15. Emergency response plan contact information (Part 2, A) & Y/N questions
	Table 16. Interconnections with other water supply systems to supply water in an emergency (Part 2, C) & Y/N questions
	Table 17. Utilizing Surface Water as an Alternative Source (Part 2, C) & discussion of additional emergency water provisions
	Table 18. Water use priorities (Part 2, C)
	Table 19. Emergency demand reduction conditions, triggers and actions (Part 2, C)
	Table 20. Plan to Inform Customers Regarding Conservation Requests, Water Use Restrictions, and Suspensions (Part 2, C) & discussion of restriction authority
	Appendix 5: Emergency Telephone List
	Appendix 6: Cooperative Agreements for Emergency Services
	Appendix 7: Municipal Critical Water Deficiency Ordinance

Part 3. Water Conservation Plan

	Table 21. Implementation of previous ten-year Conservation Plan (Part 3, A) & discussion of progress and results
	Table 22. Short and long-term demand reduction conditions, triggers & actions (Part 3, A)
	Y/N & discussion of leak detection monitoring , water audits & water loss (Part 3, B)
	Table 23. Customer Meters (Part 3, B)
	Table 24. Water Source Meters (Part 3, B)
	Y/N & discussion of water use trends in residential GPCD (Part 3, B)
	Table 25. Strategies and timeframe to reduce residential per capita demand (Part 3, B)
	Table 26. Strategies and timeframe to reduce institutional, commercial, industrial, and agricultural and non-revenue use demand (Part 3, B)
	Describe trends in customer use categories (Part 3, B)
	Calculate ratio of maximum day demand to average day demand (Part 3, B)
	Table 27. Rate structures for each customer category (add additional rows as needed)
	Table 28. Additional strategies to Reduce Water Use & Support Wellhead Protection (Part 3, B)
	Discuss how you will track success (Part 3, B)
	Table 29. Regulations for short-term reductions in demand and long-term improvements in water efficiencies (Part 3, B)
	Table 30. Retrofitting programs (Part 3, B)
	Table 31. Current and Proposed Education Programs (Part 3, C) and discussion of future education plans
	Appendix 8: Graph showing annual per capita water demand for each customer category during the last ten-years
	Appendix 9: Water Rate Structure
	Appendix 10: Adopted or proposed regulations to reduce demand/improve water efficiency
	Appendix 11: Implementation Checklist

Part 4. Items Metropolitan Area Water Suppliers

	Table 32. Alternative Approaches (Part IV, D)
	Complete Technical Assistance question

Plan Submittal and Adoption

Follow MPARS submission guidelines on page 1 of this document (preferred) or
 Mail to: DNR Ecological & Water Resources
 Water Permit Programs Supervisor
 500 Lafayette Road
 St. Paul, MN 55155-4032 Or e-mail to <http://www.dnr.state.mn.us/mpars/index.html>

(Metro communities with less than 1,000 people only)

Follow MPARS submission guidelines on page 1 of this document (preferred) or
 Mail to: Metropolitan Council
 Reviews Coordinator
 390 N Robert St
 St. Paul, MN 55101 Or e-mail to ReviewsCoordinator@metc.state.mn.us

Certification of Plan Adoption

Date:

IMPLEMENTATION CHECKLIST

The City of Belle Plaine intends to focus on continuing to maintain low residential and total water demands. They currently are proactive in reducing demands and will continue to utilize any resources possible to reduce demand.

Activity or Action Item	Timeframe
Make water system infrastructure improvements	Ongoing – as population and demand require
Conduct audience-appropriate water conservation education and outreach.	Ongoing
Repair leaking system components (e.g. pipes, valves)	Ongoing
Enforce existing water conservation ordinances	Ongoing

-
- The number of each potential contaminant source identified and the nature of the potential contaminant associated with each source
 - The capability of the geologic material to absorb a contaminant
 - The effectiveness of existing controls
 - The time required to get cooperation from other agencies and cooperators
 - The resources needed: staff, money, time, legal, and technical

The City (the Public Water Supplier) defines priority for implementing a WHPP measure as addressing the issues that directly impact the aquifer, and are relatively inexpensive, first. The following table lists each measure that it will implement over the ten year period that the City's WHPP is in effect as well as the priority that it has assigned to each measure.

Table 11 - WHPP Plan of Action

Category – Public Education and Outreach																		
Objective A-1. Work to establish a line of communication between the citizens and the City and use that line to educate the citizens of Belle Plaine about how land use activities can impact local water quality.																		
Measure	Priority	Description	City Action Alone Unless Cooperator is Noted	Cost	Implementation time frame													
					2015	2016	2017	2018	2019	2020	2021	2022	2023	2024				
Measure A1-1	Low	<p>Develop and release periodic items to the local news media regarding WHPP efforts of the Community. One example is the annual Consumer Confidence Report, which is distributed to the public through the Belle Plaine Herald. Other educational materials are available from the Minnesota Rural Water Association website (www.mrwa.com/swedu.html)</p> <p>Source of Action: City of Belle Plaine</p> <p>Time frame: Every 3 years</p> <p>Goal achieved: Community citizens and area residents become aware of wellhead protection program.</p>	<p>Cooperator(s): Local newspaper</p>	<p>Estimated cost: staff time</p>		X				X								
Measure A1-2	Medium	<p>The City will continue to include educational material in the quarterly newsletter and/or City website, including information explaining the WHPP and its purpose, to be distributed through local outlets to citizens served by the water system and the general public. Educational materials are available from the Minnesota Rural Water Association website (www.mrwa.com/swedu.html)</p> <p>Source of Action: City Wellhead Protection Team</p> <p>Time frame: Every 3 years</p> <p>Goal achieved: Citizens and customers become better informed about the City’s Wellhead Protection Program, resulting in public acceptance and buy-in to the Plan.</p>	<p>Cooperator(s): MRWA</p>	<p>Estimated cost: \$100</p>			X			X					X			

Category – Wells/IWMZ Management														
Objective B-2. Seal unused or abandoned wells within the DWSMA.														
Measure	Priority	Description	City Action Alone Unless Cooperator is Noted	Cost	Implementation time frame									
					2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Measure B2-1	High	<p>The City intends to help coordinate local efforts to properly seal unused wells within the DWSMA. This will be done in conjunction with the well/potential contaminant source inventory – information on sealing wells will be provided to well owners. The City can assist in finding funding sources for the homeowners. Wells in the ERA are the priority.</p> <p>Source of Action: City of Belle Plaine WHPP Team</p> <p>Time frame: Every 5 years, to match inventory time frame.</p> <p>Goal achieved: Private well owners become more likely to properly seal their unused wells and the City becomes aware of changes in well status. Sealing unused wells removes a pathway in which contamination could reach the drinking water supply.</p>	<p>Cooperator(s): Scott County Water Plan, Landowners</p>	<p>Estimated cost: Unknown, estimated at \$300-\$400 per well.</p>			X					X		

Category – Wells/IWMZ Management														
Objective B-3. Raise well owner awareness and prevent contamination of City water supply via private wells.														
Measure	Priority	Description	City Action Alone Unless Cooperator is Noted	Cost	Implementation time frame									
					2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Measure B3-1	Medium	<p>City staff and members of the WHPP Team will obtain and distribute brochures, describing proper well maintenance and operation, to private landowners who have wells within the DWSMA. The mailing list will be based on MDH well owner information and the responses received in the 2015 well questionnaire. Educational materials are available from the Minnesota Rural Water Association website (www.mrwa.com/swedu.html)</p> <p>Source of Action: City Water Department, WHPP Team</p> <p>Time frame: Every 3 years</p> <p>Goal achieved: Private well owners will learn proper operation and maintenance of private wells, thereby reducing potential for contamination of City water supply.</p>	<p>Cooperator(s): MDH, Belle Plaine Township, Scott County, local well drillers</p>	<p>Estimated cost: \$100</p>		X				X			X	

Category – Wells/IWMZ Management

Objective B-5. Identify new high-capacity wells that are proposed for construction in the WHPA/DWSMA, and/or major changes to groundwater appropriations for existing high-capacity wells, to determine whether the pumping of said wells will alter the current boundaries of the WHPA/DWSMA delineations or other portions of the City’s WHPP.

Measure	Priority	Description	City Action Alone Unless Cooperator is Noted	Cost	Implementation time frame										
					2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	
Measure B5-1	High	<p>City staff and staff in the MDH Source Water Protection Unit will coordinate efforts with the DNR Water Appropriations Program to identify proposed high capacity wells in the City’s wellhead protection area, and/or major changes to groundwater appropriations for existing high capacity wells.</p> <p>Source of Action: Belle Plaine Water Department, MDH, DNR</p> <p>Time frame: Ongoing</p> <p>Goal achieved: The program will always be current and be able to incorporate new owners into its education programs. This action will also assist the City with identifying new wells that are proposed for construction in the DWSMA and determine if the pumping of those wells will affect the City’s WHPP.</p>	<p>Cooperator(s): Adjacent and nearby land owners, well operators</p>	<p>Estimated cost: Limited to staff time and special studies if needed</p>	X	X	X	X	X	X	X	X	X	X	X

Category – Wells/IWMZ Management

Objective B-6. Effectively manage the IWMZ to reduce the likelihood of contaminants from entering the well at a level to cause human health impacts.

Measure	Priority	Description	City Action Alone Unless Cooperator is Noted	Cost	Implementation time frame													
					2015	2016	2017	2018	2019	2020	2021	2022	2023	2024				
Measure B6-1	High	<p>Review and update the IWMZ survey for all wells in system. The City will work with the MDH staff on the update of their IWMZ at a time scheduled by the MDH and be part of the sanitary survey.</p> <p>Source of Action: Wellhead Protection Manager/Team</p> <p>Time frame: 2015, 2018, 2021</p> <p>Goal achieved: The potential contaminant sources within the IWMZ will be identified.</p>	Cooperator(s): MDH, MRWA	Estimated cost: Staff time		X			X				X					
Measure B6-2	High	<p>Monitor setbacks for all new potential sources of contamination located within the IWMZ.</p> <p>Source of Action: Wellhead Protection Manager/Team</p> <p>Time frame: Annually</p> <p>Goal achieved: Potential contaminant sources in the setbacks will be identified.</p>	Cooperator(s): City staff, MDH, MRWA	Estimated cost: Staff time		X	X	X	X	X	X	X	X	X	X	X	X	X
Measure B6-3	High	<p>Implement the WHPP Measures identified in current and future IWMZ Inventories and recommendations received in the MDH Sanitary Survey under “Element 1 – Water Source.” For example, the stormwater infiltration pond located adjacent to Wells 3 and 4 was clay lined in 2007 as part of the water treatment plant upgrade.</p> <p>Source of Action: Wellhead Protection Manager/Team</p> <p>Time frame: Annually</p> <p>Goal achieved: The City can ensure corrective action is taken if any threats are detected within the IWMZ.</p>	Cooperator(s): MDH, MRWA	Estimated cost: Staff time	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Category – Wells/IWMZ Management

Objective B-7. Locate any private wells that are connected to the City’s water supply and work with the owners of the wells to disconnect them from the water supply and properly seal them, if the owner is willing.

Measure	Priority	Description	City Action Alone Unless Cooperator is Noted	Cost	Implementation time frame											
					2015	2016	2017	2018	2019	2020	2021	2022	2023	2024		
Measure B7-1	Low	<p>The City gathered information regarding existing wells within City boundaries that may have been connected to the City water system during development of necessary data for the WHPP in 2015. Some wells may have been unidentified due to lack of well logs and/or other information. The City will continually attempt to locate other wells that could possibly threaten the City’s water supply.</p> <p>The City intends to help coordinate local efforts to properly disconnect wells from the City water system and seal unused wells within the City’s DWSMA. This will be done in conjunction with the well/potential contaminant source inventory. The City will assist in finding funding sources for the homeowners. Those wells that are thought to have been interconnected with the municipal system at one time are always eligible for the MDH Well Management Well Sealing Grant, when found.</p> <p>Because the wells in question are not within the DWSMA, the priority of this measure is ranked “Low.” If the WHPP team is able to locate any of the wells, or update a status on any of the wells, that information will be sent to MDH (or planner) so that the MDH files can be updated and the future inventorying efforts won't need to include these wells.</p> <p>Source of Action: City of Belle Plaine Water Department</p> <p>Time frame: Every 5 years, to match inventory time frame.</p> <p>Goal achieved: Information will be collected about the current number of private wells that pose a threat to City drinking water. This measure also allows for opportunity for a public education and awareness campaign. Private well owners become more likely to properly seal their unused wells and the City becomes aware of changes in well status.</p>	<p>Cooperator(s): Adjacent and nearby land owners, well operators</p>	<p>Estimated cost: Limited to staff time and special studies if needed</p>			X									

Category –Subsurface Sewage Treatment Systems (SSTS)															
Objective C-1. Discourage SSTS within the high vulnerability areas of the DWSMA.															
Measure	Priority	Description	City Action Alone Unless Cooperator is Noted	Cost	Implementation time frame										
					2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	
Measure C1-1	High	<p>City Council will continue to enforce an ordinance requiring new construction within the DWSMA and within the city limits to connect to City sanitary sewer (where available) instead of using SSTS. This will reduce the likelihood that SSTS will impact contaminant movement to the City wells. The City will encourage the County Environmental Services to have a similar policies for the properties within the high vulnerability area of the DWSMA, but outside of City limits to connect to sanitary sewer, where available.</p> <p>Source of Action: City Council</p> <p>Time frame: Ongoing</p> <p>Goal achieved: New homes will use City sanitary sewer instead of SSTS, thereby reducing potential for contamination of groundwater.</p>	<p>Cooperator(s): Land owners, Scott County Zoning</p>	<p>Estimated cost: \$100</p>	X	X	X	X	X	X	X	X	X	X	X

Category – Hazardous Materials															
Objective D-1. Provide educational opportunities for residential landowners regarding proper handling and disposal of household hazardous waste products.															
Measure	Priority	Description	City Action Alone Unless Cooperator is Noted	Cost	Implementation time frame										
					2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	
Measure D1-1	Medium	<p>Direct land owners to household hazardous waste collection held by Scott County at 588 Country Trail East (Hwy 282) in Spring Lake Township.</p> <p>Source of Action: WHPP Team</p> <p>Time frame: Ongoing</p> <p>Goal achieved: Opportunity for residents to exchange and/or properly dispose of household hazardous waste products.</p>	<p>Cooperator(s): Adjacent and nearby land owners, MPCA, Scott County</p>	<p>Estimated cost: Limited to staff time</p>	X	X	X	X	X	X	X	X	X	X	X

Category – Hazardous Materials

Objective D-2. Publicize in the City newsletter that Scott County provides commercial hazardous waste generators with information on proper handling of hazardous materials.

Measure	Priority	Description	City Action Alone Unless Cooperator is Noted	Cost	Implementation time frame											
					2015	2016	2017	2018	2019	2020	2021	2022	2023	2024		
Measure D2-1	Low	<p>The County will distribute published information to generators. The City will put an annual notice in the City newsletter and/or on the City website that the County provides the service.</p> <p>Source of Action: Scott County</p> <p>Time frame: Every 5 years</p> <p>Goal achieved: Hazardous material generators and handlers learn proper management techniques and disposal methods.</p>	<p>Cooperator(s): Business owners, Minnesota Technical Assistance Program (MNTAP), MPCA</p>	<p>Estimated cost: Limited to staff time</p>				X						X		

Category – Turf/Land Use Management

Objective E-1. Reduce usage of turf care products within the moderate and high vulnerability areas of the DWSMA; improve management of fertilizers and pesticides.

Measure	Priority	Description	City Action Alone Unless Cooperator is Noted	Cost	Implementation time frame										
					2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	
Measure E1-1	Low	<p>The City will work with athletic field management within the moderate and high vulnerability areas of the DWSMA to reduce use of fertilizers and chemicals, and to reduce impact of potential future expansion into the WHPA. The City will advise athletic field management on areas that fuel tanks and fertilizer storage should not be placed. The golf course is currently closed, but if it opens again, the City will work with golf course management in a similar way.</p> <p>Source of Action: WHPP Team</p> <p>Time frame: 2015</p> <p>Goal achieved: Athletic field turf management and storage of fuels and nutrient products will not pose problems for future water quality.</p>	<p>Cooperator(s): Athletic field management, turf care professionals, Extension, MPCA, Scott County</p>	<p>Estimated cost: Staff time</p>	X										
Measure E1-2	Low	<p>The City will provide a link to MRWA’s residential turf management landscaping educational materials on its website.</p> <p>Source of Action: WHPP Team</p> <p>Time frame: 2015</p> <p>Goal achieved: Residential turf management will not pose problems for future water quality.</p>	<p>Cooperator(s): MRWA</p>	<p>Estimated cost: Staff time</p>	X										

Category – Turf/Land Use Management

Objective E-2. Review zoning and land use classifications in the WHPA and IWMZ for each well to evaluate if there are opportunities for improvement.

Measure	Priority	Description	City Action Alone Unless Cooperator is Noted	Cost	Implementation time frame											
					2015	2016	2017	2018	2019	2020	2021	2022	2023	2024		
Measure E2-1	High	<p>Evaluate zoning and land use classifications, identify land uses that have a high potential for groundwater contamination, and make recommendations to prevent such land uses from locating within the DWSMA to the City Council as part of the next update to the City’s zoning. ERAs are a priority.</p> <p>Source of Action: WHPP Team, City Planner</p> <p>Time frame: Every 3 years</p> <p>Goal achieved: Land uses that have a high potential for groundwater contamination will not be located within the DWSMA.</p>	<p>Cooperator(s): Adjacent and nearby land owners, City Council</p>	<p>Estimated cost: \$100</p>				X			X				X	

Category – Turf/Land Use Management

Objective E-3. Review water system, sanitary sewer system, and stormwater system in the WHPA and IWMZ for each well to evaluate if there are opportunities for improvement.

Measure	Priority	Description	City Action Alone Unless Cooperator is Noted	Cost	Implementation time frame											
					2015	2016	2017	2018	2019	2020	2021	2022	2023	2024		
Measure E3-1	Low	<p>Most of the water system within the DWSMA was constructed after 1981, so likely is in good condition. Evaluate water system, identify components that have a high likelihood of admitting contamination into the water system, and make recommendations to the City Council as part of the next update to the City’s Capital Improvement Plan. The parts of the system within the ERA are the priority. Consider extending system to buildings that are not currently connected.</p> <p>Source of Action: WHPP Team, Belle Plaine Public Works Department</p> <p>Time frame: Every 3 years</p> <p>Goal achieved: Maintenance and improvements can be done strategically to the water system to prevent contamination from entering the water system.</p>	<p>Cooperator(s): Adjacent and nearby land owners, City Council</p>	Estimated cost: \$100				X			X				X	
Measure E3-2	Low	<p>Most of the sanitary sewer system within the DWSMA was constructed after 1991, so likely is in good condition. Evaluate sanitary sewer system, identify components that have a high likelihood of emitting contamination into the groundwater, and make recommendations to the City Council as part of the next update to the City’s Capital Improvement Plan. The parts of the system within the ERA are the priority. Consider extending system to buildings that are not currently connected.</p> <p>Source of Action: WHPP Team, Belle Plaine Public Works Department</p> <p>Time frame: Every 3 years</p> <p>Goal achieved: Maintenance and improvements can be done strategically to the wastewater system to prevent contamination from entering the groundwater.</p>	<p>Cooperator(s): Adjacent and nearby land owners, City Council</p>	Estimated cost: \$100			X			X					X	

Measure E3-3	High	<p>Most of the storm sewer system within the DWSMA was constructed after 1991, so likely is in good condition. Evaluate stormwater system, identify components that have a high likelihood of admitting contamination into the groundwater, and make recommendations to the City Council as part of the next update to the City's Capital Improvement Plan. The parts of the system within the ERA are the priority. Consider extending system to buildings that are not currently connected.</p> <p>Source of Action: WHPP Team, Belle Plaine Public Works Department</p> <p>Time frame: Every three years</p> <p>Goal achieved: Maintenance and improvements can be done strategically to the stormwater system to prevent contamination from entering the groundwater. For example, the stormwater infiltration pond located adjacent to Wells 3 and 4 was clay lined in 2007 as part of the water treatment plant upgrade.</p>	<p>Cooperator(s): Adjacent and nearby land owners, City Council</p>	Estimated cost: \$100			X			X			X	
Measure E3-4	High	<p>Currently, the City's Stormwater Ordinance 1107 just states that stormwater management will be in compliance with the WHPP, but does not specifically state any requirements other than that. The City will consider changing the City's stormwater ordinance to prohibit stormwater infiltration within the high vulnerability area of the DWSMA; to consider stormwater infiltration on a case-by-case basis for the moderate vulnerability area; and to allow stormwater infiltration in the low vulnerability area.</p> <p>Source of Action: WHPP Team, Belle Plaine City Council</p> <p>Time frame: 2015</p> <p>Goal achieved: The high and moderate vulnerability areas will be protected from potential contaminants in stormwater.</p>	<p>Cooperator(s): Adjacent and nearby land owners, City Public Works Department</p>	Estimated cost: Staff time	X									

Category – Turf/Land Use Management

Objective E-4. Educate farmers and producers about management of manure, fertilizers and pesticides within the moderate and high vulnerability areas of the DWSMA, and encourage them to implement Best Management Practices (BMPs).

Measure	Priority	Description	City Action Alone Unless Cooperator is Noted	Cost	Implementation time frame									
					2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Measure E4-1	Low	<p>The City has no authority over agricultural fertilizer use, manure spreading or feedlot nutrient management outside of City boundaries. The MPCA has authority over the feedlot management. The City will offer to work with the agricultural landowners within the DWSMA to implement cropland and feedlot BMPs.</p> <p>Source of Action: WHPP Team</p> <p>Time frame: Every 3 years</p> <p>Goal achieved: Farmers will be educated about nutrient management.</p>	<p>Cooperator(s): Adjacent and nearby land owners, MDA, MPCA</p>	Estimated cost: \$100			X			X			X	
Measure E4-2	Low	<p>The City will request assistance from MDA to provide and promote information to landowners and producers about Best Management Practices for Nitrogen on Coarse Textured Soils. Farmers can receive guidance on Nutrient Management Relating to Agricultural Practices from the MDA.</p> <p>Source of Action: WHPP Team, MDA</p> <p>Time frame: Every 3 years</p> <p>Goal achieved: Farmers will be educated about nutrient management.</p>	<p>Cooperator(s): Adjacent and nearby land owners, MDA</p>	Estimated cost: \$100			X			X			X	
Measure E4-3	Low	<p>The City will work cooperatively with Scott County SWCD to promote the increased implementation which will provide a water quality benefit. The City will explore options for applying for funds via MDH or other entities to help promote these management practices and help educate farmers as to the water quality benefits they provide.</p> <p>Source of Action: WHPP Team, MDA, MPCA, MDH</p> <p>Time frame: Every 3 years</p> <p>Goal achieved: Funding will be available for nutrient management.</p>	<p>Cooperator(s): Adjacent and nearby land owners, MPCA, MDA, Scott County SWCD, MDH</p>	Estimated cost: \$100			X			X			X	

Category – Tanks

Objective F-1. Establish status of existing storage tanks within the moderate and high vulnerability areas of the DWSMA.

Measure	Priority	Description	City Action Alone Unless Cooperator is Noted	Cost	Implementation time frame											
					2015	2016	2017	2018	2019	2020	2021	2022	2023	2024		
Measure F1-1	High	<p>Conduct property survey to identify the current status of storage tanks located within the moderate and high vulnerability areas of the DWSMA. Gather tank information from the MPCA. Identify tanks by category (above ground, underground, agricultural, fuel, etc) and identify with a parcel ID number, owner name, contact person and address. This was done as part of the 2015 WHPP update and will be done in conjunction with the well/potential contaminant source inventory updates. Tanks in the ERA are the priority. Within the moderate vulnerability area, only tanks larger than 1100 gallons capacity need to be inventoried.</p> <p>Source of Action: Belle Plaine Water Department</p> <p>Time frame: Every 5 years</p> <p>Goal achieved: Identification of the current status of storage tanks located within the DWSMA will assist the WHPP Team in determining what course of action to take in assisting land owners.</p>	<p>Cooperator(s): Adjacent and nearby land owners, MPCA, MDA</p>	<p>Estimated cost: Limited to staff time and special studies if needed</p>	X			X							X	

Category – Tanks																
Objective F-2. Distribute BMPs of other management information to owners of identified storage tanks within the moderate and high vulnerability areas of the DWSMA.																
Measure	Priority	Description	City Action Alone Unless Cooperator is Noted	Cost	Implementation time frame											
					2015	2016	2017	2018	2019	2020	2021	2022	2023	2024		
Measure F2-1	Medium	<p>Prepare a mailing list of owners of storage tanks within the moderate and high vulnerability areas of the DWSMA and forward to Jake Mueller, Tanks Compliance and Enforcement manager for MPCA (jacob.mueller@state.mn.us, 651-757-2862) requesting they be placed on the MPCA’s tank owner/installer listserv mailing list.</p> <p>Source of Action: WHPP Manager, Belle Plaine Water Department</p> <p>Time frame: Every 3 years</p> <p>Goal achieved: Land owners become aware of proper storage tank maintenance and operation, thereby reducing threats to the water supply.</p>	Cooperator(s): MPCA	Estimated cost: Limited to staff in-kind time				X		X						X

Category – Tanks																	
Objective F-3. Explore with the appropriate local unit of government the possibility of requiring secondary containment for all underground tanks in the high and moderate vulnerability areas of the DWSMA.																	
Measure	Priority	Description	City Action Alone Unless Cooperator is Noted	Cost	Implementation time frame												
					2015	2016	2017	2018	2019	2020	2021	2022	2023	2024			
Measure F3-1	Medium	<p>Explore with the appropriate local unit of government the possibility of requiring secondary containment for all underground tanks in the high and moderate vulnerability areas of the DWSMA. Work with the MDH hydrologist to determine which tanks might be good candidates for this action.</p> <p>Source of Action: WHPP Manager</p> <p>Time frame: Start in 2015</p> <p>Goal achieved: Secondary containment will provide one more level of protection from a spill and a contaminated water supply.</p>	Cooperator(s): City of Belle Plaine, Scott County Zoning	Estimated cost: Limited to staff in-kind time	X												

Category – Potential Contamination Source Management, Especially in Transportation Corridors

Objective G-1. Work to establish a line of communication between the citizens and the City and use that line to educate the citizens of Belle Plaine about how transportation-related land use activities within the moderate and high vulnerability areas of the DWSMA can impact local water quality.

Measure	Priority	Description	City Action Alone Unless Cooperator is Noted	Cost	Implementation time frame											
					2015	2016	2017	2018	2019	2020	2021	2022	2023	2024		
Measure G1-1	Medium	<p>Provide information regarding effective road salt use to citizens and City’s Street Department, either by informational brochure, posting on City website, or in the newspaper. Encourage less use of salt or a less damaging salt alternative. Information and training are available from MPCA (Road Salt Education Program).</p> <p>Source of Action: City of Belle Plaine</p> <p>Time frame: Within next three years</p> <p>Goal achieved: The Street Department and the citizens become aware of road salt’s effect on groundwater, and will use less salt and/or a less damaging salt alternative.</p>	<p>Cooperator(s): MPCA, newspaper</p>	<p>Estimated cost: \$250</p>		X	X	X								

Category – Potential Contamination Source Management, Especially in Transportation Corridors

Objective G-2. Work to establish a coordinated spill response plan with area and state emergency management entities.

Measure	Priority	Description	City Action Alone Unless Cooperator is Noted	Cost	Implementation time frame												
					2015	2016	2017	2018	2019	2020	2021	2022	2023	2024			
Measure G2-1	High	<p>Coordinate spill response efforts with other agencies, such as the Scott County Highway Department, the Scott County Emergency Management Department, and State Incident Duty Officer.</p> <p>Source of Action: City of Belle Plaine Fire and Police Departments</p> <p>Time frame: Within next three years</p> <p>Goal achieved: Spills along transportation corridors, or from pipeline or other issues, within the City’s DWSMA will be contained and cleaned up within a reasonable time frame, thereby protecting the City’s water supply.</p>	<p>Cooperator(s): Scott County, MPCA, State Incident Duty Officer</p>	<p>Estimated cost: Minimal</p>				X	X	X							

Category – Potential Contamination Source Management, Especially in Transportation Corridors

Objective G-3. Address impacts of major construction along transportation corridors within the moderate and high vulnerability areas of the DWSMA.

Measure	Priority	Description	City Action Alone Unless Cooperator is Noted	Cost	Implementation time frame													
					2015	2016	2017	2018	2019	2020	2021	2022	2023	2024				
Measure G3-1	High	<p>Coordinate with MnDOT and MDH and contractors to address impacts of construction along road corridors within the moderate and high vulnerability areas of the DWSMA (especially Highway 169) to minimize chances of future contamination of water supply.</p> <p>Source of Action: City of Belle Plaine</p> <p>Time frame: As necessary, when road construction/reconstruction occurs – City will summarize any actions taken in Year 8 of plan implementation.</p> <p>Goal achieved: Issues of soil erosion, storm water runoff, construction wells/drainage, and placement of equipment and service areas will be addressed prior to construction activities.</p>	<p>Cooperator (s): MnDOT, construction contractors, suppliers, MDH</p>	<p>Estimated cost: Minimal</p>													X	

Measure H1-2	Medium	<p>There is a Class V well at the Valley View Golf Course, which is currently closed. In the event another Class V well is identified, provide information to the landowner on technical services available through MNTAP to assess management and/or disposal alternatives. Provide them with local contacts for permitting information for the City of Belle Plaine and Scott County.</p> <p>Source of Action: WHPP Manager, City staff</p> <p>Time frame: Dependent on outcome of H1-1, as needed</p> <p>Goal achieved: Alternative management strategies for Class V wells are identified and the potential for groundwater contamination is reduced.</p>	<p>Cooperator(s): MDH, MRWA planners, landowners, MNTAP</p>	<p>Estimated cost: Staff time, postage, copying costs</p>	X	X	X	X	X	X	X	X	X	X

<p align="center">Category – Data Collection, Reporting and Evaluation</p> <p align="center">Objective I-1. Collect and tabulate additional data (i.e., groundwater elevations, well driller logs for new wells) relative to local groundwater in order to augment and improve current knowledge of local conditions and to provide additional, more accurate, data for future revisions of the City’s WHPP.</p>														
Measure	Priority	Description	City Action Alone Unless Cooperator is Noted	Cost	Implementation time frame									
					2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Measure I1-1	Medium	<p>Gather and record water quality data from City wells on a regular basis and maintain a record of state water levels. Collect samples of City well water, surface water and precipitation and conduct stable isotope analyses of these to evaluate the mixture of surface water and groundwater. Continue collecting groundwater samples for analysis of regulated contaminants and provide the data to the MDH.</p> <p>Source of Action: Belle Plaine Water Department</p> <p>Time frame: Annually</p> <p>Goal achieved: City can detect changes in groundwater supplies and detect contaminants before they reach problem levels in the City wells.</p>	<p>Cooperator(s): None</p>	<p>Estimated cost: \$200 annually</p>	X	X	X	X	X	X	X	X	X	X
Measure I1-2	Medium	<p>Regularly measure groundwater levels east, southeast and south of the City wells to better understand flow directions.</p> <p>Source of Action: Belle Plaine Water Department</p> <p>Time frame: Annually</p> <p>Goal achieved: This could reduce model uncertainty and the size of the capture zones and potentially the DWSMA.</p>	<p>Cooperator(s): None</p>	<p>Estimated cost: \$200 annually</p>	X	X	X	X	X	X	X	X	X	X

Measure II-3	Medium	<p>Develop a database for recording and reporting water resource data collected from the monitoring wells and stations.</p> <p>Source of Action: City of Belle Plaine, MDH</p> <p>Time frame: Within the next 10 years, as the opportunity presents itself</p> <p>Goal achieved: Additional information about the Belle Plaine area ensures more accurate information will be used to delineate the WHPA for the next WHPP update.</p>	<p>Cooperator(s): MDH, City's Engineering Consultant</p>	Estimated cost: Staff time plus consultant fee	X	X	X	X	X	X	X	X	X	X
		<p>Obtain more area-specific hydraulic conductivity data in the area of the City wells. This can be completed by conducting additional pumping tests on the City wells or other existing high capacity wells. Perform an aquifer transmissivity test on a City well as the opportunity (during well maintenance operations) or the need arises. Technical assistance from MDH will be provided to determine the feasibility of performing an aquifer transmissivity test as well as perform the test and data calculations.</p> <p>Source of Action: City of Belle Plaine, MDH</p> <p>Time frame: Within the next 10 years, as the opportunity presents itself</p> <p>Goal achieved: By performing an aquifer transmissivity test on one of the City's wells, more accurate geologic and aquifer data will be used to delineate the WHPA for the next WHPP update.</p>		<p>Cooperator(s): MDH, City's Engineering Consultant</p>	Estimated cost: Staff time (approximately 8-12 hours) plus consultant fee	X	X	X	X	X	X	X	X	X
Measure II-4	Medium	<p>Obtain geologic information pertaining to wellhead protection from other sources as it becomes available.</p> <p>Source of Action: City of Belle Plaine</p> <p>Time frame: Ongoing</p> <p>Goal achieved: Additional information about the Belle Plaine area ensures more accurate information will be used to delineate the WHPA for the next WHPP update. Note: Scott County has contracted with the Minnesota Geological Survey to update the County Geologic Atlas, which provides updated geologic information across the County. This information was utilized in the formulation of this WHPP.</p>	<p>Cooperator(s): Agencies with results from geologic studies, well drilling companies, Scott County, others</p>		Estimated cost: Staff time	X	X	X	X	X	X	X	X	X
		<p>Obtain geologic information pertaining to wellhead protection from other sources as it becomes available.</p> <p>Source of Action: City of Belle Plaine</p> <p>Time frame: Ongoing</p> <p>Goal achieved: Additional information about the Belle Plaine area ensures more accurate information will be used to delineate the WHPA for the next WHPP update. Note: Scott County has contracted with the Minnesota Geological Survey to update the County Geologic Atlas, which provides updated geologic information across the County. This information was utilized in the formulation of this WHPP.</p>		<p>Cooperator(s): Agencies with results from geologic studies, well drilling companies, Scott County, others</p>	Estimated cost: Staff time	X	X	X	X	X	X	X	X	X
Measure II-5	Medium				Estimated cost: Staff time	X	X	X	X	X	X	X	X	X
					Estimated cost: Staff time	X	X	X	X	X	X	X	X	X

D. Commitments from Cooperators

The agencies that are listed in Tables 9 and 10 need to indicate that they will support the Public Water Supplier with the implementing the WHPP measure(s) in which they are identified. The agency and corresponding measure will be listed as they are received.

X. EVALUATION PROGRAM

Plan evaluation is specified under objective H-2 and provides the mechanism for determining whether WHPP action items are achieving the intended result or whether they need to be modified to address changing administrative, technical, or financial resource conditions within the DWSMA. Evaluation is used to support plan implementation and is required under MR 4720.5270 prior to amending the city's WHPP. The City has identified the following procedures that it will use to evaluate the success with implementing its WHPP:

- A annual briefing to the City council will provide the basis for documenting whether each action step for that year was implemented;
- The WHPP team will meet at a minimum every two and one half years to assess the status of plan implementation and to identify issues that impact implementation of action steps throughout the DWSMA;
- The City will assess the results of each action item that has been taken annually to determine whether the action item has accomplished its purpose or whether modification is needed. Assessment results will be presented in the annual report to the City council.
- The City will prepare a written report that documents how it has assessed plan implementation and the action items that were carried out. The report will be presented to MDH at the first scoping meeting that it will hold with the City to begin amending the WHPP.

XI. CONTINGENCY STRATEGY

The WHPP must include a contingency strategy that addresses disruption of the water supply that is caused either by contamination or mechanical failure. The City has prepared this strategy using a template that is provided by MDH and it is presented in Appendix IV of this plan.

XII. GLOSSARY OF TERMS

Conjunctive Delineation means a WHPP area that is defined by two components consisting of 1) the capture zone for a well that is based on generating flow pathlines within the subsurface area(s) of contribution and 2) a surface area that may contribute recharge to the capture zone.

Data Element means a specific type of information that is required by the Minnesota Department of Health to prepare a wellhead protection plan.

Drinking Water Supply Management Area (DWSMA) means the surface and subsurface areas surrounding a public water supply well, including the WHPP area, that must be managed by the entity identified in the WHPP. (MR4720.5100, subpart 13). This area is delineated using identifiable landmarks that reflect the scientifically calculated WHPA boundaries as closely as possible.

Emergency Response Area (ERA) means the part of the WHPP area that is defined by a one-year time of travel within the aquifer that is used by the public water supply well (MR4720.5250, Subpart 3). It is used to set priorities for managing potential contamination sources within the DWSMA.

Emergency Standby Well means a well that is pumped by a public water supply system only during emergencies such as when an adequate water supply cannot be achieved because one or more primary or seasonal water supply well cannot be used.

Inner Wellhead Management Zone (IWMZ) means the land that is within 200 feet of a public water supply well (MR4720.5100, subpart 19). The public water supplier must manage the IWMZ to help protect it from sources of pathogen or chemical contamination that may cause an acute health effect.

Non-point Source Contamination refers to contamination of the drinking water aquifer that is caused by polluted runoff or pollution sources that cannot be attributed to a well-defined origin, e.g., runoff from agricultural fields, feedlots or urban areas.

Point Source Contamination refers to contamination of the drinking water aquifer that is attributed to pollution arising from a well-defined origin, such as discharge from a leaking fuel tank, a solid waste disposal site, or an improperly constructed or sealed well.

Primary Water Supply Well means a well that is regularly pumped by a public water supply system to provide drinking water.

Seasonal Water Supply Well means a well that is only used to provide drinking water during certain times of the year either when pumping demand cannot be met by the primary water supply well(s) or for a facility, such as a resort, that is closed to the public on a seasonal basis.

Vulnerability refers to the likelihood that one or more contaminants of human origin may enter either 1) a water supply well that is used by the public water supplier or 2) an aquifer that is a source of public drinking water.

WHP Area (WHPA) is the surface and subsurface area surrounding a well or well field that supplies a public water system, through which contaminants are likely to move toward and reach the well or well field (Minnesota Statutes, Part 1031.005, subdivision 24).

WHPP Goal means an overall outcome of implementing the WHPP, e.g., Providing for a safe and adequate drinking water supply.

WHPP Measure means a method adopted and implemented by a public water supplier to prevent contamination of a public water supply, and approved by the Minnesota Department of Health under Minnesota Rules parts 4720.5110 to 4720.5590.

WHPP Objective means a capability that is needed to achieve one or more WHPP goals, e.g., implementing WHPP measures to address high priority potential contamination sources within 5 years.

XIII. LIST OF ACRONYMS

BMP	Best Management Practice
BWSR	Board of Water and Soil Resources
CITY	City of Belle Plaine
CWI	County Well Index
DWSMA	Drinking Water Supply Management Area
EPA	U.S. Environmental Protection Agency
EQB	Environmental Quality Board
ERA	Emergency Response Area
FSA	Farm Service Agency
IWMZ	Inner Wellhead Management Zone
LGU(s)	Local Unit(s) of Government
MDA	Minnesota Department of Agriculture
MDH	Minnesota Department of Health
MN DNR	Minnesota Department of Natural Resources
MnDOT	Minnesota Department of Transportation
MNTAP	Minnesota Technical Assistance Program
MOA	Memorandum of Agreement
MPCA	Minnesota Pollution Control Agency
MRWA	Minnesota Rural Water Association
PLAN	Wellhead Protection Plan
QBAA	Quaternary age sand and gravel (Quaternary Buried Artesian Aquifer)
SSTS	Subsurface Sewage Treatment System
SWCD	Soil and Water Conservation District
SWP	Source Water Protection
USDA	U.S. Department of Agriculture
WHPP	Wellhead Protection
WHPA	Wellhead Protection Area

XIV. REFERENCES

MNgage website (<http://climate.umn.edu/HIDENcityEdit/HIDENweb.htm>)

MDH's County Well Index (<http://www.health.state.mn.us/divs/eh/cwi/index.html>)

MDH's Well Disclosure Certificate Look Up website
(<https://www.health.state.mn.us/divs/eh/wells/apps/disclosures/disclaimer.cfm>)

NRCS Web Soil Survey (<http://websoilsurvey.nrcs.usda.gov>)

Scott County Hazardous Waste Resources
(<http://www.co.scott.mn.us/ParksLibraryEnv/HHW/Pages/HHWManagementinScottCounty.aspx>)