CITY OF
BLOOMINGTON
MINNESOTA

Wellhead and Source Water Protection – Part 2: Wellhead Protection Plan

Prepared for:
City of Bloomington, Minnesota

April 2014

BARR

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I hereby certify that this plan, document, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Geologist under the laws of the state of Minnesota.

John C. Greer, PG

Date: _April 23, 2014_ License No. 30347

BARR

4700 West 77th Street
Minneapolis, MN 55435-4803
Phone: (952) 832-2600
Fax: (952) 832-2601

Wellhead and Source Water Protection – Part 2: Wellhead Protection Plan Bloomington, Minnesota April 2014

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PUBLIC WATER SUPPLY PROFILE

The following persons are the contacts for the Bloomington Wellhead Protection Plan:

Public Water Supply Contact

Robert Cockriel
Utilities Superintendent
City of Bloomington
1700 W. 98th Street
Bloomington, Minnesota 55431
Telephone: 952-563-8777
Fax: 952-563-8770
E-mail: rcockriel@BloomingtonMN.gov

Wellhead Protection Manager

Robert Cockriel
Utilities Superintendent
City of Bloomington
1700 W. 98th Street
Bloomington, Minnesota 55431
Telephone: 952-563-8777
Fax: 952-563-8770
E-mail: rcockriel@BloomingtonMN.gov

Wellhead Protection Consultant

John Greer, PG
Barr Engineering Company
4700 W. 77th Street
Minneapolis, Minnesota 55435-4803
Telephone: 952-832-2600
Fax: 952-832-2601
e-mail: jgreer@barr.com

GENERAL INFORMATION

UNIQUE WELL NUMBER(S) 222910, 222911, 222912, 133389, 603079, 603080

SIZE OF POPULATION SERVED 82,893 (2010 census)

COUNTY Hennepin

DOCUMENTATION LIST

Step	Date Performed
Scoping Meeting II Held (4720.5340, subp. 1)	April 23, 2013
Scoping II Decision Notice Received (4720.5340, subp. 2)	June 17, 2013
Remaining Portion of Plan Submitted to Local Units of Government (LUGs) (4720.5350)	January 21, 2014
Review Received From Local Units of Government (4720.5350, subp. 2)	January 22, 2014 through March 24, 2014
Review Comments Considered (4720.5350, subp. 3)	January 23, 2014 through March 28, 2014
Public Hearing Conducted (4720.5350, subp.4)	April 21, 2014
Remaining Portion WHP Plan Submitted (4720.5360, subp. 1)	April 23, 2014
Final WHP Plan Review Received (4720.5360, subp. 4)	August 4, 2014

Executive Summary

The Wellhead and Source Water Protection Plan (WHPP) for the City of Bloomington (City) addresses the six municipal water supply wells used by the City: Well 1, Well 2, Well 3, Well 4, Well 5, and Well 6. The original Bloomington Wellhead Protection Plan received final approval from the Minnesota Department of Health in 2004. This Plan amendment was prepared in accordance the applicable portions of the State of Minnesota Wellhead Protection Rules (Minnesota Rules 4720.5100 through 4720.5590).

The six water supply wells provide a portion of the Bloomington municipal water supply. The remainder is obtained via an interconnection with the City of Minneapolis water supply system under the terms of a Water Agreement between Bloomington and Minneapolis. Under the terms of the Water Agreement, the City must purchase at least 2.0 million gallons per day (MGD) from Minneapolis. The current Water Agreement expires on December 31, 2017.

Bloomington Wells 1, 5, and 6 are completed in the Jordan Sandstone aquifer. Wells 2 and 4 are open mainly in the Jordan Sandstone aquifer but their open intervals extend up into the bottom 3 feet of the overlying Prairie du Chien Group. Since these 3-foot open segments are minimal compared to the 69-foot and 86-foot segments of Wells 2 and 4, respectively, that are open to the Jordan Sandstone, the Prairie du Chien Group's contribution to water pumped by Wells 2 and 4 is considered negligible. Well 3 is completed in both the Tunnel City Group – Wonewoc Sandstone aquifer (formerly known as the Franconia-Ironton-Galesville or FIG aquifer) and the Mt. Simon Sandstone aquifer.

In Part 1 of the Plan, wellhead protection areas (WHPAs) for the Bloomington wells were delineated as was the associated drinking water supply management area (DWSMA). The vulnerability of the Bloomington wells and the associated DWSMA to contamination was assessed. In accordance with Minnesota Rules 4720.5550, Bloomington Wells 1, 2, 3, 4, 5, and 6 were classified as vulnerable to releases of contaminants at the surface. The Jordan Sandstone aquifer (i.e., the uppermost source water aquifer) in approximately 75% of the DWSMA was classified as having low vulnerability to releases of contaminants at the surface. In approximately 3.5% of the DWSMA, the uppermost source water aquifer was classified as being highly vulnerable to releases of contaminants at the surface. The Bloomington DWSMA extends into the cities of Eden Prairie, Edina, Minneapolis, and Richfield. Part 1 of the Plan was approved by the Minnesota Department of Health on April 11, 2013.

This document comprises Part 2 of the Plan and includes the following information:

- A review of data elements identified by the Minnesota Department of Health as applicable to the DWSMA.
- Results of an inventory of potential contaminant sources within the DWSMA.
- Review of changes, issues, problems, and opportunities related to the public water supply and the identified potential contaminant sources.
- A discussion of potential contaminant source management strategies and the goals, objectives, and action plans associated with these management strategies.
- A review of the Wellhead and Source Water Protection evaluation program and Bloomington's alternative water supply contingency strategy.

The aquifer vulnerability in the Bloomington DWSMA is classified mainly as Low or Moderate. As noted above, the aquifer vulnerability is classified as High in approximately 3.5% of the DWSMA. Therefore, the City's Wellhead and Source Water Protection Program is targeting properties with potential contaminant sources including non-municipal wells, potential Class V wells (consisting of only properties associated with automotive repair since no large scale septic systems serving more than 20 people or cesspools were identified in the DWSMA), hazardous waste generators, chemical storage sites, storage tanks, and spill sites within the DWSMA. The City will also focus on educating city staff, residents, and business owners in the City of Bloomington, as well as those in the portions of the cities of Eden Prairie, Edina, Minneapolis, and Richfield within the DWSMA, regarding wellhead and source water protection. In addition, the City of Bloomington will compile new or updated information for future revisions of the WHPP.

The following goals have been identified for Bloomington's Wellhead and Source Water Protection Program:

- The City will work to maintain or improve the current level of water quality so that the municipal water supply will continue to meet or exceed all applicable state and federal water quality standards.
- Since the DWSMA extends into surrounding cities, the City of Bloomington will, to the extent possible and practicable, work with the surrounding cities with the goal of protecting the source water aquifers.
- The City will provide information and promote activities that protect the City's source water aquifer. This will result in increased public awareness of the Wellhead and Source Water Protection Program and groundwater-related issues and include activities to manage the identified potential contaminant source properties within the DWSMA.

- The City will continue to compile data from their wells and available public sources to support future wellhead and source water protection efforts.

The goals for the City of Bloomington's Wellhead and Source Water Protection Program will be achieved through implementing the following existing and planned programs:

- Well management
    1. Permitting of wells.
    2. Encouraging the proper sealing of all unused wells within the DWSMA.
    3. Encouraging proper management of existing wells with in the DWSMA.

- Potential contaminant source properties
    1. Encourage proper handling of chemicals/wastes.
    2. Encourage proper operation of storage tanks.
    3. Periodically obtain information on the status of various permits associated with potential contaminant sources from the regulating agencies to allow timely recognition of potential problems arising at a particular property that could affect the municipal water supply.

- Public education
    1. Providing the public with information regarding the quality of the City's drinking water.
    2. Improving public awareness and understanding of the City's Wellhead Protection Program.

- Land use management
    1. Inclusion of wellhead and source water protection into the City's planning process,
- Continued data collection

    1. Recording static and pumping water levels in the Bloomington municipal wells.
    2. Compilation of additional local geologic and hydrogeologic data as it becomes available from public sources.
    3. Using new geologic/hydrogeologic data to update the groundwater flow model used in the delineation of the WHPA.
    4. Periodic compilation of updated information on potential contaminant sources within the DWSMA.

1.0 Introduction

1.1 Background

The City of Bloomington (the City) currently operates a total of six municipal water supply wells: Wells 1, 2, 3, 4, 5, and 6. Minnesota unique well numbers for the City's wells are shown in Table 1. All six Bloomington municipal wells have been classified as vulnerable to contamination (Barr, 2013).

The original Part 1 of the City's Wellhead Protection Plan (WHPP) was prepared in 2002 (Black and Veatch, 2002) and approved by the Minnesota Department of Health (MDH) in October 2002. Per the Minnesota Wellhead Protection Rules (Minnesota Rules 4720.5100 through 4720.5590), the delineations of the Bloomington Wellhead Protection Area (WHPA) and Drinking Water Supply Management Area (DWSMA) were updated in 2013 (Barr, 2013). The new delineations were approved by the MDH on April 11, 2013. The updated WHPA delineation incorporated both porous media flow and fracture flow, as required by the MDH.

1.2 Description of the Public Water Supply System

The City of Bloomington (City) is located in southern Hennepin County. The City's municipal water supply system (Public Water Supply 1270001) serves approximately 82,893 residents in Bloomington. As shown on Figure 1, the City currently has six municipal water supply wells: Well 1, Well 2, Well 3, Well 4, Well 5, and Well 6. These municipal wells are found in Township 27N Range 24W Sections 7 and 18. Wells 1, 5, and 6 are completed in the Jordan Sandstone aquifer. Wells 2 and 4 are open mainly in the Jordan Sandstone aquifer but their open intervals extend up into the bottom 3 feet of the overlying Prairie du Chien Group. Since these 3-foot open segments are minimal compared to the 69-foot and 86-foot segments of Wells 2 and 4, respectively, that are open to the Jordan Sandstone, the Prairie du Chien Group's contribution to water pumped by Wells 2 and 4 is considered negligible. Well 3 is completed in both the Tunnel City Group – Wonewoc Sandstone aquifer (formerly known as the Franconia-Ironton-Galesville or FIG aquifer) and the Mt. Simon Sandstone aquifer. Construction information for the Bloomington municipal water supply wells is summarized in Table 1. MDH well records for these wells are presented in Appendix A.

Water provided to residents of the City comes from two sources: the Bloomington municipal water supply wells and an interconnection with the City of Minneapolis water supply system. Per the Water Agreement between Bloomington and Minneapolis, the City must purchase at least

2.0 million gallons per day (MGD) from Minneapolis. The current Water Agreement expires on December 31, 2017. The municipal water supply system includes a total of 30 million gallons of combined storage capacity in two elevated towers (1.5 million gallons), a clear well (4 million gallons) at the water treatment plant, a ground storage tank (3 million gallons), and two reservoirs (10 million gallons each) that receive water from Minneapolis, six water supply wells, and an interconnection with the Minneapolis water distribution system.

As discussed in Barr (2013), pumping information from the City for the period 2007 through 2011 and City water use projections were used to develop pumping rate projections for use in delineating the WHPA. Annual volume of water pumped by each of the City's municipal water supply wells during the period 2007 through 2011 is shown in Table 2.

The Bloomington municipal wells have a total firm capacity of 15.26 Mgpd (Black & Veatch, 2011). Water pumped from the municipal wells goes to the water treatment plant operated by the City. The water treatment plant has a capacity of 14 MGD (Black & Veatch, 2011). In the treatment plant, water is softened using lime and fluoride and chlorine are added (Black & Veatch, 2011).

1.3 DWSMA

As shown on Figure 1, the DWSMA delineated for the Part 1 WHPP (Barr, 2013) extends beyond the Bloomington city limits into Eden Prairie, Edina, Minneapolis, and Richfield. The Bloomington DWSMA is found in Township 117N Range 21W Sections 31, 32, and 33; Township 116N Range 22W Sections 1, 2, 11, 12, 13, 14, 23,24, 25, 26, 27, 34, 35, and 36; Township 116N Range 21W Sections 4, 5, 6, 7, 8, 9 16, 17, 18, 19, 20, 21, 28, 29, 30, 31, 32, and 33; Township 115N Range 22W Section 1; Township 115N Range 21W Sections 4, 5, 6, 7, and 8; Township 28N Range 24W Sections 19, 20, 21, 27, 28, 29 30, 31, 32, 33, 34, and 35; and Township 27N Range 24W Sections 2, 3, 4, 5, 6, 7, 8, 9, 10 , 11, 13, 14, 15, 16, 17, 18, 19, 20, 29, and 30. The DWSMA was delineated to encompass the 10-year groundwater time of travel zones around the City's wells. Both porous media and fractured media groundwater flow evaluations were used to delineate the groundwater time of travel zones encompassed by the DWSMA (Barr, 2013). The Bloomington DWSMA overlaps the Edina and Richfield DWSMAs (Figure 1). As discussed in Barr (2013), the aquifer vulnerability in the majority of the DWSMA is classified as Low with smaller areas in which aquifer vulnerability is classified as Moderate or High. A copy of the Part 1 report can be found in Appendix B.

2.0 Identification and Assessment of Data Elements

The Minnesota Wellhead Protection Rules specify data elements that must be addressed in wellhead protection plans. MDH staff met with City staff on two occasions to discuss the data elements that are specified in the Minnesota Rule 4720.5400. Results of the meetings were transmitted to the City via two Scoping Decisions dated May 11, 2012 and June 13, 2013.

The first Scoping Meeting was held on April 30, 2012. At this meeting, the data elements related to delineation of the WHPA and DWSMA and assessment of well and aquifer vulnerability were discussed as was the deadline of April 28, 2014 to complete both Parts 1 and 2 of the WHPP amendment.

The second Scoping Meeting was held on April 23, 2013. At this meeting, the data elements required to support development of Part 2 of the WHPP (this document) which identifies potential contaminant sources within the DWSMA and identifies management strategies to help safeguard the municipal water supply from identified potential contaminant sources were discussed. Data elements that pertain to the Bloomington WHPP have been identified. An assessment of these data elements, as required by the Minnesota Wellhead Protection Rule, is presented in Appendix C.

3.0 Inventory of Potential Contaminant Sources

The Bloomington DWSMA extends into the cities of Edina, Minneapolis, and Richfield to the north and Eden Prairie to the west (Figure 1). As shown on Figure 1, the Bloomington DWSMA is overlapped by the Edina and Richfield DWSMAs.

A variety of land uses are present in the DWSMA that may impact the source water aquifer. Per the June 13, 2013 Second Scoping Decision, the City performed a potential contaminant source inventory (PCSI) within the DWSMA.

3.1 Inventory Process

At the Second Scoping Meeting, the types of potential contaminant sources that must be inventoried in the DWSMA were discussed. As discussed in Appendix C, sources of data accessed for the potential contaminant source inventory include City of Bloomington, Hennepin County, Minnesota Department of Natural Resources (MDNR), Minnesota Department of Public Safety (MDPS), Minnesota Geological Survey (MGS), Minnesota Pollution Control Agency (MPCA), and U.S. Environmental Protection Agency (EPA) databases.

Aquifer vulnerability in the DWSMA varies (Figure 1). Aquifer vulnerability in the majority of the area encompassed by the Bloomington DWSMA is classified as Low and there are smaller areas in the DWSMA in which the aquifer vulnerability is classified as High or Moderate.

In the areas of Low aquifer vulnerability classification, the types of potential contaminant sources inventoried include wells (active and sealed) and potential Class V disposal wells (defined by the U.S. EPA as cesspools, large-scale septic systems serving more than 20 people, or potential automotive maintenance waste disposal wells/pits). In the areas of Moderate aquifer vulnerability classification, the types of potential contaminant sources inventoried include wells (active and sealed), potential Class V disposal wells, and storage tanks. In areas of High aquifer vulnerability classification, the types of potential contaminant point sources inventoried include wells (active and sealed), chemical storage sites, potential Class V disposal wells, dump and spill sites, feedlots, hazardous waste generators, leaking tank sites, subsurface sewage treatment systems (SSTS; a.k.a., septic systems), and registered storage tank sites.

The first step in the inventory was to determine if there were any potential contaminant sources in the Inner Wellhead Management Zone (IWMZ) or the Emergency Response Zone (ERZ). The IWMZ is

defined as the area within a 200-foot radius of each municipal well. The ERZ is defined as the area within which the travel time of groundwater to one of the municipal wells is one year or less. The inventory was then expanded out to the boundaries of the DWSMA.

Potential contaminant sources were assigned a priority based on the relative risk they pose to the public water supply. The evaluation of risk related to a potential contaminant source type is based on the locations of potential contaminant sources of that type. Higher priority was assigned to those potential contaminant sources that would pose the highest risk to the municipal water supply should a contaminant release occur.

3.2 Inventory Results

A more detailed discussion of the potential contaminant sources within the DWSMA is presented in Appendix C. The inventory results are summarized in Table 3.

The Wellhead Protection Rules require that at least 25 locations of each type of potential contaminant source identified during the PCSI be verified during preparation of the plan. The rules also require that if there are fewer than 25 of a particular potential contaminant source type that all locations of that type be verified. During the preparation of this Plan, the minimum requirements for verification of potential contaminant source locations identified during the PCSI were fulfilled. Verification procedures used included matching mapped locations with addresses on MDH Well Records, published business addresses, property parcel addresses, local knowledge of City staff, and/or information from City files (note that not all verification procedures were used for each type of potential contaminant source). Remaining locations will be verified during implementation of this Plan. Verified locations are identified in the tables in Appendix C.

4.0 Impact of Changes to the Public Water Supply Wells

In accordance with the requirements of Minnesota Rules 4720.5220, anticipated changes in the physical environment, land use, surface water, and groundwater in the DWSMA within the next 10 years and the impact of these changes on the source water aquifer are discussed in this section.

4.1 Potential Changes Identified

4.1.1 Physical Environment

Bloomington is fully developed and the Metropolitan Council has designated the City as a developed area (Bloomington, 2008). Therefore, future growth in the City will be via redevelopment and significant or large-scale changes in the physical environment are not anticipated in the next 10 years.

Changes to existing municipal wells that provide water for the City are not anticipated in the next ten years. While the City's water system master plan (Black & Veatch, 2011) discusses options for additional municipal wells, Bloomington currently has no plans to construct any additional water supply wells in the next ten years.

The City of Bloomington will work with the other local governmental units whose jurisdictions overlap the DWSMA to the extent practicable to manage the portions of the DWSMA that fall within their jurisdictional boundaries.

4.1.2 Land Use

Land within the City of Bloomington, including within the DWSMA, is essentially fully developed with less than 2% of the land in Bloomington being undeveloped (Bloomington, 2009). Redevelopment of areas will occur in the future. A current (2010) land use map and a projected land use map for 2030 are shown on Figures 2 and 3, respectively. Comparison of the year 2010 land use with the projected year 2030 land use indicates that the few undeveloped properties within the DWSMA are anticipated to be developed and that the small area of agricultural land use currently in the DWSMA will likely be put to other uses in the future. Projected future land use types in the DWSMA are currently present within the DWSMA. Therefore, all land uses anticipated during the next 10 years within the DWSMA are currently present in the area covered by this Plan. As a result, adjustments in the land use within the DWSMA such as those projected for the year 2030 will be adequately addressed by the management strategies put forth in this Plan.

4.1.3 Surface Water

There are surface water bodies and wetlands within the DWSMA. Bloomington has in place plans (see Bloomington, 1997; WSB, 2007), ordinances, and zoning to protect these surface water bodies and wetlands. Bloomington's management of surface water bodies and wetlands is not expected to adversely affect the management strategies for the Bloomington DWSMA. Rather, the City's management of surface water bodies and wetlands is consistent with the objectives of this Plan.

The City is not aware of any plans to alter the course or location of any surface water bodies currently present within the DWSMA in the next 10 years.

4.1.4 Groundwater

As discussed in the Comprehensive Plan (Bloomington, 2008), Bloomington is fully developed but future increases in population are anticipated. As the population of Bloomington grows water demand in the City is expected to grow as well. As discussed in the water system master plan (Black & Veatch, 2011), the six existing municipal wells supplemented by the purchase of water from Minneapolis can meet projected 2030 water demand. Therefore, the City currently has no plans to construct additional water supply wells in the next ten years.

City staff inspect the treatment plant and municipal wells regularly. The MDH inspects all treatment facilities and wells annually. This inspection includes sampling of all wells to insure they comply with applicable regulatory standards. In addition, Bloomington has a SCADA system that measures the volume of water pumped from a well, the pumping rate for each well, and the water level (static or pumping) in each well. The SCADA system can produce reports summarizing the data recorded for each of the municipal wells.

Groundwater level data for the Jordan Sandstone aquifer has been collected from an MDNR observation well (Observation Well No. 27001, Unique No. 233183) in the southern portion of Bloomington since 1965. Water level data from the well indicates that potentiometric levels in the Jordan Sandstone aquifer fluctuate seasonally. In addition, as the Metropolitan Council has observed (see Appendix D), between 1965 and 2013 the potentiometric level in the Jordan Sandstone measured in the MDNR observation well shows a declining trend. However, during the period 2009 to 2013 there is no clear decreasing trend in the water level data. The MDNR has collected potentiometric level data for the Mt. Simon Sandstone and the Tunnel City Group-Wonewoc Sandstone in observation wells in the northern portion of the City of Savage (Mt. Simon: Observation Well No. 70030, Unique No. 272087; Tunnel City-Wonewoc: Observation Well No. 70037, Unique No.

593579). The available data from observation well 70030 indicates that the potentiometric level in the Mt. Simon Sandstone has undergone seasonal fluctuations but has followed a generally increasing trend over the past several years. The dataset from observation well 70037 does not cover a sufficiently long time period to allow characterization of any long term trends in the Tunnel City Group-Wonewoc Sandstone aquifer.

The City supports water conservation. Section 11.23 of the City Code authorizes the Mayor and City Council to limit water usage if a water shortage appears to be imminent and identifies penalties for non-compliance with water use restrictions specified by the Mayor or City Council. Bloomington has adopted a tiered water rate structure to encourage users to conserve water. In addition, Section 11.14 of the City Code requires that leaking water lines be repaired within 24 hours of the time the owner is notified of the leak. In all new construction, the use of low-flow water conserving toilets and fixtures is required. Information on water conservation is available via the City's website.

As shown in Table 4 and on Figure 4, there are 88 high capacity wells within one mile of the Bloomington DWSMA (including the Bloomington municipal wells). In the next 10 years it is possible that new business or industrial developments in or near Bloomington may seek to construct privately owned high capacity wells completed in one of the source water aquifers. Such wells could potentially affect the DWSMA boundary, depending on their location. Bloomington will work with the Cities of Eden Prairie, Edina, Minneapolis, and Richfield, to the extent possible, to manage the installation of any new high capacity water supply wells in one of the source water aquifers within the portion of the DWSMA that extends into each of these other municipalities.

4.2 Impact of Changes

4.2.1 Water Use

In the coming years, the City's population and water demand are anticipated to increase. Bloomington's Water Emergency and Conservation Plan (Bloomington, 2007) and Comprehensive Plan (Bloomington, 2009) project water use of approximately 13.9 MGD (5.1 billion gallons per year) in 2020 and approximately 14.3 MGD (5.2 billion gallons per year) in 2030. The average water demand over the period 2008-2012 was approximately 12.1 MGD (4.4 billion gallons per year) with approximately 77% of the City's water demand being met via water pumped from the municipal wells and the remainder being purchased from Minneapolis. Based on water demand projections in the City's Water Emergency and Conservation Plan and Comprehensive Plan and available water use data, the City's annual water demand could increase by up to approximately 20% between 2010 and 2020. If the water purchase agreement between Bloomington and Minneapolis is extended beyond its

current expiration date of December 31, 2017 the City would expect to be able to meet projected future water demand without constructing any additional municipal water supply wells.

As noted above, Bloomington has a water conservation program that includes a tiered water rate structure and a process for implementing water use restrictions in times of imminent water shortage.

The construction and operation of one or more additional high capacity wells in or near the Bloomington DWSMA or significant changes in current groundwater appropriations for existing wells in the area could affect the source water aquifers and local water supplies. Such changes could also potentially change the WHPAs and DWSMA delineated for the existing City of Bloomington wells. Increased pumping from the source water aquifers in the vicinity of Bloomington could result in a lowering of static water levels in the City of Bloomington wells if the total pumping exceeds the recharge to the aquifers. The City will work with the MDH Source Water Protection Unit to identify any proposed high capacity wells in the vicinity of the DWSMA and, when feasible, provide interaction with the proposed well owner(s) to minimize potential problems.

4.2.2 Influence of Existing Water and Land Government Programs and Regulations

Chapter 11 of the Bloomington City Code addresses the public water supply. A copy of the Bloomington City Code is available from the Wellhead Protection Manager or on the Internet via the following location: http://bloomingtonmn.gov/code/code_info.htm.

Chapter 11 of the City Code specifies that if property owners or occupants do not repair a leaking water service pipe within 24 hours after of receiving oral or written notice of the presence of a leak the water service to the property may be shut off until the leaking pipe has been repaired and the fee for restoration of disconnected service has been paid.

Unlike some cities, Bloomington does not have permanent restrictions on outdoor water use. However, the City Code identifies a process by which the Mayor or City Council can place restrictions on water usage when a water supply shortage may be imminent. The Code also identifies penalties for non-compliance with water use restrictions imposed by the Mayor or City Council.

Bloomington has a two-tier water rate structure in which a higher rate is charged to the consumer for increased water usage. The aim of the tiered rate structure is to give the consumer an incentive for minimizing their water usage, particularly during the warmer months of the year when demand is generally higher.

Chapter 15, Article VIII, Division C of the Bloomington City Code addresses individual sewage treatment systems (ISTS). The City Code adopts the State rules regarding ISTS and requires a property owner to get a permit from the City before constructing, replacing, extending, or repairing an ISTS.

Regulation of wells within the Bloomington city limits has been delegated to the City by the MDH. Chapter 15, Article VIII, Division D of the City Code addresses well regulation. The City's Environmental Health Division has responsibility for the delegated well program.

Storm water management in the City is addressed in Bloomington's surface water management plan (WSB, 2007). The City believes that their existing storm water management program is sufficient to address storm water within the Bloomington portion of the DWSMA. The City will rely on the surface water management programs of the other cities into which the DWSMA extends to address storm water in those portions of the DWSMA.

The City relies upon the MDNR Waters Appropriations Permitting Program for regulation of water appropriation permitting within the city limits.

In those portions of the DWSMA that are outside of the Bloomington city limits, the City must rely on other governmental units for regulations that address issues that may impact the source water aquifers. Therefore, Eden Prairie, Edina, Minneapolis, and Richfield city ordinances and management plans; Hennepin County ordinances, the MDNR Waters Appropriations Permitting Program, the State of Minnesota Well Management and Drinking Water Supply Programs; the U.S. EPA's program for regulation of Class V wells; and the MPCA's regulation of hazardous waste generators and oversight of contaminant release response, and permitting/regulation program for operation of storage tanks will be relied upon for assistance in regulating the installation of new wells, water appropriation permitting, the proper sealing/abandonment of existing wells, and regulation of potential contaminant sources that could potentially affect drinking water quality. The City of Bloomington believes that the current level of regulations and oversight are adequate to address these issues.

Land use control and land activities outside of the City of Bloomington are governed by the local unit of government with jurisdiction in a particular area. This Plan has been developed to protect the interests of the City of Bloomington and, to the extent practicable, to have no adverse effect on the plans and strategies developed for adjacent communities. The Metropolitan Council jurisdiction overlaps the Bloomington DWSMA as do the jurisdictions of the Lower Minnesota River Watershed

District, the Nine Mile Creek Watershed District, the Minnehaha Creek Watershed District, the Riley-Purgatory-Bluff Creek Watershed District, the Richfield-Bloomington Watershed Management Organization, and portions of the Cities of Eden Prairie, Edina, Minneapolis, and Richfield. This Plan will be provided to these other governmental units as a resource for future land development planning. Local ordinances and plans related to land use will be relied upon for the management of the portions of Bloomington's DWSMA that extends into Eden Prairie, Edina, Minneapolis, and Richfield. The Wellhead Protection Manager will, to the extent feasible and practicable, communicate the goals and objectives of this Plan to the other local governmental units whose jurisdictions overlap the Bloomington DWSMA.

The City of Bloomington will continue to rely on Federal, State, County, and local agencies and regulations and programs to handle issues outside of the City's boundaries regarding water conservation, water appropriations, well installation and sealing, individual sewage treatment systems, and storm and sanitary sewer extensions. The City will comply, as necessary, with the requirements of the MPCA's current Storm Water Pollution Prevention Program (SWPPP) and the National Pollutant Discharge Elimination System (NPDES) program to regulate the quality and quantity of storm water discharge. These programs have proven to be effective. City staff will cooperate with these agencies if any issues arise.

4.2.3 Administrative, Technical, and Financial Considerations

Bloomington will have adequate resources available to protect the public water supply's source water aquifers. In general, funds to support ongoing wellhead and source water protection efforts will come from the City's Public Utilities Enterprise Fund. The City may also submit grant applications to the Minnesota Department of Health's Source Water Protection Grant Program for additional funds for source water protection programs. Wellhead and source water protection activities will be evaluated on at least a bi-annual basis, and any changes in the focus of the tasks will also be evaluated to determine if additional funding will be necessary to accommodate the changes.

For this Plan to be effective, the City will need to continue making the public aware of the issues affecting its water supply through public educational programs. Therefore, a significant portion of the wellhead and source water protection actions will include public education.

Routine administrative duties will be directed or performed by the Wellhead Protection Manager. Specific tasks and strategies will be performed by the Wellhead Protection Manager or delegated by the Manager to City staff or outside resources.

Based on current population and water demand projections, the City does not anticipate installing any additional water supply wells during the life cycle of this Plan. The City does not anticipate adding additional storage reservoirs or treatment facilities during the life-cycle of this Plan. If new high capacity wells are installed in the vicinity of the Bloomington DWSMA, the City will periodically evaluate, likely with the assistance of their Wellhead Protection Consultant and the MDH, what effect, if any, the new wells have on the boundaries of the Bloomington DWSMA.

Bloomington will work, to the extent practicable, with the other local governmental units whose jurisdictions overlap the Bloomington DWSMA to manage the portions of the DWSMA within each of these jurisdictions.

5.0 Issues, Problems, and Opportunities

In accordance with Minnesota Rules chapter 4720.5230, this section discusses issues, problems, and opportunities related to land use, comments from local units of government and the general public, the data elements and local, state, and federal programs and regulations.

5.1 Land Use Issues, Problems, and Opportunities

5.1.1 Source Water Aquifer

As shown on Figure 1, the aquifer vulnerability classification in the Bloomington DWSMA ranges from Low to High. The aquifer vulnerability classification is Low in approximately 75% of the area within the DWSMA. Land use issues, problems and opportunities must be assessed to determine what, if any, potential effect they may have on the management of the municipal wells and the Bloomington DWSMA.

The City of Bloomington does not anticipate installing any new municipal wells during the next ten years. However, the installation of additional high capacity wells within or near the Bloomington DWSMA by others (either municipal wells or private wells) could produce changes in the groundwater flow system (e.g., flow direction, static water level, etc.) which could result in changes to the shape and extent of the WHPAs and DWSMA delineated for this Plan. The City will work with the Wellhead Protection Consultant and MDH to amend this Plan as necessary when additional high capacity wells are installed within or near the DWSMA.

As discussed elsewhere in this Plan, potential sources of contamination within the DWSMA that could affect the source water aquifers were identified during the PCSI. These potential contaminant sources include wells, storage tanks, hazardous waste generators, spill sites, chemical storage sites, and potential Class V well locations. The entities in the various potential contaminant source categories are regulated by City, County, or State programs. The lack of City jurisdiction over many potential contaminant source entities poses a potential problem for protection of the source water aquifer. However, the jurisdictional issues also provide the City of Bloomington with an opportunity to develop working relationships with County and State agencies that regulate the potential contaminant source entities. Therefore, the City will work with the appropriate County and State programs, to the extent practicable, to address the potential contaminant sources within the DWSMA.

Bloomington has a Comprehensive Plan (Bloomington, 2008) in place that includes policies for managing growth of the City. Policies identified in the Comprehensive Plan will help protect the

City's source water aquifer. Bloomington will also discuss with the Cities of Eden Prairie, Edina, Minneapolis, and Richfield, to the extent practicable, the development of land management policies that will protect the source water aquifer in the portions of the DWSMA that extend into these cities.

5.1.2 Groundwater Quality

Bloomington has always placed a high priority on the safety of the municipal water supply system. To prevent the possibility of unauthorized people gaining access to the City's wells, Bloomington strictly limits access to their municipal wells and associated infrastructure to the City's Public Works staff.

As discussed in Appendix C, groundwater pumped from the source water aquifers is currently free of pathogens and disease-causing organisms and meets or exceeds the water quality requirements of the Federal Safe Drinking Water Act.

The City treats water pumped by the municipal wells with lime to soften it.

5.1.3 DWSMA

Current land uses within the DWSMA that cover more than 1% of the area in the DWSMA include residential uses, parks/recreational/preserve uses, industrial and utility uses, commercial uses, institutional land uses, retail/commercial/office land uses, undeveloped land, and transportation corridors. Open water accounts for nearly 5% of the area within the DWSMA. Agricultural land uses are found in less than 1% of the area encompassed by the DWSMA (Appendix C).

As shown in Table 1, the MDH has classified all of the Bloomington municipal wells as being vulnerable to contamination. The uppermost source water aquifer (the Jordan Sandstone) in the Bloomington DWSMA has also been classified as vulnerable to contamination, although the vulnerability classification varies across the DWSMA. It was not necessary to include a surface water contribution area in the delineation of the Bloomington DWSMA (Barr, 2013). While current and future land uses could potentially affect the management strategies for portions of the Bloomington DWSMA, no issues, problems, or opportunities, other than the potential contaminant source locations previously discussed have been identified regarding land uses in the DWSMA.

As discussed elsewhere in this Plan, the DWSMA is overlapped by other jurisdictions and portions of the DWSMA extend beyond the Bloomington city limits into portions of Eden Prairie, Edina, Minneapolis, and Richfield. Thus, Bloomington does not have jurisdiction over the entire DWSMA. Therefore, Bloomington will work, to the extent practicable, with the other cities in the DWSMA to

establish requirements regarding management of the portions of the DWSMA within their jurisdictions. Issues, problems, or opportunities associated with the potential contaminant sources are discussed elsewhere in this Plan.

Information gathered for this Plan provides the City with the basis for tracking potential contaminant sources within the DWSMA. Thus, the City has an opportunity to catalog and track potential contaminant sources and stay informed of land use changes or potential future threats to the source water aquifer.

Privately owned wells within the DWSMA may potentially provide pathways for contaminants to reach the source water aquifers if they are not properly constructed, maintained, or sealed. Locations of wells (both active and sealed) identified within the DWSMA during the PCSI are shown in Appendix C. As required by the Wellhead Protection Rules, locations of 25 wells were verified to the extent possible with available information during development of this Plan.

5.2 Issues, Problems, and Opportunities Disclosed at Public Meetings and in Written Comments

At the beginning of the development of this Plan, the City of Bloomington sent a notification to other local units of government of its intention to prepare a wellhead protection plan amendment. The MDH approved Part 1 of the Plan in April 2013 (MDH, 2013). As required by the Wellhead Protection Rules, Bloomington subsequently sent information on the WHPAs, DWSMA, and aquifer and well vulnerability to the local units of government whose jurisdictions overlap some portion of the Bloomington DWSMA.

The City of Bloomington held a Public Information Meeting on May 20, 2013 to receive comments on the Part 1 Wellhead Protection Plan amendment from the general public. The local units of government whose jurisdictions overlap the DWSMA were notified of the Public Information Meeting and representatives of the cities of Edina and Richfield attended the Public Information Meeting. At the Public Information Meeting, the representative of the City of Edina noted that there are some differences in the aquifer vulnerability classifications between the Edina and Bloomington DWSMAs where they overlap. The differences appear to be related to the methodologies used to complete the aquifer vulnerability assessments. The MDH approved both the Edina and Bloomington aquifer vulnerability assessments.

As required by the Wellhead Protection Rules, the City provided local units of government whose jurisdictions overlap the DWSMA a copy of the draft Part 2 Wellhead Protection Plan. The

Metropolitan Council provided the City with a written acknowledgement of their review of the draft Part 2 WHPP (Appendix D). In their written acknowledgement, the Metropolitan Council noted that water level data from DNR observation well 27001 in Bloomington indicates a declining trend in the Jordan Sandstone for the period 1965-2013. In response to this comment, Section 4.1.4 of this Plan was modified to include the Metropolitan Council's observation of this long term trend in the water level data from DNR observation well 27001.

The City held a Public Hearing on the WHPP on April 21, 2014. The local units of government whose jurisdictions overlap the DWSMA were notified of the time, date, and place for the Public Hearing. No comments on the WHPP were received from the local units of government or the general public at the Public Hearing.

5.3 Issues, Problems, and Opportunities Related to the Data Elements

Beginning with the WHPAs delineation (i.e., Part 1 of this Plan) and continuing in this document, the required data elements identified by the MDH have been addressed. As discussed in Appendix C, available local and regional information was used in compiling and assessing the data elements. Bloomington intends to continue collecting data from the municipal wells and other applicable information from public data sources, as it becomes available, during the life of this Plan. At a minimum, this Plan will be revised/updated every 10 years, as required by the Wellhead Protection Rules. Each time this Plan is revised/updated the most recent and accurate data available will be used.

5.4 Issues, Problems, and Opportunities Related to Local, State, and Federal Programs and Regulations

State and local units of government currently enforce land use ordinances, zoning laws, sewer ordinances, well permitting, hazardous waste permitting, storage tank permitting, and groundwater appropriation permit regulations. The City will work with the other cities within the DWSMA, to the extent practicable, to ensure proper management of the portions of the DWSMA that extend into these cities. The City will work to promote the use of best management practices for potential contaminant source properties within the DWSMA. It is anticipated that local issues will be adequately addressed through these existing processes and adoption of best management practices.

Eden Prairie, Edina, and Richfield city limits overlap Bloomington's DWSMA and these cities use the same source water aquifers as Bloomington for their municipal water supplies. Implementation of

this WHPP will provide Bloomington with the opportunity to work with these neighboring cities whose jurisdictions overlap the DWSMA to cooperatively manage their shared source water resource.

6.0 Wellhead Protection Goals

In accordance with Minnesota Rules chapter 4720.5240, this section discusses the goals for present and future water use and land use in the DWSMA to provide a framework for Plan objectives and related actions.

Goals presented in this section were selected based on the information gathered and compiled from the data elements, delineations of the WHPAs and DWSMA, results of the vulnerability assessments, results of the PCSI, evaluation of potential for changes in land and water uses, identified issues, problems, and opportunities, and evaluation of this information.

Through the years the City of Bloomington has worked to meet water demands with a sufficient and safe water supply. Bloomington intends to continue providing a safe water supply to its residents and businesses and other customers into the future by implementing this Plan.

The Bloomington municipal wells have been classified by the MDH as vulnerable to contamination from the surface. The goals and objectives of this Plan will focus on reducing the potential contaminant pathways to the source water aquifer that may be provided by private wells, educating property owners and water supply users, and working with the Cities of Eden Prairie, Edina, Minneapolis, and Richfield to ensure, to the extent possible, proper management of the portions of the Bloomington DWSMA that extend into these cities.

Bloomington has identified the following goals for implementation of this Plan:

- The City will work to maintain or improve the current level of water quality so that the municipal water supply will continue to meet or exceed all applicable state and federal water quality standards.

- Since the DWSMA extends into surrounding cities, the City of Bloomington will, to the extent possible and practicable, work with the surrounding cities with the goal of protecting the source water aquifers.

- The City will provide information and promote activities that protect the City's source water aquifer. This will result in increased public awareness of the Wellhead and Source Water Protection Program and groundwater-related issues and include activities to manage the identified potential contaminant source properties within the DWSMA.

- The City will continue to compile data from their wells and available public sources to support future wellhead and source water protection efforts.

7.0 Objectives and Plans of Action

In accordance with Minnesota Rules chapter 4720.5250, this section discusses the objectives and plans of action to goals for Bloomington's Wellhead and Source Water Protection Program.

7.1 Establishing Priorities

The Jordan Sandstone aquifer (i.e., the uppermost source water aquifer) that supplies much of the groundwater for Bloomington's public water supply has been classified as vulnerable to contamination. Potential contaminant sources within the DWSMA have been determined to consist of storage tanks sites, hazardous waste generators, spill sites, chemical storage sites, potential Class V well locations, and wells. Privately owned wells within the DWSMA could potentially provide a pathway for contaminants to reach the source water aquifers if they were not properly constructed, are not properly maintained, or are not properly sealed when no longer in use.

Aquifer vulnerability varies from Low to High in the Bloomington DWSMA. Addressing potential contaminant sources in areas where aquifer vulnerability is classified as High should be given a high priority. In addition, addressing privately owned wells that extend into or through the source water aquifers should also be given a high priority. Priorities assigned to the various potential contaminant source categories are summarized in Table 3.

The City of Bloomington has identified the objectives and corresponding actions described in the following sections for accomplishing the wellhead and source water protection goals discussed above in Section 6. The goals for the City of Bloomington Wellhead and Source Water Protection Program identified in Section 6 of this Plan will be achieved through the following categories and objectives:

- Well management
    1. Permitting of wells.
    2. Encouraging the proper sealing of all unused wells within the DWSMA.
    3. Encouraging proper management of existing wells with in the DWSMA.
- Potential contaminant source properties
    1. Encourage proper handling of chemicals/wastes.
    2. Encourage proper operation of storage tanks.
    3. Periodically obtain information on the status of various permits associated with potential contaminant sources from the regulating agencies to allow timely

recognition of potential problems arising at a particular property that could affect the municipal water supply.

- Public education
    1. Providing the public with information regarding the quality of the City's drinking water.
    2. Improving public awareness and understanding of the City's Wellhead Protection Program.
- Land use management
    1. Inclusion of wellhead and source water protection into the City's planning process,
- Continued data collection
    1. Recording static and pumping water levels in the Bloomington municipal wells.
    2. Compilation of additional local geologic and hydrogeologic data as it becomes available from public sources.
    3. Using new geologic/hydrogeologic data to update the groundwater flow model used in the delineation of the WHPA.
    4. Periodic compilation of updated information on potential contaminant sources within the DWSMA.

7.2 Well Management

The well management objectives outlined in this section consist of permitting of wells, promoting the proper sealing of any unused, unmaintained, damaged, or abandoned wells, and promoting proper management of active wells within the DWSMA. Accomplishing some of these objectives will require cooperation with other cities within the DWSMA.

7.2.1 Permitting of Wells in Bloomington

Regulation of wells within the Bloomington city limits has been delegated to the City by the MDH. Chapter 15, Article VIII, Division D of the City Code addresses well regulation. The City's Environmental Health Division has responsibility for the Delegated Well Program. The City will continue to operate this program to ensure proper well construction, usage, and sealing of unused wells in the City.

7.2.1.1 Source of Action

Bloomington Environmental Health Division staff will oversee the delegated well program.

7.2.1.2 Cooperators

None

7.2.1.3 Time Frame

Ongoing.

7.2.1.4 Estimated Cost

Approximately $97,000 annually. Annual costs are budgeted by the Environmental Health Division.

7.2.1.5 Goals Achieved

Locations of wells within the City limits will be known. Wells within the City limits will be properly constructed and maintained and properly sealed when no longer in use. As a result, the chances of a well in the City becoming a pathway for contaminants to reach the source water aquifers will be minimized.

Success criterion: Continuing to operate the Delegated Well Program.

7.2.2 Distribution of Well Operation and Maintenance Information

The MDH has developed a handbook of information on proper well construction, operation, and maintenance titled "The Well Owner's Handbook". This handbook is available on the MDH website. Bloomington will provide the handbook information to all owners of active wells within the DWSMA and when approving applications for new wells in the City. To accomplish this, a link to the MDH website page where the handbook can be found will be added to the City's website. The City will also notify well owners within the DWSMA via mail that the information is available through the City's website. The cities of Eden Prairie, Edina, Minneapolis, and Richfield will be asked to provide the handbook information to any new well owners that take up residence in the portions of the DWSMA that fall within their jurisdictions. Bloomington staff will track the number of well owners to whom they provide information regarding the Well Owner's Handbook.

7.2.2.1 Source of Action

Bloomington staff will obtain the website information for the handbook from the MDH. City staff will then mail the website information to appropriate addresses within the DWSMA, include a link to the MDH website on the City's website, have a copy of the handbook available in a publicly accessible location in the Bloomington city offices, and request that other cities within the DWSMA provide a link on their websites to the MDH website page where the handbook can be found.

7.2.2.2 Cooperators

City staff and staff from the Cities of Eden Prairie, Edina, Minneapolis, and Richfield.

7.2.2.3 Time Frame

Distribution of the information to owners of wells and the requests to the other cities in the DWSMA will be completed within one year after approval of this WHPP. Distribution of information to applicants for new wells in Bloomington will be done on an ongoing basis as needed.

7.2.2.4 Estimated Cost

Approximately $1,000 to $1,500. Costs will include City staff time, postcard printing and postage costs, and handbook printing costs.

7.2.2.5 Goals Achieved

Through the MDH handbook, well owners will be educated concerning the proper operation and maintenance of wells. Proper operation and maintenance of wells will reduce the potential risk of these wells becoming pathways for contaminants to travel from the ground surface to the source water aquifer.

Success criterion: Notification by mail of well owners in the DWSMA that information on the proper operation and maintenance of private wells is available through the City's website will be completed within one year of MDH approval of the WHPP and the number of notifications sent out will be tracked.

7.2.3 Promote the Proper Sealing of Unused, Unmaintained, Damaged, or Abandoned Wells in the DWSMA

City staff will promote the proper sealing of unused privately owned wells within the DWSMA. The highest priority will be placed on those wells that are completed in one of the source water aquifers from which the Bloomington municipal wells pump.

Proper sealing of unused wells can be promoted by periodically mailing (e.g., as water bill inserts or post cards) a reminder to owners of wells that unused wells should be properly sealed and by posting a reminder on the City's website. The reminder will include a notification of the Hennepin County cost share program for the sealing of unused wells. Proper sealing of unused wells at properties on which new developments are built or as properties are redeveloped can be promoted as part of the City's development approval process. City staff will work with staff from the other cities into which the DWSMA extends, to the extent practicable, to promote the proper sealing of unused privately owned wells in the portions of the DWSMA within their jurisdictions. Bloomington staff will

provide assistance in disseminating appropriate information to neighboring cities if requested and feasible. In addition, the City will promote sealing of unused wells in Bloomington as part of the continued operation of the Delegated Well Permitting Program within the Bloomington city limits

7.2.3.1 Source of Action

City of Bloomington staff and staff from Eden Prairie, Edina, Minneapolis, and Richfield.

7.2.3.2 Cooperators

City of Bloomington staff and staff from other cities in the DWSMA.

7.2.3.3 Time Frame

The first reminders to owners of wells (either active or unused/unsealed) identified as high priority will occur within 1 year of approval of this Plan. Subsequent reminders will include owners of wells identified as high and moderate priority and will be mailed approximately every three years beginning in year four of Plan implementation. The Wellhead Protection Manager, or designated representative, will contact representatives of the other cities into which the DWSMA extends to request their assistance in promoting proper sealing of unused wells and to invite their participation in a Wellhead Protection Coordination Committee within 1 year of approval of this WHPP.

7.2.3.4 Estimated Cost

Approximately $1,500-$2,500 for each well sealing reminder mailing event. City staff time and costs for preparing and mailing reminders to well owners.

7.2.3.5 Goals Achieved

As this action is implemented, the City's goal of working to eliminate potential pathways for contaminants to travel from the ground surface to the source water aquifers will be realized.

Success criterion: Completion of distributing the reminders distributed to well owners in the DWSMA per the time frames identified in Section 7.2.3.3 and tracking of the number of reminders distributed.

7.2.4 Identify New High Capacity Wells in or Near the DWSMA

High capacity wells are wells that pump at least 10,000 gallons per day or 1,000,000 gallons per year. City staff will identify new high capacity wells that are proposed for construction in or near Bloomington's DWSMA and/or major changes to groundwater appropriations for existing high-capacity wells. Information on new high capacity wells or changes to groundwater appropriations will be used to determine whether the pumping increases will affect the groundwater flow direction,

static water level, or groundwater availability within the DWSMA or alter the current boundaries of the DWSMA delineation or other portions of the City's WHPP.

7.2.4.1 Source of Action

At least once per year, City staff will request from the MDH and Regional MDNR office information on any newly proposed/constructed high capacity wells within or near the DWSMA or any changes to existing appropriations permits for existing, nearby high capacity wells. City staff will also request assistance from the Wellhead Protection Consultant and the MDH to evaluate whether proposed pumping (or changes to pumping) will change the boundaries of the DWSMA delineated for Bloomington's wells.

7.2.4.2 Cooperators

City staff, MDH, MDNR, and the Wellhead Protection Consultant.

7.2.4.3 Time Frame

At least annually.

7.2.4.4 Estimated Cost

Approximately $3,000-$10,000 each time new high capacity wells or changes to existing appropriations permits are identified and evaluation of how the changes may affect the boundaries of the DWSMA is performed. Estimated costs are for City staff time and Wellhead Protection Consultant time.

7.2.4.5 Goals Achieved

As this action is implemented, the City's WHPA/DWSMA delineations will remain current. New well owners will also be identified and educational materials identified/developed as part of other well management strategies can be provided to these new well owners.

Success criterion: Annual determination of whether there are new high capacity wells in or near the DWSMA and if there have been any major changes in permitted appropriations for existing high capacity wells in or near the DWSMA.

7.3 Potential Contaminant Source Properties

The management objectives outlined in this section consist of promoting proper operation of storage tanks, maintaining an up-to-date geo-located database (accessible via the City's GIS system) of storage tank properties in the portions of the DWSMA where aquifer vulnerability is classified as

Moderate or High, providing owners of properties where Class V wells may be, or may have been, with information on Class V wells and associated regulations, promoting proper handling of chemicals and wastes, maintaining the Inner Wellhead Management Zone (IWMZ) around each well so that potential contaminants are prevented from entering the IWMZs, and working with the cities of Eden Prairie, Edina, Minneapolis, and Richfield, to the extent practicable, to promote similar activities at potential contaminant source properties within the portions of the Bloomington DWSMA in these cities.

7.3.1 Information for Registered Storage Tank Owners

With the assistance of the MPCA or the Wellhead Protection Consultant, the City will prepare an information packet for owners of properties within the High and Moderate aquifer vulnerability zones of the DWSMA that have registered storage tanks. The information packet will be sent first to owners of properties located in those portions of the DWSMA where the aquifer vulnerability is classified as High. Once this is completed, the information packet will be sent to owners of properties located in those portions of the DWSMA where the aquifer vulnerability is classified as Moderate. This packet will include information on the City's Wellhead and Source Water Protection Program (the Program) and MPCA publications on proper operation and maintenance of storage tanks. Since there are properties where storage tanks are located in the portions of the DWSMA located in Eden Prairie, Edina, and Richfield City staff will contact staff from these cities for assistance in distributing the information packets to owners of storage tank properties in the High and/or Moderate vulnerability zones of the DWSMA in their jurisdictions. Copies of the information packet materials will be retained by the City.

7.3.1.1 Source of Action

City staff, possibly with the assistance of the Wellhead Protection Consultant, will obtain from the MPCA publications on proper storage tank operation and maintenance for the information packet. City staff, possibly with the assistance of the Wellhead Protection Consultant, will prepare general information regarding the Wellhead Protection Program and contact staff from the cities of Eden Prairie, Edina, and Richfield for assistance in distributing the information packets to owners of storage tank properties in the High and/or Moderate vulnerability zones of the DWSMA in their jurisdictions.

7.3.1.2 Cooperators

City staff, staff from the Cities of Eden Prairie, Edina, and Richfield, the MPCA, and, possibly, the Wellhead Protection Consultant.

7.3.1.3 Time Frame

The information packet will be sent to owners of properties where aquifer vulnerability is classified as High within one year of approval of this Plan. The information packet will be sent to owners of properties where aquifer vulnerability is classified as Moderate within two years of approval of this Plan. City staff will request that the cities of Eden Prairie, Edina, and Richfield provide assistance with the distribution of the information packets to property owners within the DWSMA in their jurisdictions. The City will also request that the other cities in the DWSMA provide the information packet to new registered storage tank owners within the targeted portions of the DWSMA when identified. Targeted registered storage tank owners will receive an updated information packet five years after the initial packet is provided to them.

7.3.1.4 Estimated Cost

Approximately $2,000-$3,000 for the initial distribution of the information packet to all owners of properties within the High and Moderate vulnerability zones of the DWSMA on which registered storage tanks are located. Similar costs would be anticipated for the distribution of the updated information packets five years after the initial packet distribution. Estimated costs include City staff time, MPCA staff time, postage costs and, potentially, Wellhead Protection Consultant costs.

7.3.1.5 Goals Achieved

Targeted property owners will be educated concerning the Wellhead and Source Water Protection program. Local storage tank owners will be educated on the issues associated with storage tanks and the requirements necessary to maintain a safe and secure system. Property owners will be encouraged to use best management practices regarding their storage tanks, and report any releases of contaminants to the City in which their property is located (in addition to any other actions required by applicable regulations). The property owners will also be educated about the Bloomington's Wellhead and Source Water Protection Program, groundwater protection principles, and steps that everyone can take to protect the City's municipal water supply. This information packet provides the City the opportunity to heighten the awareness of wellhead and source water protection to these property owners.

Success criterion: Distribution of information packets completed according to the schedule outlined in section 7.3.1.3 and tracking of the number of information packets distributed.

7.3.2 Tracking of Registered Storage Tanks

The City will annually request from the MPCA information on the status of registered storage tanks in those portions of the Bloomington DWSMA in which the aquifer vulnerability is classified as High or Moderate. This information will allow the City of Bloomington to update the PCSI database and maintain current information regarding these potential contaminant sources in the DWSMA.

7.3.2.1 Source of Action

City staff will contact MPCA staff or request the Wellhead Protection Consultant to contact the MPCA on behalf of the City to obtain the information on the status of registered storage tanks.

7.3.2.2 Cooperators

City staff, the MPCA, and possibly, the Wellhead Protection Consultant.

7.3.2.3 Time Frame

This information will be requested from the MPCA annually starting one year after approval of this Plan.

7.3.2.4 Estimated Cost

Estimated costs of $500 - $1,500 include City staff time and, possibly, Wellhead Protection Consultant time.

7.3.2.5 Goals Achieved

By tracking the status of registered storage tanks within the target areas, the City of Bloomington will remain aware of the current status of these potential contaminant sources. This will allow the City to identify potential impacts to the municipal water supply and give the City time to determine the best response to any potential impacts before the municipal water supply is compromised.

Success criterion: Submittal of an annual request to the MPCA for information regarding the status of registered storage tanks in those portions of the DWSMA where aquifer vulnerability is classified as Moderate or High and completion of any updates to the PCSI database necessitated by the new information.

7.3.3 Potential Class V Wells

During the PCSI, 176 properties where Class V wells may be or may have been located were identified within the DWSMA. Bloomington will work with the MDH and the other local units of government into which the DWSMA extends to provide information packets regarding what a

Class V well is and the federal requirements associated with Class V wells to owners of these properties. Bloomington staff will track the number of information packets distributed.

7.3.3.1 Source of Action

Bloomington staff will compile the information on what constitutes a Class V well and what federal requirements are associated with Class V wells with the assistance of MDH staff and, possibly, the Wellhead Protection Consultant. Bloomington staff will mail the information to targeted property owners in the DWSMA and, if necessary, work with staff from the other local units of government into whose jurisdictions the DWSMA extends to distribute the information.

7.3.3.2 Cooperators

Bloomington staff, potentially staff from other cities within the DWSMA, MDH, and, potentially, the Wellhead Protection Consultant.

7.3.3.3 Time Frame

Distribution of the information on Class V wells will occur within two years of approval of this Plan.

7.3.3.4 Estimated Cost

Costs for the preparation and distribution of the information packet will include Bloomington staff time, printing and postage costs and, potentially, Wellhead Protection Consultant costs and are estimated to be approximately $1,500 to $2,500.

7.3.3.5 Goals Achieved

Property owners will become aware of their responsibilities related to Class V wells. Compliance with the applicable regulations regarding Class V wells by the property owners will reduce the potential for groundwater contamination and impact to the source water aquifer.

Success criterion: Distribution of information packets completed according to the schedule outlined in section 7.3.3.3 and tracking of the number of information packets distributed.

7.3.4 Inner Wellhead Management Zone Management

The Inner Wellhead Management Zone (IWMZ) is defined in the Minnesota Rules as that area within a 200-foot radius of a public water supply well. A PCSI was completed for the IWMZ around each Bloomington municipal supply well by the MDH in 2013. The City will continue to monitor setbacks in the IWMZ around each municipal well, possibly with the assistance of the MDH, to ensure that the IWMZ around each Bloomington municipal well remains free of potential contaminant sources. City

staff will document each IWMZ inspection and any actions taken to remove potential contaminant sources from an IWMZ.

7.3.4.1 Source of Action

Bloomington staff.

7.3.4.2 Cooperators

City staff and, potentially, the MDH

7.3.4.3 Time Frame

The monitoring of setbacks within the IWMZs will be done at least annually after approval of this Plan.

7.3.4.4 Estimated Cost

Costs for monitoring the IWMZ setbacks include Bloomington staff time (estimated as approximately 10 to 12 hours annually).

7.3.4.5 Goals Achieved

By monitoring the IWMZ setbacks, Bloomington will be able to keep the IWMZ around each well free of potential contaminant sources and ensure that any new regulated activities will meet required setbacks.

Success criterion: Completion of IWMZ inventories per required regulatory schedules and keeping the IWMZ free of potential contaminant sources.

7.3.5 Information for Other Potential Contaminant Source Properties

Through direct mail contact, the City will encourage the hazardous waste generators and owners of properties where chemical storage occurs within the High vulnerability zones of the DWSMA to participate in self-audits of their waste generation and handling and chemical handling. In conjunction with the self-audits, the City will encourage these businesses to request a site visit from the Minnesota Technical Assistance Program (MnTAP). MnTAP helps Minnesota businesses implement industry tailored solutions that maximize resource efficiency, prevent pollution and reduce costs, to improve public health and the environment.

MnTAP helps Minnesota businesses protect the environment and stay competitive by providing practical alternatives to prevent pollution of land, air and water. By reducing waste and increasing

efficiency, businesses can save on disposal and raw material costs, decrease the regulatory compliance burden, and make working conditions healthier and safer for their employees.

7.3.5.1 Source of Action

Bloomington staff.

7.3.5.2 Cooperators

None

7.3.5.3 Time Frame

Distribution of the direct mail notice will occur within 1 year of approval of this Plan.

7.3.5.4 Estimated Cost

Costs for the preparation and distribution of the direct mail notice will include City staff time and postage costs and is estimated to be $500 to $800.

7.3.5.5 Goals Achieved

Business owners will become aware of their chemical/waste handling and waste generation and learn of available assistance for identifying ways to minimize and properly dispose their hazardous waste.

Success criterion: Distribution of the direct mail notice on the schedule identified in Section 7.3.5.3. City staff will keep track of the number of notices sent out.

7.3.6 Transportation Corridors, Pipelines, and Emergency Response

It will be important to establish communication and create awareness among Bloomington city staff about transportation corridor and pipeline issues that may affect the public water supply and the procedures in place to address spills and prevent released contaminants from entering the municipal water supply. The Wellhead Protection Manager will work with City staff to ensure that procedures that will protect the municipal water supply are part of the City's emergency response program.

7.3.6.1 Source of Action

Bloomington staff.

7.3.6.2 Cooperators

None

7.3.6.3 Time Frame

Within 18 months of approval of this Plan.

7.3.6.4 Estimated Cost

Costs for this action will include City staff time (estimated at 20 hours).

7.3.6.5 Goals Achieved

Local emergency responders will work with and assist County and State first responders in the handling of spills in transportation corridors or from pipelines to prevent, to the extent possible, released contaminants from entering the environment and impacting the municipal water supply.

Success criterion: Emergency responder awareness of the City's DWSMA.

7.4 General Public Education

Public education concerning the DWSMA associated with Bloomington's municipal wells will include: distribution of the Bloomington Drinking Water Annual Reports to residents of Bloomington, providing information on the City of Bloomington website (http://bloomingtonmn.gov/), and inclusion of wellhead and source water protection into the City's planning process. In addition, to facilitate communication on wellhead protection issues with surrounding local units of government whose jurisdictions overlap the DWSMA, the City will invite the cities of Eden Prairie, Edina, Minneapolis, and Richfield to join a Wellhead Protection Coordinating Committee.

7.4.1 Drinking Water Quality Report

The City will continue to annually prepare and distribute the Annual Drinking Water Quality Report to all Bloomington residents. The report provides residents with information regarding the City's municipal water supply and its water quality. The 2012 Drinking Water Quality Report is presented in Appendix E. The 2012 report can also be found on the City's website at http://bloomingtonmn.gov/main_top/4_news/briefing/2013/06/2013_wqr.pdf.

7.4.1.1 Source of Action

City staff.

7.4.1.2 Cooperators

None.

7.4.1.3 Time Frame

Annually as required by Federal regulations.

7.4.1.4 Estimated Cost

Costs include preparation of the report and preparing a notification for inclusion with utility bills that the report is available on the City's website. Estimated annual cost for preparation and distribution of the report is $6,000.

7.4.1.5 Goals Achieved

The residents of Bloomington will become more aware of the federal water quality requirements for public water supplies. Residents will also become more aware of the overall water quality of Bloomington's municipal water supply.

Success criterion: Annual publication/distribution of the Water Quality Report and tracking of the number of reports distributed.

7.4.2 City of Bloomington Website

The City will post information on the Wellhead and Source Water Protection Program on the City's website (http://bloomingtonmn.gov/). If necessary, the City will request assistance from the Wellhead Protection Consultant to prepare information for the website.

7.4.2.1 Source of Action

City staff.

7.4.2.2 Cooperators

City staff and, as needed, Wellhead Protection Consultant.

7.4.2.3 Time Frame

To begin within 120 days of approval of this WHPP and then reviewed and updated if needed at least annually thereafter.

7.4.2.4 Estimated Cost

Approximately $500-$3,500 annually. City staff time and, potentially, Wellhead Protection Consultant costs.

7.4.2.5 Goals Achieved

The residents of Bloomington will become more aware of wellhead and source water protection issues and the actions Bloomington is taking to protect the municipal water supply. Education of the residents should lead to a better awareness of pollution prevention among the City's population.

Success criterion: Posting of Wellhead and Source Water Protection Program information on the City's website according to the schedule identified in section 7.4.2.3.

7.4.3 Inclusion of Wellhead and Source Water Protection in the Planning Process Within the DWSMA

Copies of this WHPP will be supplied to the City Planning Manager and Community Development Department so that they are aware of the Wellhead Protection Program. The Wellhead Protection Manager will work with the City Planning Manager and Community Development Department to determine the best way to ensure that the City's planning process is consistent with the goals and objectives of this WHPP and to include the objectives of this WHPP in the normal zoning and planning review process. Options that may be discussed could include developing checklists related to wellhead protection for use in the planning review process, adjustments to zoning, and amendments to the City Code.

In addition, the Wellhead Protection Manager will discuss with representatives of the other cities within the DWSMA the goals and objectives of Bloomington's WHPP and ways that the cities can cooperate in meeting the goals of the WHPP by including the objectives of the WHPP in their development planning process. Copies of this WHPP will be supplied to the other cities within the DWSMA.

7.4.3.1 Source of Action

City staff.

7.4.3.2 Cooperators

Other cities within the DWSMA.

7.4.3.3 Time Frame

The Wellhead Protection Manager and those responsible for City planning will determine, within one year of approval of this WHPP, how best to incorporate wellhead and source water protection into the normal zoning and planning review process and then evaluate the process at least annually thereafter. Also within two years of the approval of this WHPP, the Wellhead Protection Manager will discuss with representatives from the other cities within the DWSMA ways that the goals and objectives of this WHPP can be included in their planning processes.

7.4.3.4 Estimated Cost

Approximately $3,000-$5,000. Costs to complete this task will include staff time to develop a process for including wellhead protection in the planning process and to review proposals that could

affect the municipal wells and associated DWSMA. In addition, City staff time for discussions with representatives of the other cities within the DWSMA.

7.4.3.5 Goals Achieved

Wellhead and source water protection will be incorporated into future planning efforts. Potential pollution risks to the source water aquifer will be reduced. Risks of altering the WHPAs and DWSMA will be minimized.

Success criterion: Implementation of a method for incorporating wellhead and source water protection into the normal zoning and planning review process.

7.4.4 Wellhead Protection Coordinating Committee

The Wellhead Protection Manager will contact representatives of the local units of government whose jurisdictions overlap the Bloomington DWSMA. These representatives will be invited to participate in a Wellhead Protection Coordinating Committee. The purpose of the committee would be to facilitate communication between the City and the local units of government in the DWSMA regarding issues that may affect the Bloomington drinking water supply. The Wellhead Protection Consultant may be requested to help facilitate meetings of the Committee.

7.4.4.1 Source of Action

The Wellhead Protection Manager will contact representatives of the local units of government whose jurisdictions overlap the Bloomington DWSMA.

7.4.4.2 Cooperators

Bloomington staff, staff from the local units of government whose jurisdictions overlap the Bloomington DWSMA, and, potentially, the Wellhead Protection Consultant.

7.4.4.3 Time Frame

The initial contact of surrounding local units of government will be done within 2 years of approval of this Plan. If the local units of government agree to participate in the Committee, the Committee will decide on the frequency of meetings.

7.4.4.4 Estimated Cost

Bloomington staff time, estimated to be approximately 4 to 8 hours for the initial contact of the local units of government whose jurisdictions overlap the DWSMA. Until the frequency of Committee meetings and level of involvement of the Wellhead Protection Consultant are known it is not possible to estimate any additional costs associated with this action item.

7.4.4.5 Goals Achieved

The Committee would be an efficient vehicle for discussing the potential affect policies of the local units of government may have on the Bloomington water supply and identifying ways to minimize the potential effects.

Success criterion: Contacting the representatives of the local units of government whose jurisdictions overlap the Bloomington DWSMA to determine their interest in participating in a Wellhead Protection Coordinating Committee.

7.5 Data Collection

Bloomington will continue to collect and maintain local geologic and hydrogeologic data as it becomes available in order to improve and augment current information and to provide additional data for future revisions of this WHPP. Bloomington will also continue to collect information on potential contaminant sources within the DWSMA.

7.5.1 Monitoring Static and Pumping Levels in Municipal Wells

The City will continue to routinely measure the static and pumping water levels in the municipal wells. These water levels will be recorded daily by the SCADA system.

7.5.1.1 Source of Action

City staff.

7.5.1.2 Cooperators

None.

7.5.1.3 Time Frame

Ongoing

7.5.1.4 Estimated Cost

City staff time.

7.5.1.5 Goals Achieved

Routine collection of groundwater levels in the municipal wells will provide data for the evaluation of groundwater elevation trends over time. These data can also be used to verify the groundwater flow fields in the source water aquifers.

Success criterion: Compilation of a long term groundwater elevation dataset that can be used to evaluate groundwater elevation trends.

7.5.2 Other Geologic and Hydrogeologic Data Collection

The City will collect local geologic and hydrogeologic data for the Bloomington area as it becomes available from other public sources. The City will also support, whenever possible, future data collection efforts by other governmental entities (e.g., MGS, MDH, MDA, MDNR, MPCA, watershed management organizations, and Hennepin County).

7.5.2.1 Source of Action

City staff.

7.5.2.2 Cooperators

State and Hennepin County agencies conducting geologic and hydrogeologic studies, well drilling companies, Wellhead Protection Consultant, and others.

7.5.2.3 Time Frame

Ongoing beginning with approval of this WHPP.

7.5.2.4 Estimated Cost

Up to approximately $1,000 annually for compiling data from other public sources.

7.5.2.5 Goals Achieved

More accurate hydrogeologic data will be available for use in siting future wells and for future revisions of the delineated WHPAs and the DWSMA for existing and proposed municipal wells. Updated and more accurate vulnerability assessments may be possible as a result of new information.

Success criterion: Compilation of a geologic/hydrogeologic dataset that can be used in the future.

7.5.3 Updating of the Groundwater Model Used in the WHPA Delineation

Any new local geologic and hydrogeologic data for the Bloomington area will be reviewed to determine if the groundwater model used in the WHPA delineations will need to be updated. In addition, pumping from high capacity wells often changes over time. Changes in pumping from high capacity wells in or near the Bloomington DWSMA could affect the DWSMA boundaries. Therefore, the City will work with the Wellhead Protection Consultant to review available information and update the groundwater flow model so that future WHPA/DWSMA delineations will be consistent with available information.

7.5.3.1 Source of Action

City staff

7.5.3.2 Cooperators

City staff and the Wellhead Protection Consultant

7.5.3.3 Time Frame

Five to seven years after approval of this Plan

7.5.3.4 Estimated Cost

Approximately $1,000 to $5,000 depending upon the magnitude of the revisions needed to make the groundwater flow model consistent with available information.

7.5.3.5 Goals Achieved

The groundwater flow model used in the WHPA delineations will be consistent with available information. Since the groundwater flow model used to delineate the WHPAs will be consistent with current information updating of the WHPAs in the future can be done more efficiently.

Success criterion: An updated groundwater flow model that can be used for future updates to Part 1 of the City's WHPP.

7.5.4 Potential Contaminant Source Database

The City will periodically update the information on potential contaminant sources within the DWSMA collected during the development of this WHPP, perhaps with the assistance of the Wellhead Protection consultant – if needed. The City will add information to the potential contaminant source database as additional potential contaminant source sites are identified or as sites are closed through working with the MPCA, the MDH, the MDNR, and Hennepin County. New information for the database will be obtained by contacting appropriate MPCA, MDH, MDNR, and County programs on an annual basis regarding any new information on potential contaminant sources that may be available.

7.5.4.1 Source of Action

City staff.

7.5.4.2 Cooperators

MPCA, MDH, MDNR, MnOPS, Hennepin County staff, City staff, and, if needed, the Wellhead Protection Consultant.

7.5.4.3 Time Frame

Annually after approval of this WHPP.

7.5.4.4 Estimated Cost

Approximately $500-$2,000 annually. City staff time and, if needed, Wellhead Protection Consultant costs.

7.5.4.5 Goals Achieved

This database will be a useful tool to track, catalog, and document the status of potential contaminant sources within the DWSMA.

Success criterion: Maintaining an up to date potential contaminant source database.

7.5.5 Potential Contaminant Source Verification

Potential contaminant sources were identified within the DWSMA during the PCSI. As part of the development of this WHPP, minimum requirements for potential contaminant source verification were met during the development of this Plan. The locations of approximately 100 storage tank properties, 145 potential Class V wells, and over 13,000 well locations were not verified during the preparation of this Plan. Potential contaminant source locations not verified during development of this Plan will be verified during implementation of this Plan, to the extent possible based on information available at the time. Any new potential sources identified during the implementation of this WHPP will be verified by the City with the assistance of the Wellhead Protection Consultant, if needed.

7.5.5.1 Source of Action

City staff.

7.5.5.2 Cooperators

City staff and, if needed, the Wellhead Protection Consultant.

7.5.5.3 Time Frame

Potential contaminant source locations not verified during Plan development will be verified, to the extent possible based on available information, within 18 months after approval of this Plan. As new potential contaminant sources in the DWSMA are identified their locations will be verified on an annual basis.

7.5.5.4 Estimated Cost

Approximately $12,000 to $17,000 to complete verification of locations not verified during Plan development. Approximately $500-$3,000 annually thereafter depending upon the number of new potential contaminant source locations that must be verified.

7.5.5.5 Goals Achieved

Verification of the locations of identified potential contaminant sources within the DWSMA will allow the City to remain in compliance with the requirements of the State of Minnesota's Wellhead and Source Water Protection Program. Verification of the newly identified locations will also ensure that the City uses the most accurate data on type and location of potential contaminant sources as implementation of this WHPP proceeds.

Success criterion: All potential contaminant source locations in the database are verified to the extent possible.

8.0 Evaluation Program

Per Minnesota Rule 4720.5270, the progress in implementing a WHPP must be evaluated routinely to determine the effectiveness of the WHPP in terms of accomplishment of goals. Monitoring and evaluation measures to ensure effectiveness of the management strategies are detailed below.

Evaluation activities discussed in this WHPP include the following:

- Track the implementation of the objectives, activities, and tasks discussed above in Section 7.0.
- Determine the effectiveness of specific management strategies for the protection of the Bloomington municipal water supply.
- Identify possible changes to the management strategies to improve overall effectiveness.
- Determine the adequacy of financial resources and staff availability to perform and implement the management strategies planned each year.
- Update the WHPP if new wells are added to the municipal water supply system.

The City of Bloomington will continue to cooperate with the MDH in the annual monitoring of the City's municipal water supply to determine if the management strategies presented in this WHPP are having a positive effect on water quality and to identify any water quality problems that may arise and need to be addressed.

The Bloomington Wellhead Protection Manager will provide a bi-annual report to the City Council summarizing the progress in implementing the management strategies and objectives in this WHPP. In addition, the results of the water quality monitoring of the City's municipal water supply will be provided to the City Council annually. The evaluation report will be completed using the MDH Wellhead Protection Program Evaluation form (Appendix F). The City will retain a copy of the report in its Wellhead Protection file and send a copy of the report to the MDH Source Water Protection Unit in St. Paul. The intent of the bi-annual reports is to compile a comprehensive review of the implementation of the source water management strategies for use when the City updates or revises this WHPP. As specified by the Wellhead Protection Rules, this WHPP will be updated a minimum of every 10 years, or more often as required due to changes to the municipal water supply system.

9.0 Alternative Water Supply Contingency Strategy

The purpose of a contingency plan is to establish, provide, and keep updated certain emergency response procedures and information for the public water supply which may become vital in the event of a partial or total loss of public water supply services as a result of natural disaster, chemical contamination, civil disorder, or human-caused disruptions.

The Bloomington emergency and water conservation plans are presented in The City's Water Emergency and Conservation Plan (Bloomington, 2007). As required, the Water Emergency and Conservation Plan was submitted to the MDNR Division of Waters – Appropriation Permit Program and the Metropolitan Council for review and approval. The plan was approved by the MDNR in September 2007. The Water Emergency and Conservation Plan was adopted by the City Council in December 2007 and the associated Certificate of Adoption was sent to the MDNR in January 2008. The Water Emergency and Conservation Plan and the Certificate of Adoption are presented in Appendix G. The Water Emergency and Conservation Plan can also be found on the City's website at: http://bloomingtonmn.gov/cityhall/dept/pubworks/utilitie/water/wecplan.pdf.

10.0 References

Barr Engineering Company (Barr), 2013. City of Bloomington Wellhead Protection Plan Amendment – Part 1 Delineation of the Wellhead Protection Area (WHPA), Drinking Water Supply Management Area (DWSMA) and Asessments of Well and DWSMA Vulnerability, prepared for the City of Bloomington, March 2013.

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City of Bloomington (Bloomington), 1997. Wetland Protection and Management Plan, June 1997.

City of Bloomington (Bloomington), 2007. Water Emergency and Conservation Plan, approved by the Minnesota Department of Natural Resources on September 28, 2007 and adopted by the City Council on December 3, 2007.

City of Bloomington (Bloomington), 2009. Comprehensive Plan 2008 – City of Bloomington, Minnesota, prepared by Bloomington Planning Division, adopted by the Bloomington City Council on May 18, 2009.

Minnesota Department of Health (MDH), 2013. Part 1 Wellhead Protection Plan Amendment approval letter from Amal Djerrari of MDH to Bob Cocriel – Bloomington Utilities Superintendent, April 11, 2013.

WSB & Associates, Inc. (WSB), 2007. Comprehensive Surface Water Management Plan for the City of Bloomington, Minnesota, WSB Project No. 1330-04, October, 2007.

Tables

Table 1

Municipal Well Construction Summary
City of Bloomington

Well	Unique Number	Use/ Status[1]	Year Constructed	Total Depth (ft bgs)	Casing Diameter (in.)	Depth to Top of Open Interval (ft bgs)	Well Vulnerability Status[2]	Aquifer
Well 1	222910	A,P	1973	440	24x20	345	Vulnerable	CJDN
Well 2	222911	A,P	1973	392	30x24	315	Vulnerable	OPDC[3], CJDN
Well 3	222912	A,P	1974	950	30x24x20x16	450	Vulnerable	CTCG, CWNC,CMTS
Well 4	133389	A,P	1978	376	30x24	282	Vulnerable	OPDC[3], CJDN
Well 5	603079	A,P	2001	405	30x24x18	307	Vulnerable	CJDN
Well 6	603080	A,P	2001	399	30x24x18	298	Vulnerable	CJDN

[1] P = Primary water supply well
ft bgs = feet below ground surface
CTCG = Tunnel City Group

[2] See Barr (2013)
OPDC = Prairie du Chien Group
CWNC = Wonewoc Sandstone

[3] Contribution from OPDC considered negligible
CJDN = Jordan Sandstone
CMTS = Mt. Simon Sandstone

Table 2

Annual Volume of Water Pumped
City of Bloomington

		Total Annual Withdrawl (gal/yr)				
Unique Number	**Well Name**	**2007**	**2008**	**2009**	**2010**	**2011**
222910	1	236,820,479	236,820,479	236,820,479	236,820,479	417,533,389
222911	2	750,173,407	750,173,407	750,173,407	750,173,407	1,097,774,104
222912	3	507,830,733	464,363,950	524,111,688	297,068,399	422,892,672
133389	4	309,541,386	469,570,537	473,098,109	526,853,114	451,993,062
603079	5	833,993,752	636,246,845	498,890,437	693,811,691	482,642,931
603080	6	751,578,847	314,933,124	977,819,113	650,057,514	481,349,287
	Totals	3,389,938,604	2,872,108,342	3,460,913,233	3,154,784,604	3,354,185,445

Source: Bloomington MDNR Annual Appropriation Reports

Table 3

Summary of Potential Sources of Contaminants and Assigned Management Priority
City of Bloomington

Potential Contaminant Source Category	Total Number in DWSMA	Number Within IWMZ and Priority Assigned	Number Within ERZ and Priority Assigned	Number Within Remainder of the DWSMA and Priority Assigned
Chemical Storage Sites	HVZ - 7	HVZ - 0	HVZ – 4; High	HVZ – 3; High
Hazardous Waste Generators	HVZ - 103	HVZ - 0	HVZ – 14; High	HVZ – 89; High
Leaking Tank Sites	HVZ - 11 MVZ - 81	HVZ - 0 MVZ - 0	HVZ – 4; High MVZ – 13; Moderate	HVZ – 7; High MVZ – 68; Moderate
Potential Class V Wells	HVZ - 3 MVZ - 15 LVZ - 158	HVZ - 0 MVZ - 0 LVZ - 0	HVZ - 0 MVZ - 0 LVZ – 0	HVZ – 3; High MVZ - 15 LVZ - 158
Registered Storage Tank Sites	HVZ - 26 MVZ - 105	HVZ - 0 MVZ – 1[3]; Moderate	HVZ – 8; High MVZ – 15; Moderate	HVZ - 18 MVZ - 89
Spill Sites	HVZ - 4	HVZ - 0	HVZ – 1; High	HVZ - 3
Wells (active, unsealed, or sealed)	HVZ - 125[1] MVZ - 2,588[1] LVZ - 11,096[1]	HVZ - 0 MVZ – 4[2]; High LVZ - 11[4]	HVZ – 26; High MVZ – 379; Moderate LVZ - 0	HVZ - 99 MVZ – 2,205 LVZ – 11,085

ERZ Emergency Response Zone: defined as portion of the WHPA within the 1-year groundwater time of travel area.
IWMZ Inner Wellhead Management Zone: defined in MR4720.5100 subpart19 as the area within 200 feet of a public water supply well.
HVZ High aquifer vulnerability zone
MVZ Moderate aquifer vulnerability zone
LVZ Low aquifer vulnerability zone

[1] Total number does not include the Bloomington Municipal Wells.
[2] Locations of these wells in the IWMZs not verified during Plan preparation. Available information indicates that three of the wells are sealed.
[3] Storage tanks are owned by the City of Bloomington. Management priority moderate since the City already maintains these tanks.
[4] Locations of these wells in the IWMZs not verified during Plan preparation. Available information indicates that ten of the wells are sealed.

Table 4

High Capacity Wells within One Mile of the DWSMA
City of Bloomington

MapID	Unique No.	Status	Well Owner	Use	Aquifer
1	222910	Active	BLOOMINGTON, CITY OF	Municipal Waterworks	CJDN
2	222911	Active	BLOOMINGTON, CITY OF	Municipal Waterworks	OPDCCJDN
3	222912	Active	BLOOMINGTON, CITY OF	Municipal Waterworks	CTCGCMTS
4	133389	Active	BLOOMINGTON, CITY OF	Municipal Waterworks	OPDCCJDN
5	603079	Active	BLOOMINGTON, CITY OF	Municipal Waterworks	CJDN
6	603080	Active	BLOOMINGTON, CITY OF	Municipal Waterworks	CJDN
100	112249	Active	EDINA, CITY OF	Golf Course Irrigation	OPDCCJDN
196	204942	Active	THREE RIVERS PARK DISTRICT	Basin/Lake Level Maintenance	OPDCCJDN
196	204942	Active	THREE RIVERS PARK DISTRICT	Snow and Ice Making	OPDCCJDN
196	204942	Active	THREE RIVERS PARK DISTRICT	Golf Course Irrigation	OPDCCJDN
275	114377	Active	BLOOMINGTON, CITY OF	Landscaping/Athletic Fields	OPDCCTCG
278	112250	Active	EDINA, CITY OF	Golf Course Irrigation	OPDCCJDN
324	118804	Active	NORMANDALE COMMUNITY COLLEGE	Landscaping/Athletic Fields	OPDCCJDN
415	206373	Active	FAIRVIEW SOUTHDALE HOSPITAL	Other Power Generation	OPDC
415	206373	Active	FAIRVIEW SOUTHDALE HOSPITAL	Once-through heating or A/C	OPDC
415	206373	Active	FAIRVIEW SOUTHDALE HOSPITAL	Landscaping/Athletic Fields	OPDC
415	206373	Active	FAIRVIEW SOUTHDALE HOSPITAL	Commercial/Institutional Waterworks	OPDC
436	200918	Active	EDINA, CITY OF	Municipal Waterworks	CJDN
457	204884	Active	EDINA, CITY OF	Municipal Waterworks	OPDCCJDN
479	206588	Standby	EDINA, CITY OF	Municipal Waterworks	PMHNPMFL
550	200561	Active	EDINA, CITY OF	Municipal Waterworks	OPDCCJDN
593	617378	Active	FILMTEC CORPORATION	Other Industrial Processing	CJDN
619	251279	Active	WOODLAWN TERRACE	Private Waterworks	OPDC

Table 4

High Capacity Wells within One Mile of the DWSMA
City of Bloomington

MapID	Unique No.	Status	Well Owner	Use	Aquifer
628	222905	Active	INDIANHEAD LAKE IMPROVEMENT ASSOC	Basin/Lake Level Maintenance	OSTPCJDN
649	206183	Active	EDINA, CITY OF	Municipal Waterworks	CJDN
688	224648	Active	BLOOMINGTON, CITY OF	Basin/Lake Level Maintenance	QWTA
703	505626	Active	EDINA, CITY OF	Municipal Waterworks	CJDN
755	200913	Active	EDINA, CITY OF	Golf Course Irrigation	CJDN
781	206377	Active	EDINA, CITY OF	Municipal Waterworks	OPDCCJDN
809	119302	Active	DUKE REALTY LTD PARTNERSHIP	Landscaping/Athletic Fields	OPDC
835	200914	Active	EDINA, CITY OF	Municipal Waterworks	CJDN
836	206184	Active	EDINA, CITY OF	Municipal Waterworks	CMTS
847	718192	Active	FILMTEC CORPORATION	Other Industrial Processing	CJDN
865	203101	Active	EDINA, CITY OF	Municipal Waterworks	OPDCCJDN
894	686286	Active	EDINA, CITY OF	Municipal Waterworks	CJDN
925	224097	Active	ROSEMOUNT INC	Once-through heating or A/C	OPDC
925	224097	Active	ROSEMOUNT INC	Industrial Process Cooling Once-through	OPDC
925	224097	Active	ROSEMOUNT INC	Landscaping/Athletic Fields	OPDC
1014	205226	Active	GENERAL DYNAMICS ADV INFO SYS INC	Landscaping/Athletic Fields	CJDN
1054	222918	Active	GENERAL DYNAMICS ADV INFO SYS INC	Landscaping/Athletic Fields	OPDCCJDN
1086	200564	Active	EDINA, CITY OF	Municipal Waterworks	OPDCCJDN
1103	768698	Active	THREE RIVERS PARK DISTRICT	Basin/Lake Level Maintenance	OPDC
1103	768698	Active	THREE RIVERS PARK DISTRICT	Snow and Ice Making	OPDC
1103	768698	Active	THREE RIVERS PARK DISTRICT	Golf Course Irrigation	OPDC
1126	147864	Active	OXMOOR LAKE ASSOCIATION	Basin/Lake Level Maintenance	OPCJ
1155	433288	Active	SOUTHDALE LTD PARTNERSHIP	Once-through heating or A/C	OPCJ

Table 4

High Capacity Wells within One Mile of the DWSMA
City of Bloomington

MapID	Unique No.	Status	Well Owner	Use	Aquifer
1155	433288	Active	SOUTHDALE LTD PARTNERSHIP	Landscaping/Athletic Fields	OPCJ
1193	462965	Active	BLOOMINGTON, CITY OF	Golf Course Irrigation	QBAA
1199	251306	Active	BLOOMINGTON, CITY OF	Golf Course Irrigation	NA
1246	505073	Active	MICRON MOLDING INC	Non-Metallic Processing	OPDC
1316	582644	Active	MINNESOTA VALLEY COUNTRY CLUB	Golf Course Irrigation	CJDN
1322	647782	Active	BEST BUY DATA CENTER	Commercial building A/C	OPCJ
112242	112242	Active	EDEN PRAIRIE, CITY OF	Municipal Waterworks	OPCJ
133362	133362	Active	RICHFIELD, CITY OF	Municipal Waterworks	CWNCCMTS
161443	161443	Active	EDINA COUNTRY CLUB	Golf Course Irrigation	OPDCCJDN
161467	161467	Active	CYPRESS SEMICONDUCTOR	Metal Processing	OPDCCJDN
161467	161467	Active	CYPRESS SEMICONDUCTOR	Other Industrial Processing	OPDCCJDN
205406	205406	Active	OLYMPIC HILLS GOLF CLUB	Golf Course Irrigation	QBAA
205574	205574	Active	POLAR SEMICONDUCTOR INC	Non-Metallic Processing	CJDN
205574	205574	Active	POLAR SEMICONDUCTOR INC	Other Industrial Processing	CJDN
205905	205905	Active	EDEN PRAIRIE, CITY OF	Municipal Waterworks	OPDCCJDN
205941	205941	Active	HENNEPIN TECHNICAL COLLEGE-BP	Landscaping/Athletic Fields	OPDC
205941	205941	Active	HENNEPIN TECHNICAL COLLEGE-BP	Other Non-Crop irrigation	OPDC
206276	206276	Active	RICHFIELD, CITY OF	Municipal Waterworks	OPDCCJDN
206279	206279	Active	RICHFIELD, CITY OF	Municipal Waterworks	OPDCCJDN
206280	206280	Active	RICHFIELD, CITY OF	Municipal Waterworks	OPDCCJDN
206353	206353	Active	RICHFIELD, CITY OF	Municipal Waterworks	CJDN
206354	206354	Active	RICHFIELD, CITY OF	Municipal Waterworks	CJDN
206361	206361	Active	RICHFIELD, CITY OF	Municipal Waterworks	OPDCCJDN
206474	206474	Active	EDINA, CITY OF	Municipal Waterworks	OPDCCJDN
207674	207674	Standby	EDINA, CITY OF	Municipal Waterworks	OPDCCJDN
208399	208399	Active	EDINA, CITY OF	Municipal Waterworks	OPDCCJDN
208813	208813	Active	LIBERTY TIRE SERVICES OF OHIO LLC	Non-Metallic Processing	OPDC

Table 4

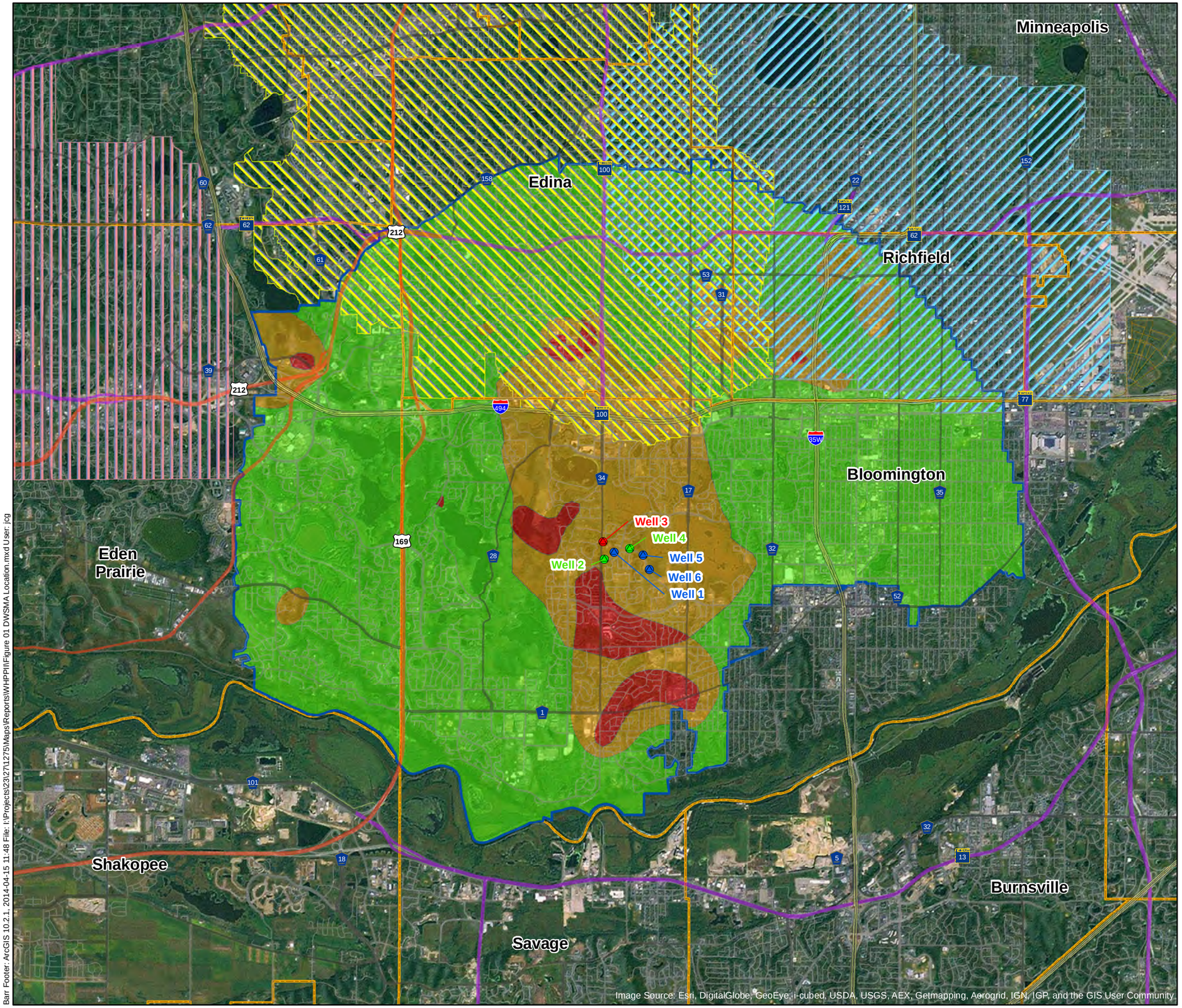
High Capacity Wells within One Mile of the DWSMA
City of Bloomington

MapID	Unique No.	Status	Well Owner	Use	Aquifer
236157	236157	Active	EDINA COUNTRY CLUB	Golf Course Irrigation	OPDCCJDN
236635	236635	Active	HENNEPIN COUNTY PARKS	Campgrounds/Waysides/Rest Areas	QBAAOPDC
240630	240630	Active	EDINA, CITY OF	Municipal Waterworks	OPDCCJDN
249986	249986	Active	IND SCHOOL DISTRICT 271	Once-through heating or A/C	CJDN
249986	249986	Active	IND SCHOOL DISTRICT 271	Landscaping/Athletic Fields	CJDN
405655	405655	Active	POLAR SEMICONDUCTOR INC	Non-Metallic Processing	OPCJ
405655	405655	Active	POLAR SEMICONDUCTOR INC	Other Industrial Processing	OPCJ
407613	407613	Active	NORMANDALE COMMUNITY COLLEGE	Landscaping/Athletic Fields	OPDC
420993	420993	Active	METROPOLITAN COUNCIL	Dewatering	OPDC
509079	509079	Active	IND SCHOOL DISTRICT 272	Landscaping/Athletic Fields	OPDC
547293	547293	Active	CYPRESS SEMICONDUCTOR	Metal Processing	OPDCCJDN
603077	603077	Active	CYPRESS SEMICONDUCTOR	Metal Processing	OPDCCJDN
639111	639111	Active	LUXUS CORP	Other Special Categories	OPDC
672551	672551	Active	AGGREGATE INDUSTRIES-NCR INC	Non-Metallic Processing	OPDC
NA1		Active	BLOOMINGTON, CITY OF	Golf Course Irrigation	OPCJ

[1] Map ID refers to Figure 4
NA Not Available

Aquifer Codes:
CJDN = Jordan SS
CMTS = Mt. Simon SS
CTCGCMTS = Tunnel City Gp to Mt. Simon SS
CWNCCMTS = Wonewoc SS to Mt. Simon SS
OPCJ = Prairie du Chien Gp and Jordan SS
OPDCCJDN = Prairie du Chien Gp to Jordan SS
OPDCCTCG = Prairie du Chien Gp to Tunnel City Gp
OSTPCJDN = St. Peter SS to Jordan SS
PMHNPMFL = Hinckley SS to Fond du Lac Formation
QBAA = Quaternary Buried Artesian Aquifer
QBAAOPDC = Quaternary Buried Artesian Aquifer to Prairie du Chien Gp
QWTA = Quaternary Water Table Aquifer

Figures



Bloomington Municipal Well Aquifer

- Prairie du Chien - Jordan
- Jordan
- Tunnel City - Mt. Simon
- Bloomington DWSMA
- Municipal Boundary

Other DWSMAs

- Eden Prairie
- Edina
- Richfield

Aquifer Vulnerability

- High
- Moderate
- Low

N

Feet

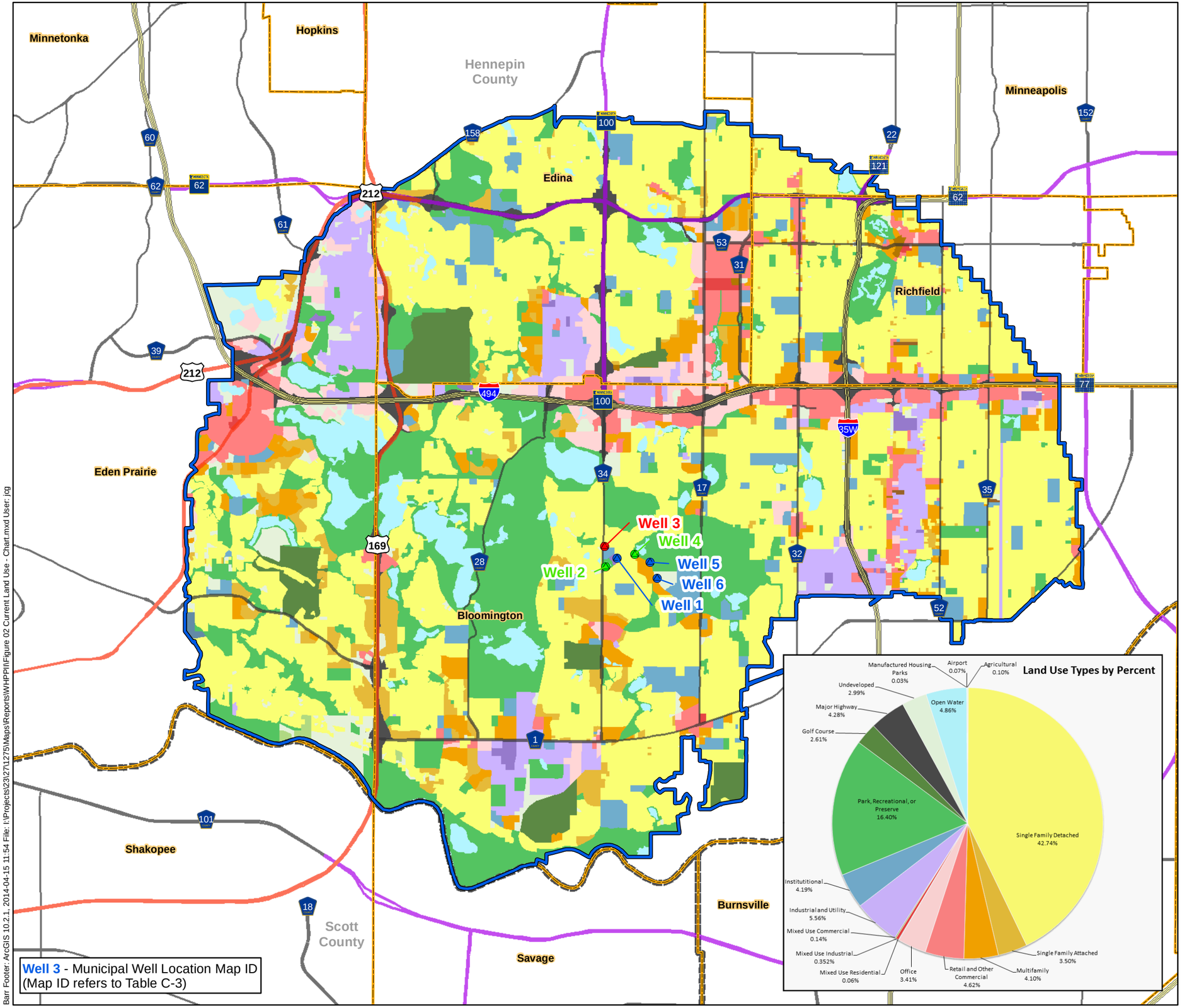
6,000 0 6,000

BARR

Figure 1

MUNICIPAL WELLS, DWSMA, AND AQUIFER VULNERABILITY
Bloomington WHPP Amendment
City of Bloomington
Hennepin County, MN

Barr Footer: ArcGIS 10.2.1, 2014-04-15 11:48 File: I:\Projects\23\2713275\Maps\Reports\WHPP\\Figure 01 DWSMA Location.mxd User: jcg



Bloomington DWSMA
Municipal Boundary
County Boundary

Current (2010) Land Use

- Single Family Detached
- Manufactured Housing Park
- Single Family Attached
- Multifamily
- Retail and Other Commercial
- Office
- Mixed Use Residential
- Mixed Use Industrial
- Mixed Use Commercial and Other
- Industrial and Utility
- Institutional
- Park, Recreational or Preserve
- Golf Course
- Major Highway
- Airport
- Agricultural
- Undeveloped
- Water

Land Use Data (Met Council 2010 Generalized Land Use)

N

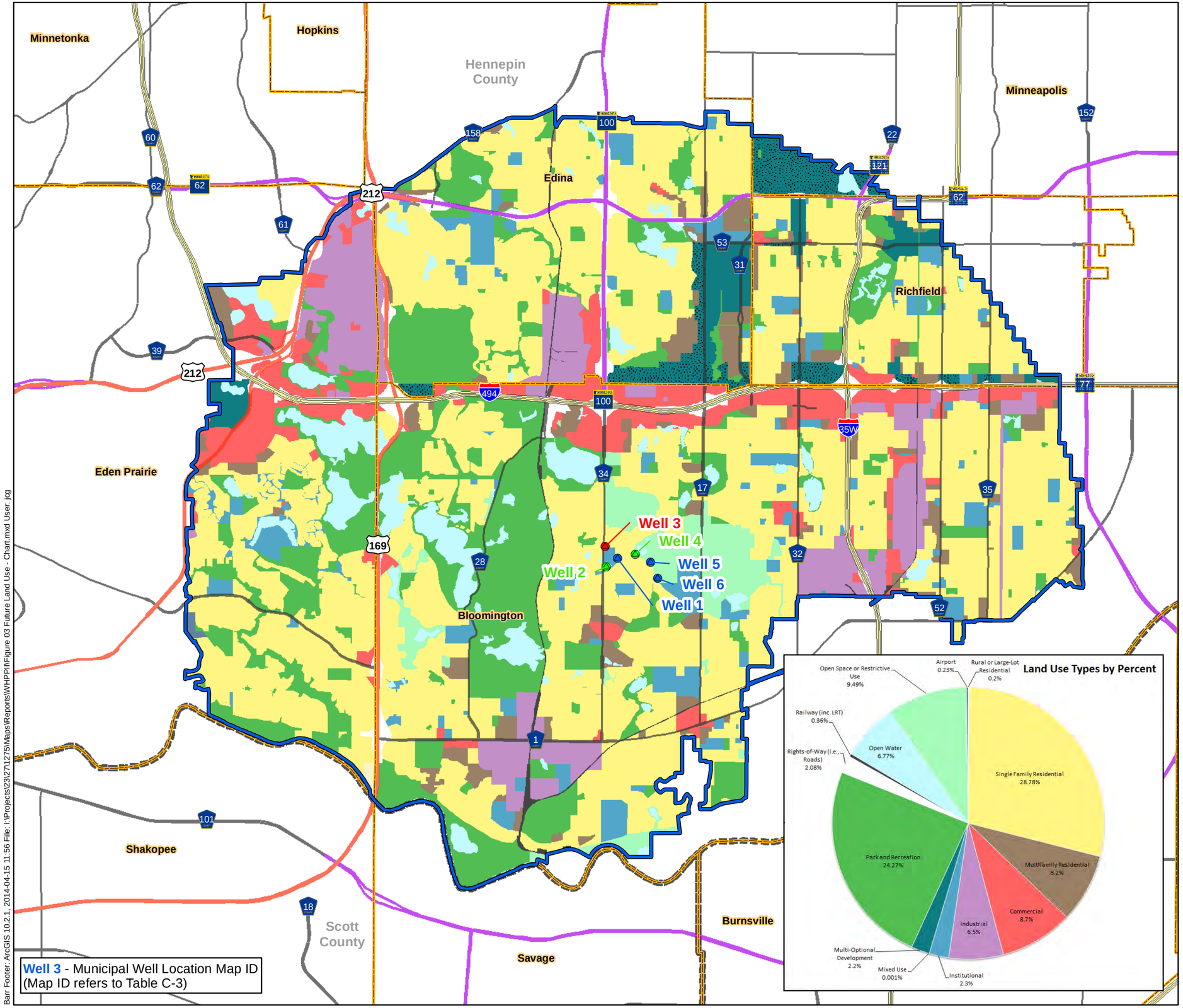
Miles
1 0 1

BARR

Figure 2

CURRENT LAND USE
Bloomington WHPP Amendment
City of Bloomington
Hennepin County, MN

Barr Footer: ArcGIS 10.2.1, 2014-04-15 11:54 File: I:\Projects\23\27\1275\Maps\Reports\WHPP\IFigure 02 Current Land Use - Chart.mxd User: jcg



Bloomington DWSMA
Municipal Boundary
County Boundary

Planned Future Land Use

- Rural or Large-Lot Residential
- Single Family Residential
- Multifamily Residential
- Commercial
- Industrial
- Institutional
- Mixed Use
- Multi-Optional Development
- Park and Recreation
- Open Space or Restrictive Use
- Rights-of-Way (i.e., Roads)
- Railway (inc. LRT)
- Airport
- Open Water

Planned Land Use Data (Metropolitan Council)

N

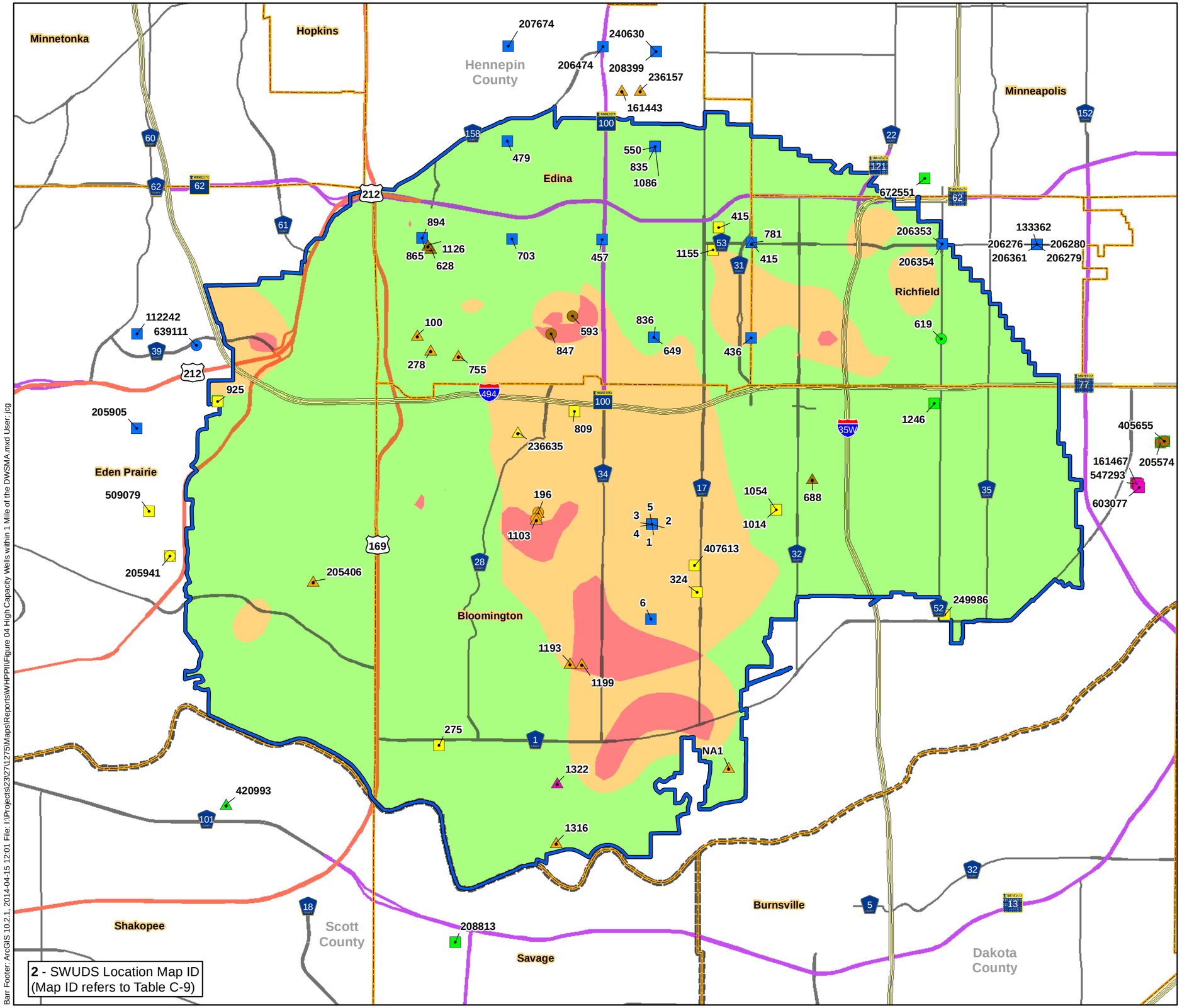
Miles
1 0 1

BARR

Figure 3

PLANNED FUTURE LAND USE
Bloomington WHPP Amendment
City of Bloomington
Hennepin County, MN

Barr Footer: ArcGIS 10.2.1, 2014-04-15 11:56 File: I:\Projects\23\27\1275\Maps\Reports\WHPP\Figure 03 Future Land Use - Chart.mxd User: jcg



Barr Footer: ArcGIS 10.2.1, 2014-04-15 12:01 File: I:\Projects\23\27\1275\Maps\Reports\WHPP\IFigure 04 High Capacity Wells within 1 Mile of the DWSMA.mxd User: jcg

Permitted Water Appropriations (SWUDS) Within 1 Mile of DWSMA

- Basin/Lake Level Maintenance
- Campgrounds/Waysides/Rest Areas
- Commercial building A/C
- Commercial/Institutional Waterworks
- Dewatering
- Golf Course Irrigation
- Industrial Process Cooling Once-through
- Landscaping/Athletic Fields
- Metal Processing
- Municipal Waterworks
- Non-Metallic Processing
- Once-through heating or A/C
- Other Industrial Processing
- Other Non-Crop irrigation
- Other Power Generation
- Other Special Categories
- Private Waterworks
- Snow and Ice Making
- Bloomington DWSMA
- Municipal Boundary
- County Boundary

Aquifer Vulnerability

- High
- Moderate
- Low

N

Miles
1 0 1

BARR

Figure 4

HIGH CAPACITY WELLS WITHIN ONE MILE OF THE DWSMA
Bloomington WHPP Amendment
City of Bloomington
Hennepin County, MN

Appendix A

MDH Well Records

Unique No. 00222910	MINNESOTA DEPARTMENT OF HEALTH	Update Date 2011/10/07
County Name Hennepin	**WELL AND BORING RECORD**	Entry Date 1991/08/24
	Minnesota Statutes Chapter 1031	

Township Name	Township	Range	Dir	Section	Subsection
	27	24	W	7	CCACCA

Well Depth	Depth Completed	Date Well Completed
440 ft.	440 ft.	1973/03/17

Well Name BLOOMINGTON 1

Drilling Method Cable Tool

Well Owner's Name BLOOMINGTON 1
POPLAR RIDGE RD
BLOOMINGTON MN 55431

Drilling Fluid

Well Hydrofractured? ☐ Yes ☐ No
From ft. to ft.

Use Community Supply (municipal)

Contact's Name CITY OF BLOOMINGTON

BLOOMINGTON MN 55431

Casing **Drive Shoe?** ☐ Yes ☐ N

Hole Diameter

Casing Diameter **Weight(lbs/ft)**

24 in. t 202 ft

20 in. t 345 ft

GEOLOGICAL MATERIAL	COLOR	HARDNESS	FROM	TO
SOIL	BLACK		0	2
SAND & GRAVEL			2	110
SANDY CLAY	GRAY		110	120
GRAVEL SOME SAND	TAN		120	161
CLAY	GRAY		161	189
FINE SAND	TAN		189	210
HEAVY GRAVEL	TAN		210	266
LARGE STONES & ROCKS	DARK		266	275
GRAVEL	DARK		275	345
SHAKOPEE-DOLOMITE			345	348
JORDAN SANDSTONE	GRAY		348	369
JORDAN	GRAY		369	429
ST. LAWRENCE	BLU/G		429	440

Screen N

Open Hole From 345 ft. to 440 ft.

Make Type

Static Water Level 120 ft. from Land surface Date 1973/03/17

PUMPING LEVEL (below land surface)

131 ft. after hrs. pumping 2400 g.p.m.

Well Head Completion

Pitless adapter mfr Model

Casing Protection ☐ 12 in. above grade

☐ At-grade(Environmental Wells and Borings ONLY)

Grouting Information Well grouted? ☐ Yes ☐ No

Nearest Known Source of Contamination

ft. direction type

Well disinfected upon completion? ☐ Yes ☐ No

Pump ☐ Not Installed Date Installed

Mfr nam

Model HP Volts

Drop Pipe Length ft. Capacity g.p.m

Type

Any not in use and not sealed well(s) on property? ☐ Yes ☐ No

Was a variance granted from the MDH for this Well? ☐ Yes ☐ No

REMARKS, ELEVATION, SOURCE OF DATA, etc.

M.G.S. NO. 876.

USGS Quad Bloomington Elevation 900

Aquifer: CJDN Alt Id: 73-1429

Well CONTRACTOR CERTIFICATION Lic. Or Reg. No. 71015

License Business Name

Name of Driller SIGAFOOS, G.

Report Copy

Unique No. 00222911

County Name Hennepin

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING RECORD

Minnesota Statutes Chapter 1031

Update Date 2003/10/23

Entry Date 1991/08/24

Township Name	Township	Range	Dir	Section	Subsection
	27	24	W	7	CCCCAB

Well Depth	Depth Completed	Date Well Completed
392 ft.	392 ft.	1973/10/00

Well Name BLOOMINGTON 2

Drilling Method Other

Contact's Name BLOOMINGTON 2

BLOOMINGTON MN

Drilling Fluid

Well Hydrofractured? ☐ Yes ☐ No

From ft. to ft.

Use Community Supply (municipal)

Casing **Drive Shoe?** ☐ Yes ☐ N

Hole Diameter

Casing Diameter		Weight(lbs/ft)	
30 in. t	70 ft		
24 in. t	315 ft		

GEOLOGICAL MATERIAL	COLOR	HARDNESS	FROM	TO
SAND, GRAVEL & ROCK			0	65
CLAY & ROCK			65	110
SAND & GRAVEL			110	132
CLAY			132	145
SAND, GRAVEL & ROCKS			145	305
LIME ROCK			305	318
JORDAN SANDSTONE			318	387
SHALE			387	392

Screen

Make Type

Open Hole From ft. to ft.

Static Water Level 106 ft. from Land surface Date 1988/12/05

PUMPING LEVEL (below land surface)

ft. after hrs. pumping g.p.m.

Well Head Completion

Pitless adapter mfr Model

Casing Protection ☐ 12 in. above grade

☐ At-grade(Environmental Wells and Borings ONLY)

Grouting Information Well grouted? ☐ Yes ☐ No

Nearest Known Source of Contamination

ft. direction type

Well disinfected upon completion? ☐ Yes ☐ No

Pump ☐ Not Installed Date Installed

Mfr nam

Model HP Volts

Drop Pipe Length ft. Capacity g.p.m

Type

Any not in use and not sealed well(s) on property? ☐ Yes ☐ No

Was a variance granted from the MDH for this Well? ☐ Yes ☐ No

REMARKS, ELEVATION, SOURCE OF DATA, etc.

CASING: 030 TO 0070;024 TO 0315.

M.G.S. NO.957

USGS Quad Bloomington Elevation 860

Aquifer: OPCJ Alt Id: 73-1429

Well CONTRACTOR CERTIFICATION Lic. Or Reg. No. 27010

License Business Name

Name of Driller JOHNSON, M.

Report Copy

Unique No. 00222912

County Name Hennepin

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING RECORD

Minnesota Statutes Chapter 1031

Update Date 2011/10/07

Entry Date 1991/08/24

Township Name	Township	Range	Dir	Section	Subsection
	27	24	W	7	CBCCCC

Well Depth	Depth Completed	Date Well Completed
950 ft.	950 ft.	1974/08/00

Well Name BLOOMINGTON 3

Drilling Method Cable Tool

Well Owner's Name BLOOMINGTON 3
NORMANDALE RD
BLOOMINGTON MN 55431

Drilling Fluid

Well Hydrofractured? ☐ Yes ☐ No
From ft. to ft.

Contact's Name CITY OF BLOOMINGTON

BLOOMINGTON MN 55431

Use Community Supply (municipal)

Casing **Drive Shoe?** ☐ Yes ☐ N

Hole Diameter

Casing Diameter		Weight(lbs/ft)	
30 in. t	150 ft		
24 in. t	323 ft		
20 in. t	320 ft		
16 in. t	450 ft		

GEOLOGICAL MATERIAL	COLOR	HARDNESS	FROM	TO
FINE SAND, BOULDERS, CL			0	290
COARSE SAND & GRAVEL			290	310
FINE SAND W/TRACE OF S			310	336
COARSE SAND & SMALL R			336	355
SANDSTONE, DOLOMITE G			355	364
JORDAN SANDSTONE			364	390
JORDAN-ST. LAWRENCE MI			390	420
ST. LAWRENCE SHALE			420	435
ST. LAWRENCE SHALE			435	476
ST. LAWRENCE SHALE			476	620
SANDSTONE FRANCONIA			620	627
SANDSTONE FRANCONIA			627	680
SANDSTONE FRANCONIA			680	706
SHALE HARD + STICKY			706	760
SANDSTONE + SHALE MIXE			760	776
SANDSTONE WITH LAYERS			776	918
HINCKLEY SANDSTONE	PINK		918	950

Screen N

Open Hole From 450 ft. to 950 ft.

Make Type

Static Water Level 105 ft. from Land surface Date 1973/08/00

PUMPING LEVEL (below land surface)
ft. after hrs. pumping g.p.m.

Well Head Completion
Pitless adapter mfr Model
Casing Protection ☐ 12 in. above grade
☐ At-grade(Environmental Wells and Borings ONLY)

Grouting Information Well grouted? ☑ Yes ☐ No

Material	From	To (ft.)	Amount(yds/bags)
G		13.5	Y

Nearest Known Source of Contamination
ft. direction type
Well disinfected upon completion? ☐ Yes ☐ No

Pump ☐ Not Installed Date Installed
Mfr nam
Model HP 0 Volts
Drop Pipe Length ft. Capacity g.p.m
Type

Any not in use and not sealed well(s) on property? ☐ Yes ☐ No

Was a variance granted from the MDH for this Well? ☐ Yes ☐ No

REMARKS, ELEVATION, SOURCE OF DATA, etc.

M.G.S. NO. 963.

USGS Quad Bloomington Elevation 879
Aquifer: CFMS Alt Id: 73-1429

Well CONTRACTOR CERTIFICATION Lic. Or Reg. No. 27010
License Business Name
Name of Driller

Report Copy

Unique No. 00133389	MINNESOTA DEPARTMENT OF HEALTH	Update Date 2011/10/07
County Name Hennepin	**WELL AND BORING RECORD**	Entry Date 1991/08/24
	Minnesota Statutes Chapter 1031	

Township Name	Township	Range	Dir	Section	Subsection
	27	24	W	7	CDBDBB

Well Depth	Depth Completed	Date Well Completed
376 ft.	376 ft.	1978/03/13

Well Name BLOOMINGTON 4

Drilling Method Cable Tool

Well Owner's Name BLOOMINGTON 4

BLOOMINGTON MN 55431

Drilling Fluid

Well Hydrofractured? ☐ Yes ☐ No

From ft. to ft.

Use Community Supply (municipal)

Contact's Name CITY OF BLOOMINGTON

BLOOMINGTON MN 55431

Casing **Drive Shoe?** ☑ Yes ☐ N

Hole Diameter

Casing Diameter				Weight(lbs/ft)
30	in. t	146	ft	
24	in. t	282	ft	94.62

GEOLOGICAL MATERIAL	COLOR	HARDNESS	FROM	TO
CLAY			0	10
SAND & BOULDERS	BROW		10	30
STICKY CLAY	GRAY		30	50
SANDY CLAY	RED		50	60
CLAY	BROW		60	70
CEMENTED SAND	GRAY		70	120
FINE CLAY	GRAY		120	150
HEAVY GRAVEL	GRAY		150	210
SAND, STONE	GRAY		210	281
SHAKOPEE	GRAY		281	285
JORDAN	WHITE		285	305
JORDAN	TAN		305	330
JORDAN	WHITE		330	340
JORDAN	GRAY		340	371
ST. LAWRENCE			371	376

Screen N

Open Hole From 281 ft. to 376 ft.

Make Type

Static Water Level 65 ft. from Land surface Date 1978/03/13

PUMPING LEVEL (below land surface)

105 ft. after hrs. pumping 3000 g.p.m.

Well Head Completion

Pitless adapter mfr Model

Casing Protection ☑ 12 in. above grade

☐ At-grade(Environmental Wells and Borings ONLY)

Grouting Information Well grouted? ☑ Yes ☐ No

Material	From	To (ft.)	Amount(yds/bags)	
G	0	281	10	Y

Nearest Known Source of Contamination

ft. direction type

Well disinfected upon completion? ☑ Yes ☐ No

Pump ☐ Not Installed Date Installed

Mfr nam

Model HP Volts

Drop Pipe Length ft. Capacity g.p.m

Type

Any not in use and not sealed well(s) on property? ☐ Yes ☐ No

Was a variance granted from the MDH for this Well? ☐ Yes ☐ No

REMARKS, ELEVATION, SOURCE OF DATA, etc.

M.G.S. NO. 1346.

USGS Quad Bloomington Elevation 821

Aquifer: OPCJ Alt Id: 73-1429

Well CONTRACTOR CERTIFICATION Lic. Or Reg. No. 27015

License Business Name

Name of Driller SIGAFOOS, G.

Report Copy

Unique No. 00603079	MINNESOTA DEPARTMENT OF HEALTH	Update Date 2006/12/18
County Name Hennepin	**WELL AND BORING RECORD**	Entry Date 2001/10/03
	Minnesota Statutes Chapter 1031	

Township Name	Township	Range	Dir	Section	Subsection
	27	24	W	7	CDDAAC

Well Depth	Depth Completed	Date Well Completed
405 ft.	405 ft.	2001/08/13

Well Name BLOOMINGTON 5

Drilling Method Cable Tool

Contact's Name CITY OF BLOOMINGTON
2215 OLD SHAKOPEE W RD
BLOOMINGTON MN 55431

Drilling Fluid Water

Well Hydrofractured? ☐ Yes ☑ No
From ft. to ft.

Well Owner's Name BLOOMINGTON 5
COLLEGEGVIEW RD
BLOOMINGTON MN 55431

Use Community Supply (municipal)

Casing **Drive Shoe?** ☑ Yes ☐ N

Hole Diameter

in. t	171	ft
in. t	307	ft
in. t	405	ft

Casing Diameter **Weight(lbs/ft)**

30	in. t	171	ft	118.65
24	in. t	292	ft	94.62
18	in. t	307	ft	70.59

GEOLOGICAL MATERIAL	COLOR	HARDNESS	FROM	TO
CLAY, SAND, GRAVEL	BROW	SOFT	0	284
LIMESTONE BUFF		HARD	284	292
SANDSTONE	WHITE	MEDIUM	292	395
SHALE	GREE	MEDIUM	395	405

Screen N
Make Type

Open Hole From 307 ft. to 405 ft.

Static Water Level 91 ft. from Land surface Date 2001/06/14

PUMPING LEVEL (below land surface)
119 ft. after 16 hrs. pumping 2200 g.p.m.

Well Head Completion
Pitless adapter mfr Model
Casing Protection Y ☑ 12 in. above grade
☐ At-grade(Environmental Wells and Borings ONLY)

Grouting Information Well grouted? ☑ Yes ☐ No

Material	From	To (ft.)	Amount(yds/bags)	
G	0	307	16	Y
G	0	171	13	Y

Nearest Known Source of Contamination
150 ft. direction W type SDF
Well disinfected upon completion? ☑ Yes ☐ No

Pump ☑ Not Installed Date Installed N
Mfr nam
Model HP Volts
Drop Pipe Length ft. Capacity g.p.m
Type

Any not in use and not sealed well(s) on property? ☐ Yes ☑ No

Was a variance granted from the MDH for this Well? ☐ Yes ☑ No

REMARKS, ELEVATION, SOURCE OF DATA, etc.

WELL ADDRESS: ACROSS FROM 9300 COLLEGEVIEW RD.

NEARBY TW-5 GAMMA LOGGED 12-15-1999. AND M.G.S. NO. 3987.

USGS Quad Bloomington Elevation 840
Aquifer: CJDN Alt Id: 1270001S06

Well CONTRACTOR CERTIFICATION Lic. Or Reg. No. 62012
License Business Name
Name of Driller GALVIN, M.

Report Copy

Unique No. 00603080	MINNESOTA DEPARTMENT OF HEALTH	Update Date 2011/08/04
County Name Hennepin	**WELL AND BORING RECORD**	Entry Date 2001/12/13
	Minnesota Statutes Chapter 1031	

Township Name	Township	Range	Dir	Section	Subsection
	27	24	W	18	ABBCAA

Well Depth	Depth Completed	Date Well Completed
399 ft.	399 ft.	2001/10/00

Well Name BLOOMINGTON 6

Drilling Method Cable Tool

Contact's Name CITY OF BLOOMINGTON
2215 OLD SHAKOPEE W RD
BLOOMINGTON MN 55431

Drilling Fluid Water

Well Hydrofractured? ☐ Yes ☑ No
From ft. to ft.

Well Owner's Name BLOOMINGTON 6
COLLEGEVIEW RD
BLOOMINGTON MN 55431

Use Community Supply (municipal)

Casing **Drive Shoe?** ☑ Yes ☐ N

Hole Diameter

in. t	169	ft
in. t	298	ft
in. t	399	ft

Casing Diameter **Weight(lbs/ft)**

30	in. t	169	ft	118.65
24	in. t	282	ft	94.62
18	in. t	298	ft	70.59

GEOLOGICAL MATERIAL	COLOR	HARDNESS	FROM	TO
SAND & GRAVEL	BROW		0	20
SAND, GRAVEL, CLAY	BROW		20	82
SAND	GRAY		82	245
SAND & GRAVEL	GRAY		245	250
SAND	GRAY		250	282
LIMESTONE	TAN		282	295
SANDSTONE	WHITE		295	392
SHALE	GREE		392	399

Screen N

Open Hole From 298 ft. to 399 ft.

Make Type

Static Water Level 84 ft. from Land surface Date 2001/10/01

PUMPING LEVEL (below land surface)
110 ft. after 8 hrs. pumping 2200 g.p.m.

Well Head Completion
Pitless adapter mfr Model
Casing Protection ☑ 12 in. above grade
☐ At-grade(Environmental Wells and Borings ONLY)

Grouting Information Well grouted? ☑ Yes ☐ No

Material	From	To (ft.)	Amount(yds/bags)	
G	0	282	12	Y
G	0	298	14.5	Y

Nearest Known Source of Contamination
60 ft. direction W type SDF
Well disinfected upon completion? ☑ Yes ☐ No

Pump ☑ Not Installed Date Installed N
Mfr nam
Model HP Volts
Drop Pipe Length ft. Capacity g.p.m
Type

REMARKS, ELEVATION, SOURCE OF DATA, etc.

NEAR BY TW-6 GAMMA LOGGED 12-9-1999. AND M.G.S. NO. 3896.
M.G.S. NO. 4167.

Any not in use and not sealed well(s) on property? ☐ Yes ☑ No

Was a variance granted from the MDH for this Well? ☐ Yes ☑ No

USGS Quad Bloomington Elevation 846
Aquifer: CJDN Alt Id: 1270001S07

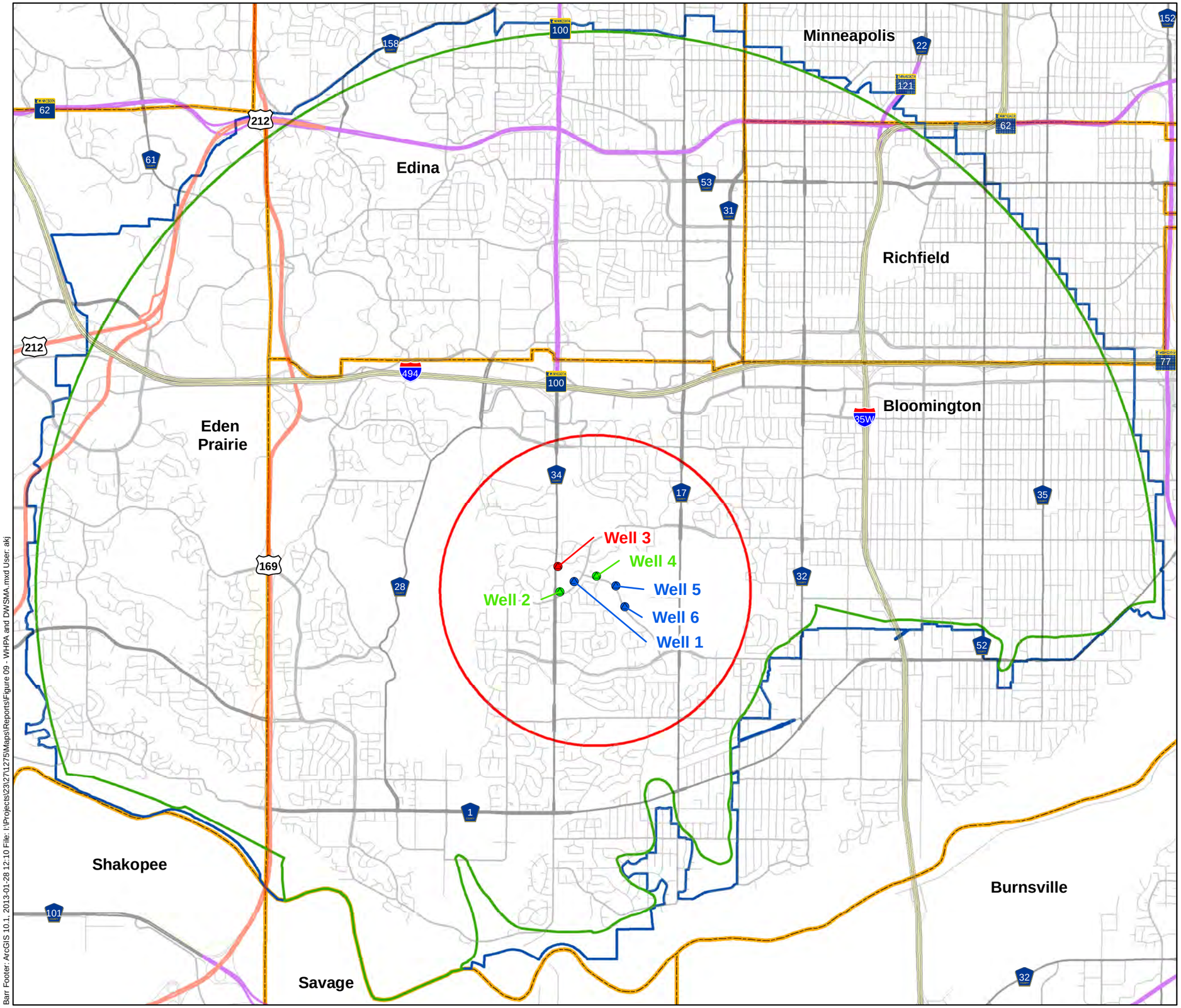
Well CONTRACTOR CERTIFICATION Lic. Or Reg. No. 62012
License Business Name
Name of Driller UNERTL, F.

Report Copy

Appendix B

Part 1 Wellhead Protection Plan

Complete Plan available on request from City of Bloomington Public Works



Barr Footer: ArcGIS 10.1, 2013-01-28 12:10 File: I:\Projects\23\27\1275\Maps\Reports\Figure 09 - WHPA and DWSMA.mxd User: akj

Bloomington Municipal Well

Aquifer

- Prairie du Chien - Jordan
- Jordan
- Tunnel City - Mt. Simon
- Emergency Response Zone
- WHPA
- DWSMA
- Municipal Boundary

N

Miles
1 0 1

Kilometers
1 0 1

BARR

Figure 9

WHPA & DWSMA
Bloomington WHPP Amendment
City of Bloomington
Hennepin County, MN

Appendix C

Data Elements Assessment

Appendix C

Data Elements Assessment

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C1.0 Data Elements and Assessment

The data elements and their assessments required to be included in the Wellhead and Source Water Protection Plan for the City of Bloomington (Public Water Supply 1270001) are discussed in this appendix. Data elements related to the physical environment, land use, water quantity, and water quality required for this Wellhead and Source Water Protection Plan (Plan) for the City of Bloomington were specified in Scoping Decision Notice No. 2 from the Minnesota Department of Health (MDH, 2013).

Bloomington operates six municipal water supply wells: Wells 1, 2, 3, 4, 5, and 6. A Drinking Water Supply Management Area (DWSMA) has been delineated for the wells. The DWSMA extends into the cities of Edina, Minneapolis, and Richfield to the north and Eden Prairie to the west. The location of the Bloomington DWSMA is shown on Figure C-1. The Bloomington DWSMA overlaps the Edina and Richfield DWSMAs (Figure C-1).

C1.1 Physical Environment Data Elements

Data elements discussed in this section include precipitation, geology and hydrogeology, soils, and water resources.

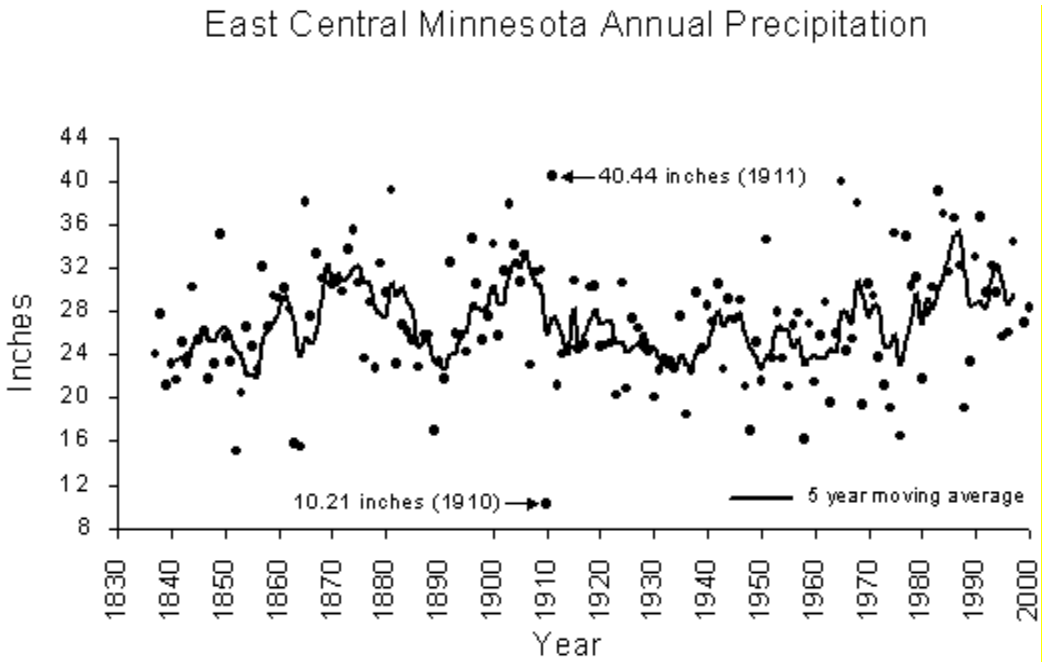
C1.1.1 Precipitation

Since the Bloomington municipal wells are classified as vulnerable to contamination and the vulnerability classification of source water aquifers within the DWSMA ranges from Low to High, precipitation must be evaluated to determine if it could potentially apply to the Plan.

As shown in Attachment C-1, there are a number of precipitation gaging stations around Hennepin County, including in and near Bloomington, that report measurements to the State Climatology Office. Locations of these precipitation gaging stations are identified by township, range, and section in the Minnesota Climatology Working Group tables in Attachment C-1. These tables also show the monthly and annual precipitation measured at these stations in Hennepin County for the period 2008 through 2012. In addition, the City of Bloomington currently has two precipitation gaging stations, one tipping bucket and one weighing bucket, at the Bloomington Public Works building. A location map for these gaging stations and precipitation measurements from the City's gaging stations are presented in Attachment C-1. The monthly average precipitation measured at the City's gaging stations for the period 2008 – 2012 is shown in the following table:

Month	Monthly Average Precipitation in Bloomington for the Period 2008 – 2012: Tipping Bucket Gage (inches of water)	Monthly Average Precipitation in Bloomington for the Period 2008 – 2012: Weighing Bucket Gage (inches of water)
January	0.14	0.42
February	1.09	1.53
March	1.67	1.63
April	2.89	2.27
May	3.88	2.85
June	4.18	3.89
July	2.87	2.94
August	3.34	3.43
September	1.71	1.35
October	2.39	1.30
November	0.94	0.83
December	1.32	2.34

Annual precipitation in east-central Minnesota from the late 1830s to 2000 is shown in the following graph:



Source: Minnesota Dept. of Natural Resources website: http://www.dnr.state.mn.us/climate/water_availability.html

The amount of precipitation affects recharge to the groundwater system and the potential for contaminant loading to the groundwater system. This is particularly important in areas of high aquifer vulnerability where the aquifer is not protected from infiltration of precipitation by

significant confining units between the ground surface and the top of the uppermost source water aquifer. Recharge to the groundwater system affects the size of the WHPA. Recharge was included in the groundwater flow model used to identify the porous media flow portion of the WHPAs (e.g., Barr, 2013; MCES, 2009). In addition, the amount of precipitation also affects the amount of surface runoff. As noted in Barr (2013), while the Bloomington DWSMA includes areas where aquifer vulnerability is classified as High it was determined that it was not necessary to include surface water contribution areas in the DWSMA. (Surface water contribution areas are areas of higher topography from which surface runoff drains onto areas within the WHPA where aquifer vulnerability is classified as High.)

The Jordan Sandstone aquifer (considered to be the uppermost source water aquifer because the contribution to the total volume of water pumped by Wells 2 and 4 coming from the portion of the well open to the overlying Prairie du Chien Group aquifer is considered to be negligible) is generally under leaky-confined hydrogeologic conditions under Bloomington, except possibly in areas where a buried bedrock valley is cut into/through the Jordan Sandstone. Based on the aquifer vulnerability assessment results, issues related to precipitation may have an effect on the management strategies developed for the DWSMA. In areas of high aquifer vulnerability, infiltration of precipitation can act as a transport mechanism to carry contaminants from the surface into the groundwater system relatively quickly.

C1.1.2 Geology and Hydrogeology

Existing information on the geology and hydrogeology in the vicinity of Bloomington was used to define the extent of the source water aquifers used by the City, delineate the WHPA, and to assess the vulnerability of the public water supply wells and the aquifers in the DWSMA.

The regional conceptual hydrogeologic model is described in detail by MCES (2009) and hydrogeologic conditions in the vicinity of Bloomington are discussed by Barr (2013). Information pertinent to the Bloomington area is summarized below.

The hydrostratigraphic units in the vicinity of the Bloomington DWSMA include, from oldest (and deepest) to youngest (and shallowest): Mt. Simon Sandstone aquifer, Eau Claire Formation confining unit, Wonewoc Sandstone (formerly known as the Ironton and Galesville Sandstones) aquifer, Tunnel City Group (formerly known as the Franconia Formation) aquifer, St. Lawrence Formation confining unit, Jordan Sandstone aquifer, Prairie du Chien Group aquifer, St. Peter Sandstone aquifer, Quaternary glacial drift aquifers and aquitards. In the northern portion of the Bloomington DWSMA

the Platteville and Glenwood Formations are also present (Figure C-2). The stratigraphy of the glacial drift is complex and consists of several thick sequences of till interbedded with large outwash sand and gravel units. The well logs for the Bloomington municipal wells indicate that these unconsolidated glacial drift deposits are approximately 280 to 360 feet thick within the DWSMA (Appendix A).

As shown in Table C-1, Bloomington Wells 1, 5, and 6 are completed in the Jordan Sandstone aquifer. Wells 2 and 4 are open to approximately the lowermost 3 feet of the Prairie du Chien Group aquifer and the entire Jordan Sandstone aquifer. However, the Prairie du Chien Group's contribution to water pumped by Wells 2 and4 is considered negligible (Barr, 2013). Bloomington Well 3 is open from the Tunnel City Group aquifer into the Mt. Simon Sandstone aquifer. Well construction information for the Bloomington municipal wells is summarized in Table C-1 and copies of the MDH well records are presented in Appendix A.

The uppermost bedrock within the DWSMA varies with location and includes the Platteville and Glenwood Formations, St. Peter Sandstone, Prairie du Chien Group, Jordan Sandstone, and St. Lawrence Formation/Tunnel City Group (Figure C-2). Information from well logs in the Minnesota Geological Survey County Well Index (CWI) indicates that, where present within the DWSMA, the St. Peter Sandstone ranges in thickness from approximately 35 to 160 feet. The Prairie du Chien Group dolostone in the area of the DWSMA ranges in thickness from approximately 15 feet to 130 feet. Depth to the top of the Jordan Sandstone ranges from approximately 195 feet to 395 feet within the DWSMA. Thickness of the Jordan Sandstone varies between approximately 60 feet and 105 feet within the DWSMA.

Based on information presented in Kanivetsky (1989a), the water table in the Bloomington area is present in the glacial drift deposits although in some areas the drift deposits do not readily transmit water. Between the glacial drift/St. Peter Sandstone aquifers and the underlying Prairie du Chien Group, the aquitard consists of the basal portion of the St. Peter Sandstone (a shaley unit of variable thickness) and glacial till. A number of extensive regional confining units are present within the bedrock portion of the hydrogeologic system (e.g., Runkel et al. 2003). The Oneota Dolomite is the lowermost unit of the Prairie du Chien Group. The Oneota Dolomite generally has low vertical hydraulic conductivity and acts as a leaky aquitard separating the Prairie du Chien Group aquifer from the underlying Jordan Sandstone aquifer. The Jordan Sandstone is hydraulically separated from the Tunnel City-Wonewoc aquifer by the St. Lawrence Formation. The Eau Claire Formation acts as a confining unit that hydraulically separates the Wonewoc Sandstone from the Mt. Simon Sandstone.

Infiltrating precipitation and leakage from lakes recharge the glacial drift/St. Peter Sandstone aquifers in Hennepin County. The primary source of water for the bedrock aquifers is leakage from adjoining aquifer units. In Hennepin County, groundwater discharge is to the major river/stream systems: the Minnesota River, the Mississippi River, and the Crow River. Groundwater flow direction in the vicinity of the Bloomington DWSMA is generally toward the Minnesota River in the glacial drift aquifer and generally toward the Minnesota River in the Prairie du Chien Group and Jordan Sandstone aquifers (e.g., Kanivetsky, 1989b). Information regarding the geology and hydrogeology of the area was used in preparation of Part 1 of this Plan to identify those portions of the uppermost source water aquifer within the DWSMA that are most vulnerable to contamination.

As shown in the following table, the Bloomington municipal wells are completed in five aquifers: Mt Simon Sandstone aquifer, Wonewoc Sandstone aquifer, Tunnel City Group aquifer, Jordan Sandstone aquifer, and Prairie du Chien Group aquifer (although, as discussed elsewhere in this Plan, the actual volume of contributions directly from the Prairie du Chien Group is considered to be negligible).

Well	Aquifer(s) to Which Well is Open
Well 1	Jordan Sandstone
Well 2	Prairie du Chien Group[1] and Jordan Sandstone
Well 3	Tunnel City Group, Wonewoc Sandstone, and Mt. Simon Sandstone
Well 4	Prairie du Chien Group[1] and Jordan Sandstone
Well 5	Jordan Sandstone
Well 6	Jordan Sandstone

[1] Aquifer's contribution of water to the well considered to negligible

The important bedrock hydrostratigraphic units relative to the Bloomington DWSMA are described in more detail in Barr (2013).

Information regarding the geology and hydrogeology of the area was used to assess the vulnerability to contamination of the source water aquifers within the DWSMA. The available information on the geology and hydrogeology in the vicinity of Bloomington, along with other available information, is consistent with the classification of the uppermost source water aquifer within the DWSMA as being susceptible to contamination to varying degrees depending upon location.

C1.1.3 Soils

Since the Bloomington municipal wells are classified as vulnerable to contamination and the aquifer vulnerability classifications within the DWSMA range from Low to High, surficial soil characteristics must be evaluated to determine if they could potentially apply to the Plan.

Review of available information from the U.S. Department of Agriculture – Natural Resources Conservation Service SSURGO database (USDA-NRCS, 2011) indicates that there are a variety of surficial soil types within the DWSMA and that these soils have a range of infiltration characteristics. Surficial soil types within the DWSMA are shown on Figure C-3 and surficial soil permeability is shown on Figure C-4. Data available from the Minnesota Board of Soil and Water Resources (BWSR) indicates that there are areas within the Bloomington DWSMA with high potential soil erosion risk. There are no areas of eroding lands causing sedimentation problems within the DWSMA although there have been some gully erosion issues along the bluff above the Minnesota River in portions of the DWSMA where aquifer vulnerability is classified as Low.

Based on the aquifer vulnerability assessment results, issues related to surficial soil characteristics or the surficial soil types may potentially have an effect on the management strategies developed for the DWSMA. Surficial geologic materials in the City of Bloomington include clay, sand, gravel and porous soils. The City is well aware that land development and land use activity may have an impact on the source water aquifers, particularly in areas of high aquifer vulnerability within the DWSMA, due to surface water infiltration through permeable soil types.

C1.1.4 Water Resources

Since the Bloomington municipal wells are classified as vulnerable to contamination and the aquifer vulnerability classifications within the DWSMA range from Low to High, surface water resources must be evaluated to determine if they could potentially apply to the Plan.

Watershed management organizations whose jurisdictions overlap the Bloomington DWSMA include the Lower Minnesota River Watershed District, Minnehaha Creek Watershed District, Nine Mile Creek Watershed District, Riley-Purgatory-Bluff Creek Watershed District, and the Richfield-Bloomington Watershed Management Organization. Flow directions and boundaries of watersheds in the area do not indicate any reasons for concern.

Surface water bodies within the DWSMA include lakes, ponds, storm water basins, and wetlands. Several of the water bodies within the DWSMA meet the definition of public waters in Minnesota Statutes Section 103G.005, subdivision 15. Public waters in Bloomington are identified in Section

19.87.03 of the City Code. The City Code also identifies ordinary high water marks and defines "shore areas" for these public waters. The City regulates use, development, and alteration of these shore areas. Some of the water bodies in the DWSMA intersect areas of the DWSMA that have been identified as highly vulnerable to contamination. Some of the high vulnerability areas in the DWSMA are within FEMA-designated Flood Zone AE with the majority of the high vulnerability areas in Zone X. The vast majority of the Bloomington DWSMA is located in FEMA Flood Zone X. Bloomington does not have an appropriation permit to withdraw water from any surface water feature within the DWSMA. Water quality management for the surface water bodies in Bloomington is addressed in the City's surface water management plan (WSB, 2007) and wetland management plan (Bloomington, 1997).

Based on the aquifer vulnerability assessment results, it appears that issues related to surface water resources should be considered in the development of the management strategies for the DWSMA, particularly in areas where aquifer vulnerability is classified as High. Geologic conditions in and around the City's DWSMA result in the aquifer vulnerability being classified as High in approximately 3.5% of the area within the DWSMA. The quality of the source water is dependent on the quality of its recharge. Recharge sources/mechanisms are noted above. Existing surface water management programs in the DWSMA address water quality and, therefore, reduce the potential negative effects that infiltrating surface waters may have on the uppermost source water aquifer. The City believes that the existing surface water management programs are adequate to address surface water quality in the DWSMA and to ensure that aquifer recharge and water availability do not become an issue for the City.

C1.2 Land Use Data Elements

Land use within the DWSMA is discussed in this section. In the Part 1 of this Plan, parcel information was used to the extent possible in the delineation of the DWSMA (Barr, 2013).

C1.2.1 Current Land Use

Since the Bloomington municipal wells are classified as vulnerable to contamination and the aquifer vulnerability classifications within the DWSMA range from Low to High, current land use must be evaluated to determine if it could potentially apply to the Plan. Figure C-5 shows the current (year 2010) land-use map within the DWSMA. Numerous land uses are found within the DWSMA. Land uses in the DWSMA that cover more than 1% of the area in the DWSMA include residential uses, parks/recreational/preserve uses, industrial and utility uses, commercial uses, institutional land uses, retail/commercial/office land uses, undeveloped land, and transportation corridors. Open water

accounts for nearly 5% of the area within the DWSMA. Agricultural land uses are found in less than 1% of the area encompassed by the DWSMA. As shown on Figure C-5, single family residential land use is the most common land use occupying over 40% of the area in the DWSMA. Figure C-6 shows the current zoning within the Bloomington DWSMA. Zoning maps for Eden Prairie, Edina, Minneapolis, and Richfield are presented in Attachment C-2.

C1.2.1.1Potential Contaminant Source Inventory

A potential contaminant source inventory (PCSI) was conducted within the DWSMA. As shown on Figure C-1, the aquifer vulnerability in the DWSMA includes the following classifications: Low, Moderate, and High. In the Bloomington DWSMA only a small portion of the area (approximately 3.5%) has an aquifer vulnerability classification of High. In the areas where aquifer vulnerability is classified as High the types of potential contaminant sources inventoried include Class V wells (defined by the U.S. EPA as cesspools, large-scale septic systems serving more than 20 people, or potential automotive maintenance waste disposal wells/pits), dump and spill sites, hazardous waste generators, storage tank sites (registered storage tanks and leaking underground storage tank sites), individual sewage treatment systems (ISTS; a.k.a., septic systems), and wells (active and sealed). In areas where the aquifer vulnerability is classified as Moderate (approximately 21.5% of the area in the DWSMA) the types of potential contaminant point sources inventoried include Class V wells, storage tank sites (registered storage tanks and leaking underground storage tank sites), and wells (active and sealed). In areas where the aquifer vulnerability is classified as Low (approximately 75% of the area in the DWSMA) the types of potential contaminant point sources inventoried include Class V wells and wells (active and sealed). No ISTS were identified in portions of the DWSMA where aquifer vulnerability is classified as High.

Information on potential contaminant source locations was obtained from the following sources: City of Bloomington, Hennepin County, Minnesota Department of Natural Resources (MDNR), Minnesota Department of Public Safety, Minnesota Geological Survey (MGS), Minnesota Pollution Control Agency (MPCA), and U.S. Environmental Protection Agency (EPA) databases. These data sources are summarized in Table C-2. Information from the various sources was compared to identify overlaps/duplications. Minimum requirements for verification of locations identified during the PCSI specified by the Wellhead Protection Rules were met during the preparation of this Plan. For future updates of this Plan, the City will access available data sources and maintain as accurate and up to date a potential contaminant source database as possible in its wellhead protection file.

In 2013 MDH staff completed a potential contaminant source inventory for in the Inner Wellhead Management Zone (IWMZ) around each of the Bloomington municipal supply wells. Copies of the IWMZ inventory reports are presented in Attachment C-3.

Results of the PCSI indicate the presence of potential contaminant source properties within the DWSMA which include properties with wells, potential Class V well locations, storage tanks, spill sites, hazardous waste generators, and chemical storage sites. These potential sources include various commercial, medical, dental, government, industrial, and storage tank sites and wells. The spill/release sites have been or are being addressed under oversight by the MPCA. Properties identified as potential sources of contamination during the PCSI are listed in Tables C-3 through C-8 as follows:

- Wells – Table C-3
- Class V wells – Table C-4
- Storage tanks – Table C-5
- Spill sites – Table C-6
- Hazardous waste generators – Table C-7
- Chemical storage sites – Table C-8

Locations of potential contaminant point sources are shown on Figures C-7 through C-12 as follows:

- Well locations – Figures C-7a, b, c
- Potential Class V well locations – Figure C-8
- Storage tank locations – Figures C-9a, b
- Spill site locations – Figure C-10
- Hazardous waste generator locations – Figure C-11
- Chemical storage site locations – Figure C-12

These potential contaminant sources have been considered in the development of the management strategies for the DWSMA.

As shown in Tables C-3 through C-8, a minimum of 25 locations of each type of potential contaminant source were verified during preparation of this Plan and if there are fewer than 25 of a particular potential contaminant source type all locations were verified. Verification procedures used included matching mapped locations with addresses on MDH Well Records or State/County-issued permits, published business addresses, property parcel addresses, local knowledge of City staff, or information from City files (note that not all verification procedures were used for each type of potential contaminant source).

C.1.2.1.1.1 Wells

Wells located within the DWSMA, in particular wells completed in the lower half of the Prairie du Chien Group and in the Jordan Sandstone or those completed within unconsolidated sediments in the

buried bedrock valley near where the Jordan Sandstone subcrops, have the potential for being a pathway for contamination to reach the Jordan Sandstone aquifer and the Bloomington municipal wells. Wells completed in the Mt. Simon-Hinckley Sandstones aquifer have the potential for being a pathway for contamination to reach this aquifer and the Bloomington municipal well that pumps from the Mt.Simon-Hinckley aquifer. Wells that were not properly installed or have not been adequately maintained may provide a conduit for contaminants to reach the source water aquifers (i.e., the aquifers from which the City's wells pump water). Data obtained during the PCSI indicate that there are 13,815 wells (this number includes open and sealed wells) within the Bloomington DWSMA (Figures C-7A, C-7B). Table C-3 lists the wells that were identified in the DWSMA and indicates the aquifer in which each well is completed (if known), the date the well was completed or sealed (if known), and the status of the well (if known).

As indicated in Table C-3, 895 of the wells in the DWSMA are identified as active domestic water supply wells. Ten of the active domestic wells in the DWSMA for which information was available are open, at least in part, to the Jordan Sandstone aquifer. Private wells located within the DWSMA, particularly those wells completed in or below a source water aquifer, have the potential for being a pathway for contamination to reach the source water aquifers and the Bloomington municipal water supply wells.

Available information indicates that there are a number of non-domestic use wells (not including the Bloomington water supply wells) within the DWSMA that are open to or penetrate one of the source water aquifers used by Bloomington (Table C-3). Wells that were not properly installed or have not been adequately maintained may provide a conduit for contaminants to reach the source water aquifers.

Available information from the SWUDS database indicates that there are 88 active high capacity wells within a zone that includes the DWSMA and extends one mile beyond the DWSMA boundary. High capacity wells are defined as wells that pump more than 1,000,000 gallons per year or more than 10,000 gallons per day. Six of these wells are the Bloomington municipal wells. Uses for the remaining 82 wells identified in the SWUDS database include the following: five have an identified use of basin/lake level maintenance, 25 are used for some type of irrigation, 26 are non-Bloomington municipal water supply wells or private waterworks, one is used campground/rest area water supply, five are used for commercial building air conditioning or once through heating/air conditioning, one is used for commercial/institutional water supply, 13 are used for some type of industrial processing, one is used for dewatering, one is used for industrial once-through cooling water, two are used for

snow making, one has a use classified as "Other Power Generation", and one well has as use classified as "Other Special Categories" (Table C-9). As shown in Table C-9, 58 of the wells are identified as open, at least in part, to the Jordan Sandstone. Four of the wells are identified as open to aquifers below the Jordan Sandstone. The other wells for which the aquifer is identified in the SWUDS database are open to an aquifer above the Jordan Sandstone.

C.1.2.1.1.2 Potential Class V Well Locations

An inventory of locations where Class V wells may be present within the DWSMA was done as part of the PCSI. Typical land uses associated with the presence of Class V wells include automobile service stations and repair shops. As defined by the U.S. Environmental Protection Agency, large-scale septic systems that serve more than 20 people also are included in the Class V well classification. During the PCSI, it was determined that there are 176 properties where Class V wells may be present based on the type of business that is or had operated there, the property being identified as the location of a Class V well in the EPA's Class V well data database, or the presence of a septic system on a property such as a business or park facility where it likely serves 20 or more people (see Table C-4). All but eight of these potential Class V well locations are properties that appear to be, or had been in the past, associated with automobile repair. Five of the locations where identified from the EPA's Class V wells database. MDH did not require that the City determine if Class V wells are actually present on any of these properties. These locations are shown on Figure C-8.

C.1.2.1.1.3 Storage Tanks

The PCSI identified 132 properties within the portions of the DWSMA where aquifer vulnerability is classified as Moderate or High where storage tanks are or have been located (Table C-5; Figure C-9). Products stored in the storage tanks vary from site to site and include various fuels, used or waste oil, and various chemicals. Forty of the 132 properties identified as past or present locations of storage tanks are sites where leaking underground storage tanks (LUSTs) are or were present. Based on available information, it appears that all but one of the LUST sites is closed and/or the leaking tanks have been removed. The status of the remaining LUST site is unknown but the MPCA's What's In My Neighborhood database does not show any tanks currently at the site. The date of complete site closure is available for all but three of the LUST sites. For one of the sites for which no site closure date is available the available information indicates that the LUST has been removed.

C.1.2.1.1.4 Spills

The PCSI identified four properties within the portions of the DWSMA where aquifer vulnerability is classified as High on which contaminant spills had occurred (Table C-6 and Figure C-10). This number does not include LUST sites, which are addressed above with registered storage tanks. Available information indicates that two of the sites are closed with either "No Further Action" or "No Action" letters issued by the MPCA. The MPCA has made a "No Association Determination" for one of the open sites and no information other than a status of "Open" is available for the fourth site.

C.1.2.1.1.5 Hazardous Waste Generators

The PCSI identified 145 properties within the portions of the DWSMA where aquifer vulnerability is classified as High on which hazardous waste generators are or have been present (Table C-7 and Figure C-11). In the hazardous waste generator database 39 of the 145 properties have a status code indicating a current hazardous waste generator license. These properties include very small, small, and minimal quantity hazardous waste generators.

C.1.2.1.1.6 Chemical Storage Sites

The PCSI identified seven properties within the portions of the DWSMA where aquifer vulnerability is classified as High on which chemical storage occurs (Table C-8 and Figure C-12). Chemicals stored on these properties are shown in Table C-8.

C1.2.2 Historical Land Use

Bloomington was incorporated in 1858 and officially became a city in 1960. Prior to the 1950s, the area now identified as the City of Bloomington was mainly farmland. Historical land use shown on Figure C-13 is based on pre-1984 land use data from the Metropolitan Council. A significant percentage of the historical land use in the areas that falls within the limits of the DWSMA was vacant/agricultural or parks and recreation (Figure C-13). Metadata associated with ESRI shape files of pre-1984 land use maps available from the Metropolitan Council indicate that the maps are not considered reliable for determining land use of individual properties. Based on available information, historical land uses that might significantly affect the management strategies for the DWSMA that are not currently present within the DWSMA were not identified.

While it is possible that buried features such as old farm wells that were not properly sealed or unused underground storage tanks not listed in any available database could be present within the

DWSMA, available information does not suggest the presence of such features. Thus, there is no basis for a concerted search for such buried features with in the DWSMA. Bloomington is fully developed and the Metropolitan Council has designated the City as a "developed area" (Bloomington, 2008). Therefore, future growth in the City will be via redevelopment. Given the state of development in the City, it is likely that, if present, such buried features would have been located during development. If any such, currently unknown, features are to be located in the future it would most likely occur only if they are encountered during redevelopment of a property.

C1.3 Public Utilities

Management of the DWSMA in the City of Bloomington must consider and reflect available public utility services information.

The Bloomington municipal wells have open-borehole completions, mainly in the Jordan Sandstone. As discussed above, a small portion of the open intervals of Wells 2 and 4 is open to the Prairie du Chien Group with the majority of the open interval of these wells in the Jordan Sandstone. Well 3 is open to the Tunnel City Group, Wonewoc Sandstone, and Mt. Simon Sandstone.

C1.3.1 Pipelines

As shown on Figure C-14, there are natural gas pipelines and a petroleum pipeline that cross the DWSMA in areas where aquifer vulnerability is classified as Low. The City will rely on State/Federal oversight and the management programs of the pipeline owners for proper operation and maintenance of the pipelines and response to releases from the pipelines. Therefore, additional measures in this Plan to address releases are not necessary. To the extent possible, the City will support any response activities by these other entities in the event of a release from any of the pipelines within the DWSMA.

C.1.3.2 Sewers

C.1.3.2.1 Sanitary Sewers

The existing sanitary sewer system in Bloomington is shown on Figure C-15. Since the Bloomington DWSMA extends into portions of Eden Prairie, Edina, Minneapolis, and Richfield available sanitary sewer maps for these cities are presented in Attachment C-2. As noted previously, the vast majority of the area within the DWSMA has aquifer vulnerability classified as Low.

An improperly designed or maintained sanitary sewer system may increase the chance for the release of untreated sewage into environmentally sensitive areas, such as protected wetlands, lakes, and

rivers or allow infiltration of untreated sewage in portions of the DWSMA in which aquifer vulnerability is classified as High that could potentially reach the source water aquifers. The City of Bloomington and other cities whose jurisdictions overlap the Bloomington DWSMA have ongoing maintenance programs to insure the integrity and proper operation of their sanitary sewer systems. Additional measures in this Plan to address the sanitary sewers are considered to be unnecessary.

C.1.3.2.2 Storm Sewers

A municipal storm sewer and surface water drainage system plays a significant role in the management of storm water and can be an important part of management strategies developed for a wellhead protection plan. An improperly designed or maintained storm sewer and surface water drainage system may increase the chance for the spread of a contaminant into environmentally sensitive areas such as protected wetlands, lakes, and rivers or allow infiltration of contaminants within areas of the DWSMA with aquifer vulnerability classified as High that could potentially reach the source water aquifers.

Storm water management in Bloomington is described in the City's surface water management plan (WSB, 2007). The location of Bloomington's storm sewer lines are shown on Figure C-16. Available storm sewer maps for other cities whose jurisdictions are overlapped by the Bloomington DWSMA are presented in Attachment C-2.

Issues related to storm water management may potentially have an effect on the management strategies developed for areas in the DWSMA in which the aquifer vulnerability classification is High. Bloomington, Eden Prairie, Edina, Minneapolis, and Richfield have programs in place to address surface water. The City will rely on these existing surface water management programs to address issues related to surface water. Therefore additional measures to address surface water in this Plan are considered to be unnecessary.

C1.4 Water Quantity Data Elements

Surface water and groundwater quantity are discussed in this section.

C1.4.1 Surface Water Quantity

As discussed above, surface water features within the DWSMA include lakes, ponds, storm water basins, and wetlands. These surface water features in Bloomington are identified and discussed in the City's surface water management plan (WSB, 2007) and wetland management plan (Bloomington, 1997). Bloomington does not have an appropriations permit to withdraw water from

any surface water feature within the DWSMA. Additional measures in this Plan to address surface water quantity issues are considered to be unnecessary.

C1.4.2 Groundwater Quantity

The Bloomington municipal water supply system currently includes six wells. Under MDNR Appropriation Permit No. 1973-1429, the City currently has a permitted annual groundwater appropriation of 4.015 billion gallons per year (BGY). The permitted instantaneous total pumping rate for the Bloomington system is 12,800 gallons per minute (gpm) or approximately 18.4 million gallons per day (MGD). The City also purchases water from the City of Minneapolis to meet a portion of its total water demand under a contract that runs through 2017.

Census records indicate that population in Bloomington steadily increased from 1950 to 1970. In 1950, the population of Bloomington was 9,902. Installation of the City's water supply system began in 1960. Bloomington's population had grown to 50,498 in 1960 and 81,971 by 1970. The City's population decreased slightly to 81, 831 in 1980 and rebounded to 86,355 in 1990. Bloomington's population slowly declined after 1990 reaching 82,893 in 2010. The Water Emergency and Conservation Plan (Bloomington, 2007) presents a projected population of 90,503 in Bloomington in 2020 and 93,000 in 2030.

Water demand for the period 1996 through 2005 is presented in the emergency and conservation plan (Bloomington, 2007) and total annual volume pumped by the Bloomington municipal wells during the period 2007 through 2011 is presented in Part 1 of this Plan (Barr, 2013). Between 1996 and 2000 the volume of water pumped by the Bloomington municipal wells decreased approximately 31% while the total water demand in the City decreased less than 1%. From 2000 to 2005 the volume of water pumped by the City's municipal wells increased approximately 74% while the total water demand decreased approximately 8%. The volume of water pumped by the City's municipal wells decreased less than 1% between 2005 and 2010. During the period 1996 through 2005, the total per capita/day water demand met by the City's water supply system varied between a low of 124.9 gallons per capita/day in 1999 and a high of 162.1 gallons per capita/day in 2003 while the residential per capita/day water demand was approximately 32% to 39% lower than the total (e.g., Bloomington, 2007).

The Bloomington Comprehensive Plan (Bloomington, 2008) projects the average day water demand in 2030 will be 14.3 MGD or approximately 9,900 gpm and the maximum day water demand (the largest daily water use in a given year) in 2030 will be approximately 38.6 MGD or approximately

26,800 gpm. Current daily demand on the Bloomington water system and daily volume pumped by the City's water supply wells average approximately 12.1 MGD and 9.3MGD, respectively. Maximum day demand is currently approximately 39.5 MGD and the maximum day volume pumped from the City's wells is approximately 20.0 MGD.

The projected pumpage used to delineate the Bloomington WHPAs and DWSMA is 5,243,793,217 gallons per year (Barr, 2013).

As discussed above, in addition to the City of Bloomington municipal wells the PCSI identified 88 high capacity water wells within one mile of the DWSMA that are listed in the MDNR's SWUDS database as having annual appropriations of more than 1 million gallons. Information on these wells is presented in Table C-9.

As indicated in Table C-9, 53 of the high capacity wells (not including the Bloomington municipal water supply wells) are open in part or in whole to the Jordan Sandstone aquifer. These non-Bloomington wells were included, to the extent possible, in the groundwater model used to delineate the wellhead protection areas for the Bloomington municipal wells. These non-Bloomington water wells do not adversely affect the supply of water to the Bloomington municipal wells. There are no other known private/non-municipal wells within one mile of the DWSMA with annual appropriations above one million gallons. There are no known adverse groundwater conflicts or interferences with the existing Bloomington municipal wells.

Construction of other high capacity wells in or near the DWSMA may influence groundwater flow in the source water aquifers and the groundwater quantity available to the municipal system. Such wells could potentially affect the boundaries of the DWSMA, which could require the City to update the Wellhead Protection Plan. In addition, such wells could potentially reduce the static levels in the source water aquifers. Issues regarding changes in appropriations resulting from additions or deletions to the current list of water appropriations in the DWSMA will be addressed in the management portion of this Plan.

Persistent drought conditions may also prove to be a threat to the quantity of groundwater available to the municipal system. To address potential shortages, under Chapter 11 Section 11.23 of the Bloomington City Code emergency water use restrictions can be established when a water supply shortage threatens the City. The City also uses tiered water rates to encourage water conservation.

The City's current water supply meets the demand of its consumers. The City is confident that the municipal water supply system will continue to have the capability of meeting future demand.

C1.5 Water Quality Data Elements

Surface water and groundwater quality are discussed in this section.

C1.5.1 Surface Water Quality

Since the Bloomington municipal wells are classified as vulnerable to contamination and the aquifer vulnerability classifications within the DWSMA range from Low to High, surface water quality must be evaluated to determine if it could potentially apply to the Plan.

Bloomington's program for managing surface water is presented in the Comprehensive Surface Water Management Plan (WSB, 2007). Additional measures in this Plan to address surface water quality issues are considered to be unnecessary.

C1.5.2 Groundwater Quality

The MDH has an ongoing program to monitor the quality of municipal water supplies. The City's municipal wells are sampled routinely for regulated compounds (i.e., compounds with primary drinking water standards) that include metals, other inorganic compounds, organic compounds, and bacteria as part of this program. Reported concentrations of all monitoring parameters meet the regulatory levels specified by the U.S. EPA as part of the Safe Drinking Water Act or by the State of Minnesota (i.e., groundwater pumped from the source water aquifers by the Bloomington municipal wells is currently free of pathogens and disease-causing organisms). Results of the sampling program are presented in the annual Water Quality Report. A copy of the Bloomington Water Quality Report for 2012 is presented in Appendix E. The report can also be found on the City's website at http://ci.bloomington.mn.us/main_top/4_news/briefing/2013/06/2013_wqr.pdf. In addition, the City tests raw and finished water in the system for a number of inorganic and organic parameters in their in-house laboratory.

The City does not have any additional water quality data for the source water aquifers within the DWSMA beyond that obtained by the MDH and City sampling programs. Groundwater quality data from these programs are available from the City upon request.

According to information from the MPCA gathered during the PCSI, there are locations of known spills/contaminant releases (including leaking underground storage tank sites) in the DWSMA (see Figures C-9 and C-10; Tables C-5 and C-6). These locations have been or are being addressed under

various regulatory programs. These spills/contaminant releases have not affected the City's water supply as evidenced by the fact that water pumped by the Bloomington wells meets drinking water standards.

It is important to consider groundwater quality when determining management strategies for the land uses within the DWSMA. Since the City currently enjoys good water quality, the City will develop management strategies in the later portions of this Plan aimed at maintaining the groundwater quality in the source water aquifers.

The MDH has prepared a study for Hennepin County which evaluates the relative susceptibility of the water table aquifer to contamination from nitrate (as well as other contaminants) (MDH, 2012). The susceptibility of the water table aquifer in the vast majority of the DWSMA is classified as low or moderate. There are some small areas of high susceptibility identified by the MDH within the Bloomington DWSMA. In areas of the DWSMA where the vulnerability of the uppermost source water aquifer is classified as High, the travel time from the water table aquifer to the uppermost source water aquifer would be expected to be relatively short (i.e., up to perhaps a few years). In areas of the DWSMA where the vulnerability of the uppermost source water aquifer is classified as Moderate or Low the travel time from the water table aquifer to the uppermost source water aquifer would be significantly longer than in an area of High vulnerability.

It's important to consider groundwater quality when determining management strategies for the land uses within the DWSMA. Since the City currently enjoys good water quality, the City has developed management strategies in this WHPP aimed at maintaining the groundwater quality in the source water aquifers.

C1.6 Assessment of Data Elements

C1.6.1 Use of the Municipal Wells

Bloomington currently has six wells in the municipal water supply and distribution system for public water supply 1270001: Well 1, Well 2, Well 3, Well 4, Well 5, and Well 6. Locations of the wells are shown on Figure C-1. Wells 1, 5, and 6 are completed in the Jordan Sandstone aquifer. Wells 2 and 4 are completed in the Jordan Sandstone aquifer but are also open to the bottom 3 feet of the overlying Prairie du Chien Group. Since these 3-foot open segments are minimal compared to the 69-foot and 86-foot segments of Wells 2 and 4, respectively, that are open to the Jordan Sandstone, the Prairie du Chien Group's contribution to water pumped by Wells 2 and 4 is considered negligible. Well 3 is completed in both the Tunnel City Group – Wonewoc Sandstone aquifer and the Mt. Simon

Sandstone aquifer. The construction details for the Bloomington municipal wells are summarized in Table C-1 and copies of the logs for these wells are presented in Appendix A of this Plan.

As discussed above, population in Bloomington increased significantly from 1960 to 1990 and has decreased slowly between 1990 and 2010. The City's Water Emergency and Conservation Plan (Bloomington, 2007) projects the will be 93,000 in 2030.

Bloomington's 2010 Water System Master Plan (Black & Veatch, 2011) recommends that the City extend the water purchase agreement with the City of Minneapolis beyond the current expiration date of December 31, 2017. The water system plan also discusses the need for additional water supply wells to meet future demand if the water purchase agreement with Minneapolis is not extended. The number of additional wells required to meet projected 2030 demand absent the purchase of water from Minneapolis would depend upon the aquifer utilized (Black & Veatch, 2011). If new wells would be installed in the Prairie du Chien Group and Jordan Sandstone it is estimated that 10 to 12 new wells would be required to meet projected future demand. If new wells would be installed in the Tunnel City Group and Wonewoc Sandstone it is estimated that 25 to 30 new wells would likely be required to meet projected future demand. The projected total number of wells is based on a population of 92,478 in Bloomington in 2030.

Water pumped from the municipal wells goes to a water treatment facility operated by the City. This water treatment facility has a capacity of 14 million gallons per day (MGD) (Black & Veatch, 2011). New water treatment facilities would likely be necessary only if the City chooses to construct additional wells in the future. The 2010 Water System Master Plan discusses multiple options for additional treatment facilities. As described in the 2010 Water System Master Plan, at the water treatment facility lime is added to soften the water, carbon dioxide is added to stabilize the treated water, and chlorine and fluoride are added before the water enters the distribution system.

Bloomington currently has 6 water storage reservoirs consisting of:

- Two elevated towers with a capacity of 1.5 million gallons (MG),
- A clear well with a capacity of 4 MG at the water treatment plant,
- A 3 MG ground storage tank,
- Two 10 MG reservoirs that receive water from Minneapolis.

C1.6.2 Wellhead Protection Area Criteria

As discussed by Barr (2013), delineation of the WHPA for the Bloomington wells involved the evaluation of both porous-media and fractured media flow. Information/criteria used to perform the

groundwater flow modeling for the Bloomington WHPA/DWSMA delineations are discussed in the WHPA delineation report (Barr, 2013; a copy of the report is presented in Appendix B of this Plan) and summarized below.

C1.6.2.1Time of Travel

A 10-year time of travel was used for the WHPA delineation for each of the Bloomington municipal wells. Maps in the Part 1 WHPP report show the 10-year time of travel WHPAs for the Bloomington wells. In addition, the one-year time of travel zone for each Bloomington municipal well is also shown on the maps in the Part 1 WHPP report.

C1.6.2.2Aquifer Transmissivity

The Bloomington municipal wells are located near the south side of a buried bedrock valley (see Figure C-2). In the "ribbons" on the north and south flanks of the buried valley where the Jordan Sandstone is the uppermost bedrock unit, aquifer transmissivity was estimated from data collected during aquifer testing performed at Bloomington Wells 1, 2, and 4 by Summit Envirosolutions in April 1998 (Summit, 1998). The relevant aquifer testing excerpts from the Summit technical memorandum are included in Appendix B. The geometric mean transmissivity determined for the Jordan Sandstone is 7,261 ft^2/day (675 m^2/day), and the geometric mean hydraulic conductivity for the Jordan Sandstone is 91.4 ft/day (27.9 m/day).

For the 1996 Bloomington Part 1 WHPP (Barr, 1996), MDH (1995) provided a regional bulk transmissivity of 1,050 ft^2/day (97.5 m^2/day) for the combined Tunnel City Group/Wonewoc Sandstone aquifer. In the 2013 Part 1 WHPP (Barr, 2013), the Tunnel City Group and Wonewoc Sandstone were represented as separate layers in the groundwater model and the hydraulic conductivity values were adjusted in the vicinity of Bloomington Well 3 to match the combined regional transmissivity.

A transmissivity of 2,193 ft^2/day (203.7 m^2/day), a value supplied by MDH from a pumping test conducted in the City of Edina, Minnesota well field (MDH, 1995), was used for the Mt. Simon Sandstone in the 1996 Bloomington Part 1 WHPP (Barr, 1996). Based on the thickness of the Mt. Simon Sandstone near Bloomington Well 3 of 228 ft (69.6 m), the hydraulic conductivity of the Mt. Simon Sandstone in the vicinity of Bloomington Well 3 used for the 2013 Bloomington Part 1 WHPP is 9.6 ft/day (2.9 m/day).

C1.6.2.3Daily Volume of Water Pumped

Daily volume of water pumped from each of Bloomington's municipal wells was determined by using the highest recorded or projected pumping volume for each well. Determination of the daily volume of water pumped for each well used in the groundwater flow model that was used in the delineation of the WHPAs is discussed in detail in the Part 1 report (Barr, 2013).

C1.6.2.4Flow Boundaries

The Minnesota River along with high capacity wells, lakes, and streams form the groundwater flow boundaries in the vicinity of Bloomington. These flow boundaries were included in the groundwater flow model used in the delineation of the WHPAs (Barr, 2013).

C1.6.2.5Groundwater Flow Field

The modeled groundwater flow field used for delineation of the WHPAs is consistent with the flow directions for the Prairie du Chien-Jordan Aquifer shown by Kanivetsky (1989b). In the Mt. Simon Sandstone aquifer, which is not hydraulically connected to the Minnesota River, groundwater flow directions are strongly influenced by proximity to high-capacity pumping wells. Kanivetsky (1989b) shows northerly flow directions in the Mt. Simon Sandstone beneath Bloomington towards pumping wells in Edina and St. Louis Park, though flow directions near Bloomington Well 3 will be directed towards Well 3. The modeled groundwater flow field is generally consistent with the published information (see Barr, 2013).

C1.6.3 Quantity and Quality of Water Supplying the Public Water Supply Wells

As discussed above, three of the six Bloomington municipal wells are open to only the Jordan Sandstone. The open intervals of Wells 2 and 4 include the Jordan Sandstone and a small portion of the base of the Prairie du Chien Group. The volume of water that Wells 2 and 4 pump from the Prairie du Chien Group aquifer is considered to be negligible. Well 3 is open to the Tunnel City Group, Wonewoc Sandstone, and Mt. Simon Sandstone aquifers. During the period 2007 through 2011, the volume of water pumped annually by Well 3 averaged approximately 14% of the annual total pumped by the City's wells. Therefore, the Jordan Sandstone aquifer is the major source water aquifer for the City of Bloomington.

Based on the available information, there are no known groundwater quantity or quality issues that will have any significant impact on the management of the DWSMA associated with the Bloomington municipal wells. While it is possible that high capacity wells completed in the Jordan Sandstone aquifer in the vicinity of or within the Bloomington DWSMA could affect the quantity of

groundwater available, there are currently no known significant conflicts or interferences related to the municipal wells or the corresponding DWSMA. If Bloomington were to install additional wells in the Jordan Sandstone aquifer in the future the DWSMA would expand. However, there are currently no plans for the City to construct additional water supply wells.

C1.6.4 Land and Groundwater Uses in the DWSMA

Aquifer vulnerability within the DWSMA ranges from Low to High. The aquifer vulnerability is classified as High in approximately 3.5% of the area in the DWSMA. The aquifer vulnerability is classified as Moderate in approximately 21.5% of the area and as Low in approximately 75% of the area. Land uses within the DWSMA could affect source water protection efforts or the management of the DWSMA. In particular, unmaintained, damaged, poorly-constructed, unused, or incorrectly abandoned wells could provide a direct route for contaminants to enter the source water aquifers.

As discussed by Barr (2013), the DWSMA was delineated to encompass the zone in which groundwater travel time to the Bloomington municipal wells is 10 years or less. The DWSMA encompasses the WHPAs as described above and are defined by geographically identifiable features. The DWSMA extends into portions of the cities of Eden Prairie, Edina, Minneapolis, and Richfield.

Privately-owned wells, particularly those that are completed in or penetrate one of the City's source water aquifers within the DWSMA, will be considered when developing the management strategies for the Bloomington DWSMA. Unmaintained, damaged, poorly-constructed, or unused/abandoned wells could provide a direct route for contaminants to enter the source water aquifers.

In addition to wells, potential contaminant sources within the DWSMA identified through the PCSI include storage tank sites, hazardous waste generators, contaminant release sites, properties where chemicals are stored, and properties that potentially have or had a Class V well. These potential contaminant sources will be considered when developing the management strategies for the Bloomington DWSMA.

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Tables

Table C-1

Municipal Well Construction Summary
City of Bloomington

Well	Unique Number	Use/ Status[1]	Year Constructed	Total Depth (ft. bgs)	Casing Diameter (in.)	Depth to Top of Open Interval (ft. bgs)	Well Vulnerability Status[2]	Aquifer
Well 1	222910	A,P	1973	440	24x20	345	Vulnerable	CJDN
Well 2	222911	A,P	1973	392	30x24	315	Vulnerable	OPDC[3]-CJDN
Well 3	222912	A,P	1974	950	30x24x20x16	450	Vulnerable	CTCG-CMTS
Well 4	133389	A,P	1978	376	30x24	282	Vulnerable	OPDC[3]-CJDN
Well 5	603079	A,P	2001	405	30x24x18	307	Vulnerable	CJDN
Well 6	603080	A,P	2001	399	30x24x18	298	Vulnerable	CJDN

[1] P = Primary water supply well
bgs = below ground surface
CJDN = Jordan Sandstone

[2] See Barr (2013)
OPDC = Prairie du Chien Group
CMTS = Mt. Simon Sandstone

[3] Contribution from OPDC considered negligible
CTCG = Tunnel City Group

Table C-2

Potential Contaminant Source Inventory Data Sources
City of Bloomington

Potential Contaminant Source Type	Data Source(s)
Chemical Storage Sites	MN DPS
Spill Sites	MPCA WIMN database; Hennepin County
Hazardous Waste Generator Locations	MPCA WIMN database; Hennepin County
Potential Class V Well Locations	MPCA WIMN data; EPA Class V Wells data; Hennepin County (Haz. Waste Generators)
Storage Tanks	MPCA WIMN data, Hennepin County; MPCA Petroleum Leaksites database (LUST locations)
Wells	MGS CWI Database; City of Bloomington; Hennepin County; MDNR SWUDS database
Other Data Type	**Data Source(s)**
Aquifer Vulnerability	dwsvul.shp - MDH Environmental Health Division - Source Water
Current Land Use	Met Council 2010 Generalized Land Use
Historical Land Use	Met Council pre-1984 Land Use
Planned Land Use	Met Council 2030 Generalized Interpreted Land Use
Bedrock Geology	MGS
Pipelines	mnpipe.shp - MGIO & MnOPS 1996
Soils (Cover)	SDM_State_MN.gdb/MUPOLYGON_wAttributes (U.S. Department of Agriculture, Natural Resources Conservation)
Soils (Hydrologic)	SDM_State_MN.gdb/MUPOLYGON_wAttributes (U.S. Department of Agriculture, Natural Resources Conservation)

Acronyms

CWI - County Well Index
LUST - Leaking Underground Storage Tank
Met Council - Metropolitan Council
MDA - Minnesota Department of Agriculture
MDH - Minnesota Department of Health
MDNR - Minnesota Department of Natural Resources
MGIO - Minnesota Geospatial Information Office
MGS - Minnesota Geological Survey
MN DPS – Minnesota Department of Public Safety
MnOPS - Minnesota Office of Pipeline Safety
MPCA - Minnesota Pollution Control Agency
SWUDS - State Water Use Data System
WIMN - What's In My Neighborhood

Table C-3

PCSI Results - Wells in the DWSMA
City of Bloomington

Map ID	PID No.	Unique No.	Status	Use	Well Owner	Well Location	City or Twp	Total/Sealed Depth (Feet)	Date Completed/Sealed	Aquifer	PCS Code	Facility Code	Facility Designation	Location Verified
1	053-0702724330061	222910	Active	Community Supply (Municipal)	Bloomington 1	POPLAR RIDGE RD	Bloomington	440	03/17/1973	CJDN	WEL	6000	Education, Public Administration, Health Care, and Other Institutions	No
2	053-0702724330061	222911	Active	Community Supply (Municipal)	Bloomington 2	Not Available	Bloomington	392	10/00/1973	OPCJ	WEL	6000	Education, Public Administration, Health Care, and Other Institutions	No
3	053-0702724330061	222912	Active	Community Supply (Municipal)	Bloomington 3	NORMANDALE RD	Bloomington	950	08/00/1974	CFMS	WEL	6000	Education, Public Administration, Health Care, and Other Institutions	No
4	053-0702724340001	133389	Active	Community Supply (Municipal)	Bloomington 4	Not Available	Bloomington	376	03/13/1978	OPCJ	WEL	6000	Education, Public Administration, Health Care, and Other Institutions	No
5	053-0702724340001	603079	Active	Community Supply (Municipal)	Bloomington 5	2215 OLD SHAKOPEE RD W	Bloomington	405	08/13/2001	CJDN	WEL	6000	Education, Public Administration, Health Care, and Other Institutions	No
6	053-1802724120095	603080	Active	Community Supply (Municipal)	Bloomington 6	2215 OLD SHAKOPEE RD W	Bloomington	399	10/00/2001	CJDN	WEL	6000	Education, Public Administration, Health Care, and Other Institutions	No
7	Not Available	204941	Active	Domestic	Kermit Poppler	8549 AMSDEN RD	Bloomington	241	07/14/1964	OPDC	WEL	1000	All Establishments Offering Residence	No
8	053-2902724230038	205554	Active	Domestic	Not Available	3801 114TH ST W	Bloomington	153	08/12/1958	QBAA	WEL	1000	All Establishments Offering Residence	No
9	053-3002724210005	205568	Active	Domestic	Not Available	4801 110TH ST W	Bloomington	115	Not Available	QBAA	WEL	1100-01	Residence	Yes
10	053-0902724310058	205238	Active	Commercial	Nalla Nursery	9105 JAMES AV S	Bloomington	50	08/15/1969	QWTA	WEL	2000	General Sales and Service	No
11	053-1911621210005	204935	Active	Domestic	Not Available	8116 OAKMERE RD	Bloomington	250	09/24/1962	QBAA	WEL	1000	All Establishments Offering Residence	No
12	053-1911621120043	206960	Active	Domestic	Not Available	8700 WYOMING AV	Bloomington	196	06/14/1960	QBAA	WEL	1000	All Establishments Offering Residence	No
13	053-2902824130008	206369	Active	Domestic	Lakedale Realty	6910 THOMAS AV	Richfield	55	09/29/1961	QWTA	WEL	1000	All Establishments Offering Residence	No
14	053-3302824330108	206219	Active	Domestic	B. K. Weekley	7645 MORGAN AV S	Richfield	49	11/06/1961	QWTA	WEL	1000	All Establishments Offering Residence	No
15	053-1902724430104	205383	Active	Domestic	Not Available	10930 JOHNSON	Bloomington	133	03/25/1960	QWTA	WEL	1000	All Establishments Offering Residence	No
16	053-1902724440070	205389	Active	Domestic	Not Available	10817 JOHNSON AV	Bloomington	108	05/09/1960	QWTA	WEL	1100-01	Residence	Yes
17	053-0502724310030	205212	Active	Domestic	Not Available	8200 XERXES AV S	Bloomington	160	01/13/1958	QBAA	WEL	1000	All Establishments Offering Residence	No
18	053-3302824130027	224350	Active	Domestic	Not Available	7233 HUMBOLDT AV S	Richfield	72	09/07/1960	QWTA	WEL	1100-01	Residence	Yes
19	053-2902724220001	205502	Active	Domestic	Not Available	11001 DREW AV	Bloomington	140	05/01/1958	OPDC	WEL	1000	All Establishments Offering Residence	No
20	053-0511621120046	204887	Active	Domestic	Allan E. Juhl	6201 WESTRIDGE BL	Edina	115	07/16/1962	QBAA	WEL	1000	All Establishments Offering Residence	No
21	053-0511621120021	204896	Active	Domestic	Hawthorne	6220 WESTRIDGE BL	Edina	228	10/27/1954	Not Available	WEL	1000	All Establishments Offering Residence	No
22	053-2111621320003	204961	Active	Domestic	Rollie Fredrickson	7 NORMAN RIDGE	Bloomington	260	10/31/1957	QBAA	WEL	1100-01	Residence	No
23	053-0611621230056	203106	Active	Domestic	Pearson Bros.	6712 ARROWHEAD PASS	Edina	266	08/16/1956	QBAA	WEL	1000	All Establishments Offering Residence	No
24	053-0211622440004	203143	Active	Domestic	Jerry Carnes	7036 WILLOW CREEK	Eden Prairie	245	10/04/1968	OPDC	WEL	1000	All Establishments Offering Residence	No
25	053-1902724440069	205390	Active	Domestic	Not Available	10825 JOHNSON AV	Bloomington	107	05/12/1960	QWTA	WEL	1100-01	Residence	Yes
26	053-1902724430097	205392	Active	Domestic	Not Available	10900 JOHNSON AV	Bloomington	110	08/18/1960	QWTA	WEL	1100-01	Residence	Yes
27	053-0702724130009	223068	Active	Domestic	Not Available	4524 90TH ST W	Bloomington	151	11/02/1959	QBAA	WEL	1100-01	Residence	Yes
28	053-0702724130066	223075	Sealed	Abandoned	Not Available	4417 90TH ST W	Bloomington	105	02/02/1960	QBAA	WEL	1100-01	Residence	Yes
29	053-1702724110028	223128	Active	Domestic	Not Available	2316 96TH ST W	Bloomington	162	03/08/1960	QWTA	WEL	1000	All Establishments Offering Residence	No
30	053-2111621210041	223156	Active	Domestic	Not Available	5405 MT. NORMANDALE CV	Bloomington	430	07/07/1962	MTPL	WEL	1100-01	Residence	No
31	053-2111621220008	223158	Active	Domestic	Larry Andersen	5600 MT. NORMANDALE RD	Bloomington	183	08/02/1965	QBUA	WEL	1100-01	Residence	No
32	053-2702824230007	206342	Active	Domestic	John Paulson	6437 PLEASANT AV S	Richfield	200	04/08/1959	Not Available	WEL	1000	All Establishments Offering Residence	No
33	Not Available	223241	Active	Domestic	Not Available	7608 LYNDALE AV S	Richfield	74	04/11/1961	QWTA	WEL	1000	All Establishments Offering Residence	No
34	053-3402824320025	223244	Active	Public Supply/Non-community	Ball Field	75TH+ PLEASANT AV S	Richfield	58	05/13/1960	QBAA	WEL	5000	Arts, Entertainment and Recreation	No
35	053-1111622410010	205899	Active	Commercial	Krsi Radio-Transmitter	Not Available	Eden Prairie	163	06/05/1958	QBAA	WEL	4200	Communications and Information Establishments	No
36	053-3211721410060	223897	Active	Domestic	W.I. Anderson	5512 BENTON AV	Edina	120	06/14/1960	MTPL	WEL	1000	All Establishments Offering Residence	No
37	053-0802724110005	222974	Active	Domestic	Marilyn Becker	8736 PENN AV S	Bloomington	61	02/08/1961	QWTA	WEL	1000	All Establishments Offering Residence	No
38	Not Available	223025	Active	Domestic	Not Available	1010 80TH ST W	Bloomington	70	09/20/1961	QBAA	WEL	1000	All Establishments Offering Residence	No
39	053-0802724430001	223028	Active	Domestic	Not Available	9400 THOMAS AV S	Bloomington	149	07/13/1959	QWTA	WEL	1100-01	Residence	No
40	053-2702824220041	218087	Active	Domestic	Not Available	6304 6304PLEASANT AV S	Richfield	51	06/21/1962	QWTA	WEL	1000	All Establishments Offering Residence	No
41	Not Available	218128	Active	Domestic	Not Available	6434 IRVING AV S	Richfield	46	11/22/1960	QWTA	WEL	1000	All Establishments Offering Residence	No
42	053-2802824430002	218138	Active	Domestic	Not Available	6833 HUMBODLT AV S	Richfield	59	12/09/1959	QWTA	WEL	1000	All Establishments Offering Residence	No
43	053-3202824140031	222922	Active	Domestic	Not Available	7233 RUSSELL AV S	Richfield	45	02/02/1961	QWTA	WEL	1100-01	Residence	No
44	053-0611621330032	203123	Active	Domestic	John Jagerstrom	6821 SALLY LA	Edina	97	06/28/1965	QBAA	WEL	1000	All Establishments Offering Residence	No
45	053-2511622320012	205948	Active	Domestic	Ray Welter	10844 BLOSSOM RD	Eden Prairie	257	02/25/1966	OPDC	WEL	1000	All Establishments Offering Residence	No
46	053-2611622220073	205951	Active	Domestic	Bob Madeen	12701 PIONEER TR	Eden Prairie	240	06/08/1962	OPDC	WEL	1000	All Establishments Offering Residence	No
47	053-0511521430009	204850	Active	Domestic	Kendell	6401 BLUFF DR	Bloomington	171	Not Available	OPDC	WEL	1000	All Establishments Offering Residence	No
48	053-3211721440056	206613	Active	Domestic	Not Available	6017 CRESCENT DR	Edina	103	09/22/1961	QUUU	WEL	1000	All Establishments Offering Residence	No
49	053-0811621210073	208033	Active	Domestic	P. Gunderson	7009 LEE VALLEY CI	Edina	282	07/29/1953	OSTP	WEL	1000	All Establishments Offering Residence	No
50	053-0411621210048	204862	Active	Domestic	C. T. Hagen	6356 TINGDALE AV	Edina	255	10/02/1954	OSTP	WEL	1000	All Establishments Offering Residence	No
51	053-0411621240021	204870	Active	Domestic	Richard Hirsch	6524 WILRYAN	Edina	215	02/02/1959	QBAA	WEL	1000	All Establishments Offering Residence	No
52	053-3311621310067	204967	Active	Domestic	Not Available	10740 NORMANDALE	Bloomington	165	05/25/1959	QBUA	WEL	1100-01	Residence	No
53	053-1102724120093	205261	Active	Public Supply/Non-community	Cedarcrest School	8700 BLOOMINGTON AV	Bloomington	360	Not Available	MTPL	WEL	6000	Education, Public Administration, Health Care, and Other Institutions	No
54	053-1811621320001	204927	Active	Domestic	Robert Stockdill	8132 ENSIGN RD	Bloomington	116	07/14/1959	QBAA	WEL	1000	All Establishments Offering Residence	No
55	053-1611621210004	204951	Active	Commercial	Standard Oil	Not Available	Bloomington	77	06/18/1953	QWTA	WEL	2000	General Sales and Service	No
56	Not Available	206261	Active	Domestic	George Kline	7508 COLUMBUS AV S	Richfield	61	07/05/1961	QUUU	WEL	1000	All Establishments Offering Residence	No
57	053-2702824230035	206341	Active	Domestic	Esther Rischmiller	6426 PLEASANT AV S	Richfield	45	01/28/1961	QWTA	WEL	1000	All Establishments Offering Residence	No
58	053-1702724110042	223123	Active	Domestic	Not Available	2309 95TH ST W	Bloomington	83	04/13/1961	QBAA	WEL	1000	All Establishments Offering Residence	No
59	053-3202824310026	206187	Active	Domestic	John Grabowski	7405 YORK AV S	Edina	96	07/01/1968	QWTA	WEL	1100-01	Residence	No
60	053-0302724210026	204979	Active	Commercial	Frank Knapp	145 78TH ST W	Bloomington	45	09/24/1957	QBUA	WEL	2000	General Sales and Service	No
61	053-0402724130062	204990	Active	Commercial	Pemtom Inc.	8055 BLOOMINGTON FREEWAY	Bloomington	328	00/00/1967	Not Available	WEL	2000	General Sales and Service	No
62	Not Available	206339	Active	Domestic	R. C. Lundquist	800 63RD ST W	Richfield	54	11/29/1960	QWTA	WEL	1000	All Establishments Offering Residence	No
63	053-0802724120053	205224	Active	Domestic	A. F. Schmidt	8636 WASHBURN AV S	Bloomington	110	06/00/1959	QWTA	WEL	1000	All Establishments Offering Residence	No
64	053-0902724110126	205232	Active	Domestic	Jerry Cummings	8716 LYNDALE AV S	Bloomington	51	12/19/1956	QWTA	WEL	1000	All Establishments Offering Residence	No
65	053-0502724140021	204998	Active	Domestic	Jack William	8025 THOMAS RD	Bloomington	56	08/20/1964	QWTA	WEL	1000	All Establishments Offering Residence	No
66	053-3202824110031	218153	Active	Domestic	Not Available	2520 70TH1/2 ST W	Richfield	82	03/29/1960	QWTA	WEL	1100-01	Residence	No
67	Not Available	223237	Active	Domestic	Not Available	7236 GIRAND AV S	Richfield	71	10/10/1961	QWTA	WEL	1100-01	Residence	No
68	Not Available	223261	Active	Domestic	Not Available	7720 NICOLLET AV S	Richfield	56	04/21/1960	QWTA	WEL	1000	All Establishments Offering Residence	No
69	053-0502724310091	205204	Active	Domestic	Not Available	8201 ABBOTT AV S	Bloomington	174	02/28/1958	QBAA	WEL	1000	All Establishments Offering Residence	No
70	053-0611621420018	222906	Active	Domestic	R. J. Crabb	Not Available	Edina	264	02/11/1953	OSTP	WEL	1000	All Establishments Offering Residence	No
71	053-0802724110002	222973	Active	Domestic	Mrs. L. St. Martin	8724 PENN AV S	Bloomington	49	04/14/1960	QWTA	WEL	1000	All Establishments Offering Residence	No
72	053-0302724230064	223017	Active	Domestic	Not Available	8008 GRAND AV S	Bloomington	51	10/27/1960	QWTA	WEL	1000	All Establishments Offering Residence	No
73	053-0802724210092	205228	Active	Domestic	Not Available	3336 88TH ST	Bloomington	122	10/14/1955	QBUA	WEL	1100-01	Residence	No
74	Not Available	205945	Active	Domestic	Richard Smith	12500 SUNNYBROOK RD	Eden Prairie	201	10/25/1967	OPDC	WEL	1000	All Establishments Offering Residence	No
75	053-2511622430261	205950	Active	Domestic	Jerry Hegge	10015 PIONEER TR	Eden Prairie	220	11/26/1971	QBAA	WEL	1000	All Establishments Offering Residence	No
76	Not Available	206610	Active	Domestic	Dick Lundgren	5501 HIGHLAND RD	Edina	115	08/31/1955	QBAA	WEL	1000	All Establishments Offering Residence	No
77	053-0511521440040	223172	Active	Domestic	Bill Seivert	5901 AUTOCLUB RD	Bloomington	280	10/10/1967	QWTA	WEL	1000	All Establishments Offering Residence	No
78	053-3611622410004	420458	Active	Domestic	Mark Seavall	9784 BROOKVIEW CI	Eden Prairie	320	11/20/1985	CJDN	WEL	1000	All Establishments Offering Residence	No
79	053-3002824310020	206393	Active	Domestic	John Maher	4501 LAGUNA DR	Edina	132	09/07/1952	OPVL	WEL	1000	All Establishments Offering Residence	No

Table C-3

PCSI Results - Wells in the DWSMA
City of Bloomington

Map ID	PID No.	Unique No.	Status	Use	Well Owner	Well Location	City or Twp	Total/Sealed Depth (Feet)	Date Completed/Sealed	Aquifer	PCS Code	Facility Code	Facility Designation	Location Verified
80	053-0511621120049	204889	Active	Domestic	Bob Fritz	6217 CRESCENT DR	Edina	142	09/27/1954	QBAA	WEL	1000	All Establishments Offering Residence	No
81	053-0611621340054	223758	Active	Domestic	Richfield Plumbing	6804 DAKOTA TR	Edina	271	Not Available	OSTP	WEL	1000	All Establishments Offering Residence	No
82	Not Available	223239	Active	Domestic	Not Available	7540 6TH AV S	Richfield	72	08/12/1960	QWTA	WEL	1100-01	Residence	No
83	Not Available	223247	Active	Domestic	Not Available	7344 PLEASANT AV S	Richfield	56	01/17/1961	QWTA	WEL	1000	All Establishments Offering Residence	No
84	053-3402824120125	223270	Active	Domestic	Not Available	7132 2ND AV S	Richfield	51	07/07/1960	QWTA	WEL	1000	All Establishments Offering Residence	No
85	Not Available	404352	Active	Domestic	Ted Finholt	10100 IVYWOOD CT	Eden Prairie	300	07/10/1984	OPDC	WEL	1000	All Establishments Offering Residence	No
86	053-0902724230075	205236	Active	Commercial	Pennys Supermarket	8931 PENN AV S	Bloomington	79	11/14/1958	QBAA	WEL	2000	General Sales and Service	No
87	053-0902724310023	205237	Active	Domestic	Lyle Hanson	9016 JAMES AV S	Bloomington	66	07/30/1963	QWTA	WEL	1000	All Establishments Offering Residence	No
88	Not Available	206196	Active	Domestic	G. R. Franson	7300 DUPONT AV S	Richfield	50	06/21/1957	QWTA	WEL	1000	All Establishments Offering Residence	No
89	053-3302824140117	206199	Active	Unknown	G. E. Egckvist	7250 OAKGROVE BL	Richfield	326	09/19/1950	MTPL	WEL	1000	All Establishments Offering Residence	No
90	053-2002724310080	205447	Active	Domestic	Not Available	10741 ABBOTT AV S	Bloomington	94	06/08/1959	QWTA	WEL	1000	All Establishments Offering Residence	No
91	Not Available	205509	Active	Domestic	Not Available	11009 EWING AV	Bloomington	147	02/04/1958	Not Available	WEL	1000	All Establishments Offering Residence	No
92	053-3402824320011	206244	Active	Domestic	Milliman Bldrs.	509 74TH ST W	Richfield	66	05/13/1960	QUUU	WEL	1000	All Establishments Offering Residence	No
93	053-2802824220135	206304	Active	Public Supply/Non-community	Baptist Church	6209 OLIVER AV S	Richfield	98	08/13/1956	QBAA	WEL	6000	Education, Public Administration, Health Care, and Other Institutions	No
94	053-1902724430101	205381	Active	Domestic	Not Available	10918 JOHNSON	Bloomington	112	04/30/1960	QBAA	WEL	1000	All Establishments Offering Residence	No
95	053-0511521440008	204855	Active	Domestic	Not Available	6221 AUTOCLUB RD	Bloomington	220	08/14/1958	OPDC	WEL	1000	All Establishments Offering Residence	No
96	053-1002724220028	223020	Active	Domestic	Not Available	8609 HARRIET AV S	Bloomington	52	10/07/1960	QWTA	WEL	1000	All Establishments Offering Residence	No
97	053-0702724130047	223088	Active	Domestic	Not Available	8901 KELL AV	Bloomington	113	11/20/1959	QBAA	WEL	1100-01	Residence	No
98	053-2802824240029	218129	Active	Domestic	Not Available	6438 IRVING AV S	Richfield	52	12/02/1959	QWTA	WEL	1000	All Establishments Offering Residence	No
99	053-3202824120038	218160	Active	Domestic	Not Available	3001 70TH1/2 ST W	Richfield	81	11/29/1962	QWTA	WEL	1100-01	Residence	No
100	053-0302724310154	223015	Active	Domestic	S. Larson	8317 PILLSBURY AV S	Bloomington	51	03/31/1960	QWTA	WEL	1000	All Establishments Offering Residence	No
101	Not Available	206185	Active	Unknown	John F. Kepler	2800 72ND ST W	Richfield	50	03/07/1963	QWTA	WEL	1100-01	Residence	No
102	Not Available	206192	Active	Public Supply/Non-community	Oak Grove Church	Not Available	Richfield	125	08/00/1957	QWTA	WEL	5000	Arts, Entertainment and Recreation	No
103	053-2702824240040	206350	Active	Domestic	Lyle	6412	Richfield	52	03/04/1960	QWTA	WEL	1000	All Establishments Offering Residence	No
104	053-0302724330028	756202	Active	Monitor Well	Mw-2A	8401 LYNDALE AV S	Bloomington	25	11/30/2009	Not Available	WEL	6000	Education, Public Administration, Health Care, and Other Institutions	No
105	053-0711621130001	112249	Active	Irrigation	Braemer Park + Golf No.1	Not Available	Edina	386	06/15/1979	MTPL	WEL	5000	Arts, Entertainment and Recreation	No
106	053-1111622110020	224096	Active	Domestic	Not Available	7121 WILLOW CREEK RD	Eden Prairie	245	Not Available	OSTP	WEL	1000	All Establishments Offering Residence	No
107	053-2702824240061	778164	Sealed	Abandoned	Mw-1	199 65TH ST W	Richfield	33	11/11/2010	Not Available	WEL	6000	Education, Public Administration, Health Care, and Other Institutions	No
108	053-2002724310056	205433	Active	Domestic	Not Available	3308 107TH ST W	Bloomington	125	06/05/1959	QBAA	WEL	1100-01	Residence	No
109	053-1002724440004	205258	Active	Commercial	Not Available	9243 5TH AV S	Bloomington	34	09/08/1959	QWTA	WEL	2000	General Sales and Service	No
110	053-2702824240061	778165	Sealed	Abandoned	Mw-2	199 65TH ST W	Richfield	35	11/11/2010	Not Available	WEL	6000	Education, Public Administration, Health Care, and Other Institutions	No
111	053-0302724310075	223014	Active	Domestic	Not Available	8242 PILLSBURY AV S	Bloomington	51	06/30/1960	QWTA	WEL	1000	All Establishments Offering Residence	No
112	053-1702724140022	223131	Active	Domestic	Not Available	2317 97TH ST W	Bloomington	59	08/19/1960	QWTA	WEL	1000	All Establishments Offering Residence	No
113	053-2011621320002	224344	Active	Other (specify in remarks)	Bloomington Bush Lake	Not Available	Bloomington	383	09/30/1964	MTPL	WEL	6000	Education, Public Administration, Health Care, and Other Institutions	No
114	053-0802724440047	223179	Active	Domestic	Not Available	9206 RUSSELL AV S	Bloomington	60	06/27/1960	QBAA	WEL	1000	All Establishments Offering Residence	No
115	053-3002824220023	223899	Active	Domestic	Not Available	6233 PARNELL AV S	Edina	265	11/02/1964	OSTP	WEL	1000	All Establishments Offering Residence	No
116	053-0302724330028	756201	Active	Monitor Well	Mw-1A	8401 LYNDALE AV S	Bloomington	25	11/30/2008	Not Available	WEL	6000	Education, Public Administration, Health Care, and Other Institutions	No
117	053-1911621120016	206962	Active	Domestic	Midwest Plumbing	7820 PICKFAIR DR	Bloomington	137	10/11/1962	QBAA	WEL	1000	All Establishments Offering Residence	No
118	053-3211721430051	206590	Active	Domestic	William Jesuup	5608 HIGHLAND RD	Edina	255	05/18/1955	OSTP	WEL	1000	All Establishments Offering Residence	No
119	053-0411621230042	223896	Active	Domestic	Monahan	6411 ROLF AV	Edina	191	01/07/1955	OPVL	WEL	1000	All Establishments Offering Residence	No
120	053-2702824240061	778166	Sealed	Abandoned	Mw-3	199 65TH ST W	Richfield	37	11/11/2010	Not Available	WEL	6000	Education, Public Administration, Health Care, and Other Institutions	No
121	053-0802724410053	223178	Active	Public Supply/Non-community	Hillcrest Methodist Chur	Not Available	Bloomington	75	08/13/1956	QBAA	WEL	6000	Education, Public Administration, Health Care, and Other Institutions	No
122	Not Available	223206	Active	Domestic	Not Available	2905 74TH ST W	Richfield	55	08/09/1960	QWTA	WEL	1100-01	Residence	No
123	Not Available	223227	Active	Domestic	Not Available	7526 LOGAN AV S	Richfield	61	08/07/1961	QWTA	WEL	1100-01	Residence	No
124	053-1911621120005	204933	Active	Domestic	Dick Lundgren	8725 VIRGINIA AV	Bloomington	132	11/03/1961	QUUU	WEL	1000	All Establishments Offering Residence	No
125	053-0611621220056	203104	Active	Domestic	Robert Naas	6320 POST LA	Edina	358	02/13/1959	Not Available	WEL	1000	All Establishments Offering Residence	No
126	Not Available	223258	Active	Domestic	Not Available	7620 NICOLLET AV S	Richfield	219	03/31/1960	OPDC	WEL	1000	All Establishments Offering Residence	No
127	053-0611621230057	203107	Active	Domestic	Henry Meyers	6728 INDIAN HILLS RD	Edina	281	06/15/1961	OSTP	WEL	1000	All Establishments Offering Residence	No
128	053-3002824120027	206400	Active	Domestic	James Lee	7044 14 AV S	Edina	51	01/28/1962	QWTA	WEL	1000	All Establishments Offering Residence	No
129	053-0811621220022	204914	Active	Domestic	Jack Lein	5920 LEE VALLEY RD	Edina	172	08/01/1957	QBAA	WEL	1000	All Establishments Offering Residence	No
130	053-1702724110052	205367	Active	Domestic	Not Available	2517 95TH ST W	Bloomington	173	03/31/1959	QBAA	WEL	1000	All Establishments Offering Residence	No
131	Not Available	137389	Active	Domestic	Robert Mcdonald	10781 PIONEER TR	Eden Prairie	260	07/03/1979	OPDC	WEL	1000	All Establishments Offering Residence	No
132	Not Available	224347	Active	Domestic	Not Available	7307 GRAND AV S	Richfield	67	08/04/1960	QBAA	WEL	1000	All Establishments Offering Residence	No
133	053-3302824130029	224349	Sealed	Abandoned	Not Available	7229 HUMBOLDT AV S	Richfield	72	07/15/1960	QWTA	WEL	1100-01	Residence	No
134	053-3611622420001	205965	Active	Domestic	H. R. Fowler	10315 RIVERVIEW RD	Eden Prairie	250	10/17/1958	QBAA	WEL	1000	All Establishments Offering Residence	No
135	053-0702724130089	223106	Active	Domestic	Not Available	4601 SOUTHMORE DR	Bloomington	210	03/08/1960	QBAA	WEL	1100-01	Residence	No
136	Not Available	223108	Active	Domestic	Not Available	4616 SOUTHMORE DR	Bloomington	215	02/17/1960	QBAA	WEL	1100-01	Residence	No
137	Not Available	223280	Active	Domestic	Not Available	7414 PORTLAND AV S	Richfield	58	02/20/1960	QWTA	WEL	1000	All Establishments Offering Residence	No
138	053-1802724220041	222932	Active	Domestic	John Palmer	9501 TOLEDO AV S	Bloomington	256	08/24/1965	QBAA	WEL	1100-01	Residence	No
139	053-2702824220045	218089	Sealed	Abandoned	Not Available	6322 PLEASANT AV S	Richfield	61	06/28/1961	QWTA	WEL	1000	All Establishments Offering Residence	No
140	053-2511622240030	205947	Active	Irrigation	Olympic Hills Golf Cours	9520 FRANLO RD	Eden Prairie	344	10/00/1969	OPDC	WEL	5000	Arts, Entertainment and Recreation	No
141	053-3302824330111	222969	Active	Domestic	Not Available	1922 78TH ST W	Richfield	56	08/20/1960	QWTA	WEL	1000	All Establishments Offering Residence	No
142	053-1402724210107	222986	Active	Domestic	Not Available	9448 12TH AV S	Bloomington	61	04/06/1960	QWTA	WEL	1000	All Establishments Offering Residence	No
143	053-1002724110045	223000	Active	Domestic	Not Available	8741 3RD AV S	Bloomington	40	12/12/1959	QWTA	WEL	1000	All Establishments Offering Residence	No
144	053-0302724310064	223013	Active	Domestic	Not Available	8237 PILLSBURY AV S	Bloomington	51	07/20/1960	QWTA	WEL	1000	All Establishments Offering Residence	No
145	053-0802724140017	W0007308	Unknown	Unknown	Not Available	Not Available	Bloomington	0	Not Available	Not Available	WEL	1000	All Establishments Offering Residence	No
146	053-0611621410077	203124	Active	Public Supply/Non-community	St. Alban'S Church	6928 GLEASON RD	Edina	302	08/29/1959	MTPL	WEL	6000	Education, Public Administration, Health Care, and Other Institutions	No
147	053-0802724440051	223180	Active	Domestic	Not Available	9224 RUSSELL AV S	Bloomington	62	Not Available	QWTA	WEL	1000	All Establishments Offering Residence	No
148	Not Available	223254	Active	Domestic	Jim Tousinant	7204 GARFIELD AV S	Richfield	51	03/06/1962	QWTA	WEL	1000	All Establishments Offering Residence	No
149	053-0502724240039	204999	Active	Domestic	Not Available	3301 81ST ST W	Bloomington	118	05/20/1957	QBAA	WEL	1000	All Establishments Offering Residence	No
150	053-0702724340001	257126	Sealed	Abandoned	Bloomington Tw-5	2215 OLD SHAKOPEE RD W	Bloomington	411	12/15/1999	Not Available	WEL	6000	Education, Public Administration, Health Care, and Other Institutions	No
151	053-2002724320018	205458	Active	Domestic	Not Available	10721 CHOWEN CIRCLE	Bloomington	101	08/31/1959	QBUA	WEL	1100-01	Residence	No
152	053-3502824230059	206259	Sealed	Abandoned	Earl Rossman	7439 PORTLAND AV S	Richfield	57	07/10/1961	QWTA	WEL	1000	All Establishments Offering Residence	No
153	053-0811621210002	208032	Active	Domestic	Paul Gunderson	7005 LEE VALLEY CI	Edina	130	Not Available	QBAA	WEL	1000	All Establishments Offering Residence	No
154	053-0511621330097	208035	Unknown	Domestic	Douglas, William	5920 70TH ST W	Edina	375	11/05/1951	MTPL	WEL	1000	All Establishments Offering Residence	No
155	053-2411622110006	224077	Active	Unknown	Marty Jessen Anderson La	TIMBER TR	Eden Prairie	203	Not Available	QUUU	WEL	1000	All Establishments Offering Residence	No
156	053-2002724340037	205466	Active	Domestic	Not Available	10809 ABBOTT AV S	Bloomington	192	12/04/1959	QBAA	WEL	1000	All Establishments Offering Residence	No
157	053-1702724140052	223189	Active	Domestic	Not Available	9757 RUSSELL AV S	Bloomington	200	03/20/1960	QBAA	WEL	1000	All Establishments Offering Residence	No
158	053-0511621110054	204885	Active	Domestic	Roger Findell	6201 CRESCENT DR	Edina	129	07/29/1954	QBAA	WEL	1000	All Establishments Offering Residence	No

Table C-3

PCSI Results - Wells in the DWSMA
City of Bloomington

Map ID	PID No.	Unique No.	Status	Use	Well Owner	Well Location	City or Twp	Total/Sealed Depth (Feet)	Date Completed/Sealed	Aquifer	PCS Code	Facility Code	Facility Designation	Location Verified
159	053-0202724240017	204971	Active	Test Well	Bloomington Tw-3	Not Available	Bloomington	390	12/04/1959	CJDN	WEL	6000	Education, Public Administration, Health Care, and Other Institutions	No
160	Not Available	223238	Active	Domestic	Not Available	7228 GIRARD AV S	Richfield	69	02/06/1961	QWTA	WEL	1000	All Establishments Offering Residence	No
161	053-3302824320060	223226	Active	Domestic	Not Available	1920 76TH ST W	Richfield	61	12/17/1959	QWTA	WEL	1100-01	Residence	No
162	Not Available	223271	Sealed	Abandoned	Not Available	7128 2ND AV S	Richfield	51	09/09/1960	QWTA	WEL	1000	All Establishments Offering Residence	No
163	053-3402824440036	206251	Active	Public Supply/Non-community	Assumption Catholic Chur	Not Available	Richfield	64	01/25/1954	QWTA	WEL	6000	Education, Public Administration, Health Care, and Other Institutions	No
164	053-2802824220111	218124	Active	Domestic	Herbert Reuteler	6331 OLIVER AV S	Richfield	93	08/21/1961	QWTA	WEL	1000	All Establishments Offering Residence	No
165	053-2002724310077	205437	Active	Domestic	Not Available	10709 ABBOTT AV S	Bloomington	98	08/06/1959	QBAA	WEL	1100-01	Residence	No
166	053-2002724310083	205438	Active	Domestic	Not Available	10700 ABBOTT AV S	Bloomington	125	06/09/1959	QWTA	WEL	1100-01	Residence	No
167	053-0502724240052	205000	Active	Domestic	Not Available	8116 ABBOTT AV S	Bloomington	133	09/05/1957	QBAA	WEL	1000	All Establishments Offering Residence	No
168	Not Available	222902	Active	Domestic	Rebers Homes	Not Available	Edina	240	12/21/1965	OSTP	WEL	1000	All Establishments Offering Residence	No
169	053-0611621330024	203122	Active	Domestic	Jagerstrom	6812 SALLY LA	Edina	94	04/29/1965	QWTA	WEL	1000	All Establishments Offering Residence	No
170	053-1502724220024	223344	Active	Domestic	Not Available	9424 GRAND AV S	Bloomington	89	12/02/1959	QBAA	WEL	1000	All Establishments Offering Residence	No
171	053-0111622410003	223877	Active	Industrial	Machine Products	6600 CR 18 HY S	Eden Prairie	237	12/29/1966	MTPL	WEL	3000	Manufacturing and Wholesale Trade	No
172	053-2002824440011	223950	Active	Domestic	August Cornelius	6014 PENN AV S	Minneapolis	339	00/00/1933	Not Available	WEL	1000	All Establishments Offering Residence	No
173	053-0302724330027	223049	Active	Domestic	Not Available	8401 LYNDALE AV S	Bloomington	215	12/28/1954	QUUU	WEL	1000	All Establishments Offering Residence	No
174	053-0702724130030	223091	Active	Domestic	Not Available	8916 KELL AV S	Bloomington	117	04/13/1960	QBAA	WEL	1100-01	Residence	No
175	053-0702724130063	223107	Active	Domestic	Not Available	4609 SOUTHMORE DR	Bloomington	104	11/05/1959	QBAA	WEL	1100-01	Residence	No
176	053-2002724310088	205448	Active	Domestic	Not Available	10740 ABBOTT AV S	Bloomington	91	07/23/1959	QBAA	WEL	1100-01	Residence	No
177	053-2902724210003	205501	Active	Public Supply/Non-community	Quest End Golf Course	Not Available	Bloomington	410	06/16/1969	CJDN	WEL	5000	Arts, Entertainment and Recreation	No
178	053-0711621130001	184886	Active	Public Supply/Non-community	City Of Edina "Dome"	7420 BRAEMAR BL	Edina	122	09/29/1982	QBAA	WEL	6000	Education, Public Administration, Health Care, and Other Institutions	No
179	053-1902824310082	200562	Active	Domestic	C. Katter	5841 CONCORD AV	Edina	98	07/21/1950	OSTP	WEL	1000	All Establishments Offering Residence	No
180	053-3402824130062	206232	Active	Domestic	D. Gessner	7232 1ST AV S	Richfield	50	01/09/1961	QWTA	WEL	1000	All Establishments Offering Residence	No
181	053-0611621420035	223761	Active	Domestic	Len Bjorklund	6624 CHEYENNE TR	Edina	245	09/17/1958	Not Available	WEL	1000	All Establishments Offering Residence	No
182	053-0511521440011	223173	Sealed	Abandoned	Not Available	6131 AUTOCLUB RD	Bloomington	271	10/11/1962	QBAA	WEL	1000	All Establishments Offering Residence	No
183	053-2802824430016	206330	Active	Public Supply/Non-community	Wood Lake Park	S	Richfield	335	02/28/1969	MTPL	WEL	6000	Education, Public Administration, Health Care, and Other Institutions	No
184	053-2902724220007	205534	Active	Domestic	Not Available	11101 DREW AV	Bloomington	100	05/02/1958	QWTA	WEL	1000	All Establishments Offering Residence	No
185	053-2902724230030	205548	Active	Domestic	Not Available	11319 EWING CIRCLE CI	Bloomington	314	08/26/1958	QBAA	WEL	1000	All Establishments Offering Residence	No
186	053-0611621430054	203181	Active	Unknown	Bergeson	6900 CHEYENNE TR	Edina	145	10/23/1957	QWTA	WEL	1000	All Establishments Offering Residence	No
187	053-3002824230045	206404	Active	Domestic	Peter Lazay	6517 SHERWOOD AV S	Edina	236	03/10/1954	OSTP	WEL	1000	All Establishments Offering Residence	No
188	053-3211721440063	206622	Active	Domestic	Hogland Plumbing	6125 CRESCENT DR	Edina	262	11/16/1959	OSTP	WEL	1000	All Establishments Offering Residence	No
189	053-1902724420068	205376	Active	Domestic	Not Available	4509 NORD DR	Bloomington	103	08/28/1956	QWTA	WEL	1100-01	Residence	Yes
190	053-0902724210074	222921	Active	Domestic	Not Available	8705 LOGAN AV S	Bloomington	61	01/26/1960	QBAA	WEL	1000	All Establishments Offering Residence	No
191	053-0802724440052	222926	Active	Domestic	Not Available	2512 93RD ST W	Bloomington	52	07/30/1960	QBAA	WEL	1000	All Establishments Offering Residence	No
192	053-3202824430049	W0000092	Active	Domestic	Montgomerie, Scott	7639 XERXES S	Richfield	60	01/19/1988	QWTA	WEL	1000	All Establishments Offering Residence	No
193	053-0411621230037	204865	Active	Domestic	Wronski	6425 ROLF AV	Edina	182	11/18/1953	Not Available	WEL	1000	All Establishments Offering Residence	No
194	053-3211721440022	114323	Active	Domestic	Mrs. Esther Madvig	5516 HIGHLAND RD	Edina	121	08/28/1975	QBUA	WEL	1000	All Establishments Offering Residence	No
195	053-1911621140002	204934	Active	Domestic	George Jensen	7416 IZAAK WALTON RD	Bloomington	190	04/24/1964	QBAA	WEL	1000	All Establishments Offering Residence	No
196	053-2111621220003	204956	Active	Domestic	Ray Haeg	5520 MT NORMANDALE	Bloomington	182	11/16/1954	QBUA	WEL	1100-01	Residence	No
197	053-3402824230001	206240	Active	Domestic	Miliman Bldrs.	401 74TH ST W	Richfield	54	05/31/1960	QWTA	WEL	1000	All Establishments Offering Residence	No
198	053-1211622430002	127344	Active	Domestic	Edward Smetana	7730 SMETANA LA	Eden Prairie	230	01/13/1984	OPDC	WEL	1000	All Establishments Offering Residence	No
199	053-1902824430114	200568	Active	Domestic	G. Williams	6121 BROOKVIEW AV	Edina	114	08/24/1955	QBAA	WEL	1000	All Establishments Offering Residence	No
200	053-2411622440093	109934	Active	Unknown	Mike	9310 18 CR	Eden Prairie	255	11/09/1976	OPDC	WEL	1000	All Establishments Offering Residence	No
201	053-2011621420002	204942	Active	Public Supply/Non-community	Hyland Lake Ski Tow	Not Available	Bloomington	375	11/19/1965	OPCJ	WEL	5000	Arts, Entertainment and Recreation	No
202	053-2011621420002	204954	Active	Commercial	Hyland Hills Chalet	6300 MT NORMANDALE DR W	Bloomington	280	01/04/1968	OPDC	WEL	6000	Education, Public Administration, Health Care, and Other Institutions	No
203	053-2002724320057	205454	Active	Domestic	Not Available	10717 CHOWEN CIRCLE CI	Bloomington	102	11/03/1959	QBAA	WEL	1100-02	Apartment or Condominium	Yes
204	053-0611621430032	203129	Active	Commercial	Furney Bros.	6805 DAKOTA TR	Edina	233	09/19/1959	OSTP	WEL	2000	General Sales and Service	No
205	053-0111622140007	203133	Active	Commercial	Research Inc.	Not Available	Eden Prairie	65	08/30/1960	QBAA	WEL	2000	General Sales and Service	No
206	Not Available	206967	Active	Domestic	Jake Anderson	8541 AMSDEN RD	Bloomington	95	07/01/1960	QBUA	WEL	1000	All Establishments Offering Residence	No
207	053-1902724440062	205397	Active	Domestic	Not Available	10917 JOHNSON AV S	Bloomington	113	09/29/1900	QBAA	WEL	1100-01	Residence	No
208	053-2002724220078	205424	Active	Domestic	Not Available	3600 103RD ST	Bloomington	119	10/13/1955	QBAA	WEL	1100-01	Residence	No
209	053-1002724140003	205244	Active	Public Supply/Non-community	Junior High School	8900 PORTLAND AV S	Bloomington	360	02/27/1958	MTPL	WEL	6000	Education, Public Administration, Health Care, and Other Institutions	No
210	053-1002724220035	205246	Active	Public Supply/Non-community	Trailer Town	8701 LYNDALE AV S	Bloomington	370	06/24/1957	MTPL	WEL	2000	General Sales and Service	No
211	053-3611622420001	206974	Active	Industrial	J. W. Wilkie	10300 RIVERVIEW RD	Eden Prairie	590	10/25/1956	MTPL	WEL	1000	All Establishments Offering Residence	No
212	053-2902824130032	206370	Active	Domestic	Ray Bullick	2740 66 ST W	Richfield	168	09/05/1964	QBAA	WEL	1000	All Establishments Offering Residence	No
213	053-0411621210020	204859	Active	Commercial	Wolsey Mcneil Co.	6305 WILRYON AV	Edina	277	12/05/1949	OSTP	WEL	2000	General Sales and Service	No
214	053-0411621240019	204868	Active	Domestic	Richard Hirsch	6518 WILRYAN	Edina	220	07/02/1959	OSTP	WEL	1000	All Establishments Offering Residence	No
215	053-0402724310028	204994	Active	Domestic	H. Kyrk	8209 KNOX AV S	Bloomington	55	09/28/1964	QWTA	WEL	1000	All Establishments Offering Residence	No
216	053-0811621120125	204911	Active	Domestic	Dale Tracy	7028 CAHILL RD	Edina	185	09/04/1964	OSTP	WEL	1100-01	Residence	No
217	Not Available	W0000154	Active	Public Supply/Non-community	Henn County	8033 TOWNLINE AV	Bloomington	0	01/14/1988	QBAA	WEL	6000	Education, Public Administration, Health Care, and Other Institutions	No
218	053-3202824420093	206190	Active	Domestic	Irene Payne	7527 XERXES AV S	Richfield	65	07/18/1961	QWTA	WEL	1000	All Establishments Offering Residence	No
219	053-0511521440006	204853	Active	Domestic	Bonament Heyda	6101 AUTOCLUB RD	Bloomington	342	01/03/1964	CJDN	WEL	1000	All Establishments Offering Residence	No
220	053-2002724340038	223160	Active	Domestic	Not Available	10802 ZENITH AV S	Bloomington	136	05/21/1959	QBAA	WEL	1000	All Establishments Offering Residence	No
221	Not Available	223174	Active	Domestic	Clarence Gross	6251 AUTOCLUB RD	Bloomington	184	09/03/1973	QBAA	WEL	1000	All Establishments Offering Residence	No
222	053-2311622120020	205942	Active	Domestic	Gil Darhenwald	11803 FRANLO RD	Eden Prairie	227	10/10/1969	OPDC	WEL	1000	All Establishments Offering Residence	No
223	053-0902724320007	223177	Active	Domestic	Not Available	9120 QUEEN AV S	Bloomington	61	08/13/1960	QBUA	WEL	1000	All Establishments Offering Residence	No
224	053-3211721430055	206601	Active	Domestic	Steine Plumbing	6101 ARBOUR LA	Edina	158	09/16/1959	QBUA	WEL	1000	All Establishments Offering Residence	No
225	053-2702824430034	218103	Sealed	Abandoned	Donald Runquist	6832 3RD AV S	Richfield	51	12/18/1961	QBAA	WEL	1000	All Establishments Offering Residence	No
226	053-2902824130019	218120	Active	Domestic	Not Available	6434 WASHBURN	Richfield	100	Not Available	QWTA	WEL	1000	All Establishments Offering Residence	No
227	053-2802824230129	218133	Active	Domestic	Not Available	6525 MORGAN AV S	Richfield	134	10/16/1959	QBAA	WEL	1000	All Establishments Offering Residence	No
228	053-0302724310020	222988	Active	Domestic	Not Available	8214 NICOLLET AV S	Bloomington	51	12/29/1959	QWTA	WEL	1000	All Establishments Offering Residence	No
229	053-0302724310051	222993	Active	Domestic	Not Available	8207 WENTWORTH AV S	Bloomington	51	11/18/1959	QBAA	WEL	1000	All Establishments Offering Residence	No
230	Not Available	206264	Active	Domestic	Gil Sandeen	7700 11TH AV S	Richfield	377	05/14/1953	CJDN	WEL	1000	All Establishments Offering Residence	No
231	053-1002724330052	222948	Active	Domestic	Not Available	9349 SYNDICATE AV	Bloomington	29	03/05/1965	QWTA	WEL	1000	All Establishments Offering Residence	No
232	053-2802824340016	218141	Active	Domestic	Not Available	6830 IRVING AV S	Richfield	45	08/01/1962	QBAA	WEL	1000	All Establishments Offering Residence	No
233	053-1002724330037	205254	Active	Domestic	Bowman	9224 GRAND AV S	Bloomington	221	08/31/1959	QBAA	WEL	1000	All Establishments Offering Residence	No
234	053-0611621420023	222904	Active	Domestic	S. T. Robb	6405 INDIANS HILLS RD	Edina	307	05/10/1951	MTPL	WEL	1000	All Establishments Offering Residence	No
235	053-0611621430011	223762	Active	Irrigation	Not Available	6805 CHEYENNE TR	Edina	237	06/30/1959	OSTP	WEL	1000	All Establishments Offering Residence	No
236	053-3611622140094	147856	Active	Domestic	Earl Houghton	9795 BLUFF RD	Eden Prairie	364	09/29/1979	CJDN	WEL	1000	All Establishments Offering Residence	No
237	053-0611621310020	203115	Active	Domestic	Helmer Smilden	Not Available	Edina	145	10/07/1958	QBAA	WEL	1000	All Establishments Offering Residence	No

Table C-3

PCSI Results - Wells in the DWSMA
City of Bloomington

Map ID	PID No.	Unique No.	Status	Use	Well Owner	Well Location	City or Twp	Total/Sealed Depth (Feet)	Date Completed/Sealed	Aquifer	PCS Code	Facility Code	Facility Designation	Location Verified
238	053-0502724420077	223117	Active	Domestic	Not Available	9120 QUEEN AV S	Bloomington	92	09/09/1960	QBUA	WEL	1000	All Establishments Offering Residence	No
239	053-1702724140010	223130	Active	Domestic	Not Available	2317 96TH ST W	Bloomington	94	10/12/1960	QBAA	WEL	1000	All Establishments Offering Residence	No
240	053-1702724140017	223132	Active	Domestic	Not Available	2400 97TH ST W	Bloomington	51	02/26/1960	QWTA	WEL	1000	All Establishments Offering Residence	No
241	053-1902724430024	223166	Active	Domestic	Not Available	10925 MORRIS AV S	Bloomington	93	11/14/1959	QBUA	WEL	1100-01	Residence	No
242	053-3202824120046	223201	Active	Domestic	Not Available	3004 71ST ST W	Richfield	82	02/21/1961	QWTA	WEL	1100-01	Residence	No
243	053-2802824240127	206315	Active	Domestic	R. W. Dallman	6309 JAMES AV S	Richfield	42	03/14/1961	QWTA	WEL	1000	All Establishments Offering Residence	No
244	053-3002824220027	206402	Sealed	Abandoned	Phil La Grandeur	6209 RYAN AV	Edina	225	10/30/1955	OSTP	WEL	1000	All Establishments Offering Residence	No
245	053-2002724310074	205432	Active	Domestic	Not Available	3316 107TH W	Bloomington	126	06/05/1959	QBAA	WEL	1100-01	Residence	No
246	053-2002724310075	205434	Active	Domestic	Not Available	10700 ZENITH	Bloomington	100	10/12/1900	QBAA	WEL	1000	All Establishments Offering Residence	No
247	053-1002724120008	205243	Active	Domestic	Ralph Bladsoe	8720 3RD AV	Bloomington	40	07/24/1973	QWTA	WEL	1000	All Establishments Offering Residence	No
248	053-2011621420002	204953	Active	Public Supply/Non-community	Hyland Park Nature Cent.	6300 MT. NORMANDALE DR W	Bloomington	315	06/11/1970	OPDC	WEL	5000	Arts, Entertainment and Recreation	No
249	053-1811621320007	204925	Active	Domestic	Richard Karlson	8110 ENSIGN CV	Bloomington	135	08/29/1969	QBAA	WEL	1000	All Establishments Offering Residence	No
250	053-0511621120039	204898	Active	Domestic	Roger Findell	6208 WESTRIDGE BL	Edina	135	09/09/1959	QUUU	WEL	1000	All Establishments Offering Residence	No
251	Not Available	206263	Active	Public Supply/Non-community	House Of Prayer	Not Available	Richfield	60	09/19/1955	QWTA	WEL	6000	Education, Public Administration, Health Care, and Other Institutions	No
252	053-2802824240145	206314	Active	Domestic	Millimar Bros	6519 IRVING AV S	Richfield	86	05/18/1961	QWTA	WEL	1000	All Establishments Offering Residence	No
253	053-0411621220085	204860	Active	Domestic	James Spencer	6348 MILDRED	Edina	178	10/30/1953	QBAA	WEL	1000	All Establishments Offering Residence	No
254	053-3311621220026	204965	Active	Unknown	Not Available	5701 102ND ST W	Bloomington	263	Not Available	QBAA	WEL	1100-01	Residence	No
255	Not Available	206238	Active	Domestic	Miliman Bldrs	301 74TH ST W	Richfield	58	06/04/1960	QWTA	WEL	1000	All Establishments Offering Residence	No
256	053-2511622210062	205946	Active	Irrigation	Olympic Hills Golf Cours	Not Available	Eden Prairie	431	09/07/1969	MTPL	WEL	5000	Arts, Entertainment and Recreation	No
257	053-1702724140056	222970	Active	Domestic	Louis Derudder	9740 RUSSELL CI	Bloomington	51	Not Available	QWTA	WEL	1000	All Establishments Offering Residence	No
258	053-3302824330108	206225	Active	Domestic	John Carroll	7701 LOGAN AV S	Richfield	55	02/27/1963	QWTA	WEL	1000	All Establishments Offering Residence	No
259	053-1411622240006	109941	Active	Domestic	Tom Madland	8102 EDENRD	Eden Prairie	250	09/10/1976	OPDC	WEL	1000	All Establishments Offering Residence	No
260	053-0302724320199	204983	Active	Commercial	World Wide	8341 LYNDALE AV S	Bloomington	209	05/26/1961	QBAA	WEL	2000	General Sales and Service	No
261	053-0402724220010	204992	Active	Commercial	Phillips 66 Station	Not Available	Bloomington	55	09/12/1960	QWTA	WEL	2000	General Sales and Service	No
262	053-2802824240024	218127	Active	Domestic	Not Available	6420 IRVING AV S	Richfield	51	06/13/1960	QWTA	WEL	1000	All Establishments Offering Residence	No
263	053-2902724220002	205503	Active	Domestic	Not Available	11009 DREW	Bloomington	139	Not Available	QBAA	WEL	1000	All Establishments Offering Residence	No
264	053-2802824430003	218139	Active	Domestic	Not Available	6839 HUMBOLDT AV S	Richfield	61	03/22/1960	QWTA	WEL	1000	All Establishments Offering Residence	No
265	053-2911621220003	180929	Active	Domestic	Jim Nesbitt	9414 BUSHLAKE RD E	Bloomington	155	12/16/1981	QBUA	WEL	1000	All Establishments Offering Residence	No
266	053-2902724230037	205553	Active	Domestic	Not Available	11232 EWING AV S	Bloomington	104	07/30/1958	QWTA	WEL	1000	All Establishments Offering Residence	No
267	053-2002724240073	205429	Active	Domestic	Not Available	10541 ABBOT AV S	Bloomington	94	03/15/1955	QWTA	WEL	1100-01	Residence	No
268	053-2902824410153	206380	Active	Domestic	Eckberg	6717 QUEEN AV S	Richfield	48	10/14/1960	QWTA	WEL	1000	All Establishments Offering Residence	No
269	053-2902724220004	205504	Active	Domestic	Not Available	11025 DREW AV	Bloomington	110	05/07/1958	QBAA	WEL	1000	All Establishments Offering Residence	No
270	053-2902724220004	205507	Active	Domestic	Not Available	11041 DREW AV	Bloomington	100	05/06/1958	QBUA	WEL	1000	All Establishments Offering Residence	No
271	053-2911621320003	414028	Active	Public Supply/Non-community-transient	Hyland Park Reserve	Not Available	Bloomington	295	07/22/1985	QBAA	WEL	5000	Arts, Entertainment and Recreation	No
272	053-0511521430010	204852	Active	Domestic	Kendell	6411 BLUFF DR	Bloomington	170	Not Available	OPDC	WEL	1000	All Establishments Offering Residence	No
273	053-1602724220008	223053	Active	Commercial	John Deere & Co	Not Available	Bloomington	385	06/27/1962	MTPL	WEL	2000	General Sales and Service	No
274	053-3102824140001	206182	Active	Commercial	Oscar Roberts Co	7200 FRANCE AV S	Edina	48	03/08/1954	QWTA	WEL	2000	General Sales and Service	No
275	053-0811621310039	204948	Active	Domestic	Schuster	5809 DEWEY HILL RD	Edina	245	08/01/1963	MTPL	WEL	1000	All Establishments Offering Residence	No
276	053-0811621430010	223210	Active	Domestic	Not Available	7700 GLASGOW DR	Edina	46	05/10/1964	QWTA	WEL	1100-01	Residence	No
277	053-1711621130003	223212	Active	Domestic	Not Available	8141 KINGSLEYRD RD	Bloomington	298	08/17/1964	OPDC	WEL	1100-01	Residence	No
278	053-1702724140061	223190	Active	Domestic	Not Available	9734 RUSSELL CI	Bloomington	52	09/15/1960	QWTA	WEL	1000	All Establishments Offering Residence	No
279	053-3202824120050	223194	Active	Domestic	Not Available	2914 71ST ST W	Richfield	72	11/30/1959	QWTA	WEL	1100-01	Residence	No
280	053-3111621430002	114377	Active	Irrigation	Dred Scott Project 1975-	Not Available	Bloomington	502	03/22/1976	MTPL	WEL	6000	Education, Public Administration, Health Care, and Other Institutions	No
281	053-1902824320002	224343	Active	Unknown	Edina H. School Water To	Not Available	Edina	410	Not Available	Not Available	WEL	6000	Education, Public Administration, Health Care, and Other Institutions	No
282	053-0411521330008	204848	Active	Domestic	Mrs. Williutl	5801 AUTOCLUB RD	Bloomington	375	08/05/1962	CJDN	WEL	1000	All Establishments Offering Residence	No
283	053-0711621130001	112250	Active	Irrigation	Braemer Park No.2	Not Available	Edina	382	05/01/1979	OPCJ	WEL	5000	Arts, Entertainment and Recreation	No
284	053-1911621120077	206964	Active	Domestic	Mel Aleshire	8701 UTAH AV S	Bloomington	236	05/19/1965	OPDC	WEL	1100-01	Residence	Yes
285	053-0611621330008	203118	Active	Domestic	Hagerstrom	6700 SIOUX TR	Edina	112	10/12/1964	QUUU	WEL	1000	All Establishments Offering Residence	No
286	053-0802724210090	205227	Active	Domestic	Ray Heisman	3324 88TH ST W	Bloomington	120	08/24/1958	QBUA	WEL	1100-01	Residence	No
287	053-1102724440106	205577	Active	Domestic	Not Available	1700 OLD SHAKOPEE RD E	Bloomington	206	10/27/1958	QBAA	WEL	1000	All Establishments Offering Residence	No
288	053-1902724430098	205396	Active	Domestic	Not Available	10906 JOHNSON AV S	Bloomington	109	11/21/1960	QWTA	WEL	1100-01	Residence	No
289	053-1102724430065	205264	Active	Domestic	Ralph Brueski	9243 15TH AV S	Bloomington	44	05/18/1959	QWTA	WEL	1000	All Establishments Offering Residence	No
290	053-2902824410047	206379	Active	Domestic	Statewide	6617 SHERIDAN AV	Richfield	89	06/06/1961	QBAA	WEL	1000	All Establishments Offering Residence	No
291	053-1902724430082	W0000150	Active	Domestic	Bratsel, Al	10825 NORD S	Bloomington	80	05/27/1988	QWTA	WEL	1100-01	Residence	No
292	053-3002824230083	250044	Unknown	Domestic	Not Available	4730 66TH ST W	Edina	270	Not Available	OSTP	WEL	1000	All Establishments Offering Residence	No
293	053-1711621220021	W0000155	Active	Domestic	Hanger, John	7195 MARTH RD	Bloomington	100	03/16/1988	QWTA	WEL	1000	All Establishments Offering Residence	No
294	053-0402724140017	223026	Active	Domestic	Not Available	1031 80TH ST W	Bloomington	185	07/06/1964	OPDC	WEL	1000	All Establishments Offering Residence	No
295	053-1702724120017	223029	Active	Domestic	Not Available	9408 THOMAS RD	Bloomington	154	04/27/1960	QBAA	WEL	1100-01	Residence	No
296	053-2902824420138	206388	Active	Domestic	Hippe Construction	6721 VINCENT	Richfield	87	Not Available	QBAA	WEL	7000	All Establishments Offering Residence	No
297	Not Available	206208	Active	Domestic	Gus Zuccato	7434 OLIVER AV S	Richfield	68	06/09/1959	QWTA	WEL	1100-01	Residence	No
298	053-3402824320003	206239	Active	Domestic	Milliman Bldrs	321 74TH ST W	Richfield	48	04/13/1960	QBAA	WEL	1000	All Establishments Offering Residence	No
299	053-0902724340011	205241	Active	Domestic	Not Available	1400 94TH ST W	Bloomington	74	06/02/1961	QBAA	WEL	1000	All Establishments Offering Residence	No
300	053-1402724220075	205270	Active	Domestic	Not Available	9517 PORTLAND	Bloomington	83	07/15/1959	QBAA	WEL	1000	All Establishments Offering Residence	No
301	053-2111621220019	204957	Active	Unknown	Judge, C.P.	5716 MT NORMANDALE	Bloomington	406	03/19/1955	OPCJ	WEL	1100-01	Residence	No
302	053-0411621240105	223895	Sealed	Abandoned	V.E. Woodward	6541 TINGDALE AV	Edina	326	10/10/1951	MTPL	WEL	1000	All Establishments Offering Residence	No
303	053-2511622320050	205949	Active	Domestic	Lyle Edlin	10881 BLOSSUM RD	Eden Prairie	213	03/21/1967	QUUU	WEL	1000	All Establishments Offering Residence	No
304	053-3211721440050	206620	Active	Domestic	Lundgren Const.	5509 HIGHLAND RD	Edina	117	12/16/1954	QUUU	WEL	1000	All Establishments Offering Residence	No
305	053-1102724420041	W0000005	Active	Domestic	Rasmusson, Gene	9025 15 AV	Bloomington	42	03/31/1988	QWTA	WEL	1000	All Establishments Offering Residence	No
306	053-0302724320050	223043	Active	Domestic	Not Available	8241 LYNDALE AV S	Bloomington	152	Not Available	QUUU	WEL	1000	All Establishments Offering Residence	No
307	053-0802724240043	223122	Active	Domestic	Not Available	8814 ZENITH RD	Bloomington	92	06/12/1959	QWTA	WEL	1100-01	Residence	No
308	053-2111621210007	223157	Active	Domestic	Not Available	5510 MT. NORMANDALE CV	Bloomington	107	09/09/1964	QBUA	WEL	1100-01	Residence	No
309	053-0411621310064	223893	Active	Unknown	Bertch Bell	6620 NORMANDALE RD	Edina	261	03/00/1958	OSTP	WEL	1000	All Establishments Offering Residence	No
310	Not Available	223920	Active	Domestic	Not Available	7020 LYNDALE AV S	Richfield	61	08/31/1960	QWTA	WEL	1000	All Establishments Offering Residence	No
311	053-1902724430014	205378	Active	Domestic	Not Available	10915 LITTLE AV S	Bloomington	91	01/02/1962	QBAA	WEL	1100-01	Residence	No
312	053-0411621240017	204867	Active	Domestic	Richard Hirsch	6508 WILRYAN	Edina	239	12/08/1959	OSTP	WEL	1000	All Establishments Offering Residence	No
313	053-2902824140028	248536	Sealed	Abandoned	Penn - 66Th Shopping Center 1	PENN AV	Richfield	265	Not Available	OSPC	WEL	2000	General Sales and Service	No
314	053-3211721440021	250021	Inactive	Domestic	Not Available	5604 HIGHLAND RD	Edina	285	Not Available	OSTP	WEL	1000	All Establishments Offering Residence	No
315	053-2902724220001	205508	Active	Domestic	Not Available	11008 DREW AV	Bloomington	139	01/20/1958	Not Available	WEL	1000	All Establishments Offering Residence	No
316	Not Available	218095	Active	Domestic	Not Available	6740 BLAISDELL AV S	Richfield	52	02/06/1963	QWTA	WEL	1100-01	Residence	No

Table C-3

PCSI Results - Wells in the DWSMA
City of Bloomington

Map ID	PID No.	Unique No.	Status	Use	Well Owner	Well Location	City or Twp	Total/Sealed Depth (Feet)	Date Completed/Sealed	Aquifer	PCS Code	Facility Code	Facility Designation	Location Verified
317	Not Available	218130	Active	Unknown	Not Available	6444 IRVING AV S	Richfield	61	12/02/1959	QWTA	WEL	1000	All Establishments Offering Residence	No
318	053-2802824330053	218145	Active	Domestic	Not Available	6916 OLIVER AV S	Richfield	51	10/13/1960	QWTA	WEL	1000	All Establishments Offering Residence	No
319	053-3511622140041	205963	Active	Domestic	Bob Brown	11480 RIVERVIEW RD	Eden Prairie	277	10/04/1963	QBAA	WEL	1000	All Establishments Offering Residence	No
320	053-1102724110059	223052	Active	Domestic	Not Available	1618 PORK RD	Bloomington	37	11/12/1959	QBAA	WEL	1000	All Establishments Offering Residence	No
321	053-0702724130067	223074	Active	Domestic	Not Available	4409 90TH ST W	Bloomington	154	02/26/1960	QBAA	WEL	1100-01	Residence	No
322	053-0702724130021	223093	Active	Domestic	Not Available	8832 MORRIS RD	Bloomington	151	01/27/1960	QBAA	WEL	1100-01	Residence	No
323	053-0702724130074	223103	Active	Unknown	Not Available	4524 SOUTHMORE DR	Bloomington	132	03/11/1960	QBAA	WEL	1100-01	Residence	No
324	053-1702724140006	223126	Active	Domestic	Not Available	2516 98TH ST W	Bloomington	52	09/29/1961	QWTA	WEL	1000	All Establishments Offering Residence	No
325	053-0902724110048	222934	Active	Domestic	Not Available	8625 COLFAX AV	Bloomington	52	11/04/1960	QWTA	WEL	1000	All Establishments Offering Residence	No
326	053-0411621320011	204882	Active	Domestic	Perry Dean	5150 CIRCLE DR	Edina	113	03/10/1959	QBAA	WEL	1000	All Establishments Offering Residence	No
327	053-0802724410007	205231	Active	Domestic	Not Available	9151 QUEEN AV S	Bloomington	77	10/00/1958	QWTA	WEL	1000	All Establishments Offering Residence	No
328	053-1802724110001	118804	Active	Irrigation	Normondale Japanese Gard	9650 FRANCE AV S	Bloomington	325	07/08/1975	MTPL	WEL	2000	General Sales and Service	No
329	053-3111621330021	190471	Active	Domestic	Geo Rybolt	8515 108TH ST W	Bloomington	441	04/24/1982	MTPL	WEL	1000	All Establishments Offering Residence	No
330	053-0502724130085	204997	Active	Domestic	Donnay	8142 VINCENT AV S	Bloomington	87	09/26/1959	QBAA	WEL	1000	All Establishments Offering Residence	No
331	053-3202824110035	218155	Active	Domestic	Not Available	2604 70TH1/2 ST W	Richfield	61	12/11/1959	QWTA	WEL	1100-01	Residence	No
332	053-3202824120041	218161	Active	Domestic	Not Available	3009 70TH1/2 ST W	Richfield	84	01/02/1963	QWTA	WEL	1100-01	Residence	No
333	053-1702724110045	223186	Active	Domestic	Not Available	9532 RUSSELL AV S	Bloomington	84	12/24/1959	QBUA	WEL	1000	All Establishments Offering Residence	No
334	Not Available	223230	Active	Domestic	Not Available	7316 OLIVER AV S	Richfield	61	09/19/1960	QWTA	WEL	1100-01	Residence	No
335	053-3402824310060	223245	Active	Domestic	Not Available	7241 PLEASANT AV S	Richfield	61	03/13/1961	QWTA	WEL	1000	All Establishments Offering Residence	No
336	Not Available	206198	Active	Domestic	George Nelson	7332 EMERSON AV S	Richfield	50	04/23/1952	QWTA	WEL	1000	All Establishments Offering Residence	No
337	053-2802824230014	206311	Active	Domestic	Nordco Inc.	6520 OLIVER AV S	Richfield	70	01/21/1960	QBAA	WEL	1000	All Establishments Offering Residence	No
338	053-2802824130081	206332	Active	Public Supply/Non-community	Woodlake School	1108 66TH ST W	Richfield	380	Not Available	Not Available	WEL	6000	Education, Public Administration, Health Care, and Other Institutions	No
339	053-3302824130030	224348	Active	Domestic	Not Available	7225 HUMBOLDT AV S	Richfield	61	Not Available	QBAA	WEL	1100-01	Residence	No
340	053-0502724310082	205215	Active	Domestic	Not Available	8224 ZENITH AV S	Bloomington	134	12/27/1957	QBAA	WEL	1000	All Establishments Offering Residence	No
341	053-0502724310083	205216	Active	Domestic	Not Available	8232 ZENITH AV S	Bloomington	110	01/09/1958	QBAA	WEL	1000	All Establishments Offering Residence	No
342	053-2002724320001	205455	Active	Domestic	Not Available	10716 BEARD	Bloomington	102	08/05/1959	QWTA	WEL	1100-01	Residence	No
343	Not Available	205461	Active	Domestic	Not Available	10725 CHOWEN CIRCLE CI	Bloomington	104	07/20/1959	QBUA	WEL	1100-01	Residence	No
344	053-3302824330108	206217	Active	Domestic	F. R. Lien Constr.	7620 LOGAN AV S	Richfield	47	07/08/1961	QWTA	WEL	1000	All Establishments Offering Residence	No
345	053-0611621310037	249998	Inactive	Domestic	6621 Mohawk Trail	6621 MOHAWK TR	Edina	310	Not Available	OSTP	WEL	1000	All Establishments Offering Residence	No
346	053-0502724310052	205211	Active	Domestic	Not Available	8200 YORK AV S	Bloomington	117	02/26/1958	QBAA	WEL	1000	All Establishments Offering Residence	No
347	053-1902724440058	205399	Active	Domestic	Not Available	10949 JOHNSON	Bloomington	97	10/17/1959	QBAA	WEL	1000	All Establishments Offering Residence	No
348	053-1911621120036	204932	Active	Domestic	Big Ten Const.	8708 VIRGINIA	Bloomington	148	09/12/1960	QBUA	WEL	1000	All Establishments Offering Residence	No
349	053-2011621230014	204944	Active	Domestic	D.E. Perkins	8851 WOODCLIFF RD	Bloomington	257	07/00/1959	OPDC	WEL	1000	All Establishments Offering Residence	No
350	053-2002724220023	222957	Active	Domestic	Not Available	3725 103RD ST W	Bloomington	143	11/03/1960	QBUA	WEL	1100-01	Residence	No
351	053-0402724310025	222966	Active	Domestic	Statewide Plumbing	8225 LOGAN AV S	Bloomington	62	11/01/1961	QWTA	WEL	1000	All Establishments Offering Residence	No
352	053-0302724310044	222995	Active	Domestic	Not Available	8245 WENTWORTH AV S	Bloomington	47	11/09/1960	QBAA	WEL	1000	All Establishments Offering Residence	No
353	053-0402724140079	223032	Active	Domestic	Not Available	1001 80 1/2 ST W	Bloomington	61	02/17/1960	QBAA	WEL	1000	All Establishments Offering Residence	No
354	053-2902724220013	223382	Active	Domestic	Not Available	11141 DREW AV	Bloomington	96	04/24/1958	QBAA	WEL	1000	All Establishments Offering Residence	No
355	053-0702724330061	205222	Active	Domestic	Marsh, Russell	NORMANDALE RD	Bloomington	440	03/24/1948	CJDN	WEL	1100-01	Residence	No
356	053-3402824220001	206234	Sealed	Abandoned	Central School	72ND& HARRIET AV S.	Richfield	384	08/00/1948	MTPL	WEL	6000	Education, Public Administration, Health Care, and Other Institutions	No
357	053-0902724130008	222936	Active	Domestic	Not Available	8933 GIRARD AV S	Bloomington	61	05/19/1960	QWTA	WEL	1000	All Establishments Offering Residence	No
358	053-0502724310091	W0000006	Active	Domestic	Schubert, Clayton	8209 ABBOTT AV S	Bloomington	85	01/28/1988	QBAA	WEL	1000	All Establishments Offering Residence	No
359	053-0302724310071	223012	Active	Domestic	Not Available	8212 PILLSBURY AV S	Bloomington	51	04/13/1961	QBAA	WEL	1000	All Establishments Offering Residence	No
360	053-0302724240074	223016	Active	Domestic	Not Available	8137 PLEASANT AV S	Bloomington	62	09/08/1965	QWTA	WEL	1000	All Establishments Offering Residence	No
361	053-0511521430012	223175	Active	Domestic	Peter Derubber	6431 BLUFF DR	Bloomington	330	07/22/1969	CJDN	WEL	1000	All Establishments Offering Residence	No
362	053-0602724210011	223216	Active	Domestic	Not Available	4700 78TH ST W	Bloomington	75	04/03/1961	QBAA	WEL	1100-01	Residence	No
363	Not Available	206385	Active	Domestic	Eckberg Realty	6612 WASHBURN	Richfield	89	10/31/1960	QWTA	WEL	1000	All Establishments Offering Residence	No
364	053-3211721430011	206599	Active	Domestic	Joe Eliason	6008 ARBOUR LA	Edina	244	10/01/1960	OPDC	WEL	1000	All Establishments Offering Residence	No
365	053-2902824120066	206368	Active	Domestic	M. C. Laughton	6221 VINCENT AV S	Richfield	115	07/11/1958	QBUA	WEL	1000	All Establishments Offering Residence	No
366	053-2902824330001	206375	Sealed	Abandoned	Donaldson'S	66	Edina	461	04/17/1956	OPDC	WEL	1000	All Establishments Offering Residence	No
367	053-2902824420027	206382	Active	Domestic	D. B. Thompson	6605 VINCENT	Richfield	91	Not Available	QBAA	WEL	1000	All Establishments Offering Residence	No
368	053-3302824330108	206218	Active	Domestic	Chuck Lack	7632 LOGAN AV S	Richfield	50	10/30/1961	QWTA	WEL	1000	All Establishments Offering Residence	No
369	053-3302824330108	206223	Active	Public Supply/Non-community	Century Masonic Lodge	7615 LOGAN AV S	Richfield	73	04/03/1959	QWTA	WEL	2000	General Sales and Service	No
370	053-2111621230013	204958	Active	Domestic	Jack Lein	5800 WOOD DR S	Bloomington	214	06/11/1957	QBAA	WEL	1100-01	Residence	Yes
371	053-3302824320058	223221	Active	Domestic	Not Available	7539 MORGAN AV S	Richfield	62	05/26/1960	QWTA	WEL	1100-01	Residence	No
372	053-2702824240017	206321	Active	Domestic	John Paulson	6413 PLEASANT AV S	Richfield	174	Not Available	OSTP	WEL	1000	All Establishments Offering Residence	No
373	053-0611621210119	203102	Active	Public Supply/Non-community	Crossview Lutheran Churc	6655 MCCAULEY TR	Edina	243	11/10/1969	OSTP	WEL	6000	Education, Public Administration, Health Care, and Other Institutions	No
374	053-0611621320056	203116	Active	Commercial	Poppler Const. Co.	6713 SAMMUEL RD	Edina	96	06/05/1961	QBAA	WEL	2000	General Sales and Service	No
375	053-0202724230005	204972	Active	Domestic	V. E. Mathews	8201 PORTLAND AV S	Bloomington	206	03/20/1959	QBAA	WEL	1000	All Establishments Offering Residence	No
376	Not Available	223069	Active	Domestic	Not Available	4600 90TH ST W	Bloomington	153	02/12/1960	QBAA	WEL	1100-01	Residence	No
377	053-3611622420001	205970	Active	Domestic	Mrs. H. R. Fowler	10315 RIVERVIEW RD	Eden Prairie	427	07/16/1969	CFRN	WEL	1000	All Establishments Offering Residence	No
378	053-1702724110013	223183	Active	Domestic	Not Available	9417 RUSSELL AV S	Bloomington	92	04/19/1960	QWTA	WEL	1000	All Establishments Offering Residence	No
379	053-3202824120110	223191	Active	Domestic	Not Available	2900 71ST ST W	Richfield	71	05/03/1960	QWTA	WEL	1100-01	Residence	No
380	Not Available	223232	Active	Domestic	Not Available	7300 LOGAN AV S	Richfield	51	08/23/1961	QWTA	WEL	1100-01	Residence	No
381	053-3202824410063	206189	Active	Public Supply/Non-community	St. Richard Church	76TH & PENN LM	Richfield	215	07/01/1953	INDT	WEL	6000	Education, Public Administration, Health Care, and Other Institutions	No
382	053-3002824320094	223892	Active	Domestic	George M. Posselt	6709 NORMANDALE RD	Edina	280	02/09/1955	Not Available	WEL	1000	All Establishments Offering Residence	No
383	053-0111622440009	223987	Active	Domestic	Don Anderson	6880 CR 18 CR	Eden Prairie	250	06/17/1967	OPDC	WEL	1000	All Establishments Offering Residence	No
384	053-3211721440033	206611	Active	Domestic	Dick Lundgren	5500 HUNTER ST	Edina	111	02/04/1956	QBAA	WEL	1000	All Establishments Offering Residence	No
385	053-1811621230027	242304	Active	Domestic	Ed Howe Const.	8032 ENSIGN RD	Bloomington	230	02/17/1971	OPDC	WEL	1000	All Establishments Offering Residence	No
386	053-3211721430014	206596	Active	Domestic	Joe Eliason	6021 STUART AV	Edina	239	10/25/1960	OSTP	WEL	1000	All Establishments Offering Residence	No
387	053-2902724230039	205555	Active	Domestic	Not Available	11401 FRANCE AV S	Bloomington	150	09/23/1958	QBAA	WEL	1000	All Establishments Offering Residence	No
388	053-2702824220044	218088	Active	Domestic	Not Available	6316 PLEASANT AV S	Richfield	62	10/16/1961	QWTA	WEL	1000	All Establishments Offering Residence	No
389	053-0611621310028	203113	Active	Domestic	Marvin Fergestad	6612 IROQUOIS TR	Edina	313	09/07/1956	OSTP	WEL	1000	All Establishments Offering Residence	No
390	053-0611621420003	203126	Active	Commercial	Karl Levenius	6404 INDIAN HILLS RD	Edina	171	09/24/1953	QWTA	WEL	2000	General Sales and Service	No
391	053-3302824140054	223235	Active	Domestic	Not Available	7309 COLFAX AV S	Richfield	61	06/14/1961	QWTA	WEL	1000	All Establishments Offering Residence	No
392	053-3402824430032	223262	Active	Domestic	Not Available	7633 STEVENS AV S	Richfield	51	03/13/1961	QWTA	WEL	1000	All Establishments Offering Residence	No
393	053-1702724140015	223187	Active	Domestic	Not Available	9601 RUSSELL AV S	Bloomington	77	07/15/1960	QWTA	WEL	1000	All Establishments Offering Residence	No
394	053-3202824120049	223196	Active	Domestic	Not Available	2920 71ST ST W	Richfield	72	04/28/1960	QWTA	WEL	1100-01	Residence	No
395	053-3202824120055	223202	Active	Domestic	Not Available	3005 71ST ST W	Richfield	83	07/22/1960	QWTA	WEL	1100-01	Residence	No

Table C-3

PCSI Results - Wells in the DWSMA
City of Bloomington

Map ID	PID No.	Unique No.	Status	Use	Well Owner	Well Location	City or Twp	Total/Sealed Depth (Feet)	Date Completed/Sealed	Aquifer	PCS Code	Facility Code	Facility Designation	Location Verified
396	053-1702724110061	223035	Active	Domestic	Not Available	9441 THOMAS RD	Bloomington	134	09/10/1960	QBAA	WEL	1000	All Establishments Offering Residence	No
397	053-3202824110037	218150	Active	Domestic	Not Available	2609 70TH ST W	Richfield	91	02/19/1960	QWTA	WEL	1100-01	Residence	No
398	053-2902824330014	218198	Active	Commercial	Daytons Southdale No. 4	Not Available	Edina	177	00/00/1956	QBAA	WEL	2000	General Sales and Service	No
399	053-1811621320009	204926	Active	Domestic	Ivar Johnson	8124 ENSIGN RD	Bloomington	155	05/00/1963	QBAA	WEL	1000	All Establishments Offering Residence	No
400	053-2802824320014	218134	Active	Domestic	Not Available	6615 MORGAN AV S	Richfield	62	08/03/1960	QWTA	WEL	1000	All Establishments Offering Residence	No
401	053-0902724220006	205234	Active	Domestic	Mark Rosin	8729 PENN AV S	Bloomington	48	06/05/1970	QWTA	WEL	1000	All Establishments Offering Residence	No
402	053-0711621130001	165646	Active	Public Supply/Non-community	Braemar Golf Course	Not Available	Edina	175	05/14/1980	MTPL	WEL	5000	Arts, Entertainment and Recreation	No
403	Not Available	206971	Active	Domestic	Not Available	11110 OLD SHAKOPEE RD	Bloomington	182	10/26/1960	OPDC	WEL	1000	All Establishments Offering Residence	No
404	053-0811621220047	204916	Active	Domestic	Ben E. Hunter	5912 LEE VALLEY RD	Edina	252	07/15/1954	MTPL	WEL	1000	All Establishments Offering Residence	No
405	053-2802824140012	206335	Active	Domestic	Paulson Const.	900 RAE DR	Richfield	93	03/20/1961	QWTA	WEL	1100-01	Residence	No
406	053-1411622310038	205902	Active	Domestic	Roy Johnson	8210 EDEN RD	Eden Prairie	135	10/20/1967	QUUU	WEL	1000	All Establishments Offering Residence	No
407	Not Available	200580	Active	Domestic	Mobilhomes Inc.	5800 XERXES AV	Edina	73	01/16/1951	QWTA	WEL	1000	All Establishments Offering Residence	No
408	Not Available	205269	Active	Domestic	Not Available	9524 ELLIOT AV	Bloomington	58	05/23/1955	QWTA	WEL	1000	All Establishments Offering Residence	No
409	Not Available	223096	Active	Domestic	Not Available	8917 MORRIS RD	Bloomington	151	Not Available	QBAA	WEL	1100-01	Residence	No
410	Not Available	223100	Sealed	Abandoned	Not Available	4500 SOUTHMORE DR	Bloomington	121	02/25/1960	QBAA	WEL	1100-01	Residence	No
411	053-1702724110038	223184	Sealed	Abandoned	Not Available	9501 RUSSELL AV S	Bloomington	73	02/06/1960	QBAA	WEL	1000	All Establishments Offering Residence	No
412	053-3402824230115	206236	Active	Domestic	Sven Micholson	7321 LYNDALE AV S	Richfield	204	06/16/1953	OSTP	WEL	1000	All Establishments Offering Residence	No
413	053-1911621120022	206957	Active	Domestic	Not Available	7821 86TH ST W	Bloomington	148	12/15/1959	QBAA	WEL	1000	All Establishments Offering Residence	No
414	053-0611521120118	206972	Active	Domestic	Not Available	11140 OLD SHAKOPEE RD	Bloomington	187	09/23/1963	OPDC	WEL	1000	All Establishments Offering Residence	No
415	053-0511621110053	204888	Active	Domestic	Lundco Inc.	6208 CRESCEMT DR	Edina	110	05/08/1962	QBAA	WEL	1000	All Establishments Offering Residence	No
416	053-0511621120038	204892	Active	Domestic	Ber Dee Builders	6212 WESTRIDGE BL	Edina	147	06/12/1967	QBAA	WEL	1000	All Establishments Offering Residence	No
417	053-0402724240026	204993	Active	Public Supply/Non-community	Bloomington Elementary S	Not Available	Bloomington	388	04/17/1957	CJDN	WEL	6000	Education, Public Administration, Health Care, and Other Institutions	No
418	053-2902824140036	206371	Active	Domestic	J. R. Kelly Qbaa	6407 RUSSEL AV S	Richfield	90	04/18/1959	QUUU	WEL	1000	All Establishments Offering Residence	No
419	053-2902824230169	206373	Active	Public Supply/Non-community	Fairview Hosp.No.1	Not Available	Edina	355	08/28/1964	OPDC	WEL	6000	Education, Public Administration, Health Care, and Other Institutions	No
420	053-2902824410018	206378	Active	Domestic	Findell	6644 QUEEN AV	Richfield	89	03/04/1969	QBAA	WEL	1000	All Establishments Offering Residence	No
421	Not Available	205533	Active	Domestic	Not Available	11149 DREW AV	Bloomington	96	04/29/1958	Not Available	WEL	1000	All Establishments Offering Residence	No
422	053-3202824120069	218158	Active	Domestic	Not Available	2901 70TH1/2 ST W	Richfield	73	11/12/1960	QWTA	WEL	1100-01	Residence	No
423	053-0511621120051	218194	Active	Domestic	James Hildreth	6223 WESTRIDGE BL	Edina	171	07/11/1958	QBAA	WEL	1000	All Establishments Offering Residence	No
424	053-2902824320003	218196	Active	Domestic	Daytons Southdale No.1	Not Available	Edina	442	00/00/1956	MTPL	WEL	2000	Residence	No
425	Not Available	205468	Active	Domestic	Not Available	3408 108TH ST W	Bloomington	132	07/03/1959	QBAA	WEL	1100-01	Residence	No
426	053-2002724220014	222955	Active	Domestic	Not Available	3708 103RD ST W	Bloomington	168	07/16/1959	QBUA	WEL	1100-01	Residence	No
427	053-3202824410005	206188	Active	Public Supply/Non-community	Lincoln Hills School	7440 PENN AV S	Richfield	270	08/15/1950	OPDC	WEL	6000	Education, Public Administration, Health Care, and Other Institutions	No
428	053-3611622130002	413372	Active	Domestic	Hinderaker	10410 WHITE TAIL CROSSING	Eden Prairie	342	08/16/1985	CJDN	WEL	1000	All Establishments Offering Residence	No
429	053-1902724430104	205384	Active	Domestic	Not Available	10942 JOHNSON	Bloomington	134	02/19/1961	QWTA	WEL	1000	All Establishments Offering Residence	No
430	Not Available	223250	Active	Domestic	Not Available	7332 PLEASANT AV S	Richfield	61	01/14/1960	QBAA	WEL	1000	All Establishments Offering Residence	No
431	053-1902724440066	205395	Active	Domestic	Not Available	10901 JOHNSON AV S	Bloomington	122	Not Available	QBAA	WEL	1100-01	Residence	No
432	053-2002724330059	205462	Active	Public Supply/Non-community	Westwood School	Not Available	Bloomington	395	11/02/1953	CJDN	WEL	6000	Education, Public Administration, Health Care, and Other Institutions	No
433	053-3311721330099	206625	Active	Domestic	Dick Lundgren	5300 62ND ST	Edina	202	12/08/1966	QUUU	WEL	1000	All Establishments Offering Residence	No
434	053-0302724330027	204984	Active	Commercial	Southtown Lumber	8436 LYNDALE AV S	Bloomington	163	03/08/1960	QBAA	WEL	2000	General Sales and Service	No
435	053-0502724140028	222924	Active	Domestic	Not Available	8017 SHERIDAN AV S	Bloomington	56	12/29/1961	QWTA	WEL	1000	All Establishments Offering Residence	No
436	053-2911621320003	118815	Active	Public Supply/Non-community-transient	Hyland Lake Campground	Not Available	Bloomington	201	02/04/1976	QBAA	WEL	5000	Arts, Entertainment and Recreation	No
437	053-0302724320044	223039	Active	Domestic	F. L. Miller	8215 GARFIELD AV S	Bloomington	41	07/17/1959	QWTA	WEL	1000	All Establishments Offering Residence	No
438	Not Available	223095	Active	Domestic	Not Available	8909 MORRIS AV S	Bloomington	165	11/25/1959	QBAA	WEL	1100-01	Residence	No
439	053-3611622130004	415466	Active	Domestic	Woody Ginkel	10430 WHITE TAIL CROSSING	Eden Prairie	294	07/29/1986	QBAA	WEL	1000	All Establishments Offering Residence	No
440	053-3202824240005	200918	Active	Community Supply (Municipal)	Edina 18	Not Available	Edina	446	10/16/1973	CJDN	WEL	6000	Education, Public Administration, Health Care, and Other Institutions	No
441	053-2802824210073	218126	Active	Domestic	M. A. Olson	6301 IRVING AV S	Richfield	43	11/01/1961	QWTA	WEL	1000	All Establishments Offering Residence	No
442	053-1102724410051	205263	Active	Domestic	Dockindorf	9101 BLOOMINGTON AV S	Bloomington	60	04/28/1959	QBAA	WEL	1000	All Establishments Offering Residence	No
443	053-0811621120032	208030	Active	Domestic	William Hunt	7024 CAHILL RD	Edina	228	Not Available	OSTP	WEL	1000	All Establishments Offering Residence	No
444	053-0811621210002	208031	Active	Domestic	Paul Gunderson	7001 LEE VALLEY CI	Edina	235	Not Available	QBAA	WEL	1000	All Establishments Offering Residence	No
445	053-3211721320012	203633	Active	Domestic	A. M. Friberg	5824 OLINGER RD	Edina	189	06/29/1954	OPDC	WEL	1000	All Establishments Offering Residence	No
446	053-0611621310019	222900	Active	Domestic	Marvin Fergestad	6625 E IROQUOIS TR E	Edina	314	07/19/1956	OSTP	WEL	1000	All Establishments Offering Residence	No
447	053-0611621430032	222901	Active	Unknown	Furney Bros.	Not Available	Edina	233	09/24/1959	OSTP	WEL	2000	General Sales and Service	No
448	053-0411621230039	204863	Active	Domestic	Lyman Burke	6413 ROLF AV	Edina	336	02/15/1949	MTPL	WEL	1000	All Establishments Offering Residence	No
449	053-0411621240090	204878	Active	Domestic	Orren Thompson	6524 JOSEPHINE	Edina	257	04/18/1952	Not Available	WEL	1000	All Establishments Offering Residence	No
450	053-3211621230056	109947	Active	Domestic	Frank Kanduth	7010 106TH ST W	Bloomington	100	06/16/1976	QWTA	WEL	1000	All Establishments Offering Residence	No
451	053-0502724310102	205207	Active	Domestic	Not Available	8224 ABBOTT AV S	Bloomington	111	12/09/1957	QBAA	WEL	1000	All Establishments Offering Residence	No
452	053-3402824410107	206250	Active	Domestic	Smith	7521 4TH AV S	Richfield	61	08/22/1960	QWTA	WEL	1000	All Establishments Offering Residence	No
453	Not Available	223260	Active	Domestic	Not Available	7700 NICOLLET	Richfield	212	05/22/1961	OPDC	WEL	1000	All Establishments Offering Residence	No
454	053-3402824410109	223265	Active	Domestic	Kenneth Buss	7509 4TH AV S	Richfield	51	05/19/1960	QWTA	WEL	1000	All Establishments Offering Residence	No
455	053-1702724140054	223188	Active	Domestic	Not Available	9741 RUSSELL AV S	Bloomington	52	03/06/1959	QBUA	WEL	1000	All Establishments Offering Residence	No
456	053-3202824120052	223195	Active	Domestic	Not Available	2915 71ST ST W	Richfield	72	11/30/1959	QWTA	WEL	1100-01	Residence	No
457	053-3202824130030	223205	Active	Domestic	Not Available	7215 VINCENT AV S	Richfield	61	07/15/1959	QWTA	WEL	1100-01	Residence	No
458	053-0802724120056	205225	Active	Domestic	John Pandelis	8642 WASHBURN AV S	Bloomington	110	07/29/1959	QWTA	WEL	1000	All Establishments Offering Residence	No
459	053-1502724110108	205327	Active	Domestic	Carl Vedin	9541 5TH AV S	Bloomington	39	06/15/1959	QWTA	WEL	1000	All Establishments Offering Residence	No
460	Not Available	223918	Active	Domestic	Not Available	7046 5TH AV S	Richfield	51	01/03/1961	QWTA	WEL	1000	All Establishments Offering Residence	No
461	053-0511621410012	204884	Active	Community Supply (Municipal)	Edina 8	Not Available	Edina	472	00/00/1953	OPCJ	WEL	6000	Education, Public Administration, Health Care, and Other Institutions	No
462	053-1402724210050	223065	Active	Domestic	Not Available	9524 ELLIOT AV S	Bloomington	52	05/24/1965	QBAA	WEL	1000	All Establishments Offering Residence	No
463	053-0702724130087	223109	Active	Domestic	Not Available	4617 SOUTHMORE DR	Bloomington	170	04/14/1960	QBAA	WEL	1100-01	Residence	No
464	053-0502724420076	223116	Active	Domestic	Not Available	8319 WASHBURN AV S	Bloomington	89	04/13/1960	QBUA	WEL	1000	All Establishments Offering Residence	No
465	Not Available	218157	Active	Domestic	Not Available	2823 70TH1/2 ST W	Richfield	67	09/13/1960	QWTA	WEL	1100-01	Residence	No
466	053-0611621220020	203103	Active	Domestic	Pete Loscheider	6316 POST LA	Edina	227	06/12/1964	OSTP	WEL	1000	All Establishments Offering Residence	No
467	053-0611621230012	203105	Active	Domestic	Pearson Bros.	6808 MARGARET LA	Edina	267	01/20/1958	OSTP	WEL	1000	All Establishments Offering Residence	No
468	053-0302724330015	204985	Active	Commercial	Concrete Prod. Co.	312 86TH ST W	Bloomington	67	03/28/1956	QWTA	WEL	2000	General Sales and Service	No

Table C-4

PCSI Results - Potential Class V Well Locations in the DWSMA
City of Bloomington

Map ID	PID No.	Status	Location Name	Street Address	City or Twp	PCS Code	Facility Code	Facility Designation	Location Verified
1	053-0202724210014	Active	Ritchie Engineering Co Inc	999 E 79Th St	Bloomington	CVWWD	2000	General Sales and Service	Yes
2	053-0811621410007	Active	Sico Inc	7525 Cahill Rd	Edina	CVWWD	3000	Manufacturing and Wholesale Trade	Yes
3	053-2902824320009	Active	Southdale Shopping Center	66Th St. And France Ave. S.	Edina	CVWWD	2100	Retail Sales or Service	Yes
4	053-0511521240007	Active	Bethany Fellowship Inc	6820 Auto Club Rd	Bloomington	CVWWD	6000	Education, Administration, Health Care, and other Institutions	Yes
5	053-1002724140003	Active	Bloomington Public Schools	8900 Portland Ave	Bloomington	CVWWD	6000	Education, Administration, Health Care, and other Institutions	Yes
6	053-0511521410003	Not Available	Minnesota Valley Country Club	6300 Auto Club Rd	Bloomington	CVWWD	5000	Arts, Entertainment and Recreation	Yes
7	053-0511521410003	Not Available	Minnesota Valley Country Club	6300 Auto Club Rd	Bloomington	CVWWD	5000	Arts, Entertainment and Recreation	Yes
8	053-2911621210002	Not Available	Three Rivers Park District	9601 Oregon Ave S	Bloomington	CVWWD	5000	Arts, Entertainment and Recreation	Yes
9	053-1602724110004	Old or obsolete operation	Ruckert Automotive	9500 Lyndale Ave S	Bloomington	CVMVW	2000	General Sales and Service	No
10	053-1902724410025	Old or obsolete operation	Valvoline Instant Oil Change	10630 France Ave S	Bloomington	CVMVW	2110-01	Automotive/Vehicle Repair	No
11	053-1411622310038	Currently Licensed	Valvoline Instant Oil Change	8260 Flying Cloud Dr	Eden Prairie	CVMVW	2000	General Sales and Service	No
12	053-0902724110128	Currently Licensed	Valvoline Instant Oil Change	8602 Lyndale Ave S	Bloomington	CVMVW	2000	General Sales and Service	No
13	053-0302724240071	Old or obsolete operation	Bloomington Auto Truck	8146 Pillsbury Ave S	Bloomington	CVMVW	2000	General Sales and Service	No
14	053-0902724410071	Old or obsolete operation	Scott Auto Parts Pro Inc.	9060 Lyndale Ave S	Bloomington	CVMVW	2000	General Sales and Service	No
15	053-0902724410071	Non-Generator	Auto Comp Inc	9050 Lyndale Ave S	Bloomington	CVMVW	2000	General Sales and Service	No
16	053-0911621330001	Old or obsolete operation	General Motors Service Parts Operations	7600 Metro Blvd	Edina	CVMVW	2110-01	Automotive/Vehicle Repair	No
17	053-3402824330005	Old or obsolete operation	Kornell Automotive	7724 Harriet Ave S	Richfield	CVMVW	2000	General Sales and Service	No
18	053-0902724110089	Old or obsolete operation	Ray'S Radiator Service	8718 Lyndale Ave S	Bloomington	CVMVW	2000	General Sales and Service	No
19	053-0802724440082	Old or obsolete operation	Precision Wheel Service	9349 Penn Ave S	Bloomington	CVMVW	2000	General Sales and Service	No
20	053-0902724440061	Old or obsolete operation	Natole'S (John) Gt Cars	9242 Bryant Ave S	Bloomington	CVMVW	2000	General Sales and Service	No
21	053-3211621330011	Currently Licensed	Z Tech Automobile Service Inc	7101 Old Shakopee Rd W Ste 200	Bloomington	CVMVW	2000	General Sales and Service	No
22	053-1002724320024	Old or obsolete operation	Pates (Dan) Auto	9033 Lyndale Ave S	Bloomington	CVMVW	2000	General Sales and Service	No
23	053-3402824330004	Currently Licensed	Lamettry'S Collision Inc	501 77Th St W	Richfield	CVMVW	2000	General Sales and Service	No
24	053-1002724320018	Old or obsolete operation	Andy & George'S Auto Service Center	541 90Th St W	Bloomington	CVMVW	2000	General Sales and Service	No
25	053-2902824310025	Old or obsolete operation	Midas Muffler	6636 York Ave S	Edina	CVMVW	2110-01	Automotive/Vehicle Repair	No
26	053-2902824420001	Currently Licensed	Goodyear Tire & Rubber Co	3013 66Th St W	Richfield	CVMVW	2000	General Sales and Service	No
27	053-1311622120003	Old or obsolete operation	Class Imports Inc	10100 Viking Dr	Eden Prairie	CVMVW	2000	General Sales and Service	Yes
28	053-1411622420005	Currently Licensed	Firestone Tire & Rubber Co	550 Prairie Center Dr	Eden Prairie	CVMVW	2000	General Sales and Service	No
29	053-0302724310154	Currently Licensed	Pillsbury Automotive	8311 Pillsbury Ave S	Bloomington	CVMVW	2000	General Sales and Service	No
30	053-2802824110016	Currently Licensed	Nelvin'S Body Shop	6232 Lyndale Ave S	Richfield	CVMVW	2000	General Sales and Service	No
31	053-2802824230023	Currently Licensed	Auto Machine & Supply Co	6501 Penn Ave S	Richfield	CVMVW	2000	General Sales and Service	No
32	053-0902724440042	Currently Licensed	Firestone Store #7324	9300 Lyndale Ave S	Bloomington	CVMVW	2000	General Sales and Service	No
33	053-1002724320007	Old or obsolete operation	Bloomington Automatic Inc	421 90Th St W	Bloomington	CVMVW	2000	General Sales and Service	Yes
34	053-1002724310057	Old or obsolete operation	Freeway Dodge Body Shop	9010 Pillsbury Ave S Bay 5	Bloomington	CVMVW	2000	General Sales and Service	No
35	053-0902724320086	Old or obsolete operation	Bloomington Tire Center Inc	9001 Penn Ave S	Bloomington	CVMVW	2000	General Sales and Service	No
36	053-0811621440013	Old or obsolete operation	P & L Automotive	5301 Edina Indust Blvd	Edina	CVMVW	2110-01	Automotive/Vehicle Repair	No
37	053-2902824310005	Currently Licensed	Firestone	3425 66Th St W	Edina	CVMVW	2000	General Sales and Service	Yes
38	053-1002724330025	Old or obsolete operation	Lamere'S Auto Sales	9301 Lyndale Ave S	Bloomington	CVMVW	2000	General Sales and Service	No
39	053-0111622440002	Old or obsolete operation	Southwest Automotive Inc	6840 Washington Ave S	Eden Prairie	CVMVW	2000	General Sales and Service	No
40	053-0302724310097	Old or obsolete operation	Roger'S Service Co	8301 Pillsbury Ave S	Bloomington	CVMVW	2000	General Sales and Service	No
41	053-0902724230075	Old or obsolete operation	Crown Auto Store	8913 Penn Ave S	Bloomington	CVMVW	2000	General Sales and Service	No
42	053-1902724410029	Currently Licensed	Goodyear Tire & Auto	10608 France Ave S	Bloomington	CVMVW	2110-01	Automotive/Vehicle Repair	No
43	053-3402824140118	Old or obsolete operation	Dan'S Auto Body	7221 Clinton Ave S	Richfield	CVMVW	2000	General Sales and Service	No
44	053-3211621330011	Currently Licensed	Abra Auto Body & Glass - W Bloomington	7101 Old Shakopee Rd W	Bloomington	CVMVW	2000	General Sales and Service	No
45	053-1002724220013	Currently Licensed	Chief'S Towing Inc	8610 Harriet Ave S	Bloomington	CVMVW	2000	General Sales and Service	No
46	053-1602724120011	Non-Generator	Chief'S Towing Inc	1200 97Threet St W	Bloomington	CVMVW	2000	General Sales and Service	No
47	053-1002724220022	Old or obsolete operation	Marque Motors	8711 Lyndale Ave S	Bloomington	CVMVW	2000	General Sales and Service	No
48	053-0602724110024	Currently Licensed	Bobby & Steve'S Auto World	7920 France Ave S	Bloomington	CVMVW	2110-01	Automotive/Vehicle Repair	No
49	053-0902724410071	Non-Generator	Auto Comp Inc	9050 Lyndale Ave S	Bloomington	CVMVW	2000	General Sales and Service	No
50	053-0402724110035	Currently Licensed	Abra Auto Body & Glass - E Bloomington	1000 American Blvd W	Bloomington	CVMVW	2000	General Sales and Service	Yes
51	053-0202724120026	Old or obsolete operation	Corporate Auto Maintenance	1525 78Th St E	Bloomington	CVMVW	2000	General Sales and Service	No
52	053-0402724140017	Old or obsolete operation	Corporate Auto Maintenance	921 80Th St W	Bloomington	CVMVW	2000	General Sales and Service	No
53	053-0111622330023	Old or obsolete operation	Countryside Auto Parts & Sales	6908 Bryant Lake Dr	Eden Prairie	CVMVW	2000	General Sales and Service	No
54	053-1002724240026	Currently Licensed	Auto Electric Service	201 88Th St W	Bloomington	CVMVW	2000	General Sales and Service	Yes
55	053-1211622120004	Old or obsolete operation	Chrysler Motors	7123 Shady Oak Rd	Eden Prairie	CVMVW	2000	General Sales and Service	No
56	053-1411622140025	Old or obsolete operation	Eden Prairie Automotive	8009 Flying Cloud Dr	Eden Prairie	CVMVW	2000	General Sales and Service	No
57	053-0402724120022	Old or obsolete operation	Roger'S Body Shop	1301 American Blvd	Bloomington	CVMVW	2000	General Sales and Service	Yes
58	053-0302724210026	Old or obsolete operation	Williams Auto Livery Co.	201 78Th St W	Bloomington	CVMVW	2000	General Sales and Service	No
59	053-3402824340055	Old or obsolete operation	Rpm Automotive	7720 Wentworth Ave S Ste Bay1	Richfield	CVMVW	2000	General Sales and Service	No
60	053-0902724440055	Old or obsolete operation	Kolorite Auto Body	9326 Bryant Ave S	Bloomington	CVMVW	2000	General Sales and Service	No

Table C-4

PCSI Results - Potential Class V Well Locations in the DWSMA
City of Bloomington

Map ID	PID No.	Status	Location Name	Street Address	City or Twp	PCS Code	Facility Code	Facility Designation	Location Verified
61	053-1002724330013	Old or obsolete operation	Al'S Body Shop And Service Center	9323 Garfield Ave S	Bloomington	CVMVW	2000	General Sales and Service	No
62	053-0302724240077	Old or obsolete operation	Metro Truck & Body	180 79Th St W	Bloomington	CVMVW	2000	General Sales and Service	No
63	053-0302724110009	Old or obsolete operation	Rau Truck Service	335 78Th St E	Bloomington	CVMVW	2000	General Sales and Service	No
64	053-2802824320062	Currently Licensed	Car X Muffler Shop	6645 Penn Ave S	Richfield	CVMVW	2000	General Sales and Service	No
65	053-0902724140078	Old or obsolete operation	Red Rooster Auto Stores	8810 Lyndale Ave S	Bloomington	CVMVW	2000	General Sales and Service	No
66	053-2802824230007	Old or obsolete operation	Al'S Auto Service	6445 Penn Ave S	Richfield	CVMVW	2000	General Sales and Service	No
67	053-0502724140001	Currently Licensed	Bloomington Chrysler Jeep Dodge	8000 Penn Ave S	Bloomington	CVMVW	2000	General Sales and Service	No
68	053-0202724440054	Old or obsolete operation	J & S Automotive	8446 16Th Ave S	Bloomington	CVMVW	2000	General Sales and Service	No
69	053-1411622310038	Currently Licensed	Midas Muffler & Brake Shop(Eden Prairie)	8260 Flying Cloud Dr	Eden Prairie	CVMVW	2000	General Sales and Service	No
70	053-2902824410145	Currently Licensed	Penn Auto Care	6724 Penn Ave S	Richfield	CVMVW	2000	General Sales and Service	No
71	053-2102824330090	Old or obsolete operation	South Penn Auto Center	6001 Penn Ave S	Minneapolis	CVMVW	2000	General Sales and Service	No
72	053-0902724110126	Non-Generator	Marque Motors	8700 Lyndale Ave S	Bloomington	CVMVW	2000	General Sales and Service	No
73	053-0402724110022	Currently Licensed	Walser Lincoln Mercury	1001 Clover Dr	Bloomington	CVMVW	2000	General Sales and Service	Yes
74	053-1002724220031	Old or obsolete operation	Crown Auto	8653 Lyndale Ave S	Bloomington	CVMVW	2000	General Sales and Service	No
75	053-2902824310007	Old or obsolete operation	Auto Max	3226 Southdale Cir	Edina	CVMVW	2000	General Sales and Service	No
76	053-0902724330003	Old or obsolete operation	Automotive Wholesalers Inc	9345 Penn Ave S	Bloomington	CVMVW	2000	General Sales and Service	No
77	053-0302724210016	Currently Licensed	Auto Tech Tune & Repair	7900 Nicollet Ave S	Bloomington	CVMVW	2000	General Sales and Service	No
78	053-0111622440010	Old or obsolete operation	Lesco Service Center	6953 Washington Ave S	Eden Prairie	CVMVW	2000	General Sales and Service	No
79	053-0111622440010	Currently Licensed	Lesco Service Center	6925 Washington Ave S	Eden Prairie	CVMVW	2000	General Sales and Service	No
80	053-1211622140004	Old or obsolete operation	Custom Auto Cleaners	7244 Washington Ave S	Eden Prairie	CVMVW	2000	General Sales and Service	No
81	053-1002724240037	Old or obsolete operation	Automotive Concepts Of Minnesota Inc	8888 Wentworth Ave S	Bloomington	CVMVW	2000	General Sales and Service	No
82	053-1411622240005	Old or obsolete operation	Jiffy Lube #1419	8100 Eden Rd	Eden Prairie	CVMVW	2000	General Sales and Service	No
83	053-2902824240007	Currently Licensed	Jiffy Lube #148	6701 York Ave S	Edina	CVMVW	2000	General Sales and Service	No
84	053-1002724330057	Old or obsolete operation	Jiffy Lube #50	9215 Lyndale Ave S	Bloomington	CVMVW	2000	General Sales and Service	No
85	053-0402724220010	Currently Licensed	Jiffy Lube #1371	7999 Penn Ave S	Bloomington	CVMVW	2000	General Sales and Service	No
86	053-0111622440009	Currently Licensed	Undercar Services	6843 Washington Ave S	Eden Prairie	CVMVW	2000	General Sales and Service	No
87	053-0902724430013	Currently Licensed	Bloomington Tire & Auto	9333 Bloomington Freeway	Bloomington	CVMVW	2000	General Sales and Service	No
88	053-3402824440025	Currently Licensed	Bon Auto Body And Glass Inc	7714 5Th Ave S	Richfield	CVMVW	2000	General Sales and Service	No
89	053-3002824440001	Old or obsolete operation	Southdale Automotive Professionals	6996 France Ave S	Edina	CVMVW	2000	General Sales and Service	No
90	053-0302724230068	Non-Generator	Martin'S (Wade) Auto Detail Inc	8011 Grand Ave S Ste Bay2A	Bloomington	CVMVW	2000	General Sales and Service	No
91	053-1902824430060	Old or obsolete operation	Roster'S Service & Rental	4416 Valley View Rd	Edina	CVMVW	2000	General Sales and Service	Yes
92	053-1211622140007	Non-Generator	Corporate Auto Rentals Inc	7384 Washington Ave S	Eden Prairie	CVMVW	2000	General Sales and Service	No
93	053-1002724320019	Currently Licensed	Andy & George'S Auto Service Center	521 90Th St W	Bloomington	CVMVW	2000	General Sales and Service	No
94	053-1211622140004	Non-Generator	Auto Visions	7222 Washington Ave S	Eden Prairie	CVMVW	2000	General Sales and Service	No
95	053-1211622410001	Old or obsolete operation	Auto Tran Inc	7424 Washington Ave S	Eden Prairie	CVMVW	2000	General Sales and Service	No
96	053-0902724340009	Old or obsolete operation	Precision Wheel Service Inc	9220 James Ave S Ste Left	Bloomington	CVMVW	2000	General Sales and Service	No
97	053-0602724130127	Currently Licensed	Walser Bpg	4601 American Blvd W	Bloomington	CVMVW	2110-01	Automotive/Vehicle Repair	Yes
98	053-1002724320020	Currently Licensed	Walser Collision & Glass	9001 Grand Ave S Ste A	Bloomington	CVMVW	2000	General Sales and Service	No
99	053-1411622340027	Currently Licensed	Tires Plus Store - Eden Prairie # 8122 / 244210	8453 Joiner Way	Eden Prairie	CVMVW	2000	General Sales and Service	No
100	053-3402824330006	Currently Licensed	Tires Plus Store - Richfield #8140 / 244221	500 78Th St W	Richfield	CVMVW	2000	General Sales and Service	Yes
101	053-2902824130082	Currently Licensed	Tires Plus Store - Southdale #8137 / 244222	3020 66Th St W	Richfield	CVMVW	2000	General Sales and Service	No
102	053-0302724240075	Old or obsolete operation	Riverwood Automotive	222 82Nd St W	Bloomington	CVMVW	2000	General Sales and Service	No
103	053-0302724130061	Old or obsolete operation	Southtown Tire & Service	8041 Nicollet Ave S	Bloomington	CVMVW	2000	General Sales and Service	No
104	053-0402724140020	Currently Licensed	Cc Auto Repair	1031 80Th St W	Bloomington	CVMVW	2000	General Sales and Service	Yes
105	053-3502824430073	Old or obsolete operation	Airport Auto Rentals Inc	1400 78Th St E	Richfield	CVMVW	2000	General Sales and Service	Yes
106	053-1002724230002	Currently Licensed	Dee'S Auto Repair	8945 Lyndale Ave S	Bloomington	CVMVW	2000	General Sales and Service	No
107	053-0902724440057	Old or obsolete operation	Genes Auto Service	1000 94Th St W Ste B	Bloomington	CVMVW	2000	General Sales and Service	Yes
108	053-1911621330033	Old or obsolete operation	Townsend Automotive & Tire	9246 Bloomington Ferry Rd	Bloomington	CVMVW	2000	General Sales and Service	No
109	053-2902824140023	Currently Licensed	Lerum Auto Inc	6420 Penn Ave S	Richfield	CVMVW	2000	General Sales and Service	No
110	053-1602724110011	Currently Licensed	Autopia Bloomington	9480 Lyndale Ave S	Bloomington	CVMVW	2000	General Sales and Service	No
111	053-1002724330044	Currently Licensed	Midas	9211 Lyndale Ave S	Bloomington	CVMVW	2000	General Sales and Service	No
112	053-1002724320007	Currently Licensed	Twin City Auto Body Inc	419 90Th St W	Bloomington	CVMVW	2000	General Sales and Service	No
113	053-0811621110005	Currently Licensed	1St Choice Auto Repair	5415 70Th St W	Edina	CVMVW	2000	General Sales and Service	No
114	053-1111622310001	Currently Licensed	Lamettry'S Collision Inc	11903 Valley View Rd	Eden Prairie	CVMVW	2110-01	Automotive/Vehicle Repair	Yes
115	053-0402724210001	Currently Licensed	Bloomington Mitsubishi	1750 American Blvd W	Bloomington	CVMVW	2000	General Sales and Service	Yes
116	053-1411622340027	Currently Licensed	Holman Automotive	8449 Joiner Way	Eden Prairie	CVMVW	2000	General Sales and Service	No
117	053-3502824330008	Currently Licensed	Sinclair Auto Repair	7733 Portland Ave S	Richfield	CVMVW	2000	General Sales and Service	No
118	053-1602724110008	Currently Licensed	Autozone #3089	9412 Lyndale Ave S	Bloomington	CVMVW	2000	General Sales and Service	No
119	053-3211621420012	Currently Licensed	Gabberts Service Center	10759 Hampshire Ave S	Bloomington	CVMVW	2000	General Sales and Service	No
120	053-0902724110067	Currently Licensed	Car-X Auto Service	8640 Lyndale Ave S	Bloomington	CVMVW	2000	General Sales and Service	No

Table C-4

PCSI Results - Potential Class V Well Locations in the DWSMA
City of Bloomington

Map ID	PID No.	Status	Location Name	Street Address	City or Twp	PCS Code	Facility Code	Facility Designation	Location Verified
121	053-1411622240006	Currently Licensed	Car-X Auto Service	8108 Eden Rd	Eden Prairie	CVMVW	2000	General Sales and Service	No
122	053-1411622340027	Currently Licensed	Precision Tune	8451 Joiner Way	Eden Prairie	CVMVW	2000	General Sales and Service	No
123	053-0111622440002	Old or obsolete operation	Auto Source Inc	6826 Washington Ave S	Eden Prairie	CVMVW	2000	General Sales and Service	No
124	053-0811621430020	Currently Licensed	P & L Automotive	5625 78Th St W	Edina	CVMVW	2110-01	Automotive/Vehicle Repair	No
125	053-0902724430010	Currently Licensed	Lamettry'S Collision Inc	9321 Bloomington Fwy E Ste A	Bloomington	CVMVW	2000	General Sales and Service	No
126	053-0902724330003	Currently Licensed	Automotive Wholesalers Inc	2224 94Th St W	Bloomington	CVMVW	2000	General Sales and Service	No
127	053-0402724240030	Currently Licensed	Bloomington Kia	1701 American Blvd W	Bloomington	CVMVW	2000	General Sales and Service	Yes
128	053-0902724440058	Licensing in Process	National Tire & Battery #894	9200 Lyndale Ave S	Bloomington	CVMVW	2000	General Sales and Service	No
129	053-0602724240004	Currently Licensed	Bloomington Hyundai	4801 American Blvd W Unit C	Bloomington	CVMVW	2110-01	Automotive/Vehicle Repair	Yes
130	053-0111622440009	Licensing in Process	Lavalley'S Auto Repair Llc	6801 Washington Ave S Ste 140	Eden Prairie	CVMVW	2000	General Sales and Service	No
131	053-2902824310007	Currently Licensed	Honest-1 Auto Care	3224 Southdale Cir	Edina	CVMVW	2000	General Sales and Service	No
132	053-3302824440231	Old or obsolete operation	79Th Street Car Care	1109 78 1/2 St W	Richfield	CVMVW	2000	General Sales and Service	No
133	053-0302724210026	Old or obsolete operation	Gray'S Garage	160 79Th St W	Bloomington	CVMVW	2000	General Sales and Service	No
134	053-1411622420011	Old or obsolete operation	Eden Prairie Body Shop	8001 Flying Cloud Dr	Eden Prairie	CVMVW	2000	General Sales and Service	No
135	053-1602724110005	Old or obsolete operation	D & B Auto	710 96Th St W Ste B	Bloomington	CVMVW	2000	General Sales and Service	No
136	053-3302824440232	Old or obsolete operation	Classic Car Care	723 77 1/2 St W	Richfield	CVMVW	2000	General Sales and Service	No
137	053-0402724110033	Old or obsolete operation	Abra Auto Body & Glass - E Bloomington (904)	904 79Th St W	Bloomington	CVMVW	2000	General Sales and Service	No
138	053-0811621410016	Old or obsolete operation	P & L Automotive	7449 Cahill Rd Ste 120	Edina	CVMVW	2110-01	Automotive/Vehicle Repair	No
139	053-3302824440233	Old or obsolete operation	Valvoline Rapid Oil Change	7700 Lyndale Ave S	Richfield	CVMVW	2000	General Sales and Service	No
140	053-1002724330065	Currently Licensed	494 Freeway 66 Service	9209 Lyndale Ave S	Bloomington	CVMVW	2000	General Sales and Service	No
141	053-3311621310067	Old or obsolete operation	Linn 76 Service	10740 Normandale Blvd	Bloomington	CVMVW	2110-01	Automotive/Vehicle Repair	Yes
142	053-3302824330108	Old or obsolete operation	Abra Auto Body	7725 Morgan Ave S	Richfield	CVMVW	2000	General Sales and Service	No
143	053-1602724110006	Old or obsolete operation	East Bloomington Tire & Auto	9538 Lyndale Ave S	Bloomington	CVMVW	2000	General Sales and Service	No
144	053-0402724220002	Old or obsolete operation	Goodyear Tire & Rubber Co.	2115 Southtown Dr	Bloomington	CVMVW	2000	General Sales and Service	No
145	053-0302724210026	Old or obsolete operation	Corporate Auto Maintenance	170 79Th St W	Bloomington	CVMVW	2000	General Sales and Service	No
146	053-3302824330108	Old or obsolete operation	Walser Buick Inc	2100 78Th St W	Richfield	CVMVW	2000	General Sales and Service	No
147	053-0402724240033	Old or obsolete operation	Bloomington Acura	8030 Humboldt Ave S	Bloomington	CVMVW	2000	General Sales and Service	No
148	053-0302724330028	Old or obsolete operation	Holiday Auto Center	601 84Th St W	Bloomington	CVMVW	2000	General Sales and Service	No
149	053-3302824330108	Old or obsolete operation	Excellence Auto Service	7608 Knox Ave S	Richfield	CVMVW	2000	General Sales and Service	No
150	053-2002724320064	Non-Generator	Burke Auto & Truck Parts	10619 France Ave S	Bloomington	CVMVW	2110-01	Automotive/Vehicle Repair	No
151	053-0902724410075	Currently Licensed	Great Bear Tire & Auto	9000 Lyndale Ave S	Bloomington	CVMVW	2000	General Sales and Service	No
152	053-0402724230016	Old or obsolete operation	Penn Auto Plazza	8099 Penn Ave S Ste A	Bloomington	CVMVW	2000	General Sales and Service	No
153	053-2311622320072	Currently Licensed	Modern Auto Care	9051 Flying Cloud Dr	Eden Prairie	CVMVW	2000	General Sales and Service	No
154	053-3302824330108	Old or obsolete operation	Walser Imports	2000 78Th St W	Richfield	CVMVW	2000	General Sales and Service	No
155	053-0402724120031	Non-Generator	Walser Detail Center	1400 79Th St W	Bloomington	CVMVW	2000	General Sales and Service	No
156	053-0402724230001	Old or obsolete operation	Walser Bloomington Dodge	8011 Penn Ave S	Bloomington	CVMVW	2000	General Sales and Service	No
157	053-0602724130128	Currently Licensed	Walser Toyota	4401 American Blvd W	Bloomington	CVMVW	2110-01	Automotive/Vehicle Repair	Yes
158	053-3302824440232	Non-Generator	Sunset Auto Detail	904 77 1/2 St W	Richfield	CVMVW	2000	General Sales and Service	No
159	053-2702824230079	Old or obsolete operation	Penske Auto Center	6501 Lyndale Ave S Ste B	Richfield	CVMVW	2000	General Sales and Service	No
160	053-0302724210026	Old or obsolete operation	Five Star Auto Salon	145 78Th St W	Bloomington	CVMVW	2000	General Sales and Service	No
161	053-2311622320072	Old or obsolete operation	Cara Collision & Glass	9057 Flying Cloud Dr	Eden Prairie	CVMVW	2000	General Sales and Service	No
162	053-0402724220012	Old or obsolete operation	Southtown Tire & Service	7901 Penn Ave S	Bloomington	CVMVW	2000	General Sales and Service	No
163	053-0111622410023	Currently Licensed	Valley Auto Sales & Leasing Inc	9811 Hamilton Rd	Eden Prairie	CVMVW	2000	General Sales and Service	No
164	053-3311621310067	Currently Licensed	Bobby And Steve'S Auto World	10730 Normandale Blvd	Bloomington	CVMVW	2110-01	Automotive/Vehicle Repair	Yes
165	053-1411622310050	Not Available	Valvoline Rapid Oil Change	8160 Flying Cloud Dr	Eden Prairie	CVMVW	2000	General Sales and Service	No
166	053-0911621340004	Not Available	Edina 66 Service	5101 Edina Industrial Bl	Edina	CVMVW	2110-01	Automotive/Vehicle Repair	No
167	053-0402724110034	Not Available	494 Freeway 66 Service Inc	7856 Lyndale Av S	Bloomington	CVMVW	2000	General Sales and Service	No
168	053-3302824330108	Not Available	Wally Mccarthys Oldsmobile Inc	1900 78Th St W	Richfield	CVMVW	2000	General Sales and Service	No
169	053-1102724440106	Not Available	Bloomington 66 Service	1700 Old Shakopee Rd E	Bloomington	CVMVW	2000	General Sales and Service	Yes
170	053-0902724110129	Not Available	Rapid Oil Change	8600 Lyndale Av S	Bloomington	CVMVW	2000	General Sales and Service	No
171	053-2902824210011	Not Available	Edina Care Center	6200 Xerxes Av S	Edina	CVMVW	2000	General Sales and Service	No
172	053-3302824330108	Not Available	Walser Buick Isuzu	7745 Penn Av S	Richfield	CVMVW	2000	General Sales and Service	No
173	053-0402724210003	Not Available	Harold Chevrolet Inc	1601 Southtown Dr	Bloomington	CVMVW	2000	General Sales and Service	Yes
174	053-0402724210001	Not Available	Southtown Freeway Toyota	1750 80Th St W	Bloomington	CVMVW	2000	General Sales and Service	Yes
175	053-3302824440232	Not Available	Formerly Napa Auto Part Store	718 77 1/2 St	Richfield	CVMVW	2000	General Sales and Service	No
176	053-0902724430013	Not Available	Bloomington Tire And Auto	9331 Bloomington Frwy	Bloomington	CVMVW	2000	General Sales and Service	No

Approximate - Parcel not found but location is approximately where that address would exist.

Table C-5

PCSI Results - Storage Tank Locations in the DWSMA
City of Bloomington

Map ID	PID Number	MPCA ID	Site	Site Address	City	Tank Number	Install Date	Registration Date	Tank Capacity	Tank Status	Tank Product	Date Removed	Release Discovered Date	Release Report Date	Complete Site Closure Date	PCS Code-Material Code	Facility Code	Facility Designation	Location Verified
1	053-1611621240002	3173	494 Citgo	5311 Green Valley Dr	Bloomington	001	12/1/1984	5/5/1986	550	Removed	Waste Oil	Not Available	-	-	-	UST-W000	2116	Gasoline Services	No
1	053-1611621240002	3173	494 Citgo	5311 Green Valley Dr	Bloomington	002	12/1/1984	5/5/1986	1,000	Removed	Fuel Oil	Not Available	-	-	-	UST-F000	2116	Gasoline Services	No
1	053-1611621240002	3173	494 Citgo	5311 Green Valley Dr	Bloomington	003	12/1/1984	5/5/1986	10,000	Removed	Gasoline	Not Available	-	-	-	UST-F000	2116	Gasoline Services	No
1	053-1611621240002	3173	494 Citgo	5311 Green Valley Dr	Bloomington	004	12/1/1984	5/5/1986	10,000	Removed	Gasoline	Not Available	-	-	-	UST-F000	2116	Gasoline Services	No
1	053-1611621240002	3173	494 Citgo	5311 Green Valley Dr	Bloomington	005	12/1/1984	5/5/1986	10,000	Removed	Gasoline	Not Available	-	-	-	UST-F000	2116	Gasoline Services	No
1	053-1611621240002	3173	494 Citgo	5311 Green Valley Dr	Bloomington	006	6/1/2003	11/29/2006	6,000	Removed	Diesel	Not Available	-	-	-	UST-F000	2117	Gasoline Services	No
2	053-3302824230014	1589	52-9280-216 (Former Union Oil SS)	7301 Penn Av S	Richfield	0G1	2/1/1952	5/1/1986	3,000	Removed	Gasoline	1/1/2001	-	-	-	UST-F000	2000	General Sales or Service	No
2	053-3302824230014	1589	52-9280-216 (Former Union Oil SS)	7301 Penn Av S	Richfield	0G2	4/1/1967	5/1/1986	3,000	Removed	Gasoline	1/1/2001	-	-	-	UST-F000	2000	General Sales or Service	No
2	053-3302824230014	1589	52-9280-216 (Former Union Oil SS)	7301 Penn Av S	Richfield	0G3	4/1/1967	5/1/1986	3,000	Removed	Gasoline	1/1/2001	-	-	-	UST-F000	2000	General Sales or Service	No
2	053-3302824230014	1589	52-9280-216 (Former Union Oil SS)	7301 Penn Av S	Richfield	0G4	2/1/1952	5/1/1986	2,000	Removed	Gasoline	1/1/2001	-	-	-	UST-F000	2000	General Sales or Service	No
2	053-3302824230014	1589	52-9280-216 (Former Union Oil SS)	7301 Penn Av S	Richfield	0G5	2/1/1952	5/1/1986	3,000	Removed	Gasoline	1/1/2001	-	-	-	UST-F000	2000	General Sales or Service	No
2	053-3302824230014	1589	52-9280-216 (Former Union Oil SS)	7301 Penn Av S	Richfield	0W1	2/1/1953	5/1/1986	3,000	Removed	Used Or Waste Oil	1/1/2001	-	-	-	UST-W000	2000	General Sales or Service	No
3	053-0911621230012	55263	Acme North America Corp	5203 73Rd St W	Edina	1001	1/1/1956	7/31/1996	260	Active	Used Or Waste Oil	Not Available	-	-	-	AST-W000	2000	General Sales or Service	No
4	053-0602724210013	54915	ADC Telecommunications	4900 78th St W	Bloomington	1001	1/1/1986	1/20/1995	500	Removed	Chemical, Other Or Unspecified	1/13/1998	-	-	-	AST-C000	4000	Transportation, Communication, Information and Utilities	No
4	053-0602724210013	54915	ADC Telecommunications	4900 78th St W	Bloomington	1002	1/1/1994	1/20/1995	1,500	Removed	Chemical, Other Or Unspecified	11/26/1997	-	-	-	AST-C000	4000	Transportation, Communication, Information and Utilities	No
4	053-0602724210013	54915	ADC Telecommunications	4900 78th St W	Bloomington	1003	1/1/2001	1/20/1995	1,000	Removed	Chemical, Other Or Unspecified	1/13/1998	-	-	-	AST-C000	4000	Transportation, Communication, Information and Utilities	No
4	053-0602724210013	54915	ADC Telecommunications	4900 78th St W	Bloomington	1004	1/1/2001	1/20/1995	250	Removed	Chemical, Other Or Unspecified	1/13/1998	-	-	-	AST-C000	4000	Transportation, Communication, Information and Utilities	No
4	053-0602724210013	54915	ADC Telecommunications	4900 78th St W	Bloomington	1005	1/1/2001	1/20/1995	250	Removed	Chemical, Other Or Unspecified	1/13/1998	-	-	-	AST-C000	4000	Transportation, Communication, Information and Utilities	No
5	053-1802724340039	55669	Airport One Business Center	1101 E 78th St	Bloomington	1001	1/1/1987	9/16/1998	170	Active	Diesel	Not Available	-	-	-	AST-F000	2000	General Sales or Service	No
6	053-0602724120016	2308	American Appraisal	4444 78th St W	Bloomington	001	1/1/1963	1/6/1986	10,000	Removed	Gasoline	10/18/1990	-	-	-	UST-F000	2000	General Sales or Service	No
7	053-0602724240004	1759	American Ford	4801 80th St W	Bloomington	001	1/1/1979	2/25/1986	10000	Removed	Gasoline	5/21/1990	-	-	-	UST-F000	2110	Automobile Sales or Service Establishment	No
7	053-0602724240004	1759	American Ford	4801 80th St W	Bloomington	002	1/1/1979	2/25/1986	1000	Removed	Used Or Waste Oil	5/21/1990	-	-	-	UST-W000	2110	Automobile Sales or Service Establishment	No
7	053-0602724240004	1759	American Ford	4801 80th St W	Bloomington	003	1/1/1979	2/25/1986	1000	Removed	Transmission Fluid	5/21/1990	-	-	-	UST-F000	2110	Automobile Sales or Service Establishment	No
7	053-0602724240004	1759	American Ford	4801 80th St W	Bloomington	004	1/1/1979	2/25/1986	1000	Removed	Motor Oil	5/21/1990	-	-	-	UST-F000	2110	Automobile Sales or Service Establishment	No
7	053-0602724240004	1759	American Ford	4801 80th St W	Bloomington	1001	9/1/1991	7/6/1998	1000	Removed	Used Or Waste Oil	11/23/2010	-	-	-	AST-W000	2110	Automobile Sales or Service Establishment	No
7	053-0602724240004	1759	American Ford	4801 80th St W	Bloomington	1	1/15/2012	1/26/2012	1000	Active	Used Or Waste Oil	Not Available	-	-	-	AST-W000	2111	Automobile Sales or Service Establishment	No
7	053-0602724240004	1759	American Ford	4801 80th St W	Bloomington	2	1/15/2012	1/26/2012	1000	Active	Petroleum Other	Not Available	-	-	-	AST-F000	2112	Automobile Sales or Service Establishment	No
7	053-0602724240004	1759	American Ford	4801 80th St W	Bloomington	3	1/15/2012	1/26/2012	500	Active	Petroleum Other	Not Available	-	-	-	AST-F000	2113	Automobile Sales or Service Establishment	No
8	053-1902724410032	1988	Amoco SS #5279	3901 Old Shakopee Rd W	Bloomington	001	10/1/1984	5/27/1986	10,000	Removed	Gasoline	Not Available	-	-	-	UST-F000	2116	Gasoline Services	No
8	053-1902724410032	1988	Amoco SS #5279	3901 Old Shakopee Rd W	Bloomington	002	10/1/1984	5/27/1986	10,000	Removed	Gasoline	Not Available	-	-	-	UST-F000	2116	Gasoline Services	No
8	053-1902724410032	1988	Amoco SS #5279	3901 Old Shakopee Rd W	Bloomington	003	10/1/1984	5/27/1986	10,000	Removed	Gasoline	Not Available	-	-	-	UST-F000	2116	Gasoline Services	No
8	053-1902724410032	1988	Amoco SS #5279	3901 Old Shakopee Rd W	Bloomington	004	10/1/1984	5/27/1986	10,000	Removed	Gasoline	Not Available	-	-	-	UST-F000	2116	Gasoline Services	No
9	053-0602724220003	1989	Amoco SS #5328	8111 Normandale Rd	Bloomington	001	1/1/1963	5/27/1986	8,000	Removed	Gasoline	5/8/1991	-	-	-	UST-F000	2116	Gasoline Services	No
9	053-0602724220003	1989	Amoco SS #5328	8111 Normandale Rd	Bloomington	002	1/1/1963	5/27/1986	8,000	Removed	Gasoline	5/8/1991	-	-	-	UST-F000	2116	Gasoline Services	No
9	053-0602724220003	1989	Amoco SS #5328	8111 Normandale Rd	Bloomington	003	1/1/1963	5/27/1986	8,000	Removed	Gasoline	5/8/1991	-	-	-	UST-F000	2116	Gasoline Services	No
9	053-0602724220003	1989	Amoco SS #5328	8111 Normandale Rd	Bloomington	004	1/1/1963	5/27/1986	1,000	Removed	Used Or Waste Oil	5/8/1991	-	-	-	UST-W000	2116	Gasoline Services	No
9	053-0602724220003	1989	Amoco SS #5328	8111 Normandale Rd	Bloomington	005	1/1/2000	5/27/1986	550	Removed	Used Or Waste Oil	5/8/1991	-	-	-	UST-W000	2116	Gasoline Services	No
10	053-1802724320027	2952	Amoco SS #9742	5150 98th St W	Bloomington	001	1/1/1973	5/28/1986	6,000	Removed	Gasoline	10/1/1986	-	-	-	UST-F000	2116	Gasoline Services	Yes
10	053-1802724320027	2952	Amoco SS #9742	5150 98th St W	Bloomington	002	1/1/1973	5/28/1986	6,000	Removed	Gasoline	10/1/1986	-	-	-	UST-F000	2116	Gasoline Services	Yes
10	053-1802724320027	2952	Amoco SS #9742	5150 98th St W	Bloomington	003	1/1/1973	5/28/1986	6,000	Removed	Gasoline	10/1/1986	-	-	-	UST-F000	2116	Gasoline Services	Yes
10	053-1802724320027	2952	Amoco SS #9742	5150 98th St W	Bloomington	004	1/1/1973	5/28/1986	6,000	Removed	Gasoline	10/1/1986	-	-	-	UST-F000	2116	Gasoline Services	Yes
10	053-1802724320027	2952	Amoco SS #9742	5150 98th St W	Bloomington	005	1/1/1973	5/28/1986	550	Removed	Used Or Waste Oil	10/1/1986	-	-	-	UST-W000	2116	Gasoline Services	Yes
10	053-1802724320027	2952	Amoco SS #9742	5150 98th St W	Bloomington	006	9/23/1986	9/23/1986	12,000	Active	Alcohol Blend	Not Available	-	-	-	UST-C000	2116	Gasoline Services	Yes
10	053-1802724320027	2952	Amoco SS #9742	5150 98th St W	Bloomington	007	9/23/1986	9/23/1986	10,000	Active	Alcohol Blend	Not Available	-	-	-	UST-C000	2116	Gasoline Services	Yes
10	053-1802724320027	2952	Amoco SS #9742	5150 98th St W	Bloomington	008	9/23/1986	9/23/1986	10,000	Active	Alcohol Blend	Not Available	-	-	-	UST-C000	2116	Gasoline Services	Yes
10	053-1802724320027	2952	Amoco SS #9742	5150 98th St W	Bloomington	009	9/23/1986	9/23/1986	560	Removed	Used Or Waste Oil	Not Available	-	-	-	UST-W000	2116	Gasoline Services	Yes
11	053-0911621310012	14044	Analysts International Coop	7615 Metro Bl	Edina	001	7/1/1969	6/23/1987	3,000	Removed	Fuel Oil	Not Available	-	-	-	UST-F000	2000	General Sales or Service	No
12	053-0602724320004	19523	Apartment Complex	8200 Stanley Rd	Bloomington	1	Unknown	1/4/1996	3,000	Removed	Fuel Oil	9/22/1995	-	-	-	UST-F000	1100-02	Apartment or Condominium	Yes
13	053-0602724210019	2301	Best Buy Co Inc	4400 78th St W	Bloomington	001	1/1/2000	5/7/1986	1,000	Removed	Gasoline	Not Available	-	-	-	UST-F000	2124	Department Stores, Warehouse Clubs or Superstores	No
13	053-0602724210019	2301	Best Buy Co Inc	4400 78th St W	Bloomington	002	1/1/2000	5/7/1986	1,000	Removed	Diesel	Not Available	-	-	-	UST-F000	2124	Department Stores, Warehouse Clubs or Superstores	No
14	053-0602724230011	1628	Best Western Seville Hotel	8151 Bridge Rd	Bloomington	001	2/1/1981	4/28/1986	25,000	Removed	Fuel Oil	12/23/1998	-	-	-	UST-F000	1300	Hotels, Motels, or Other Accommodation Services	No
14	053-0602724230011	1628	Best Western Seville Hotel	8151 Bridge Rd	Bloomington	002	2/1/1981	4/28/1986	500	Removed	Diesel	4/15/1999	-	-	-	UST-F000	1300	Hotels, Motels, or Other Accommodation Services	No
14	053-0602724230011	1628	Best Western Seville Hotel	8151 Bridge Rd	Bloomington	003	12/23/1998	Not Available	4,000	Active	Fuel Oil	Not Available	-	-	-	UST-F000	1300	Hotels, Motels, or Other Accommodation Services	No
15	053-2002724320063	3172	Bloomdale Citgo	3835 Old Shakopee Rd W	Bloomington	001	7/1/1985	5/5/1986	550	Removed	Used Or Waste Oil	11/24/1998	-	-	-	UST-W000	2000	General Sales or Service	Yes
15	053-2002724320063	3172	Bloomdale Citgo	3835 Old Shakopee Rd W	Bloomington	002	11/1/1983	5/5/1986	10,000	Removed	Gasoline	11/24/1998	-	-	-	UST-F000	2000	General Sales or Service	Yes
15	053-2002724320063	3172	Bloomdale Citgo	3835 Old Shakopee Rd W	Bloomington	003	11/1/1983	5/5/1986	10,000	Removed	Gasoline	11/24/1998	-	-	-	UST-F000	2000	General Sales or Service	Yes
15	053-2002724320063	3172	Bloomdale Citgo	3835 Old Shakopee Rd W	Bloomington	004	11/1/1983	5/5/1986	10,000	Removed	Gasoline	11/24/1998	-	-	-	UST-F000	2000	General Sales or Service	Yes
16	053-1702724240002	3121	Bloomington Armory	3000 98th St W	Bloomington	001	1/1/1985	12/17/1985	6,000	Removed	Fuel Oil	10/12/2000	-	-	-	UST-F000	6000	Education, Public Administration, Health Care and Other Institutions	No
17	053-0602724110024	1635	Bobbys Mobil	7920 France Av	Bloomington	001	6/1/1968	4/22/1986	6,000	Removed	Gasoline	6/13/1996	-	-	-	UST-F000	2116	Gasoline Services	No
17	053-0602724110024	1635	Bobbys Mobil	7920 France Av	Bloomington	002	6/1/1968	4/22/1986	6,000	Removed	Diesel	6/13/1996	-	-	-	UST-F000	2116	Gasoline Services	No
17	053-0602724110024	1635	Bobbys Mobil	7920 France Av	Bloomington	003	6/1/1968	4/22/1986	6,000	Removed	Gasoline	6/13/1996	-	-	-	UST-F000	2116	Gasoline Services	No
17	053-0602724110024	1635	Bobbys Mobil	7920 France Av	Bloomington	004	7/1/1982	4/22/1986	8,000	Removed	Gasoline	6/13/1996	-	-	-	UST-F000	2116	Gasoline Services	No
17	053-0602724110024	1635	Bobbys Mobil	7920 France Av	Bloomington	005	1/1/2000	11/8/1996	560	Removed	Fuel Oil	6/13/1996	-	-	-	UST-F000	2116	Gasoline Services	No
17	053-0602724110024	1635	Bobbys Mobil	7920 France Av	Bloomington	006	1/1/2000	11/8/1996	560	Removed	Fuel Oil	6/13/1996	-	-	-	UST-F000	2116	Gasoline Services	No
17	053-0602724110024	1635	Bobbys Mobil	7920 France Av	Bloomington	372	7/17/1996	5/2/2003	10,000	Active	Gasoline	Not Available	-	-	-	UST-F000	2116	Gasoline Services	No
17	053-0602724110024	1635	Bobbys Mobil	7920 France Av	Bloomington	373	7/17/1996	5/2/2003	10,000	Active	Gasoline	Not Available	-	-	-	UST-F000	2116	Gasoline Services	No
17	053-0602724110024	1635	Bobbys Mobil	7920 France Av	Bloomington	378	7/17/1996	5/2/2003	8,000	Active	Diesel	Not Available	-	-	-	UST-F000	2116	Gasoline Services	No
17	053-0602724110024	1635	Bobbys Mobil	7920 France Av	Bloomington	491	7/17/1996	5/2/2003	20,000	Active	Gasoline	Not Available	-	-	-	UST-F000	2116	Gasoline Services	No
18	053-0811621440009	53315	Carleton Screw Products Inc	7705 Bush Lake Rd	Edina	1001	10/4/1999	2/24/1992	300	Removed	Chemical Other Or Unspecified	10/4/1999	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
18	053-0811621440009	53315	Carleton Screw Products Inc	7705 Bush Lake Rd	Edina	1002	10/4/1999	2/24/1992	300	Removed	Lube Oil	10/4/1999	-	-	-	AST-F000	3000	Manufacturing and Wholesale Trade	No
18	053-0811621440009	53315	Carleton Screw Products Inc	7705 Bush Lake Rd	Edina	1003	10/4/1999	2/24/1992	300	Removed	Lube Oil	10/4/1999	-	-	-	AST-F000	3000	Manufacturing and Wholesale Trade	No
18	053-0811621440009	53315	Carleton Screw Products Inc	7705 Bush Lake Rd	Edina	1004	10/4/1999	2/24/1992	1,000	Removed	Lube Oil	10/4/1999	-	-	-	AST-F000	3000	Manufacturing and Wholesale Trade	No
18	053-0811621440009	53315	Carleton Screw Products Inc	7705 Bush Lake Rd	Edina	1005	10/4/1999	2/24/1992	500	Removed	Other Substance	10/4/1999	-	-	-	AST	3000	Manufacturing and Wholesale Trade	No
18	053-0811621440009	53315	Carleton Screw Products Inc	7705 Bush Lake Rd	Edina	1006	10/4/1999	2/24/1992	125	Removed	Chemical Other Or Unspecified	10/4/1999	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
19	Not Available	122222	City of Bloomington Water Plant	9300 Poplar Bridge Rd	Bloomington	001	Not Available	7/8/1994	6,000	Removed	Fuel Oil	8/27/2001	-	-	-	UST-F000	6000	Education, Public Administration, Health Care and Other Institutions	No
19	Not Available	122222	City of Bloomington Water Plant	9300 Poplar Bridge Rd	Bloomington	002	11/1/2001	1/4/2002	4,000	Active	Fuel Oil	Not Available	-	-	-	UST-F000	6000	Education, Public Administration, Health Care and Other Institutions	No
19	Not Available	122222	City of Bloomington Water Plant	9300 Poplar Bridge Rd	Bloomington	1001	1/1/2002	5/17/2006	500	Active	Diesel	Not Available	-	-	-	AST-F000	6000	Education, Public Administration, Health Care and Other Institutions	No
20	Not Available	18780	City of Bloomington	9304 Poplar Bridge Rd	Bloomington	Not Available	Not Available	Not Available	6,000	Reconditioned	Fuel Oil	Not Available	-	-	-	UST-F000	6000	Education, Public Administration, Health Care and Other Institutions	No
21	Not Available	125180	City of Edina Public Works	7450 Metro Blvd	Edina	1	8/1/2010	6/19/2012	10,000	Active	E-10 - 10% Ethanol & 90% Gas	Not Available	-	-	-	UST-F000	6000	Education, Public Administration, Health Care and Other Institutions	No
21	Not Available	125180	City of Edina Public Works	7450 Metro Blvd	Edina	2	8/1/2010	6/19/2012	10,000	Active	Diesel	Not Available	-	-	-	UST-F000	6000	Education, Public Administration, Health Care and Other Institutions	No
21	Not Available	125180	City of Edina Public Works	7450 Metro Blvd	Edina	3	8/1/2010	9/13/2012	500	Active	Used Or Waste Oil	Not Available	-	-	-	AST-W000	6000	Education, Public Administration, Health Care and Other Institutions	No
22	Not Available	17001	Cowles Media Co	6601 W 78th St	Edina	001	1/1/2001	2/8/1990	2,000	Removed	Other Substance	12/29/1989	-	-	-	UST	4000	Transportation, Communication, Information and Utilities	No
22	Not Available	17001	Cowles Media Co	6601 W 78th St	Edina	002	1/1/2001	2/8/1990	2,000	Removed	Other Substance	12/29/1989	-	-	-	UST	4000	Transportation, Communication, Information and Utilities	No
23	053-3202824240001	20896	Durham Apartments	7201 York Av S	Edina	001	10/1/1977	12/1/1998	40,000	Active	Fuel Oil	Not Available	-	-	-	UST-F000	1100-02	Apartment or Condominium	No
24	Not Available	2744	Eden Prairie Truck Station #90986/Mndot	7333 Bryant Lake Dr	Eden Prairie	001	7/1/1992	8/25/1992	10,000	Active	Diesel	Not Available	-	-	-	UST-F000	6000	Education, Public Administration, Health Care and Other Institutions	No
24	Not Available	2744	Eden Prairie Truck Station #90986/Mndot	7333 Bryant Lake Dr	Eden Prairie	002	7/1/1992	8/25/1992	10,000	Active	Alcohol Blend	Not Available	-	-	-	UST-C000	6000	Education, Public Administration, Health Care and Other Institutions	No
24	Not Available	2744	Eden Prairie Truck Station #90986/Mndot	7333 Bryant Lake Dr	Eden Prairie	1001	1/1/1994	7/8/1998	650	Active	Used Or Waste Oil	Not Available	-	-	-	AST-W000	6000	Education, Public Administration, Health Care and Other Institutions	No
24	Not Available	2744	Eden Prairie Truck Station #90986/Mndot	7333 Bryant Lake Dr	Eden Prairie	1002	1/1/1979	7/8/1998	265	Active	Motor Oil	Not Available	-	-	-	AST-F000	6000	Education, Public Administration, Health Care and Other Institutions	No
24	Not Available	2744	Eden Prairie Truck Station #90986/Mndot	7333 Bryant Lake Dr	Eden Prairie	1003	1/1/1995	7/7/1997	250	Active	Hydraulic Fluid	Not Available	-	-	-	AST-F000	6000	Education, Public Administration, Health Care and Other Institutions	No
24	Not Available	2744	Eden Prairie Truck Station #90986/Mndot	7333 Bryant Lake Dr	Eden Prairie	1004	1/1/1995	7/7/1997	250	Active	Hydraulic Fluid	Not Available	-	-	-	AST-F000	6000	Education, Public Administration, Health Care and Other Institutions	No
24	Not Available	2744	Eden Prairie Truck Station #90986/Mndot	7333 Bryant Lake Dr	Eden Prairie	1005	1/1/1995	7/7/1997	250	Active	Hydraulic Fluid	Not Available	-	-	-	AST-F000	6000	Education, Public Administration, Health Care and Other Institutions	No
24	Not Available	2744	Eden Prairie Truck Station #90986/Mndot	7333 Bryant Lake Dr	Eden Prairie	861	1/1/1976	2/7/1986	10,000	Removed	Gasoline	9/17/1992	-	-	-	UST-F000	6000	Education, Public Administration, Health Care and Other Institutions	No
24	Not Available	2744	Eden Prairie Truck Station #90986/Mndot	7333 Bryant Lake Dr	Eden Prairie	862	1/1/1976	2/7/1986	10,000	Removed	Diesel	9/17/1992	-	-	-	UST-F000	6000	Education, Public Administration, Health Care and Other Institutions	No
24	Not Available	2744	Eden Prairie Truck Station #90986/Mndot	7333 Bryant Lake Dr	Eden Prairie	863	1/1/1976	2/7/1986	10,000	Removed	Fuel Oil	9/17/1992	-	-	-	UST-F000	6000	Education, Public Administration, Health Care and Other Institutions	No
24	Not Available	2744	Eden Prairie Truck Station #90986/Mndot	7333 Bryant Lake Dr	Eden Prairie	864	1/1/1976	2/7/1986	500	Removed	Used Or Waste Oil	6/1/1987	-	-	-	UST-W000	6000	Education, Public Administration, Health Care and Other Institutions	No
24	Not Available	2744	Eden Prairie Truck Station #90986/Mndot	7333 Bryant Lake Dr	Eden Prairie	865	6/1/1987	6/22/1987	1000	Removed	Used Or Waste Oil	9/17/1992	-	-	-	UST-W000	6000	Education, Public Administration, Health Care and Other Institutions	No
25	053-0911621340004	1798	Edina 66 Service	5101 Edina Industrial Bl	Edina	001	1/1/2000	4/15/1986	10000	Removed	Gasoline	11/1/1998	-	-	-	UST-F000	2116	Gasoline Services	No
25	053-0911621340004	1798	Edina 66 Service	5101 Edina Industrial Bl	Edina	002	1/1/2000	4/15/1986	10000	Removed	Gasoline	11/1/1998	-	-	-	UST-F000	2116	Gasoline Services	No
25	053-0911621340004	1798	Edina 66 Service	5101 Edina Industrial Bl	Edina	003	1/1/2000	4/15/1986	4000	Removed	Gasoline	11/1/1998	-	-	-	UST-F000	2116	Gasoline Services	No

Table C-5

PCSI Results - Storage Tank Locations in the DWSMA
City of Bloomington

Map ID	PID Number	MPCA ID	Site	Site Address	City	Tank Number	Install Date	Registration Date	Tank Capacity	Tank Status	Tank Product	Date Removed	Release Discovered Date	Release Report Date	Complete Site Closure Date	PCS Code-Material Code	Facility Code	Facility Designation	Location Verified
25	053-0911621340004	1798	Edina 66 Service	5101 Edina Industrial Bl	Edina	004	1/1/2000	4/15/1986	560	Removed	Used Or Waste Oil	7/14/1999	-	-	-	UST-W000	2116	Gasoline Services	No
25	053-0911621340004	1798	Edina 66 Service	5101 Edina Industrial Bl	Edina	005	1/1/2000	4/15/1986	1000	Removed	Fuel Oil	7/14/1999	-	-	-	UST-F000	2116	Gasoline Services	No
25	053-0911621340004	1798	Edina 66 Service	5101 Edina Industrial Bl	Edina	006	11/1/1998	Not Available	12000	Active	Gasoline	Not Available	-	-	-	UST-F000	2116	Gasoline Services	No
25	053-0911621340004	1798	Edina 66 Service	5101 Edina Industrial Bl	Edina	007	11/1/1998	Not Available	12000	Active	Gasoline	Not Available	-	-	-	UST-F000	2116	Gasoline Services	No
25	053-0911621340004	1798	Edina 66 Service	5101 Edina Industrial Bl	Edina	008	11/1/1998	Not Available	8000	Active	Gasoline	Not Available	-	-	-	UST-F000	2116	Gasoline Services	No
25	053-0911621340004	1798	Edina 66 Service	5101 Edina Industrial Bl	Edina	009	11/1/1998	Not Available	8000	Active	Gasoline	Not Available	-	-	-	UST-F000	2116	Gasoline Services	No
25	053-0911621340004	1798	Edina 66 Service	5101 Edina Industrial Bl	Edina	010	11/1/1998	Not Available	6000	Active	Diesel	Not Available	-	-	-	UST-F000	2116	Gasoline Services	No
26	053-0602724240004	125635	Feldmann Nissan	4851 American Blvd W	Bloomington	1	5/2/2010	11/21/2011	535	Active	Used Or Waste Oil	Not Available	-	-	-	AST-W000	2110	Automobile Sales or Service Establishment	No
26	053-0602724240004	125635	Feldmann Nissan	4851 American Blvd W	Bloomington	2	5/2/2010	11/21/2011	530	Active	Motor Oil	Not Available	-	-	-	AST-F000	2110	Automobile Sales or Service Establishment	No
27	053-0602724240009	52372	Feldmann Terry Imports	4901 80th St W	Bloomington	1001	1/25/1989	10/16/1990	265	Active	Transmission Fluid	Not Available	-	-	-	AST-F000	2110	Automobile Sales or Service Establishment	No
27	053-0602724240009	52372	Feldmann Terry Imports	4901 80th St W	Bloomington	1002	1/25/1989	10/16/1990	700	Active	Motor Oil	Not Available	-	-	-	AST-F000	2110	Automobile Sales or Service Establishment	No
27	053-0602724240009	52372	Feldmann Terry Imports	4901 80th St W	Bloomington	1003	1/25/1989	10/16/1990	575	Active	Used Or Waste Oil	Not Available	-	-	-	AST-W000	2110	Automobile Sales or Service Establishment	No
27	053-0602724240009	52372	Feldmann Terry Imports	4901 80th St W	Bloomington	1	9/1/2000	2/29/2008	575	Active	Used Or Waste Oil	Not Available	-	-	-	AST-W000	2110	Automobile Sales or Service Establishment	No
28	053-0811621110007	124034	Filmtec Corporation	5400 Dewey Hill Rd	Edina	3000	9/1/2005	8/5/2005	12000	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
28	053-0811621110007	124034	Filmtec Corporation	5400 Dewey Hill Rd	Edina	3001	9/1/2005	8/5/2005	12000	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
28	053-0811621110007	124034	Filmtec Corporation	5400 Dewey Hill Rd	Edina	3002	9/1/2005	8/5/2005	6000	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
28	053-0811621110007	124034	Filmtec Corporation	5400 Dewey Hill Rd	Edina	3003	9/1/2005	8/5/2005	2500	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
28	053-0811621110007	124034	Filmtec Corporation	5400 Dewey Hill Rd	Edina	3004	9/1/2005	8/5/2005	2500	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
28	053-0811621110007	124034	Filmtec Corporation	5400 Dewey Hill Rd	Edina	3005	9/1/2005	8/5/2005	2500	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
28	053-0811621110007	124034	Filmtec Corporation	5400 Dewey Hill Rd	Edina	3006	9/1/2005	8/5/2005	1500	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
28	053-0811621110007	124034	Filmtec Corporation	5400 Dewey Hill Rd	Edina	3007	9/1/2005	8/5/2005	8520	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
28	053-0811621110007	124034	Filmtec Corporation	5400 Dewey Hill Rd	Edina	3008	9/1/2005	8/5/2005	1500	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
28	053-0811621110007	124034	Filmtec Corporation	5400 Dewey Hill Rd	Edina	3009	9/1/2005	8/5/2005	10000	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
28	053-0811621110007	124034	Filmtec Corporation	5400 Dewey Hill Rd	Edina	3010	9/1/2005	8/5/2005	900	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
28	053-0811621110007	124034	Filmtec Corporation	5400 Dewey Hill Rd	Edina	3011	9/1/2005	8/5/2005	1500	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
28	053-0811621110007	124034	Filmtec Corporation	5400 Dewey Hill Rd	Edina	3012	9/1/2005	8/5/2005	750	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
28	053-0811621110007	124034	Filmtec Corporation	5400 Dewey Hill Rd	Edina	3013	9/1/2005	8/5/2005	750	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
28	053-0811621110007	124034	Filmtec Corporation	5400 Dewey Hill Rd	Edina	3014	9/1/2005	8/5/2005	750	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
28	053-0811621110007	124034	Filmtec Corporation	5400 Dewey Hill Rd	Edina	3015	9/1/2005	8/5/2005	500	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
28	053-0811621110007	124034	Filmtec Corporation	5400 Dewey Hill Rd	Edina	3016	9/1/2005	8/5/2005	594	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
28	053-0811621110007	124034	Filmtec Corporation	5400 Dewey Hill Rd	Edina	3017	9/1/2005	8/5/2005	1000	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
28	053-0811621110007	124034	Filmtec Corporation	5400 Dewey Hill Rd	Edina	3018	9/1/2005	8/5/2005	672	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
28	053-0811621110007	124034	Filmtec Corporation	5400 Dewey Hill Rd	Edina	3019	9/1/2005	8/5/2005	2000	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
28	053-0811621110007	124034	Filmtec Corporation	5400 Dewey Hill Rd	Edina	3020	9/1/2005	8/5/2005	1018	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
28	053-0811621110007	124034	Filmtec Corporation	5400 Dewey Hill Rd	Edina	3021	9/1/2005	8/5/2005	1018	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
28	053-0811621110007	124034	Filmtec Corporation	5400 Dewey Hill Rd	Edina	3022	9/1/2005	8/5/2005	734	Active	Other Substance	Not Available	-	-	-	AST	3000	Manufacturing and Wholesale Trade	No
28	053-0811621110007	124034	Filmtec Corporation	5400 Dewey Hill Rd	Edina	3023	9/1/2005	8/5/2005	734	Active	Other Substance	Not Available	-	-	-	AST	3000	Manufacturing and Wholesale Trade	No
28	053-0811621110007	124034	Filmtec Corporation	5400 Dewey Hill Rd	Edina	3024	9/1/2005	8/5/2005	734	Active	Other Substance	Not Available	-	-	-	AST	3000	Manufacturing and Wholesale Trade	No
28	053-0811621110007	124034	Filmtec Corporation	5400 Dewey Hill Rd	Edina	3025	9/1/2005	8/5/2005	734	Active	Other Substance	Not Available	-	-	-	AST	3000	Manufacturing and Wholesale Trade	No
28	053-0811621110007	124034	Filmtec Corporation	5400 Dewey Hill Rd	Edina	3026	9/1/2005	8/5/2005	734	Active	Other Substance	Not Available	-	-	-	AST	3000	Manufacturing and Wholesale Trade	No
28	053-0811621110007	124034	Filmtec Corporation	5400 Dewey Hill Rd	Edina	3027	9/1/2005	8/5/2005	500	Active	Other Substance	Not Available	-	-	-	AST	3000	Manufacturing and Wholesale Trade	No
28	053-0811621110007	124034	Filmtec Corporation	5400 Dewey Hill Rd	Edina	3028	9/1/2005	8/5/2005	500	Active	Other Substance	Not Available	-	-	-	AST	3000	Manufacturing and Wholesale Trade	No
28	053-0811621110007	124034	Filmtec Corporation	5400 Dewey Hill Rd	Edina	3029	9/1/2005	8/5/2005	2500	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
28	053-0811621110007	124034	Filmtec Corporation	5400 Dewey Hill Rd	Edina	3030	9/1/2005	8/5/2005	2500	Active	Other Substance	Not Available	-	-	-	AST	3000	Manufacturing and Wholesale Trade	No
28	053-0811621110007	124034	Filmtec Corporation	5400 Dewey Hill Rd	Edina	3031	9/1/2005	8/5/2005	2500	Active	Other Substance	Not Available	-	-	-	AST	3000	Manufacturing and Wholesale Trade	No
28	053-0811621110007	124034	Filmtec Corporation	5400 Dewey Hill Rd	Edina	3032	9/1/2005	8/5/2005	4382	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
28	053-0811621110007	124034	Filmtec Corporation	5400 Dewey Hill Rd	Edina	3033	9/1/2005	8/5/2005	4382	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
28	053-0811621110007	124034	Filmtec Corporation	5400 Dewey Hill Rd	Edina	3034	9/1/2005	8/5/2005	5500	Active	Other Substance	Not Available	-	-	-	AST	3000	Manufacturing and Wholesale Trade	No
28	053-0811621110007	124034	Filmtec Corporation	5400 Dewey Hill Rd	Edina	3035	9/1/2005	8/5/2005	4137	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
28	053-0811621110007	124034	Filmtec Corporation	5400 Dewey Hill Rd	Edina	3036	9/1/2005	8/5/2005	4137	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
28	053-0811621110007	124034	Filmtec Corporation	5400 Dewey Hill Rd	Edina	3037	9/1/2005	8/5/2005	1528	Active	Other Substance	Not Available	-	-	-	AST	3000	Manufacturing and Wholesale Trade	No
28	053-0811621110007	124034	Filmtec Corporation	5400 Dewey Hill Rd	Edina	3038	9/1/2005	8/5/2005	1528	Active	Other Substance	Not Available	-	-	-	AST	3000	Manufacturing and Wholesale Trade	No
28	053-0811621110007	124034	Filmtec Corporation	5400 Dewey Hill Rd	Edina	3039	9/1/2005	8/5/2005	5500	Active	Other Substance	Not Available	-	-	-	AST	3000	Manufacturing and Wholesale Trade	No
28	053-0811621110007	124034	Filmtec Corporation	5400 Dewey Hill Rd	Edina	3040	9/1/2005	8/5/2005	5500	Active	Other Substance	Not Available	-	-	-	AST	3000	Manufacturing and Wholesale Trade	No
28	053-0811621110007	124034	Filmtec Corporation	5400 Dewey Hill Rd	Edina	3041	9/1/2005	8/5/2005	5500	Active	Other Substance	Not Available	-	-	-	AST	3000	Manufacturing and Wholesale Trade	No
28	053-0811621110007	124034	Filmtec Corporation	5400 Dewey Hill Rd	Edina	3042	9/1/2005	8/5/2005	5500	Active	Other Substance	Not Available	-	-	-	AST	3000	Manufacturing and Wholesale Trade	No
28	053-0811621110007	124034	Filmtec Corporation	5400 Dewey Hill Rd	Edina	3043	9/1/2005	8/5/2005	5500	Active	Other Substance	Not Available	-	-	-	AST	3000	Manufacturing and Wholesale Trade	No
28	053-0811621110007	124034	Filmtec Corporation	5400 Dewey Hill Rd	Edina	3044	9/1/2005	8/5/2005	5500	Active	Other Substance	Not Available	-	-	-	AST	3000	Manufacturing and Wholesale Trade	No
28	053-0811621110007	124034	Filmtec Corporation	5400 Dewey Hill Rd	Edina	3045	9/1/2005	8/5/2005	5500	Active	Other Substance	Not Available	-	-	-	AST	3000	Manufacturing and Wholesale Trade	No
28	053-0811621110007	124034	Filmtec Corporation	5400 Dewey Hill Rd	Edina	3046	9/1/2005	8/5/2005	5500	Active	Other Substance	Not Available	-	-	-	AST	3000	Manufacturing and Wholesale Trade	No
28	053-0811621110007	124034	Filmtec Corporation	5400 Dewey Hill Rd	Edina	3047	9/1/2005	8/5/2005	1500	Active	Other Substance	Not Available	-	-	-	AST	3000	Manufacturing and Wholesale Trade	No
28	053-0811621110007	124034	Filmtec Corporation	5400 Dewey Hill Rd	Edina	3048	9/1/2005	8/5/2005	7500	Active	Other Substance	Not Available	-	-	-	AST	3000	Manufacturing and Wholesale Trade	No
28	053-0811621110007	124034	Filmtec Corporation	5400 Dewey Hill Rd	Edina	3049	9/1/2005	8/5/2005	3135	Active	Other Substance	Not Available	-	-	-	AST	3000	Manufacturing and Wholesale Trade	No
28	053-0811621110007	124034	Filmtec Corporation	5400 Dewey Hill Rd	Edina	3050	9/1/2005	8/5/2005	550	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
28	053-0811621110007	124034	Filmtec Corporation	5400 Dewey Hill Rd	Edina	3051	9/1/2005	8/5/2005	2370	Active	Other Substance	Not Available	-	-	-	AST	3000	Manufacturing and Wholesale Trade	No
28	053-0811621110007	124034	Filmtec Corporation	5400 Dewey Hill Rd	Edina	3052	9/1/2005	8/5/2005	1000	Active	Other Substance	Not Available	-	-	-	AST	3000	Manufacturing and Wholesale Trade	No
28	053-0811621110007	124034	Filmtec Corporation	5400 Dewey Hill Rd	Edina	1	4/1/2009	7/24/2009	1500	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
28	053-0811621110007	124034	Filmtec Corporation	5400 Dewey Hill Rd	Edina	10	6/10/2009	7/24/2009	672	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
28	053-0811621110007	124034	Filmtec Corporation	5400 Dewey Hill Rd	Edina	11	6/10/2009	7/24/2009	900	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
28	053-0811621110007	124034	Filmtec Corporation	5400 Dewey Hill Rd	Edina	12	6/10/2009	7/24/2009	900	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
28	053-0811621110007	124034	Filmtec Corporation	5400 Dewey Hill Rd	Edina	13	6/10/2009	7/24/2009	750	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
28	053-0811621110007	124034	Filmtec Corporation	5400 Dewey Hill Rd	Edina	14	6/10/2009	7/24/2009	750	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
28	053-0811621110007	124034	Filmtec Corporation	5400 Dewey Hill Rd	Edina	15	6/10/2009	7/24/2009	500	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
28	053-0811621110007	124034	Filmtec Corporation	5400 Dewey Hill Rd	Edina	16	6/10/2009	7/24/2009	594	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
28	053-0811621110007	124034	Filmtec Corporation	5400 Dewey Hill Rd	Edina	17	5/1/2009	7/24/2009	734	Active	Other Substance	Not Available	-	-	-	AST	3000	Manufacturing and Wholesale Trade	No
28	053-0811621110007	124034	Filmtec Corporation	5400 Dewey Hill Rd	Edina	18	5/1/2009	7/24/2009	734	Active	Other Substance	Not Available	-	-	-	AST	3000	Manufacturing and Wholesale Trade	No
28	053-0811621110007	124034	Filmtec Corporation	5400 Dewey Hill Rd	Edina	19	2/15/2011	3/9/2011	734	Active	Other Substance	Not Available	-	-	-	AST	3000	Manufacturing and Wholesale Trade	No
28	053-0811621110007	124034	Filmtec Corporation	5400 Dewey Hill Rd	Edina	2	4/1/2009	7/24/2009	1500	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
28	053-0811621110007	124034	Filmtec Corporation	5400 Dewey Hill Rd	Edina	20	2/15/2011	3/9/2011	1200	Active	Other Substance	Not Available	-	-	-	AST	3000	Manufacturing and Wholesale Trade	No
28	053-0811621110007	124034	Filmtec Corporation	5400 Dewey Hill Rd	Edina	21	2/15/2011	3/9/2011	1200	Active	Other Substance	Not Available	-	-	-	AST	3000	Manufacturing and Wholesale Trade	No
28	053-0811621110007	124034	Filmtec Corporation	5400 Dewey Hill Rd	Edina	22	2/15/2011	3/9/2011	1700	Active	Other Substance	Not Available	-	-	-	AST	3000	Manufacturing and Wholesale Trade	No
28	053-0811621110007	124034	Filmtec Corporation	5400 Dewey Hill Rd	Edina	3	6/1/2009	7/24/2009	2000	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
28	053-0811621110007	124034	Filmtec Corporation	5400 Dewey Hill Rd	Edina	4	6/1/2009	7/24/2009	1018	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
28	053-0811621110007	124034	Filmtec Corporation	5400 Dewey Hill Rd	Edina	5	6/1/2009	7/24/2009	1018	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
28	053-0811621110007	124034	Filmtec Corporation	5400 Dewey Hill Rd	Edina	6	6/1/2009	7/24/2009	734	Active	Other Substance	Not Available	-	-	-	AST	3000	Manufacturing and Wholesale Trade	No
28	053-0811621110007	124034	Filmtec Corporation	5400 Dewey Hill Rd	Edina	7	6/1/2009	7/24/2009	734	Active	Other Substance	Not Available	-	-	-	AST	3000	Manufacturing and Wholesale Trade	No
28	053-0811621110007	124034	Filmtec Corporation	5400 Dewey Hill Rd	Edina	8	6/1/2009	7/24/2009	734	Active	Other Substance	Not Available	-	-	-	AST	3000	Manufacturing and Wholesale Trade	No
28	053-0811621110007	124034	Filmtec Corporation	5400 Dewey Hill Rd	Edina	9	6/20/2009	7/24/2009	1000	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
29	053-0911621220034	55123	Filmtec Corp	7200 Ohms La	Edina	1001	1/1/2000	1/2/1996	8000	Active	Other Substance	Not Available	-	-	-	AST	3000	Manufacturing and Wholesale Trade	No
29	053-0911621220034	55123	Filmtec Corp	7200 Ohms La	Edina	1002	1/1/2000	1/2/1996	1000	Active	Other Substance	Not Available	-	-	-	AST	3000	Manufacturing and Wholesale Trade	No
29	053-0911621220034	55123	Filmtec Corp	7200 Ohms La	Edina	1003	1/1/2000	1/2/1996	200	Removed	Other Substance	3/1/2002	-	-	-	AST	3000	Manufacturing and Wholesale Trade	No
29	053-0911621220034	55123	Filmtec Corp	7200 Ohms La	Edina	1004	1/1/2000	1/2/1996	500	Removed	Chemical Other Or Unspecified	3/1/2002	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
29	053-0911621220034	55123	Filmtec Corp	7200 Ohms La	Edina	1005	1/1/2000	1/2/1996	500	Removed	Chemical Other Or Unspecified	3/1/2002	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
29	053-0911621220034	55123	Filmtec Corp	7200 Ohms La	Edina	1006	3/1/2000	3/21/2000	10000	Active	Other Substance	Not Available	-	-	-	AST	3000	Manufacturing and Wholesale Trade	No
29	053-0911621220034	55123	Filmtec Corp	7200 Ohms La	Edina	1007	9/9/1994	4/29/2003	7777	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
29	053-0911621220034	55123	Filmtec Corp	7200 Ohms La	Edina	1008	1/5/2001	6/29/2003	331	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
29	053-0911621220034	55123	Filmtec Corp	7200 Ohms La	Edina	1009	3/21/2001	6/29/2003	580	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
29	053-0911621220034	55123	Filmtec Corp	7200 Ohms La	Edina	1010	3/21/2001	4/29/2003	580	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
29	053-0911621220034	55123	Filmtec Corp	7200 Ohms La	Edina	1011	12/20/2000	4/29/2003	390	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
29	053-0911621220034	55123	Filmtec Corp	7200 Ohms La	Edina	1012	12/20/2000	4/29/2003	390	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No

Table C-5

PCSI Results - Storage Tank Locations in the DWSMA
City of Bloomington

Map ID	PID Number	MPCA ID	Site	Site Address	City	Tank Number	Install Date	Registration Date	Tank Capacity	Tank Status	Tank Product	Date Removed	Release Discovered Date	Release Report Date	Complete Site Closure Date	PCS Code-Material Code	Facility Code	Facility Designation	Location Verified
29	053-0911621220034	55123	Filmtec Corp	7200 Ohms La	Edina	1013	1/5/2001	4/29/2003	220	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
29	053-0911621220034	55123	Filmtec Corp	7200 Ohms La	Edina	1014	1/5/2001	4/29/2003	327	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
29	053-0911621220034	55123	Filmtec Corp	7200 Ohms La	Edina	1015	1/5/2001	4/29/2003	700	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
29	053-0911621220034	55123	Filmtec Corp	7200 Ohms La	Edina	1016	1/5/2001	4/29/2003	126	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
29	053-0911621220034	55123	Filmtec Corp	7200 Ohms La	Edina	1017	10/1/2002	4/29/2003	167	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
29	053-0911621220034	55123	Filmtec Corp	7200 Ohms La	Edina	1018	10/1/2002	4/29/2003	167	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
29	053-0911621220034	55123	Filmtec Corp	7200 Ohms La	Edina	1019	11/7/2000	4/29/2003	350	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
29	053-0911621220034	55123	Filmtec Corp	7200 Ohms La	Edina	1020	11/9/2000	4/29/2003	126	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
29	053-0911621220034	55123	Filmtec Corp	7200 Ohms La	Edina	1021	9/12/2000	4/29/2003	2500	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
29	053-0911621220034	55123	Filmtec Corp	7200 Ohms La	Edina	1022	9/12/2000	2/20/2000	5500	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
29	053-0911621220034	55123	Filmtec Corp	7200 Ohms La	Edina	1023	5/1/1997	4/29/2003	378	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
29	053-0911621220034	55123	Filmtec Corp	7200 Ohms La	Edina	1025	1/1/1994	4/29/2003	215	Removed	Chemical Other Or Unspecified	7/1/2004	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
29	053-0911621220034	55123	Filmtec Corp	7200 Ohms La	Edina	1026	6/1/1992	4/29/2003	701	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
29	053-0911621220034	55123	Filmtec Corp	7200 Ohms La	Edina	1027	4/1/1997	4/29/2003	550	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
29	053-0911621220034	55123	Filmtec Corp	7200 Ohms La	Edina	1028	6/1/1995	4/29/2003	230	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
29	053-0911621220034	55123	Filmtec Corp	7200 Ohms La	Edina	1029	6/1/1995	4/29/2003	230	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
29	053-0911621220034	55123	Filmtec Corp	7200 Ohms La	Edina	1030	6/1/2001	4/29/2003	120	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
29	053-0911621220034	55123	Filmtec Corp	7200 Ohms La	Edina	1031	3/13/1997	4/29/2003	250	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
29	053-0911621220034	55123	Filmtec Corp	7200 Ohms La	Edina	1032	3/13/1997	4/29/2003	250	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
29	053-0911621220034	55123	Filmtec Corp	7200 Ohms La	Edina	1033	6/10/1997	4/29/2003	113	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
29	053-0911621220034	55123	Filmtec Corp	7200 Ohms La	Edina	1034	4/6/2001	4/29/2003	1480	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
29	053-0911621220034	55123	Filmtec Corp	7200 Ohms La	Edina	1035	4/1/1997	4/29/2003	483	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
29	053-0911621220034	55123	Filmtec Corp	7200 Ohms La	Edina	1036	9/1/1994	4/29/2003	132	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
29	053-0911621220034	55123	Filmtec Corp	7200 Ohms La	Edina	1037	10/20/2000	4/29/2003	275	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
29	053-0911621220034	55123	Filmtec Corp	7200 Ohms La	Edina	1038	10/20/2000	4/29/2003	275	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
29	053-0911621220034	55123	Filmtec Corp	7200 Ohms La	Edina	1039	10/20/2000	4/29/2003	275	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
29	053-0911621220034	55123	Filmtec Corp	7200 Ohms La	Edina	1040	10/20/2000	4/29/2003	275	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
29	053-0911621220034	55123	Filmtec Corp	7200 Ohms La	Edina	1041	5/31/2001	4/29/2003	275	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
29	053-0911621220034	55123	Filmtec Corp	7200 Ohms La	Edina	1042	5/31/2001	4/29/2003	275	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
29	053-0911621220034	55123	Filmtec Corp	7200 Ohms La	Edina	1043	3/1/2001	4/29/2003	360	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
29	053-0911621220034	55123	Filmtec Corp	7200 Ohms La	Edina	1044	10/1/1998	4/29/2003	375	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
29	053-0911621220034	55123	Filmtec Corp	7200 Ohms La	Edina	1045	3/1/2001	4/29/2003	1300	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
29	053-0911621220034	55123	Filmtec Corp	7200 Ohms La	Edina	1046	1/1/1990	4/29/2003	300	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
29	053-0911621220034	55123	Filmtec Corp	7200 Ohms La	Edina	1047	12/1/2000	4/29/2003	120	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
29	053-0911621220034	55123	Filmtec Corp	7200 Ohms La	Edina	1048	6/1/2003	4/29/2003	350	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
29	053-0911621220034	55123	Filmtec Corp	7200 Ohms La	Edina	1049	1/1/2000	4/29/2003	1390	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
29	053-0911621220034	55123	Filmtec Corp	7200 Ohms La	Edina	1050	1/1/2000	4/29/2003	1390	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
29	053-0911621220034	55123	Filmtec Corp	7200 Ohms La	Edina	1051	3/1/2001	2/20/2000	1000	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
29	053-0911621220034	55123	Filmtec Corp	7200 Ohms La	Edina	1052	3/1/2001	4/29/2003	1000	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
29	053-0911621220034	55123	Filmtec Corp	7200 Ohms La	Edina	1053	3/1/2001	4/29/2003	1000	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
29	053-0911621220034	55123	Filmtec Corp	7200 Ohms La	Edina	1054	3/1/2001	4/29/2003	1000	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
29	053-0911621220034	55123	Filmtec Corp	7200 Ohms La	Edina	1055	6/1/2000	2/20/2000	1000	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
29	053-0911621220034	55123	Filmtec Corp	7200 Ohms La	Edina	1056	6/9/2000	2/20/2000	1000	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
29	053-0911621220034	55123	Filmtec Corp	7200 Ohms La	Edina	1057	6/9/2000	4/29/2003	1000	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
29	053-0911621220034	55123	Filmtec Corp	7200 Ohms La	Edina	1058	8/21/2000	4/29/2003	1000	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
29	053-0911621220034	55123	Filmtec Corp	7200 Ohms La	Edina	1059	8/21/2000	4/29/2003	202	Active	Other Substance	Not Available	-	-	-	AST	3000	Manufacturing and Wholesale Trade	No
29	053-0911621220034	55123	Filmtec Corp	7200 Ohms La	Edina	1060	4/3/2001	4/29/2003	360	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
29	053-0911621220034	55123	Filmtec Corp	7200 Ohms La	Edina	1061	10/13/2000	4/29/2003	187	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
29	053-0911621220034	55123	Filmtec Corp	7200 Ohms La	Edina	1062	8/21/2000	4/29/2003	232	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
29	053-0911621220034	55123	Filmtec Corp	7200 Ohms La	Edina	1063	8/21/2000	4/29/2003	232	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
29	053-0911621220034	55123	Filmtec Corp	7200 Ohms La	Edina	1064	6/9/2000	4/29/2003	110	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
29	053-0911621220034	55123	Filmtec Corp	7200 Ohms La	Edina	1065	6/9/2000	4/29/2003	110	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
29	053-0911621220034	55123	Filmtec Corp	7200 Ohms La	Edina	1066	4/1/1997	4/29/2003	220	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
29	053-0911621220034	55123	Filmtec Corp	7200 Ohms La	Edina	1067	4/1/1997	4/29/2003	327	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
29	053-0911621220034	55123	Filmtec Corp	7200 Ohms La	Edina	1069	4/1/1997	4/29/2003	736	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
29	053-0911621220034	55123	Filmtec Corp	7200 Ohms La	Edina	2000	4/1/2005	6/2/2005	1630	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
29	053-0911621220034	55123	Filmtec Corp	7200 Ohms La	Edina	2001	5/16/2005	7/5/2005	2923	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
29	053-0911621220034	55123	Filmtec Corp	7200 Ohms La	Edina	2002	5/16/2005	7/5/2005	2923	Active	Chemical Other Or Unspecified	Not Available	-	-	-	AST-C000	3000	Manufacturing and Wholesale Trade	No
29	053-0911621220034	55123	Filmtec Corp	7200 Ohms La	Edina	40910	6/1/2006	7/17/2006	231	Active	Other Substance	Not Available	-	-	-	AST	3000	Manufacturing and Wholesale Trade	No
30	053-1902724410002	2568	Finaserve #604-7500-609	10642 France Av S	Bloomington	001	1/1/1961	4/30/1986	6000	Removed	Gasoline	10/18/1994	-	-	-	UST-F000	2000	General Sales or Service	No
30	053-1902724410002	2568	Finaserve #604-7500-609	10642 France Av S	Bloomington	002	1/1/1961	4/30/1986	6000	Removed	Gasoline	10/18/1994	-	-	-	UST-F000	2000	General Sales or Service	No
30	053-1902724410002	2568	Finaserve #604-7500-609	10642 France Av S	Bloomington	003	1/1/1974	4/30/1986	8000	Removed	Gasoline	10/18/1994	-	-	-	UST-F000	2000	General Sales or Service	No
30	053-1902724410002	2568	Finaserve #604-7500-609	10642 France Av S	Bloomington	004	1/1/1961	4/30/1986	560	Removed	Used Or Waste Oil	11/12/1991	-	-	-	UST-W000	2000	General Sales or Service	No
31	053-2002724320063	123053	Former Standard Service Station	3835 Old Shakopee Rd W	Bloomington	001	None Indicated	6/5/2003	4000	Removed	Diesel	6/4/2003	-	-	-	UST-F000	2000	General Sales or Service	Yes
31	053-2002724320063	123053	Former Standard Service Station	3835 Old Shakopee Rd W	Bloomington	002	None Indicated	6/5/2003	4000	Removed	Diesel	6/4/2003	-	-	-	UST-F000	2000	General Sales or Service	Yes
31	053-2002724320063	123053	Former Standard Service Station	3835 Old Shakopee Rd W	Bloomington	003	None Indicated	6/5/2003	4000	Removed	Gasoline	6/4/2003	-	-	-	UST-F000	2000	General Sales or Service	Yes
31	053-2002724320063	123053	Former Standard Service Station	3835 Old Shakopee Rd W	Bloomington	004	None Indicated	6/5/2003	8000	Removed	Gasoline	6/4/2003	-	-	-	UST-F000	2000	General Sales or Service	Yes
32	Not Available	2741	France Av Truck Station #90942/Mndot	3900-3905 80th St W	Bloomington	001	6/1/1960	None Indicated	560	Removed	Used Or Waste Oil	1/27/2005	-	-	-	UST-W000	6000	Education, Public Administration, Health Care and Other Institutions	No
32	Not Available	2741	France Av Truck Station #90942/Mndot	3900-3905 80th St W	Bloomington	1001	1/1/1993	1/1/1993	650	Removed	Used Or Waste Oil	9/1/1999	-	-	-	AST-W000	6000	Education, Public Administration, Health Care and Other Institutions	No
32	Not Available	2741	France Av Truck Station #90942/Mndot	3900-3905 80th St W	Bloomington	1002	1/1/1994	7/8/1998	160	Removed	Other Substance	9/1/1999	-	-	-	AST	6000	Education, Public Administration, Health Care and Other Institutions	No
32	Not Available	2741	France Av Truck Station #90942/Mndot	3900-3905 80th St W	Bloomington	421	1/1/1960	2/7/1986	6000	Removed	Gasoline	4/26/1993	-	-	-	UST-F000	6000	Education, Public Administration, Health Care and Other Institutions	No
32	Not Available	2741	France Av Truck Station #90942/Mndot	3900-3905 80th St W	Bloomington	422	1/1/1960	2/7/1986	10000	Removed	Alcohol Blend	4/26/1993	-	-	-	UST-C000	6000	Education, Public Administration, Health Care and Other Institutions	No
32	Not Available	2741	France Av Truck Station #90942/Mndot	3900-3905 80th St W	Bloomington	423	1/1/1960	2/7/1986	500	Removed	Used Or Waste Oil	4/26/1993	-	-	-	UST-W000	6000	Education, Public Administration, Health Care and Other Institutions	No
32	Not Available	2741	France Av Truck Station #90942/Mndot	3900-3905 80th St W	Bloomington	424	1/1/1960	2/7/1986	8000	Removed	Fuel Oil	Not Available	-	-	-	UST-F000	6000	Education, Public Administration, Health Care and Other Institutions	No
32	Not Available	2741	France Av Truck Station #90942/Mndot	3900-3905 80th St W	Bloomington	425	1/4/1993	1/29/1993	12000	Removed	Diesel	9/22/1999	-	-	-	UST-F000	6000	Education, Public Administration, Health Care and Other Institutions	No
32	Not Available	2741	France Av Truck Station #90942/Mndot	3900-3905 80th St W	Bloomington	426	1/4/1993	1/29/1993	8000	Removed	Alcohol Blend	9/22/1999	-	-	-	UST-C000	6000	Education, Public Administration, Health Care and Other Institutions	No
33	053-0811621140001	2294	Gabberts Distribution Center	7215 Cahill Rd	Edina	101	1/1/2000	5/15/1986	2000	Removed	Gasoline	11/14/1989	-	-	-	UST-F000	3000	Manufacturing and Wholesale Trade	No
33	053-0811621140001	2294	Gabberts Distribution Center	7215 Cahill Rd	Edina	102	1/1/2000	5/15/1986	4000	Removed	Diesel	11/14/1989	-	-	-	UST-F000	3000	Manufacturing and Wholesale Trade	No
33	053-0811621140001	2294	Gabberts Distribution Center	7215 Cahill Rd	Edina	103	5/4/1973	5/15/1986	250	Removed	Used Or Waste Oil	11/14/1989	-	-	-	UST-W000	3000	Manufacturing and Wholesale Trade	No
34	053-2902824330020	14087	Galleria	3510 70th St W	Edina	001	1/1/1973	7/20/1990	12000	Removed	Fuel Oil	6/1/1990	-	-	-	UST-F000	2000	General Sales or Service	No
34	053-2902824330020	14087	Galleria	3510 70th St W	Edina	002	1/1/2000	7/20/1990	2000	Removed	Fuel Oil	1/9/1991	-	-	-	UST-F000	2000	General Sales or Service	No
35	053-0911621330001	14503	General Motors Service Parts Oper	7600 Metro Bl	Edina	001	1/1/1966	1/1/1991	30000	Removed	Gasoline	8/1/1990	-	-	-	UST-F000	2110-01	Automotive/Vehicle Repair	No
35	053-0911621330001	14503	General Motors Service Parts Oper	7600 Metro Bl	Edina	002	1/1/1966	1/1/1991	30000	Removed	Gasoline	7/31/1990	-	-	-	UST-F000	2110-01	Automotive/Vehicle Repair	No
35	053-0911621330001	14503	General Motors Service Parts Oper	7600 Metro Bl	Edina	003	1/1/2000	4/8/1996	1000	Removed	Fuel Oil	10/10/1995	-	-	-	UST-F000	2110-01	Automotive/Vehicle Repair	No
35	053-0911621330001	14503	General Motors Service Parts Oper	7600 Metro Bl	Edina	004	1/1/2000	4/8/1996	250	Removed	Fuel Oil	10/10/1995	-	-	-	UST-F000	2110-01	Automotive/Vehicle Repair	No
36	053-1902724410025	11139	Goodyear Tire Center 1667	10608 France Av S	Bloomington	001	1/1/1971	4/18/1986	560	Removed	Used Or Waste Oil	2/12/1990	-	-	-	UST-W000	2110-01	Automotive/Vehicle Repair	No
37	053-3102824410088	2516	Heatherton of Edina	4120 Parklawn Av	Edina	001	1/1/2000	5/8/1986	1000	Active	Fuel Oil	Not Available	-	-	-	UST-F000	1100-02	Apartment or Condominium	Yes
38	053-1902724140112	20152	Heritage Hills Apartment	3909 Heritage Hills Dr	Bloomington	002	6/1/1974	7/5/2005	5000	Active	Fuel Oil	8/7/1997	-	-	-	UST-F000	1110-02	Apartment or Condominium	No
38	053-1902724140112	20152	Heritage Hills Apartment	3909 Heritage Hills Dr	Bloomington	003	6/1/1990	7/5/2005	3500	Active	Fuel Oil	Not Available	-	-	-	UST-F000	1110-02	Apartment or Condominium	No
39	053-0802724430001	1731	Hillcrest Center	9301 Thomas Rd	Bloomington	001	7/12/1990	7/12/1990	10000	Active	Fuel Oil	Not Available	-	-	-	UST-F000	6000	Education, Public Administration, Health Care and Other Institutions	Yes
39	053-0802724430001	1731	Hillcrest Center	9301 Thomas Rd	Bloomington	010	1/1/1962	2/14/1986	7500	Removed	Fuel Oil	6/19/1990	-	-	-	UST-F000	6000	Education, Public Administration, Health Care and Other Institutions	Yes
40	053-0602724130126	54949	Holiday Companies Inc	4567 80th St W	Bloomington	1001	1/1/1986	4/3/1995	260	Active	Diesel	Not Available	-	-	-	AST-F000	2000	General Sales or Service	No
40	053-0602724130126	54949	Holiday Companies Inc	4567 80th St W	Bloomington	1002	1/1/1986	4/3/1995	260	Active	Diesel	Not Available	-	-	-	AST-F000	2000	General Sales or Service	No
40	053-0602724130126	54949	Holiday Companies Inc	4567 80th St W	Bloomington	1003	1/1/1996	5/11/1999	260	Active	Diesel	Not Available	-	-	-	AST-F000	2000	General Sales or Service	No
41	Not Available	13876	Holiday Stationstore #245	5401 Old Shakopee Rd W	Bloomington	001	11/17/1989	11/22/1989	12000	Active	Gasoline	Not Available	-	-	-	UST-F000	2116	Gasoline Services	No
41	Not Available	13876	Holiday Stationstore #245	5401 Old Shakopee Rd W	Bloomington	002	11/17/1989	11/22/1989	12000	Active	Gasoline	Not Available	-	-	-	UST-F000	2116	Gasoline Services	No
41	Not Available	13876	Holiday Stationstore #245	5401 Old Shakopee Rd W	Bloomington	003	11/17/1989	11/22/1989	10000	Active	Gasoline	Not Available	-	-	-	UST-F000	2116	Gasoline Services	No
41	Not Available	13876	Holiday Stationstore #245	5401 Old Shakopee Rd W	Bloomington	004	11/30/1992	12/23/1992	6000	Active	Diesel	Not Available	-	-	-	UST-F000	2116	Gasoline Services	No
41	Not Available	13876	Holiday Stationstore #245	5401 Old Shakopee Rd W	Bloomington	005	4/11/2000	4/11/2000	6000	Active	E-85 - 85% Ethanol & 15% Gas	Not Available	-	-	-	UST-F000	2116	Gasoline Services	No

Table C-5

PCSI Results - Storage Tank Locations in the DWSMA
City of Bloomington

Map ID	PID Number	MPCA ID	Site	Site Address	City	Tank Number	Install Date	Registration Date	Tank Capacity	Tank Status	Tank Product	Date Removed	Release Discovered Date	Release Report Date	Complete Site Closure Date	PCS Code-Material Code	Facility Code	Facility Designation	Location Verified
42	053-3202824120093	20999	Hubert Humphrey (HHH) Terminal Fuel Farm	2800 72Nd St E	Richfield	001	6/1/1998	10/26/1998	3000	Removed	Jet Fuel	4/20/1999	-	-	-	UST-F000	1100-01	Residence	Yes
42	053-3202824120093	20999	Hubert Humphrey (HHH) Terminal Fuel Farm	2800 72Nd St E	Richfield	003	6/1/1998	10/26/1998	20000	Removed	Diesel	4/20/1999	-	-	-	UST-F000	1100-01	Residence	Yes
42	053-3202824120093	20999	Hubert Humphrey (HHH) Terminal Fuel Farm	2800 72Nd St E	Richfield	1001	12/1/1998	6/7/1999	406000	Removed	Jet Fuel	4/20/1999	-	-	-	UST-F000	1100-01	Residence	Yes
42	053-3202824120093	20999	Hubert Humphrey (HHH) Terminal Fuel Farm	2800 72Nd St E	Richfield	1002	12/1/1998	6/7/1999	406000	Removed	Jet Fuel	4/20/1999	-	-	-	UST-F000	1100-01	Residence	Yes
42	053-3202824120093	20999	Hubert Humphrey (HHH) Terminal Fuel Farm	2800 72Nd St E	Richfield	1	8/2/2001	4/3/2002	20000	Removed	Gasoline	4/20/1999	-	-	-	UST-F000	1100-01	Residence	Yes
43	Not Available	12757	Hyland Golf Course	102Nd & Normandale Bl	Bloomington	011	1/1/1970	9/21/1987	500	Removed	Gasoline	11/13/1989	-	-	-	UST-F000	5000	Arts, Entertainment and Recreation	No
44	Not Available	123157	Hyland Greens Golf Course	10100 Normandale Blvd	Bloomington	1001	9/1/1999	7/11/2003	1000	Active	Diesel	Not Available	-	-	-	AST-F000	5000	Arts, Entertainment and Recreation	No
45	053-2011621130006	1907	Hyland Hills Ski Area	8800 Chalet Rd	Bloomington	001	8/11/1984	4/24/1986	1000	Removed	Gasoline	10/23/1991	-	-	-	UST-F000	5000	Arts, Entertainment and Recreation	No
45	053-2011621130006	1907	Hyland Hills Ski Area	8800 Chalet Rd	Bloomington	002	8/11/1984	4/24/1986	1000	Removed	Gasoline	10/23/1991	-	-	-	UST-F000	5000	Arts, Entertainment and Recreation	No
45	053-2011621130006	1907	Hyland Hills Ski Area	8800 Chalet Rd	Bloomington	003	8/11/1984	4/24/1986	1000	Removed	Diesel	10/23/1991	-	-	-	UST-F000	5000	Arts, Entertainment and Recreation	No
45	053-2011621130006	1907	Hyland Hills Ski Area	8800 Chalet Rd	Bloomington	004	8/11/1984	4/24/1986	4000	Removed	Fuel Oil	10/23/1991	-	-	-	UST-F000	5000	Arts, Entertainment and Recreation	No
45	053-2011621130006	1907	Hyland Hills Ski Area	8800 Chalet Rd	Bloomington	005	1/1/2000	4/24/1986	5000	Removed	Fuel Oil	8/1/1989	-	-	-	UST-F000	5000	Arts, Entertainment and Recreation	No
45	053-2011621130006	1907	Hyland Hills Ski Area	8800 Chalet Rd	Bloomington	006	1/1/2001	4/24/1986	560	Removed	Used Or Waste Oil	10/23/1991	-	-	-	UST-W000	5000	Arts, Entertainment and Recreation	No
45	053-2011621130006	54159*	Hyland Hills Ski Area	8800 Chalet Rd	Bloomington	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	-	-	-	Not Available	5000	Arts, Entertainment and Recreation	No
45	053-2011621130006	54159*	Hyland Hills Ski Area	8800 Chalet Rd	Bloomington	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	-	-	-	Not Available	5000	Arts, Entertainment and Recreation	No
45	053-2011621130006	54159*	Hyland Hills Ski Area	8800 Chalet Rd	Bloomington	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	-	-	-	Not Available	5000	Arts, Entertainment and Recreation	No
45	053-2011621130006	54591	Hyland Lake Park Reserve	8800 Chalet Rd	Bloomington	1122	12/1/1992	8/6/1993	1500	Active	Gasoline	Not Available	-	-	-	AST-F000	5000	Arts, Entertainment and Recreation	No
45	053-2011621130006	54591	Hyland Lake Park Reserve	8800 Chalet Rd	Bloomington	1123	12/1/1992	8/6/1993	2000	Active	Diesel	Not Available	-	-	-	AST-F000	5000	Arts, Entertainment and Recreation	No
45	053-2011621130006	54591	Hyland Lake Park Reserve	8800 Chalet Rd	Bloomington	1124	12/1/1992	8/6/1993	500	Active	Used Or Waste Oil	Not Available	-	-	-	AST-W000	5000	Arts, Entertainment and Recreation	No
47	053-1902724110014	1740	Jefferson Senior High School	4001 102Nd St W	Bloomington	001	1/1/1970	2/13/1986	20000	Removed	Fuel Oil	7/16/1990	-	-	-	UST-F000	6000	Education, Public Administration, Health Care and Other Institutions	No
47	053-1902724110014	1740	Jefferson Senior High School	4001 102Nd St W	Bloomington	002	1/1/1979	2/13/1986	20000	Removed	Fuel Oil	7/16/1990	-	-	-	UST-F000	6000	Education, Public Administration, Health Care and Other Institutions	No
47	053-1902724110014	1740	Jefferson Senior High School	4001 102Nd St W	Bloomington	003	7/27/1990	7/27/1990	20000	Active	Fuel Oil	Not Available	-	-	-	UST-F000	6000	Education, Public Administration, Health Care and Other Institutions	No
47	053-1902724110014	1740	Jefferson Senior High School	4001 102Nd St W	Bloomington	1001	1/1/1984	9/23/1996	100	Removed	Used Or Waste Oil	9/1/2001	-	-	-	AST-W000	6000	Education, Public Administration, Health Care and Other Institutions	No
48	053-0811621110023	1486	Jesco Inc	7175 Cahill Rd	Edina	001	1/1/2000	4/15/1986	2000	Removed	Gasoline	8/14/1997	-	-	-	UST-F000	3000	Manufacturing and Wholesale Trade	Approximate
48	053-0811621110023	1486	Jesco Inc	7175 Cahill Rd	Edina	002	1/1/2000	4/15/1986	10000	Removed	Gasoline	8/14/1997	-	-	-	UST-F000	3000	Manufacturing and Wholesale Trade	Approximate
48	053-0811621110023	1486	Jesco Inc	7175 Cahill Rd	Edina	003	1/1/2000	4/15/1986	10000	Removed	Diesel	6/6/1990	-	-	-	UST-F000	3000	Manufacturing and Wholesale Trade	Approximate
48	053-0811621110023	1486	Jesco Inc	7175 Cahill Rd	Edina	004	1/1/2000	4/15/1986	1000	Removed	Antifreeze	6/6/1990	-	-	-	UST-C000	3000	Manufacturing and Wholesale Trade	Approximate
48	053-0811621110023	1486	Jesco Inc	7175 Cahill Rd	Edina	005	1/1/2000	4/15/1986	1000	Removed	Motor Oil	6/7/1990	-	-	-	UST-F000	3000	Manufacturing and Wholesale Trade	Approximate
48	053-0811621110023	1486	Jesco Inc	7175 Cahill Rd	Edina	006	1/1/2000	4/15/1986	3000	Removed	Motor Oil	6/7/1990	-	-	-	UST-F000	3000	Manufacturing and Wholesale Trade	Approximate
48	053-0811621110023	1486	Jesco Inc	7175 Cahill Rd	Edina	007	1/1/2000	4/15/1986	3000	Removed	Fuel Oil	6/7/1990	-	-	-	UST-F000	3000	Manufacturing and Wholesale Trade	Approximate
48	053-0811621110023	1486	Jesco Inc	7175 Cahill Rd	Edina	008	1/1/2000	4/15/1986	3000	Removed	Used Or Waste Oil	6/7/1990	-	-	-	UST-W000	3000	Manufacturing and Wholesale Trade	Approximate
48	053-0811621110023	1486	Jesco Inc	7175 Cahill Rd	Edina	009	1/1/2000	4/15/1986	1500	Removed	Lube Oil	6/7/1990	-	-	-	UST-F000	3000	Manufacturing and Wholesale Trade	Approximate
48	053-0811621110023	1486	Jesco Inc	7175 Cahill Rd	Edina	010	1/1/2000	4/15/1986	6000	Removed	Gasoline	6/7/1990	-	-	-	UST-F000	3000	Manufacturing and Wholesale Trade	Approximate
49	Not Available	123528	Jlm Landscape Llc	7155 Cahill Rd	Edina	1001	12/1/2003	12/15/2003	265	Active	Petroleum Other	Not Available	-	-	-	AST-F000	2000	General Sales or Service	No
50	053-2902824340002	2029	Key Cadillac Inc	6825 York Av S	Edina	001	10/1/1965	1/13/1986	2000	Removed	Diesel	4/23/2000	-	-	-	UST-F000	2110	Automobile Sales or Service Establishment	No
50	053-2902824340002	2029	Key Cadillac Inc	6825 York Av S	Edina	002	10/1/1965	1/13/1986	1000	Removed	Motor Oil	4/23/1990	-	-	-	UST-F000	2110	Automobile Sales or Service Establishment	No
50	053-2902824340002	2029	Key Cadillac Inc	6825 York Av S	Edina	003	10/1/1965	1/13/1986	1000	Removed	Motor Oil	4/23/1990	-	-	-	UST-F000	2110	Automobile Sales or Service Establishment	No
50	053-2902824340002	2029	Key Cadillac Inc	6825 York Av S	Edina	004	10/1/1965	1/13/1986	500	Removed	Motor Oil	4/23/1990	-	-	-	UST-F000	2110	Automobile Sales or Service Establishment	No
50	053-2902824340002	2029	Key Cadillac Inc	6825 York Av S	Edina	005	10/1/1965	1/13/1986	560	Removed	Used Or Waste Oil	4/23/1990	-	-	-	UST-W000	2110	Automobile Sales or Service Establishment	No
50	053-2902824340002	2029	Key Cadillac Inc	6825 York Av S	Edina	006	10/1/1965	1/13/1986	10000	Removed	Gasoline	4/23/1990	-	-	-	UST-F000	2110	Automobile Sales or Service Establishment	No
50	053-2902824340002	2029	Key Cadillac Inc	6825 York Av S	Edina	007	10/30/1990	10/31/1999	1000	Active	Motor Oil	Not Available	-	-	-	UST-F000	2110	Automobile Sales or Service Establishment	No
50	053-2902824340002	2029	Key Cadillac Inc	6825 York Av S	Edina	008	10/30/1990	1/3/1999	1000	Active	Motor Oil	Not Available	-	-	-	UST-F000	2110	Automobile Sales or Service Establishment	No
50	053-2902824340002	2029	Key Cadillac Inc	6825 York Av S	Edina	009	10/30/1990	10/31/1990	560	Active	Transmission Fluid	Not Available	-	-	-	UST-F000	2110	Automobile Sales or Service Establishment	No
50	053-2902824340002	2029	Key Cadillac Inc	6825 York Av S	Edina	010	10/30/1990	10/31/1990	1000	Active	Used Or Waste Oil	Not Available	-	-	-	UST-W000	2110	Automobile Sales or Service Establishment	No
50	053-2902824340002	2029	Key Cadillac Inc	6825 York Av S	Edina	1	10/23/2001	11/21/2007	1500	Active	Used Or Waste Oil	Not Available	-	-	-	AST-W000	2110	Automobile Sales or Service Establishment	No
51	053-1111622310001	122205	Land Rover Eden Prairie	11903 Valley View Rd	Eden Prairie	1001	3/1/1998	7/26/2001	550	Active	Petroleum Other	Not Available	-	-	-	AST-F000	2000	General Sales or Service	Yes
51	053-1111622310001	122205	Land Rover Eden Prairie	11903 Valley View Rd	Eden Prairie	1002	3/1/1998	7/26/2001	550	Active	Used Or Waste Oil	Not Available	-	-	-	AST-W000	2000	General Sales or Service	Yes
51	053-1111622310001	122205	Land Rover Eden Prairie	11903 Valley View Rd	Eden Prairie	1003	3/1/1998	7/26/2001	320	Active	Transmission Fluid	Not Available	-	-	-	AST-F000	2000	General Sales or Service	Yes
51	053-1111622310001	122205	Land Rover Eden Prairie	11903 Valley View Rd	Eden Prairie	1004	3/1/1998	7/26/2001	150	Active	Antifreeze	Not Available	-	-	-	AST-C000	2000	General Sales or Service	Yes
52	053-1802724340039	124594	Life Church	2201 W 108th St	Bloomington	1	None Indicated	7/31/2007	8000	Removed	Fuel Oil	07/06/2007	-	-	-	UST-F000	6000	Education, Public Administration, Health Care and Other Institutions	No
53	053-1611621220003	1900	Lifetouch National Schools Studios	7800 Picture Dr	Bloomington	001	1/1/1966	3/27/1986	12000	Removed	Fuel Oil	Not Available	-	-	-	UST-F000	6000	Education, Public Administration, Health Care and Other Institutions	No
53	053-1611621220003	1900	Lifetouch National Schools Studios	7800 Picture Dr	Bloomington	002	1/1/2000	3/27/1986	12000	Removed	Fuel Oil	12/12/1989	-	-	-	UST-F000	6000	Education, Public Administration, Health Care and Other Institutions	No
53	053-1611621220003	1900	Lifetouch National Schools Studios	7800 Picture Dr	Bloomington	003	1/3/1990	1/3/1990	12000	Active	Fuel Oil	Not Available	-	-	-	UST-F000	6000	Education, Public Administration, Health Care and Other Institutions	No
54	Not Available	124104	Minnesota Center	7760 France Ave S	Edina	1001	9/1/1999	12/10/2003	120	Active	Diesel	Not Available	-	-	-	AST-F000	2000	General Sales or Service	No
54	Not Available	124104	Minnesota Center	7760 France Ave S	Edina	1002	6/1/1987	12/10/2003	100	Active	Diesel	Not Available	-	-	-	AST-F000	2000	General Sales or Service	No
54	Not Available	124104	Minnesota Center	7760 France Ave S	Edina	1003	6/1/1987	12/10/2003	150	Active	Diesel	Not Available	-	-	-	AST-F000	2000	General Sales or Service	No
55	053-0911621320003	2460	Mn Vikings Food Service Inc	5200 74th St W	Edina	001	4/1/1971	2/12/1986	10000	Removed	Gasoline	9/2/1998	-	-	-	UST-F000	3000	Manufacturing and Wholesale Trade	No
56	053-2002724320064	11135	Mobil Oil Taylors Service Center	3816 Old Shakopee Rd W	Bloomington	001	1/1/1981	4/30/1986	1000	Removed	Fuel Oil	1/1/1980	-	-	-	UST-F000	2110-01	Automotive/Vehicle Repair	No
56	053-2002724320064	11135	Mobil Oil Taylors Service Center	3816 Old Shakopee Rd W	Bloomington	002	1/1/1973	4/30/1986	10000	Removed	Gasoline	11/1/1987	-	-	-	UST-F000	2110-01	Automotive/Vehicle Repair	No
56	053-2002724320064	11135	Mobil Oil Taylors Service Center	3816 Old Shakopee Rd W	Bloomington	003	1/1/1959	4/30/1986	5000	Removed	Gasoline	11/1/1987	-	-	-	UST-F000	2110-01	Automotive/Vehicle Repair	No
56	053-2002724320064	11135	Mobil Oil Taylors Service Center	3816 Old Shakopee Rd W	Bloomington	004	1/1/1959	4/30/1986	4000	Removed	Gasoline	11/1/1987	-	-	-	UST-F000	2110-01	Automotive/Vehicle Repair	No
56	053-2002724320064	11135	Mobil Oil Taylors Service Center	3816 Old Shakopee Rd W	Bloomington	005	12/7/1989	12/7/1989	1000	Removed	Used Or Waste Oil	10/21/1992	-	-	-	UST-W000	2110-01	Automotive/Vehicle Repair	No
56	053-2002724320064	11135	Mobil Oil Taylors Service Center	3816 Old Shakopee Rd W	Bloomington	006	1/1/2001	4/30/1986	560	Removed	Used Or Waste Oil	12/6/1989	-	-	-	UST-W000	2110-01	Automotive/Vehicle Repair	No
56	053-2002724320064	11135	Mobil Oil Taylors Service Center	3816 Old Shakopee Rd W	Bloomington	007	11/13/1987	6/25/1992	10000	Removed	Gasoline	10/21/1992	-	-	-	UST-F000	2110-01	Automotive/Vehicle Repair	No
56	053-2002724320064	11135	Mobil Oil Taylors Service Center	3816 Old Shakopee Rd W	Bloomington	008	11/13/1987	6/25/1992	10000	Removed	Gasoline	10/21/1992	-	-	-	UST-F000	2110-01	Automotive/Vehicle Repair	No
56	053-2002724320064	11135	Mobil Oil Taylors Service Center	3816 Old Shakopee Rd W	Bloomington	009	11/13/1987	6/25/1992	10000	Removed	Gasoline	10/21/1992	-	-	-	UST-F000	2110-01	Automotive/Vehicle Repair	No
57	053-1802724110001	2571	Normandale Community College	9700 France Av S	Bloomington	003	8/1/1996	None Indicated	1000	Removed	Gasoline	7/1/1996	-	-	-	UST-F000	6000	Education, Public Administration, Health Care and Other Institutions	No
57	053-1802724110001	2571	Normandale Community College	9700 France Av S	Bloomington	1001	6/1/1970	5/15/2003	265	Active	Diesel	8/1/1996	-	-	-	AST-F000	6000	Education, Public Administration, Health Care and Other Institutions	No
57	053-1802724110001	2571	Normandale Community College	9700 France Av S	Bloomington	1002	None Indicated	5/15/2003	250	Active	Used Or Waste Oil	12/15/2011	-	-	-	AST-W000	6000	Education, Public Administration, Health Care and Other Institutions	No
57	053-1802724110001	2571	Normandale Community College	9700 France Av S	Bloomington	LD1	8/4/1975	12/11/1986	300	Removed	Diesel	Not Available	-	-	-	UST-F000	6000	Education, Public Administration, Health Care and Other Institutions	No
58	053-1802724220001	1730	Normandale Hills Elementary School	9501 Toledo Av S	Bloomington	012	1/1/1968	2/14/1986	8000	Removed	Fuel Oil	7/13/1989	-	-	-	UST-F000	6000	Education, Public Administration, Health Care and Other Institutions	Yes
58	053-1802724220001	1730	Normandale Hills Elementary School	9501 Toledo Av S	Bloomington	144	8/10/1989	8/10/1989	10000	Active	Fuel Oil	Not Available	-	-	-	UST-F000	6000	Education, Public Administration, Health Care and Other Institutions	Yes
59	053-0811621110029	3158	Northern States Power Co-Normandale Div	5309 70th St W	Edina	002	1/1/1957	4/14/1986	8000	Removed	Diesel	Not Available	-	-	-	UST-F000	4000	Transportation, Communication, Information and Utilities	No
59	053-0811621110029	3158	Northern States Power Co-Normandale Div	5309 70th St W	Edina	003	1/1/1972	4/14/1986	500	Removed	Used Or Waste Oil	Not Available	-	-	-	UST-W000	4000	Transportation, Communication, Information and Utilities	No
59	053-0811621110029	3158	Northern States Power Co-Normandale Div	5309 70th St W	Edina	004	1/1/1957	4/14/1986	1000	Removed	Fuel Oil	Not Available	-	-	-	UST-F000	4000	Transportation, Communication, Information and Utilities	No
59	053-0811621110029	3158	Northern States Power Co-Normandale Div	5309 70th St W	Edina	005	1/1/1957	4/14/1986	7000	Closed In-Place	Fuel Oil	Not Available	-	-	-	UST-F000	4000	Transportation, Communication, Information and Utilities	No
59	053-0811621110029	3158	Northern States Power Co-Normandale Div	5309 70th St W	Edina	2242	11/1/1999	1/25/2001	600	Active	Used Or Waste Oil	Not Available	-	-	-	AST-W000	4000	Transportation, Communication, Information and Utilities	No
59	053-0811621110029	3158	Northern States Power Co-Normandale Div	5309 70th St W	Edina	375	1/1/1981	4/14/1986	20000	Active	Diesel	Not Available	-	-	-	UST-F000	4000	Transportation, Communication, Information and Utilities	No
59	053-0811621110029	3158	Northern States Power Co-Normandale Div	5309 70th St W	Edina	376	11/6/1987	11/6/1987	8000	Active	Gasoline	Not Available	-	-	-	UST-F000	4000	Transportation, Communication, Information and Utilities	No
60	053-0502724230007	14329	Northland Plaza	3800 80th St W	Bloomington	001	10/1/1984	12/31/1990	560	Removed	Diesel	8/13/1997	-	-	-	UST-F000	2000	General Sales or Service	Yes
60	053-0502724230007	14329	Northland Plaza	3800 80th St W	Bloomington	002	8/13/1997	9/5/1997	560	Active	Diesel	Not Available	-	-	-	UST-F000	2000	General Sales or Service	Yes
61	053-1902724120001	1737	Olson Junior High School	4551 102Nd St W	Bloomington	008	1/1/1967	2/14/1986	15000	Removed	Fuel Oil	7/11/1989	-	-	-	UST-F000	6000	Education, Public Administration, Health Care and Other Institutions	No
61	053-1902724120001	1737	Olson Junior High School	4551 102Nd St W	Bloomington	009	1/1/1970	2/14/1986	20000	Removed	Fuel Oil	7/12/1989	-	-	-	UST-F000	6000	Education, Public Administration, Health Care and Other Institutions	No
61	053-1902724120001	1737	Olson Junior High School	4551 102Nd St W	Bloomington	149	7/26/1989	7/26/1989	10000	Active	Fuel Oil	Not Available	-	-	-	UST-F000	6000	Education, Public Administration, Health Care and Other Institutions	No
62	053-0911621310013	17824	One Corporate Plaza	7400 Metro Bl	Edina	002	8/4/1994	1/22/1998	4000	Active	Fuel Oil	6/10/1994	-	-	-	UST-F000	2000	General Sales or Service	No
63	053-0811621440013	52700	P & L Automotive	5301 Edina Industrial Bl	Edina	101A	12/10/1987	10/16/1990	265	Active	Other Substance	Not Available	-	-	-	AST	2110-01	Automotive/Vehicle Repair	No
63	053-0811621440013	52700	P & L Automotive	5301 Edina Industrial Bl	Edina	101B	12/10/1987	10/16/1990	265	Active	Other Substance	Not Available	-	-	-	AST	2110-01	Automotive/Vehicle Repair	No
64	053-3102824410088	20292	Park Lawn Apartments	4120 Park Lawn Av	Edina	002	10/22/1997	1/5/1998	6000	Active	Fuel Oil	10/21/1997	-	-	-	UST-F000	1100-02	Apartment or Condominium	Yes
65	053-3102824410013	15440	Park Lawn Estates	4141 Parklawn Av	Edina	001	1/1/1969	10/3/1991	6000	Active	Fuel Oil	Not Available	-	-	-	UST-F000	1100-02	Apartment or Condominium	Yes
66	053-0702724140002	124569	Park Shore Estates	4001 89th St W	Bloomington	1	None Indicated	6/4/2007	1500	Removed	Fuel Oil	5/21/2007	-	-	-	UST-F000	1100-02	Apartment or Condominium	No
67	053-3102824420043	15393	Parklawn East & West Condominiums	4351-4401 Parklawn Av	Edina	001	1/1/1966	9/9/1991	5000	Active	Fuel Oil	Not Available	-	-	-	UST-F000	1100-02	Apartment or Condominium	No
67	053-3102824420043	15393	Parklawn East & West Condominiums	4351-4401 Parklawn Av	Edina	002	1/1/1966	9/9/1991	5000	Active	Fuel Oil	Not Available	-	-	-	UST-F000	1100-02	Apartment or Condominium	No
68	053-1802724410059	122406	Pebble Brook Apartments	9901 Harrison Rd	Bloomington	001	12/19/2001	1/4/2002	10883	Active	Fuel Oil	Not Available	-	-	-	UST-F000	1100-02	Apartment or Condominium	No
69	053-1802724410029	21059	Pebblebrook Apartments	4101 98th St W	Bloomington	002	1/1/1977	4/16/1998	10,000	Removed	Fuel Oil	Not Available	-	-	-	UST-F000	1100-02	Apartment or Condominium	Yes
69	053-1802724410029	21059	Pebblebrook Apartments	4101 98th St W	Bloomington	003	12/11/2001	None Indicated	10,000	Active	Fuel Oil	Not Available	-	-	-	UST-F000	1100-02	Apartment or Condominium	Yes
69	053-1802724410029	21059	Pebblebrook Apartments	4101 98th St W	Bloomington	004	None Indicated	None Indicated	10,000	Removed	Fuel Oil	12/11/2001	-	-	-	UST-F000	1100-02	Apartment or Condominium	Yes
69	053-1802724410029	21059	Pebblebrook Apartments	4101 98th St W	Bloomington	410	1/1/1975	4/16/1998	10,000	Removed	Fuel Oil	Not Available	-	-	-	UST-F000	1100-02	Apartment or Condominium	Yes
70	053-3102824340009	3215	Pentagon Office Park	4510 77th St W	Edina	510	1/1/2000	9/29/1986	10,000	Removed	Fuel Oil	9/25/1988	-	-	-	UST-F000	2000	General Sales or Service	No
70	053-3102824340009	3215	Pentagon Office Park	4510 77th St W	Edina	511	7/13/1988	7/13/1988	6,000	Active	Fuel Oil	Not Available	-	-	-	UST-F000	2000	General Sales or Service	No
71	053-3102824430005	3214	Pentagon Office Park	7600 Parklawn Av	Edina	600	6/1/1988	6/1/1988	4,000	Active	Fuel Oil	Not Available	-	-	-	UST-F000	2000	General Sales or Service	No

Table C-5

PCSI Results - Storage Tank Locations in the DWSMA
City of Bloomington

Map ID	PID Number	MPCA ID	Site	Site Address	City	Tank Number	Install Date	Registration Date	Tank Capacity	Tank Status	Tank Product	Date Removed	Release Discovered Date	Release Report Date	Complete Site Closure Date	PCS Code-Material Code	Facility Code	Facility Designation	Location Verified
71	053-3102824430005	3214	Pentagon Office Park	7600 Parklawn Av	Edina	760	1/1/2000	9/29/1986	10,000	Removed	Fuel Oil	9/25/1988	-	-	-	UST-F000	2000	General Sales or Service	No
72	053-3102824430004	3216	Pentagon Office Park	4530 77th St W	Edina	530	1/1/2000	9/29/1986	10,000	Removed	Fuel Oil	9/25/1988	-	-	-	UST-F000	2000	General Sales or Service	No
73	053-3102824340009	3217	Pentagon Office Park	4550 77th St W	Edina	511	7/20/1988	7/20/1988	6,000	Active	Fuel Oil	Not Available	-	-	-	UST-F000	2000	General Sales or Service	No
73	053-3102824340009	3217	Pentagon Office Park	4550 77th St W	Edina	550	1/1/2000	9/29/1986	10,000	Removed	Fuel Oil	9/25/1989	-	-	-	UST-F000	2000	General Sales or Service	No
74	053-3102824430001	3218	Pentagon Office Park	4570 77th St W	Edina	570	1/1/2000	9/29/1986	10,000	Removed	Fuel Oil	9/25/1988	-	-	-	UST-F000	2000	General Sales or Service	No
75	053-3102824340008	3219	Pentagon Office Park	4600 77th St W	Edina	600	1/1/2000	9/29/1986	10,000	Removed	Fuel Oil	9/25/1988	-	-	-	UST-F000	2000	General Sales or Service	No
75	053-3102824340008	3219	Pentagon Office Park	4600 77th St W	Edina	601	6/22/1988	6/22/1988	6,000	Active	Fuel Oil	Not Available	-	-	-	UST-F000	2000	General Sales or Service	No
76	053-3102824340008	3220	Pentagon Office Park	4620 77th St W	Edina	620	1/1/2000	9/29/1986	10,000	Removed	Fuel Oil	9/25/1988	-	-	-	UST-F000	2000	General Sales or Service	No
77	053-3102824340007	3221	Pentagon Office Park	4640 77th St W	Edina	640	1/1/2000	9/29/1986	10,000	Removed	Fuel Oil	9/25/1988	-	-	-	UST-F000	2000	General Sales or Service	No
77	053-3102824340007	3221	Pentagon Office Park	4640 77th St W	Edina	641	7/5/1988	7/5/1988	6,000	Active	Fuel Oil	Not Available	-	-	-	UST-F000	2000	General Sales or Service	No
78	053-3102824340007	3222	Pentagon Office Park	4660 77th St W	Edina	660	1/1/2000	9/29/1986	10,000	Removed	Fuel Oil	9/25/1988	-	-	-	UST-F000	2000	General Sales or Service	No
79	053-3102824330009	3223	Pentagon Office Park	4930 77th St W	Edina	930	1/1/2000	9/29/1986	10,000	Removed	Fuel Oil	6/7/1991	-	-	-	UST-F000	2000	General Sales or Service	No
80	053-3102824330010	3224	Pentagon Office Park	4940 Viking Dr	Edina	940	1/1/2000	9/29/1986	10,000	Removed	Fuel Oil	9/25/1988	-	-	-	UST-F000	2000	General Sales or Service	No
80	053-3102824330010	3224	Pentagon Office Park	4940 Viking Dr	Edina	941	7/13/1988	7/13/1988	4,000	Active	Fuel Oil	Not Available	-	-	-	UST-F000	2000	General Sales or Service	No
81	053-0602724120020	123117	Phase I Marketpoint	4300 Market Pointe	Bloomington	1001	6/9/2000	2/21/2003	650	Active	Diesel	Not Available	-	-	-	AST-F000	2000	General Sales or Service	Yes
82	053-0602724340001	1727	Popular Bridge Elementary School	8401 Palmer Av S	Bloomington	015	1/1/1961	2/14/1986	10,000	Removed	Fuel Oil	7/19/1989	-	-	-	UST-F000	6000	Education, Public Administration, Health Care and Other Institutions	Yes
82	053-0602724340001	1727	Popular Bridge Elementary School	8401 Palmer Av S	Bloomington	149	7/20/1989	7/20/1989	10,000	Active	Fuel Oil	Not Available	-	-	-	UST-F000	6000	Education, Public Administration, Health Care and Other Institutions	Yes
83	Not Available	55874	Radisson Hotel South	7800 Normandale Blvd	Edina	1001	1/1/1970	6/29/1999	20,000	Active	Diesel	Not Available	-	-	-	AST-F000	1300	Hotels, Motels, or Other Accommodation Services	No
84	Not Available	122733	Randy'S Sanitation	7800 E Bush Lake Rd	Bloomington	14773	None Indicated	9/4/2002	1,000	Removed	Diesel	Not Available	-	-	-	AST-F000	4345	Sanitary Landfill (Disposal)	No
84	Not Available	122733	Randy'S Sanitation	7800 E Bush Lake Rd	Bloomington	17432	None Indicated	9/4/2002	500	Removed	Petroleum Other	Not Available	-	-	-	AST-F000	4345	Sanitary Landfill (Disposal)	No
84	Not Available	122733	Randy'S Sanitation	7800 E Bush Lake Rd	Bloomington	5438	None Indicated	9/4/2002	425	Removed	Used Or Waste Oil	Not Available	-	-	-	AST-W000	4345	Sanitary Landfill (Disposal)	No
85	053-1902724410025	2671	Rapid Oil Change	10630 France Av S	Bloomington	001	1/1/1985	5/27/1986	1,000	Removed	Used Or Waste Oil	6/24/1993	-	-	-	UST-W000	2116	Gasoline Services	No
86	053-2702824340039	125601	Redevelopment Site	66th St & Penn Ave	Richfield	1	None Indicated	None Indicated	265	Removed	Fuel Oil	Not Available	-	-	-	UST-F000	2000	General Sales or Service	No
86	053-2702824340039	125601	Redevelopment Site	66th St & Penn Ave	Richfield	2	None Indicated	None Indicated	265	Removed	Fuel Oil	Not Available	-	-	-	UST-F000	2000	General Sales or Service	No
86	053-2702824340039	125601	Redevelopment Site	66th St & Penn Ave	Richfield	3	None Indicated	None Indicated	265	Removed	Fuel Oil	Not Available	-	-	-	UST-F000	2000	General Sales or Service	No
86	053-2702824340039	125601	Redevelopment Site	66th St & Penn Ave	Richfield	4	None Indicated	None Indicated	265	Removed	Fuel Oil	Not Available	-	-	-	UST-F000	2000	General Sales or Service	No
86	053-2702824340039	125601	Redevelopment Site	66th St & Penn Ave	Richfield	5	None Indicated	None Indicated	265	Removed	Fuel Oil	Not Available	-	-	-	UST-F000	2000	General Sales or Service	No
87	053-0911621210016	20886	Regis Corporation	7201 Metro Bl	Edina	002	4/19/1999	4/26/2004	550	Removed	Diesel	4/19/1999	-	-	-	UST-F000	2000	General Sales or Service	No
88	053-3302824320001	2494	Richfield Junior High School	7461 Oliver Av S	Richfield	002	5/17/1994	5/26/1994	10,000	Active	Fuel Oil	Not Available	-	-	-	UST-F000	6000	Education, Public Administration, Health Care and Other Institutions	No
88	053-3302824320001	2494	Richfield Junior High School	7461 Oliver Av S	Richfield	008	7/1/1958	5/16/1986	10,000	Removed	Fuel Oil	5/16/1994	-	-	-	UST-F000	6000	Education, Public Administration, Health Care and Other Institutions	No
88	053-3302824320001	2494	Richfield Junior High School	7461 Oliver Av S	Richfield	009	7/1/1973	5/16/1986	10,000	Removed	Fuel Oil	5/16/1994	-	-	-	UST-F000	6000	Education, Public Administration, Health Care and Other Institutions	No
89	053-3402824220001	2501	Richfield Public Schools Garage	300 72Nd St W	Richfield	001	7/1/1971	5/16/1986	10,000	Removed	Diesel	7/20/1999	-	-	-	UST-F000	6000	Education, Public Administration, Health Care and Other Institutions	No
89	053-3402824220001	2501	Richfield Public Schools Garage	300 72Nd St W	Richfield	002	7/1/1982	5/16/1986	1,000	Removed	Gasoline	7/22/1999	-	-	-	UST-F000	6000	Education, Public Administration, Health Care and Other Institutions	No
89	053-3402824220001	2501	Richfield Public Schools Garage	300 72Nd St W	Richfield	003	1/1/2000	5/16/1986	1,500	Removed	Fuel Oil	11/16/1990	-	-	-	UST-F000	6000	Education, Public Administration, Health Care and Other Institutions	No
90	053-3402824210003	2499	Richfield Senior High School	7001 Harriet Av S	Richfield	003	7/1/1954	5/16/1986	21,000	Removed	Fuel Oil	8/1/1998	-	-	-	UST-F000	6000	Education, Public Administration, Health Care and Other Institutions	No
90	053-3402824210003	2499	Richfield Senior High School	7001 Harriet Av S	Richfield	004	7/1/1974	5/16/1986	21,000	Removed	Fuel Oil	8/1/1998	-	-	-	UST-F000	6000	Education, Public Administration, Health Care and Other Institutions	No
90	053-3402824210003	2499	Richfield Senior High School	7001 Harriet Av S	Richfield	005	9/1/1998	2/7/2006	20,000	Active	Fuel Oil	Not Available	-	-	-	UST-F000	6000	Education, Public Administration, Health Care and Other Institutions	No
91	053-2911621110001	1726	Ridgeview Elementary School	9400 Nesbitt Av S	Bloomington	016	1/1/1962	2/14/1986	8000	Removed	Fuel Oil	7/12/1989	-	-	-	UST-F000	6000	Education, Public Administration, Health Care and Other Institutions	Yes
91	053-2911621110001	1726	Ridgeview Elementary School	9400 Nesbitt Av S	Bloomington	139	7/25/1989	7/25/1989	10000	Active	Fuel Oil	Not Available	-	-	-	UST-F000	6000	Education, Public Administration, Health Care and Other Institutions	Yes
92	053-0602724240009	1694	Road Machinery & Supplies Co (RMS)	4901 80th St W	Bloomington	001	1/1/2000	10/17/1988	2000	Removed	Gasoline	Not Available	-	-	-	UST-F000	3000	Manufacturing and Wholesale Trade	No
92	053-0602724240009	1694	Road Machinery & Supplies Co (RMS)	4901 80th St W	Bloomington	002	1/1/2000	10/17/1988	2000	Removed	Diesel	Not Available	-	-	-	UST-F000	3000	Manufacturing and Wholesale Trade	No
92	053-0602724240009	1694	Road Machinery & Supplies Co (RMS)	4901 80th St W	Bloomington	003	1/1/1975	10/17/1988	2000	Removed	Gasoline	Not Available	-	-	-	UST-F000	3000	Manufacturing and Wholesale Trade	No

Table C-6

PCSI Results - Spills in the DWSMA
City of Bloomington

MapID	PID Number	Address	City	Name	PCS Code	Facility Code	Facility Designation	Location Verified
1	1902724410023	SW Quad of France & Old Shakopee Rd.	Bloomington	Corners Development	SPL	2000	General Sales and Service	Yes
3	911621220000	7125 Ohms Lane	Edina	Supra Color Labs Inc.	SPL	2417	Advertising, Media and Photography Services	Yes
2	1802724320000	5101-5159 W. 98th St.	Bloomington	Normandale Village Shopping Center	SPL	2100	Retail Sales or Service	Yes
4	2002724320000	NE Quad of France Ave. & Old Shakopee Rd.	Bloomington	The Point	SPL	2000	General Sales and Service	Yes

Table C-7

PCSI Results - Hazardous Waste Generators in the DWSMA
City of Bloomington

Map ID	PID Number	Generator	Address	City	Generator Size	Generator Type	Generator Status	PCS Code	Facility Code	Facility Designation	Location Verified
1	053-2811621330003	Bloomington (City Of) Hyland Golf Course	10100 Normandale Blvd	Bloomington	MIG	Not Available	Currently Licensed	HWG	5370	Golf Courses	Yes
2	053-0911621230021	Honeywell Inc	7171 Ohms La	Edina	Not Available	Not Available	Non-Generator	HWG	2400	Professional, Scientific and Technical Services and General Business	Yes
3	053-2811621310016	Park Nicollet Clinic - Bloomington	5320 Hyland Greens Dr	Bloomington	VSQG	Not Available	Currently Licensed	HWG	6511	Clinics	Yes
4	053-1902724410003	Penn Cycle Shops Inc	3916 Old Shakopee Rd W	Bloomington	MIG	Not Available	Currently Licensed	HWG	2100	Retail Sales or Service	Yes
5	053-1902724410025	Valvoline Instant Oil Change	10630 France Ave S	Bloomington	MIG	Not Available	Old or Obsolete Operation	HWG	2110-01	Automotive/Vehicle Repair	Yes
6	053-0811621140005	Thiele Engineering Co	7225 Bush Lake Rd	Edina	VSQG	Not Available	Old or Obsolete Operation	HWG	2400	Professional, Scientific and Technical Services and General Business	Yes
7	053-1902724410027	Bloomington Valley West Clinic	4160 Old Shakopee Rd W	Bloomington	VSQG	Not Available	Old or Obsolete Operation	HWG	6511	Clinics	Yes
8	053-1802724320026	Now Sports Inc	5153 98Th St W	Bloomington	VSQG	Not Available	Old or Obsolete Operation	HWG	2100	Retail Sales or Service	No
9	053-0911621230014	Hysitron Inc	5251 73Rd St W	Edina	Not Available	Not Available	Old or Obsolete Operation	HWG	3350	Machinery Manufacturing	No
10	053-0911621230012	Color Printing	7326 Ohms La	Edina	VSQG	Not Available	Old or Obsolete Operation	HWG	2400	Professional, Scientific and Technical Services and General Business	No
11	053-1902724410001	Sew What	10636 France Ave S	Bloomington	Not Available	Not Available	Non-Generator	HWG	2400	Professional, Scientific and Technical Services and General Business	Yes
12	053-0911621230013	Separation Dynamics International	7334 Ohms La	Edina	SQG	Not Available	Old or Obsolete Operation	HWG	3350	Machinery Manufacturing	No
13	053-2811621310016	Park Dental Bloomington	5320 Hyland Greens Dr Ste 200	Bloomington	VSQG	Not Available	Currently Licensed	HWG	6500	Health and Human Services Facilities	Yes
14	053-0811621410001	Print Shop (The) Edina	7385 Bush Lake Rd	Edina	MIG	Not Available	Old or Obsolete Operation	HWG	2400	Professional, Scientific and Technical Services and General Business	Yes
15	053-2811621310016	Schroeder (Lawrence M) Dds	5129 98Th St W	Bloomington	VSQG	Not Available	Currently Licensed	HWG	6500	Health and Human Services Facilities	No
16	053-0911621230013	Xerox	7324 Ohms La	Edina	MIG	Not Available	Old or Obsolete Operation	HWG	3350	Machinery Manufacturing	No
17	053-0811621140002	Filmtec Corporation	5400 Dewey Hill Rd	Edina	VSQG	Not Available	Currently Licensed	HWG	3000	Manufacturing and Wholesale Trade	Yes
18	053-1902724410029	Metro Dental Care (Bloomington)	10554 France Ave S	Bloomington	MIG	Not Available	Old or Obsolete Operation	HWG	6500	Health and Human Services Facilities	No
19	053-1902724410029	Normandale Chiropractic Health Center	10564 France Ave S	Bloomington	MIG	Not Available	Currently Licensed	HWG	6500	Health and Human Services Facilities	No
20	053-0811621410001	Hey (Dc) Co Inc	7399 Bush Lake Rd	Edina	VSQG	Not Available	Old or Obsolete Operation	HWG	3000	Manufacturing and Wholesale Trade	No
21	053-1111622420002	Merry Dental Care Center	7460 Market Place Dr	Eden Prairie	VSQG	Not Available	Currently Licensed	HWG	6500	Health and Human Services Facilities	Yes
22	053-1902724410029	Goodyear Tire & Auto	10608 France Ave S	Bloomington	VSQG	Not Available	Currently Licensed	HWG	2110-01	Automotive/Vehicle Repair	No
23	053-1902724410029	Cub Foods #1034	10520 France Ave S	Bloomington	VSQG	Not Available	Currently Licensed	HWG	2500	Food Services	Yes
24	053-0911621230012	Pillsbury Haagen Dazs R & D	5219 73Rd St W	Edina	VSQG	Not Available	Old or Obsolete Operation	HWG	2416	Research and Development Establishments (Scientific, etc...)	No
25	053-1802724320027	Now Sports Inc	5101 98Th St W	Bloomington	VSQG	Not Available	Old or Obsolete Operation	HWG	2100	Retail Sales or Service	Yes
26	053-0911621230016	Acme North America Corp	5203 73Rd St W	Edina	VSQG	Not Available	Old or Obsolete Operation	HWG	3360	Electrical/Electronic Products Manufacturing	Yes
27	053-1902724310044	Creation Audio Recording	5002 Old Shakopee Rd W	Bloomington	Not Available	Not Available	Non-Generator	HWG	2400	Professional, Scientific and Technical Services and General Business	No
28	053-1802724320027	Brett Chiropractic	5127 98Th St W	Bloomington	MIG	Not Available	Currently Licensed	HWG	6500	Health and Human Services Facilities	No
29	053-0811621140002	Outlook Publications, Inc	7317 Cahill Rd	Edina	Not Available	Not Available	Non-Generator	HWG	2400	Professional, Scientific and Technical Services and General Business	No
30	053-0911621230017	International Parts Supply Corporation	7220 Ohms La	Edina	VSQG	Not Available	Old or Obsolete Operation	HWG	3350	Machinery Manufacturing	Yes
31	053-1802724320026	Normandale Amoco	5150 98Th St W	Bloomington	MIG	Not Available	Currently Licensed	HWG	2116	Gasoline Services	No
32	053-0911621230013	J B Controls	7350 Ohms La	Edina	MIG	Not Available	Old or Obsolete Operation	HWG	3350	Machinery Manufacturing	No
33	053-0911621230013	Integral Refrigeration	7340 Ohms La	Edina	Not Available	Not Available	Non-Generator	HWG	3000	Manufacturing and Wholesale Trade	No
34	053-1902724410029	Snyder Drug #46	10606 France Ave S	Bloomington	MIG	Not Available	Old or Obsolete Operation	HWG	2100	Retail Sales or Service	No
35	053-1802724320027	Snyder Drug #84	5135 98Th St W	Bloomington	MIG	Not Available	Old or Obsolete Operation	HWG	2100	Retail Sales or Service	No
36	053-1902724140110	Pm Printing	10512 France Ave S	Bloomington	MIG	Not Available	Currently Licensed	HWG	2400	Professional, Scientific and Technical Services and General Business	No
37	053-0911621230016	Industrial Wood Products Inc	5200 73Rd St W	Edina	Not Available	Not Available	Non-Generator	HWG	3210	Wood Products Establishment	No
38	053-0911621230012	Vending Equipment Sales Inc	5211 73Rd St W	Edina	Not Available	Not Available	Non-Generator	HWG	3350	Machinery Manufacturing	No
39	053-1111622410014	Nve Corporation	11405 Valley View Rd	Eden Prairie	SQG	Not Available	Currently Licensed	HWG	3350	Machinery Manufacturing	No
40	053-1802724320027	Norwest Bank West Bloomington	9801 Normandale Blvd	Bloomington	Not Available	Not Available	Non-Generator	HWG	2200	Financial and Insurance Establishments	No
41	053-1802724320027	Lunds Normandale Village	5159 98Th St W	Bloomington	VSQG	Not Available	Currently Licensed	HWG	2500	Food Services	No
42	053-0911621230014	Universal Cleaning Inc	5251 73Rd St W	Edina	Not Available	Not Available	Non-Generator	HWG	2400	Professional, Scientific and Technical Services and General Business	No
43	053-0811621140003	Spinetech Inc	7375 Bush Lake Rd	Edina	Not Available	Not Available	Non-Generator	HWG	3000	Manufacturing and Wholesale Trade	No
44	053-1902724140112	Heritage Hills Apartments	3909 Heritage Hills Dr	Bloomington	Not Available	Not Available	Non-Generator	HWG	1100-02	Residence	No
45	053-1902724410003	Mn Insty Prints	3918 Old Shakopee Rd W	Bloomington	MIG	Not Available	Currently Licensed	HWG	2400	Professional, Scientific and Technical Services and General Business	No
46	053-0911621320002	One Way Building Services Inc	5250 74Th St W Ste 21	Edina	MIG	Not Available	Currently Licensed	HWG	2400	Professional, Scientific and Technical Services and General Business	No
47	053-0911621320002	Sprinter Printing	5250 74Th St W	Edina	MIG	Not Available	Currently Licensed	HWG	2400	Professional, Scientific and Technical Services and General Business	No
48	053-0811621410001	Redco Group	7395 Bush Lake Rd	Edina	Not Available	Not Available	Non-Generator	HWG	2400	Professional, Scientific and Technical Services and General Business	No
49	053-0911621230016	Psa Inc	5200 73Rd St W	Edina	Not Available	Not Available	Non-Generator	HWG	6500	Health and Human Services Facilities	No
50	053-0911621240025	Hypoguard	7301 Ohms La Ste 200	Edina	Not Available	Not Available	Non-Generator	HWG	3320	Chemical Manufacturing/Processing Plant	No
51	053-0911621320003	Minnesota Vikings Food Services Inc	5200 74Th St W	Edina	MIG	Not Available	Old or Obsolete Operation	HWG	2500	Food Services	No
52	053-1902724410027	Kalenda (Kris J) Dds	4200 Old Shakopee Rd W Ste 221	Bloomington	VSQG	Not Available	Currently Licensed	HWG	6500	Health and Human Services Facilities	Yes
53	053-0811621140008	Fast Technologies	7391 Bush Lake Rd	Edina	Not Available	Not Available	Non-Generator	HWG	3000	Manufacturing and Wholesale Trade	No

Table C-7

PCSI Results - Hazardous Waste Generators in the DWSMA
City of Bloomington

Map ID	PID Number	Generator	Address	City	Generator Size	Generator Type	Generator Status	PCS Code	Facility Code	Facility Designation	Location Verified
54	053-0911621210016	Regis Corporation	7201 Metro Blvd	Edina	MIG	Not Available	Currently Licensed	HWG	2400	Professional, Scientific and Technical Services and General Business	No
55	053-0911621230014	Event Sound & Lighting	5251 73Rd St W Ste B	Edina	Not Available	Not Available	Non-Generator	HWG	2400	Professional, Scientific and Technical Services and General Business	No
56	053-0911621230014	Preferred Painting	5249 73Rd St W	Edina	MIG	Not Available	Old or Obsolete Operation	HWG	2400	Professional, Scientific and Technical Services and General Business	No
57	053-1902724410029	Martinizing Cleaners	10516 France Ave S	Bloomington	VSQG	Not Available	Currently Licensed	HWG	2600-01	Dry Cleaners	No
58	053-1802724320027	Drylan'S	5111 98Th St W	Bloomington	Not Available	Not Available	Non-Generator	HWG	2600	Personal Services	No
59	053-2002724320061	Southport Cleaners	3701 Old Shakopee Rd W	Bloomington	VSQG	Not Available	Currently Licensed	HWG	2600-01	Dry Cleaners	No
60	053-0911621230013	Kirk House Publishers	7322 Ohms Ln	Edina	Not Available	Not Available	Non-Generator	HWG	2400	Professional, Scientific and Technical Services and General Business	No
61	053-0911621220028	Minnesota Wanner Company	7125 Ohms La	Edina	VSQG	Not Available	Currently Licensed	HWG	3000	Manufacturing and Wholesale Trade	Yes
62	053-1802724320025	Highlands Apartments	5200 98Th St W	Bloomington	Not Available	Not Available	Non-Generator	HWG	1100-02	Residence	No
63	053-1902724410029	Midwest Wellness Center, Inc	10562 France Ave S	Bloomington	VSQG	Not Available	Currently Licensed	HWG	6500	Health and Human Services Facilities	No
64	053-0811621140001	Filmtec	7215 Cahill Rd	Edina	MIG	Not Available	Currently Licensed	HWG	3000	Manufacturing and Wholesale Trade	Yes
65	053-1902724410031	Walgreens #11250	3913 Old Shakopee Rd W	Bloomington	VSQG	Not Available	Currently Licensed	HWG	2100	Retail Sales or Service	No
66	053-2002724320061	France Avenue Pet Hospital	3701 W Old Shakopee Rd Ste 280	Bloomington	VSQG	Not Available	Currently Licensed	HWG	6500	Health and Human Services Facilities	No
67	053-0911621230013	Hobart Corporation	7330 Ohms Ln	Edina	MIG	Not Available	Currently Licensed	HWG	2500	Food Services	No
68	053-0911621240035	Twin Cities Pain Clinic	7235 Ohms Ln	Edina	VSQG	Not Available	Currently Licensed	HWG	6511	Clinics	No
69	053-0911621320002	Pace Analytical Services Inc	1800 Elm St Se	Minneapolis	VSQG	Not Available	Currently Licensed	HWG	2400	Professional, Scientific and Technical Services and General Business	No
70	053-1902724410032	Property Re-Development	10700 France Ave S	Bloomington	Not Available	Not Available	Old or Obsolete Operation	HWG	2400	Professional, Scientific and Technical Services and General Business	No
71	053-1111622410015	Emerson Network Power	7575 Market Place Dr	Eden Prairie	MIG	Not Available	Currently Licensed	HWG	2400	Professional, Scientific and Technical Services and General Business	No
72	053-2002724320061	Pet Supplies Plus - Bloomington	3701 Old Shakopee Rd W Ste 300	Bloomington	VSQG	Not Available	Currently Licensed	HWG	2100	Retail Sales or Service	No
73	053-2002724320064	Tc Orthodontics - Bloomington	10617 France Ave S	Bloomington	MIG	Not Available	Currently Licensed	HWG	6500	Health and Human Services Facilities	No
74	053-0911621240032	Snoring And Sleep Apnea Dental Treatment Center	7225 Ohms Ln Ste 180	Edina	VSQG	Not Available	Currently Licensed	HWG	6500	Health and Human Services Facilities	No
75	053-1902724410029	Big Lots	10590 France Ave S	Bloomington	VSQG	Not Available	Currently Licensed	HWG	2124	Department Stores, Warehourse Clubs or Superstores	No
76	053-1902724410029	Cosmoprof	10536 France Ave S	Bloomington	VSQG	Not Available	Currently Licensed	HWG	2400	Professional, Scientific and Technical Services and General Business	No
77	053-2002724320064	Metro Dentalcare - Bloomington	10611 France Ave S Ste 200	Bloomington	VSQG	Not Available	Currently Licensed	HWG	6500	Health and Human Services Facilities	No
78	053-1902724410031	Clean N Press	4007 Old Shakopee Rd W	Bloomington	Not Available	Not Available	Non-Generator	HWG	2600-01	Dry Cleaners	No
79	053-2002724320064	Clean N Press Inc	10619 France Ave S	Bloomington	Not Available	Not Available	Non-Generator	HWG	2600-01	Dry Cleaners	No
80	053-2002724320064	Normandale Chiropractic Health Center	10574 France Ave S	Bloomington	MIG	Not Available	Old or Obsolete Operation	HWG	6500	Health and Human Services Facilities	No
81	053-2002724320064	Taylor'S Service Center	3816 Old Shakopee Rd W	Bloomington	VSQG	Not Available	Old or Obsolete Operation	HWG	2110-01	Automotive/Vehicle Repair	No
82	053-2002724320063	Bloomdale Unocal 76	3835 Old Shakopee Rd W	Bloomington	MIG	Not Available	Old or Obsolete Operation	HWG	2116	Gasoline Services	Yes
83	053-2002724320064	Point Family Dentistry	10611 France Ave S Ste 201	Bloomington	VSQG	Not Available	Currently Licensed	HWG	6500	Health and Human Services Facilities	No
84	053-1902724410031	Pet Crossing Animal Hospital & Dental	4015 Old Shakopee Rd W	Bloomington	MIG	Not Available	Old or Obsolete Operation	HWG	6500	Health and Human Services Facilities	No
85	053-1902724410031	One (1) Hour Photo Lab	3919 Old Shakopee Rd W Ste B	Bloomington	MIG	Not Available	Old or Obsolete Operation	HWG	2417-01	Photographic Services	No
86	053-1902724410032	Valley West Amoco	3901 Old Shakopee Rd W	Bloomington	MIG	Not Available	Old or Obsolete Operation	HWG	2116	Gasoline Services	No
87	053-1902724410031	Ashland Tv	4005 Old Shakopee Rd W	Bloomington	MIG	Not Available	Old or Obsolete Operation	HWG	4200	Communications and Information Establishments	No
88	053-2002724320064	Dollar Tree #04361 Valley West Shopping Center	10600 France Ave S	Bloomington	VSQG	Not Available	Currently Licensed	HWG	2124	Department Stores, Warehourse Clubs or Superstores	No
89	053-1902724410032	Corners Development	Old Shakopee Rd & France Ave S	Bloomington	Hazardous Waste, Small to Minimal QG	Not Available	Inactive	HWG	2000	General Sales and Service	No
90	053-3311621340005	Metro Dentalcare - Normandale	10800 Normandale Blvd Ste 116	Bloomington	Hazardous Waste, Small to Minimal QG	Not Available	Inactive	HWG	6500	Health and Human Services Facilities	Yes
91	053-0811621140004	Fournier Inc	7275 Bush Lake Rd	Edina	Hazardous Waste, Small to Minimal QG	Not Available	Inactive	HWG	2400	Professional, Scientific and Technical Services and General Business	Yes
92	Not Available	Evans Central	11415 Valley View Rd	Eden Prairie	Hazardous Waste, Small to Minimal QG	Not Available	Active	HWG	3000	Manufacturing and Wholesale Trade	No
93	Not Available	Phyton Corp - Bloomington	10804 Normandale Blvd	Bloomington	Hazardous Waste, Small to Minimal QG	Not Available	Active	HWG	3320	Chemical Manufacturing/Processing Plant	No
94	Not Available	Jerry'S Do It Best Hardware - Bloomington	10530 France Ave S	Bloomington	Hazardous Waste, Small to Minimal QG	Not Available	Active	HWG	2122	Hardware Stores and Home Centers	No
95	Not Available	Xcel Hyland Lake Substation	10901 Normandale Blvd	Bloomington	Hazardous Waste, Small to Minimal QG	Not Available	Inactive	HWG	4310-01	Power Substation	No
96	053-1111622420043	Bausch & Lomb Hearing Systems	7555 Market Place Dr	Eden Prairie	Hazardous Waste, Small to Minimal QG	Not Available	Inactive	HWG	3360	Electrical/Electronic Products Manufacturing	Yes
97	053-1802724340039	Lcs Westminster Partnership V Llp	14511 County Road 47	Plymouth	Hazardous Waste, Small to Minimal QG	Not Available	Inactive	HWG	2110-01	Automotive/Vehicle Repair	No
98	Not Available	Bloomington Dental Center	4158 W Old Shakopee Rd	Bloomington	Hazardous Waste, Small to Minimal QG	Not Available	Inactive	HWG	6500	Health and Human Services Facilities	No
99	Not Available	Minnesota Made Ice Center	7300 Bush Lake Rd	Edina	Hazardous Waste, Small to Minimal QG	Not Available	Active	HWG	2400	Professional, Scientific and Technical Services and General Business	No
100	053-1111622410010	Kjjo Fm & Kzow Am	11320 Valley View Rd	Eden Prairie	Hazardous Waste, Small to Minimal QG	Not Available	Inactive	HWG	4200	Communications and Information Establishments	Yes
101	Not Available	Raco Oil & Grease Co	10812 Normandale Blvd	Bloomington	Hazardous Waste, Small to Minimal QG	Not Available	Active	HWG	3310-01	Petroleum Refining/Processing	No
102	053-0911621230018	Maxi-Print Inc	5250 73Rd St W Ste C	Edina	Hazardous Waste, Small to Minimal QG	Not Available	Active	HWG	2400	Professional, Scientific and Technical Services and General Business	Yes
103	Not Available	Metro Place Ii	7151 Metro Blvd	Edina	Hazardous Waste, Small to Minimal QG	Not Available	Inactive	HWG	2000	General Sales and Service	No

LQG Large Quantity Generator
MQG Moderate Quantity Generator
SQG Small Quantity Generator
VSQG Very Small Quantity Generator

Approximate - Parcel not found but location is approximately where that address would exist.
Uncertain - No address information provided or address is provided but changed substantially making locating difficult.

Table C-8
PCSI Results - Chemical Storage Sites in the DWSMA
City of Bloomington

MapID	PID Number	CAS Numbers	Facility Name	Site Address	Chemicals	PCS Code	Facility Code	Facility Designation	Location Verified
1	053-1111622410014	7727379	Nve Corporation	11409 VALLEY VIEW ROAD	NITROGEN, LIQUID	STOR-C000	3360	Electrical/Electronic Products Manufacturing	Yes
2	053-1902724120001	68476302	Hubert Olson Elementary/Middle School	4501 W 102ND ST	FUEL OIL	STOR-C000	6100	Schools	Yes
2	053-1902724120001	7778543	Hubert Olson Elementary/Middle School	4501 W 102ND ST	CHLORINE	STOR-C000	6100	Schools	Yes
3	053-1802724320027	7664939	At&T Mobility - Normandale 1732	5101 W 98th St	SULFURIC ACID	STOR-C000	4200	Communication and Information Establishments	Yes
4	053-1802724330070	68476302	Tarnhill Associates Dba Tarnhill	5200-5240 W 102ND ST	FUEL OIL #2	STOR-C000	1100-02	Apartment or Condominium	Yes
4	053-1802724330070	68476302	Tarnhill Associates Dba Tarnhill	5200-5240 W 102ND ST	FUEL OIL #2	STOR-C000	1100-02	Apartment or Condominium	Yes
4	053-1802724330070	68476302	Tarnhill Associates Dba Tarnhill	5200-5240 W 102ND ST	FUEL OIL #2	STOR-C000	1100-02	Apartment or Condominium	Yes
4	053-1802724330070	68476302	Tarnhill Associates Dba Tarnhill	5200-5240 W 102ND ST	FUEL OIL #2	STOR-C000	1100-02	Apartment or Condominium	Yes
5	053-0811621140002	68122	FilmTec Corporation	5400 Dewey Hill Road	DIMETHYLFORMAMIDE	STOR-C000	3360	Electrical/Electronic Products Manufacturing	Yes
5	053-0811621140002	64742489	FilmTec Corporation	5400 Dewey Hill Road	ISOPAR	STOR-C000	3360	Electrical/Electronic Products Manufacturing	Yes
5	053-0811621140002	25068386	FilmTec Corporation	5400 Dewey Hill Road	EPOXY RESIN	STOR-C000	3360	Electrical/Electronic Products Manufacturing	Yes
5	053-0811621140002	25068386	FilmTec Corporation	5400 Dewey Hill Road	EPOXY RESIN	STOR-C000	3360	Electrical/Electronic Products Manufacturing	Yes
5	053-0811621140002	25620580	FilmTec Corporation	5400 Dewey Hill Road	EPOXY HARDENER	STOR-C000	3360	Electrical/Electronic Products Manufacturing	Yes
5	053-0811621140002	25620580	FilmTec Corporation	5400 Dewey Hill Road	EPOXY HARDENER	STOR-C000	3360	Electrical/Electronic Products Manufacturing	Yes
5	053-0811621140002	101688	FilmTec Corporation	5400 Dewey Hill Road	ISOCYANATE BASED PRODUCT	STOR-C000	3360	Electrical/Electronic Products Manufacturing	Yes
5	053-0811621140002	101688	FilmTec Corporation	5400 Dewey Hill Road	ISOCYANATE BASED PRODUCT	STOR-C000	3360	Electrical/Electronic Products Manufacturing	Yes
5	053-0811621140002	7664382	FilmTec Corporation	5400 Dewey Hill Road	PHOSPHORIC ACID	STOR-C000	3360	Electrical/Electronic Products Manufacturing	Yes
5	053-0811621140002	7732185	FilmTec Corporation	5400 Dewey Hill Road	SODIUM HYDROXIDE	STOR-C000	3360	Electrical/Electronic Products Manufacturing	Yes
5	053-0811621140002	68585477	FilmTec Corporation	5400 Dewey Hill Road	SODIUM LAURYL SULFATE	STOR-C000	3360	Electrical/Electronic Products Manufacturing	Yes
5	053-0811621140002	7681529	FilmTec Corporation	5400 Dewey Hill Road	SODIUM HYPOCHLORITE	STOR-C000	3360	Electrical/Electronic Products Manufacturing	Yes
5	053-0811621140002	7681529	FilmTec Corporation	5400 Dewey Hill Road	SODIUM HYPOCHLORITE	STOR-C000	3360	Electrical/Electronic Products Manufacturing	Yes
5	053-0811621140002	108452	FilmTec Corporation	5400 Dewey Hill Road	M-PHENYLENEDIAMINE	STOR-C000	3360	Electrical/Electronic Products Manufacturing	Yes
5	053-0811621140002	7722647	FilmTec Corporation	5400 Dewey Hill Road	POTASSIUM PERMANGANATE	STOR-C000	3360	Electrical/Electronic Products Manufacturing	Yes
5	053-0811621140002	1310732	FilmTec Corporation	5400 Dewey Hill Road	DUBOTH	STOR-C000	3360	Electrical/Electronic Products Manufacturing	Yes
5	053-0811621140002	108918	FilmTec Corporation	5400 Dewey Hill Road	CORRODINE	STOR-C000	3360	Electrical/Electronic Products Manufacturing	Yes
5	053-0811621140002	64742489	FilmTec Corporation	5400 Dewey Hill Road	NAPTHA (TOTES)	STOR-C000	3360	Electrical/Electronic Products Manufacturing	Yes
6	053-0911621220034	68122	FilmTec Corporation	7200 Ohms Lane	DIMETHYLFORMAMIDE	STOR-C000	3360	Electrical/Electronic Products Manufacturing	Yes
6	053-0911621220034	64742489	FilmTec Corporation	7200 Ohms Lane	ISOPAR	STOR-C000	3360	Electrical/Electronic Products Manufacturing	Yes
6	053-0911621220034	25068386	FilmTec Corporation	7200 Ohms Lane	EPOXY RESIN	STOR-C000	3360	Electrical/Electronic Products Manufacturing	Yes
6	053-0911621220034	25620580	FilmTec Corporation	7200 Ohms Lane	EPOXY HARDENER	STOR-C000	3360	Electrical/Electronic Products Manufacturing	Yes
6	053-0911621220034	101688	FilmTec Corporation	7200 Ohms Lane	ISOCYANATE BASED PRODUCT	STOR-C000	3360	Electrical/Electronic Products Manufacturing	Yes
6	053-0911621220034	101688	FilmTec Corporation	7200 Ohms Lane	ISOCYANATE BASED PRODUCT	STOR-C000	3360	Electrical/Electronic Products Manufacturing	Yes

Table C-9

High Capacity Wells within One Mile of the DWSMA
City of Bloomington

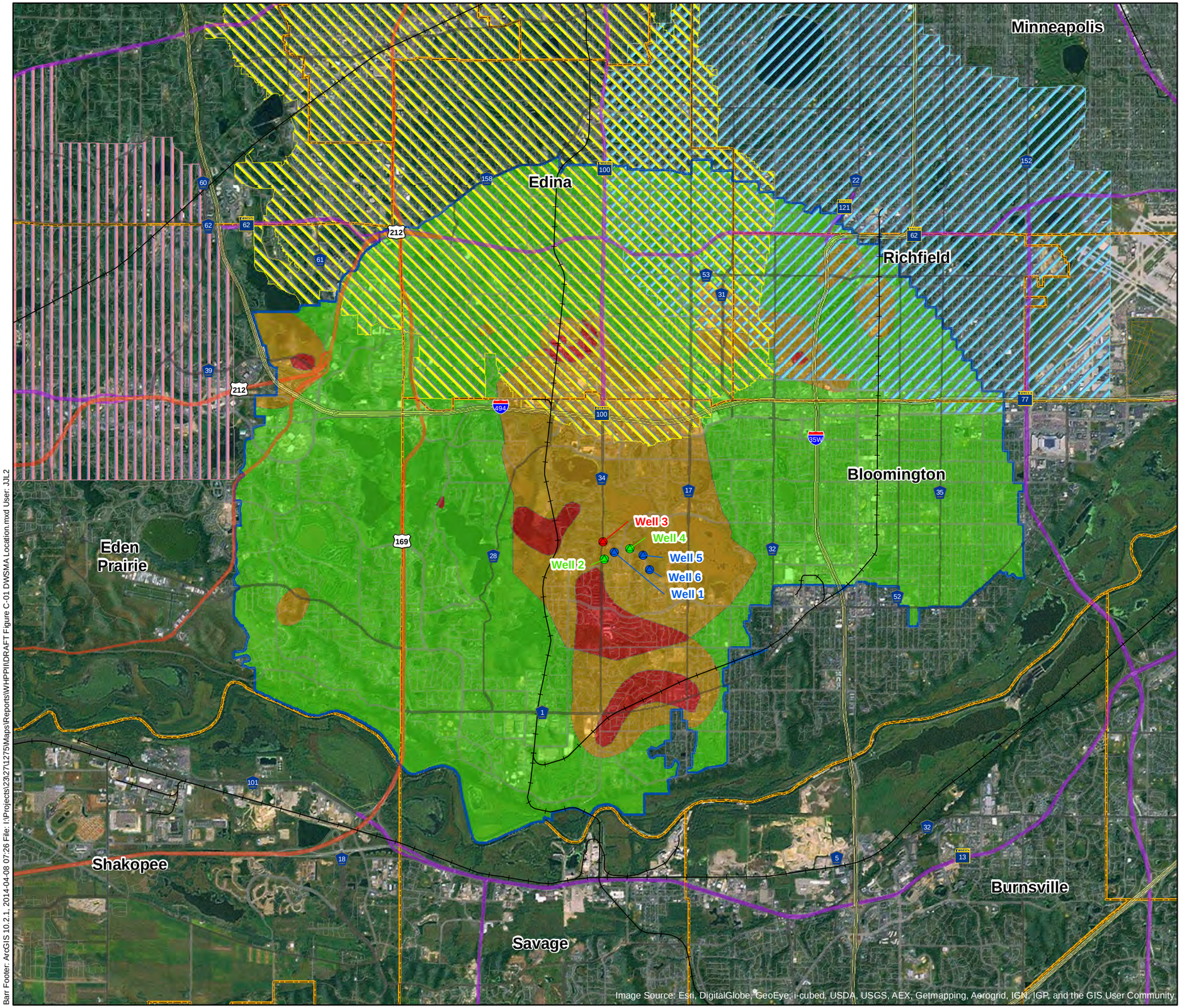
MapID	Permit Number	Unique ID	Type	Status	Use	Well Location	City or Twp	Permittee	PCS Code	Facility Code	Facility Designation	Aquifer	Permitted GPM
1	1973-1429	222910	Waterworks	Active	Municipal Waterworks	Poplar Ridge Rd	Bloomington	Bloomington, City Of	WEL	6000	Education, Public Administration, Health Care and Other Institutions	CJDN	12,800
2	1973-1429	222911	Waterworks	Active	Municipal Waterworks	Not Available	Bloomington	Bloomington, City Of	WEL	6000	Education, Public Administration, Health Care and Other Institutions	OPDCCJDN	12,800
3	1973-1429	222912	Waterworks	Active	Municipal Waterworks	Normandale Rd	Bloomington	Bloomington, City Of	WEL	6000	Education, Public Administration, Health Care and Other Institutions	CTCGCMTS	12,800
4	1973-1429	133389	Waterworks	Active	Municipal Waterworks	Not Available	Bloomington	Bloomington, City Of	WEL	6000	Education, Public Administration, Health Care and Other Institutions	OPDCCJDN	12,800
5	1973-1429	603079	Waterworks	Active	Municipal Waterworks	2215 Old Shakopee Rd W	Bloomington	Bloomington, City Of	WEL	6000	Education, Public Administration, Health Care and Other Institutions	CJDN	12,800
6	1973-1429	603080	Waterworks	Active	Municipal Waterworks	2215 Old Shakopee Rd W	Bloomington	Bloomington, City Of	WEL	6000	Education, Public Administration, Health Care and Other Institutions	CJDN	12,800
100	2003-3049	112249	Non-Crop Irrigation	Active	Golf Course Irrigation	Not Available	Edina	Edina, City Of	WEL	5000	Arts, Entertainment and Recreation	OPDCCJDN	2,000
196	1965-1082	204942	Water Level Maintenance	Active	Basin/Lake Level Maintenance	Not Available	Bloomington	Three Rivers Park District	WEL	6000	Education, Public Administration, Health Care and Other Institutions	OPDCCJDN	3,000
196	1965-1082	204942	Special Categories	Active	Snow and Ice Making	Not Available	Bloomington	Three Rivers Park District	WEL	6000	Education, Public Administration, Health Care and Other Institutions	OPDCCJDN	3,000
196	1965-1082	204942	Non-Crop Irrigation	Active	Golf Course Irrigation	Not Available	Bloomington	Three Rivers Park District	WEL	6000	Education, Public Administration, Health Care and Other Institutions	OPDCCJDN	3,000
275	1976-6200	114377	Non-Crop Irrigation	Active	Landscaping/Athletic Fields	Not Available	Bloomington	Bloomington, City Of	WEL	6000	Education, Public Administration, Health Care and Other Institutions	OPDCCTCG	225
278	2003-3049	112250	Non-Crop Irrigation	Active	Golf Course Irrigation	Not Available	Edina	Edina, City Of	WEL	5000	Arts, Entertainment and Recreation	OPDCCJDN	2,000
324	1975-6246	118804	Non-Crop Irrigation	Active	Landscaping/Athletic Fields	9650 France Ave S	Bloomington	Normandale Community College	WEL	6000	Education, Public Administration, Health Care and Other Institutions	OPDCCJDN	50
415	1985-6073	206373	Power Generation	Active	Other Power Generation	Not Available	Edina	Fairview Southdale Hospital	WEL	6000	Education, Public Administration, Health Care and Other Institutions	OPDC	50
415	1985-6073	206373	Air Conditioning	Active	Once-through heating or A/C	Not Available	Edina	Fairview Southdale Hospital	WEL	6000	Education, Public Administration, Health Care and Other Institutions	OPDC	50
415	1985-6073	206373	Non-Crop Irrigation	Active	Landscaping/Athletic Fields	Not Available	Edina	Fairview Southdale Hospital	WEL	6000	Education, Public Administration, Health Care and Other Institutions	OPDC	50
415	1985-6073	206373	Waterworks	Active	Commercial/Institutional Waterworks	Not Available	Edina	Fairview Southdale Hospital	WEL	6000	Education, Public Administration, Health Care and Other Institutions	OPDC	50
436	1973-1119	200918	Waterworks	Active	Municipal Waterworks	Not Available	Richfield	Edina, City Of	WEL	6000	Education, Public Administration, Health Care and Other Institutions	CJDN	17,500
457	1973-1119	204884	Waterworks	Active	Municipal Waterworks	Not Available	Edina	Edina, City Of	WEL	6000	Education, Public Administration, Health Care and Other Institutions	OPDCCJDN	17,500
479	1973-1119	206588	Waterworks	Standby	Municipal Waterworks	Not Available	Edina	Edina, City Of	WEL	6000	Education, Public Administration, Health Care and Other Institutions	PMHNPMFL	17,500
550	1973-1119	200561	Waterworks	Active	Municipal Waterworks	Not Available	Edina	Edina, City Of	WEL	6000	Education, Public Administration, Health Care and Other Institutions	OPDCCJDN	17,500
593	1999-6058	617378	Industrial Processing	Active	Other Industrial Processing	7200 Ohms La	Edina	Filmtec Corporation	WEL	3000	Manufacturing and Wholesale Trade	CJDN	240
619	1985-6054	251279	Waterworks	Active	Private Waterworks	7421 Lyndale Ave S	Richfield	Woodlawn Terrace	WEL	1100-02	Apartment or Condominium	OPDC	80
628	1960-0231	222905	Water Level Maintenance	Active	Basin/Lake Level Maintenance	6405 Indians Hills Rd	Edina	Indianhead Lake Improvement Assoc	WEL	6000	Education, Public Administration, Health Care and Other Institutions	OSTPCJDN	200
649	1973-1119	206183	Waterworks	Active	Municipal Waterworks	Not Available	Edina	Edina, City Of	WEL	6000	Education, Public Administration, Health Care and Other Institutions	CJDN	17,500
688	1975-6273	224648	Water Level Maintenance	Active	Basin/Lake Level Maintenance	Not Available	Bloomington	Bloomington, City Of	WEL	6000	Education, Public Administration, Health Care and Other Institutions	QWTA	400
703	1973-1119	505626	Waterworks	Active	Municipal Waterworks	6054 Valleyview Rd	Edina	Edina, City Of	WEL	6000	Education, Public Administration, Health Care and Other Institutions	CJDN	17,500
755	2003-3049	200913	Non-Crop Irrigation	Active	Golf Course Irrigation	Not Available	Edina	Edina, City Of	WEL	5000	Arts, Entertainment and Recreation	CJDN	2,000
781	1973-1119	206377	Waterworks	Active	Municipal Waterworks	3850 69th St W	Edina	Edina, City Of	WEL	6000	Education, Public Administration, Health Care and Other Institutions	OPDCCJDN	17,500
809	1975-6260	119302	Non-Crop Irrigation	Active	Landscaping/Athletic Fields	5501 Green Valley Dr	Bloomington	Duke Realty Ltd Partnership	WEL	2000	General Sales or Service	OPDC	40
835	1973-1119	200914	Waterworks	Active	Municipal Waterworks	Not Available	Edina	Edina, City Of	WEL	6000	Education, Public Administration, Health Care and Other Institutions	CJDN	17,500
836	1973-1119	206184	Waterworks	Active	Municipal Waterworks	Not Available	Edina	Edina, City Of	WEL	6000	Education, Public Administration, Health Care and Other Institutions	CMTS	17,500
847	2005-3101	718192	Industrial Processing	Active	Other Industrial Processing	5400 Dewey Hill Rd	Edina	Filmtec Corporation	WEL	3000	Manufacturing and Wholesale Trade	CJDN	900
865	1973-1119	203101	Waterworks	Active	Municipal Waterworks	1001 Gleason Rd	Edina	Edina, City Of	WEL	6000	Education, Public Administration, Health Care and Other Institutions	OPDCCJDN	17,500
894	1973-1119	686286	Waterworks	Active	Municipal Waterworks	Gleason Rd	Edina	Edina, City Of	WEL	6000	Education, Public Administration, Health Care and Other Institutions	CJDN	17,500
925	1969-0167	224097	Air Conditioning	Active	Once-through heating or A/C	12001 78th St W	Eden Prairie	Rosemount Inc	WEL	3000	Manufacturing and Wholesale Trade	OPDC	365
925	1969-0167	224097	Industrial Processing	Active	Industrial Process Cooling Once-through	12001 78th St W	Eden Prairie	Rosemount Inc	WEL	3000	Manufacturing and Wholesale Trade	OPDC	365
925	1969-0167	224097	Non-Crop Irrigation	Active	Landscaping/Athletic Fields	12001 78th St W	Eden Prairie	Rosemount Inc	WEL	3000	Manufacturing and Wholesale Trade	OPDC	365
1014	1997-6116	205226	Non-Crop Irrigation	Active	Landscaping/Athletic Fields	Not Available	Bloomington	General Dynamics Adv Info Sys Inc	WEL	2000	General Sales or Service	CJDN	230
1054	1997-6116	222918	Non-Crop Irrigation	Active	Landscaping/Athletic Fields	Not Available	Bloomington	General Dynamics Adv Info Sys Inc	WEL	2000	General Sales or Service	OPDCCJDN	230
1086	1973-1119	200564	Waterworks	Active	Municipal Waterworks	Not Available	Edina	Edina, City Of	WEL	6000	Education, Public Administration, Health Care and Other Institutions	OPDCCJDN	17,500
1103	1965-1082	768698	Water Level Maintenance	Active	Basin/Lake Level Maintenance	8800 Chalet Rd	Bloomington	Three Rivers Park District	WEL	6000	Education, Public Administration, Health Care and Other Institutions	OPDC	3,000
1103	1965-1082	768698	Special Categories	Active	Snow and Ice Making	8800 Chalet Rd	Bloomington	Three Rivers Park District	WEL	6000	Education, Public Administration, Health Care and Other Institutions	OPDC	3,000
1103	1965-1082	768698	Non-Crop Irrigation	Active	Golf Course Irrigation	8800 Chalet Rd	Bloomington	Three Rivers Park District	WEL	6000	Education, Public Administration, Health Care and Other Institutions	OPDC	3,000
1126	1981-6197	147864	Water Level Maintenance	Active	Basin/Lake Level Maintenance	8213 Oxborough Ave	Edina	Oxmoor Lake Association	WEL	6000	Education, Public Administration, Health Care and Other Institutions	OPCJ	50
1155	1975-6269	433288	Air Conditioning	Active	Once-through heating or A/C	66th St & France Ave	Edina	Southdale Ltd Partnership	WEL	2000	General Sales or Service	OPCJ	1,600
1155	1975-6269	433288	Non-Crop Irrigation	Active	Landscaping/Athletic Fields	66th St & France Ave	Edina	Southdale Ltd Partnership	WEL	2000	General Sales or Service	OPCJ	1,600

Table C-9

High Capacity Wells within One Mile of the DWSMA
City of Bloomington

MapID	Permit Number	Unique ID	Type	Status	Use	Well Location	City or Twp	Permittee	PCS Code	Facility Code	Facility Designation	Aquifer	Permitted GPM
1193	1997-6148	462965	Non-Crop Irrigation	Active	Golf Course Irrigation	5850 102Nd Ave W	Bloomington	Bloomington, City Of	WEL	5370	Golf Courses	QBAA	550
1199	1997-6148	251306	Non-Crop Irrigation	Active	Golf Course Irrigation	Not Available	Bloomington	Bloomington, City Of	WEL	5000	Arts, Entertainment and Recreation		550
1246	2002-6085	505073	Industrial Processing	Active	Non-Metallic Processing	101 79th St W	Bloomington	Micron Molding Inc	WEL	3000	Manufacturing and Wholesale Trade	OPDC	25
1316	1992-6212	582644	Non-Crop Irrigation	Active	Golf Course Irrigation	6300 Auto Club Rd	Bloomington	Minnesota Valley Country Club	WEL	5000	Arts, Entertainment and Recreation	CJDN	450
1322	2002-6035	647782	Air Conditioning	Active	Commercial building A/C	6201 111th St W	Bloomington	Best Buy Data Center	WEL	2000	General Sales or Service	OPCJ	50
112242	1978-6175	112242	Waterworks	Active	Municipal Waterworks	7599 Mitchell Rd	Eden Prairie	Eden Prairie, City Of	WEL	6000	Education, Public Administration, Health Care and Other Institutions	OPCJ	22650
133362	1962-0691	133362	Waterworks	Active	Municipal Waterworks	Not Available	Richfield	Richfield, City Of	WEL	6000	Education, Public Administration, Health Care and Other Institutions	CWNCCMTS	0
161443	1972-1231	161443	Non-Crop Irrigation	Active	Golf Course Irrigation	5100 Wooddale Ave	Edina	Edina Country Club	WEL	5000	Arts, Entertainment and Recreation	OPDCCJDN	1400
161467	1986-6091	161467	Industrial Processing	Active	Metal Processing	2401 86th St E	Bloomington	Cypress Semiconductor	WEL	3000	Manufacturing and Wholesale Trade	OPDCCJDN	1200
161467	1986-6091	161467	Industrial Processing	Active	Other Industrial Processing	2401 86th St E	Bloomington	Cypress Semiconductor	WEL	3000	Manufacturing and Wholesale Trade	OPDCCJDN	1200
205406	1985-6356	205406	Non-Crop Irrigation	Active	Golf Course Irrigation	10530 Vincent	Eden Prairie	Olympic Hills Golf Club	WEL	5000	Arts, Entertainment and Recreation	QBAA	700
205574	1973-1413	205574	Industrial Processing	Active	Non-Metallic Processing	2800 Old Shakopee Rd	Bloomington	Polar Semiconductor Inc	WEL	3000	Manufacturing and Wholesale Trade	CJDN	1080
205574	1973-1413	205574	Industrial Processing	Active	Other Industrial Processing	2800 Old Shakopee Rd	Bloomington	Polar Semiconductor Inc	WEL	3000	Manufacturing and Wholesale Trade	CJDN	1080
205905	1978-6175	205905	Waterworks	Active	Municipal Waterworks	7955 Mitchell Rd	Eden Prairie	Eden Prairie, City Of	WEL	6000	Education, Public Administration, Health Care and Other Institutions	OPDCCJDN	22650
205941	1971-0452	205941	Non-Crop Irrigation	Active	Landscaping/Athletic Fields	9200 Flying Cloud Dr	Eden Prairie	Hennepin Technical College-Bp	WEL	6000	Education, Public Administration, Health Care and Other Institutions	OPDC	175
205941	1971-0452	205941	Non-Crop Irrigation	Active	Other Non-Crop irrigation	9200 Flying Cloud Dr	Eden Prairie	Hennepin Technical College-Bp	WEL	6000	Education, Public Administration, Health Care and Other Institutions	OPDC	175
206276	1962-0691	206276	Waterworks	Active	Municipal Waterworks	Not Available	Richfield	Richfield, City Of	WEL	6000	Education, Public Administration, Health Care and Other Institutions	OPDCCJDN	0
206279	1962-0691	206279	Waterworks	Active	Municipal Waterworks	Not Available	Richfield	Richfield, City Of	WEL	6000	Education, Public Administration, Health Care and Other Institutions	OPDCCJDN	0
206280	1962-0691	206280	Waterworks	Active	Municipal Waterworks	Not Available	Richfield	Richfield, City Of	WEL	6000	Education, Public Administration, Health Care and Other Institutions	OPDCCJDN	0
206353	1962-0691	206353	Waterworks	Active	Municipal Waterworks	Not Available	Richfield	Richfield, City Of	WEL	6000	Education, Public Administration, Health Care and Other Institutions	CJDN	0
206354	1962-0691	206354	Waterworks	Active	Municipal Waterworks	Not Available	Richfield	Richfield, City Of	WEL	6000	Education, Public Administration, Health Care and Other Institutions	CJDN	0
206361	1962-0691	206361	Waterworks	Active	Municipal Waterworks	Not Available	Richfield	Richfield, City Of	WEL	6000	Education, Public Administration, Health Care and Other Institutions	OPDCCJDN	0
206474	1973-1119	206474	Waterworks	Active	Municipal Waterworks	Not Available	Edina	Edina, City Of	WEL	6000	Education, Public Administration, Health Care and Other Institutions	OPDCCJDN	17500
207674	1973-1119	207674	Waterworks	Standby	Municipal Waterworks	5005 Mirror Lake Dr	Edina	Edina, City Of	WEL	6000	Education, Public Administration, Health Care and Other Institutions	OPDCCJDN	17500
208399	1973-1119	208399	Waterworks	Active	Municipal Waterworks	4521 50th St	Edina	Edina, City Of	WEL	6000	Education, Public Administration, Health Care and Other Institutions	OPDCCJDN	17500
208813	1992-6254	208813	Industrial Processing	Active	Non-Metallic Processing	Not Available	Savage	Liberty Tire Services Of Ohio Llc	WEL	2000	General Sales or Service	OPDC	15
236157	1972-1231	236157	Non-Crop Irrigation	Active	Golf Course Irrigation	5100 Wooddale Ave	Edina	Edina Country Club	WEL	5000	Arts, Entertainment and Recreation	OPDCCJDN	1400
236635	1970-0815	236635	Waterworks	Active	Campgrounds/Waysides/Rest Areas	Not Available	Bloomington	Hennepin County Parks	WEL	5000	Arts, Entertainment and Recreation	QBAAOPDC	90
240630	1973-1119	240630	Waterworks	Active	Municipal Waterworks	4801 50th St W	Edina	Edina, City Of	WEL	6000	Education, Public Administration, Health Care and Other Institutions	OPDCCJDN	17500
249986	1964-0014	249986	Air Conditioning	Active	Once-through heating or A/C	Not Available	Bloomington	Ind School District 271	WEL	6100	Schools	CJDN	170
249986	1964-0014	249986	Non-Crop Irrigation	Active	Landscaping/Athletic Fields	Not Available	Bloomington	Ind School District 271	WEL	6100	Schools	CJDN	170
405655	1973-1413	405655	Industrial Processing	Active	Non-Metallic Processing	3800 Old Shakopee Rd	Bloomington	Polar Semiconductor Inc	WEL	3000	Manufacturing and Wholesale Trade	OPCJ	1080
405655	1973-1413	405655	Industrial Processing	Active	Other Industrial Processing	3800 Old Shakopee Rd	Bloomington	Polar Semiconductor Inc	WEL	3000	Manufacturing and Wholesale Trade	OPCJ	1080
407613	1990-6201	407613	Non-Crop Irrigation	Active	Landscaping/Athletic Fields	Not Available	Bloomington	Normandale Community College	WEL	6000	Education, Public Administration, Health Care and Other Institutions	OPDC	180
420993	1992-6215	420993	Water Level Maintenance	Active	Dewatering	6949 101 Hy	Shakopee	Metropolitan Council	WEL	6000	Education, Public Administration, Health Care and Other Institutions	OPDC	14530
509079	1997-6194	509079	Non-Crop Irrigation	Active	Landscaping/Athletic Fields	13400 Staring Lake Pk	Eden Prairie	Ind School District 272	WEL	6000	Education, Public Administration, Health Care and Other Institutions	OPDC	80
547293	1986-6091	547293	Industrial Processing	Active	Metal Processing	2401 86th St E	Bloomington	Cypress Semiconductor	WEL	3000	Manufacturing and Wholesale Trade	OPDCCJDN	1200
603077	1986-6091	603077	Industrial Processing	Active	Metal Processing	2401 86th St E	Bloomington	Cypress Semiconductor	WEL	3000	Manufacturing and Wholesale Trade	OPDCCJDN	1200
639111	2000-6028	639111	Special Categories	Active	Other Special Categories	12619 Valley View Rd	Eden Prairie	Luxus Corp	WEL	3000	Manufacturing and Wholesale Trade	OPDC	100
672551	2003-3011	672551	Industrial Processing	Active	Non-Metallic Processing	2915 Waters Rd	Minneapolis	Aggregate Industries-Ncr Inc	WEL	3000	Manufacturing and Wholesale Trade	OPDC	170
NA1	1969-0053		Non-Crop Irrigation	Active	Golf Course Irrigation	Not Available	Bloomington	Bloomington, City Of	WEL	5000	Arts, Entertainment and Recreation	OPCJ	450

Figures



Bloomington Municipal Well

Aquifer

- Prairie du Chien - Jordan
- Jordan
- Tunnel City - Mt. Simon
- Railroad
- Bloomington DWSMA
- Municipal Boundary

Other DWSMAs

- Eden Prairie
- Edina
- Richfield

Aquifer Vulnerability

- High
- Moderate
- Low

N

Feet

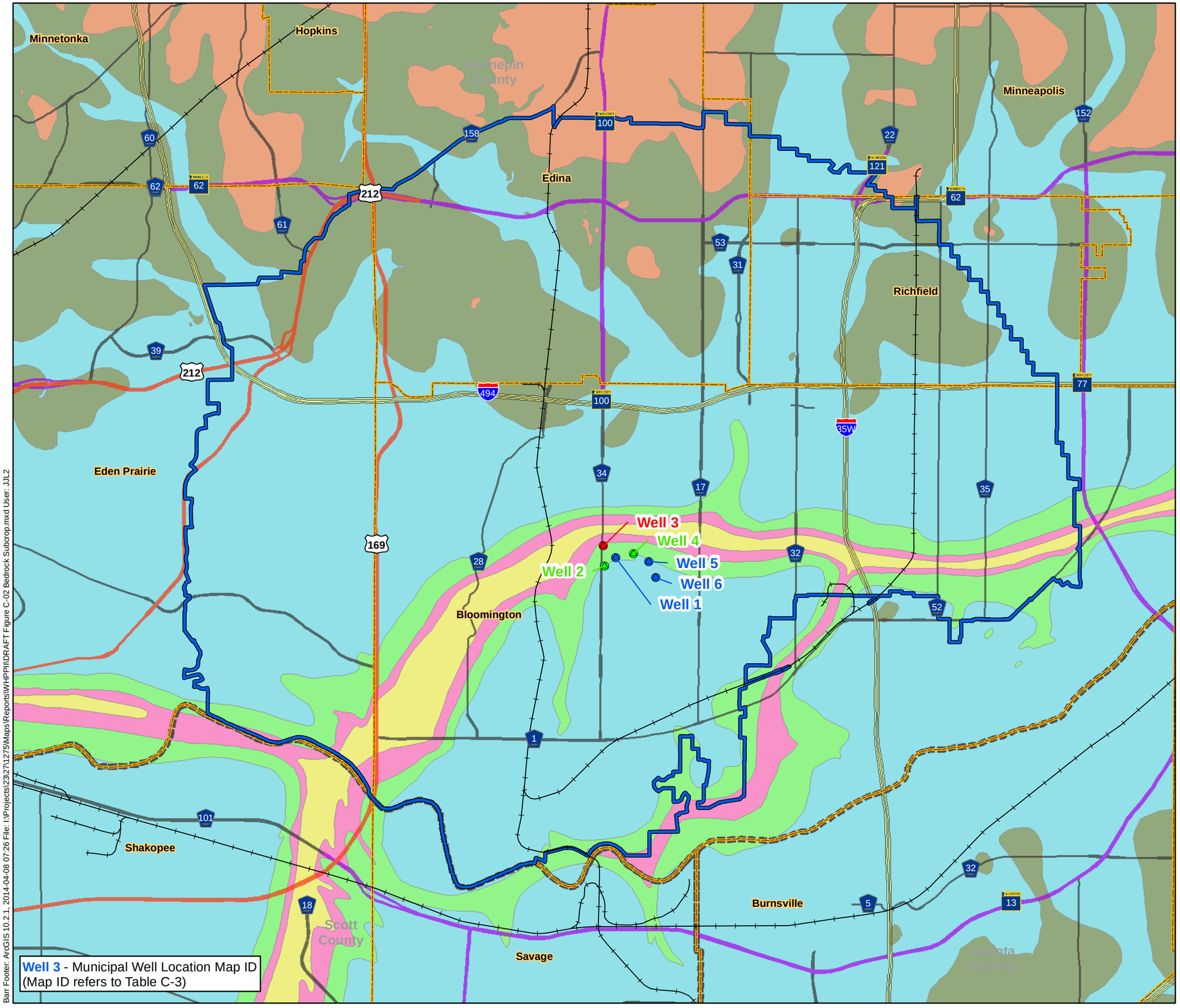
6,000 0 6,000

BARR

Figure C-1

MUNICIPAL WELLS, DWSMA AND AQUIFER VULNERABILITY
Bloomington WHPP Amendment
City of Bloomington
Hennepin County, MN

Barr Footer: ArcGIS 10.2.1, 2014-04-08 07:26 File: I:\Projects\23\27\1275\Maps\Reports\WHPP\\DRAFT Figure C-01 DWSMA Location.mxd User: JJL2



Railroad
Bloomington DWSMA
Municipal Boundary
County Boundary

Bedrock Subcrop*

- Decorah Shale
- Jordan Sandstone
- Platteville Formation and Glenwood Formation
- Prairie du Chien Group
- St. Lawrence Formation
- St. Peter Sandstone
- Tunnel City Group

* Minnesota Geological Survey

N

Miles
1 0 1

BARR

Figure C-2

BEDROCK SUBCROP
Bloomington WHPP Amendment
City of Bloomington
Hennepin County, MN

Barr Footer: ArcGIS 10.2.1, 2014-04-08 07:26 File: I:\Projects\23\27\1275\Maps\Reports\WHPP\DRAFT Figure C-02 Bedrock Subcrop.mxd User: JJL2

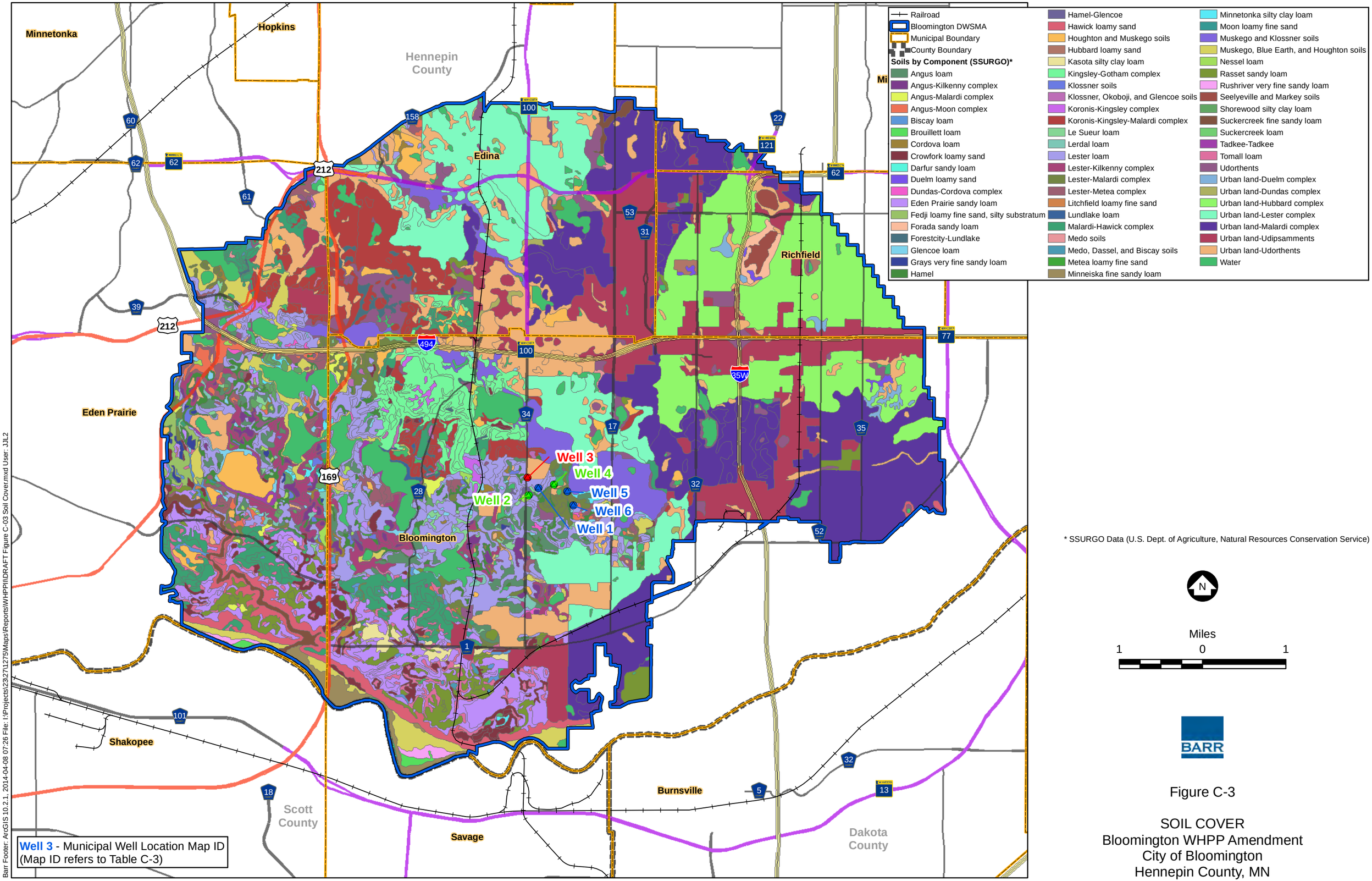
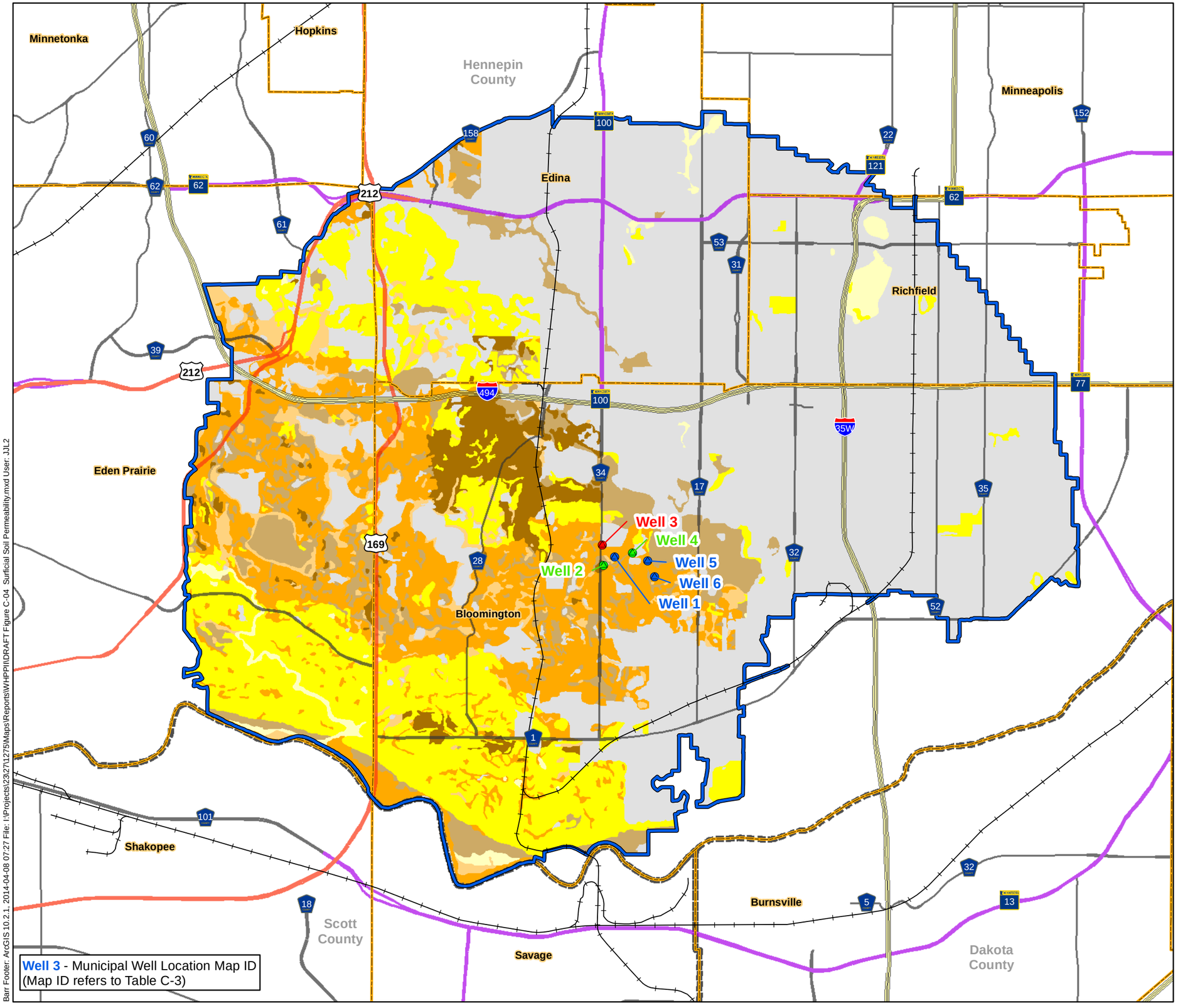


Figure C-3

SOIL COVER
Bloomington WHPP Amendment
City of Bloomington
Hennepin County, MN

Barr Footer: ArcGIS 10.2.1, 2014-04-08 07:26 File: I:\Projects\23\27\1275\Maps\Reports\WHPP\DRAFT Figure C-03 Soil Cover.mxd User: JJL2



Railroad
Bloomington DWSMA
Municipal Boundary
County Boundary

Soil Permeability Classification*

- Not rated or not available
- A
- A/D
- B
- B/D
- C
- C/D

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

* SSURGO Data (U.S. Dept. of Agriculture, Natural Resources Conservation Service)

N

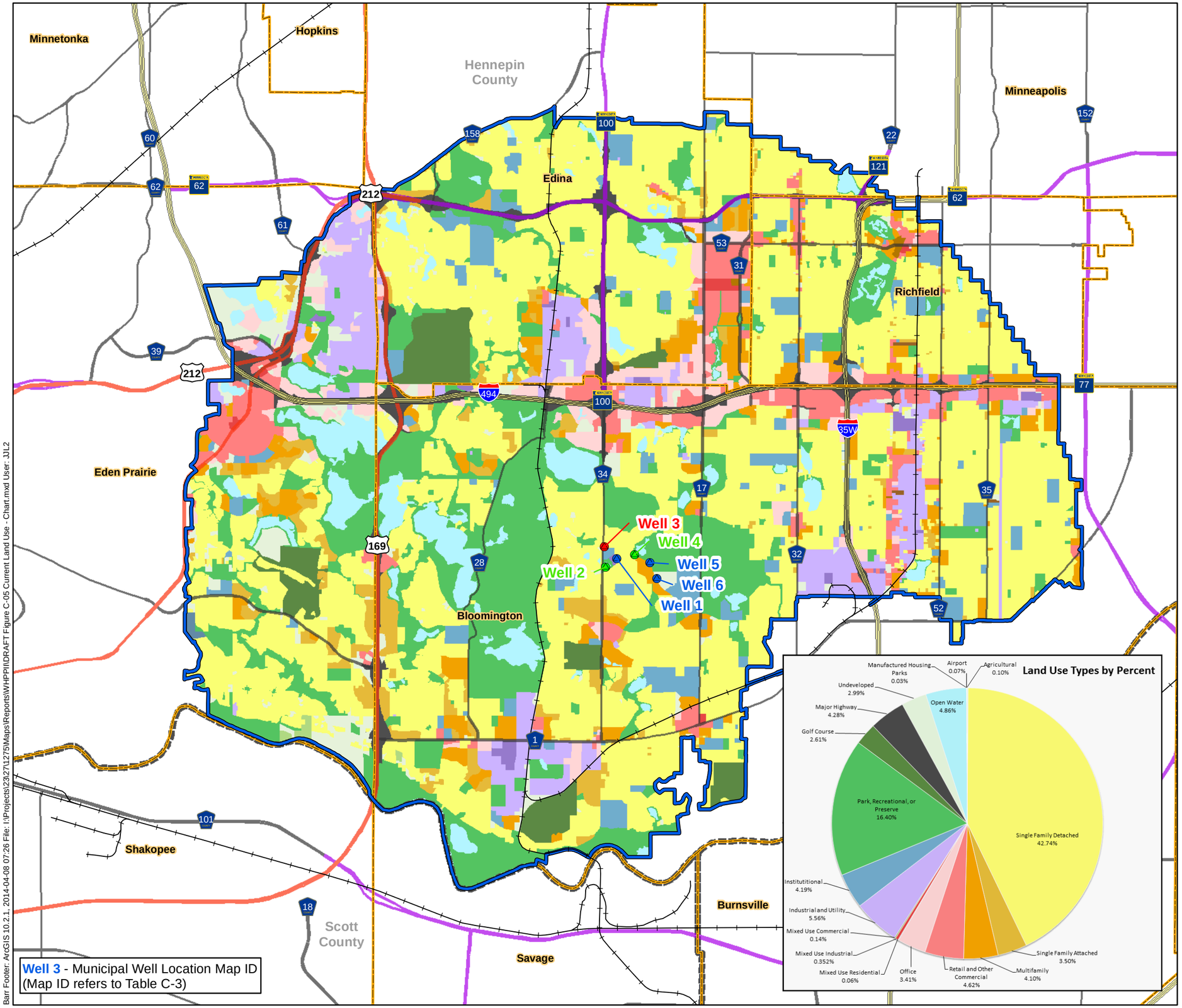
Miles
1 0 1

BARR

Figure C-4

SOIL PERMEABILITY
Bloomington WHPP Amendment
City of Bloomington
Hennepin County, MN

Barr Footer: ArcGIS 10.2.1, 2014-04-08 07:27 File: I:\Projects\23\27\1275\Maps\Reports\WHPP\IDRAFT Figure C-04 Surficial Soil Permeability.mxd User: JJL2



Railroad
Bloomington DWSMA
Municipal Boundary
County Boundary

Current (2010) Land Use

- Single Family Detached
- Manufactured Housing Park
- Single Family Attached
- Multifamily
- Retail and Other Commercial
- Office
- Mixed Use Residential
- Mixed Use Industrial
- Mixed Use Commercial and Other
- Industrial and Utility
- Institutional
- Park, Recreational or Preserve
- Golf Course
- Major Highway
- Airport
- Agricultural
- Undeveloped
- Water

Land Use Data (Met Council 2010 Generalized Land Use)

N

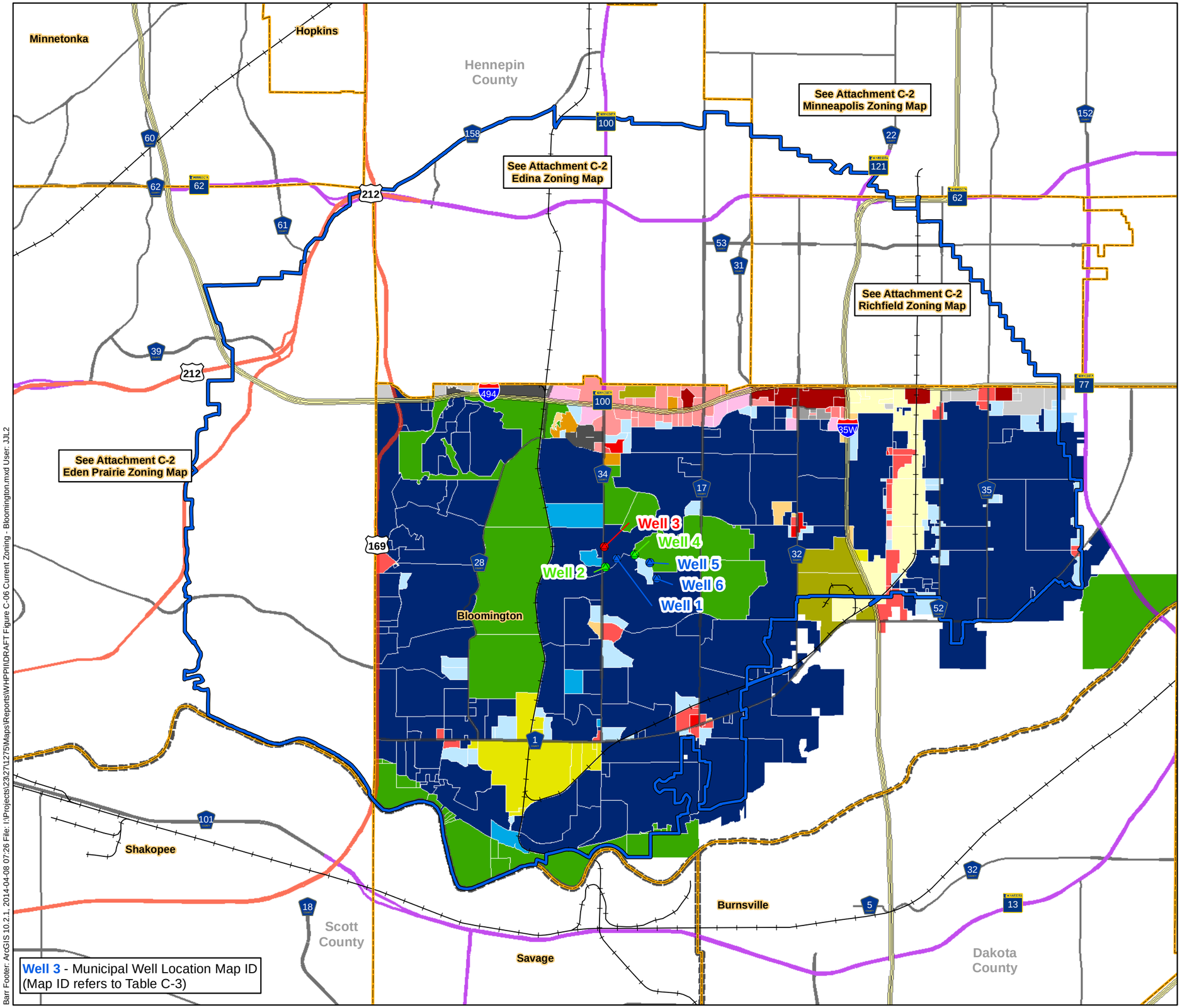
Miles
1 0 1

BARR

Figure C-5

CURRENT LAND USE
Bloomington WHPP Amendment
City of Bloomington
Hennepin County, MN

Barr Footer: ArcGIS 10.2.1, 2014-04-08 07:26 File: I:\Projects\23\2712\75\Maps\Reports\WHPP\DRAFT Figure C-05 Current Land Use - Chart.mxd User: JJL2



Railroad
Bloomington DWSMA
Municipal Boundary
County Boundary

City of Bloomington Zoning

- Conservation
- Central Business
- Commercial Office
- Commercial Service
- General Business
- General Commercial
- Neighborhood Commercial
- Regional Commercial
- Freeway Commercial
- Freeway Development
- Freeway Mixed Use
- Freeway Office
- Freeway Office and Service
- General Industry
- Industrial Park
- Limited Industry
- Multiple-Family Residential
- Large Lot Single-Family Residential
- Single-Family Residential
- Neighborhood Office
- Residential Office

Zoning Data (City of Bloomington)

N

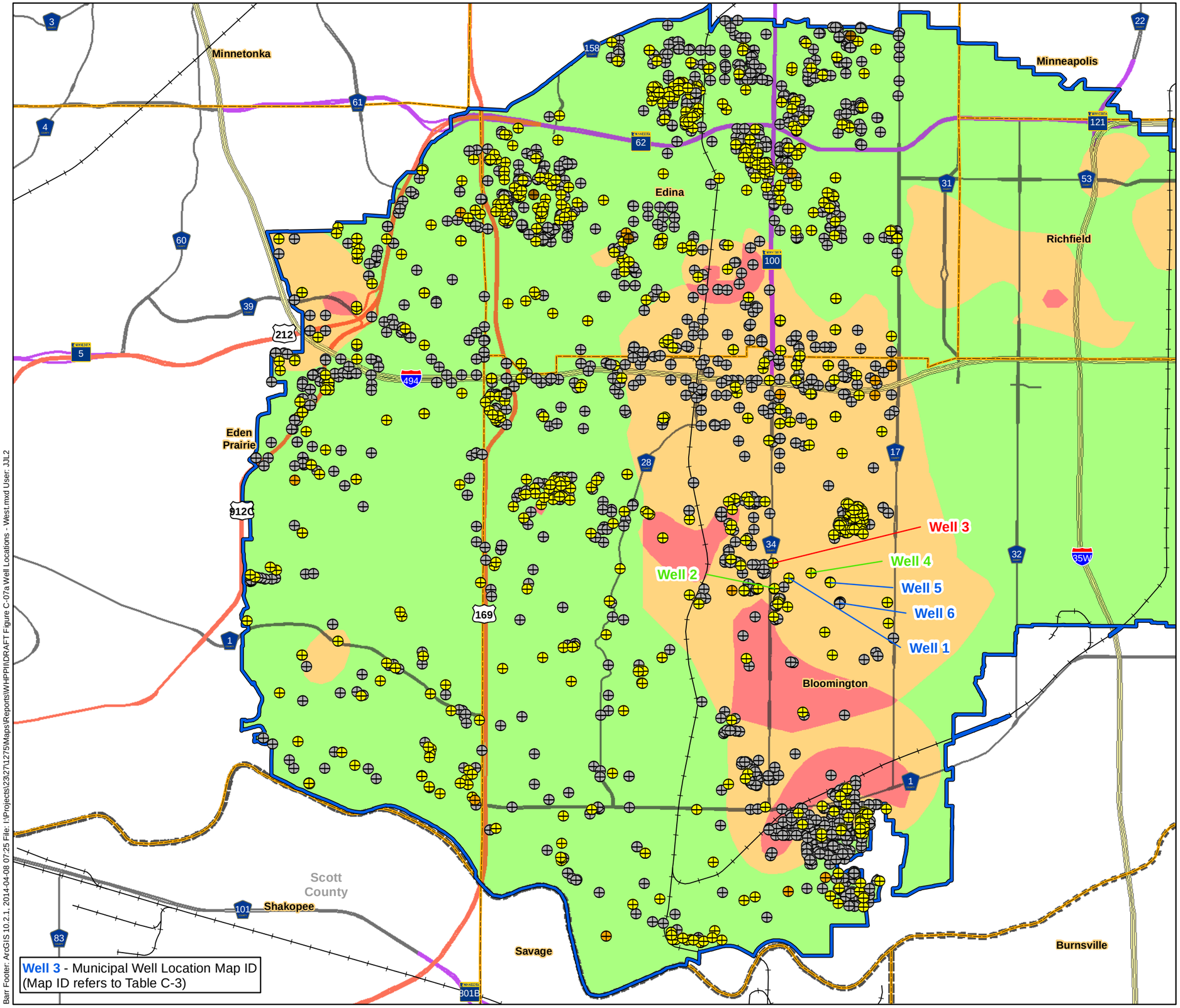
Miles
1 0 1

BARR

Figure C-6

CURRENT ZONING - BLOOMINGTON
Bloomington WHPP Amendment
City of Bloomington
Hennepin County, MN

Barr Footer: ArcGIS 10.2.1, 2014-04-08 07:26 File: I:\Projects\23\27\1275\Maps\Reports\WHPP\DRAFT Figure C-06 Current Zoning - Bloomington.mxd User: JJL2



Wells by Status

- Active
- Inactive
- Not Available
- Sealed
- Railroad
- Bloomington DWSMA
- Municipal Boundary
- County Boundary

Aquifer Vulnerability

- High
- Moderate
- Low

N

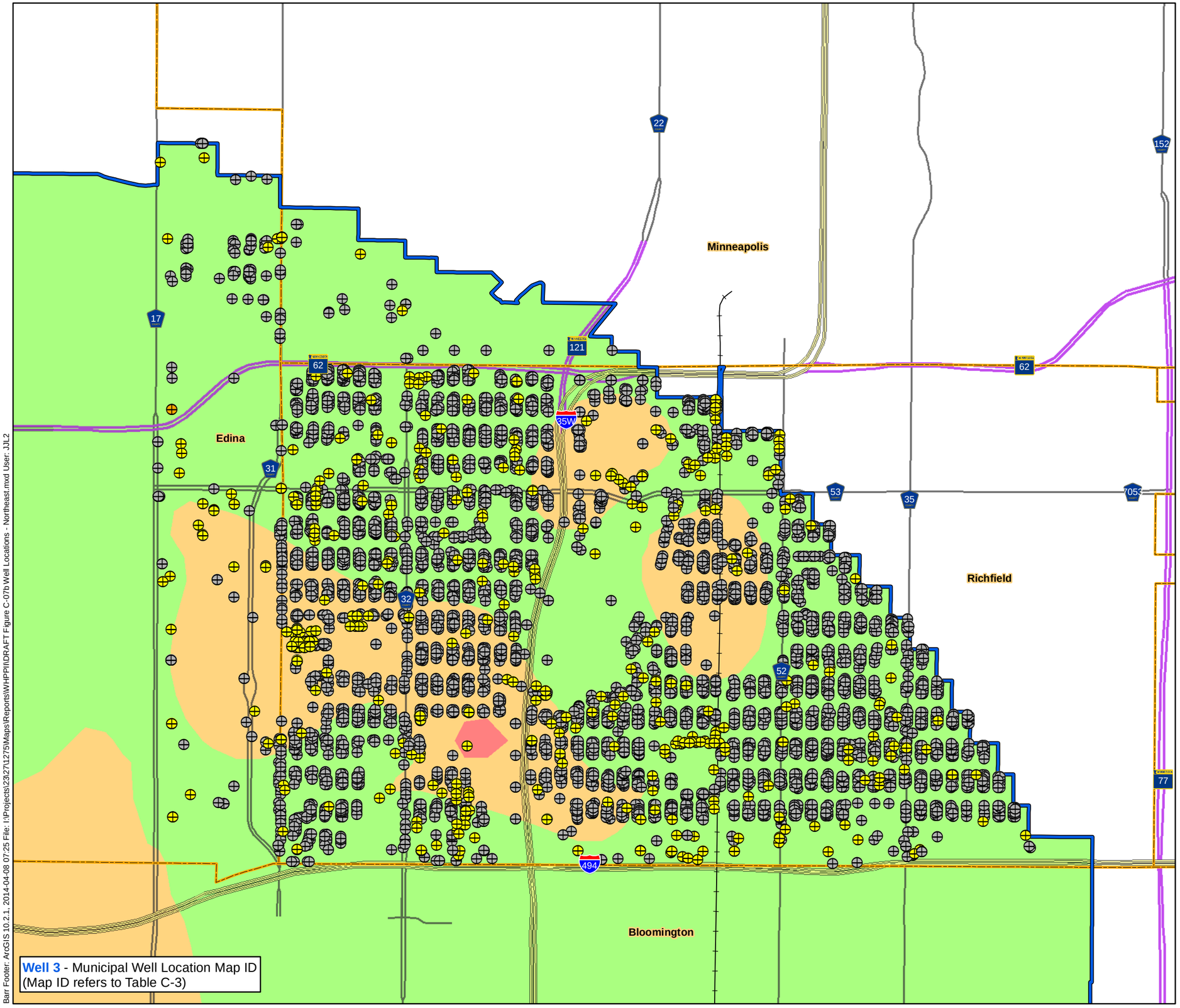
Feet
4,000 0 4,000

BARR

Figure C-7a

WELL LOCATIONS - WEST
Bloomington WHPP Amendment
City of Bloomington
Hennepin County, MN

Barr Footer: ArcGIS 10.2.1, 2014-04-08 07:25 File: I:\Projects\23\27\1275\Maps\Reports\WHPP\\DRAFT Figure C-07a Well Locations - West.mxd User: JJL2



Wells by Status

- Active
- Inactive
- Not Available
- Sealed
- Railroad
- Bloomington DWSMA
- Municipal Boundary
- County Boundary

Aquifer Vulnerability

- High
- Moderate
- Low

N

Feet

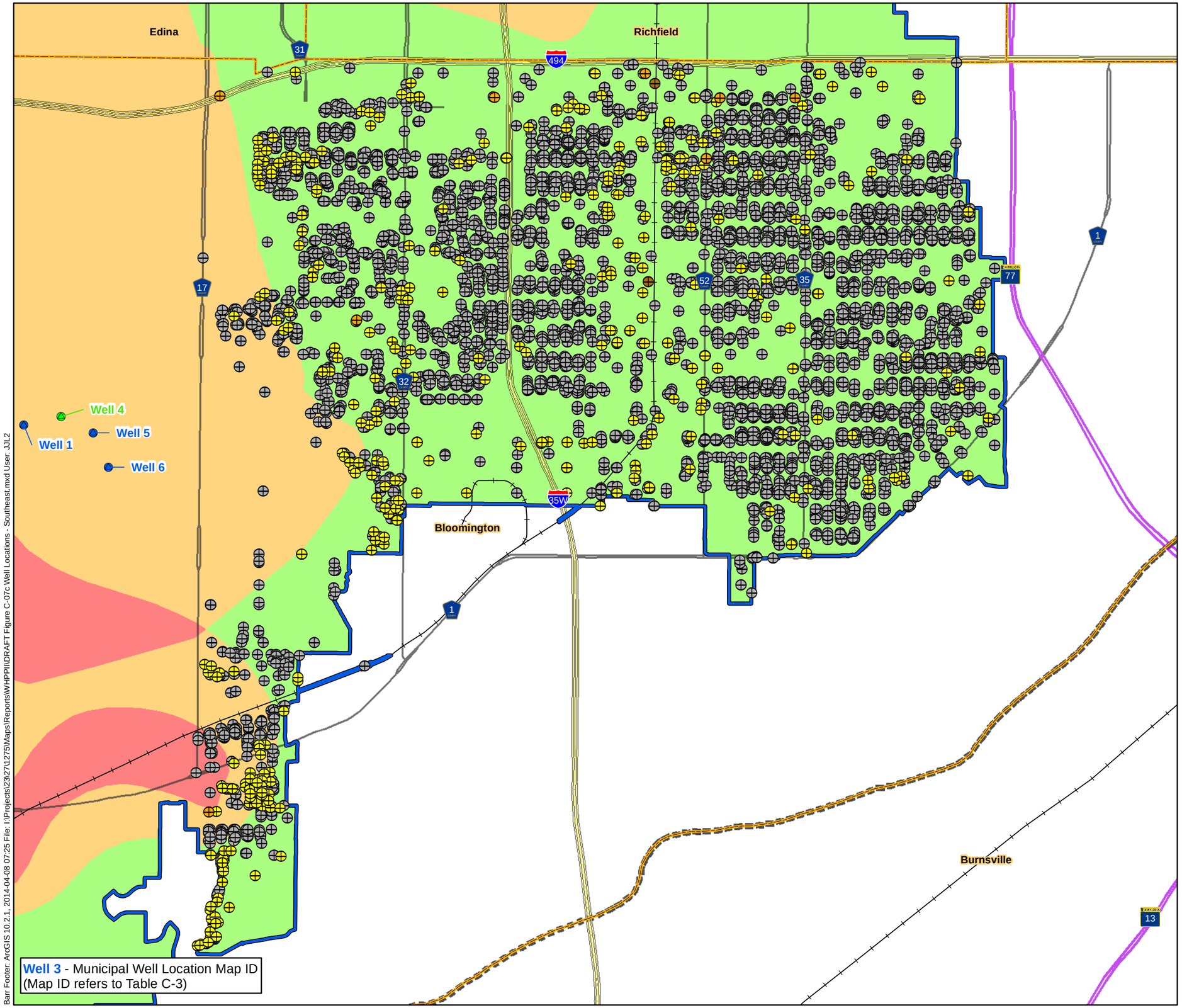
2,000 0 2,000

BARR

Figure C-7b

WELL LOCATIONS - NORTHEAST
Bloomington WHPP Amendment
City of Bloomington
Hennepin County, MN

Barr Footer: ArcGIS 10.2.1, 2014-04-08 07:25 File: I:\Projects\23\27\1275\Maps\Reports\WHPP\DRAFT Figure C-07b Well Locations - Northeast.mxd User: JJL2



Wells by Status

- Active
- Inactive
- Not Available
- Sealed
- Railroad
- Bloomington DWSMA
- Municipal Boundary
- County Boundary

Aquifer Vulnerability

- High
- Moderate
- Low

N

Feet

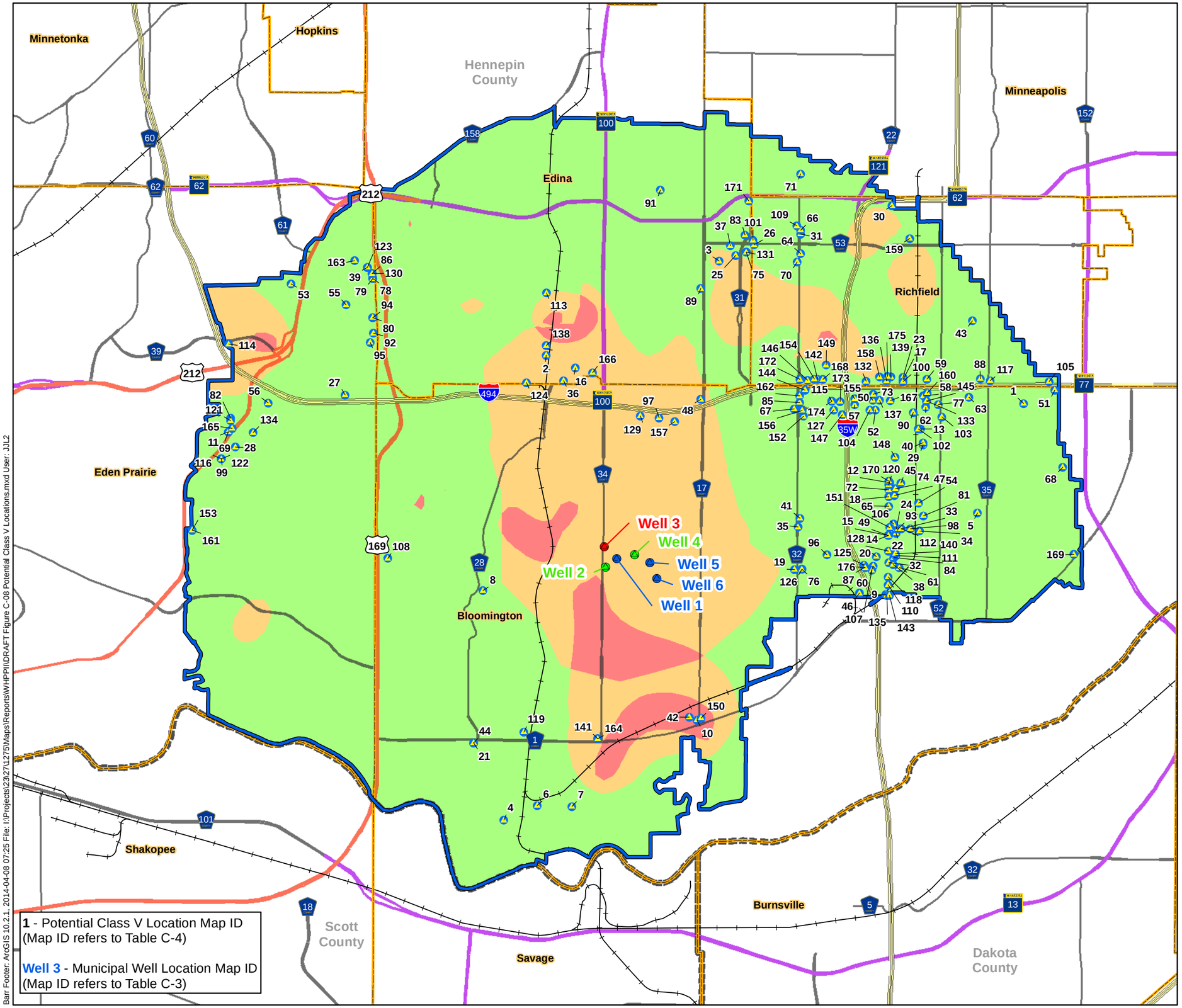
2,500 0 2,500

BARR

Figure C-7c

WELL LOCATIONS - SOUTHEAST
Bloomington WHPP Amendment
City of Bloomington
Hennepin County, MN

Barr Footer: ArcGIS 10.2.1, 2014-04-08 07:25 File: I:\Projects\23\27\1275\Maps\Reports\WHPP\\DRAFT Figure C-07c Well Locations - Southeast.mxd User: JJL2



Potential Class V Well Locations
Railroad
Bloomington DWSMA
Municipal Boundary
County Boundary

Aquifer Vulnerability

High
Moderate
Low

N

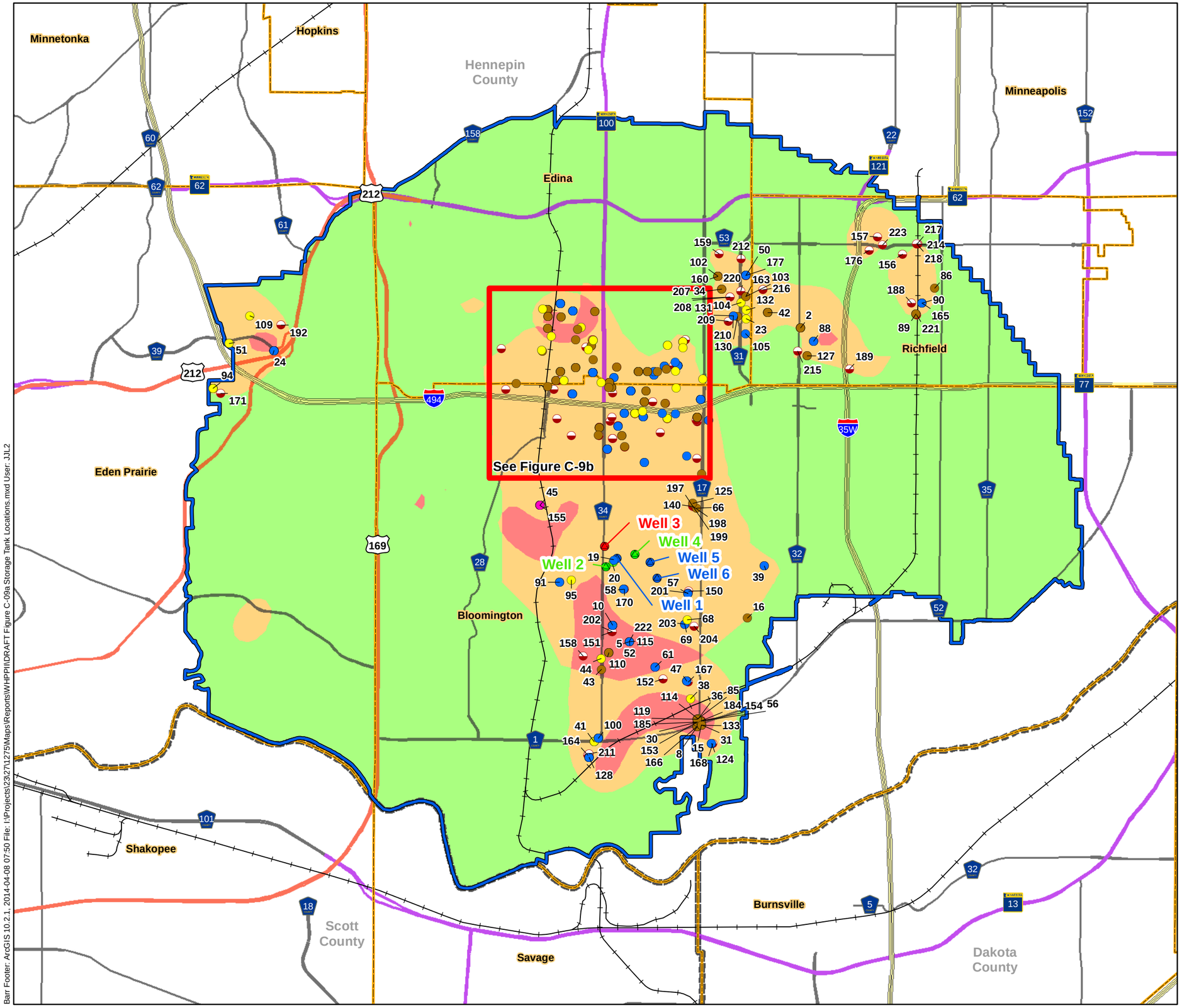
Miles
1 0 1

BARR

Figure C-8

POTENTIAL CLASS V WELL LOCATIONS
Bloomington WHPP Amendment
City of Bloomington
Hennepin County, MN

Barr Footer: ArcGIS 10.2.1, 2014-04-08 07:25 File: I:\Projects\23\27\1275\Maps\Reports\WHPP\\DRAFT Figure C-08 Potential Class V Locations.mxd User: JJL2



Tank Location

- Both*
- Active
- Both Removed and Not Available
- Reconditioned
- Removed
- MPCA LUST Site
- Railroad
- Bloomington DWSMA
- Municipal Boundary
- County Boundary

Aquifer Vulnerability

- High
- Moderate
- Low

* Indicates tank site locations with both active and removed tanks on site (see Table C-5)

N

Miles

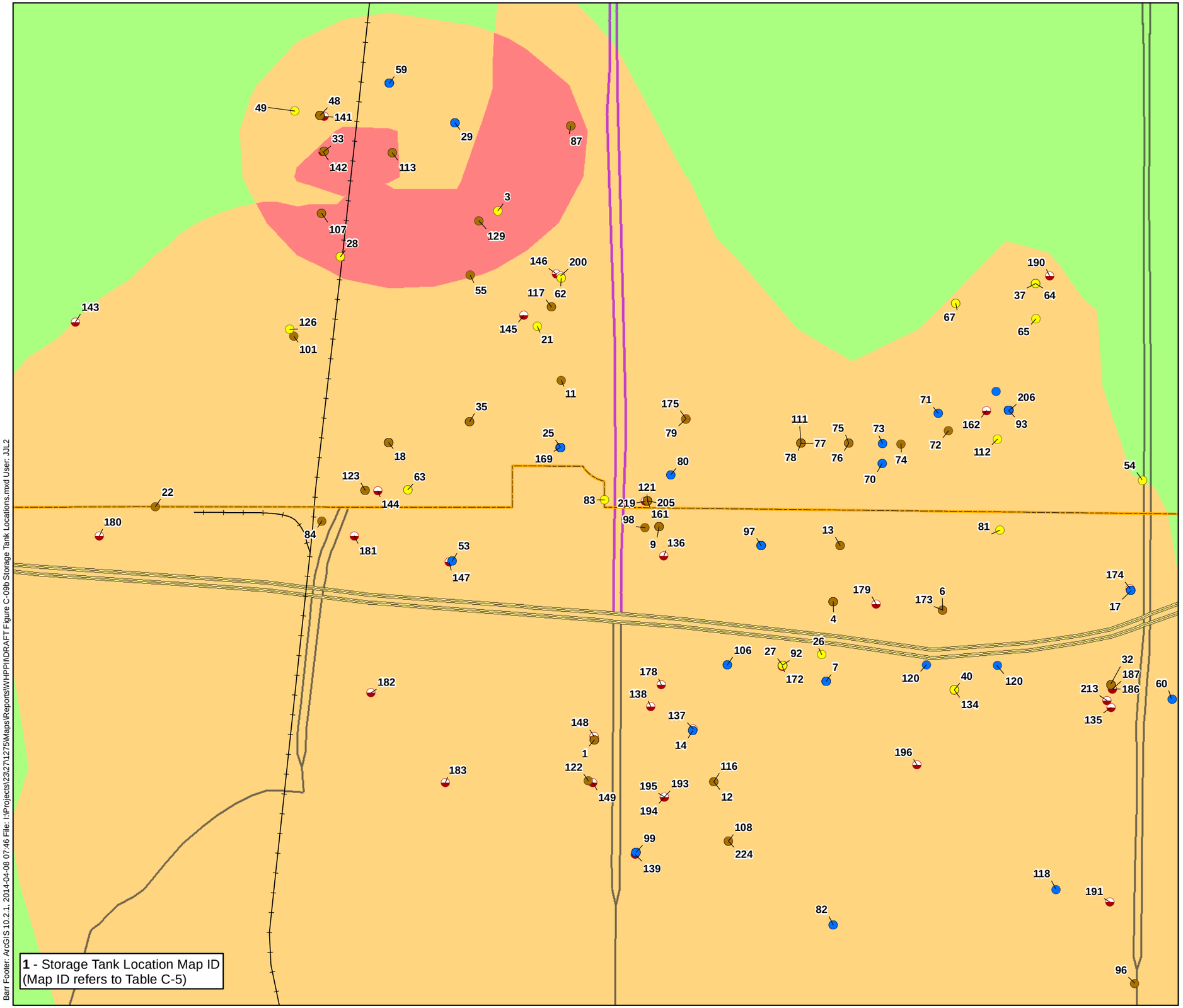
1 0 1

BARR

Figure C-9a

STORAGE TANK LOCATIONS
Bloomington WHPP Amendment
City of Bloomington
Hennepin County, MN

Barr Footer: ArcGIS 10.2.1, 2014-04-08 07:50 File: I:\Projects\23\27\1275\Maps\Reports\WHPP\IDRAFT Figure C-09a Storage Tank Locations.mxd User: JJL2



Barr Footer: ArcGIS 10.2.1, 2014-04-08 07:46 File: I:\Projects\23\2713275\Maps\Reports\WHPP\II\DRAFT Figure C-09b Storage Tank Locations.mxd User: JJL2

Tank Location

- Both*
- Active
- Removed
- MPCA LUST Site
- Railroad
- Bloomington DWSMA
- Municipal Boundary
- County Boundary

Aquifer Vulnerability

- High
- Moderate
- Low

* Indicates tank site locations with both active and removed tanks on site (see Table C-5)

N

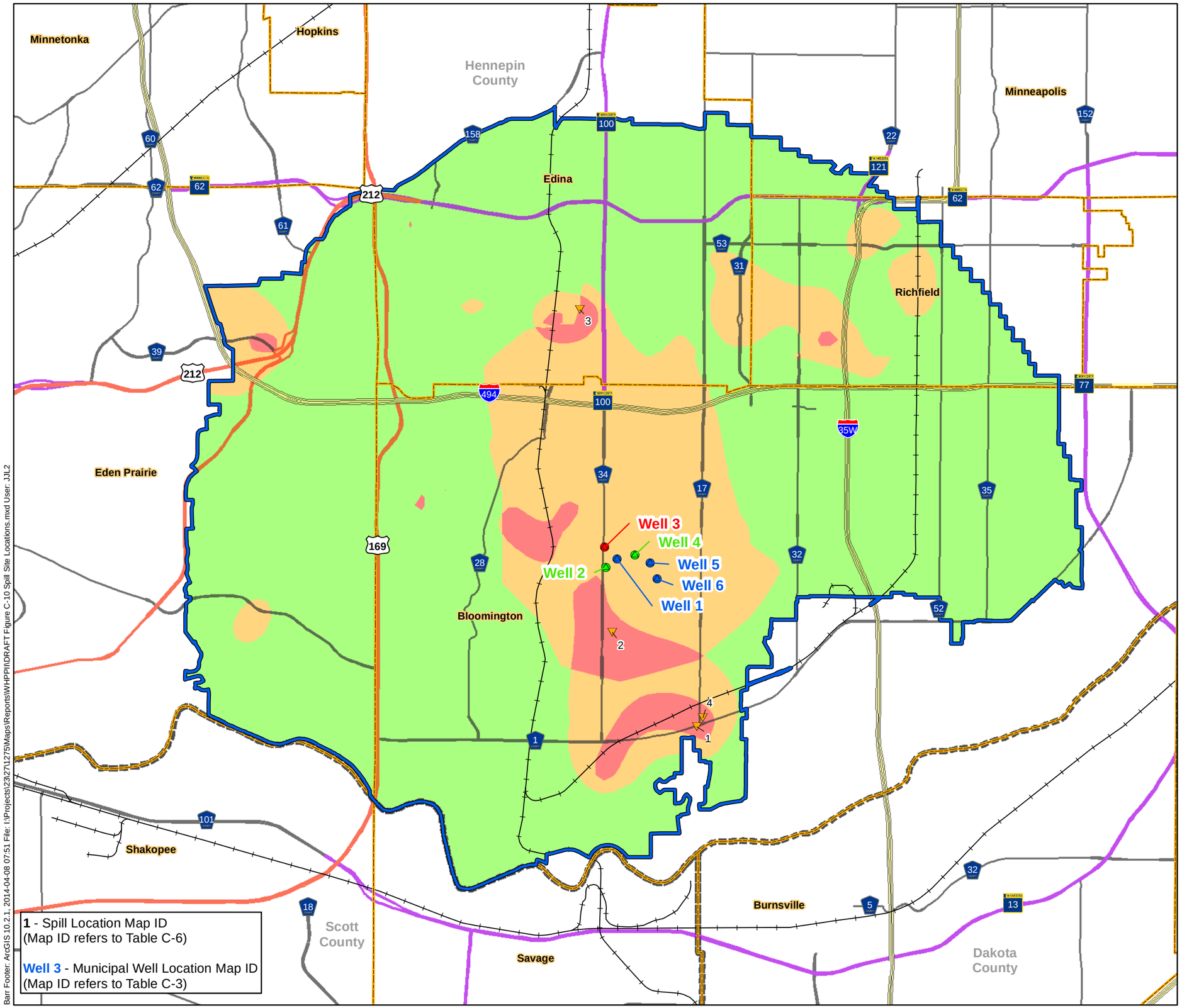
Feet

1,000 0 1,000

BARR

Figure C-9b

STORAGE TANK LOCATIONS - INSET
Bloomington WHPP Amendment
City of Bloomington
Hennepin County, MN



Spill Location
Railroad
Bloomington DWSMA
Municipal Boundary
County Boundary

Aquifer Vulnerability

High
Moderate
Low

N

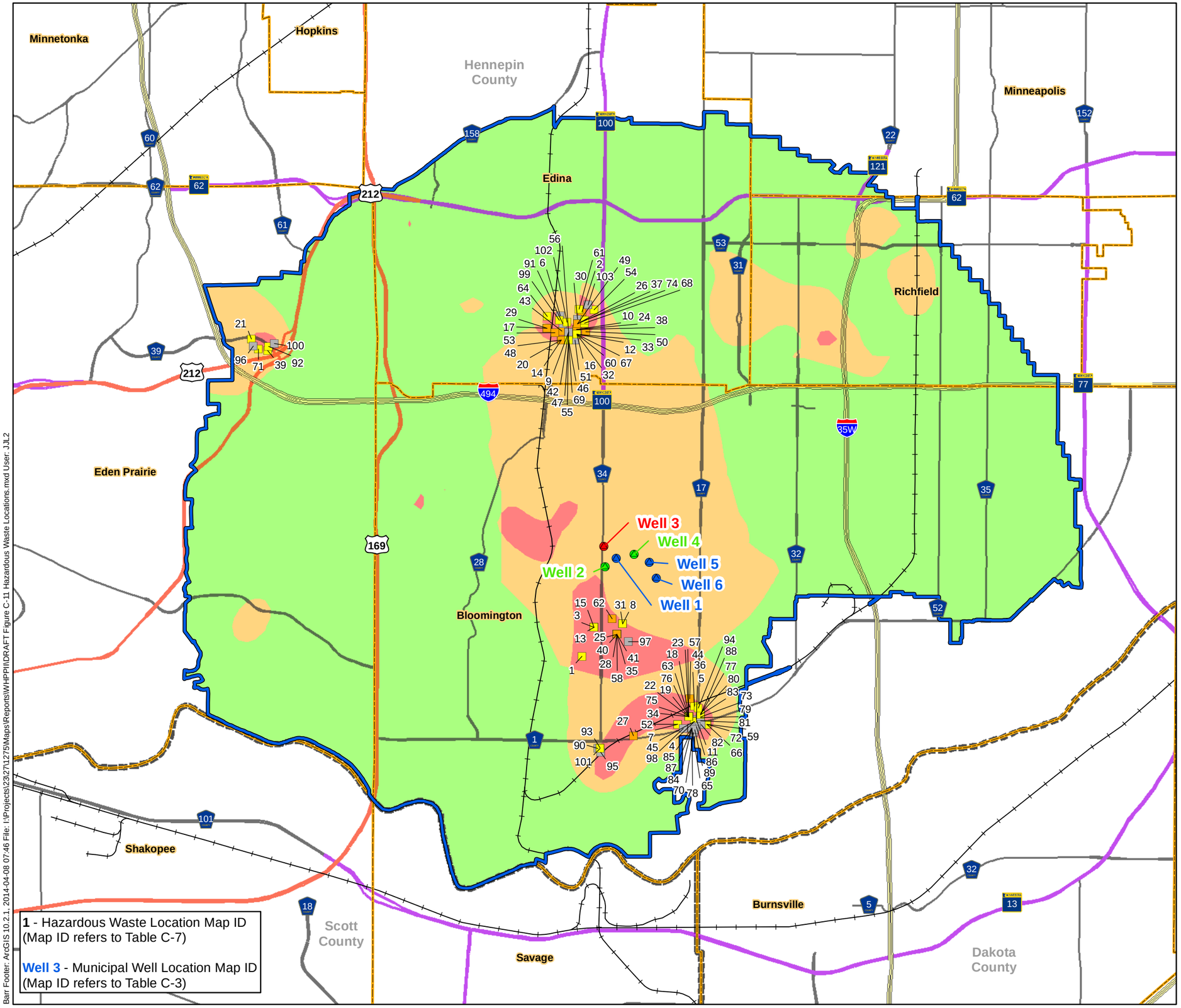
Miles
1 0 1

BARR

Figure C-10

SPILL SITE LOCATIONS
Bloomington WHPP Amendment
City of Bloomington
Hennepin County, MN

Barr Footer: ArcGIS 10.2.1, 2014-04-08 07:51 File: I:\Projects\23\27\1275\Maps\Reports\WHPP\\DRAFT Figure C-10 Spill Site Locations.mxd User: JJL2



Hazardous Waste Generator Locations by Status

- Active
- Inactive
- Non-Generator
- Railroad
- Bloomington DWSMA
- Municipal Boundary
- County Boundary

Aquifer Vulnerability

- High
- Moderate
- Low

N

Miles

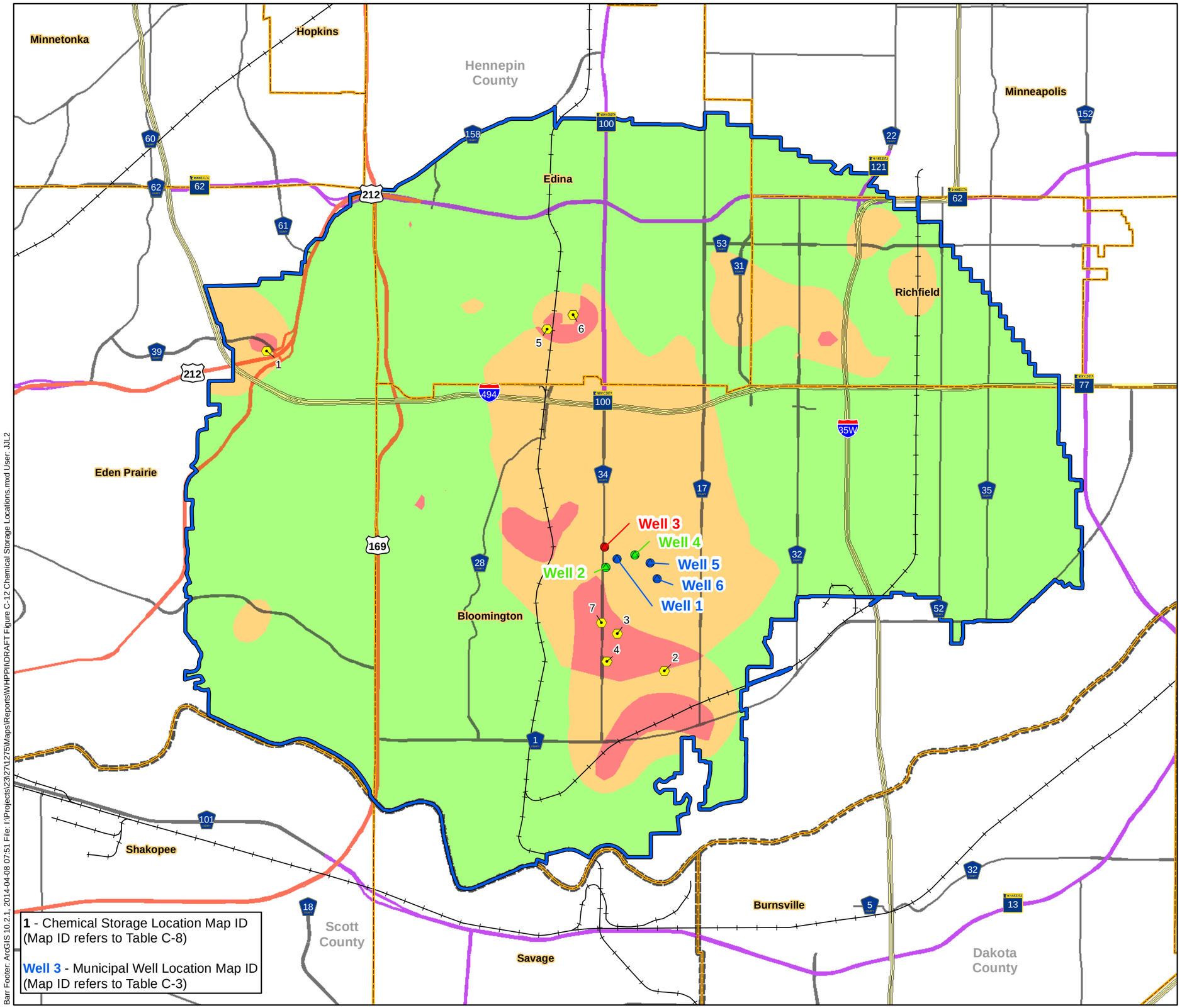
1 0 1

BARR

Figure C-11

HAZARDOUS WASTE GENERATOR LOCATIONS
Bloomington WHPP Amendment
City of Bloomington
Hennepin County, MN

Barr Footer: ArcGIS 10.2.1, 2014-04-08 07:46 File: I:\Projects\23\27\1275\Maps\Reports\WHPP\DRAFT Figure C-11 Hazardous Waste Locations.mxd User: JJL2



Non-agricultural Chemical Storage Locations
Railroad
Bloomington DWSMA
Municipal Boundary
County Boundary

Aquifer Vulnerability

High
Moderate
Low

N

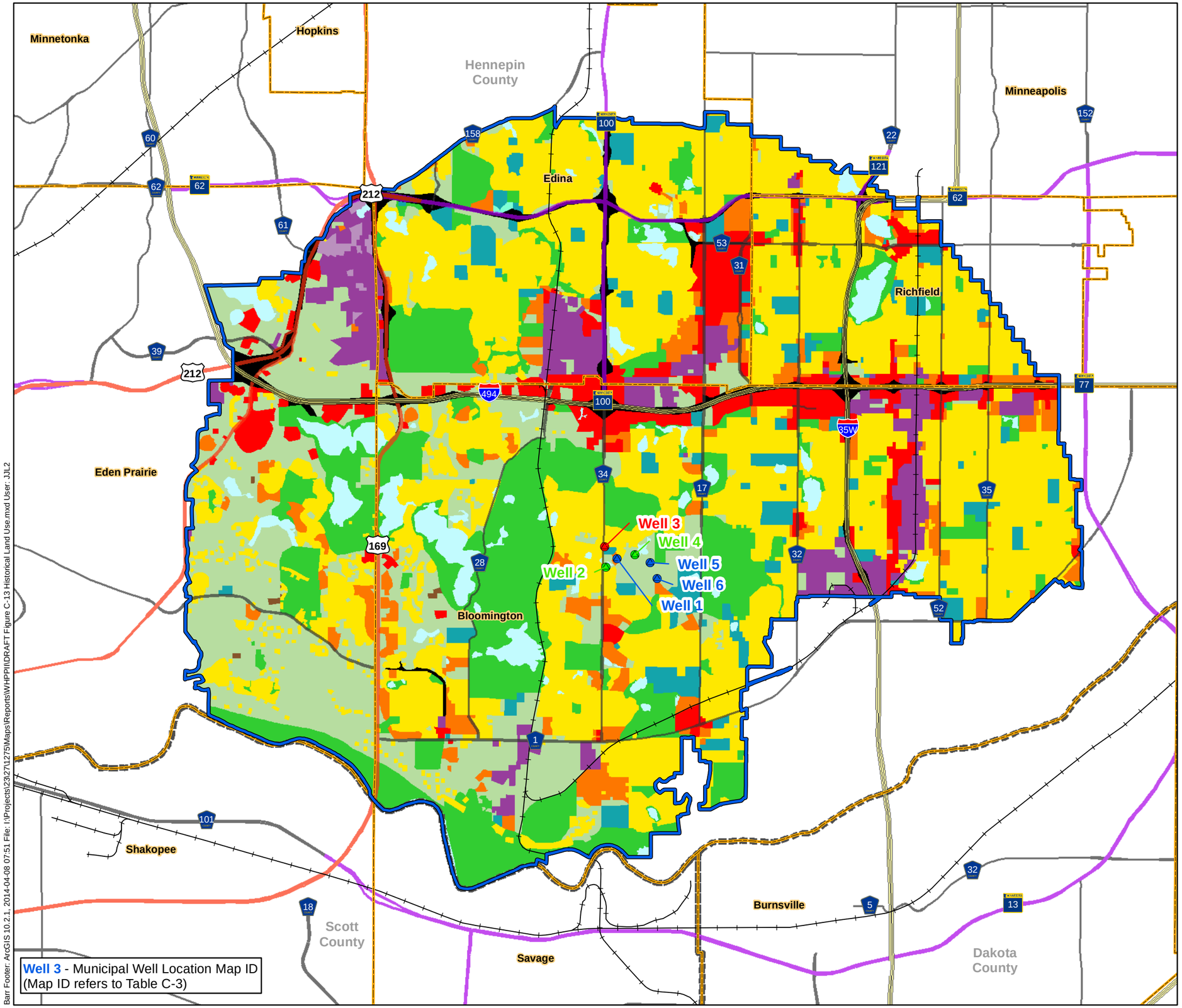
Miles
1 0 1

BARR

Figure C-12

CHEMICAL STORAGE LOCATIONS
Bloomington WHPP Amendment
City of Bloomington
Hennepin County, MN

Barr Footer: ArcGIS 10.2.1, 2014-04-08 07:51 File: I:\Projects\23\27\1275\Maps\Reports\WHPP\DRAFT Figure C-12 Chemical Storage Locations.mxd User: JJL2



Railroad
Bloomington DWSMA
Municipal Boundary
County Boundary

Historical (1984) Land Use

- Single Family Residential
- Multi-Family Residential
- Commercial
- Industrial
- Public/Semi-Public
- Parks & Recreation
- Vacant/Agricultural
- Major Four Lane Highways
- Open Water Bodies
- Farmsteads
- Industrial Parks not Developed
- Public/Semi-Public not Developed

Historical Land Use Data (Metropolitan Council)

N

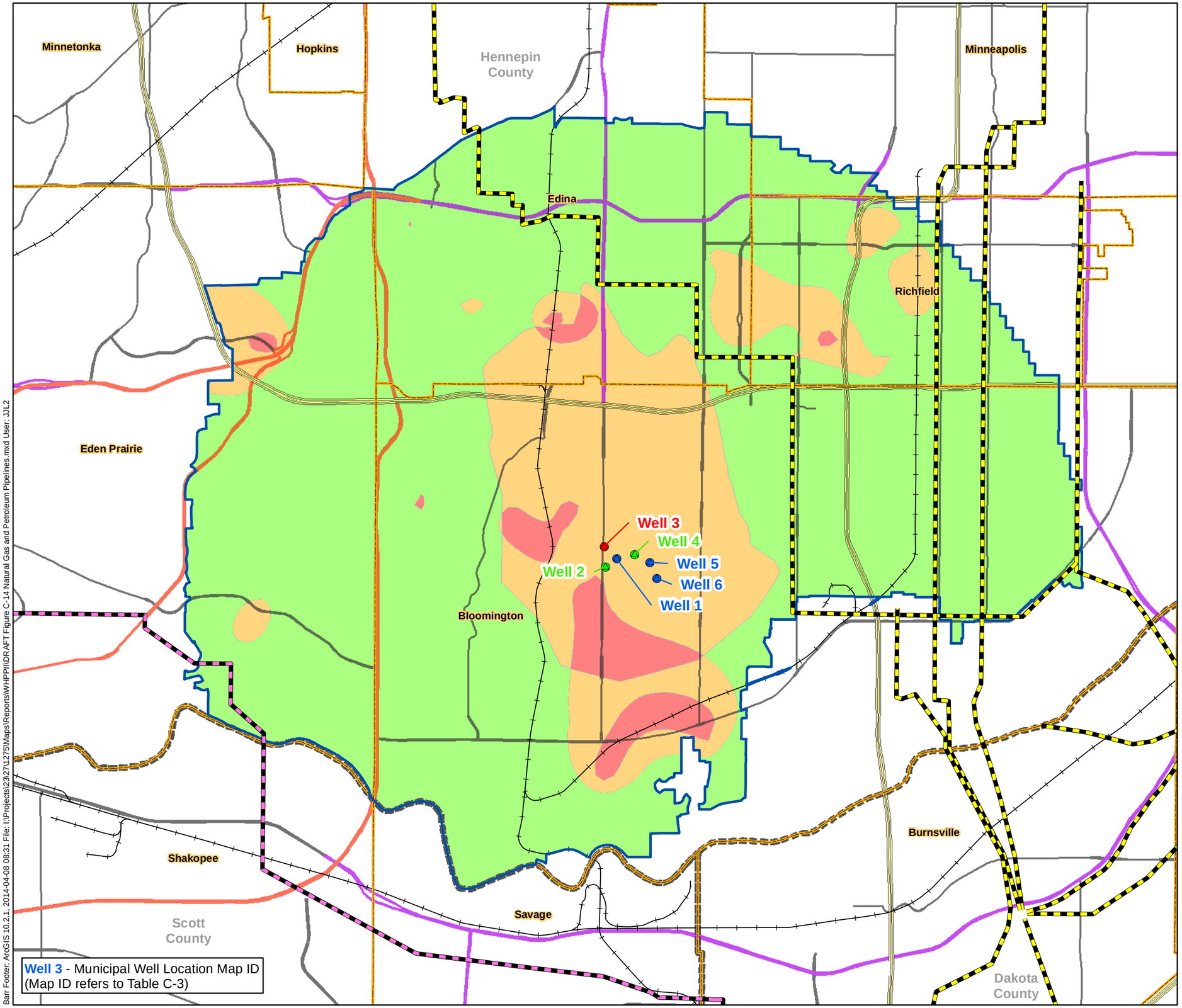
Miles
1 0 1

BARR

Figure C-13

HISTORICAL LAND USE
Bloomington WHPP Amendment
City of Bloomington
Hennepin County, MN

Barr Footer: ArcGIS 10.2.1, 2014-04-08 07:51 File: I:\Projects\23\2713275\Maps\Reports\WHPP\\DRAFT Figure C-13 Historical Land Use.mxd User: JJL2



Natural Gas Pipeline
Petroleum Pipeline
Railroad
Bloomington DWSMA

Aquifer Vulnerability

High
Moderate
Low

N

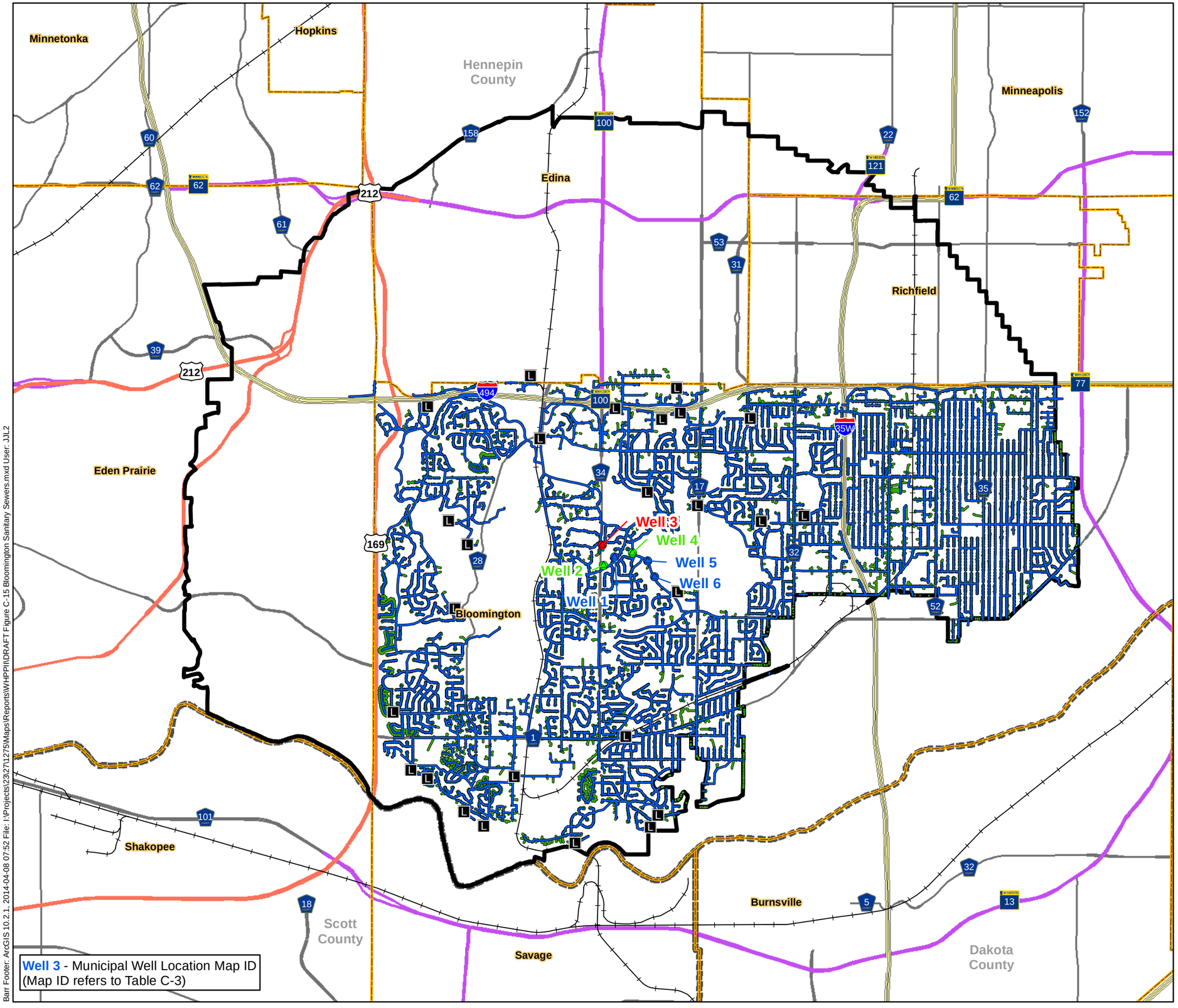
Miles
1 0 1

BARR

Figure C-14

NATURAL GAS AND PETROLEUM PIPELINES IN THE VICINITY OF THE DWSMA
Bloomington WHPP Amendment
City of Bloomington
Hennepin County, MN

Barr Footer: ArcGIS 10.2.1, 2014-04-08 08:31 File: I:\Projects\23\27\1275\Maps\Reports\WHPP\\DRAFT Figure C-14 Natural Gas and Petroleum Pipelines.mxd User: JJL2



Sanitary Lift Station
Sanitary Service Line
Sanitary Mainline Pipe
Railroad
Bloomington DWSMA
Municipal Boundary
County Boundary

N

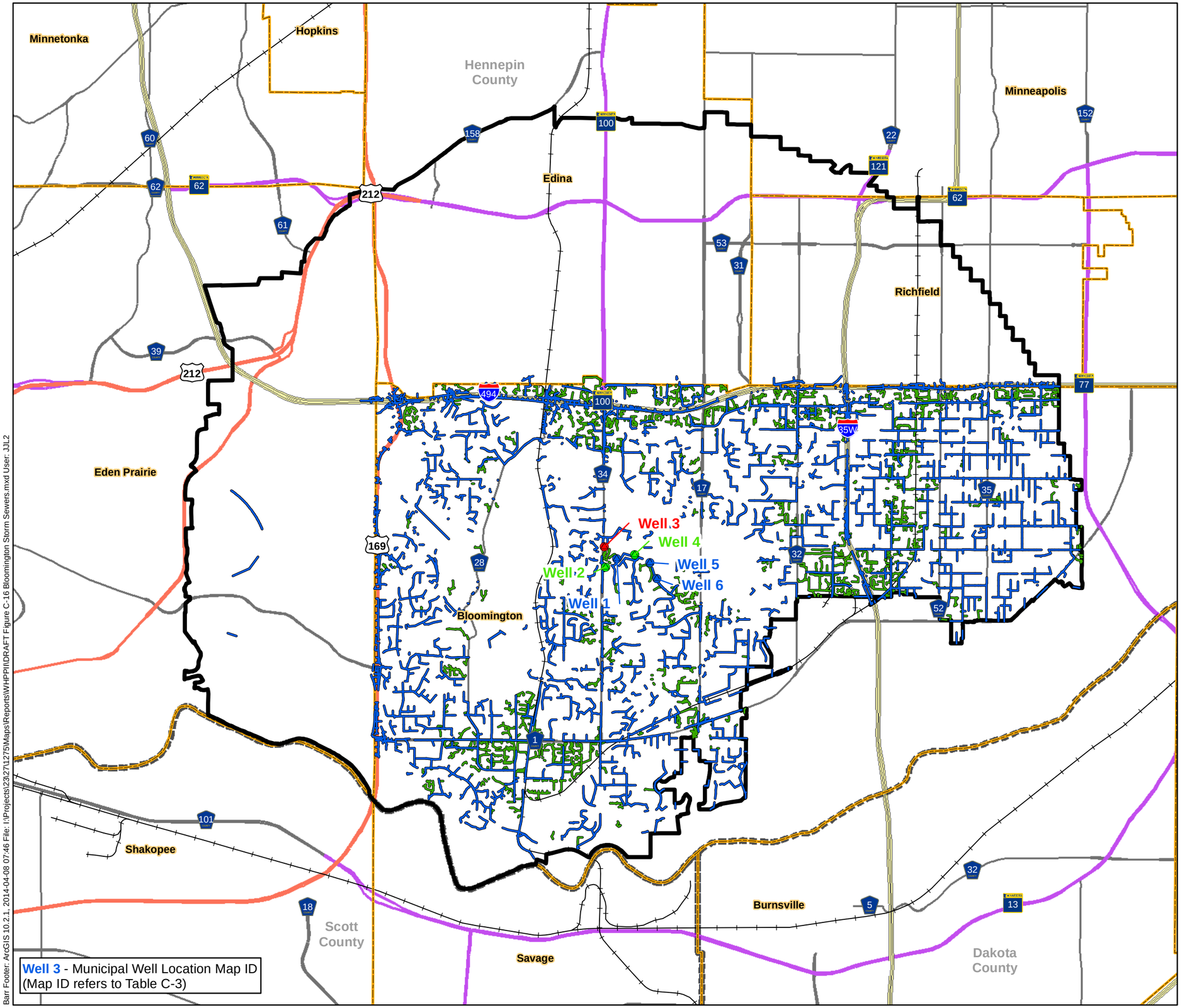
Miles
1 0 1

BARR

Figure C-15

BLOOMINGTON SANITARY SEWERS
Bloomington WHPP Amendment
City of Bloomington
Hennepin County, MN

Barr Footer: ArcGIS 10.2.1, 2014-04-08 07:52 File: I:\Projects\23\27\1275\Maps\Reports\WHPP\DRAFT Figure C-15 Bloomington Sanitary Sewers.mxd User: JJL2



Storm Sewer Main
Storm Sewer Main (Private)
Railroad
Bloomington DWSMA
Municipal Boundary
County Boundary

N

Miles
1 0 1

BARR

Figure C-16

BLOOMINGTON STORM SEWERS
Bloomington WHPP Amendment
City of Bloomington
Hennepin County, MN

Barr Footer: ArcGIS 10.2.1, 2014-04-08 07:46 File: I:\Projects\23\27\1275\Maps\Reports\WHPP\DRAFT Figure C-16 Bloomington Storm Sewers.mxd User: JJL2

Attachment C-1

Precipitation Data

Minnesota Climatology Working Group

State Climatology Office - DNR Division of Ecological and Water Resources University of Minnesota

Annual Reports of Monthly Precipitation Totals

This application creates annual summaries of precipitation data gathered by volunteer-based observation networks throughout Minnesota. The data presented are monthly totals and the data are grouped by county. Observer locations are described using township, range, and section numbers.

Choose a county and year, then click on **"Annual report"**.

HENNEPIN 2008 Annual report

2008 HENNEPIN Monthly Precipitation, Totals

cc	ttt	rr	ss	oooooooo	nnnn	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AGR	HYD	ANN	GRO
27	27N	24W	8	BLOOMING	MOSQ				3.72	2.92	3.31	3.20	3.39	1.56	1.76						14.38
27	27N	24W	15		BYRG				3.38	3.50	3.41	3.58	2.96	1.57	2.31						15.02
27	27N	24W	20		BYRG				3.67	3.50	3.40	3.74	3.24	1.85	2.17						15.73
27	27N	24W	21		BYRG				*	3.60	3.62	3.47	3.01	1.52	2.11						15.22
27	28N	23W	18	NOONAN S	MOSQ				3.48	1.93	3.21	1.90	3.23	1.93							12.20
27	28N	24W	25	MPLS NWS	NWS	.15	.40	1.97	3.12	2.52	2.70	2.13	3.20	1.78	1.96	1.14	1.15	26.37	23.17	22.22	12.33
27	28N	24W	33		SWCD	.15	.39	1.82					2.83	1.98	2.03	1.29	1.34				
27	29N	23W	30		BYRG	.17	.53	1.86	4.05	2.90	2.65	1.74	2.72	1.97	2.20	1.36	1.62	30.10	25.00	23.77	11.98
27	29N	24W	11		SWCD				4.83	2.91	4.59	2.62	2.48	2.39	1.74	*					14.99
27	29N	24W	23	LSAF	NWS	.16	.63	1.46	4.43	2.45	3.28	2.14	2.29	2.32	1.81	1.54	1.65	28.70	25.38	24.16	12.48
27	29N	24W	26		BYRG								1.91	*	*						
27	116N	21W	7	EDINA	MOSQ				3.06	1.92	2.44	4.06	3.13	2.48							14.03
27	116N	21W	19		BYRG						*	3.43	2.99	2.48	1.77	1.25	1.02				
27	116N	22W	7		SWCD					*	3.32	3.34	2.60	2.63	1.81						
27	116N	22W	9	EDEN PR2	MOSQ					2.46	3.24	2.56	2.59	2.55							13.40
27	116N	22W	24	JOHNSONW	MOSQ				3.92	2.31	2.72	3.23	2.14	2.71	1.74						13.11
27	117N	21W	7		BYRG											*	1.52				
27	117N	21W	8	MURCH TI	MOSQ				4.53	2.68	4.27	2.40	2.77	1.95							14.07
27	117N	21W	17		BYRG				4.12	2.48	4.20	2.33	3.25	2.49	1.53						14.75
27	117N	22W	15		SWCD				3.89	2.35	3.82	3.56	2.61	2.36	1.75						14.70
27	117N	22W	17		BYRG				*	2.49	4.05	3.85	2.99	2.73	1.62	1.57					16.11
27	117N	22W	21	MINNETON	MOSQ				4.53	2.34	4.04	3.79	2.95	2.43	1.67						15.55
27	117N	22W	29		BYRG				4.23	2.64	3.38	3.50	2.58	2.60	1.49						14.70
27	117N	23W	19	SPRNG PK	NWS	.68	1.07	.42	4.41	2.40	5.09	2.02	2.78	2.71	1.47	1.04	.56	29.02	26.97	24.65	15.00
27	117N	23W	24	DEEPHAVE	MOSQ				3.70	2.46	4.29	3.95	3.65	1.97							16.32
27	117N	23W	31		BYRG				3.32	2.84	5.04	4.39	2.46	2.72	1.41	1.59					17.45
27	117N	23W	34		BYRG	.11	.52	1.66	5.94	1.65	3.90	4.05	2.47	2.86	.83	.92	1.75	30.84	28.89	26.66	14.93
27	117N	24W	21	MINNETRI	MOSQ				2.80	2.29	5.51	3.16	2.40	1.55							14.91
27	118N	21W	6		BYRG				4.70	2.78	5.01	2.10	2.25								
27	118N	21W	9	ROBBINSD	MOSQ					1.67	3.74	1.65	1.58	1.94							10.58
27	118N	21W	17		SWCD				2.46	2.71	4.83	2.62	2.20	1.97	1.87	*					14.33
27	118N	21W	20	NEW HOPE	NWS	.13	.52	2.09	4.80	3.68	4.48	2.04	2.46	2.15	1.91	1.21	1.63	33.38	29.50	27.10	14.81
27	118N	21W	30		SWCD				3.47	2.79	4.51	1.95	3.00	2.12	*						14.37

27	118N	21W	31	GOLDEN V	MOSQ					2.27	3.81	1.74	3.30	2.05									13.17
27	118N	22W	5	XIONG JA	MOSQ				4.08	2.19	3.73	1.14	3.72	3.31									14.09
27	118N	22W	13	HANSMANN	MOSQ				4.19	2.28	4.37	1.96	2.16	2.68	1.34								13.45
27	118N	22W	17		SWCD				3.04	2.46	4.92	2.40	2.92	2.82	1.48	*							15.52
27	118N	22W	18		SWCD				2.89	2.26	5.20	2.41	2.78	2.48	1.41								15.13
27	118N	22W	22	PLYMOUTH	MOSQ				4.33	2.49	5.25	2.02	3.73	2.11	1.18								15.60
27	118N	22W	24	GREEN R	MOSQ				3.66	2.27	4.73	1.84	2.58	2.59	1.85								14.01
27	118N	22W	25		BYRG					*	4.86	.46	2.95	2.52	1.19	1.10	1.01						
27	118N	22W	31		SWCD				2.84	2.73	5.16	2.81	2.95	2.49	1.56								16.14
27	118N	23W	22		SWCD				3.10	2.31	5.20	1.52	2.67	2.62	1.76								14.32
27	119N	21W	25		BYRG				3.95	1.95	4.20	2.17	3.50	2.62	1.60								14.44
27	119N	21W	31	SPODEN G	DNR							*											
27	119N	21W	33		BYRG				3.82	2.65	4.02	2.59	2.77	2.25	1.83								14.28
27	119N	21W	33		BYRG				3.65	2.15	4.70	2.00	2.30	2.10	1.75								13.25
27	119N	21W	34		BYRG				3.90	2.71	4.31	2.60	2.90	2.22	1.95								14.74
27	119N	22W	1		SWCD				3.11	3.62	3.79	2.72	2.00	3.43	1.51								15.56
27	119N	22W	9		SWCD				3.15	3.67	4.11	2.89	2.43	2.70	.96								15.80
27	119N	22W	13	N HENN D	MOSQ				2.80	3.09	2.13	2.10	1.79	2.77									11.88
27	119N	22W	33		BYRG				3.69	2.24	4.59	1.60		2.88									
27	119N	22W	33		SWCD	.10	.46	1.26	3.63	2.58	4.59	1.48	2.66	2.89	1.50	1.11	1.34	29.42	26.98	23.60			14.20
27	119N	23W	7	BURSCHVI	MOSQ				3.89	2.30	3.63	1.39	2.34	3.17									12.83
27	119N	23W	24		SWCD					1.21	4.24	1.85	1.75	3.12	1.55	1.07							12.17
27	119N	23W	25	CORCORAN	MOSQ				4.09	2.62	4.52	1.24	2.92	3.66									14.96
27	119N	24W	34		SWCD	.22		1.38	3.69	2.70	4.55	2.66	2.75	4.22	1.47	1.56							16.88
27	120N	21W	32	CHAMPLIN	MOSQ				3.77	3.45	4.35	2.77	1.88	2.72	1.32								15.17
27	120N	21W	33	CHAMPLIN	MOSQ					3.35	2.49	1.31	1.98	2.67									11.80
27	120N	22W	16	DAYTON	MOSQ					3.32	1.90	1.91	1.64	3.96									12.73
27	120N	22W	34	OSSEO PA	MOSQ					2.90	1.69	3.34	1.76	3.52									13.21
27	120N	23W	27	HASSAN	MOSQ					3.13	1.39	1.56	1.74	3.23									11.05
county averages						.21	.57	1.55	3.77	2.62	3.94	2.50	2.64	2.52	1.65	1.27	1.33	29.69	26.56	24.59			14.22
# of obs						9	8	9	45	55	57	58	59	58	40	14	11	7	7	7			53

- Data as received and digitized on or before 11/11/2013. **All values are in inches**.
- 'cc ttt rr ss' is county-township-range-section number, 'ooooooo' is community name (where applicable), 'nnnn' is network type.
- 'AGR', 'HYD', and 'ANN' are 12 month precipitation totals starting in Sep 2007, Oct 2007, and Jan 2008, respectively. 'GRO' is growing season (May 2008 thru Sep 2008) precipitation total.
- '*' denotes a partial monthly record, 'e' denotes that value is wholly or partially estimated.
- Prepared by: State Climatology Office - DNR Waters, phone: 651-296-4214, web: http://climate.umn.edu

For some purposes, **daily** precipitation data are required. The precipitation data archive allows a user to interactively retrieve daily precipitation data from the site nearest to a target.

Obtaining Data for Legal Purposes

Last modified: April 10, 2008

Minnesota Climatology Working Group

State Climatology Office - DNR Division of Ecological and Water Resources University of Minnesota

Annual Reports of Monthly Precipitation Totals

This application creates annual summaries of precipitation data gathered by volunteer-based observation networks throughout Minnesota. The data presented are monthly totals and the data are grouped by county. Observer locations are described using township, range, and section numbers.

Choose a county and year, then click on **"Annual report"**.

HENNEPIN 2009 Annual report

2009 HENNEPIN Monthly Precipitation, Totals

cc	ttt	rr	ss	oooooooo	nnnn	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AGR	HYD	ANN	GRO
27	27N	24W	8	BLOOMING	MOSQ				1.89	.64	3.34	1.42	7.58	.72	6.60						13.70
27	27N	24W	15		BYRG				1.70	.81	3.38	2.19	6.34	.62	6.41						13.34
27	27N	24W	20		BYRG				2.47	.89	3.29	1.71	7.69	.68	6.64						14.26
27	27N	24W	21		BYRG					.86	3.49	1.52	9.37	.65	*						15.89
27	28N	23W	18	NOONAN S	MOSQ				*	.56	3.14	1.49	6.21	.90							12.30
27	28N	24W	25	MPLS NWS	NWS	.57	.93	1.50	1.57	.53	2.86	2.17	6.43	.46	5.57	.38	1.83	22.59	21.27	24.80	12.45
27	28N	24W	33		SWCD	.52	.87	1.38	1.81	.78	2.67	1.71	7.36	.64	4.56	.54		23.74	22.40		13.16
27	29N	23W	30		BYRG	.54	1.03	1.53	1.58	.65	2.48	1.63	4.56	.39	4.95	.37	2.37	21.15	19.57	22.08	9.71
27	29N	24W	11		SWCD					.54	3.41	1.92	5.81	.65	7.10	.55					12.33
27	29N	24W	23	LSAF	NWS	.59	1.26	1.39	2.20	.26	3.37	1.29	7.13	.42	6.65	.52	2.79	24.81	22.91	27.87	12.47
27	116N	21W	7	EDINA	MOSQ				1.02	.48	3.48	1.19	8.75	.99							14.89
27	116N	21W	19		BYRG	.40	1.23	1.34	1.78	.61	3.25	.96	9.27	.42	6.35	.39	2.15	25.36	23.30	28.15	14.51
27	116N	22W	7		SWCD				1.21	.34	3.03	1.67	9.61	1.12	7.24						15.77
27	116N	22W	9	EDEN PR2	MOSQ					.42	3.08	1.40	8.91	.78							14.59
27	116N	22W	24	JOHNSONW	MOSQ				1.62	.55	3.58	1.13	7.33	.81	5.26						13.40
27	117N	21W	7		BYRG	.55	1.14	2.20	1.41	.44	2.93	2.17	6.57	.93	6.14	.63	2.11			27.22	13.04
27	117N	21W	8	MURCH TI	MOSQ				*	.29	3.24	.97	7.28	.85							12.63
27	117N	21W	17		BYRG				.96	.30	3.82	.83	7.64	.96	*						13.55
27	117N	22W	15		SWCD				1.46	.51	3.38	1.48	7.20	.70	6.64	.72					13.27
27	117N	22W	17		BYRG				*	.47	3.81	1.65	7.90	.77	7.12	.65	*				14.60
27	117N	22W	21	MINNETON	MOSQ				1.04	.55	3.85	1.74	7.46	.65	7.15						14.25
27	117N	22W	29		BYRG				1.43	.51	3.08	1.86	7.76	.75	6.66						13.96
27	117N	23W	19	SPRNG PK	NWS	.23	.77	1.89	1.59	.30	*	1.12	6.79	.84	4.71	1.12	2.29				
27	117N	23W	24	DEEPHAVE	MOSQ				*	.43	2.91	1.07	8.01								
27	117N	23W	31		BYRG			*	1.43	.60	3.41	1.73	7.83	2.37	7.36						15.94
27	117N	23W	34		BYRG	.97	1.26	1.09	1.67	.41	2.92	1.74	9.53	1.93	3.89	.33	1.78	25.95	25.02	27.52	16.53
27	117N	24W	21	MINNETRI	MOSQ				*	.63	2.57	1.33	8.15	.71							13.39
27	117N	24W	27		BYRG				.93	.53	2.44	1.05	7.99	.59	5.04	.64	1.93				12.60
27	118N	21W	6		BYRG				1.82	.62	4.63	1.06	6.43	.70	6.01						13.44
27	118N	21W	9	ROBBINSD	MOSQ					.29	3.34	1.10	5.24	.71							10.68
27	118N	21W	17		SWCD				*	.31	3.43	.92	5.75	.30	6.16						10.71
27	118N	21W	20	NEW HOPE	NWS	.58	1.19	2.15	1.21	.47	3.89	2.37	5.88	.73	6.16	.54	2.55	24.64	23.22	27.72	13.34
27	118N	21W	30		SWCD				1.09	.49	3.66	1.01	6.66	.62	5.50	.61					12.44

27	118N	21W	31	GOLDEN V	MOSQ					.26	3.63	.72	6.40	.63									11.64
27	118N	22W	5	XIONG JA	MOSQ					.48	3.73	.56	6.62	.85									12.24
27	118N	22W	13	HANSMANN	MOSQ				1.07	.48	3.88	.85	6.54	.68	4.99								12.43
27	118N	22W	17		SWCD			1.20	1.31	.37	4.16	.66	5.65	1.02	5.87	.57							11.86
27	118N	22W	18		SWCD				.69	.43	3.96	.48	6.07	.96	6.56								11.90
27	118N	22W	22	PLYMOUTH	MOSQ				*	.46	3.90	.64	5.82	.84	5.82								11.66
27	118N	22W	24	GREEN R	MOSQ				1.25	.46	3.71	.77	6.41	.60	4.71								11.95
27	118N	22W	25		BYRG	.31	.81	1.56	1.18	.36	2.11		6.45		5.02	.66	1.91						
27	118N	22W	25		BYRG			1.20				1.84		*	3.46	.37							
27	118N	22W	31		SWCD				.87	.54	3.86	.72	6.48	1.04	4.35								12.64
27	118N	23W	12		SWCD				*	.71	3.70	.86	6.25	1.00	5.91	.53							12.52
27	118N	23W	22		SWCD				1.31	.42	2.42	.38	6.60	.53	5.47	.53							10.35
27	119N	21W	25		BYRG				1.23	.32	3.48	.90	6.20	.50	6.30								11.40
27	119N	21W	33		BYRG				1.21	.51	3.85	.96	6.29	.69	5.69								12.30
27	119N	21W	33		BYRG				1.40	.55	3.30	.75	5.55	.40	5.25								10.55
27	119N	21W	34		BYRG				1.17	.51	4.14	.95	6.30	.75	5.64								12.65
27	119N	22W	1		SWCD				.67	.46	2.85	1.71	5.96	.92	5.96	.66							11.90
27	119N	22W	9		SWCD			1.24	.78	.52	4.21	1.42	6.62	.50	5.66	.44							13.27
27	119N	22W	13	N HENN D	MOSQ				1.06	.25	3.18	.84	6.46	.69	4.95								11.42
27	119N	22W	33		BYRG				1.34	.45	4.19	.70	6.51	.69	5.90								12.54
27	119N	22W	33		SWCD	.45	.98	1.82	1.35	.66	4.28	.64	5.58	.74	5.44			22.60	20.45				11.90
27	119N	22W	33		BYRG					.42	4.42	.71	6.25	.76	6.05	.59							12.56
27	119N	23W	7	BURSCHVI	MOSQ					.83	3.49	1.13	6.97	.53									12.95
27	119N	23W	25	CORCORAN	MOSQ					.41	4.18	1.14	6.62	1.28									13.63
27	119N	24W	34		SWCD				1.53	1.17	4.18	1.30	6.86	.64	6.65	.87	3.00						14.15
27	120N	21W	32	CHAMPLIN	MOSQ				.83	.63	4.09	1.48	7.59	.61	5.62								14.40
27	120N	21W	33	CHAMPLIN	MOSQ				.92	.53	3.77	1.42	7.89	.67									14.28
27	120N	22W	16	DAYTON	MOSQ					.66	3.37	1.41	6.38	.51									12.33
27	120N	22W	34	OSSEO PA	MOSQ					.52	3.85	1.59	5.92	.64									12.52
27	120N	23W	21		SWCD						4.20	.70	8.90										
27	120N	23W	27	HASSAN	MOSQ					.89	4.01	1.79	9.66	1.15									17.50
county averages						.52	1.04	1.54	1.33	.52	3.50	1.25	6.99	.77	5.81	.57	2.25	23.86	22.27	26.48			13.03
# of obs						11	11	14	42	62	62	63	63	60	46	23	11	8	8	7			59

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Obtaining Data for Legal Purposes

Last modified: April 10, 2008

Minnesota Climatology Working Group

State Climatology Office - DNR Division of Ecological and Water Resources University of Minnesota

Annual Reports of Monthly Precipitation Totals

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Choose a county and year, then click on **"Annual report"**.

HENNEPIN 2010 Annual report

2010 HENNEPIN Monthly Precipitation, Totals

cc	ttt	rr	ss	oooooooo	nnnn	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AGR	HYD	ANN	GRO
27	27N	24W	8	BLOOMING	MOSQ				3.06	3.09	6.29	5.20	5.46	6.10							26.14
27	27N	24W	15		BYRG				2.87	3.14	7.26	4.70	5.34	6.43	1.99						26.87
27	27N	24W	20		BYRG				2.84	3.20	7.14	5.98	6.22	6.12	1.87						28.66
27	27N	24W	21		BYRG					3.09	7.58	5.63	5.93	5.99	2.11						28.22
27	28N	23W	18	NOONAN S	MOSQ					2.86	6.78	4.57	5.67	5.36							25.24
27	28N	24W	25	MPLS NWS	NWS	.45	.75	.69	2.40	2.50	6.07	3.03	4.91	5.53	1.61		*	2.79	29.04	34.11	22.04
27	29N	23W	30		BYRG	.68	1.04	.79	2.21	2.46	5.96	5.27	6.53	4.42	1.45	2.07	2.80	33.02	37.05	35.68	24.64
27	29N	24W	11		SWCD					3.24	7.17	4.14	4.96	6.04	2.35						25.55
27	29N	24W	23	LSAF	NWS	.69	.33	.85	2.20	2.90	7.11	4.97	7.73	6.56	1.98	1.53	3.64	37.16	43.30	40.49	29.27
27	116N	21W	7	EDINA	MOSQ				2.95	2.76	4.71	3.74	5.77	4.85							21.83
27	116N	21W	19		BYRG	.61	.73	1.05	3.04	2.81	4.95	4.33	5.28	4.91	2.41	2.19	2.81	32.11	36.60	35.12	22.28
27	116N	22W	7		SWCD				*	2.57	3.56	4.08	6.87	5.98							23.06
27	116N	22W	9	EDEN PR2	MOSQ					2.38	4.08	4.59	6.20	5.73							22.98
27	116N	22W	24	JOHNSONW	MOSQ					2.88	4.08	3.99	3.97	4.19	1.88						19.11
27	117N	21W	7		BYRG	.64	1.10	1.08	2.18	2.54	5.90	4.39	6.35	6.31	2.09	1.70	3.44	33.99	39.37	37.72	25.49
27	117N	21W	8	MURCH TI	MOSQ				2.12	2.39	6.79	4.96	6.12	6.35							26.61
27	117N	21W	17		BYRG				*	2.49	6.06	4.23	5.67	7.23	2.00						25.68
27	117N	22W	15		SWCD				2.14	2.64	5.38	4.58	6.22	6.15							24.97
27	117N	22W	17		BYRG				2.37	2.79	5.92	4.57	6.39	6.23	2.11		*				25.90
27	117N	22W	21	MINNETON	MOSQ					2.89	5.52	4.57	6.54	5.26	2.16						24.78
27	117N	22W	29		BYRG				2.59	2.76	4.46	4.24	6.94	6.43	1.97						24.83
27	117N	23W	19	SPRNG PK	NWS	.57	.85	.99	1.59	3.01	4.70	4.13	5.82	5.86	1.42	1.63	2.49	30.62	35.64	33.06	23.52
27	117N	23W	24	DEEPHAVE	MOSQ					*	5.91	4.04	6.28	5.66							
27	117N	23W	31		BYRG				2.77	2.86	4.47	4.30	6.79	5.85	2.22		*				24.27
27	117N	23W	34		BYRG	.68	.78	1.16	1.40	2.39	3.17	3.93	5.14	3.93	.70			2.95	26.58	28.58	18.56
27	117N	24W	21	MINNETRI	MOSQ				1.76	3.15	4.03	3.87	7.88	2.92							21.85
27	117N	24W	27		BYRG	.55	.89	.90	1.68	2.69	4.05	3.15	6.95	4.63	1.14	1.27	2.26	29.06	33.10	30.16	21.47
27	118N	21W	6		BYRG				2.03	3.09	7.07	3.10	6.53	6.23	1.91						26.02
27	118N	21W	9	ROBBINSD	MOSQ					2.92	6.51	3.17	4.41	5.08							22.09
27	118N	21W	17		SWCD				1.74	2.73	6.90	3.41	4.81	4.46	2.13						22.31
27	118N	21W	20	NEW HOPE	NWS	.68	1.01	.93	2.11	2.90	7.68	4.20	5.26	6.24	1.89	2.42	3.38	34.75	40.26	38.70	26.28
27	118N	21W	30		SWCD				2.05	2.70	6.41	4.05	5.27	5.97							24.40
27	118N	21W	31	GOLDEN V	MOSQ					2.83	5.69	4.10	5.85	6.05							24.52

27	118N	22W	5	XIONG JA	MOSQ					2.63	4.53	2.60	4.69	6.05					20.50
27	118N	22W	13	HANSMANN	MOSQ					2.59	7.33	3.96	6.28	5.75	1.86				25.91
27	118N	22W	17		SWCD				1.54	3.11	6.73	3.46	6.38	6.50	2.09	*			26.18
27	118N	22W	18		SWCD				1.67	3.14	6.58	3.21	6.31	6.89	2.09				26.13
27	118N	22W	22	PLYMOUTH	MOSQ				1.60	3.25	6.66	2.93	5.93	6.73	2.43				25.50
27	118N	22W	24	GREEN R	MOSQ				2.04	2.51	6.17	3.93	*	5.42	1.66				
27	118N	22W	25		BYRG	.63	.40	.86	2.01	2.16	5.95	3.49	5.73	5.71	2.10	2.34	2.10	34.53 33.48	23.04
27	118N	22W	31		SWCD				1.70	3.35	6.41	3.61	6.53	6.54					26.44
27	118N	23W	2		WSD	.50	.89	.56	1.53	2.51	5.33	2.75	4.96	5.24	1.82	1.09	2.27	29.45	20.79
27	118N	23W	12		SWCD				1.88		7.53	2.54	5.08	6.16					
27	118N	23W	22		SWCD						7.07	3.80	7.12	5.01					
27	119N	21W	25		BYRG				2.32	3.21	5.00	2.93	5.80	4.70	1.70				21.64
27	119N	21W	31		BYRG												*		
27	119N	21W	33		BYRG				1.76	2.69	5.28	2.86	6.61	5.33	1.81				22.77
27	119N	21W	33		BYRG				1.90	2.90	6.50	2.50	4.90	5.45	2.00				22.25
27	119N	21W	34		BYRG				1.72	2.98	5.79	2.87	6.66	5.43	1.86				23.73
27	119N	22W	1		SWCD			.99	1.89	2.87	5.46	3.30	5.76	6.25					23.64
27	119N	22W	9		SWCD				1.57	2.83	5.85	2.78	5.03	5.93					22.42
27	119N	22W	13	N HENN D	MOSQ				1.47	2.83	5.65	2.90	3.46	6.04	2.02				20.88
27	119N	22W	33		BYRG				1.41	2.89	7.01	2.65	6.40	6.19	1.91				25.14
27	119N	22W	33		SWCD	.49	1.00												
27	119N	22W	33		BYRG				1.56	2.81	7.20	2.78	6.41		1.97	*			
27	119N	23W	7	BURSCHVI	MOSQ					2.90	6.54	3.03	3.87	5.21					21.55
27	119N	23W	25	CORCORAN	MOSQ					2.20	4.74	2.70	2.68	4.94					17.26
27	119N	24W	34		SWCD					3.18	8.01	3.11	6.88	5.01	1.76				26.19
27	120N	21W	32	CHAMPLIN	MOSQ					2.99	5.50	3.48	4.23	6.34	1.77				22.54
27	120N	21W	33	CHAMPLIN	MOSQ				1.97	3.08	5.53	3.55	4.24	6.37					22.77
27	120N	22W	16	DAYTON	MOSQ					2.81	5.45	3.54	4.48	5.58					21.86
27	120N	22W	34	OSSEO PA	MOSQ					2.75	5.55	3.17	5.02	5.56					22.05
27	120N	23W	27	HASSAN	MOSQ					4.30	6.35	5.08	4.39	6.30					26.42
county averages						.60	.81	.90	2.04	2.85	5.92	3.78	5.70	5.69	1.90	1.80	2.81	31.81 36.25	34.87 23.88
# of obs						12	12	12	40	58	61	61	60	60	37	9	11	9 10	9 56

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- Prepared by: State Climatology Office - DNR Waters, phone: 651-296-4214, web: http://climate.umn.edu

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Obtaining Data for Legal Purposes

Last modified: April 10, 2008

Minnesota Climatology Working Group

State Climatology Office - DNR Division of Ecological and Water Resources University of Minnesota

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HENNEPIN 2011 Annual report

2011 HENNEPIN Monthly Precipitation, Totals

cc	ttt	rr	ss	oooooooo	nnnn	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AGR	HYD	ANN	GRO
27	27N	24W	15		BYRG				3.35	4.42	4.50	4.00	2.26	.49	1.05						15.67
27	27N	24W	20		BYRG				3.20	4.65	3.80	4.58	2.29	.49	.82						15.81
27	28N	23W	18	NOONAN S	MOSQ				2.80	4.78	4.66	5.96									
27	28N	24W	25	MPLS NWS	NWS	1.00	1.12	2.06	2.80	4.04	5.28	4.78	3.03	.36	.70	.21	.99			26.37	17.49
27	29N	23W	30		BYRG	.97	.99	2.20	3.25	3.94	3.81	7.31	4.00	.50	.84	.32	.89	37.21	33.29	29.02	19.56
27	29N	23W	33	METROMOS	MOSQ				2.70	4.78		8.72									
27	29N	24W	1		SWCD						4.82	5.56	2.71	.35	.74	.26	.79				
27	29N	24W	11		SWCD					6.37	4.18	8.65	5.10	.35	.82						24.65
27	29N	24W	23	LSAF	NWS	.99	1.21	2.66	3.23	4.84	5.10	8.48	4.51	.89	1.01	.24	.84	44.73	39.06	34.00	23.82
27	116N	22W	7		SWCD					5.44	4.86	4.96	3.99	.35	.77						19.60
27	117N	21W	7		BYRG	1.04	1.07	2.61	3.11	5.57	4.35	5.83	3.81	.34	1.12	.23	1.04	40.93	34.96	30.12	19.90
27	117N	21W	8	MURCH TI	MOSQ					6.41	4.06	6.19									
27	117N	21W	21	ST LOUIS	MOSQ				2.86												
27	117N	22W	15		SWCD				3.20	5.70	3.77	5.54	2.99	.35							18.35
27	117N	22W	17		BYRG				3.28	5.15	3.47	6.02	2.86	.29	.91	.25					17.79
27	117N	22W	21	MINNETON	MOSQ				3.33	5.86		5.80									
27	117N	22W	29		BYRG				3.39	5.31	4.46	6.00	2.68	.21	.83						18.66
27	117N	23W	19	SPRNG PK	NWS				2.61	5.31	6.22	4.37	1.66	.40	.71	.32					17.96
27	117N	23W	24	DEEPHAVE	MOSQ				2.80	5.50	3.25	6.42									
27	117N	23W	31		BYRG					4.30	3.04	5.40	3.64	.28	.96						16.66
27	117N	23W	34		BYRG	1.30	1.25	1.85	2.13	3.32	2.20	4.03	2.28	.13	.85						11.96
27	117N	24W	21	MINNETRI	MOSQ				2.92	5.00	3.02	3.42									
27	117N	24W	27		BYRG	.73	1.20	1.57	2.49	4.47	3.16	3.06	1.94	.29	.78	.07	.47	27.92	23.58	20.23	12.92
27	118N	21W	6		BYRG				3.27	7.11	3.60	9.02	5.12		.96						
27	118N	21W	17		SWCD					5.96	3.48	6.80	4.91	.12	.58						21.27
27	118N	21W	20	NEW HOPE	NWS	1.04	.90	2.26	3.67	6.26	4.16	6.36	4.54	.31	.78	.22	.92	43.12	37.19	31.42	21.63
27	118N	21W	30		SWCD					5.58	3.81	5.49	3.61	.34							18.83
27	118N	22W	5	XIONG JA	MOSQ						4.84	6.18									
27	118N	22W	13	HANSMANN	MOSQ				2.27	5.75	3.36	6.06									
27	118N	22W	17		SWCD				2.75	6.59	5.09	7.16	4.67	.54	.99	*					24.05
27	118N	22W	18		SWCD				2.53	7.04	4.65	6.83	3.59	.62	.94						22.73
27	118N	22W	22	PLYMOUTH	MOSQ				2.78	6.50	3.35	7.05									

27	118N	22W	24	GREEN R	MOSQ					5.17	3.87	5.38											
27	118N	22W	25		BYRG						4.10	5.76	3.87	.49	.67	.25	.79						
27	118N	22W	25		BYRG	.71	1.23	1.27	2.90	*													
27	118N	22W	31		SWCD				*	5.24	3.84	5.80	3.11	.47									18.46
27	118N	23W	12		SWCD				2.86	6.45	4.95	6.40	1.93										
27	118N	23W	22		SWCD					6.46	3.89	5.40	2.64	.48									18.87
27	119N	21W	25		BYRG				2.95	5.80	4.60	9.14	4.40	.35	.60								24.29
27	119N	21W	31		BYRG											*							
27	119N	21W	33		BYRG				3.05	6.00	3.89	8.07	4.10	.63	.73								22.69
27	119N	21W	33		BYRG				3.15	6.55	3.70	7.40	4.75	.25	.50								22.65
27	119N	21W	34		BYRG				3.22	6.21	4.39	9.92	4.20	.67	.92								25.39
27	119N	22W	1		SWCD				3.63	7.78	3.79	7.18	3.89	.93	.97								23.57
27	119N	22W	9		SWCD			1.90	2.78	8.11	3.80	7.30	4.00										
27	119N	22W	13	N HENN D	MOSQ					7.05	3.81	7.75											
27	119N	22W	33		BYRG				3.15	8.03	3.52	6.39	4.14		.98	0							
27	119N	22W	33		BYRG				3.07	7.69	4.32	7.54	4.58	1.13	.93								25.26
27	119N	23W	25	CORCORAN	MOSQ					6.45	3.73	6.77											
27	119N	24W	33	ROCKFORD	MOSQ				2.82	7.56	3.34	4.52											
27	119N	24W	34		SWCD					7.53	4.25	5.39	3.91	1.67	.84	.20							22.75
27	120N	21W	32	CHAMPLIN	MOSQ				3.37	5.68	3.89	8.66											
27	120N	21W	33	CHAMPLIN	MOSQ					8.25	3.96	8.78											
27	120N	22W	16	DAYTON	MOSQ					7.41	3.26	6.78											
county averages						.97	1.12	2.04	2.99	5.95	4.03	6.40	3.59	.49	.84	.21	.84	38.78	33.62	28.53	20.11		
# of obs						8	8	9	36	48	49	51	35	31	29	12	8	5	5	6	29		

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HENNEPIN 2012 Annual report

2012 HENNEPIN Monthly Precipitation, Totals

cc	ttt	rr	ss	oooooooo	nnnn	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AGR	HYD	ANN	GRO
27	27N	24W	15		BYRG				2.95	9.97	5.07	3.43	2.35	.57	1.38						21.39
27	27N	24W	20		BYRG				2.91	10.08	4.59	3.12	2.23	.61							20.63
27	28N	24W	12		WSD	.37	1.61	1.50	3.58	9.15	3.44	3.04	1.09	.14	1.12	.71	1.56			27.31	16.86
27	28N	24W	25	MPLS NWS	NWS	.36	1.72	1.40	3.04	9.34	3.59	4.90	1.38	.30	1.30	.63	1.64	27.99	27.93	29.60	19.51
27	29N	23W	30		BYRG	.67	1.58	1.39	2.67	8.65	2.76	4.41	1.17	.37	1.53	.86	1.40	25.85	25.72	27.46	17.36
27	29N	23W	33	METROMOS	MOSQ				3.29	9.44	3.52	5.21	1.00	.42	1.40						19.59
27	29N	24W	1		SWCD	.33	.76	1.54	3.23	9.15	4.19	5.10	1.82	.40	1.16	.69	1.90	28.26	28.31	30.27	20.66
27	29N	24W	11		SWCD				3.09	10.19	3.81	4.78	1.65	.49	1.57	*					20.92
27	29N	24W	23	LSAF	NWS	.67	1.62	1.82	3.44	9.04	3.48	6.24	1.86	.32	1.35	1.02	1.55	31.15	30.58	32.41	20.94
27	116N	22W	7		SWCD			1.16	3.41	10.25	5.30	3.81	2.75	.44	1.29						22.55
27	117N	21W	7		BYRG	.37	2.13	1.50	2.97	8.73	4.23	3.92	1.60	.46	1.20	.89	1.60	28.18	28.30	29.60	18.94
27	117N	21W	8	MURCH TI	MOSQ				3.05	9.31	4.10										
27	117N	22W	15		SWCD				3.01	9.11	4.34	3.26	1.71	.46	1.26						18.88
27	117N	22W	17		BYRG			.98	3.24	9.62	4.65	3.12	2.39	.54							20.32
27	117N	22W	21	MINNETON	MOSQ				3.07	9.41	4.68	3.26	1.57	.48	1.23						19.40
27	117N	22W	29		BYRG				2.87	10.05	4.60	2.72	2.05	.40							19.82
27	117N	23W	19	SPRNG PK	NWS	.49	1.73	1.70	2.96	9.55		4.75	1.50	.30	1.35	.85	1.20				
27	117N	23W	24	DEEPHAVE	MOSQ				2.79	10.57	4.53	2.67	1.77	.42	1.60						19.96
27	117N	23W	26		WSD	.40	1.29	1.57	3.04	8.60	5.39	2.77	1.69	.34	1.32	.81	1.73			28.95	18.79
27	117N	23W	31		BYRG				2.79	10.99	4.82	2.42	1.88	.51	1.55	*					20.62
27	117N	23W	34		BYRG			*	1.74	9.30	5.40			.50							
27	117N	24W	21	MINNETRI	MOSQ				2.40	10.95	4.12	2.76	2.83	.51	.95						21.17
27	117N	24W	27		BYRG	.47	1.56	1.16	1.99	10.19	4.03	2.28	2.83	.45	.93	.59	.93	26.12	26.28	27.41	19.78
27	118N	21W	6		BYRG				2.82	10.20	4.62	4.04	1.13	.60	1.52	.88					20.59
27	118N	21W	17		SWCD				1.44												
27	118N	21W	20	NEW HOPE	NWS	.32	2.21	1.26	2.72	9.17	3.62	4.53	1.64	.50	1.52	.93	1.79	27.70	27.89	30.21	19.46
27	118N	21W	30		SWCD				2.80	8.57	3.69	4.42	1.43	.53	1.32						18.64
27	118N	22W	5	XIONG JA	MOSQ						4.10	3.69	1.35	.53	2.07						
27	118N	22W	13	HANSMANN	MOSQ				2.44	9.74	4.70	4.33	1.15	.39	1.30						20.31
27	118N	22W	17		SWCD				2.98	10.55	5.29	5.76	.96	.58	2.24						23.14

27	118N	22W	18		SWCD				2.77	10.07	5.84	5.10	.92	.54	2.60						22.47
27	118N	22W	22	PLYMOUTH	MOSQ				2.83	9.05	3.90	4.87	1.45	.48	1.67						19.75
27	118N	22W	24	GREEN R	MOSQ				2.42	8.12	3.26	3.71	1.76	.35	1.10						17.20
27	118N	22W	25		BYRG	.72	2.54	1.29	2.76	9.72	3.91	4.81	1.87	.63	1.47	1.09	1.83	29.82	29.96	32.64	20.94
27	118N	22W	31		SWCD				2.71	9.79	4.06	5.27	1.21	.52	1.09						20.85
27	118N	23W	2		WSD	.30	1.55	.81	2.12			4.30	1.08	.64	2.08	.68	1.14				
27	118N	23W	22		SWCD			*	2.08	8.66	3.96										
27	119N	21W	25		BYRG				2.47	9.55	2.95	4.75	.80	.55	1.12						18.60
27	119N	21W	31		BYRG						*										
27	119N	21W	33		BYRG			.95	2.69	9.33	3.89	4.05	1.33	.59	1.71						19.19
27	119N	21W	33		BYRG				2.70	9.00	3.60	4.25	1.05	.35	1.50						18.25
27	119N	21W	34		BYRG			*	2.97	10.56	4.05	4.45	1.43	.82	1.73						21.31
27	119N	22W	1		SWCD			.85	2.89	9.50	4.02	5.32	.99	.98	2.20	.68	1.39				20.81
27	119N	22W	9		SWCD				2.18	10.14	3.13										
27	119N	22W	13	N HENN D	MOSQ						3.52	4.30	.91	.46	1.46						
27	119N	22W	33		BYRG			.88	2.79	10.55	4.36	4.21	.99	.48	1.88	.62					20.59
27	119N	22W	33		SWCD	.39	2.13	1.21	2.70	9.92	4.69	3.92	.83	.43	1.77	.71	1.56			30.26	19.79
27	119N	22W	33		BYRG			.81	3.01	11.11	4.53	3.90	.97	.45	1.90	.66					20.96
27	119N	23W	25	CORCORAN	MOSQ						4.27	5.67	.91	.58	2.94						
27	119N	24W	33	ROCKFORD	MOSQ				2.20	13.14	3.53	4.31	1.84	.37	.89						23.19
27	119N	24W	34		SWCD				2.54	11.78	5.04	4.69	1.76	.57	1.53						23.84
27	120N	21W	32	CHAMPLIN	MOSQ				2.63	10.31	3.92	5.05	1.05	.55	1.58						20.88
27	120N	21W	33	CHAMPLIN	MOSQ						3.95	4.88	.94	.53	1.50						
27	120N	22W	16	DAYTON	MOSQ						4.01	4.37	.94	.35							
county averages						.45	1.73	1.25	2.75	9.79	4.18	4.19	1.50	.49	1.53	.78	1.52	28.13	28.12	29.65	20.22
# of obs						13	13	19	48	46	50	48	48	49	44	17	14	8	8	11	41

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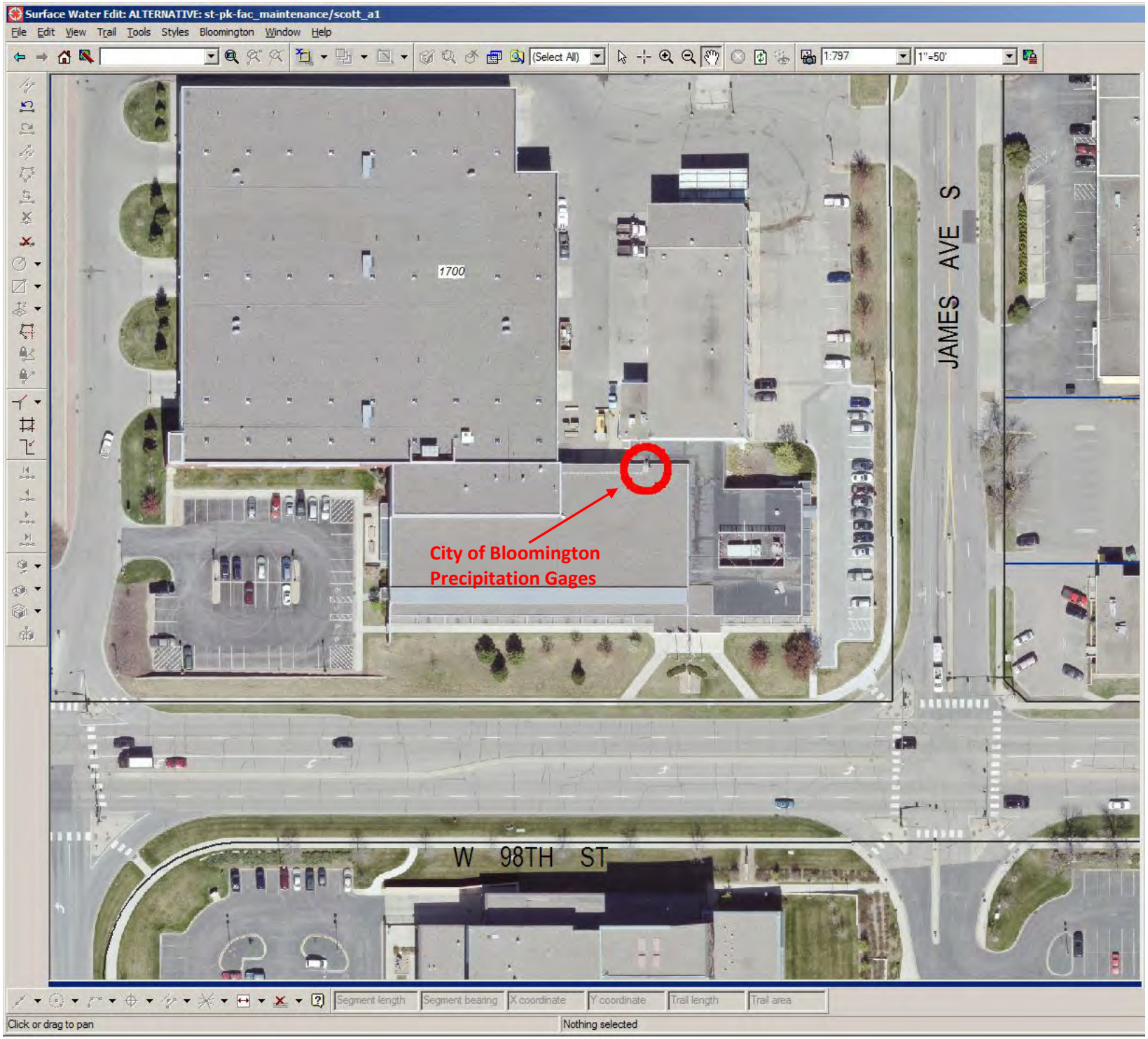
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City of Bloomington
Precipitation Gages
Segment length
Segment bearing
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Y coordinate
Trail length
Trail area
Click or drag to pan
Nothing selected

Date	Total Precipitation Amount (in.) reported by Bloomington Tipping Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NWS	Total Precipitation Amount (in.) as reported by the Weighing Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NCDC
1/1/2008		T	0.00	
1/2/2008		0.00	0.00	
1/3/2008		0.00	0.00	
1/4/2008		0.00	0.00	
1/5/2008		0.00	0.00	
1/6/2008		0.00	0.00	
1/7/2008		T	0.00	
1/8/2008		0.00	0.00	
1/9/2008		0.00	0.00	
1/10/2008		T	0.00	
1/11/2008		0.04	0.00	
1/12/2008		0.01	0.00	
1/13/2008		T	0.00	
1/14/2008		T	0.00	
1/15/2008		0.00	0.00	
1/16/2008		T	0.00	
1/17/2008		0.00	0.00	
1/18/2008		T	0.00	
1/19/2008		0.00	0.00	
1/20/2008		0.00	0.00	
1/21/2008		0.09	0.00	
1/22/2008		T	0.00	
1/23/2008		0.00	0.00	
1/24/2008		T	0.00	
1/25/2008		T	0.00	
1/26/2008		T	0.00	
1/27/2008		0.00	0.00	
1/28/2008		0.01	0.00	
1/29/2008		T	0.00	
1/30/2008		0.00	0.00	
1/31/2008		T	0.00	
Totals	**0.00**	**0.15**	**0.00**	**0.00**

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NWS is the National Weather Service, Station location MSP Airport
T is reported as a trace event being less than 0.01 inches
- (dash) Represents no recorded data for that day.
The weighing bucket data deemed only reasonably accurate/chart time accurate with tipping bucket
Only the total precipitation for weighing bucket reported for the month due to inability to read time on the chart

Date	Total Precipitation Amount (in.) reported by Bloomington Tipping Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NWS	Total Precipitation Amount (in.) as reported by the Weighing Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NCDC
2/1/2008		0.00	0.00	
2/2/2008		T	0.00	
2/3/2008		T	0.00	
2/4/2008		0.14	0.18	
2/5/2008		0.00	0.00	
2/6/2008		T	0.00	
2/7/2008		T	0.00	
2/8/2008		0.02	0.00	
2/9/2008		0.03	0.03	
2/10/2008		0.00	0.00	
2/11/2008		0.00	0.00	
2/12/2008		0.00	0.00	
2/13/2008	0.04	0.08	0.05	
2/14/2008	0.03	0.03	0.08	
2/15/2008	0.00	0.00	0.00	
2/16/2008	0.00	0.00	0.00	
2/17/2008	0.00	0.01	0.00	
2/18/2008	0.00	0.01	0.00	
2/19/2008	0.00	T	0.00	
2/20/2008	0.00	0.00	0.00	
2/21/2008	0.00	0.00	0.00	
2/22/2008	0.00	0.00	0.00	
2/23/2008	0.00	0.00	0.00	
2/24/2008	0.00	0.00	0.00	
2/25/2008	0.00	0.00	0.00	
2/26/2008	0.00	0.00	0.00	
2/27/2008	0.00	T	0.00	
2/28/2008	0.01	0.07	0.10	
2/29/2008	0.01	0.01	0.00	
Totals	**0.09**	**0.40**	**0.44**	**0.00**

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The weighing bucket data deemed only reasonably accurate/chart time accurate with tipping bucket

Date	Total Precipitation Amount (in.) reported by Bloomington Tipping Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NWS	Total Precipitation Amount (in.) as reported by the Weighing Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NCDC
3/1/2008	0.00	0.00	0.00	
3/2/2008	0.02	T	0.00	
3/3/2008	0.01	0.00	0.00	
3/4/2008	0.00	0.00	0.00	
3/5/2008	0.06	0.13	0.10	
3/6/2008	0.00	T	0.00	
3/7/2008	0.00	0.00	0.00	
3/8/2008	0.00	T	0.00	
3/9/2008	0.00	0.01	0.00	
3/10/2008	0.00	0.00	0.00	
3/11/2008	0.00	0.00	0.00	
3/12/2008	0.01	0.01	0.00	
3/13/2008	0.00	0.00	0.00	
3/14/2008	0.00	0.00	0.00	
3/15/2008	0.00	0.00	0.00	
3/16/2008	0.00	0.00	0.00	
3/17/2008	0.10	0.14	0.02	
3/18/2008	0.29	0.33	0.30	
3/19/2008	0.00	0.00	0.00	
3/20/2008	0.01	0.02	0.00	
3/21/2008	0.42	0.36	0.40	
3/22/2008	0.09	0.15	0.13	
3/23/2008	0.07	0.06	0.08	
3/24/2008	0.00	0.01	0.00	
3/25/2008	0.04	0.03	0.05	
3/26/2008	0.00	0.00	0.00	
3/27/2008	0.00	0.00	0.00	
3/28/2008	0.00	0.00	0.00	
3/29/2008	0.00	0.00	0.00	
3/30/2008	0.00	T	0.00	
3/31/2008	0.86	0.72	1.05	
Totals	**1.98**	**1.97**	**2.13**	**0.00**

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- (dash) Represents no recorded data for that day.
The weighing bucket data deemed only reasonably accurate/chart time accurate with tipping bucket

Date	Total Precipitation Amount (in.) reported by Bloomington Tipping Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NWS	Total Precipitation Amount (in.) as reported by the Weighing Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NCDC
4/1/2008	0.01	0.01	0.00	
4/2/2008	0.00	0.00	0.00	
4/3/2008	0.00	0.00	0.00	
4/4/2008	0.00	0.01	0.00	
4/5/2008	0.00	0.00	0.00	
4/6/2008	0.45	0.42	0.35	
4/7/2008	0.01	0.01	0.00	
4/8/2008	0.00	0.00	0.00	
4/9/2008	0.00	0.00	0.00	
4/10/2008	1.29	0.83	0.80	
4/11/2008	0.16	0.11	0.35	
4/12/2008	0.00	T	0.00	
4/13/2008	0.00	0.00	0.00	
4/14/2008	0.00	0.00	0.00	
4/15/2008	0.00	0.00	0.00	
4/16/2008	0.00	0.00	0.00	
4/17/2008	0.00	0.00	0.00	
4/18/2008	0.14	0.15	0.10	
4/19/2008	0.11	0.12	0.10	
4/20/2008	0.00	T	0.00	
4/21/2008	0.44	0.38	0.40	
4/22/2008	0.00	T	0.05	
4/23/2008	0.00	0.00	0.00	
4/24/2008	0.70	0.82	0.58	
4/25/2008	0.27	0.23	0.18	
4/26/2008	0.03	0.03	0.08	
4/27/2008	0.00	T	0.00	
4/28/2008	0.00	0.00	0.00	
4/29/2008	0.00	0.00	0.00	
4/30/2008	0.00	0.00	0.00	
Totals	**3.61**	**3.12**	**2.99**	**0.00**

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The weighing bucket data deemed only reasonably accurate/chart time accurate with tipping bucket

Date	Total Precipitation Amount (in.) reported by Bloomington Tipping Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NWS	Total Precipitation Amount (in.) as reported by the Weighing Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NCDC
5/1/2008	0.00	0.01	0.00	
5/2/2008	0.92	1.23	1.65	
5/3/2008	0.18	0.10	0.25	
5/4/2008	0.00	0.00	0.00	
5/5/2008	0.00	0.00	0.00	
5/6/2008	0.00	0.18	0.25	
5/7/2008	0.00	0.00	0.00	
5/8/2008	0.00	0.00	0.00	
5/9/2008	0.00	0.00	0.00	
5/10/2008	0.00	0.32	0.33	
5/11/2008	0.00	0.01	0.08	
5/12/2008	0.00	0.00	0.00	
5/13/2008	0.00	0.01	0.00	
5/14/2008	0.00	0.00	0.00	
5/15/2008	0.00	T	0.00	
5/16/2008	0.00	T	0.00	
5/17/2008	0.00	T	0.00	
5/18/2008	0.00	0.00	0.00	
5/19/2008	0.00	0.01	0.00	
5/20/2008	0.00	0.00	0.00	
5/21/2008	0.00	0.00	0.00	
5/22/2008	0.00	0.00	0.00	
5/23/2008	0.00	0.00	0.00	
5/24/2008	0.00	0.02	0.00	
5/25/2008	0.00	0.00	0.00	
5/26/2008	0.00	0.00	0.00	
5/27/2008	0.00	0.00	0.00	
5/28/2008	0.00	0.00	0.00	
5/29/2008	0.03	0.14	0.35	
5/30/2008	0.04	0.07	0.05	
5/31/2008	0.10	0.43	0.05	
Totals	**1.27**	**2.53**	**3.01**	**0.00**

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- (dash) Represents no recorded data for that day.
The weighing bucket data deemed only reasonably accurate/chart time accurate with tipping bucket

Date	Total Precipitation Amount (in.) reported by Bloomington Tipping Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NWS	Total Precipitation Amount (in.) as reported by the Weighing Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NCDC
6/1/2008	0.00	0.00	0.00	
6/2/2008	0.01	0.02	0.00	
6/3/2008	0.00	0.02	0.00	
6/4/2008	0.00	0.00	0.00	
6/5/2008	1.12	1.20	1.50	
6/6/2008	0.07	0.06	0.11	
6/7/2008	0.01	0.02	0.00	
6/8/2008	0.07	0.09	0.08	
6/9/2008	0.00	0.00	0.00	
6/10/2008	0.11	T	0.00	
6/11/2008	0.30	0.55	0.60	
6/12/2008	0.08	0.42	0.45	
6/13/2008	0.01	T	0.00	
6/14/2008	0.01	0.12	0.00	
6/15/2008	0.00	0.00	0.00	
6/16/2008	0.00	0.00	0.00	
6/17/2008	0.00	0.00	0.00	
6/18/2008	0.00	0.00	0.00	
6/19/2008	0.00	0.00	0.00	
6/20/2008	0.00	T	0.00	
6/21/2008	0.01	0.01	0.00	
6/22/2008	0.04	T	0.00	
6/23/2008	0.00	0.00	0.00	
6/24/2008	0.00	0.00	0.00	
6/25/2008	0.00	0.00	0.00	
6/26/2008	0.00	0.00	0.00	
6/27/2008	0.04	0.05	0.08	
6/28/2008	0.01	0.14	0.00	
6/29/2008	0.00	T	0.00	
6/30/2008	0.00	0.00	0.00	
Totals	**1.89**	**2.70**	**2.82**	**0.00**

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The weighing bucket data deemed only reasonably accurate/chart time accurate with tipping bucket

Date	Total Precipitation Amount (in.) reported by Bloomington Tipping Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NWS	Total Precipitation Amount (in.) as reported by the Weighing Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NCDC
7/1/2008	0.00	0.00	0.00	
7/2/2008	0.00	0.00	0.00	
7/3/2008	0.00	0.00	0.00	
7/4/2008	0.00	0.00	0.00	
7/5/2008	0.00	0.00	0.00	
7/6/2008	0.00	T	0.00	
7/7/2008	0.20	0.47	0.45	
7/8/2008	0.00	0.00	0.00	
7/9/2008	0.00	0.00	0.00	
7/10/2008	1.23	0.77	1.50	
7/11/2008	0.16	0.40	0.13	
7/12/2008	0.00	0.00	0.00	
7/13/2008	0.00	0.00	0.00	
7/14/2008	0.00	0.00	0.00	
7/15/2008	0.00	0.00	0.00	
7/16/2008	0.00	0.00	0.00	
7/17/2008	0.10	0.17	0.10	
7/18/2008	0.00	0.00	0.00	
7/19/2008	0.08	0.09	0.05	
7/20/2008	0.00	0.00	0.00	
7/21/2008	0.00	0.00	0.00	
7/22/2008	0.00	0.00	0.00	
7/23/2008	0.00	0.00	0.00	
7/24/2008	0.00	T	0.00	
7/25/2008	0.02	0.10	0.30	
7/26/2008	0.00	0.00	0.00	
7/27/2008	0.00	0.01	0.00	
7/28/2008	0.00	0.00	0.00	
7/29/2008	0.00	T	0.00	
7/30/2008	0.00	0.00	0.00	
7/31/2007	0.00	0.12	0.14	
Totals	**1.79**	**2.13**	**2.67**	**0.00**

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The weighing bucket data deemed only reasonably accurate/chart time accurate with tipping bucket

Date	Total Precipitation Amount (in.) reported by Bloomington Tipping Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NWS	Total Precipitation Amount (in.) as reported by the Weighing Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NCDC
8/1/2008	0.00	0.00	0.00	
8/2/2008	0.00	0.00	0.00	
8/3/2008	0.00	0.01	0.00	
8/4/2008	0.00	0.14	0.00	
8/5/2008	0.00	0.00	0.00	
8/6/2008	0.00	0.05	0.00	
8/7/2008	0.00	0.00	0.00	
8/8/2008	0.00	0.01	0.00	
8/9/2008	0.00	0.01	0.00	
8/10/2008	0.00	0.00	0.00	
8/11/2008	0.00	T	0.00	
8/12/2008	0.00	0.40	0.35	
8/13/2008	0.00	0.57	0.15	
8/14/2008	0.00	T	0.00	
8/15/2008	0.00	0.00	0.00	
8/16/2008	0.00	T	0.00	
8/17/2008	0.00	0.00	0.00	
8/18/2008	0.00	0.00	0.00	
8/19/2008	0.00	0.00	0.00	
8/20/2008	0.00	0.00	0.00	
8/21/2008	0.00	0.00	0.00	
8/22/2008	0.00	T	0.00	
8/23/2008	0.00	0.00	0.00	
8/24/2008	0.00	0.00	0.00	
8/25/2008	0.00	0.00	0.00	
8/26/2008	0.00	0.00	0.00	
8/27/2008	0.05	2.12	1.95	
8/28/2008	0.34	0.04	0.15	
8/29/2008	0.00	0.00	0.00	
8/30/2008	0.00	0.00	0.00	
8/31/2008	0.00	0.00	0.00	
Totals	**0.39**	**3.35**	**2.60**	**0.00**

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- (dash) Represents no recorded data for that day.
The weighing bucket data deemed only reasonably accurate/chart time accurate with tipping bucket

Date	Total Precipitation Amount (in.) reported by Bloomington Tipping Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NWS	Total Precipitation Amount (in.) as reported by the Weighing Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NCDC
9/1/2008	0.00	0.00	0.00	
9/2/2008	0.00	0.02	0.10	
9/3/2008	0.00	0.00	0.00	
9/4/2008	0.00	T	0.00	
9/5/2008	0.00	0.00	0.00	
9/6/2008	0.00	0.09	0.10	
9/7/2008	0.00	0.04	0.00	
9/8/2008	0.00	0.00	0.00	
9/9/2008	0.00	0.00	0.00	
9/10/2008	0.00	0.00	0.00	
9/11/2008	0.48	0.45	0.38	
9/12/2008	0.00	0.00	0.00	
9/13/2008	0.22	0.28	0.20	
9/14/2008	0.10	0.23	0.08	
9/15/2008	0.00	0.00	0.00	
9/16/2008	0.00	0.00	0.00	
9/17/2008	0.00	0.00	0.00	
9/18/2008	0.00	0.00	0.00	
9/19/2008	0.00	T	0.00	
9/20/2008	0.00	0.00	0.00	
9/21/2008	0.00	0.00	0.00	
9/22/2008	0.00	0.03	0.00	
9/23/2008	0.54	0.61	0.53	
9/24/2008	0.00	0.00	0.00	
9/25/2008	0.00	T	0.00	
9/26/2008	0.00	0.00	0.00	
9/27/2008	0.00	0.00	0.00	
9/28/2008	0.03	0.03	0.00	
9/29/2008	0.00	0.00	0.00	
9/30/2008	0.00	0.00	0.00	
	0.00			
Totals	**1.37**	**1.78**	**1.38**	**0.00**

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- (dash) Represents no recorded data for that day.
The weighing bucket data deemed only reasonably accurate/chart time accurate with tipping bucket

Date	Total Precipitation Amount (in.) reported by Bloomington Tipping Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NWS	Total Precipitation Amount (in.) as reported by the Weighing Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NCDC
10/1/2008	0.00	0.00	0.00	
10/2/2008	0.00	0.00	0.00	
10/3/2008	0.00	0.00	0.00	
10/4/2008	0.00	0.00	0.00	
10/5/2008	0.40	0.20	0.25	
10/6/2008	0.02	0.07	0.02	
10/7/2008	0.71	0.93	0.68	
10/8/2008	0.01	0.00	0.00	
10/9/2008	0.03	0.05	0.00	
10/10/2008	0.01	T	0.00	
10/11/2008	0.00	0.01	0.00	
10/12/2008	0.00	T	0.00	
10/13/2008	0.52	0.43	0.40	
10/14/2008	0.00	T	0.00	
10/15/2008	0.01	0.01	0.00	
10/16/2008	0.00	0.00	0.00	
10/17/2008	0.00	T	0.00	
10/18/2008	0.00	0.00	0.00	
10/19/2008	0.00	0.01	0.00	
10/20/2008	0.00	0.00	0.00	
10/21/2008	0.00	0.01	0.00	
10/22/2008	0.18	0.17	0.12	
10/23/2008	0.01	T	0.00	
10/24/2008	0.00	0.02	0.00	
10/25/2008	0.00	0.00	0.00	
10/26/2008	0.08	0.05	0.05	
10/27/2008	0.00	0.00	0.00	
10/28/2008	0.00	0.00	0.00	
10/29/2008	0.00	0.00	0.00	
10/30/2008	0.00	0.00	0.00	
10/31/2008	0.00	0.00	0.00	
Totals	**1.98**	**1.96**	**1.52**	**0.00**

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- (dash) Represents no recorded data for that day.
The weighing bucket data deemed only reasonably accurate/chart time accurate with tipping bucket

Date	Total Precipitation Amount (in.) reported by Bloomington Tipping Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NWS	Total Precipitation Amount (in.) as reported by the Weighing Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NCDC
11/1/2008	0.00	0.00	0.00	
11/2/2008	0.00	0.00	0.00	
11/3/2008	0.00	0.00	0.00	
11/4/2008	0.00	0.00	0.00	
11/5/2008	0.01	0.04	0.00	
11/6/2008	0.50	0.41	0.45	
11/7/2008	0.25	0.19	0.20	
11/8/2008	0.06	0.05	0.05	
11/9/2008	0.00	T	0.00	
11/10/2008	0.00	0.00	0.00	
11/11/2008	0.16	0.21	0.10	
11/12/2008	0.08	0.07	0.10	
11/13/2008	0.08	0.07	0.05	
11/14/2008	0.00	T	0.00	
11/15/2008	0.00	T	0.00	
11/16/2008	0.00	T	0.00	
11/17/2008	0.00	T	0.00	
11/18/2008	0.00	0.00	0.00	
11/19/2008	0.00	0.00	0.00	
11/20/2008	0.00	T	0.00	
11/21/2008	0.00	0.00	0.00	
11/22/2008	0.01	0.02	0.00	
11/23/2008	0.00	T	0.00	
11/24/2008	0.00	T	0.00	
11/25/2008	0.00	0.00	0.00	
11/26/2008	0.00	0.00	0.00	
11/27/2008	0.00	0.00	0.00	
11/28/2008	0.00	0.00	0.00	
11/29/2008	0.00	T	0.00	
11/30/2008	0.01	0.08	0.00	
	0.00			
Totals	**1.16**	**1.14**	**0.95**	**0.00**

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T is reported as a trace event being less than 0.01 inches
- (dash) Represents no recorded data for that day.
The weighing bucket data deemed only reasonably accurate/chart time accurate with tipping bucket

Date	Total Precipitation Amount (in.) reported by Bloomington Tipping Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NWS	Total Precipitation Amount (in.) as reported by the Weighing Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NCDC
12/1/2008	0.00	T	0.00	
12/2/2008	0.03	0.01	0.00	
12/3/2008	0.03	0.02	0.00	
12/4/2008	0.00	0.01	0.00	
12/5/2008	0.01	0.04	0.03	
12/6/2008	0.00	T	0.00	
12/7/2008	0.01	0.04	0.02	
12/8/2008	0.20	0.20	0.13	
12/9/2008	0.03	0.02	0.20	
12/10/2008	0.00	0.00	0.00	
12/11/2008	0.00	T	0.00	
12/12/2008	0.00	T	0.00	
12/13/2008	0.00	0.00	0.00	
12/14/2008	0.23	0.27	0.15	
12/15/2008	0.00	T	0.05	
12/16/2008	0.02	0.09	0.10	
12/17/2008	0.00	T	0.00	
12/18/2008	0.00	0.00	0.02	
12/19/2008	0.01	0.02	0.02	
12/20/2008	0.10	0.24	0.21	
12/21/2008	0.00	T	0.00	
12/22/2008	0.00	T	0.00	
12/23/2008	0.00	0.05	0.05	
12/24/2008	0.00	T	0.00	
12/25/2008	0.00	0.00	0.00	
12/26/2008	0.00	0.01	0.05	
12/27/2008	0.00	T	0.05	
12/28/2008	0.00	0.00	0.00	
12/29/2008	0.00	0.00	0.00	
12/30/2008	0.07	0.13	0.05	
12/31/2008	0.00	0.00	0.00	
Totals	**0.74**	**1.15**	**1.13**	**0.00**

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- (dash) Represents no recorded data for that day.
The weighing bucket data deemed only reasonably accurate/chart time accurate with tipping bucket

Date	Total Precipitation Amount (in.) reported by Bloomington Tipping Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NWS	Total Precipitation Amount (in.) as reported by the Weighing Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NCDC
1/1/2009	0.00	T	0.05	
1/2/2009	0.00	0.00	0.00	
1/3/2009	0.11	0.15	0.10	
1/4/2009	0.00	T	0.00	
1/5/2009	0.00	0.00	0.00	
1/6/2009	0.00	0.00	0.00	
1/7/2009	0.00	0.01	0.00	
1/8/2009	0.00	0.00	0.00	
1/9/2009	0.01	0.03	0.00	
1/10/2009	0.00	0.00	0.00	
1/11/2009	0.01	0.04	0.00	
1/12/2009	0.10	0.23	0.23	
1/13/2009	0.00	0.02	0.02	
1/14/2009	0.00	0.01	0.00	
1/15/2009	0.00	0.00	0.00	
1/16/2009	0.00	T	0.00	
1/17/2009	0.00	T	0.00	
1/18/2009	0.01	0.05	0.05	
1/19/2009	0.00	T	0.00	
1/20/2009	0.00	0.00	0.00	
1/21/2009	0.00	T	0.00	
1/22/2009	0.00	0.00	0.00	
1/23/2009	0.00	T	0.00	
1/24/2009	0.00	0.00	0.00	
1/25/2009	0.00	0.00	0.00	
1/26/2009	0.00	0.00	0.00	
1/27/2009	0.00	0.00	0.00	
1/28/2009	0.00	0.03	0.00	
1/29/2009	0.00	T	0.00	
1/30/2009	0.00	0.00	0.00	
1/31/2009	0.00	0.00	0.00	
Totals	**0.24**	**0.57**	**0.45**	**0.00**

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- (dash) Represents no recorded data for that day.
The weighing bucket data deemed only reasonably accurate/chart time accurate with tipping bucket
Only the total precipitation for weighing bucket reported for the month due to inability to read time on the chart

Date	Total Precipitation Amount (in.) reported by Bloomington Tipping Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NWS	Total Precipitation Amount (in.) as reported by the Weighing Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NCDC
2/1/2009	0.00	0.00	0.00	
2/2/2009	0.00	T	0.00	
2/3/2009	0.00	T	0.00	
2/4/2009	0.00	0.00	0.00	
2/5/2009	0.00	0.00	0.00	
2/6/2009	0.00	0.00	0.00	
2/7/2009	0.00	0.00	0.00	
2/8/2009	0.00	0.00	0.00	
2/9/2009	0.05	0.05	0.03	
2/10/2009	0.16	0.10	0.13	
2/11/2009	0.00	T	0.00	
2/12/2009	0.00	T	0.00	
2/13/2009	0.00	T	0.00	
2/14/2009	0.00	T	0.00	
2/15/2009	0.00	0.00	0.00	
2/16/2009	0.00	0.00	0.00	
2/17/2009	0.12	0.07	0.05	
2/18/2009	0.00	T	0.00	
2/19/2009	0.00	0.00	0.00	
2/20/2009	0.06	0.14	0.05	
2/21/2009	0.10	0.11	0.25	
2/22/2009	0.00	T	0.00	
2/23/2009	0.00	0.00	0.00	
2/24/2009	0.00	0.00	0.00	
2/25/2009	0.00	T	0.00	
2/26/2009	0.84	0.46	1.18	
2/27/2009	0.00	0.00	0.05	
2/28/2009	0.00	0.00	0.00	
	0.00			
Totals	**1.33**	**0.93**	**1.74**	**0.00**

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The weighing bucket data deemed only reasonably accurate/chart time accurate with tipping bucket

Date	Total Precipitation Amount (in.) reported by Bloomington Tipping Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NWS	Total Precipitation Amount (in.) as reported by the Weighing Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NCDC
3/1/2009	0.00	0.00	0.00	
3/2/2009	0.00	0.00	0.00	
3/3/2009	0.00	0.00	0.00	
3/4/2009	0.00	0.00	0.00	
3/5/2009	0.00	0.00	0.00	
3/6/2009	0.00	0.00	0.00	
3/7/2009	0.00	0.00	0.00	
3/8/2009	0.00	0.00	0.00	
3/9/2009	0.02	0.02	0.00	
3/10/2009	0.26	0.19	0.23	
3/11/2009	0.00	T	0.00	
3/12/2009	0.00	0.00	0.00	
3/13/2009	0.00	0.00	0.00	
3/14/2009	0.00	0.00	0.00	
3/15/2009	0.00	0.00	0.00	
3/16/2009	0.00	0.00	0.00	
3/17/2009	0.00	0.00	0.00	
3/18/2009	0.00	0.00	0.00	
3/19/2009	0.00	0.00	0.00	
3/20/2009	0.14	0.14	0.10	
3/21/2009	0.00	0.00	0.00	
3/22/2009	0.00	T	0.00	
3/23/2009	0.48	0.34	0.44	
3/24/2009	0.45	0.44	0.35	
3/25/2009	0.01	T	0.00	
3/26/2009	0.00	T	0.00	
3/27/2009	0.00	T	0.00	
3/28/2009	0.00	0.00	0.00	
3/29/2009	0.00	0.00	0.00	
3/30/2009	0.00	0.00	0.00	
3/31/2009	0.38	0.37	0.25	
Totals	**1.74**	**1.50**	**1.37**	**0.00**

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The weighing bucket data deemed only reasonably accurate/chart time accurate with tipping bucket

Date	Total Precipitation Amount (in.) reported by Bloomington Tipping Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NWS	Total Precipitation Amount (in.) as reported by the Weighing Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NCDC
4/1/2009	0.07	0.08	0.13	
4/2/2009	0.00	0.00	0.00	
4/3/2009	0.00	0.00	0.00	
4/4/2009	0.35	0.30	0.10	
4/5/2009	0.16	0.09	0.35	
4/6/2009	0.00	0.00	0.00	
4/7/2009	0.00	0.00	0.00	
4/8/2009	0.00	0.00	0.00	
4/9/2009	0.00	0.00	0.00	
4/10/2009	0.00	0.00	0.00	
4/11/2009	0.00	0.00	0.00	
4/12/2009	0.00	0.00	0.00	
4/13/2009	0.00	0.00	0.00	
4/14/2009	0.00	0.00	0.00	
4/15/2009	0.00	0.00	0.00	
4/16/2009	0.00	0.00	0.00	
4/17/2009	0.00	0.00	0.00	
4/18/2009	0.00	T	0.00	
4/19/2009	0.09	0.06	0.05	
4/20/2009	0.07	0.06	0.05	
4/21/2009	0.00	T	0.00	
4/22/2009	0.00	0.00	0.00	
4/23/2009	0.01	T	0.00	
4/24/2009	0.00	0.00	0.00	
4/25/2009	0.00	T	0.00	
4/26/2009	0.86	0.81	0.80	
4/27/2009	0.01	T	0.00	
4/28/2009	0.00	0.00	0.00	
4/29/2009	0.17	0.16	0.10	
4/30/2009	0.03	0.01	0.00	
Totals	**1.82**	**1.57**	**1.58**	**0.00**

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The weighing bucket data deemed only reasonably accurate/chart time accurate with tipping bucket

Date	Total Precipitation Amount (in.) reported by Bloomington Tipping Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NWS	Total Precipitation Amount (in.) as reported by the Weighing Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NCDC
5/1/2009	0.00	0.00	0.00	
5/2/2009	0.00	T	0.00	
5/3/2009	0.00	0.00	0.00	
5/4/2009	0.00	0.00	0.00	
5/5/2009	0.13	0.20	0.10	
5/6/2009	0.00	T	0.00	
5/7/2009	0.00	0.00	0.00	
5/8/2009	0.23	0.13	0.15	
5/9/2009	0.00	T	0.00	
5/10/2009	0.00	0.00	0.00	
5/11/2009	0.00	0.00	0.00	
5/12/2009	0.02	T	0.00	
5/13/2009	0.08	0.04	0.04	
5/14/2009	0.00	0.00	0.00	
5/15/2009	0.00	0.01	0.00	
5/16/2009	0.00	0.00	0.00	
5/17/2009	0.00	0.00	0.00	
5/18/2009	0.00	0.00	0.00	
5/19/2009	0.00	0.00	0.00	
5/20/2009	0.00	0.00	0.00	
5/21/2009	0.01	T	0.00	
5/22/2009	0.00	0.00	0.00	
5/23/2009	0.15	0.12	0.10	
5/24/2009	0.00	0.00	0.00	
5/25/2009	0.00	0.00	0.00	
5/26/2009	0.00	0.00	0.00	
5/27/2009	0.00	T	0.00	
5/28/2009	0.00	0.00	0.00	
5/29/2009	0.00	T	0.00	
5/30/2009	0.06	0.03	0.00	
5/31/2009	0.00	T	0.00	
Totals	**0.68**	**0.53**	**0.39**	**0.00**

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The weighing bucket data deemed only reasonably accurate/chart time accurate with tipping bucket

Date	Total Precipitation Amount (in.) reported by Bloomington Tipping Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NWS	Total Precipitation Amount (in.) as reported by the Weighing Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NCDC
6/1/2009	0.00	0.00	0.00	
6/2/2009	0.00	0.00	0.00	
6/3/2009	0.00	0.00	0.00	
6/4/2009	0.00	0.00	0.00	
6/5/2009	0.00	0.00	0.00	
6/6/2009	0.85	0.69	0.75	
6/7/2009	0.04	0.07	0.10	
6/8/2009	0.53	0.42	0.55	
6/9/2009	0.00	T	0.00	
6/10/2009	0.05	0.02	0.00	
6/11/2009	0.00	0.00	0.00	
6/12/2009	0.00	0.00	0.00	
6/13/2009	0.00	0.00	0.00	
6/14/2009	0.00	0.00	0.00	
6/15/2009	0.00	0.01	0.00	
6/16/2009	0.87	0.65	0.78	
6/17/2009	0.18	0.09	0.09	
6/18/2009	0.00	0.00	0.00	
6/19/2009	0.00	T	0.00	
6/20/2009	0.00	0.00	0.00	
6/21/2009	0.02	0.03	0.00	
6/22/2009	0.26	0.02	0.20	
6/23/2009	0.00	T	0.00	
6/24/2009	0.02	0.16	0.00	
6/25/2009	0.05	0.17	0.00	
6/26/2009	0.00	0.00	0.00	
6/27/2009	0.36	0.53	0.30	
6/28/2009	0.00	0.00	0.00	
6/29/2009	0.00	0.00	0.00	
6/30/2009	0.00	T	0.00	
Totals	**3.23**	**2.86**	**2.77**	**0.00**

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The weighing bucket data deemed only reasonably accurate/chart time accurate with tipping bucket

Date	Total Precipitation Amount (in.) reported by Bloomington Tipping Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NWS	Total Precipitation Amount (in.) as reported by the Weighing Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NCDC
7/1/2009	0.01	0.04	0.00	
7/2/2009	0.00	0.00	0.00	
7/3/2009	0.00	0.00	0.00	
7/4/2009	0.22	0.15	0.10	
7/5/2009	0.00	0.00	0.00	
7/6/2009	0.00	T	0.00	
7/7/2009	0.00	T	0.00	
7/8/2009	0.00	0.00	0.00	
7/9/2009	0.23	0.01	0.20	
7/10/2009	0.03	0.02	0.00	
7/11/2009	0.00	0.00	0.00	
7/12/2009	0.00	0.00	0.00	
7/13/2009	0.00	0.00	0.00	
7/14/2009	0.02	0.04	0.00	
7/15/2009	0.00	0.00	0.00	
7/16/2009	0.00	0.00	0.00	
7/17/2009	0.00	T	0.00	
7/18/2009	0.00	0.00	0.00	
7/19/2009	0.00	0.00	0.00	
7/20/2009	0.00	T	0.00	
7/21/2009	0.60	0.92	0.50	
7/22/2009	0.00	0.24	0.00	
7/23/2009	0.00	0.00	0.00	
7/24/2009	0.09	0.09	0.05	
7/25/2009	0.00	0.01	0.00	
7/26/2009	0.00	0.00	0.00	
7/27/2009	0.00	0.01	0.00	
7/28/2009	0.00	0.00	0.00	
7/29/2009	0.04	T	0.05	
7/30/2009	0.03	0.01	0.00	
7/31/2009	0.56	0.63	0.48	
Totals	**1.83**	**2.17**	**1.38**	**0.00**

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The weighing bucket data deemed only reasonably accurate/chart time accurate with tipping bucket

Date	Total Precipitation Amount (in.) reported by Bloomington Tipping Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NWS	Total Precipitation Amount (in.) as reported by the Weighing Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NCDC
8/1/2009	0.00	0.00	0.00	
8/2/2009	0.36	0.42	0.30	
8/3/2009	0.00	0.00	0.00	
8/4/2009	0.00	0.00	0.00	
8/5/2009	0.00	0.00	0.00	
8/6/2009	0.00	0.00	0.00	
8/7/2009	1.08	2.08	0.95	
8/8/2009	2.30	0.98	2.38	
8/9/2009	0.00	0.00	0.00	
8/10/2009	0.01	T	0.00	
8/11/2009	0.00	0.00	0.00	
8/12/2009	0.00	0.00	0.00	
8/13/2009	0.01	T	0.00	
8/14/2009	0.00	0.00	0.00	
8/15/2009	0.14	0.17	0.10	
8/16/2009	0.08	0.08	0.05	
8/17/2009	0.00	0.00	0.00	
8/18/2009	0.00	0.00	0.00	
8/19/2009	2.13	1.46	2.05	
8/20/2009	0.30	0.45	0.25	
8/21/2009	0.18	0.18	0.20	
8/22/2009	0.00	0.00	0.00	
8/23/2009	0.00	0.00	0.00	
8/24/2009	0.00	0.00	0.00	
8/25/2009	0.37	0.53	0.30	
8/26/2009	0.00	0.00	0.00	
8/27/2009	0.00	0.00	0.00	
8/28/2009	0.08	0.08	0.05	
8/29/2009	0.00	0.00	-	
8/30/2009	0.00	0.00	-	
8/31/2009	0.00	0.00	-	
Totals	**7.04**	**6.43**	**6.63**	**0.00**

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- (dash) Represents no recorded data for that day.
The weighing bucket data deemed only reasonably accurate/chart time accurate with tipping bucket

Date	Total Precipitation Amount (in.) reported by Bloomington Tipping Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NWS	Total Precipitation Amount (in.) as reported by the Weighing Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NCDC
9/1/2009	0.00	0.00	-	
9/2/2009	0.00	0.00	-	
9/3/2009	0.00	0.00	-	
9/4/2009	0.00	0.00	-	
9/5/2009	0.00	0.00	-	
9/6/2009	0.00	0.00	-	
9/7/2009	0.00	0.00	-	
9/8/2009	0.00	0.00	-	
9/9/2009	0.01	0.01	-	
9/10/2009	0.00	0.00	-	
9/11/2009	0.00	0.00	-	
9/12/2009	0.00	0.00	-	
9/13/2009	0.00	0.00	-	
9/14/2009	0.00	0.00	-	
9/15/2009	0.00	0.00	-	
9/16/2009	0.00	0.00	-	
9/17/2009	0.00	0.00	-	
9/18/2009	0.00	0.00	-	
9/19/2009	0.00	0.00	-	
9/20/2009	0.00	0.00	-	
9/21/2009	0.05	T	-	
9/22/2009	0.00	T	-	
9/23/2009	0.00	T	-	
9/24/2009	0.00	T	-	
9/25/2009	0.44	0.37	-	
9/26/2009	0.01	0.00	-	
9/27/2009	0.11	0.08	-	
9/28/2009	0.00	t	-	
9/29/2009	0.00	0.00	-	
9/30/2009	0.00	0.00	-	
	0.00			
Totals	**0.62**	**0.46**	**0.00**	**0.00**

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T is reported as a trace event being less than 0.01 inches
- (dash) Represents no recorded data for that day.
The weighing bucket data deemed only reasonably accurate/chart time accurate with tipping bucket

Date	Total Precipitation Amount (in.) reported by Bloomington Tipping Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NWS	Total Precipitation Amount (in.) as reported by the Weighing Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NCDC
10/1/2009	1.24	1.29	-	
10/2/2009	0.36	0.16	-	
10/3/2009	0.07	0.04	-	
10/4/2009	0.00	T	-	
10/5/2009	0.25	0.27	-	
10/6/2009	1.41	1.38	-	
10/7/2009	0.00	0.00	-	
10/8/2009	0.00	0.00	-	
10/9/2009	0.00	0.00	-	
10/10/2009	0.02	0.01	-	
10/11/2009	0.00	0.00	-	
10/12/2009	0.22	0.25	-	
10/13/2009	0.00	0.00	-	
10/14/2009	0.02	0.05	-	
10/15/2009	0.40	0.30	-	
10/16/2009	0.01	0.04	-	
10/17/2009	0.00	0.00	-	
10/18/2009	0.00	0.00	-	
10/19/2009	0.00	0.00	0.00	
10/20/2009	0.00	0.01	0.00	
10/21/2009	0.60	0.55	0.50	
10/22/2009	0.00	0.00	0.00	
10/23/2009	0.45	0.44	0.40	
10/24/2009	0.00	T	0.00	
10/25/2009	0.01	0.03	0.00	
10/26/2009	0.00	0.00	0.00	
10/27/2009	0.00	0.00	0.00	
10/28/2009	0.00	T	0.00	
10/29/2009	0.62	0.57	0.48	
10/30/2009	0.21	0.17	0.13	
10/31/2009	0.05	0.01	0.05	
Totals	**5.94**	**5.57**	**1.56**	**0.00**

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- (dash) Represents no recorded data for that day.
The weighing bucket data deemed only reasonably accurate/chart time accurate with tipping bucket

Date	Total Precipitation Amount (in.) reported by Bloomington Tipping Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NWS	Total Precipitation Amount (in.) as reported by the Weighing Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NCDC
11/1/2009	0.00	0.00	0.00	
11/2/2009	0.00	0.00	0.00	
11/3/2009	0.09	0.09	0.08	
11/4/2009	0.00	0.00	0.00	
11/5/2009	0.00	0.00	0.00	
11/6/2009	0.00	0.00	0.00	
11/7/2009	0.00	0.00	0.00	
11/8/2009	0.00	0.00	0.00	
11/9/2009	0.00	0.00	0.00	
11/10/2009	0.00	0.00	0.00	
11/11/2009	0.00	0.00	0.00	
11/12/2009	0.00	0.00	0.00	
11/13/2009	0.05	0.06	0.05	
11/14/2009	0.00	T	0.00	
11/15/2009	0.00	0.00	0.00	
11/16/2009	0.00	0.00	0.00	
11/17/2009	0.00	0.00	0.00	
11/18/2009	0.00	0.00	0.00	
11/19/2009	0.02	0.03	0.00	
11/20/2009	0.00	0.00	0.00	
11/21/2009	0.00	0.00	0.00	
11/22/2009	0.00	T	0.00	
11/23/2009	0.02	0.01	0.00	
11/24/2009	0.10	0.06	0.08	
11/25/2009	0.10	0.10	0.10	
11/26/2009	0.00	0.00	0.00	
11/27/2009	0.00	0.00	0.00	
11/28/2009	0.00	0.00	0.00	
11/29/2009	0.03	0.03	0.02	
11/30/2009	0.00	0.00	0.00	
	0.00			
Totals	**0.41**	**0.38**	**0.33**	**0.00**

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The weighing bucket data deemed only reasonably accurate/chart time accurate with tipping bucket

Date	Total Precipitation Amount (in.) reported by Bloomington Tipping Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NWS	Total Precipitation Amount (in.) as reported by the Weighing Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NCDC
12/1/2009	0.00	0.00	0.00	
12/2/2009	0.00	0.00	0.00	
12/3/2009	0.00	T	0.00	
12/4/2009	0.00	T	0.00	
12/5/2009	0.00	T	0.00	
12/6/2009	0.00	0.00	0.00	
12/7/2009	0.00	T	0.00	
12/8/2009	0.23	0.24	0.50	
12/9/2009	0.17	0.13	0.80	
12/10/2009	0.00	T	0.00	
12/11/2009	0.00	0.00	0.00	
12/12/2009	0.00	0.00	0.00	
12/13/2009	0.00	0.02	0.00	
12/14/2009	0.00	0.11	0.05	
12/15/2009	0.00	0.00	0.00	
12/16/2009	0.00	0.00	0.00	
12/17/2009	0.10	0.00	0.00	
12/18/2009	0.00	0.00	0.00	
12/19/2009	0.00	T	0.00	
12/20/2009	0.00	0.06	0.05	
12/21/2009	0.00	T	0.00	
12/22/2009	0.00	0.02	0.03	
12/23/2009	0.00	0.20	0.28	
12/24/2009	0.00	0.44	0.68	
12/25/2009	0.00	0.56	1.00	
12/26/2009	0.00	T	0.00	
12/27/2009	0.00	T	0.00	
12/28/2009	0.00	0.00	0.00	
12/29/2009	0.00	0.05	0.05	
12/30/2009	0.00	0.00	0.00	
12/31/2009	0.00			
Totals	**0.50**	**1.83**	**3.44**	**0.00**

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The weighing bucket data deemed only reasonably accurate/chart time accurate with tipping bucket

Date	Total Precipitation Amount (in.) reported by Bloomington Tipping Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NWS	Total Precipitation Amount (in.) as reported by the Weighing Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NCDC
1/1/2010	0.00	T	0.00	
1/2/2010	0.00	0.00	0.00	
1/3/2010	0.00	0.00	0.00	
1/4/2010	0.00	0.00	0.00	
1/5/2010	0.00	0.00	0.00	
1/6/2010	0.00	0.00	0.00	
1/7/2010	0.00	0.06	0.25	
1/8/2010	0.00	0.00	0.00	
1/9/2010	0.00	0.00	0.00	
1/10/2010	0.00	0.00	0.00	
1/11/2010	0.00	T	0.00	
1/12/2010	0.00	T	0.00	
1/13/2010	0.00	T	0.00	
1/14/2010	0.00	0.00	0.00	
1/15/2010	0.00	0.00	0.00	
1/16/2010	0.00	0.00	0.00	
1/17/2010	0.00	0.00	0.00	
1/18/2010	0.00	0.00	0.00	
1/19/2010	0.00	T	0.00	
1/20/2010	0.00	T	0.00	
1/21/2010	0.00	0.05	0.00	
1/22/2010	0.00	0.02	0.00	
1/23/2010	0.00	0.23	0.25	
1/24/2010	0.00	0.04	0.05	
1/25/2010	0.00	0.05	0.05	
1/26/2010	0.00	T	0.00	
1/27/2010	0.00	T	0.00	
1/28/2010	0.00	T	0.00	
1/29/2010	0.00	0.00	0.00	
1/30/2010	0.00	0.00	0.00	
1/31/2010	0.00	0.00	0.00	
Totals	**0.00**	**0.45**	**0.60**	**0.00**

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- (dash) Represents no recorded data for that day.
The weighing bucket data deemed only reasonably accurate/chart time accurate with tipping bucket
Only the total precipitation for weighing bucket reported for the month due to inability to read time on the chart

Date	Total Precipitation Amount (in.) reported by Bloomington Tipping Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NWS	Total Precipitation Amount (in.) as reported by the Weighing Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NCDC
2/1/2010	0.00	0.11	0.05	
2/2/2010	0.00	0.02	0.15	
2/3/2010	0.00	0.00	0.00	
2/4/2010	0.03	0.07	0.00	
2/5/2010	0.10	0.12	0.15	
2/6/2010	0.00	0.00	0.00	
2/7/2010	0.00	0.05	0.00	
2/8/2010	0.18	0.23	0.33	
2/9/2010	0.05	0.03	0.25	
2/10/2010	0.00	0.00	0.00	
2/11/2010	0.00	0.00	0.00	
2/12/2010	0.00	T	0.00	
2/13/2010	0.00	T	0.00	
2/14/2010	0.05	0.09	0.05	
2/15/2010	0.03	0.03	0.13	
2/16/2010	0.00	0.00	0.00	
2/17/2010	0.00	0.00	0.00	
2/18/2010	0.00	0.00	0.00	
2/19/2010	0.00	0.00	0.00	
2/20/2010	0.00	T	0.00	
2/21/2010	0.00	0.00	0.00	
2/22/2010	0.00	0.00	0.00	
2/23/2010	0.00	T	0.00	
2/24/2010	0.00	0.00	0.00	
2/25/2010	0.00	0.00	0.00	
2/26/2010	0.00	0.00	0.00	
2/27/2010	0.00	0.00	0.00	
2/28/2010	0.00	0.00	0.00	
	0.00			
Totals	**0.44**	**0.75**	**1.11**	**0.00**

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The weighing bucket data deemed only reasonably accurate/chart time accurate with tipping bucket

Date	Total Precipitation Amount (in.) reported by Bloomington Tipping Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NWS	Total Precipitation Amount (in.) as reported by the Weighing Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NCDC
3/1/2010	0.00	0.00	0.00	
3/2/2010	0.00	0.00	0.00	
3/3/2010	0.00	0.00	0.00	
3/4/2010	0.00	0.00	0.00	
3/5/2010	0.00	0.00	0.00	
3/6/2010	0.01	T	0.00	
3/7/2010	0.01	0.02	0.00	
3/8/2010	0.00	T	0.00	
3/9/2010	0.06	0.04	0.00	
3/10/2010	0.21	0.27	0.25	
3/11/2010	0.46	0.25	0.40	
3/12/2010	0.04	0.03	0.00	
3/13/2010	0.00	0.00	0.00	
3/14/2010	0.00	0.00	0.00	
3/15/2010	0.00	0.00	0.00	
3/16/2010	0.12	0.08	0.06	
3/17/2010	0.00	0.00	0.00	
3/18/2010	0.00	0.00	0.00	
3/19/2010	0.00	0.00	0.00	
3/20/2010	0.00	0.00	0.00	
3/21/2010	0.00	0.00	0.00	
3/22/2010	0.00	0.00	0.00	
3/23/2010	0.00	0.00	0.00	
3/24/2010	0.00	0.00	0.00	
3/25/2010	0.00	0.00	0.00	
3/26/2010	0.00	0.00	0.00	
3/27/2010	0.00	0.00	0.00	
3/28/2010	0.00	0.00	0.00	
3/29/2010	0.00	0.00	0.00	
3/30/2010	0.00	0.00	0.00	
3/31/2010	0.00	0.00	0.00	
Totals	**0.91**	**0.69**	**0.71**	**0.00**

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- (dash) Represents no recorded data for that day.

The weighing bucket data deemed only reasonably accurate/chart time accurate with tipping bucket

Date	Total Precipitation Amount (in.) reported by Bloomington Tipping Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NWS	Total Precipitation Amount (in.) as reported by the Weighing Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NCDC
4/1/2010	0.00	0.00	0.00	
4/2/2010	0.05	0.06	0.00	
4/3/2010	0.00	0.00	0.00	
4/4/2010	0.00	T	0.00	
4/5/2010	0.00	0.01	0.00	
4/6/2010	0.52	0.28	0.30	
4/7/2010	0.00	0.00	0.00	
4/8/2010	0.00	0.00	0.00	
4/9/2010	0.00	0.00	0.00	
4/10/2010	0.00	0.00	0.00	
4/11/2010	0.00	0.00	0.00	
4/12/2010	0.00	0.00	0.00	
4/13/2010	1.18	0.73	1.13	
4/14/2010	0.08	0.07	0.05	
4/15/2010	0.42	0.56	0.40	
4/16/2010	0.00	0.00	0.00	
4/17/2010	0.00	0.00	0.00	
4/18/2010	0.00	0.00	0.00	
4/19/2010	0.00	0.00	0.00	
4/20/2010	0.00	0.00	0.00	
4/21/2010	0.00	0.00	0.00	
4/22/2010	0.00	0.00	0.00	
4/23/2010	0.00	T	0.00	
4/24/2010	0.43	0.50	0.38	
4/25/2010	0.08	0.04	0.05	
4/26/2010	0.00	0.00	0.00	
4/27/2010	0.00	0.00	0.00	
4/28/2010	0.00	0.00	0.00	
4/29/2010	0.00	T	0.00	
4/30/2010	0.12	0.07	0.10	
Totals	**2.88**	**2.32**	**2.41**	**0.00**

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The weighing bucket data deemed only reasonably accurate/chart time accurate with tipping bucket

Date	Total Precipitation Amount (in.) reported by Bloomington Tipping Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NWS	Total Precipitation Amount (in.) as reported by the Weighing Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NCDC
5/1/2010	0.00	0.00	0.00	
5/2/2010	0.00	0.00	0.00	
5/3/2010	0.03	0.05	0.05	
5/4/2010	0.02	T	0.00	
5/5/2010	0.00	T	0.00	
5/6/2010	0.10	0.04	0.05	
5/7/2010	0.73	0.55	0.60	
5/8/2010	0.00	T	0.05	
5/9/2010	0.00	0.00	0.00	
5/10/2010	0.18	0.19	0.10	
5/11/2010	0.64	0.47	0.55	
5/12/2010	0.05	0.04	0.05	
5/13/2010	0.69	0.61	0.65	
5/14/2010	0.00	0.00	0.00	
5/15/2010	0.00	0.00	0.00	
5/16/2010	0.00	0.00	0.00	
5/17/2010	0.00	0.00	0.00	
5/18/2010	0.00	0.00	0.00	
5/19/2010	0.00	0.00	0.00	
5/20/2010	0.00	0.00	0.00	
5/21/2010	0.04	0.02	0.05	
5/22/2010	0.22	0.12	0.20	
5/23/2010	0.00	0.00	0.00	
5/24/2010	0.00	0.00	0.00	
5/25/2010	0.40	0.38	0.35	
5/26/2010	0.00	0.00	0.00	
5/27/2010	0.00	0.00	0.00	
5/28/2010	0.00	0.00	0.00	
5/29/2010	0.00	0.00	0.00	
5/30/2010	0.07	0.03	0.05	
5/31/2010	0.00	0.00	0.00	
Totals	**3.17**	**2.50**	**2.75**	**0.00**

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The weighing bucket data deemed only reasonably accurate/chart time accurate with tipping bucket

Date	Total Precipitation Amount (in.) reported by Bloomington Tipping Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NWS	Total Precipitation Amount (in.) as reported by the Weighing Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NCDC
6/1/2010	0.60	0.18	0.55	
6/2/2010	0.00	0.01	0.00	
6/3/2010	0.00	0.01	0.00	
6/4/2010	0.36	0.44	0.30	
6/5/2010	0.32	0.27	0.25	
6/6/2010	0.02	T	0.00	
6/7/2010	0.00	0.01	0.00	
6/8/2010	0.75	0.84	0.65	
6/9/2010	0.01	0.00	0.00	
6/10/2010	0.00	T	0.00	
6/11/2010	0.71	0.79	0.65	
6/12/2010	0.07	0.15	0.00	
6/13/2010	0.00	0.00	0.00	
6/14/2010	0.35	0.26	0.30	
6/15/2010	0.02	0.01	0.05	
6/16/2010	0.00	0.00	0.00	
6/17/2010	0.00	0.01	0.00	
6/18/2010	0.00	0.00	0.00	
6/19/2010	0.00	0.00	0.00	
6/20/2010	0.00	0.00	0.00	
6/21/2010	0.19	0.07	0.13	
6/22/2010	0.00	0.00	0.00	
6/23/2010	0.67	0.32	0.55	
6/24/2010	0.00	0.00	0.00	
6/25/2010	0.93	0.73	1.10	
6/26/2010	2.57	2.15	2.60	
6/27/2010	0.00	0.00	0.00	
6/28/2010	0.00	0.00	0.00	
6/29/2010	0.00	0.00	0.00	
6/30/2010	0.00	0.00	0.00	
Totals	**7.57**	**6.25**	**7.13**	**0.00**

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- (dash) Represents no recorded data for that day.
The weighing bucket data deemed only reasonably accurate/chart time accurate with tipping bucket

Date	Total Precipitation Amount (in.) reported by Bloomington Tipping Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NWS	Total Precipitation Amount (in.) as reported by the Weighing Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NCDC
7/1/2010	0.00	0.00	0.00	
7/2/2010	0.00	0.00	0.00	
7/3/2010	0.00	0.00	0.00	
7/4/2010	0.12	0.10	0.10	
7/5/2010	1.91	0.80	1.70	
7/6/2010	0.01	0.00	0.00	
7/7/2010	0.51	0.22	0.40	
7/8/2010	0.00	0.00	0.00	
7/9/2010	0.00	0.00	0.00	
7/10/2010	0.00	0.08	0.00	
7/11/2010	0.18	0.17	0.10	
7/12/2010	0.00	0.00	0.00	
7/13/2010	0.00	0.00	0.00	
7/14/2010	0.26	0.27	0.20	
7/15/2010	0.00	0.00	0.00	
7/16/2010	0.00	0.00	0.00	
7/17/2010	0.52	0.28	0.45	
7/18/2010	0.00	0.00	0.00	
7/19/2010	0.00	0.00	0.00	
7/20/2010	0.00	0.00	0.00	
7/21/2010	0.00	T	0.00	
7/22/2010	0.41	0.28	0.30	
7/23/2010	0.00	T	0.00	
7/24/2010	0.82	0.51	0.75	
7/25/2010	0.00	0.00	0.00	
7/26/2010	0.00	0.00	0.00	
7/27/2010	0.12	0.20	0.10	
7/28/2010	0.00	0.00	0.00	
7/29/2010	0.00	0.00	0.00	
7/30/2010	0.08	0.12	0.05	
7/31/2010	0.00	0.00	0.00	
Totals	**4.94**	**3.03**	**4.15**	**0.00**

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- (dash) Represents no recorded data for that day.
The weighing bucket data deemed only reasonably accurate/chart time accurate with tipping bucket

Date	Total Precipitation Amount (in.) reported by Bloomington Tipping Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NWS	Total Precipitation Amount (in.) as reported by the Weighing Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NCDC
8/1/2010	0.00	T	0.00	
8/2/2010	0.02	T	0.00	
8/3/2010	0.00	0.00	0.00	
8/4/2010	0.00	0.00	0.00	
8/5/2010	0.00	0.00	0.00	
8/6/2010	0.00	0.00	0.00	
8/7/2010	0.10	0.07	0.05	
8/8/2010	0.20	0.32	0.15	
8/9/2010	0.00	0.00	0.00	
8/10/2010	2.30	2.47	2.10	
8/11/2010	0.01	0.00	0.00	
8/12/2010	0.00	T	0.00	
8/13/2010	2.10	1.47	1.90	
8/14/2010	0.02	T	0.00	
8/15/2010	0.00	0.00	0.00	
8/16/2010	0.00	0.00	0.00	
8/17/2010	0.00	0.00	0.00	
8/18/2010	0.00	0.00	0.00	
8/19/2010	0.00	T	0.00	
8/20/2010	0.00	T	0.00	
8/21/2010	0.00	0.00	0.00	
8/22/2010	0.00	0.00	0.00	
8/23/2010	0.00	0.00	0.00	
8/24/2010	0.27	0.23	0.20	
8/25/2010	0.00	0.00	0.00	
8/26/2010	0.00	0.00	0.00	
8/27/2010	0.00	0.00	0.00	
8/28/2010	0.00	0.00	0.00	
8/29/2010	0.00	0.00	0.00	
8/30/2010	0.00	T	0.00	
8/31/2010	0.32	0.35	0.25	
Totals	**5.34**	**4.91**	**4.65**	**0.00**

NCDC is the National Climatic Data Center, where the NWS archives data
NWS is the National Weather Service, Station location MSP Airport
T is reported as a trace event being less than 0.01 inches
- (dash) Represents no recorded data for that day.
The weighing bucket data deemed only reasonably accurate/chart time accurate with tipping bucket

Date	Total Precipitation Amount (in.) reported by Bloomington Tipping Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NWS	Total Precipitation Amount (in.) as reported by the Weighing Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NCDC
9/1/2010	0.00	0.00	0.00	
9/2/2010	0.85	0.74	0.75	
9/3/2010	0.00	T	0.00	
9/4/2010	0.00	0.00	0.00	
9/5/2010	0.00	0.00	0.00	
9/6/2010	0.19	0.13	0.10	
9/7/2010	0.00	T	0.00	
9/8/2010	0.00	0.00	0.00	
9/9/2010	0.00	T	0.00	
9/10/2010	0.16	0.16	0.13	
9/11/2010	0.01	0.00	0.00	
9/12/2010	0.00	0.00	0.00	
9/13/2010	0.00	0.00	0.00	
9/14/2010	0.00	0.00	0.00	
9/15/2010	0.90	0.91	0.73	
9/16/2010	0.02	0.00	0.08	
9/17/2010	0.01	0.01	0.00	
9/18/2010	0.00	T	0.00	
9/19/2010	0.00	0.00	0.00	
9/20/2010	0.00	0.04	0.00	
9/21/2010	0.63	0.53	0.50	
9/22/2010	0.72	1.01	0.60	
9/23/2010	2.20	1.98	2.03	
9/24/2010	0.00	0.00	0.00	
9/25/2010	0.03	0.02	0.00	
9/26/2010	0.00	0.00	0.00	
9/27/2010	0.00	0.00	0.00	
9/28/2010	0.00	0.00	0.00	
9/29/2010	0.00	0.00	0.00	
9/30/2010	0.00	0.00	0.00	
	0.00			
Totals	**5.72**	**5.53**	**4.92**	**0.00**

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The weighing bucket data deemed only reasonably accurate/chart time accurate with tipping bucket

Date	Total Precipitation Amount (in.) reported by Bloomington Tipping Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NWS	Total Precipitation Amount (in.) as reported by the Weighing Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NCDC
10/1/2010	0.00	T	0.00	
10/2/2010	0.00	0.00	0.00	
10/3/2010	0.00	0.00	0.00	
10/4/2010	0.00	0.00	0.00	
10/5/2010	0.00	0.00	0.00	
10/6/2010	0.00	0.00	0.00	
10/7/2010	0.00	0.00	0.00	
10/8/2010	0.00	0.00	0.00	
10/9/2010	0.00	0.00	0.00	
10/10/2010	0.00	0.00	0.00	
10/11/2010	0.00	0.00	0.00	
10/12/2010	0.00	0.00	0.00	
10/13/2010	0.00	0.00	0.00	
10/14/2010	0.00	0.00	0.00	
10/15/2010	0.00	0.00	0.00	
10/16/2010	0.00	0.00	0.00	
10/17/2010	0.00	T	0.00	
10/18/2010	0.00	T	0.00	
10/19/2010	0.00	0.00	0.00	
10/20/2010	0.00	0.00	0.00	
10/21/2010	0.00	0.00	0.00	
10/22/2010	0.00	0.00	0.00	
10/23/2010	0.00	0.01	0.00	
10/24/2010	0.80	0.51	0.80	
10/25/2010	0.52	0.67	0.45	
10/26/2010	0.61	0.37	0.50	
10/27/2010	0.06	0.05	0.05	
10/28/2010	0.00	0.00	0.00	
10/29/2010	0.00	0.00	0.00	
10/30/2010	0.00	0.00	0.00	
10/31/2010	0.00	0.00	0.00	
Totals	**1.99**	**1.61**	**1.80**	**0.00**

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- (dash) Represents no recorded data for that day.
The weighing bucket data deemed only reasonably accurate/chart time accurate with tipping bucket

Date	Total Precipitation Amount (in.) reported by Bloomington Tipping Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NWS	Total Precipitation Amount (in.) as reported by the Weighing Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NCDC
11/1/2010	0.00	0.00	0.00	
11/2/2010	0.00	0.00	0.00	
11/3/2010	0.00	0.00	0.00	
11/4/2010	0.00	0.00	0.00	
11/5/2010	0.00	0.00	0.00	
11/6/2010	0.00	0.00	0.00	
11/7/2010	0.00	0.00	0.00	
11/8/2010	0.00	0.00	0.00	
11/9/2010	0.00	0.00	0.00	
11/10/2010	0.03	0.17	0.00	
11/11/2010	0.00	0.00	0.00	
11/12/2010	0.10	0.03	0.03	
11/13/2010	1.30	0.98	1.50	
11/14/2010	0.01	0.06	0.10	
11/15/2010	0.00	0.00	0.00	
11/16/2010	0.06	0.02	0.00	
11/17/2010	0.00	0.00	0.00	
11/18/2010	0.00	T	0.00	
11/19/2010	0.00	0.00	0.00	
11/20/2010	0.00	0.02	0.00	
11/21/2010	0.01	0.03	0.00	
11/22/2010	0.01	0.02	0.00	
11/23/2010	0.00	0.00	0.00	
11/24/2010	0.07	0.12	0.15	
11/25/2010	0.00	T	0.00	
11/26/2010	0.00	0.00	0.00	
11/27/2010	0.00	0.00	0.00	
11/28/2010	0.00	0.00	0.00	
11/29/2010	0.59	0.59	0.45	
11/30/2010	0.04	0.03	0.05	
Totals	**2.22**	**2.07**	**2.28**	**0.00**

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- (dash) Represents no recorded data for that day.
The weighing bucket data deemed only reasonably accurate/chart time accurate with tipping bucket

Date	Total Precipitation Amount (in.) reported by Bloomington Tipping Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NWS	Total Precipitation Amount (in.) as reported by the Weighing Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NCDC
12/1/2010	0.00	T	0.00	
12/2/2010	0.00	T	0.00	
12/3/2010	0.34	0.43	0.30	
12/4/2010	0.05	0.09	0.20	
12/5/2010	0.00	0.01	0.00	
12/6/2010	0.00	T	0.00	
12/7/2010	0.00	0.00	0.00	
12/8/2010	0.00	T	0.00	
12/9/2010	0.00	0.01	0.00	
12/10/2010	0.12	0.05	0.00	
12/11/2010	2.32	1.16	4.30	
12/12/2010	0.00	0.00	0.00	
12/13/2010	0.00	0.00	0.00	
12/14/2010	0.00	0.00	0.00	
12/15/2010	0.00	0.00	0.00	
12/16/2010	0.01	T	0.00	
12/17/2010	0.00	T	0.00	
12/18/2010	0.00	T	0.00	
12/19/2010	0.00	0.00	0.00	
12/20/2010	0.16	0.36	0.15	
12/21/2010	0.01	0.05	0.05	
12/22/2010	0.00	T	0.00	
12/23/2010	0.06	0.15	0.05	
12/24/2010	0.12	0.18	0.20	
12/25/2010	0.00	T	0.00	
12/26/2010	0.00	T	0.00	
12/27/2010	0.00	T	0.00	
12/28/2010	0.00	0.00	0.00	
12/29/2010	0.00	T	0.00	
12/30/2010	0.23	0.27	0.25	
12/31/2010	0.02	0.03	0.00	
Totals	**3.44**	**2.79**	**5.50**	**0.00**

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The weighing bucket data deemed only reasonably accurate/chart time accurate with tipping bucket

Date	Total Precipitation Amount (in.) reported by Bloomington Tipping Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NWS	Total Precipitation Amount (in.) as reported by the Weighing Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NCDC
1/1/2011	0.00	T	0.00	
1/2/2011	0.00	T	0.00	
1/3/2011	0.01	0.03	0.00	
1/4/2011	0.00	T	0.00	
1/5/2011	0.00	0.04	0.00	
1/6/2011	0.00	T	0.00	
1/7/2011	0.00	0.01	0.00	
1/8/2011	0.00	T	0.00	
1/9/2011	0.00	T	0.00	
1/10/2011	0.04	0.16	0.10	
1/11/2011	0.02	0.10	0.15	
1/12/2011	0.00	0.00	0.00	
1/13/2011	0.01	0.08	0.00	
1/14/2011	0.11	0.17	0.10	
1/15/2011	0.00	0.00	0.05	
1/16/2011	0.00	0.01	0.05	
1/17/2011	0.02	0.07	0.05	
1/18/2011	0.00	T	0.00	
1/19/2011	0.00	0.01	0.00	
1/20/2011	0.00	0.01	0.00	
1/21/2011	0.00	0.01	0.00	
1/22/2011	0.00	T	0.00	
1/23/2011	0.00	0.00	0.00	
1/24/2011	0.00	0.01	0.00	
1/25/2011	0.00	T	0.00	
1/26/2011	0.00	T	0.00	
1/27/2011	0.00	0.01	0.00	
1/28/2011	0.00	0.00	0.00	
1/29/2011	0.00	T	0.00	
1/30/2011	0.01	0.03	0.00	
1/31/2011	0.11	0.25	0.25	
Totals	**0.33**	**1.00**	**0.75**	**0.00**

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The weighing bucket data deemed only reasonably accurate/chart time accurate with tipping bucket
Only the total precipitation for weighing bucket reported for the month due to inability to read time on the chart

Date	Total Precipitation Amount (in.) reported by Bloomington Tipping Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NWS	Total Precipitation Amount (in.) as reported by the Weighing Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NCDC
2/1/2011	0.01	T	0.13	
2/2/2011	0.00	0.00	0.05	
2/3/2011	0.00	0.00	0.00	
2/4/2011	0.00	0.00	0.00	
2/5/2011	0.01	0.01	0.05	
2/6/2011	0.00	0.01	0.00	
2/7/2011	0.00	T	0.00	
2/8/2011	0.00	0.00	0.00	
2/9/2011	0.00	0.00	0.00	
2/10/2011	0.00	0.00	0.00	
2/11/2011	0.00	0.01	0.00	
2/12/2011	0.00	0.00	0.00	
2/13/2011	0.00	0.00	0.00	
2/14/2011	0.00	0.00	0.00	
2/15/2011	0.00	0.00	0.00	
2/16/2011	0.00	T	0.00	
2/17/2011	0.00	0.01	0.00	
2/18/2011	0.00	0.00	0.00	
2/19/2011	0.00	0.00	0.00	
2/20/2011	1.86	0.85	2.30	
2/21/2011	0.12	0.11	0.40	
2/22/2011	0.00	T	0.00	
2/23/2011	0.00	T	0.00	
2/24/2011	0.00	0.00	0.00	
2/25/2011	0.00	0.02	0.00	
2/26/2011	0.00	0.10	0.10	
2/27/2011	0.00	T	0.00	
2/28/2011	0.00	0.00	0.00	
	0.00			
Totals	**2.00**	**1.12**	**3.03**	**0.00**

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The weighing bucket data deemed only reasonably accurate/chart time accurate with tipping bucket

Date	Total Precipitation Amount (in.) reported by Bloomington Tipping Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NWS	Total Precipitation Amount (in.) as reported by the Weighing Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NCDC
3/1/2011	0.00	0.00	0.00	
3/2/2011	0.00	0.00	0.00	
3/3/2011	0.00	0.01	0.00	
3/4/2011	0.00	0.00	0.00	
3/5/2011	0.00	0.00	0.00	
3/6/2011	0.07	0.12	0.10	
3/7/2011	0.02	0.03	0.00	
3/8/2011	0.00	T	0.00	
3/9/2011	0.08	0.09	0.10	
3/10/2011	0.00	0.00	0.00	
3/11/2011	0.03	0.04	0.00	
3/12/2011	0.00	T	0.00	
3/13/2011	0.00	T	0.00	
3/14/2011	0.00	0.00	0.00	
3/15/2011	0.03	0.04	0.00	
3/16/2011	0.00	0.00	0.00	
3/17/2011	0.00	0.00	0.00	
3/18/2011	0.00	0.00	0.00	
3/19/2011	0.07	0.04	0.03	
3/20/2011	0.10	0.10	0.05	
3/21/2011	0.00	0.00	0.00	
3/22/2011	1.27	1.14	1.25	
3/23/2011	0.60	0.34	1.45	
3/24/2011	0.00	0.00	0.00	
3/25/2011	0.00	0.00	0.00	
3/26/2011	0.00	0.00	0.00	
3/27/2011	0.00	0.00	0.00	
3/28/2011	0.00	0.00	0.00	
3/29/2011	0.00	0.00	0.00	
3/30/2011	0.00	0.00	0.00	
3/31/2011	0.06	0.11	0.05	
Totals	**2.33**	**2.06**	**3.03**	**0.00**

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- (dash) Represents no recorded data for that day.
The weighing bucket data deemed only reasonably accurate/chart time accurate with tipping bucket

Date	Total Precipitation Amount (in.) reported by Bloomington Tipping Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NWS	Total Precipitation Amount (in.) as reported by the Weighing Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NCDC
4/1/2011	0.08	0.07	0.05	
4/2/2011	0.00	0.00	0.00	
4/3/2011	0.01	T	0.00	
4/4/2011	0.00	0.01	0.00	
4/5/2011	0.00	0.00	0.00	
4/6/2011	0.01	0.00	0.00	
4/7/2011	0.00	0.00	0.00	
4/8/2011	0.00	0.00	0.00	
4/9/2011	0.00	0.01	0.00	
4/10/2011	0.18	0.10	0.05	
4/11/2011	0.00	0.00	0.00	
4/12/2011	0.00	0.00	0.00	
4/13/2011	0.00	T	0.00	
4/14/2011	0.01	T	0.00	
4/15/2011	0.17	0.13	0.05	
4/16/2011	0.02	T	0.15	
4/17/2011	0.00	0.00	0.00	
4/18/2011	0.00	0.00	0.00	
4/19/2011	0.00	T	0.00	
4/20/2011	0.22	0.20	0.15	
4/21/2011	0.19	0.16	0.05	
4/22/2011	0.10	0.09	0.15	
4/23/2011	0.02	0.04	0.00	
4/24/2011	0.00	0.00	0.00	
4/25/2011	0.00	0.00	0.00	
4/26/2011	1.89	1.46	1.65	
4/27/2011	0.00	T	0.00	
4/28/2011	0.03	0.06	0.00	
4/29/2011	0.00	T	0.00	
4/30/2011	0.46	0.47	0.35	
Totals	**3.39**	**2.80**	**2.65**	**0.00**

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- (dash) Represents no recorded data for that day.
The weighing bucket data deemed only reasonably accurate/chart time accurate with tipping bucket

Date	Total Precipitation Amount (in.) reported by Bloomington Tipping Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NWS	Total Precipitation Amount (in.) as reported by the Weighing Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NCDC
5/1/2011	0.00	T	0.00	
5/2/2011	0.00	T	0.00	
5/3/2011	0.00	0.00	0.00	
5/4/2011	0.00	T	0.00	
5/5/2011	0.16	0.15	0.15	
5/6/2011	0.00	0.00	0.00	
5/7/2011	0.00	0.00	0.00	
5/8/2011	0.19	0.18	0.15	
5/9/2011	0.42	0.47	0.40	
5/10/2011	0.01	T	0.00	
5/11/2011	0.02	0.02	0.00	
5/12/2011	0.03	0.02	0.00	
5/13/2011	0.00	T	0.00	
5/14/2011	0.11	0.08	0.05	
5/15/2011	0.00	0.00	0.00	
5/16/2011	0.00	0.00	0.00	
5/17/2011	0.00	0.00	0.00	
5/18/2011	0.00	0.00	0.00	
5/19/2011	0.00	0.00	0.00	
5/20/2011	0.34	0.28	0.25	
5/21/2011	1.21	1.74	1.10	
5/22/2011	1.00	0.57	0.90	
5/23/2011	0.00	0.01	0.00	
5/24/2011	0.01	0.01	0.00	
5/25/2011	0.24	0.10	0.13	
5/26/2011	0.00	0.00	0.00	
5/27/2011	0.11	0.22	0.05	
5/28/2011	0.26	0.15	0.20	
5/29/2011	0.00	0.01	0.00	
5/30/2011	0.01	0.03	0.00	
5/31/2011	0.07	T	0.00	
Totals	**4.19**	**4.04**	**3.38**	**0.00**

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- (dash) Represents no recorded data for that day.
The weighing bucket data deemed only reasonably accurate/chart time accurate with tipping bucket

Date	Total Precipitation Amount (in.) reported by Bloomington Tipping Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NWS	Total Precipitation Amount (in.) as reported by the Weighing Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NCDC
6/1/2011	0.00	0.00	0.00	
6/2/2011	0.00	0.00	0.00	
6/3/2011	0.06	0.02	0.00	
6/4/2011	0.00	0.00	0.00	
6/5/2011	0.00	0.00	0.00	
6/6/2011	0.00	0.00	0.00	
6/7/2011	0.00	0.00	0.00	
6/8/2011	0.00	0.00	0.00	
6/9/2011	0.00	T	0.00	
6/10/2011	0.15	0.29	0.15	
6/11/2011	0.01	0.02	0.00	
6/12/2011	0.00	0.00	0.00	
6/13/2011	0.00	0.00	0.00	
6/14/2011	0.99	0.92	0.75	
6/15/2011	0.50	0.43	0.50	
6/16/2011	0.00	0.00	0.00	
6/17/2011	0.47	0.80	0.40	
6/18/2011	0.40	0.28	0.30	
6/19/2011	0.00	0.00	0.00	
6/20/2011	0.00	0.00	0.00	
6/21/2011	0.96	1.20	0.85	
6/22/2011	0.51	1.29	0.30	
6/23/2011	0.03	0.01	0.08	
6/24/2011	0.00	0.00	0.00	
6/25/2011	0.01	0.02	0.00	
6/26/2011	0.00	T	0.00	
6/27/2011	0.00	T	0.00	
6/28/2011	0.00	0.00	0.00	
6/29/2011	0.00	0.00	0.00	
6/30/2011	0.00	0.00	0.00	
Totals	**4.09**	**5.28**	**3.33**	**0.00**

NCDC is the National Climatic Data Center, where the NWS archives data
NWS is the National Weather Service, Station location MSP Airport
T is reported as a trace event being less than 0.01 inches
- (dash) Represents no recorded data for that day.
The weighing bucket data deemed only reasonably accurate/chart time accurate with tipping bucket

Date	Total Precipitation Amount (in.) reported by Bloomington Tipping Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NWS	Total Precipitation Amount (in.) as reported by the Weighing Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NCDC
7/1/2011	0.19	0.14	0.15	
7/2/2011	0.00	0.00	0.00	
7/3/2011	0.00	0.00	0.00	
7/4/2011	0.00	0.00	0.00	
7/5/2011	0.00	0.01	0.00	
7/6/2011	0.00	0.00	0.00	
7/7/2011	0.00	T	0.00	
7/8/2011	0.00	0.00	0.00	
7/9/2011	0.00	T	0.00	
7/10/2011	0.55	0.62	0.45	
7/11/2011	0.03	T	0.00	
7/12/2011	0.00	0.00	0.00	
7/13/2011	0.00	0.00	0.00	
7/14/2011	0.21	0.13	0.10	
7/15/2011	2.14	1.84	2.00	
7/16/2011	0.51	1.08	0.45	
7/17/2011	0.00	T	0.00	
7/18/2011	0.00	T	0.00	
7/19/2011	0.00	0.28	0.00	
7/20/2011	0.00	0.00	0.00	
7/21/2011	0.00	0.00	0.00	
7/22/2011	0.00	0.00	0.00	
7/23/2011	0.26	0.68	0.15	
7/24/2011	0.00	0.00	0.00	
7/25/2011	0.00	0.00	0.00	
7/26/2011	0.00	T	0.00	
7/27/2011	0.54	0.44	0.50	
7/28/2011	0.00	0.00	0.00	
7/29/2011	0.00	0.00	0.00	
7/30/2011	0.00	0.01	0.00	
7/31/2011	0.00	0.00	0.00	
Totals	**4.43**	**5.23**	**3.80**	**0.00**

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The weighing bucket data deemed only reasonably accurate/chart time accurate with tipping bucket

Date	Total Precipitation Amount (in.) reported by Bloomington Tipping Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NWS	Total Precipitation Amount (in.) as reported by the Weighing Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NCDC
8/1/2011	0.97	0.82	1.10	
8/2/2011	0.01	0.01	0.00	
8/3/2011	0.00	0.00	0.00	
8/4/2011	0.00	0.00	0.00	
8/5/2011	0.00	0.00	0.00	
8/6/2011	0.00	T	0.00	
8/7/2011	0.00	0.00	0.00	
8/8/2011	0.00	0.00	0.00	
8/9/2011	0.00	0.00	0.00	
8/10/2011	0.00	0.00	0.00	
8/11/2011	0.00	0.00	0.00	
8/12/2011	0.02	0.01	0.00	
8/13/2011	0.31	0.61	0.20	
8/14/2011	0.00	0.00	0.00	
8/15/2011	0.00	0.00	0.00	
8/16/2011	0.39	1.42	0.30	
8/17/2011	0.00	0.00	0.00	
8/18/2011	0.00	0.00	0.00	
8/19/2011	0.01	0.01	0.00	
8/20/2011	0.01	0.01	0.00	
8/21/2011	0.00	T	0.00	
8/22/2011	0.00	0.00	0.00	
8/23/2011	0.23	0.12	0.18	
8/24/2011	0.00	0.00	0.00	
8/25/2011	0.00	0.00	0.00	
8/26/2011	0.00	0.00	0.00	
8/27/2011	0.00	T	0.00	
8/28/2011	0.00	0.00	0.00	
8/29/2011	0.00	0.00	0.00	
8/30/2011	0.02	0.02	0.00	
8/31/2011	0.03	T	0.00	
Totals	**2.00**	**3.03**	**1.78**	**0.00**

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- (dash) Represents no recorded data for that day.
The weighing bucket data deemed only reasonably accurate/chart time accurate with tipping bucket

Date	Total Precipitation Amount (in.) reported by Bloomington Tipping Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NWS	Total Precipitation Amount (in.) as reported by the Weighing Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NCDC
9/1/2011	0.00	0.00	0.00	
9/2/2011	0.03	0.02	0.05	
9/3/2011	0.00	T	0.00	
9/4/2011	0.00	T	0.00	
9/5/2011	0.00	0.00	0.00	
9/6/2011	0.00	0.00	0.00	
9/7/2011	0.00	0.00	0.00	
9/8/2011	0.00	0.00	0.00	
9/9/2011	0.00	0.00	0.00	
9/10/2011	0.00	0.00	0.00	
9/11/2011	0.00	0.00	0.00	
9/12/2011	0.00	0.00	0.00	
9/13/2011	0.00	0.00	0.00	
9/14/2011	0.00	0.00	0.00	
9/15/2011	0.00	0.00	0.00	
9/16/2011	0.00	0.00	0.00	
9/17/2011	0.00	T	0.00	
9/18/2011	0.17	0.20	0.10	
9/19/2011	0.00	0.00	0.00	
9/20/2011	0.05	0.04	0.05	
9/21/2011	0.05	0.05	0.05	
9/22/2011	0.01	T	0.00	
9/23/2011	0.00	0.00	0.00	
9/24/2011	0.00	0.00	0.00	
9/25/2011	0.00	T	0.00	
9/26/2011	0.00	T	0.00	
9/27/2011	0.03	0.05	0.05	
9/28/2011	0.01	0.00	0.00	
9/29/2011	0.00	T	0.00	
9/30/2011	0.00	0.00	0.00	
	0.00			
Totals	**0.35**	**0.36**	**0.30**	**0.00**

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- (dash) Represents no recorded data for that day.
The weighing bucket data deemed only reasonably accurate/chart time accurate with tipping bucket

Date	Total Precipitation Amount (in.) reported by Bloomington Tipping Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NWS	Total Precipitation Amount (in.) as reported by the Weighing Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NCDC
10/1/2011	0.00	0.00	0.00	
10/2/2011	0.00	0.00	0.00	
10/3/2011	0.00	0.00	0.00	
10/4/2011	0.00	0.00	0.00	
10/5/2011	0.00	0.00	0.00	
10/6/2011	0.00	0.00	0.00	
10/7/2011	0.00	0.00	0.00	
10/8/2011	0.00	T	0.00	
10/9/2011	0.00	0.00	0.00	
10/10/2011	0.11	0.12	0.10	
10/11/2011	0.01	0.02	0.00	
10/12/2011	0.44	0.54	0.35	
10/13/2011	0.01	T	0.00	
10/14/2011	0.00	0.00	0.00	
10/15/2011	0.00	T	0.00	
10/16/2011	0.00	0.00	0.00	
10/17/2011	0.00	0.00	0.00	
10/18/2011	0.00	T	0.00	
10/19/2011	0.00	0.00	0.00	
10/20/2011	0.00	0.00	0.00	
10/21/2011	0.00	0.00	0.00	
10/22/2011	0.00	0.00	0.00	
10/23/2011	0.03	0.01	0.03	
10/24/2011	0.00	0.00	0.00	
10/25/2011	0.00	T	0.00	
10/26/2011	0.00	T	0.00	
10/27/2011	0.07	0.01	0.05	
10/28/2011	0.00	0.00	0.00	
10/29/2011	0.00	0.00	0.00	
10/30/2011	0.00	T	0.00	
10/31/2011	0.00	0.00	0.00	
Totals	**0.67**	**0.70**	**0.53**	**0.00**

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- (dash) Represents no recorded data for that day.
The weighing bucket data deemed only reasonably accurate/chart time accurate with tipping bucket

Date	Total Precipitation Amount (in.) reported by Bloomington Tipping Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NWS	Total Precipitation Amount (in.) as reported by the Weighing Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NCDC
11/1/2011	0.00	T	0.00	
11/2/2011	0.00	T	0.00	
11/3/2011	0.00	0.00	0.00	
11/4/2011	0.00	0.00	0.00	
11/5/2011	0.00	0.00	0.00	
11/6/2011	0.00	T	0.00	
11/7/2011	0.00	0.00	0.00	
11/8/2011	0.00	0.00	0.00	
11/9/2011	0.00	T	0.00	
11/10/2011	0.00	T	0.00	
11/11/2011	0.00	0.00	0.00	
11/12/2011	0.00	0.00	0.00	
11/13/2011	0.00	0.00	0.00	
11/14/2011	0.00	0.00	0.00	
11/15/2011	0.00	0.00	0.00	
11/16/2011	0.00	0.00	0.00	
11/17/2011	0.00	0.00	0.00	
11/18/2011	0.00	0.00	0.00	
11/19/2011	0.32	0.21	0.25	
11/20/2011	0.00	0.00	0.00	
11/21/2011	0.00	0.00	0.00	
11/22/2011	0.00	0.00	0.00	
11/23/2011	0.00	0.00	0.00	
11/24/2011	0.00	0.00	0.00	
11/25/2011	0.00	0.00	0.00	
11/26/2011	0.07	0.08	0.00	
11/27/2011	0.00	0.00	0.00	
11/28/2011	0.00	0.00	0.00	
11/29/2011	0.00	0.00	0.00	
11/30/2011	0.00	T	0.00	
Totals	**0.39**	**0.29**	**0.25**	**0.00**

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- (dash) Represents no recorded data for that day.
The weighing bucket data deemed only reasonably accurate/chart time accurate with tipping bucket

Date	Total Precipitation Amount (in.) reported by Bloomington Tipping Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NWS	Total Precipitation Amount (in.) as reported by the Weighing Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NCDC
12/1/2011	0.02	0.04	0.00	
12/2/2011	0.00	0.00	0.00	
12/3/2011	0.15	0.18	0.05	
12/4/2011	0.00	0.01	0.00	
12/5/2011	0.00	T	0.00	
12/6/2011	0.00	T	0.00	
12/7/2011	0.00	0.00	0.00	
12/8/2011	0.00	0.00	0.00	
12/9/2011	0.00	0.00	0.00	
12/10/2011	0.00	0.00	0.00	
12/11/2011	0.00	0.00	0.00	
12/12/2011	0.00	0.01	0.00	
12/13/2011	0.01	0.01	0.00	
12/14/2011	0.40	0.37	0.40	
12/15/2011	0.00	T	0.00	
12/16/2011	0.00	T	0.00	
12/17/2011	0.00	0.01	0.00	
12/18/2011	0.00	0.00	0.00	
12/19/2011	0.00	0.00	0.00	
12/20/2011	0.00	0.00	0.00	
12/21/2011	0.00	T	0.00	
12/22/2011	0.00	0.00	0.00	
12/23/2011	0.00	0.02	0.00	
12/24/2011	0.00	0.00	0.00	
12/25/2011	0.00	0.00	0.00	
12/26/2011	0.00	0.00	0.00	
12/27/2011	0.00	0.00	0.00	
12/28/2011	0.00	0.01	0.00	
12/29/2011	0.00	0.00	0.00	
12/30/2011	0.00	T	0.00	
12/31/2011	0.36	0.33	0.20	
Totals	**0.94**	**0.99**	**0.65**	**0.00**

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- (dash) Represents no recorded data for that day.
The weighing bucket data deemed only reasonably accurate/chart time accurate with tipping bucket

Date	Total Precipitation Amount (in.) reported by Bloomington Tipping Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NWS	Total Precipitation Amount (in.) as reported by the Weighing Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NCDC
1/1/2012	0.00	T	0.00	
1/2/2012	0.00	T	0.00	
1/3/2012	0.00	0.00	0.00	
1/4/2012	0.00	0.00	0.00	
1/5/2012	0.00	0.00	0.00	
1/6/2012	0.00	0.00	0.00	
1/7/2012	0.00	0.00	0.00	
1/8/2012	0.00	0.00	0.00	
1/9/2012	0.00	0.00	0.00	
1/10/2012	0.00	0.00	0.00	
1/11/2012	0.00	T	0.00	
1/12/2012	0.00	T	0.00	
1/13/2012	0.00	0.02	0.00	
1/14/2012	0.00	0.03	0.00	
1/15/2012	0.00	0.00	0.00	
1/16/2012	0.00	0.00	0.00	
1/17/2012	0.00	0.01	0.00	
1/18/2012	0.00	T	0.00	
1/19/2012	0.00	0.00	0.00	
1/20/2012	0.01	0.07	0.00	
1/21/2012	0.00	0.00	0.00	
1/22/2012	0.00	0.01	0.00	
1/23/2012	0.09	0.15	0.20	
1/24/2012	0.00	T	0.00	
1/25/2012	0.00	T	0.00	
1/26/2012	0.00	0.00	0.00	
1/27/2012	0.01	0.04	0.05	
1/28/2012	0.03	0.03	0.05	
1/29/2012	0.00	T	0.00	
1/30/2012	0.00	T	0.00	
1/31/2012	0.00	0.00	0.00	
Totals	**0.14**	**0.36**	**0.30**	**0.00**

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- (dash) Represents no recorded data for that day.
The weighing bucket data deemed only reasonably accurate/chart time accurate with tipping bucket
Only the total precipitation for weighing bucket reported for the month due to inability to read time on the chart

Date	Total Precipitation Amount (in.) reported by Bloomington Tipping Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NWS	Total Precipitation Amount (in.) as reported by the Weighing Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NCDC
2/1/2012	0.00	0.00	0.00	
2/2/2012	0.00	0.00	0.00	
2/3/2012	0.00	0.00	0.00	
2/4/2012	0.00	T	0.00	
2/5/2012	0.00	0.00	0.00	
2/6/2012	0.00	0.00	0.00	
2/7/2012	0.00	0.00	0.00	
2/8/2012	0.00	0.00	0.00	
2/9/2012	0.00	0.00	0.00	
2/10/2012	0.00	T	0.00	
2/11/2012	0.00	0.00	0.00	
2/12/2012	0.00	0.00	0.00	
2/13/2012	0.02	0.04	0.01	
2/14/2012	0.00	0.01	0.00	
2/15/2012	0.00	T	0.00	
2/16/2012	0.00	0.00	0.00	
2/17/2012	0.00	0.00	0.00	
2/18/2012	0.00	0.00	0.00	
2/19/2012	0.00	0.00	0.00	
2/20/2012	0.15	0.23	0.00	
2/21/2012	0.04	0.07	0.00	
2/22/2012	0.00	0.00	0.00	
2/23/2012	0.00	0.00	0.00	
2/24/2012	0.00	0.01	0.00	
2/25/2012	0.00	T	0.00	
2/26/2012	0.00	T	0.00	
2/27/2012	0.00	T	0.00	
2/28/2012	0.67	0.70	0.55	
2/29/2012	0.69	0.62	0.75	
Totals	**1.57**	**1.68**	**1.31**	**0.00**

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- (dash) Represents no recorded data for that day.
The weighing bucket data deemed only reasonably accurate/chart time accurate with tipping bucket

Date	Total Precipitation Amount (in.) reported by Bloomington Tipping Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NWS	Total Precipitation Amount (in.) as reported by the Weighing Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NCDC
3/1/2012	0.00	0.09	0.00	
3/2/2012	0.00	T	0.00	
3/3/2012	0.00	0.02	0.00	
3/4/2012	0.00	0.00	0.00	
3/5/2012	0.00	0.00	0.00	
3/6/2012	0.00	0.00	0.00	
3/7/2012	0.03	0.04	0.00	
3/8/2012	0.00	0.01	0.00	
3/9/2012	0.00	0.00	0.00	
3/10/2012	0.00	0.00	0.00	
3/11/2012	0.00	0.02	0.00	
3/12/2012	0.31	0.28	0.25	
3/13/2012	0.00	0.00	0.00	
3/14/2012	0.00	0.00	0.00	
3/15/2012	0.00	0.00	0.00	
3/16/2012	0.00	0.00	0.00	
3/17/2012	0.00	0.00	0.00	
3/18/2012	0.00	0.00	0.00	
3/19/2012	0.52	0.58	0.40	
3/20/2012	0.01	0.01	0.00	
3/21/2012	0.00	0.02	0.00	
3/22/2012	0.17	0.12	0.15	
3/23/2012	0.00	T	0.00	
3/24/2012	0.00	0.00	0.00	
3/25/2012	0.00	0.00	0.00	
3/26/2012	0.07	0.05	0.00	
3/27/2012	0.00	T	0.00	
3/28/2012	0.00	0.00	0.00	
3/29/2012	0.29	0.16	0.13	
3/30/2012	0.01	T	0.00	
3/31/2012	0.00	0.00	0.00	
Totals	**1.41**	**1.40**	**0.93**	**0.00**

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- (dash) Represents no recorded data for that day.
The weighing bucket data deemed only reasonably accurate/chart time accurate with tipping bucket

Date	Total Precipitation Amount (in.) reported by Bloomington Tipping Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NWS	Total Precipitation Amount (in.) as reported by the Weighing Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NCDC
4/1/2012	0.00	0.00	0.00	
4/2/2012	0.28	0.46	0.15	
4/3/2012	0.00	0.00	0.00	
4/4/2012	0.00	0.00	0.00	
4/5/2012	0.00	0.00	0.00	
4/6/2012	0.00	0.00	0.00	
4/7/2012	0.18	0.17	0.15	
4/8/2012	0.00	0.00	0.00	
4/9/2012	0.00	0.00	0.00	
4/10/2012	0.00	0.00	0.00	
4/11/2012	0.00	0.00	0.00	
4/12/2012	0.00	0.00	0.00	
4/13/2012	0.11	0.00	0.00	
4/14/2012	0.00	0.00	0.00	
4/15/2012	1.11	1.19	0.85	
4/16/2012	0.30	0.24	0.35	
4/17/2012	0.06	0.13	0.05	
4/18/2012	0.11	0.05	0.05	
4/19/2012	0.12	0.06	0.05	
4/20/2012	0.00	0.00	0.00	
4/21/2012	0.14	0.29	0.05	
4/22/2012	0.04	0.03	0.00	
4/23/2012	0.00	0.00	-	
4/24/2012	0.00	T	-	
4/25/2012	0.04	0.00	-	
4/26/2012	0.00	T	-	
4/27/2012	0.00	0.25	-	
4/28/2012	0.21	0.05	-	
4/29/2012	0.04	T	-	
4/30/2012	0.00	T	-	
Totals	**2.74**	**2.92**	**1.70**	**0.00**

NCDC is the National Climatic Data Center, where the NWS archives data
NWS is the National Weather Service, Station location MSP Airport
T is reported as a trace event being less than 0.01 inches
- (dash) Represents no recorded data for that day.
The weighing bucket data deemed only reasonably accurate/chart time accurate with tipping bucket

Date	Total Precipitation Amount (in.) reported by Bloomington Tipping Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NWS	Total Precipitation Amount (in.) as reported by the Weighing Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NCDC
5/1/2012	0.45	0.75	-	
5/2/2012	0.38	0.03	-	
5/3/2012	0.62	0.76	-	
5/4/2012	0.46	0.38	-	
5/5/2012	1.14	0.91	-	
5/6/2012	1.57	1.40	-	
5/7/2012	0.00	0.00	0.00	
5/8/2012	0.09	0.06	0.00	
5/9/2012	0.00	0.00	0.00	
5/10/2012	0.00	0.00	0.00	
5/11/2012	0.04	0.06	0.00	
5/12/2012	0.00	0.00	0.00	
5/13/2012	0.00	0.00	0.00	
5/14/2012	0.00	0.00	0.00	
5/15/2012	0.00	0.00	0.00	
5/16/2012	0.00	0.00	0.00	
5/17/2012	0.00	0.00	0.00	
5/18/2012	0.00	0.00	0.00	
5/19/2012	0.51	0.42	0.50	
5/20/2012	0.02	0.02	0.00	
5/21/2012	0.00	0.00	0.00	
5/22/2012	0.00	0.00	0.00	
5/23/2012	0.53	0.81	0.40	
5/24/2012	2.73	2.58	2.50	
5/25/2012	0.00	T	0.00	
5/26/2012	0.60	0.65	0.45	
5/27/2012	0.68	0.32	0.50	
5/28/2012	0.26	0.19	0.35	
5/29/2012	0.00	T	0.00	
5/30/2012	0.00	T	0.00	
5/31/2012	0.02	T	0.00	
Totals	**10.10**	**9.34**	**4.70**	**0.00**

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T is reported as a trace event being less than 0.01 inches
- (dash) Represents no recorded data for that day.
The weighing bucket data deemed only reasonably accurate/chart time accurate with tipping bucket

Date	Total Precipitation Amount (in.) reported by Bloomington Tipping Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NWS	Total Precipitation Amount (in.) as reported by the Weighing Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NCDC
6/1/2012	0.00	0.00	0.00	
6/2/2012	0.00	0.00	0.00	
6/3/2012	0.00	0.00	0.00	
6/4/2012	0.00	0.00	0.00	
6/5/2012	0.00	0.00	0.00	
6/6/2012	0.07	0.02	0.00	
6/7/2012	0.01	0.00	0.00	
6/8/2012	0.02	0.01	0.00	
6/9/2012	0.00	0.00	0.00	
6/10/2012	0.46	0.37	0.35	
6/11/2012	0.00	0.00	0.00	
6/12/2012	0.00	0.00	0.00	
6/13/2012	0.00	T	0.00	
6/14/2012	0.92	0.86	0.80	
6/15/2012	0.00	0.00	0.00	
6/16/2012	0.19	0.31	0.15	
6/17/2012	1.27	1.15	1.05	
6/18/2012	0.33	0.10	0.45	
6/19/2012	0.65	0.61	0.50	
6/20/2012	0.17	0.16	0.10	
6/21/2012	0.01	0.00	0.00	
6/22/2012	0.00	0.00	0.00	
6/23/2012	0.00	T	0.00	
6/24/2012	0.00	0.00	0.00	
6/25/2012	0.00	0.00	0.00	
6/26/2012	0.00	0.00	0.00	
6/27/2012	0.00	0.00	0.00	
6/28/2012	0.00	0.00	0.00	
6/29/2012	0.00	0.00	0.00	
6/30/2012	0.00	T	0.00	
Totals	**4.10**	**3.59**	**3.40**	**0.00**

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NWS is the National Weather Service, Station location MSP Airport

T is reported as a trace event being less than 0.01 inches

- (dash) Represents no recorded data for that day.

The weighing bucket data deemed only reasonably accurate/chart time accurate with tipping bucket

Date	Total Precipitation Amount (in.) reported by Bloomington Tipping Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NWS	Total Precipitation Amount (in.) as reported by the Weighing Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NCDC
7/1/2012	0.00	0.00	0.00	
7/2/2012	0.00	0.00	0.00	
7/3/2012	0.04	0.05	0.00	
7/4/2012	0.01	T	0.00	
7/5/2012	0.00	0.00	0.00	
7/6/2012	0.06	0.54	-	
7/7/2012	0.04	T	-	
7/8/2012	0.00	0.00	-	
7/9/2012	0.00	0.00	-	
7/10/2012	0.00	0.00	-	
7/11/2012	0.00	0.00	-	
7/12/2012	0.00	T	-	
7/13/2012	0.21	T	0.10	
7/14/2012	0.00	-	0.00	
7/15/2012	0.00	0.00	0.00	
7/16/2012	0.00	0.00	0.00	
7/17/2012	0.00	0.00	0.00	
7/18/2012	0.26	0.83	0.20	
7/19/2012	0.00	0.00	0.00	
7/20/2012	0.00	T	0.00	
7/21/2012	0.16	0.22	0.10	
7/22/2012	0.00	T	0.00	
7/23/2012	0.00	0.05	0.00	
7/24/2012	-	1.69	1.90	
7/25/2012	0.00	0.01	0.00	
7/26/2012	0.00	0.00	0.00	
7/27/2012	0.00	0.00	0.00	
7/28/2012	0.00	T	0.00	
7/29/2012	0.57	0.51	0.40	
7/30/2012	0.00	0.00	0.00	
7/31/2012	0.00	0.00	0.00	
Totals	**1.35**	**3.90**	**2.70**	**0.00**

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- (dash) Represents no recorded data for that day.
The weighing bucket data deemed only reasonably accurate/chart time accurate with tipping bucket

Date	Total Precipitation Amount (in.) reported by Bloomington Tipping Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NWS	Total Precipitation Amount (in.) as reported by the Weighing Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NCDC
8/1/2012	0.00	T	0.00	
8/2/2012	0.00	0.00	0.00	
8/3/2012	0.32	0.38	0.20	
8/4/2012	0.18	0.02	0.20	
8/5/2012	0.00	0.00	0.00	
8/6/2012	0.00	0.00	0.00	
8/7/2012	0.00	0.00	0.00	
8/8/2012	0.00	0.01	0.00	
8/9/2012	0.00	0.10	0.00	
8/10/2012	0.00	0.00	0.00	
8/11/2012	0.00	0.00	0.00	
8/12/2012	0.00	T	0.00	
8/13/2012	0.00	0.00	0.00	
8/14/2012	0.01	T	0.00	
8/15/2012	1.27	0.73	1.10	
8/16/2012	0.00	0.00	0.00	
8/17/2012	0.00	0.00	0.00	
8/18/2012	0.02	0.02	0.00	
8/19/2012	0.01	0.00	0.00	
8/20/2012	0.00	0.00	0.00	
8/21/2012	0.00	0.00	0.00	
8/22/2012	0.03	0.04	0.00	
8/23/2012	0.00	0.01	0.00	
8/24/2012	0.00	0.00	0.00	
8/25/2012	0.10	0.06	0.00	
8/26/2012	0.00	0.01	0.00	
8/27/2012	0.00	0.00	0.00	
8/28/2012	0.00	0.00	0.00	
8/29/2012	0.00	0.00	0.00	
8/30/2012	0.00	0.00	0.00	
8/31/2012	0.00	0.00	0.00	
Totals	**1.94**	**1.38**	**1.50**	**0.00**

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- (dash) Represents no recorded data for that day.
The weighing bucket data deemed only reasonably accurate/chart time accurate with tipping bucket

Date	Total Precipitation Amount (in.) reported by Bloomington Tipping Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NWS	Total Precipitation Amount (in.) as reported by the Weighing Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NCDC
9/1/2012	0.00	0.00	0.00	
9/2/2012	0.00	0.00	0.00	
9/3/2012	0.00	0.00	0.00	
9/4/2012	0.00	0.00	0.00	
9/5/2012	0.03	0.02	0.00	
9/6/2012	0.00	T	0.00	
9/7/2012	0.02	T	0.00	
9/8/2012	0.00	0.00	0.00	
9/9/2012	0.00	0.00	0.00	
9/10/2012	0.00	0.00	0.00	
9/11/2012	0.00	0.00	0.00	
9/12/2012	0.12	0.09	0.05	
9/13/2012	0.01	0.00	0.00	
9/14/2012	0.00	0.00	0.00	
9/15/2012	0.00	0.00	0.00	
9/16/2012	0.00	0.00	0.00	
9/17/2012	0.30	0.19	0.10	
9/18/2012	0.00	0.00	0.00	
9/19/2012	0.00	T	0.00	
9/20/2012	0.00	0.00	0.00	
9/21/2012	0.00	T	0.00	
9/22/2012	0.00	T	0.00	
9/23/2012	0.00	0.00	0.00	
9/24/2012	0.00	0.00	0.00	
9/25/2012	0.00	0.00	0.00	
9/26/2012	0.00	0.00	0.00	
9/27/2012	0.00	0.00	0.00	
9/28/2012	0.00	0.00	0.00	
9/29/2012	0.00	0.00	0.00	
9/30/2012	0.00	0.00	0.00	
Totals	**0.48**	**0.30**	**0.15**	**0.00**

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NWS is the National Weather Service, Station location MSP Airport
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- (dash) Represents no recorded data for that day.
The weighing bucket data deemed only reasonably accurate/chart time accurate with tipping bucket

Date	Total Precipitation Amount (in.) reported by Bloomington Tipping Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NWS	Total Precipitation Amount (in.) as reported by the Weighing Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NCDC
10/1/2012	0.00	0.00	0.00	
10/2/2012	0.00	0.00	0.00	
10/3/2012	0.00	0.00	0.00	
10/4/2012	0.00	0.00	0.00	
10/5/2012	0.00	0.00	0.00	
10/6/2012	0.00	0.00	0.00	
10/7/2012	0.00	0.00	0.00	
10/8/2012	0.00	T	0.00	
10/9/2012	0.05	0.03	0.00	
10/10/2012	0.00	0.00	0.00	
10/11/2012	0.00	T	0.00	
10/12/2012	0.00	T	0.00	
10/13/2012	0.03	0.04	0.00	
10/14/2012	0.00	0.00	0.00	
10/15/2012	0.00	T	0.00	
10/16/2012	0.00	T	0.00	
10/17/2012	0.00	T	0.00	
10/18/2012	0.00	0.01	0.00	
10/19/2012	0.15	0.21	0.10	
10/20/2012	0.00	0.00	0.00	
10/21/2012	0.00	0.00	0.00	
10/22/2012	0.00	T	0.00	
10/23/2012	0.11	0.08	0.10	
10/24/2012	0.18	0.18	0.20	
10/25/2012	0.86	0.75	0.70	
10/26/2012	0.00	0.00	0.00	
10/27/2012	0.00	0.00	0.00	
10/28/2012	0.00	0.00	0.00	
10/29/2012	0.00	0.00	0.00	
10/30/2012	0.00	0.00	0.00	
10/31/2012	0.00	0.00	0.00	
Totals	**1.38**	**1.30**	**1.10**	**0.00**

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- (dash) Represents no recorded data for that day.
The weighing bucket data deemed only reasonably accurate/chart time accurate with tipping bucket

Date	Total Precipitation Amount (in.) reported by Bloomington Tipping Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NWS	Total Precipitation Amount (in.) as reported by the Weighing Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NCDC
11/1/2012	0.00	0.00	0.00	
11/2/2012	0.00	0.00	0.00	
11/3/2012	0.00	0.00	0.00	
11/4/2012	0.00	0.00	0.00	
11/5/2012	0.00	T	0.00	
11/6/2012	0.24	0.31	0.20	
11/7/2012	0.00	0.00	0.00	
11/8/2012	0.00	0.00	0.00	
11/9/2012	0.00	0.00	0.00	
11/10/2012	0.28	0.24	0.15	
11/11/2012	0.01	0.02	0.00	
11/12/2012	0.00	0.01	0.00	
11/13/2012	0.00	0.00	0.00	
11/14/2012	0.00	0.00	0.00	
11/15/2012	0.00	T	0.00	
11/16/2012	0.00	0.00	0.00	
11/17/2012	0.00	0.00	0.00	
11/18/2012	0.00	0.00	0.00	
11/19/2012	0.00	T	0.00	
11/20/2012	0.00	0.00	0.00	
11/21/2012	0.00	0.00	0.00	
11/22/2012	0.01	0.02	0.00	
11/23/2012	0.00	0.02	0.00	
11/24/2012	0.00	T	0.00	
11/25/2012	0.00	0.00	0.00	
11/26/2012	0.00	0.00	0.00	
11/27/2012	0.00	0.00	0.00	
11/28/2012	0.00	0.00	0.00	
11/29/2012	0.00	0.00	0.00	
11/30/2012	0.00	0.00	0.00	
Totals	**0.54**	**0.62**	**0.35**	**0.00**

NCDC is the National Climatic Data Center, where the NWS archives data
NWS is the National Weather Service, Station location MSP Airport
T is reported as a trace event being less than 0.01 inches
- (dash) Represents no recorded data for that day.
The weighing bucket data deemed only reasonably accurate/chart time accurate with tipping bucket

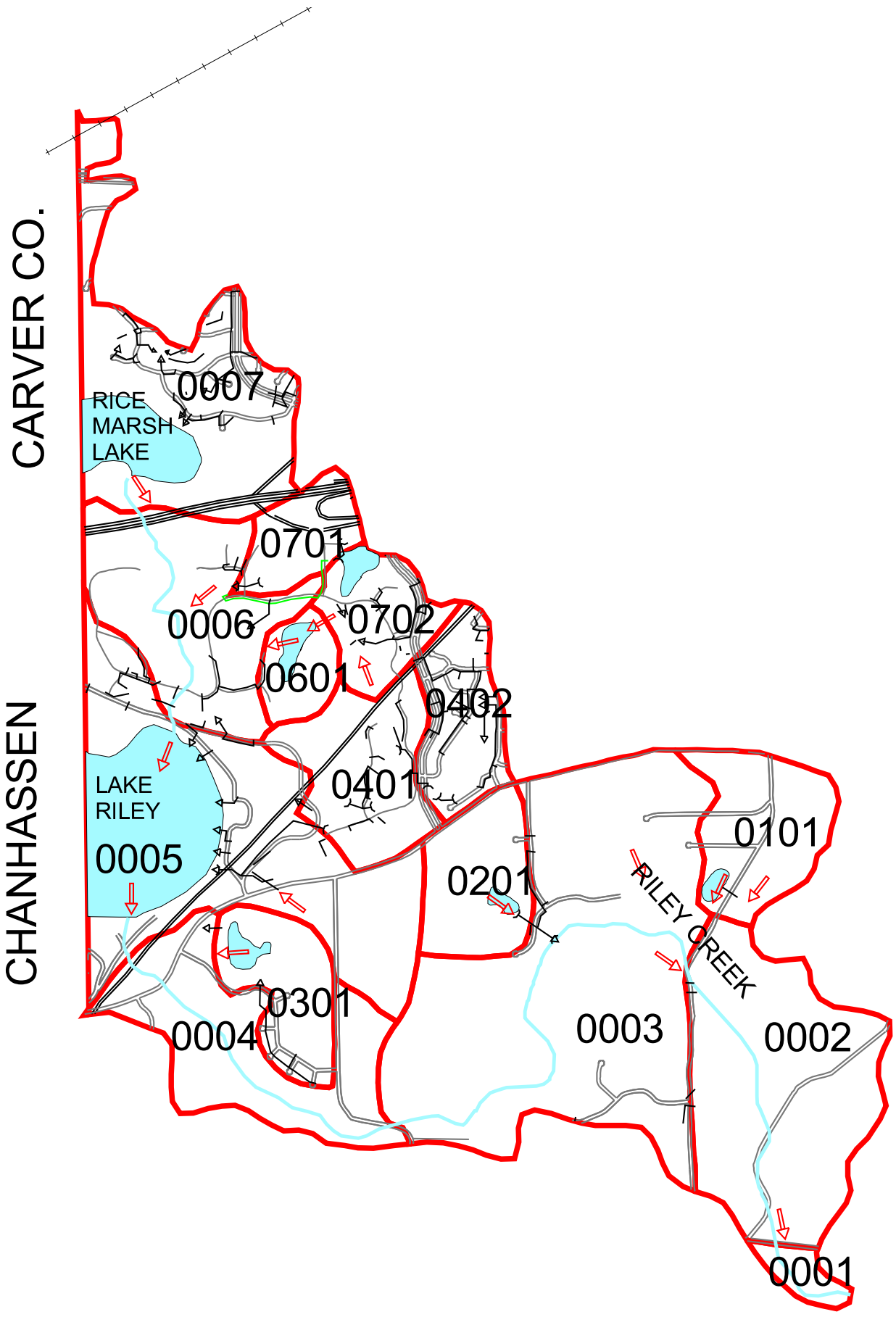
Date	Total Precipitation Amount (in.) reported by Bloomington Tipping Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NWS	Total Precipitation Amount (in.) as reported by the Weighing Bucket Gauge at Public Works	Total Precipitation Amount (in.) as reported by the NCDC
12/1/2012	0.00	0.00	0.00	
12/2/2012	0.00	0.00	0.00	
12/3/2012	0.00	0.02	0.00	
12/4/2012	0.00	0.00	0.00	
12/5/2012	0.00	0.00	0.00	
12/6/2012	0.00	T	0.00	
12/7/2012	0.02	0.05	0.00	
12/8/2012	0.00	0.00	0.00	
12/9/2012	0.56	0.95	0.60	
12/10/2012	0.01	T	0.00	
12/11/2012	0.00	T	0.00	
12/12/2012	0.00	0.00	0.00	
12/13/2012	0.00	0.00	0.00	
12/14/2012	0.00	0.00	0.00	
12/15/2012	0.33	0.42	0.35	
12/16/2012	0.00	T	0.00	
12/17/2012	0.00	T	0.00	
12/18/2012	0.00	T	0.00	
12/19/2012	0.01	0.02	0.00	
12/20/2012	0.01	0.02	0.00	
12/21/2012	0.00	0.00	0.00	
12/22/2012	0.00	0.00	0.00	
12/23/2012	0.00	0.00	0.00	
12/24/2012	0.00	0.01	0.00	
12/25/2012	0.00	0.00	0.00	
12/26/2012	0.00	0.00	0.00	
12/27/2012	0.02	0.09	0.05	
12/28/2012	0.01	0.06	0.00	
12/29/2012	0.00	T	0.00	
12/30/2012	0.00	0.00	0.00	
12/31/2012	0.00	T	0.00	
Totals	**0.97**	**1.64**	**1.00**	**0.00**

NCDC is the National Climatic Data Center, where the NWS archives data
NWS is the National Weather Service, Station location MSP Airport
T is reported as a trace event being less than 0.01 inches
- (dash) Represents no recorded data for that day.
The weighing bucket data deemed only reasonably accurate/chart time accurate with tipping bucket

Attachment C-2

Maps for Other Cities in the DWSMA

RILEY CREEK WATERSHED



LEGEND

- GENERAL FLOW DIRECTION
- TRUNK STORM SEWER
- COLLECTOR STORM SEWER
- STREAMS

0 1 Miles

N

MWH MONTGOMERY WATSON HARZA

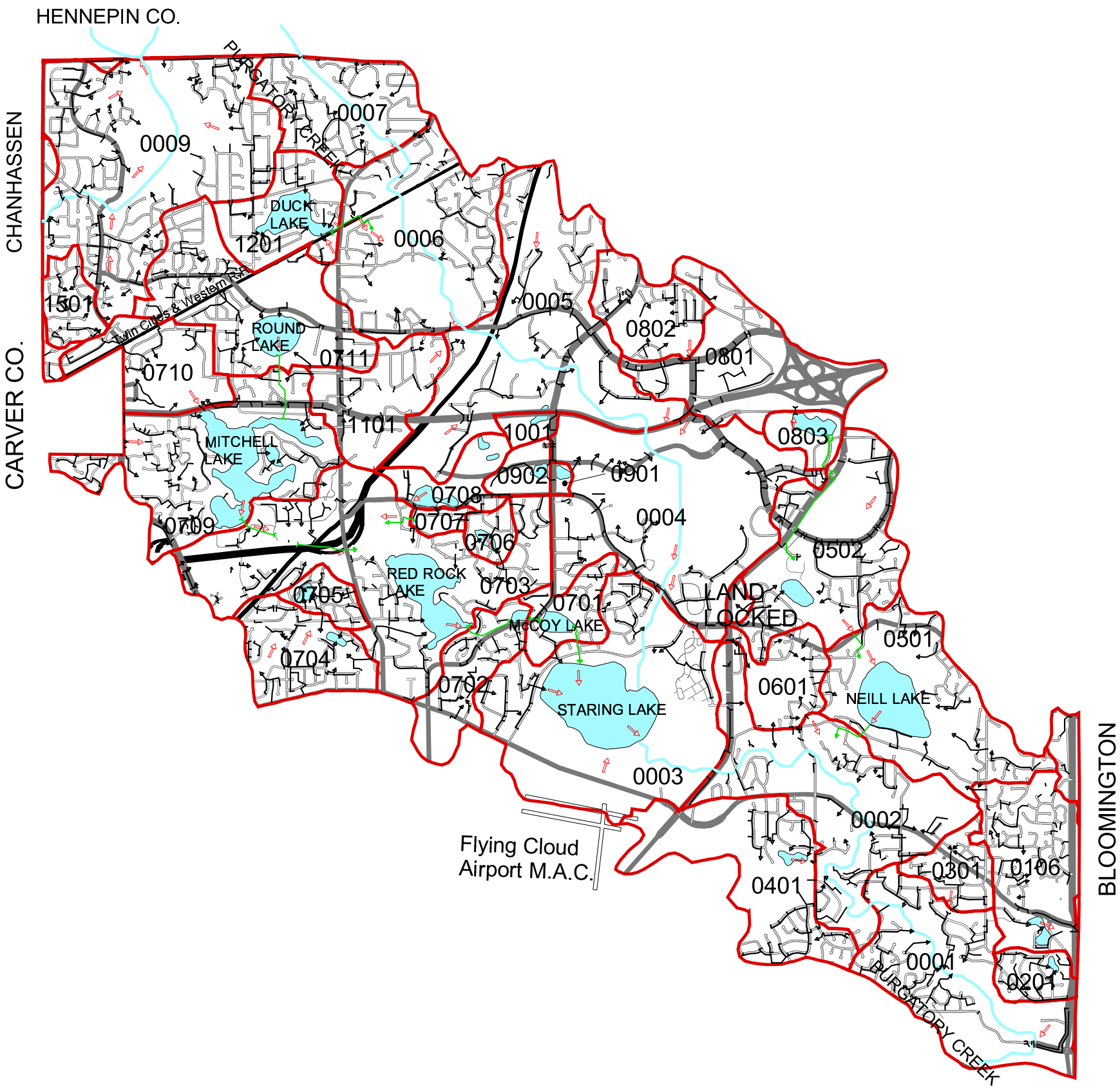
Peterson Environmental Consulting, Inc.

Wenck

EDEN PRAIRIE LIVE • WORK • DREAM

FIGURE 7

PURGATORY CREEK WATERSHED



LEGEND

- GENERAL FLOW DIRECTION
- TRUNK STORM SEWER
- COLLECTOR STORM SEWER
- STREAMS

1 0 1 2 Miles

N

MWH MONTGOMERY WATSON HARZA

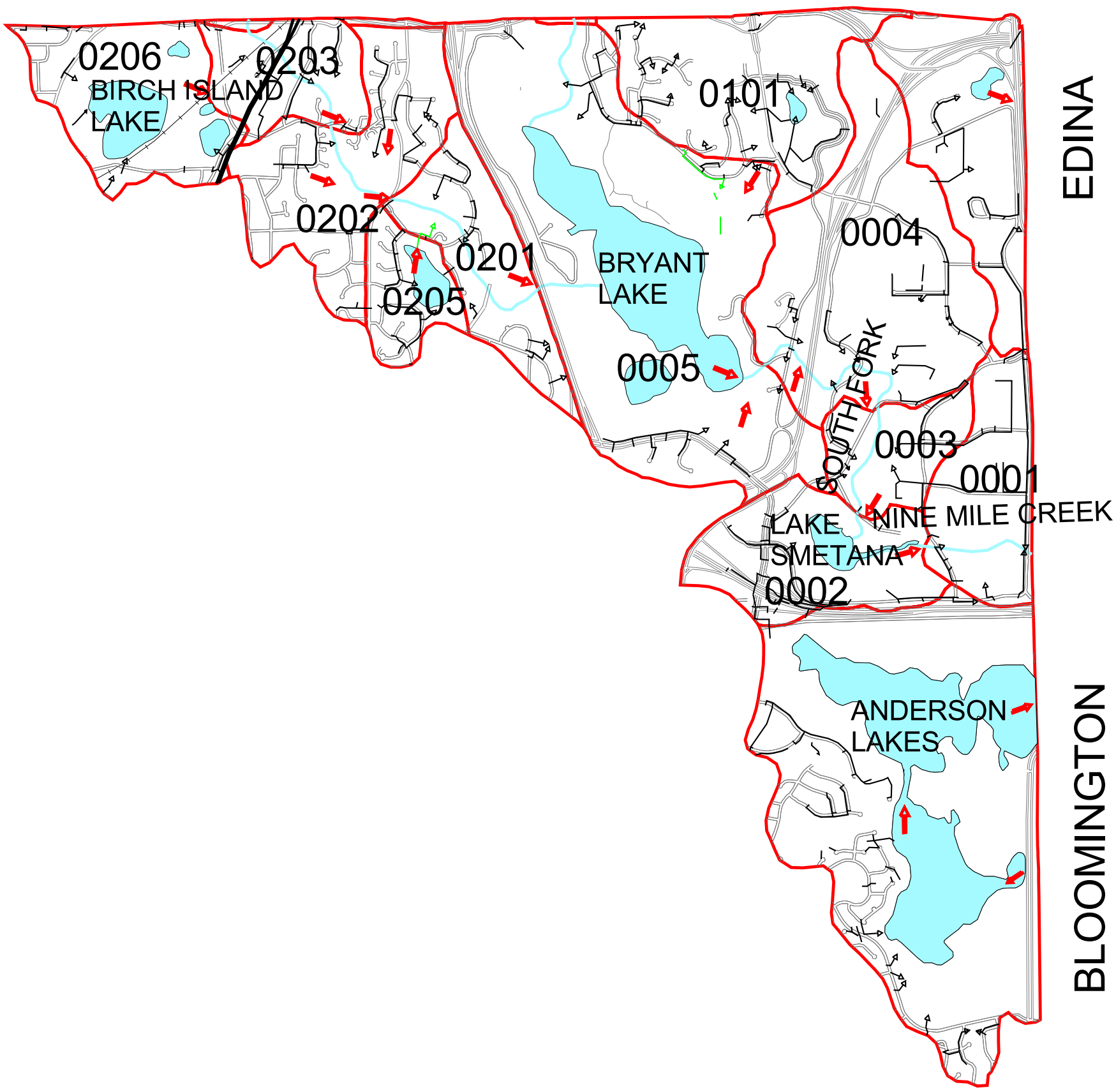
Peterson Environmental Consulting, Inc.

Wenck

EDEN PRAIRIE LIVE • WORK • DREAM

FIGURE 8

NINE MILE CREEK WATERSHED



LEGEND

- GENERAL FLOW DIRECTION
- TRUNK STORM SEWER
- COLLECTOR STORM SEWER
- STREAMS

0 1 Miles

N

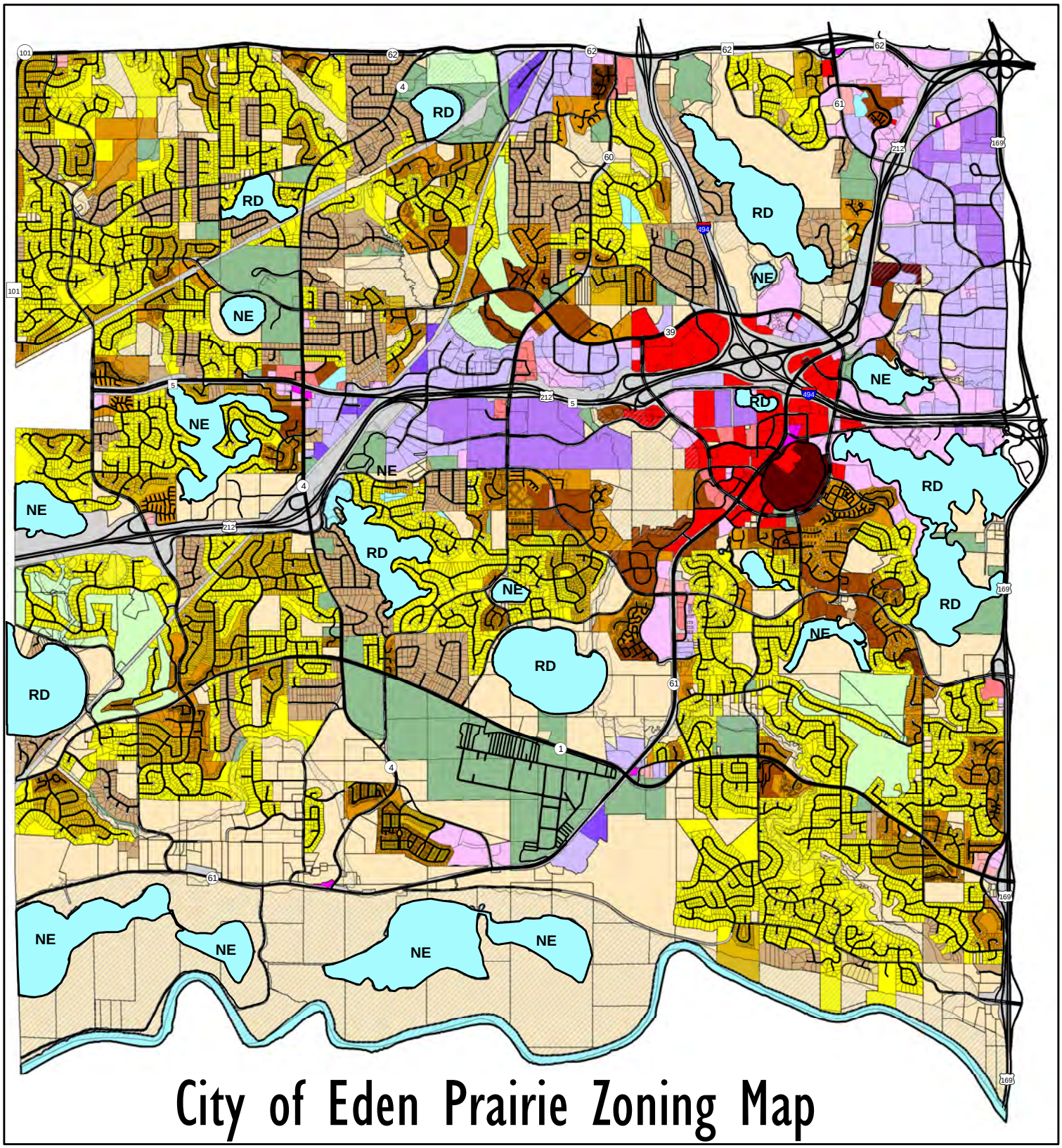
MWH MONTGOMERY WATSON HARZA

Peterson Environmental Consulting, Inc.

Wenck

EDEN PRAIRIE LIVE • WORK • DREAM

FIGURE 9



City of Eden Prairie Zoning Map

- Rural
- R1-44 One Family- 44,000 sf. min.
- R1-22 One Family-22,000 sf min.
- R1-13.5 One Family-13,500 sf min.
- R1-9.5 One Family-9,500 sf min.
- RM-6.5 Multi-Family-6.7 U.P.A. max.
- RM-2.5 Multi-Family-17.4 U.P.A. max.
- Office
- Neighborhood Commercial
- Community Commercial
- Highway Commercial
- Regional Service Commercial
- Regional Commercial
- TC-C Town Center Commercial
- TC-R Town Center Residential
- TC-MU Town Center Mixed Use
- Industrial Park - 2 Acre Min,
- Industrial Park - 5 Acre Min.
- General Industrial - 5 Acre Min.
- Public
- Golf Course
- Water
- Right of Way

Shoreland Management Classifications

- NE Natural Environment Waters
- RD Recreational Development Waters
- GD General Development Waters (Creeks Only)
- 100 - Year Floodplain

N

Up dated through approved Ordinances #35-2012

Ordinance #33-2001 (BFI Addition) approved, but not shown on this map edition

Date: March 1, 2013

In case of discrepency related to a zoning classification on this zoning map, the Ordinance and attached legal description on file at Eden Prairie City Center will prevail.

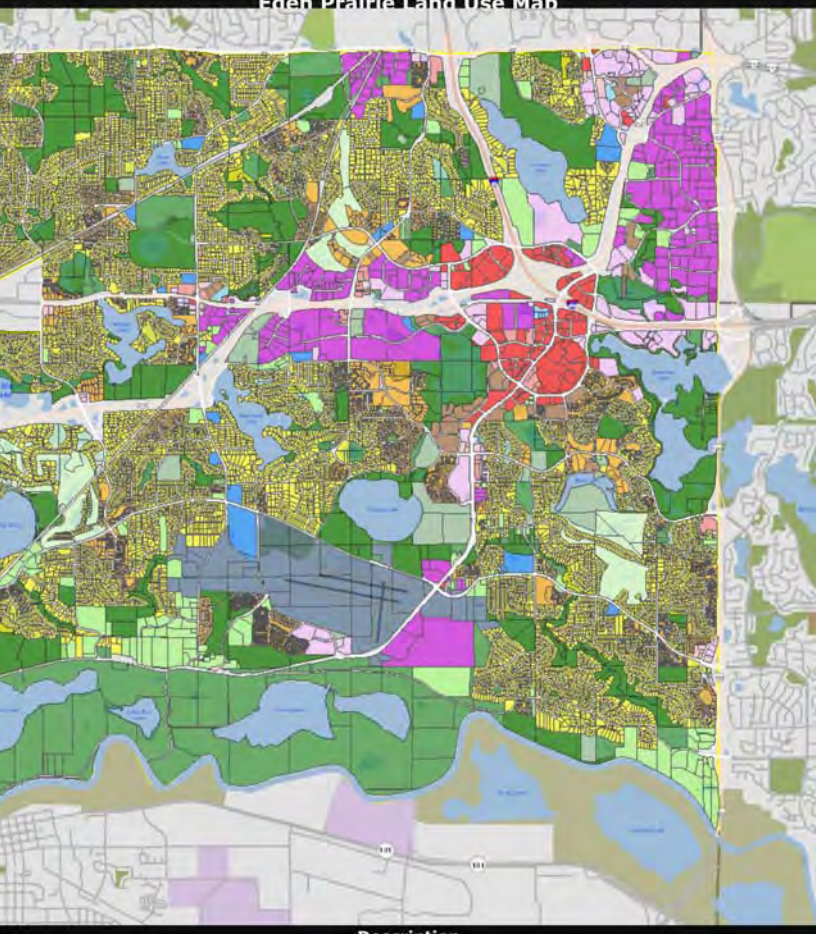
0 0.5 1

Miles

edenprairie.org

DISCLAIMER: The City of Eden Prairie does not warrant the accuracy nor the correctness of the information contained in this map. It is your responsibility to verify the accuracy of this information. In no event will The City of Eden Prairie be liable for any damages, including loss of business, lost profits, business interruption, loss of business information or other pecuniary loss that might arise from the use of this map or the information it contains. Map information is believed to be accurate but accuracy is not guaranteed. Any errors or omissions should be reported to The City of Eden Prairie.
M:\GIS\Users\Departments\CommDev\Documents\Official Maps\Official\Zoning.mxd
Map was Updated/Created: Monday, April 29, 2013

Eden Prairie Land Use Map



Description

1km

1mi

Scale 1:49858

"DESCLAIMER: The City of Eden Prairie does not warrant the accuracy nor the correctness of the information contained in this map. It is your responsibility to verify the accuracy of this information. In no event will The City of Eden Prairie be liable for any damages, including loss of business, lost profits, business interruption, loss of business information or other pecuniary loss that might arise from the use of this map or the information it contains. Map information is believed to be accurate but accuracy is not guaranteed. Any errors or omissions should be reported to The City of Eden Prairie."

N

W E

S

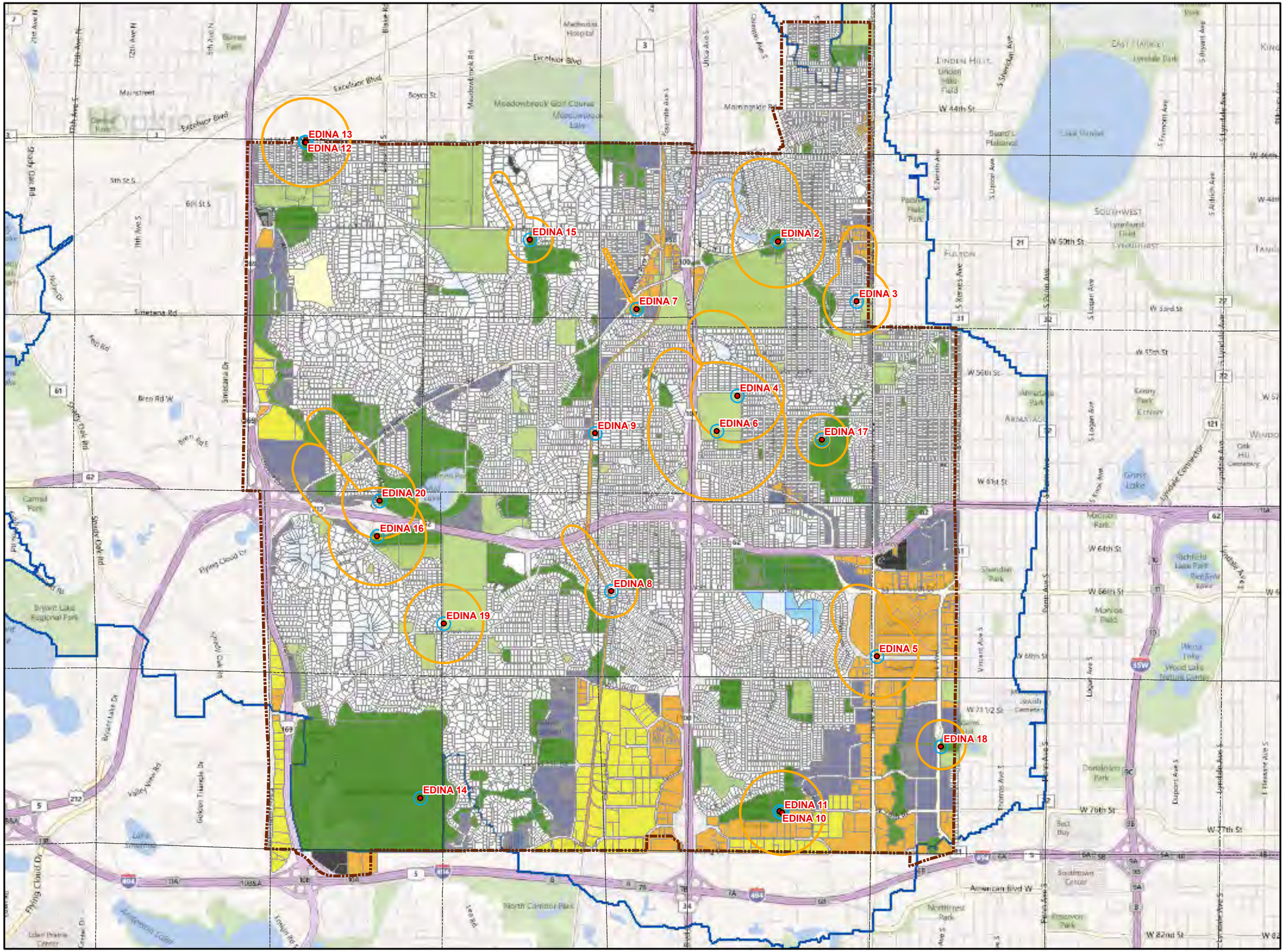


Figure 6

City of Edina
Zoning

Legend

- Municipal Wells
- Inner Wellhead Management Zone
- Emergency Response Area (ERA)
- DWSMA
- Twp Rng Sec Line
- Municipal Boundary

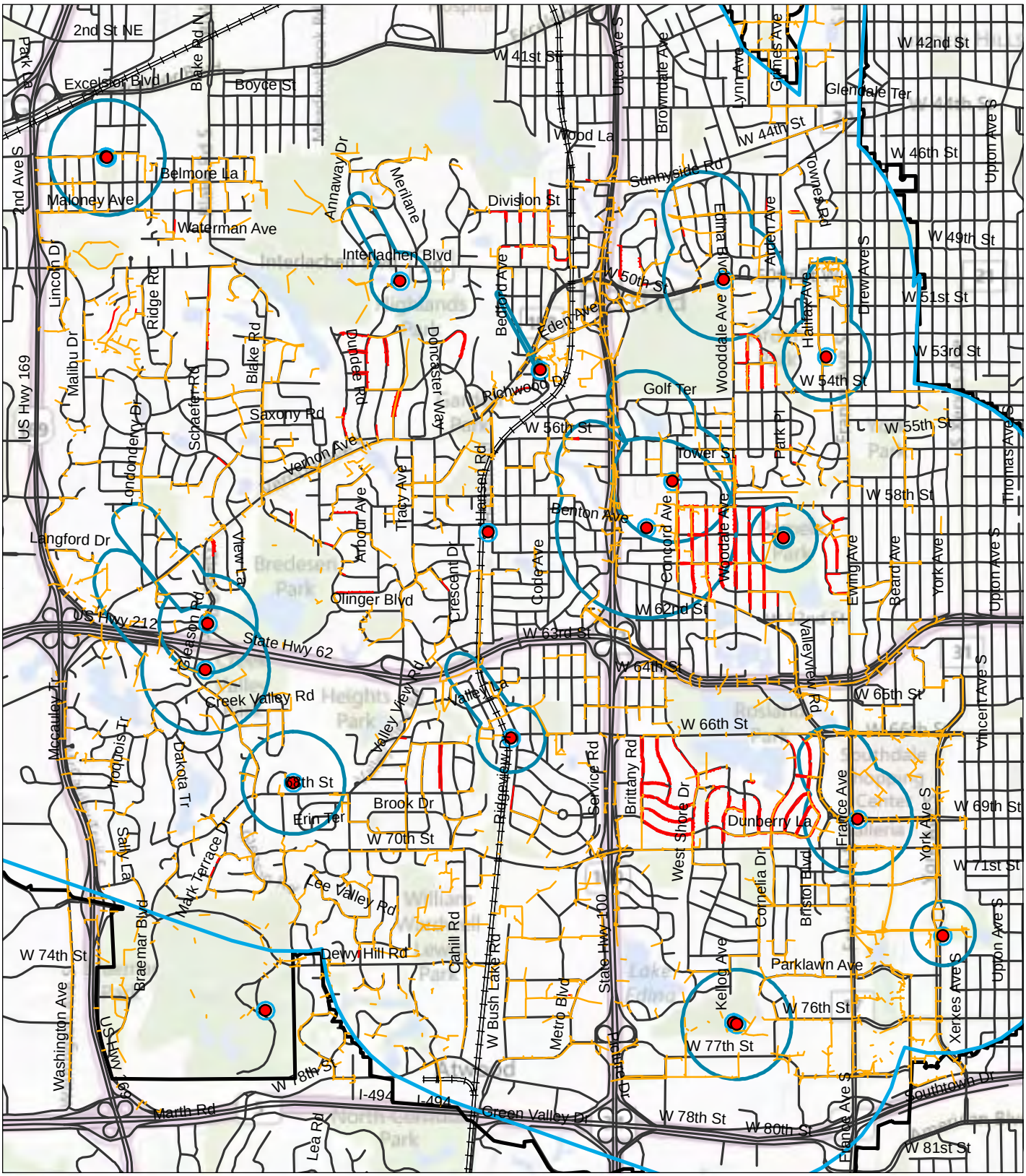
Zoning

LANDUSE

- Commercial
- Industrial
- Multiple Family Residential
- Open Water
- Parks & Recreation
- Public/Semi-Public
- Single Family Residential
- Vacant
- No Data Available

0 500 1,000 2,000 3,000 4,000 Feet

SOURCEWATER SOLUTIONS
213 4th St. E, Suite 418, St. Paul, MN 55101
Phone: (612) 354-2549
www.sourcewater-solutons.com



SOURCEWATER SOLUTIONS

213 4th St. E, Suite 418, St. Paul, MN 55101
Phone: (612) 354-2549
www.sourcewater-solutions.com

Legend

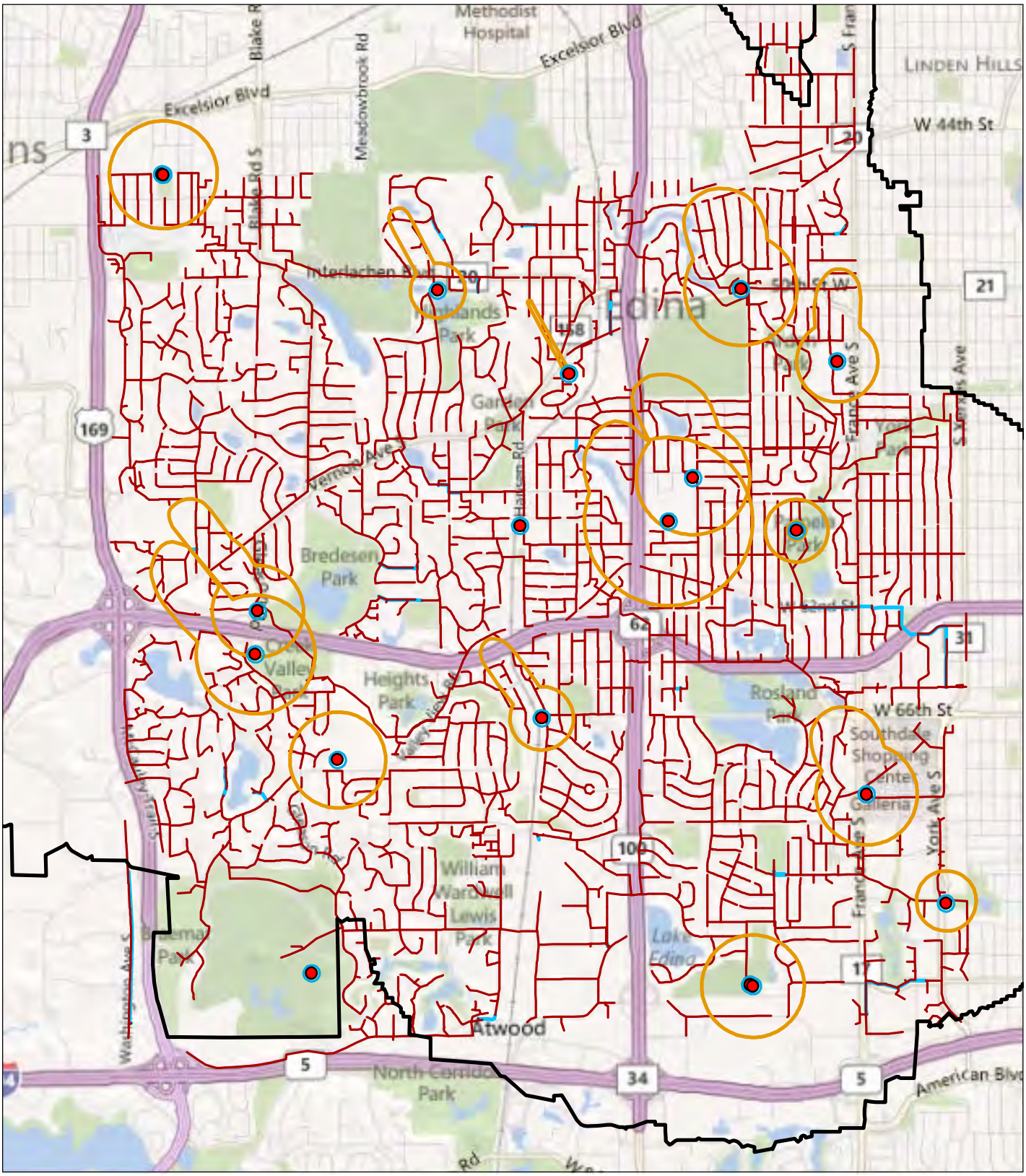
- Edina Wells
- Wellhead Protection Area
- Drinking Water Supply Management Area
- Emergency Response Area (ERA)
- Inner Wellhead Management Zone
- Railroads
- Roads
- Gravity Main
- Sump Draintile

0 1,200 2,400 4,800 7,200 Feet

Figure 9

Storm Sewer and Major Transportation Corridor

Edina Wellhead Protection Plan



SOURCEWATER SOLUTIONS
213 4th St. E, Suite 418, St. Paul, MN 55101
Phone: (612) 354-2549
www.sourcewater-solutions.com

Legend

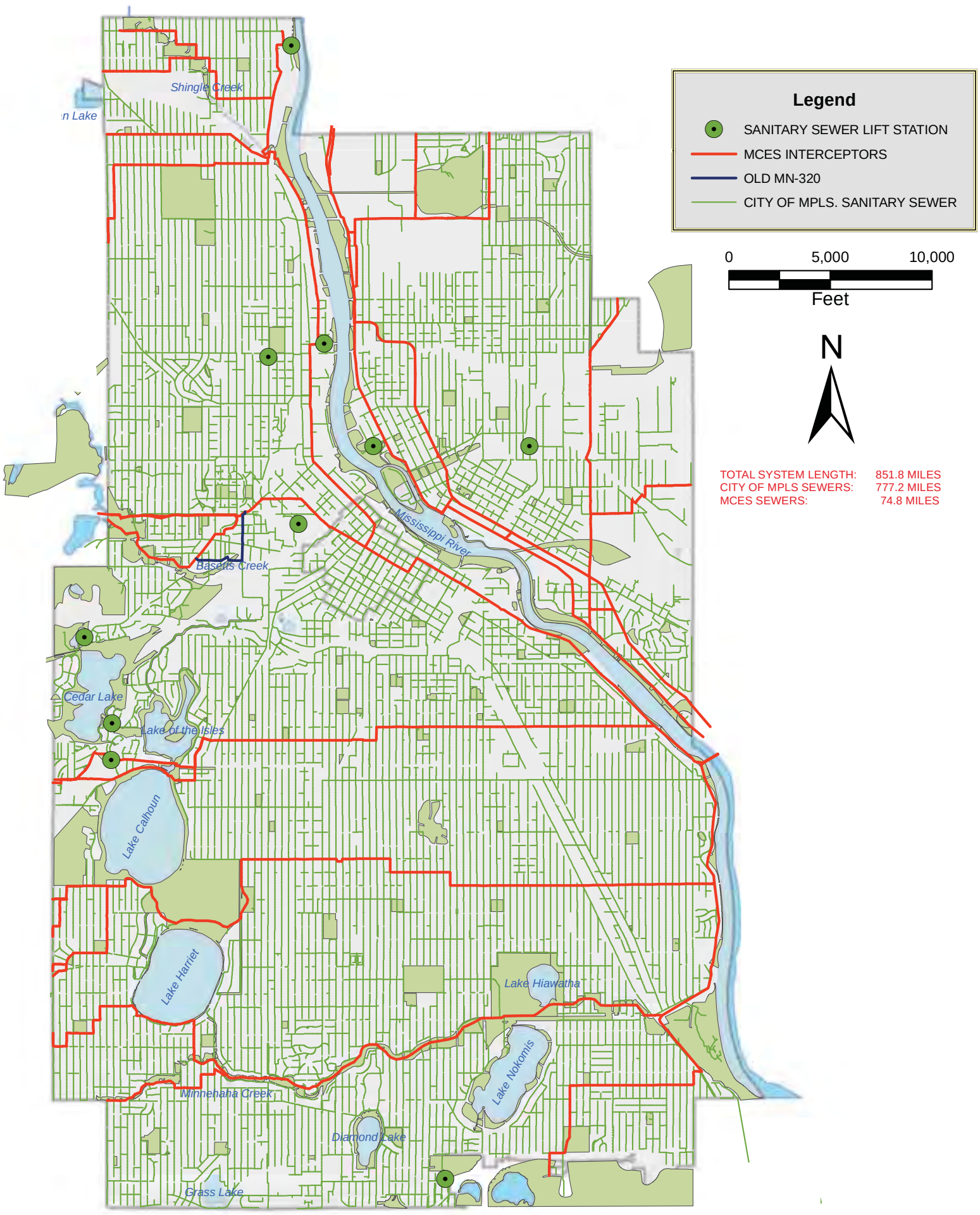
- Inner Wellhead Management Zone
- Emergency Response Area (ERA)
- Drinking Water Supply Management Area
- Edina Wells
- Gravity Main
- Pressurized Main

0 1,650 3,300 6,600 9,900 Feet

Figure 8

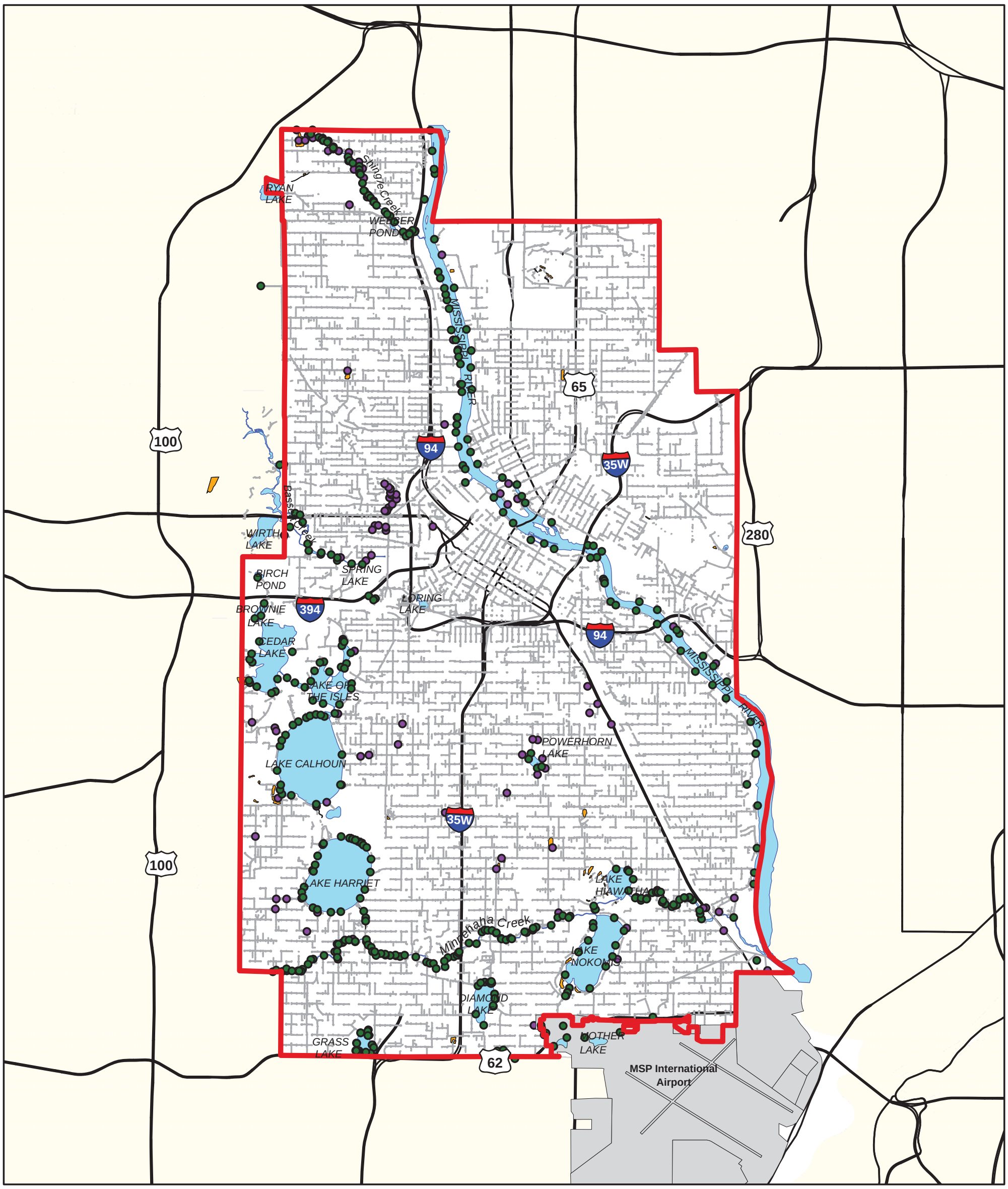
Sanitary Sewer Coverage

Edina Wellhead Protection Plan



CITY OF MINNEAPOLIS
SANITARY SEWERS & LIFT STATIONS

APRIL 2008



N
W E
S

Miles

1 0 1

City of Minneapolis

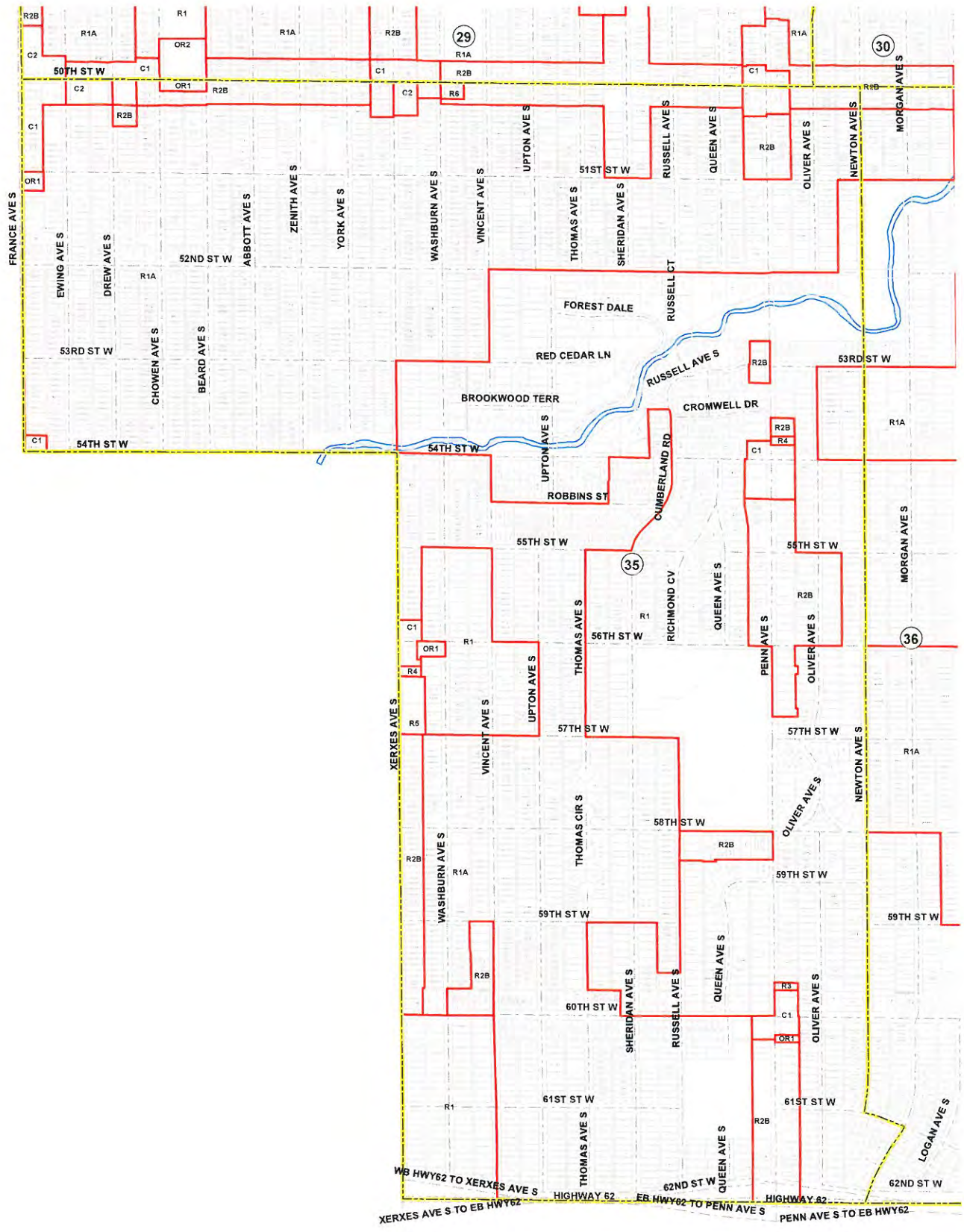
Stormwater Drainage System

Local Surface Water Management Plan

Figure 4-3

City Storm Sewer
Highways
Grit Chambers
Outfalls
Stormwater Basins

PRIMARY ZONING DISTRICTS



RESIDENCE DISTRICTS
LOW DENSITY
R1
R1A
R2
R2B
MEDIUM DENSITY DISTRICTS
R3
R4
HIGH DENSITY DISTRICTS
R5
R6

OFFICE RESIDENCE DISTRICTS
OR1
OR2
OR3

COMMERCIAL DISTRICTS
C1
C2
C3A
C3S
C4

DOWNTOWN DISTRICTS
B4
B4C
B4S

INDUSTRIAL DISTRICTS
I1
I2
I3

N

(12) PLATE NUMBER

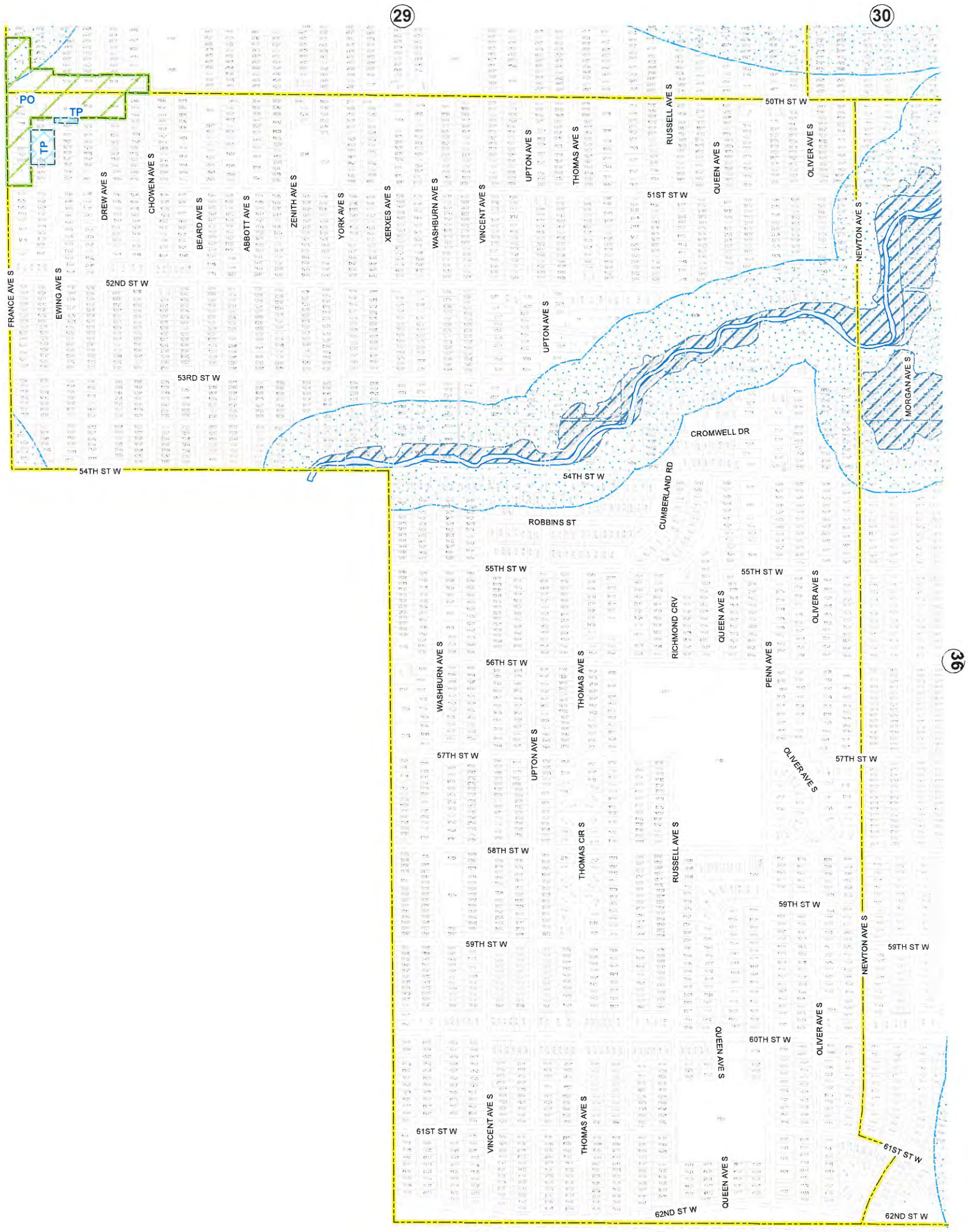
Last Amended : April 12, 2013

Primary Zoning
Plate Boundaries

0 250 500 1,000 1,500 Feet

MINNEAPOLIS ZONING PLATE 35

OVERLAY ZONING DISTRICTS



OVERLAY DISTRICTS

PO	PEDESTRIAN ORIENTED OVERLAY DISTRICT	DP	DOWNTOWN PARKING OVERLAY DISTRICT
LH	LINDEN HILLS OVERLAY DISTRICT	B4H	DOWNTOWN HOUSING OVERLAY DISTRICT
IL	INDUSTRIAL LIVING OVERLAY DISTRICT	DH	DOWNTOWN HEIGHT OVERLAY DISTRICT
TP	TRANSITIONAL PARKING OVERLAY DISTRICT	NM	NICOLLET MALL OVERLAY DISTRICT
NP	NORTH PHILLIPS OVERLAY DISTRICT	HA	HARMON AREA OVERLAY DISTRICT
MR	MISSISSIPPI RIVER CRITICAL AREA OVERLAY DISTRICT		

Wetland

Shoreland

Floodplain

PLATE BOUNDARIES

12 ADJOINING PLATE NUMBER

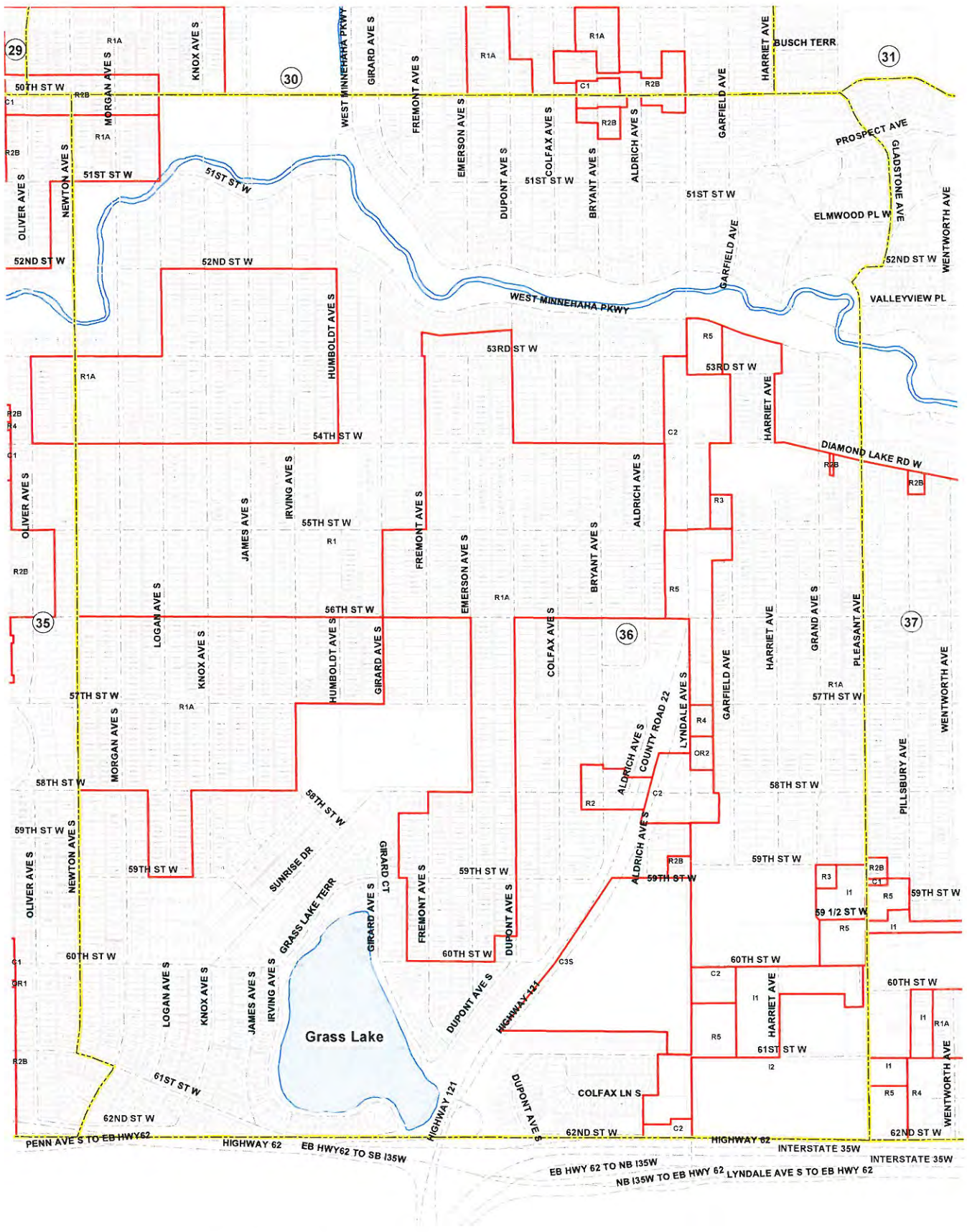
Last Amended : August 20, 2004

N

0 250 500 1,000 1,500 Feet

MINNEAPOLIS ZONING PLATE 35

PRIMARY ZONING DISTRICTS



RESIDENCE DISTRICTS
LOW DENSITY
R1
R1A
R2
R2B
MEDIUM DENSITY DISTRICTS
R3
R4
HIGH DENSITY DISTRICTS
R5
R6

OFFICE RESIDENCE DISTRICTS
OR1
OR2
OR3
COMMERCIAL DISTRICTS
C1
C2
C3A
C3S
C4

DOWNTOWN DISTRICTS
B4
B4C
B4S
INDUSTRIAL DISTRICTS
I1
I2
I3

N

(12) PLATE NUMBER

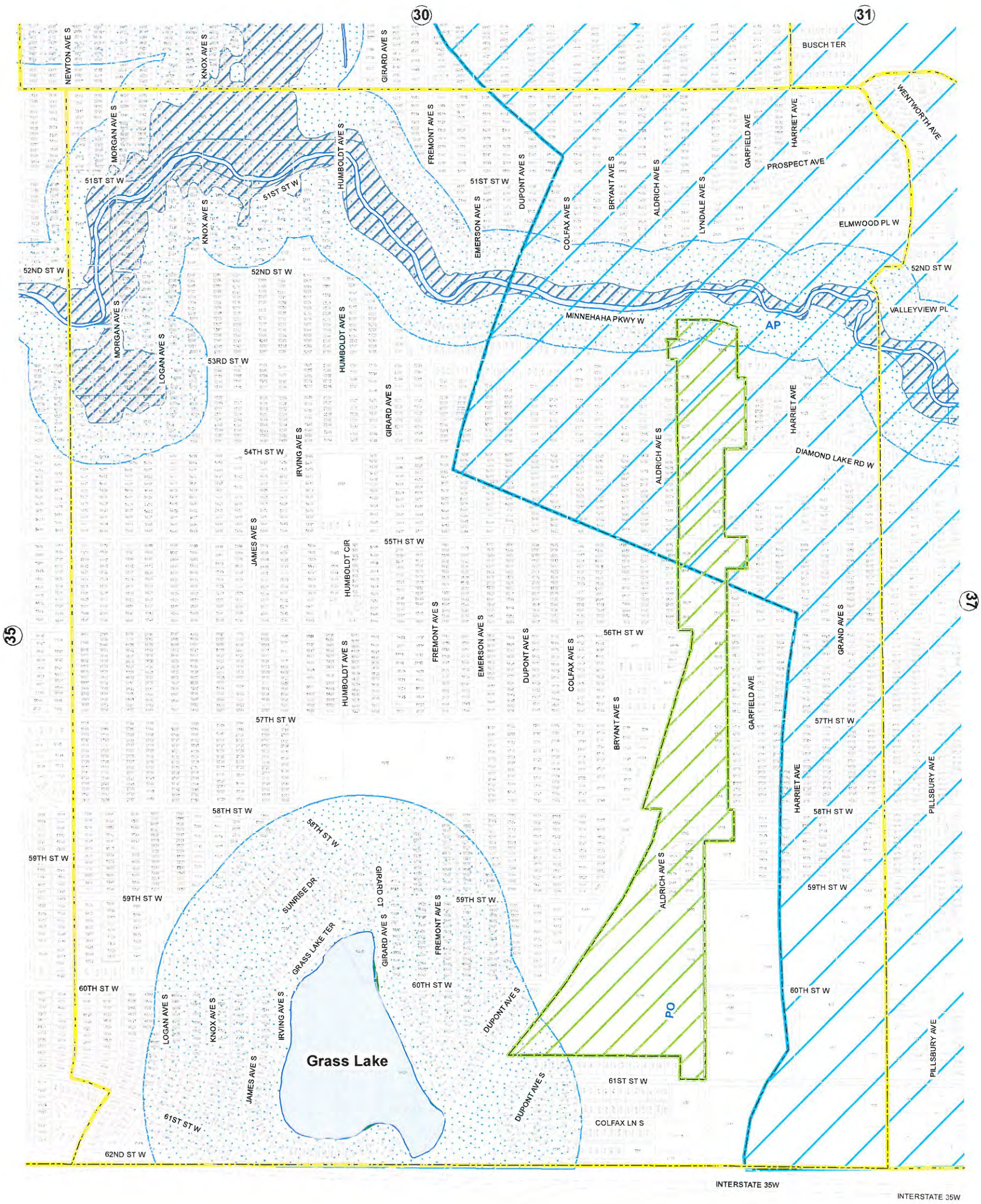
Last Amended : January 11, 2013

Primary Zoning
Plate Boundaries

0 250 500 1,000 1,500 Feet

MINNEAPOLIS ZONING PLATE 36

OVERLAY ZONING DISTRICTS



Overlay Districts

- Airport
- Downtown Height
- Downtown Housing
- Downtown Parking
- Harmon Area
- Industrial Living
- Linden Hills
- Nicollet Mall
- North Phillips
- Pedestrian Oriented
- Transitional Parking
- Mississippi River Critical Area
- Shoreland
- Floodplain

N

(12) ADJOINING PLATE NUMBER

Last Amended : September 21, 2007

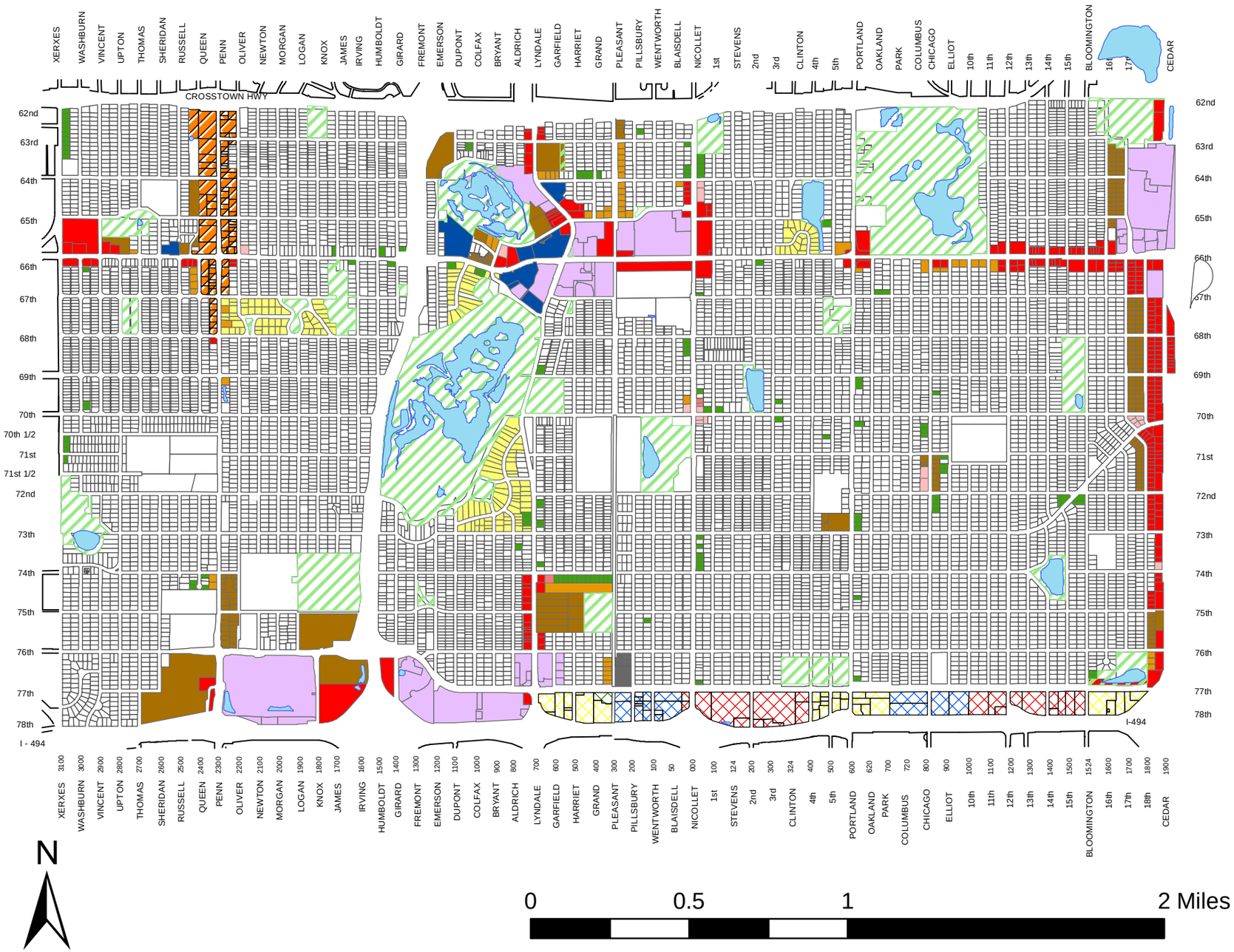
Wetland — Plate Boundaries

0 250 500 1,000 1,500 Feet

MINNEAPOLIS ZONING PLATE 36

UPDATED: 5/15/13

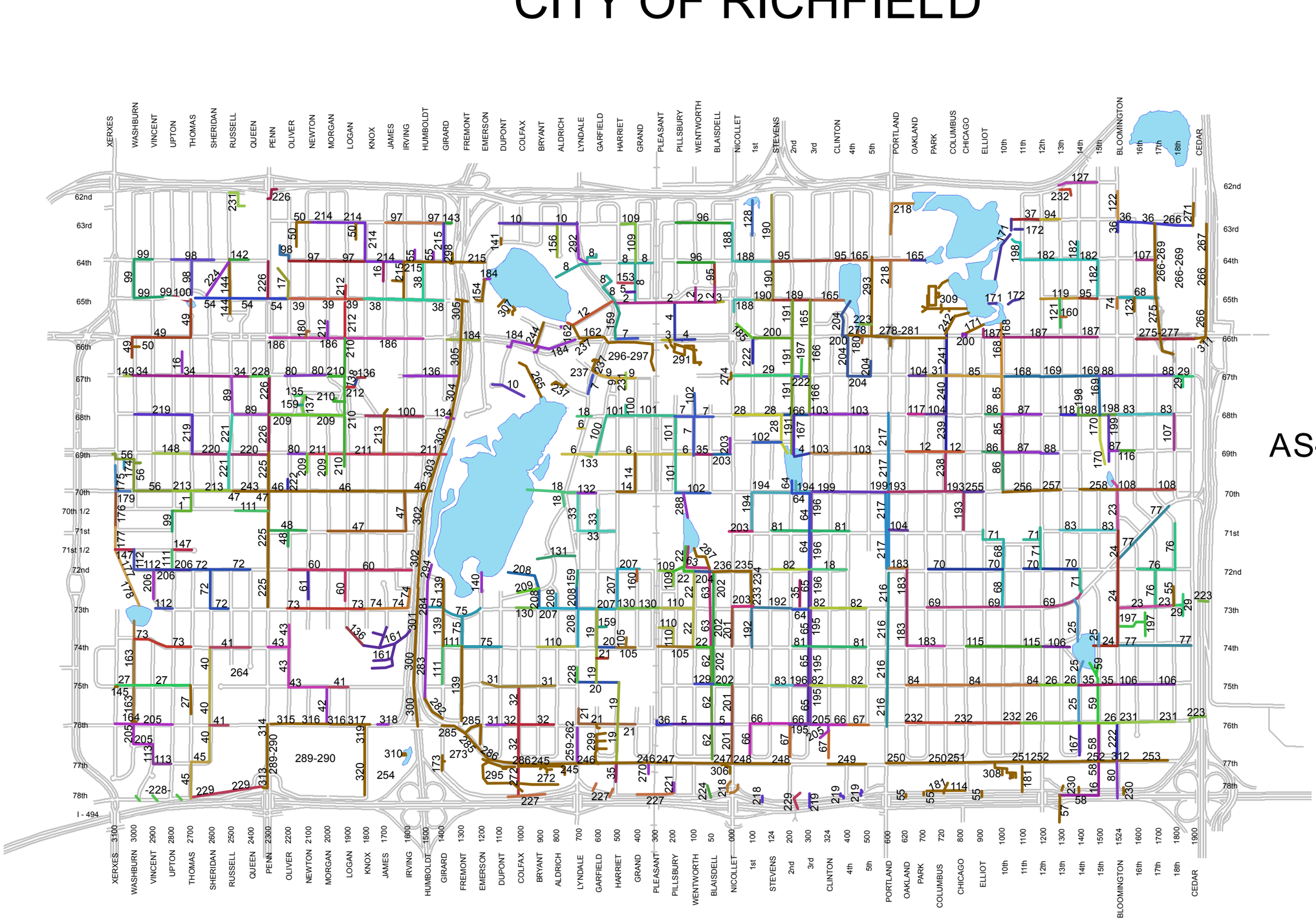
City of Richfield



Zoning Designation

- Park (Zoning District is R)
- R Single-Family
- R-1 Low-Density Single-Fam.
- MR-1 Two-Family
- PMR-1 Planned Two-Family
- PMR Planned Multi-Fam.
- MR-2 Multi-Family
- MR-3 High-Density Multi-Fam.
- SO Service Office
- C-1 Community Commercial
- C-2 General Commercial
- PC-2 Planned Gen.Commercial
- I Industrial
- MU-N Mixed Use-Neighborhood
- MU-C Mixed Use-Community
- MU-C/PAC MU-C w/Penn Overlay
- MU-R Mixed Use-Regional
- PMU Planned Mixed Use

CITY OF RICHFIELD



STORM SEWER
AS-BUILT INDEX MAP

City of Richfield, Engineering Division 2011

CITY OF RICHFIELD

SANITARY SEWER AS-BUILT INDEX MAP

0 0.15 0.3 0.6 0.9 1.2 Miles

City of Richfield, Engineering Division 2011

Attachment C-3

IWMZ Inventories

Environmental Health Division
Drinking Water Protection Section
P.O. Box 64975
St. Paul, Minnesota 55164-0975

INNER WELLHEAD MANAGEMENT ZONE (IWMZ) - POTENTIAL CONTAMINANT SOURCE INVENTORY (PCSI) REPORT

PUBLIC WATER SYSTEM INFORMATION

PWS ID	1270001	**COMMUNITY**
NAME	Bloomington	
ADDRESS	Bloomington Water Superintendent, 1700 West 98th Street, Bloomington, MN 55437	

FACILITY (WELL) INFORMATION

NAME	Well #1	**IS THERE A WELL LOG OR ADDITIONAL CONSTRUCTION INFORMATION AVAILABLE?**
FACILITY ID	S01	☐ **YES** (Please attach a copy)
UNIQUE WELL NO.	222910	☐ **NO** ☐ **UNDETERMINED**
COUNTY	Hennepin	

PWS ID / FACILITY ID	1270001 S01	**UNIQUE WELL NO.**	222910

PCSI CODE	ACTUAL OR POTENTIAL CONTAMINATION SOURCE	ISOLATION DISTANCES (FEET)				LOCATION	
		Minimum Distances		Sensitive Well[1]	Within 200 Ft. Y / N / U	Dist. from Well	Est. (?)
		Community	Non-community				
Agricultural Related							
*AC1	Agricultural chemical buried piping	50	50		N		
*AC2	Agricultural chemical multiple tanks or containers for residential retail sale or use, no single tank or container exceeding, but aggregate volume exceeding 56 gal. or 100 lbs. dry weight	50	50		N		
ACP	Agricultural chemical tank or container with 25 gal. or more or 100 lbs. or more dry weight, or equipment filling or cleaning area without safeguards	150	150		N		
ACS	Agricultural chemical storage or equipment filling or cleaning area with safeguards	100	100		N		
ACR	Agricultural chemical storage or equipment filling or cleaning area with safeguards and roofed	50	50		N		
ADW	Agricultural drainage well[2] (Class V well - illegal[3])	50	50		N		
AAT	Anhydrous ammonia tank (stationary tank)	50	50		N		
AB1	Animal building, feedlot, confinement area, or kennel, 0.1 to 1.0 animal unit (stockyard)	50	20	100/40	N		
AB2	Animal building or poultry building, including a horse riding area, more than 1.0 animal unit	50	50	100	N		
ABS	Animal burial area, more than 1.0 animal unit	50	50		N		
FWP	Animal feeding or watering area within a pasture, more than 1.0 animal unit	50	50	100	N		
AF1	Animal feedlot, unroofed, 300 or more animal units (stockyard)	100	100	200	N		
AF2	Animal feedlot, more than 1.0, but less than 300 animal units (stockyard)	50	50	100	N		
AMA	Animal manure application	use discretion	use discretion		N		
REN	Animal rendering plant	50	50		N		
MS1	Manure (liquid) storage basin or lagoon, unpermitted or noncertified	300	300	600	N		
MS2	Manure (liquid) storage basin or lagoon, approved earthen liner	150	150	300	N		
MS3	Manure (liquid) storage basin or lagoon, approved concrete or composite liner	100	100	200	N		
MS4	Manure (solid) storage area, not covered with a roof	100	100	200	N		
OSC	Open storage for crops	use discretion	use discretion		N		
SSTS Related							
AA1	Absorption area of a soil dispersal system, average flow greater than 10,000 gal./day	300	300	600	N		
AA2	Absorption area of a soil dispersal system serving a facility handling infectious or pathological wastes, average flow 10,000 gal./day or less	150	150	300	N		
AA3	Absorption area of a soil dispersal system, average flow 10,000 gal./day or less	50	50	100	N		
AA4	Absorption area of a soil dispersal system serving multiple family residences or a non-residential facility and has the capacity to serve 20 or more persons per day (Class V well)[2]	50/300/150[4]	50/300/150[4]	100/600/300[4]	N		
CSP	Cesspool	75	75	150	N		
AGG	Dry well, leaching pit, seepage pit	75	75	150	N		
*FD1	Floor drain, grate, or trough connected to a buried sewer	50	50		N		
*FD2	Floor drain, grate, or trough if buried sewer is air-tested, approved materials, serving one building, or two or less single-family residences	50	20		N		
*GW1	Gray-water dispersal area	50	50	100	N		
LC1	Large capacity cesspools (Class V well - illegal)[2]	75	75	150	N		

PWS ID / FACILITY ID	1270001 S01	UNIQUE WELL NO.	222910

PCSI CODE	ACTUAL OR POTENTIAL CONTAMINATION SOURCE	ISOLATION DISTANCES (FEET)				LOCATION	
		Minimum Distances		Sensitive Well[1]	Within 200 Ft. Y / N / U	Dist. from Well	Est. (?)
		Community	Non-community				
MVW	Motor vehicle waste disposal (Class V well - illegal)[2]	illegal	illegal		N		
PR1	Privy, nonportable	50	50	100	N		
PR2	Portable (privy) or toilet	50	20		N		
*SF1	Watertight sand filter; peat filter; or constructed wetland	50	50		N		
SET	Septic tank	50	50		N		
HTK	Sewage holding tank, watertight	50	50		N		
SS1	Sewage sump capacity 100 gal. or more	50	50		N		
SS2	Sewage sump capacity less than 100 gal., tested, conforming to rule	50	20		N		
*ST1	Sewage treatment device, watertight	50	50		N		
SB1	Sewer, buried, approved materials, tested, serving one building, or two or less single-family residences	50	20		N		
SB2	Sewer, buried, collector, municipal, serving a facility handling infectious or pathological wastes, open-jointed or unapproved materials	50	50		Y	130	N
*WB1	Water treatment backwash holding basin, reclaim basin, or surge tank with a direct sewer connection	50	50		N		
*WB2	Water treatment backwash holding basin, reclaim basin, or surge tank with a backflow protected sewer connection	20	20		Y	150	N
Land Application							
SPT	Land spreading area for sewage, septage, or sludge	50	50	100	N		
Solid Waste Related							
COS	Commercial compost site	50	50		N		
CD1	Construction or demolition debris disposal area	50	50	100	N		
*HW1	Household solid waste disposal area, single residence	50	50	100	N		
LF1	Landfill, permitted demolition debris, dump, or mixed municipal solid waste from multiple persons	300	300	600	N		
SVY	Scrap yard	50	50		N		
SWT	Solid waste transfer station	50	50		N		
Storm Water Related							
SD1	Storm water drain pipe, 8 inches or greater in diameter	50	20		Y	160	N
SWI	Storm water drainage well[2] (Class V well - illegal[3])	50	50		N		
SM1	Storm water pond greater than 5000 gal.	50	35		N		
Wells and Borings							
*EB1	Elevator boring, not conforming to rule	50	50		N		
*EB2	Elevator boring, conforming to rule	20	20		N		
MON	Monitoring well	record dist.	record dist.		N		
WEL	Operating well	record dist.	record dist.		N		
UUW	Unused, unsealed well or boring	50	50		N		
General							
*CR1	Cistern or reservoir, buried, nonpressurized water supply	20	20		N		
PLM	Contaminant plume	50	50		N		
*CW1	Cooling water pond, industrial	50	50	100	N		
DC1	Deicing chemicals, bulk road	50	50	100	N		
*ET1	Electrical transformer storage area, oil-filled	50	50		N		
GRV	Grave or mausoleum	50	50		N		
GP1	Gravel pocket or French drain for clear water drainage only	20	20		Y	54	N
*HS1	Hazardous substance buried piping	50	50		N		
HS2	Hazardous substance tank or container, above ground or underground, 56 gal. or more, or 100 lbs. or more dry weight, without safeguards	150	150		N		
HS3	Hazardous substance tank or container, above ground or underground, 56 gal. or more, or 100 lbs. or more dry weight with safeguards	100	100		N		
HS4	Hazardous substance multiple storage tanks or containers for residential retail sale or use, no single tank or container exceeding 56 gal. or 100 lbs., but aggregate volume exceeding	50	50		N		
HWF	Highest water or flood level	50	N/A		N		
*HG1	Horizontal ground source closed loop heat exchanger buried piping	50	50		N		
*HG2	Horizontal ground source closed loop heat exchanger buried piping and horizontal piping, approved materials and heat transfer fluid	50	10		N		
IWD	Industrial waste disposal well (Class V well)[2]	illegal[3]	illegal[3]		N		
IWS	Interceptor, including a flammable waste or sediment	50	50		N		
OH1	Ordinary high water level of a stream, river, pond, lake, reservoir, or drainage ditch (holds water six months or more)	50	35		N		

PWS ID / FACILITY ID	1270001 S01	UNIQUE WELL NO.	222910

PCSI CODE	ACTUAL OR POTENTIAL CONTAMINATION SOURCE	ISOLATION DISTANCES (FEET)				LOCATION	
		Minimum Distances		Sensitive Well[1]	Within 200 Ft. Y / N / U	Dist. from Well	Est. (?)
		Community	Non-community				
*PP1	Petroleum buried piping	50	50		N		
*PP2	Petroleum or crude oil pipeline to a refinery or distribution center	100	100		N		
PT1	Petroleum tank or container, 1100 gal. or more, without safeguards	150	150		Y	200	N
PT2	Petroleum tank or container, 1100 gal. or more, with safeguards	100	100		N		
PT3	Petroleum tank or container, buried, between 56 and 1100 gal.	50	50		N		
PT4	Petroleum tank or container, not buried, between 56 and 1100 gal.	50[5]	20		N		
PU1	Pit or unfilled space more than four feet in depth	20	20		N		
PC1	Pollutant or contaminant that may drain into the soil	50	50	100	N		
SP1	Swimming pool, in-ground	20	20		N		
*VH1	Vertical heat exchanger, horizontal piping conforming to rule	50	10		N		
*VH2	Vertical heat exchanger (vertical) piping, conforming to rule	50	35		N		
*WR1	Wastewater rapid infiltration basin, municipal or industrial	300	300	600	N		
*WA1	Wastewater spray irrigation area, municipal or industrial	150	150	300	N		
*WS1	Wastewater stabilization pond, industrial	150	150	300	N		
*WS2	Wastewater stabilization pond, municipal, 500 or more gal./acre/day of leakage	300	300	600	N		
*WS3	Wastewater stabilization pond, municipal, less than 500 gal./acre/day of leakage	150	150	300	N		
*WT1	Wastewater treatment unit tanks, vessels and components (Package plant)	100	100		N		
*WT2	Water treatment backwash disposal area	50	50	100	N		
Additional Sources (If there is more than one source listed above, please indicate here).							
Potential Contamination Sources and Codes Based on Previous Versions of this Form							
	none found within 200' of this well.						

* New potential contaminant source.

[1] A sensitive well has less than 50 feet of watertight casing, and which is not cased below a confining layer or confining materials of at least 10' in thickness.

[2] These sources, known as Class V underground injection wells, are regulated by the federal U.S. Environmental Protection Agency.

[3] These sources are classified as illegal by Minnesota Rules, Chapter 4725.

[4] Isolation distance is determined by average flow per day or if a facility handles infectious or pathological wastes.

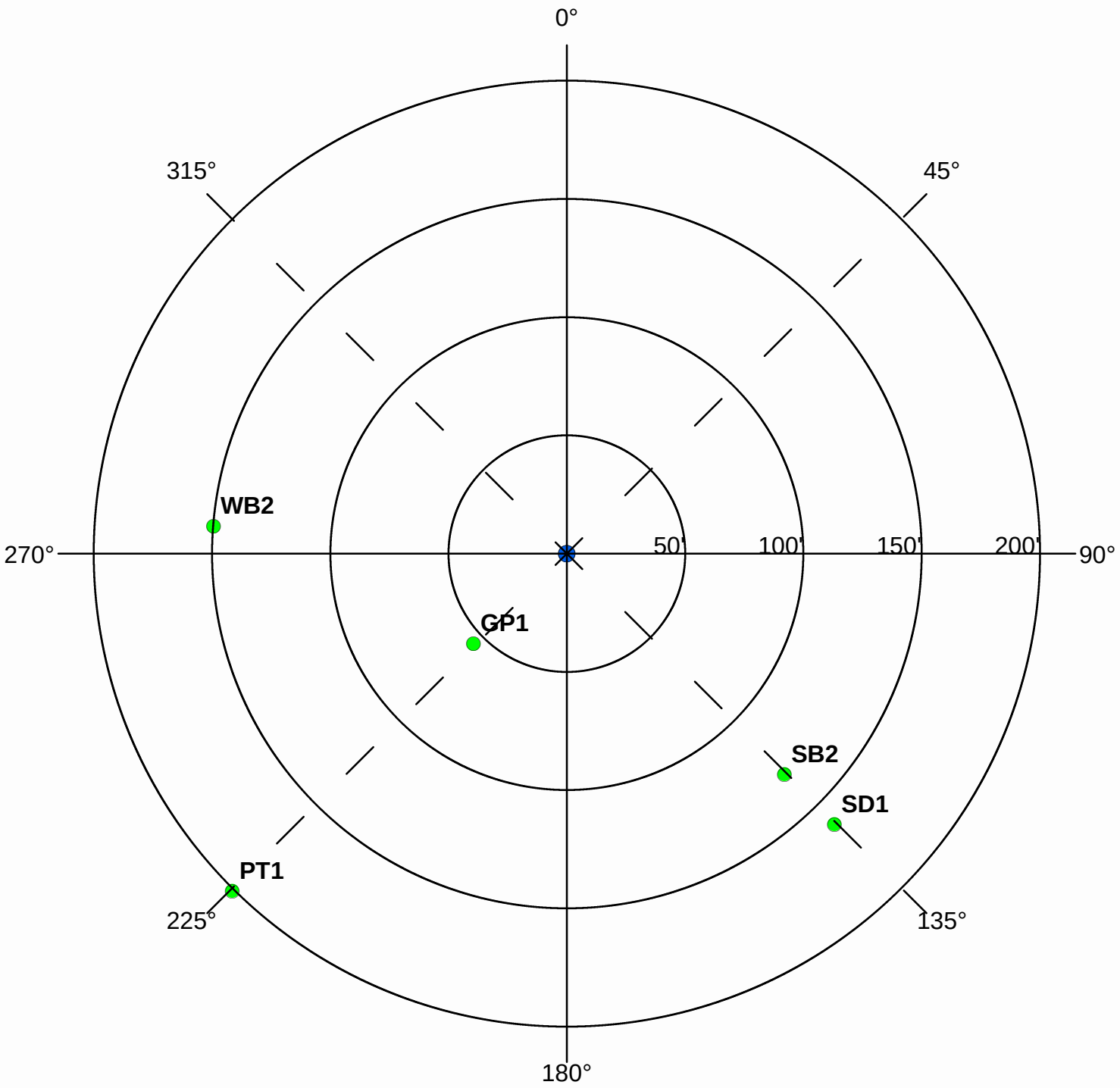
[5] A community public water-supply well must be a minimum of 50 feet from a petroleum tank or container, unless the tank or container is used for emergency pumping and is located in a room or building separate from the community well; and is of double-wall construction with leak detection between walls; or is protected with secondary containment.

This form is based on the new isolation distances in Minnesota Rules, Chapter 4725, related to wells and borings adopted August 4, 2008, and Minnesota Rules, Chapter 4720, related to wellhead protection.

PWS ID / FACILITY ID	1270001 S01	UNIQUE WELL NO.	222910

SETBACK DISTANCES	All potential contaminant sources must be noted on sketch.

Record the distance and approximate compass bearing of each potential contaminant source from the well, and identify the source using the "Source Code". Unlabeled points on the map are unsealed wells.



Were the isolation distances maintained for the new sources of contamination?	(Y)	N	N/A
Is the system monitoring existing nonconforming sources of contamination?	Y	N	(N/A)

Reminder Question: Were the wellhead protection measure(s) implemented?

INSPECTOR	Freitag, John	DATE	8 - 6 - 2013

PWS ID / FACILITY ID	1270001 S01	UNIQUE WELL NO.	222910

RECOMMENDED WELLHEAD PROTECTION (WHP) MEASURES	WHP MEASURE IMPLEMENTED? Y or N	DATE VERIFIED

COMMENTS

For further information, please contact:

Minnesota Department of Health
Drinking Water Protection Section
Source Water Protection Unit
P.O. Box 64975
St. Paul, Minnesota 55164-0975

Section Receptionist: 651-201-4700
Division TDD: 651-201-5797 or MN Relay Service @ 1-800-627-3529 and ask for 651-201-5000

Environmental Health Division
Drinking Water Protection Section
P.O. Box 64975
St. Paul, Minnesota 55164-0975

INNER WELLHEAD MANAGEMENT ZONE (IWMZ) - POTENTIAL CONTAMINANT SOURCE INVENTORY (PCSI) REPORT

PUBLIC WATER SYSTEM INFORMATION

PWS ID 1270001 **COMMUNITY**
NAME Bloomington
ADDRESS Bloomington Water Superintendent, 1700 West 98th Street, Bloomington, MN 55437

FACILITY (WELL) INFORMATION

NAME Well #2
FACILITY ID S02
UNIQUE WELL NO. 222911
COUNTY Hennepin

IS THERE A WELL LOG OR ADDITIONAL CONSTRUCTION INFORMATION AVAILABLE?
☐ YES (Please attach a copy)
☐ NO ☐ UNDETERMINED

PWS ID / FACILITY ID	1270001 S02	UNIQUE WELL NO.	222911

PCSI CODE	ACTUAL OR POTENTIAL CONTAMINATION SOURCE	ISOLATION DISTANCES (FEET)				LOCATION	
		Minimum Distances		Sensitive Well[1]	Within 200 Ft. Y / N / U	Dist. from Well	Est. (?)
		Community	Non-community				
Agricultural Related							
*AC1	Agricultural chemical buried piping	50	50		N		
*AC2	Agricultural chemical multiple tanks or containers for residential retail sale or use, no single tank or container exceeding, but aggregate volume exceeding 56 gal. or 100 lbs. dry weight	50	50		N		
ACP	Agricultural chemical tank or container with 25 gal. or more or 100 lbs. or more dry weight, or equipment filling or cleaning area without safeguards	150	150		N		
ACS	Agricultural chemical storage or equipment filling or cleaning area with safeguards	100	100		N		
ACR	Agricultural chemical storage or equipment filling or cleaning area with safeguards and roofed	50	50		N		
ADW	Agricultural drainage well[2] (Class V well - illegal[3])	50	50		N		
AAT	Anhydrous ammonia tank (stationary tank)	50	50		N		
AB1	Animal building, feedlot, confinement area, or kennel, 0.1 to 1.0 animal unit (stockyard)	50	20	100/40	N		
AB2	Animal building or poultry building, including a horse riding area, more than 1.0 animal unit	50	50	100	N		
ABS	Animal burial area, more than 1.0 animal unit	50	50		N		
FWP	Animal feeding or watering area within a pasture, more than 1.0 animal unit	50	50	100	N		
AF1	Animal feedlot, unroofed, 300 or more animal units (stockyard)	100	100	200	N		
AF2	Animal feedlot, more than 1.0, but less than 300 animal units (stockyard)	50	50	100	N		
AMA	Animal manure application	use discretion	use discretion		N		
REN	Animal rendering plant	50	50		N		
MS1	Manure (liquid) storage basin or lagoon, unpermitted or noncertified	300	300	600	N		
MS2	Manure (liquid) storage basin or lagoon, approved earthen liner	150	150	300	N		
MS3	Manure (liquid) storage basin or lagoon, approved concrete or composite liner	100	100	200	N		
MS4	Manure (solid) storage area, not covered with a roof	100	100	200	N		
OSC	Open storage for crops	use discretion	use discretion		N		
SSTS Related							
AA1	Absorption area of a soil dispersal system, average flow greater than 10,000 gal./day	300	300	600	N		
AA2	Absorption area of a soil dispersal system serving a facility handling infectious or pathological wastes, average flow 10,000 gal./day or less	150	150	300	N		
AA3	Absorption area of a soil dispersal system, average flow 10,000 gal./day or less	50	50	100	N		
AA4	Absorption area of a soil dispersal system serving multiple family residences or a non-residential facility and has the capacity to serve 20 or more persons per day (Class V well)[2]	50/300/150[4]	50/300/150[4]	100/600/300[4]	N		
CSP	Cesspool	75	75	150	N		
AGG	Dry well, leaching pit, seepage pit	75	75	150	N		
*FD1	Floor drain, grate, or trough connected to a buried sewer	50	50		N		
*FD2	Floor drain, grate, or trough if buried sewer is air-tested, approved materials, serving one building, or two or less single-family residences	50	20		N		
*GW1	Gray-water dispersal area	50	50	100	N		
LC1	Large capacity cesspools (Class V well - illegal)[2]	75	75	150	N		

PWS ID / FACILITY ID	1270001 S02	UNIQUE WELL NO.	222911

PCSI CODE	ACTUAL OR POTENTIAL CONTAMINATION SOURCE	ISOLATION DISTANCES (FEET)				LOCATION	
		Minimum Distances		Sensitive Well[1]	Within 200 Ft. Y / N / U	Dist. from Well	Est. (?)
		Community	Non-community				
MVW	Motor vehicle waste disposal (Class V well - illegal)[2]	illegal	illegal		N		
PR1	Privy, nonportable	50	50	100	N		
PR2	Portable (privy) or toilet	50	20		N		
*SF1	Watertight sand filter; peat filter; or constructed wetland	50	50		N		
SET	Septic tank	50	50		N		
HTK	Sewage holding tank, watertight	50	50		N		
SS1	Sewage sump capacity 100 gal. or more	50	50		N		
SS2	Sewage sump capacity less than 100 gal., tested, conforming to rule	50	20		N		
*ST1	Sewage treatment device, watertight	50	50		N		
SB1	Sewer, buried, approved materials, tested, serving one building, or two or less single-family residences	50	20		N		
SB2	Sewer, buried, collector, municipal, serving a facility handling infectious or pathological wastes, open-jointed or unapproved materials	50	50		Y	190	N
*WB1	Water treatment backwash holding basin, reclaim basin, or surge tank with a direct sewer connection	50	50		N		
*WB2	Water treatment backwash holding basin, reclaim basin, or surge tank with a backflow protected sewer connection	20	20		N		
Land Application							
SPT	Land spreading area for sewage, septage, or sludge	50	50	100	N		
Solid Waste Related							
COS	Commercial compost site	50	50		N		
CD1	Construction or demolition debris disposal area	50	50	100	N		
*HW1	Household solid waste disposal area, single residence	50	50	100	N		
LF1	Landfill, permitted demolition debris, dump, or mixed municipal solid waste from multiple persons	300	300	600	N		
SVY	Scrap yard	50	50		N		
SWT	Solid waste transfer station	50	50		N		
Storm Water Related							
SD1	Storm water drain pipe, 8 inches or greater in diameter	50	20		Y	125	N
SD1	Storm water drain pipe, 8 inches or greater in diameter	50	20		Y	160	N
SD1	Storm water drain pipe, 8 inches or greater in diameter	50	20		Y	150	N
SWI	Storm water drainage well[2] (Class V well - illegal[3])	50	50		N		
SM1	Storm water pond greater than 5000 gal.	50	35		N		
Wells and Borings							
*EB1	Elevator boring, not conforming to rule	50	50		N		
*EB2	Elevator boring, conforming to rule	20	20		N		
MON	Monitoring well	record dist.	record dist.		N		
WEL	Operating well	record dist.	record dist.		Y	42	
UUW	Unused, unsealed well or boring	50	50		N		
General							
*CR1	Cistern or reservoir, buried, nonpressurized water supply	20	20		N		
PLM	Contaminant plume	50	50		N		
*CW1	Cooling water pond, industrial	50	50	100	N		
DC1	Deicing chemicals, bulk road	50	50	100	N		
*ET1	Electrical transformer storage area, oil-filled	50	50		N		
GRV	Grave or mausoleum	50	50		N		
GP1	Gravel pocket or French drain for clear water drainage only	20	20		Y	51	N
*HS1	Hazardous substance buried piping	50	50		N		
HS2	Hazardous substance tank or container, above ground or underground, 56 gal. or more, or 100 lbs. or more dry weight, without safeguards	150	150		N		
HS3	Hazardous substance tank or container, above ground or underground, 56 gal. or more, or 100 lbs. or more dry weight with safeguards	100	100		N		
HS4	Hazardous substance multiple storage tanks or containers for residential retail sale or use, no single tank or container exceeding 56 gal. or 100 lbs., but aggregate volume exceeding	50	50		N		
HWF	Highest water or flood level	50	N/A		N		
*HG1	Horizontal ground source closed loop heat exchanger buried piping	50	50		N		
*HG2	Horizontal ground source closed loop heat exchanger buried piping and horizontal piping, approved materials and heat transfer fluid	50	10		N		
IWD	Industrial waste disposal well (Class V well)[2]	illegal[3]	illegal[3]		N		
IWS	Interceptor, including a flammable waste or sediment	50	50		N		

PWS ID / FACILITY ID	1270001 S02	UNIQUE WELL NO.	222911

PCSI CODE	ACTUAL OR POTENTIAL CONTAMINATION SOURCE	ISOLATION DISTANCES (FEET)				LOCATION	
		Minimum Distances		Sensitive Well[1]	Within 200 Ft. Y / N / U	Dist. from Well	Est. (?)
		Community	Non-community				
OH1	Ordinary high water level of a stream, river, pond, lake, reservoir, or drainage ditch (holds water six months or more)	50	35		Y	105	N
*PP1	Petroleum buried piping	50	50		N		
*PP2	Petroleum or crude oil pipeline to a refinery or distribution center	100	100		N		
PT1	Petroleum tank or container, 1100 gal. or more, without safeguards	150	150		N		
PT2	Petroleum tank or container, 1100 gal. or more, with safeguards	100	100		N		
PT3	Petroleum tank or container, buried, between 56 and 1100 gal.	50	50		N		
PT4	Petroleum tank or container, not buried, between 56 and 1100 gal.	50[5]	20		N		
PU1	Pit or unfilled space more than four feet in depth	20	20		N		
PC1	Pollutant or contaminant that may drain into the soil	50	50	100	N		
SP1	Swimming pool, in-ground	20	20		N		
*VH1	Vertical heat exchanger, horizontal piping conforming to rule	50	10		N		
*VH2	Vertical heat exchanger (vertical) piping, conforming to rule	50	35		N		
*WR1	Wastewater rapid infiltration basin, municipal or industrial	300	300	600	N		
*WA1	Wastewater spray irrigation area, municipal or industrial	150	150	300	N		
*WS1	Wastewater stabilization pond, industrial	150	150	300	N		
*WS2	Wastewater stabilization pond, municipal, 500 or more gal./acre/day of leakage	300	300	600	N		
*WS3	Wastewater stabilization pond, municipal, less than 500 gal./acre/day of leakage	150	150	300	N		
*WT1	Wastewater treatment unit tanks, vessels and components (Package plant)	100	100		N		
*WT2	Water treatment backwash disposal area	50	50	100	N		
Additional Sources (If there is more than one source listed above, please indicate here).							
Potential Contamination Sources and Codes Based on Previous Versions of this Form							
	none found within 200' of this well.						

* New potential contaminant source.

[1] A sensitive well has less than 50 feet of watertight casing, and which is not cased below a confining layer or confining materials of at least 10' in thickness.

[2] These sources, known as Class V underground injection wells, are regulated by the federal U.S. Environmental Protection Agency.

[3] These sources are classified as illegal by Minnesota Rules, Chapter 4725.

[4] Isolation distance is determined by average flow per day or if a facility handles infectious or pathological wastes.

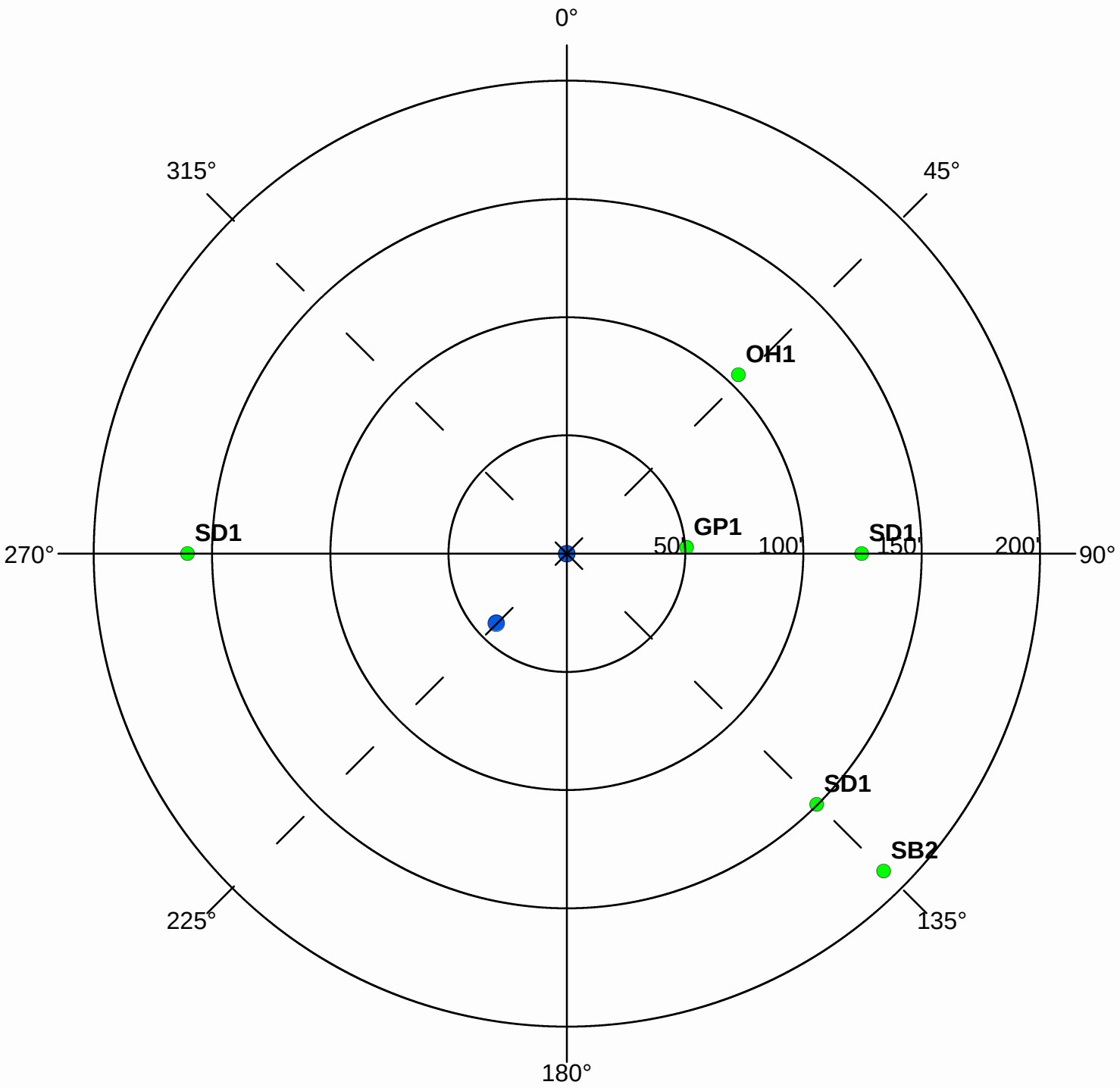
[5] A community public water-supply well must be a minimum of 50 feet from a petroleum tank or container, unless the tank or container is used for emergency pumping and is located in a room or building separate from the community well; and is of double-wall construction with leak detection between walls; or is protected with secondary containment.

This form is based on the new isolation distances in Minnesota Rules, Chapter 4725, related to wells and borings adopted August 4, 2008, and Minnesota Rules, Chapter 4720, related to wellhead protection.

PWS ID / FACILITY ID	1270001 S02	UNIQUE WELL NO.	222911

SETBACK DISTANCES	All potential contaminant sources must be noted on sketch.

Record the distance and approximate compass bearing of each potential contaminant source from the well, and identify the source using the "Source Code". Unlabeled points on the map are unsealed wells.



Were the isolation distances maintained for the new sources of contamination?	(Y)	N	N/A
Is the system monitoring existing nonconforming sources of contamination?	Y	N	(N/A)

Reminder Question: Were the wellhead protection measure(s) implemented?

INSPECTOR	Freitag, John	DATE	8 - 6 - 2013

PWS ID / FACILITY ID	1270001 S02	UNIQUE WELL NO.	222911

RECOMMENDED WELLHEAD PROTECTION (WHP) MEASURES	WHP MEASURE IMPLEMENTED? Y or N	DATE VERIFIED

COMMENTS

For further information, please contact:

Minnesota Department of Health
Drinking Water Protection Section
Source Water Protection Unit
P.O. Box 64975
St. Paul, Minnesota 55164-0975

Section Receptionist: 651-201-4700
Division TDD: 651-201-5797 or MN Relay Service @ 1-800-627-3529 and ask for 651-201-5000

Environmental Health Division
Drinking Water Protection Section
P.O. Box 64975
St. Paul, Minnesota 55164-0975

INNER WELLHEAD MANAGEMENT ZONE (IWMZ) - POTENTIAL CONTAMINANT SOURCE INVENTORY (PCSI) REPORT

PUBLIC WATER SYSTEM INFORMATION

PWS ID	1270001	**COMMUNITY**
NAME	Bloomington	
ADDRESS	Bloomington Water Superintendent, 1700 West 98th Street, Bloomington, MN 55437	

FACILITY (WELL) INFORMATION

NAME	Well #3	**IS THERE A WELL LOG OR ADDITIONAL CONSTRUCTION INFORMATION AVAILABLE?**
FACILITY ID	S03	☐ **YES** (Please attach a copy)
UNIQUE WELL NO.	222912	☐ **NO** ☐ **UNDETERMINED**
COUNTY	Hennepin	

PWS ID / FACILITY ID	1270001 S03	**UNIQUE WELL NO.**	222912

PCSI CODE	ACTUAL OR POTENTIAL CONTAMINATION SOURCE	ISOLATION DISTANCES (FEET)				LOCATION	
		Minimum Distances		Sensitive Well[1]	Within 200 Ft. Y / N / U	Dist. from Well	Est. (?)
		Community	Non-community				
Agricultural Related							
*AC1	Agricultural chemical buried piping	50	50		N		
*AC2	Agricultural chemical multiple tanks or containers for residential retail sale or use, no single tank or container exceeding, but aggregate volume exceeding 56 gal. or 100 lbs. dry weight	50	50		N		
ACP	Agricultural chemical tank or container with 25 gal. or more or 100 lbs. or more dry weight, or equipment filling or cleaning area without safeguards	150	150		N		
ACS	Agricultural chemical storage or equipment filling or cleaning area with safeguards	100	100		N		
ACR	Agricultural chemical storage or equipment filling or cleaning area with safeguards and roofed	50	50		N		
ADW	Agricultural drainage well[2] (Class V well - illegal[3])	50	50		N		
AAT	Anhydrous ammonia tank (stationary tank)	50	50		N		
AB1	Animal building, feedlot, confinement area, or kennel, 0.1 to 1.0 animal unit (stockyard)	50	20	100/40	N		
AB2	Animal building or poultry building, including a horse riding area, more than 1.0 animal unit	50	50	100	N		
ABS	Animal burial area, more than 1.0 animal unit	50	50		N		
FWP	Animal feeding or watering area within a pasture, more than 1.0 animal unit	50	50	100	N		
AF1	Animal feedlot, unroofed, 300 or more animal units (stockyard)	100	100	200	N		
AF2	Animal feedlot, more than 1.0, but less than 300 animal units (stockyard)	50	50	100	N		
AMA	Animal manure application	use discretion	use discretion		N		
REN	Animal rendering plant	50	50		N		
MS1	Manure (liquid) storage basin or lagoon, unpermitted or noncertified	300	300	600	N		
MS2	Manure (liquid) storage basin or lagoon, approved earthen liner	150	150	300	N		
MS3	Manure (liquid) storage basin or lagoon, approved concrete or composite liner	100	100	200	N		
MS4	Manure (solid) storage area, not covered with a roof	100	100	200	N		
OSC	Open storage for crops	use discretion	use discretion		N		
SSTS Related							
AA1	Absorption area of a soil dispersal system, average flow greater than 10,000 gal./day	300	300	600	N		
AA2	Absorption area of a soil dispersal system serving a facility handling infectious or pathological wastes, average flow 10,000 gal./day or less	150	150	300	N		
AA3	Absorption area of a soil dispersal system, average flow 10,000 gal./day or less	50	50	100	N		
AA4	Absorption area of a soil dispersal system serving multiple family residences or a non-residential facility and has the capacity to serve 20 or more persons per day (Class V well)[2]	50/300/150[4]	50/300/150[4]	100/600/300[4]	N		
CSP	Cesspool	75	75	150	N		
AGG	Dry well, leaching pit, seepage pit	75	75	150	N		
*FD1	Floor drain, grate, or trough connected to a buried sewer	50	50		N		
*FD2	Floor drain, grate, or trough if buried sewer is air-tested, approved materials, serving one building, or two or less single-family residences	50	20		N		
*GW1	Gray-water dispersal area	50	50	100	N		
LC1	Large capacity cesspools (Class V well - illegal)[2]	75	75	150	N		

PWS ID / FACILITY ID	1270001 S03	UNIQUE WELL NO.	222912

PCSI CODE	ACTUAL OR POTENTIAL CONTAMINATION SOURCE	ISOLATION DISTANCES (FEET)				LOCATION	
		Minimum Distances		Sensitive Well[1]	Within 200 Ft. Y / N / U	Dist. from Well	Est. (?)
		Community	Non-community				
MVW	Motor vehicle waste disposal (Class V well - illegal)[2]	illegal	illegal		N		
PR1	Privy, nonportable	50	50	100	N		
PR2	Portable (privy) or toilet	50	20		N		
*SF1	Watertight sand filter; peat filter; or constructed wetland	50	50		N		
SET	Septic tank	50	50		N		
HTK	Sewage holding tank, watertight	50	50		N		
SS1	Sewage sump capacity 100 gal. or more	50	50		N		
SS2	Sewage sump capacity less than 100 gal., tested, conforming to rule	50	20		N		
*ST1	Sewage treatment device, watertight	50	50		N		
SB1	Sewer, buried, approved materials, tested, serving one building, or two or less single-family residences	50	20		N		
SB2	Sewer, buried, collector, municipal, serving a facility handling infectious or pathological wastes, open-jointed or unapproved materials	50	50		Y	130	N
*WB1	Water treatment backwash holding basin, reclaim basin, or surge tank with a direct sewer connection	50	50		N		
*WB2	Water treatment backwash holding basin, reclaim basin, or surge tank with a backflow protected sewer connection	20	20		N		
Land Application							
SPT	Land spreading area for sewage, septage, or sludge	50	50	100	N		
Solid Waste Related							
COS	Commercial compost site	50	50		N		
CD1	Construction or demolition debris disposal area	50	50	100	N		
*HW1	Household solid waste disposal area, single residence	50	50	100	N		
LF1	Landfill, permitted demolition debris, dump, or mixed municipal solid waste from multiple persons	300	300	600	N		
SVY	Scrap yard	50	50		N		
SWT	Solid waste transfer station	50	50		N		
Storm Water Related							
SD1	Storm water drain pipe, 8 inches or greater in diameter	50	20		Y	130	N
SWI	Storm water drainage well[2] (Class V well - illegal[3])	50	50		N		
SM1	Storm water pond greater than 5000 gal.	50	35		N		
Wells and Borings							
*EB1	Elevator boring, not conforming to rule	50	50		N		
*EB2	Elevator boring, conforming to rule	20	20		N		
MON	Monitoring well	record dist.	record dist.		N		
WEL	Operating well	record dist.	record dist.		Y	97	
UUW	Unused, unsealed well or boring	50	50		N		
General							
*CR1	Cistern or reservoir, buried, nonpressurized water supply	20	20		N		
PLM	Contaminant plume	50	50		N		
*CW1	Cooling water pond, industrial	50	50	100	N		
DC1	Deicing chemicals, bulk road	50	50	100	N		
*ET1	Electrical transformer storage area, oil-filled	50	50		N		
GRV	Grave or mausoleum	50	50		N		
GP1	Gravel pocket or French drain for clear water drainage only	20	20		Y	47	N
*HS1	Hazardous substance buried piping	50	50		N		
HS2	Hazardous substance tank or container, above ground or underground, 56 gal. or more, or 100 lbs. or more dry weight, without safeguards	150	150		N		
HS3	Hazardous substance tank or container, above ground or underground, 56 gal. or more, or 100 lbs. or more dry weight with safeguards	100	100		N		
HS4	Hazardous substance multiple storage tanks or containers for residential retail sale or use, no single tank or container exceeding 56 gal. or 100 lbs., but aggregate volume exceeding	50	50		N		
HWF	Highest water or flood level	50	N/A		N		
*HG1	Horizontal ground source closed loop heat exchanger buried piping	50	50		N		
*HG2	Horizontal ground source closed loop heat exchanger buried piping and horizontal piping, approved materials and heat transfer fluid	50	10		N		
IWD	Industrial waste disposal well (Class V well)[2]	illegal[3]	illegal[3]		N		
IWS	Interceptor, including a flammable waste or sediment	50	50		N		
OH1	Ordinary high water level of a stream, river, pond, lake, reservoir, or drainage ditch (holds water six months or more)	50	35		N		

PWS ID / FACILITY ID	1270001 S03	UNIQUE WELL NO.	222912

PCSI CODE	ACTUAL OR POTENTIAL CONTAMINATION SOURCE	ISOLATION DISTANCES (FEET)				LOCATION	
		Minimum Distances		Sensitive Well[1]	Within 200 Ft. Y / N / U	Dist. from Well	Est. (?)
		Community	Non-community				
*PP1	Petroleum buried piping	50	50		N		
*PP2	Petroleum or crude oil pipeline to a refinery or distribution center	100	100		N		
PT1	Petroleum tank or container, 1100 gal. or more, without safeguards	150	150		N		
PT2	Petroleum tank or container, 1100 gal. or more, with safeguards	100	100		N		
PT3	Petroleum tank or container, buried, between 56 and 1100 gal.	50	50		N		
PT4	Petroleum tank or container, not buried, between 56 and 1100 gal.	50[5]	20		N		
PU1	Pit or unfilled space more than four feet in depth	20	20		N		
PC1	Pollutant or contaminant that may drain into the soil	50	50	100	N		
SP1	Swimming pool, in-ground	20	20		N		
*VH1	Vertical heat exchanger, horizontal piping conforming to rule	50	10		N		
*VH2	Vertical heat exchanger (vertical) piping, conforming to rule	50	35		N		
*WR1	Wastewater rapid infiltration basin, municipal or industrial	300	300	600	N		
*WA1	Wastewater spray irrigation area, municipal or industrial	150	150	300	N		
*WS1	Wastewater stabilization pond, industrial	150	150	300	N		
*WS2	Wastewater stabilization pond, municipal, 500 or more gal./acre/day of leakage	300	300	600	N		
*WS3	Wastewater stabilization pond, municipal, less than 500 gal./acre/day of leakage	150	150	300	N		
*WT1	Wastewater treatment unit tanks, vessels and components (Package plant)	100	100		N		
*WT2	Water treatment backwash disposal area	50	50	100	N		
Additional Sources (If there is more than one source listed above, please indicate here).							
Potential Contamination Sources and Codes Based on Previous Versions of this Form							
	none found within 200' of this well.						

* New potential contaminant source.

[1] A sensitive well has less than 50 feet of watertight casing, and which is not cased below a confining layer or confining materials of at least 10' in thickness.

[2] These sources, known as Class V underground injection wells, are regulated by the federal U.S. Environmental Protection Agency.

[3] These sources are classified as illegal by Minnesota Rules, Chapter 4725.

[4] Isolation distance is determined by average flow per day or if a facility handles infectious or pathological wastes.

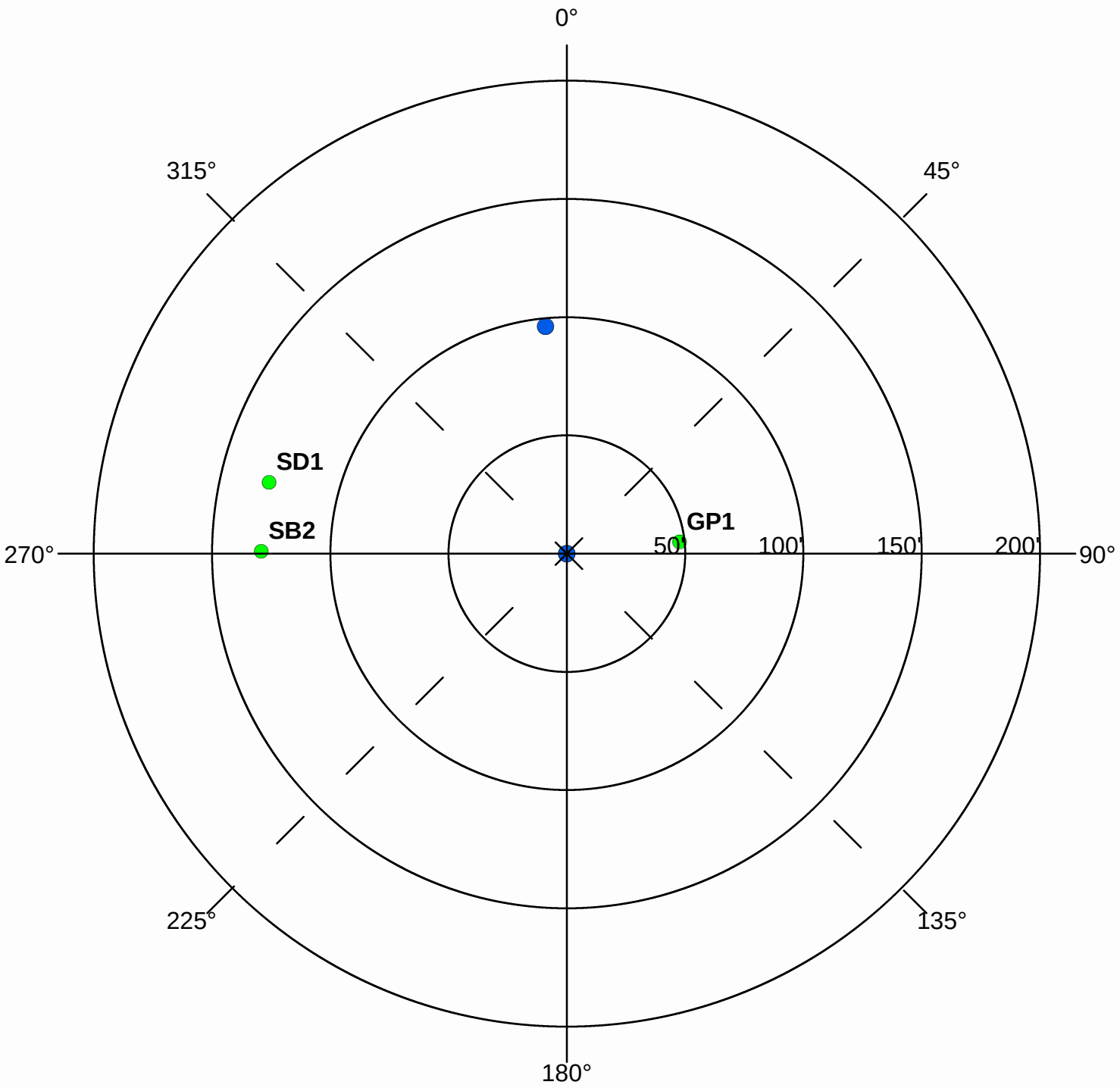
[5] A community public water-supply well must be a minimum of 50 feet from a petroleum tank or container, unless the tank or container is used for emergency pumping and is located in a room or building separate from the community well; and is of double-wall construction with leak detection between walls; or is protected with secondary containment.

This form is based on the new isolation distances in Minnesota Rules, Chapter 4725, related to wells and borings adopted August 4, 2008, and Minnesota Rules, Chapter 4720, related to wellhead protection.

PWS ID / FACILITY ID	1270001 S03	UNIQUE WELL NO.	222912

SETBACK DISTANCES	All potential contaminant sources must be noted on sketch.

Record the distance and approximate compass bearing of each potential contaminant source from the well, and identify the source using the "Source Code". Unlabeled points on the map are unsealed wells.



Were the isolation distances maintained for the new sources of contamination?	(Y)	N	N/A
Is the system monitoring existing nonconforming sources of contamination?	Y	N	(N/A)

Reminder Question: Were the wellhead protection measure(s) implemented?

INSPECTOR	Freitag, John	DATE	8 - 6 - 2013

PWS ID / FACILITY ID	1270001 S03	UNIQUE WELL NO.	222912

RECOMMENDED WELLHEAD PROTECTION (WHP) MEASURES	WHP MEASURE IMPLEMENTED? Y or N	DATE VERIFIED

COMMENTS

For further information, please contact:

Minnesota Department of Health
Drinking Water Protection Section
Source Water Protection Unit
P.O. Box 64975
St. Paul, Minnesota 55164-0975

Section Receptionist: 651-201-4700
Division TDD: 651-201-5797 or MN Relay Service @ 1-800-627-3529 and ask for 651-201-5000

Environmental Health Division
Drinking Water Protection Section
P.O. Box 64975
St. Paul, Minnesota 55164-0975

INNER WELLHEAD MANAGEMENT ZONE (IWMZ) - POTENTIAL CONTAMINANT SOURCE INVENTORY (PCSI) REPORT

PUBLIC WATER SYSTEM INFORMATION

PWS ID	1270001	**COMMUNITY**
NAME	Bloomington	
ADDRESS	Bloomington Water Superintendent, 1700 West 98th Street, Bloomington, MN 55437	

FACILITY (WELL) INFORMATION

NAME	Well #4	**IS THERE A WELL LOG OR ADDITIONAL CONSTRUCTION INFORMATION AVAILABLE?**
FACILITY ID	S04	☐ **YES** (Please attach a copy)
UNIQUE WELL NO.	133389	☐ **NO** ☐ **UNDETERMINED**
COUNTY	Hennepin	

PWS ID / FACILITY ID	1270001 S04	**UNIQUE WELL NO.**	133389

PCSI CODE	ACTUAL OR POTENTIAL CONTAMINATION SOURCE	ISOLATION DISTANCES (FEET)				LOCATION	
		Minimum Distances		Sensitive Well[1]	Within 200 Ft. Y / N / U	Dist. from Well	Est. (?)
		Community	Non-community				
Agricultural Related							
*AC1	Agricultural chemical buried piping	50	50		N		
*AC2	Agricultural chemical multiple tanks or containers for residential retail sale or use, no single tank or container exceeding, but aggregate volume exceeding 56 gal. or 100 lbs. dry weight	50	50		N		
ACP	Agricultural chemical tank or container with 25 gal. or more or 100 lbs. or more dry weight, or equipment filling or cleaning area without safeguards	150	150		N		
ACS	Agricultural chemical storage or equipment filling or cleaning area with safeguards	100	100		N		
ACR	Agricultural chemical storage or equipment filling or cleaning area with safeguards and roofed	50	50		N		
ADW	Agricultural drainage well[2] (Class V well - illegal[3])	50	50		N		
AAT	Anhydrous ammonia tank (stationary tank)	50	50		N		
AB1	Animal building, feedlot, confinement area, or kennel, 0.1 to 1.0 animal unit (stockyard)	50	20	100/40	N		
AB2	Animal building or poultry building, including a horse riding area, more than 1.0 animal unit	50	50	100	N		
ABS	Animal burial area, more than 1.0 animal unit	50	50		N		
FWP	Animal feeding or watering area within a pasture, more than 1.0 animal unit	50	50	100	N		
AF1	Animal feedlot, unroofed, 300 or more animal units (stockyard)	100	100	200	N		
AF2	Animal feedlot, more than 1.0, but less than 300 animal units (stockyard)	50	50	100	N		
AMA	Animal manure application	use discretion	use discretion		N		
REN	Animal rendering plant	50	50		N		
MS1	Manure (liquid) storage basin or lagoon, unpermitted or noncertified	300	300	600	N		
MS2	Manure (liquid) storage basin or lagoon, approved earthen liner	150	150	300	N		
MS3	Manure (liquid) storage basin or lagoon, approved concrete or composite liner	100	100	200	N		
MS4	Manure (solid) storage area, not covered with a roof	100	100	200	N		
OSC	Open storage for crops	use discretion	use discretion		N		
SSTS Related							
AA1	Absorption area of a soil dispersal system, average flow greater than 10,000 gal./day	300	300	600	N		
AA2	Absorption area of a soil dispersal system serving a facility handling infectious or pathological wastes, average flow 10,000 gal./day or less	150	150	300	N		
AA3	Absorption area of a soil dispersal system, average flow 10,000 gal./day or less	50	50	100	N		
AA4	Absorption area of a soil dispersal system serving multiple family residences or a non-residential facility and has the capacity to serve 20 or more persons per day (Class V well)[2]	50/300/150[4]	50/300/150[4]	100/600/300[4]	N		
CSP	Cesspool	75	75	150	N		
AGG	Dry well, leaching pit, seepage pit	75	75	150	N		
*FD1	Floor drain, grate, or trough connected to a buried sewer	50	50		N		
*FD2	Floor drain, grate, or trough if buried sewer is air-tested, approved materials, serving one building, or two or less single-family residences	50	20		N		
*GW1	Gray-water dispersal area	50	50	100	N		
LC1	Large capacity cesspools (Class V well - illegal)[2]	75	75	150	N		

PWS ID / FACILITY ID	1270001 S04	UNIQUE WELL NO.	133389

PCSI CODE	ACTUAL OR POTENTIAL CONTAMINATION SOURCE	ISOLATION DISTANCES (FEET)				LOCATION	
		Minimum Distances		Sensitive Well[1]	Within 200 Ft. Y / N / U	Dist. from Well	Est. (?)
		Community	Non-community				
MVW	Motor vehicle waste disposal (Class V well - illegal)[2]	illegal	illegal		N		
PR1	Privy, nonportable	50	50	100	N		
PR2	Portable (privy) or toilet	50	20		N		
*SF1	Watertight sand filter; peat filter; or constructed wetland	50	50		N		
SET	Septic tank	50	50		N		
HTK	Sewage holding tank, watertight	50	50		N		
SS1	Sewage sump capacity 100 gal. or more	50	50		N		
SS2	Sewage sump capacity less than 100 gal., tested, conforming to rule	50	20		N		
*ST1	Sewage treatment device, watertight	50	50		N		
SB1	Sewer, buried, approved materials, tested, serving one building, or two or less single-family residences	50	20		N		
SB2	Sewer, buried, collector, municipal, serving a facility handling infectious or pathological wastes, open-jointed or unapproved materials	50	50		Y	100	N
SB2	Sewer, buried, collector, municipal, serving a facility handling infectious or pathological wastes, open-jointed or unapproved materials	50	50		Y	80	N
*WB1	Water treatment backwash holding basin, reclaim basin, or surge tank with a direct sewer connection	50	50		N		
*WB2	Water treatment backwash holding basin, reclaim basin, or surge tank with a backflow protected sewer connection	20	20		N		
Land Application							
SPT	Land spreading area for sewage, septage, or sludge	50	50	100	N		
Solid Waste Related							
COS	Commercial compost site	50	50		N		
CD1	Construction or demolition debris disposal area	50	50	100	N		
*HW1	Household solid waste disposal area, single residence	50	50	100	N		
LF1	Landfill, permitted demolition debris, dump, or mixed municipal solid waste from multiple persons	300	300	600	N		
SVY	Scrap yard	50	50		N		
SWT	Solid waste transfer station	50	50		N		
Storm Water Related							
SD1	Storm water drain pipe, 8 inches or greater in diameter	50	20		Y	70	N
SD1	Storm water drain pipe, 8 inches or greater in diameter	50	20		Y	120	N
SWI	Storm water drainage well[2] (Class V well - illegal[3])	50	50		N		
SM1	Storm water pond greater than 5000 gal.	50	35		N		
Wells and Borings							
*EB1	Elevator boring, not conforming to rule	50	50		N		
*EB2	Elevator boring, conforming to rule	20	20		N		
MON	Monitoring well	record dist.	record dist.		N		
WEL	Operating well	record dist.	record dist.		N		
UUW	Unused, unsealed well or boring	50	50		N		
General							
*CR1	Cistern or reservoir, buried, nonpressurized water supply	20	20		N		
PLM	Contaminant plume	50	50		N		
*CW1	Cooling water pond, industrial	50	50	100	N		
DC1	Deicing chemicals, bulk road	50	50	100	N		
*ET1	Electrical transformer storage area, oil-filled	50	50		N		
GRV	Grave or mausoleum	50	50		N		
GP1	Gravel pocket or French drain for clear water drainage only	20	20		Y	43	N
*HS1	Hazardous substance buried piping	50	50		N		
HS2	Hazardous substance tank or container, above ground or underground, 56 gal. or more, or 100 lbs. or more dry weight, without safeguards	150	150		N		
HS3	Hazardous substance tank or container, above ground or underground, 56 gal. or more, or 100 lbs. or more dry weight with safeguards	100	100		N		
HS4	Hazardous substance multiple storage tanks or containers for residential retail sale or use, no single tank or container exceeding 56 gal. or 100 lbs., but aggregate volume exceeding	50	50		N		
HWF	Highest water or flood level	50	N/A		N		
*HG1	Horizontal ground source closed loop heat exchanger buried piping	50	50		N		
*HG2	Horizontal ground source closed loop heat exchanger buried piping and horizontal piping, approved materials and heat transfer fluid	50	10		N		
IWD	Industrial waste disposal well (Class V well)[2]	illegal[3]	illegal[3]		N		

PWS ID / FACILITY ID	1270001 S04	UNIQUE WELL NO.	133389

PCSI CODE	ACTUAL OR POTENTIAL CONTAMINATION SOURCE	ISOLATION DISTANCES (FEET)				LOCATION	
		Minimum Distances		Sensitive Well[1]	Within 200 Ft. Y / N / U	Dist. from Well	Est. (?)
		Community	Non-community				
IWS	Interceptor, including a flammable waste or sediment	50	50		N		
OH1	Ordinary high water level of a stream, river, pond, lake, reservoir, or drainage ditch (holds water six months or more)	50	35		Y	100	N
*PP1	Petroleum buried piping	50	50		N		
*PP2	Petroleum or crude oil pipeline to a refinery or distribution center	100	100		N		
PT1	Petroleum tank or container, 1100 gal. or more, without safeguards	150	150		N		
PT2	Petroleum tank or container, 1100 gal. or more, with safeguards	100	100		N		
PT3	Petroleum tank or container, buried, between 56 and 1100 gal.	50	50		N		
PT4	Petroleum tank or container, not buried, between 56 and 1100 gal.	50[5]	20		N		
PU1	Pit or unfilled space more than four feet in depth	20	20		N		
PC1	Pollutant or contaminant that may drain into the soil	50	50	100	N		
SP1	Swimming pool, in-ground	20	20		N		
*VH1	Vertical heat exchanger, horizontal piping conforming to rule	50	10		N		
*VH2	Vertical heat exchanger (vertical) piping, conforming to rule	50	35		N		
*WR1	Wastewater rapid infiltration basin, municipal or industrial	300	300	600	N		
*WA1	Wastewater spray irrigation area, municipal or industrial	150	150	300	N		
*WS1	Wastewater stabilization pond, industrial	150	150	300	N		
*WS2	Wastewater stabilization pond, municipal, 500 or more gal./acre/day of leakage	300	300	600	N		
*WS3	Wastewater stabilization pond, municipal, less than 500 gal./acre/day of leakage	150	150	300	N		
*WT1	Wastewater treatment unit tanks, vessels and components (Package plant)	100	100		N		
*WT2	Water treatment backwash disposal area	50	50	100	N		
Additional Sources (If there is more than one source listed above, please indicate here).							
Potential Contamination Sources and Codes Based on Previous Versions of this Form							
	none found within 200' of this well.						

* New potential contaminant source.

[1] A sensitive well has less than 50 feet of watertight casing, and which is not cased below a confining layer or confining materials of at least 10' in thickness.

[2] These sources, known as Class V underground injection wells, are regulated by the federal U.S. Environmental Protection Agency.

[3] These sources are classified as illegal by Minnesota Rules, Chapter 4725.

[4] Isolation distance is determined by average flow per day or if a facility handles infectious or pathological wastes.

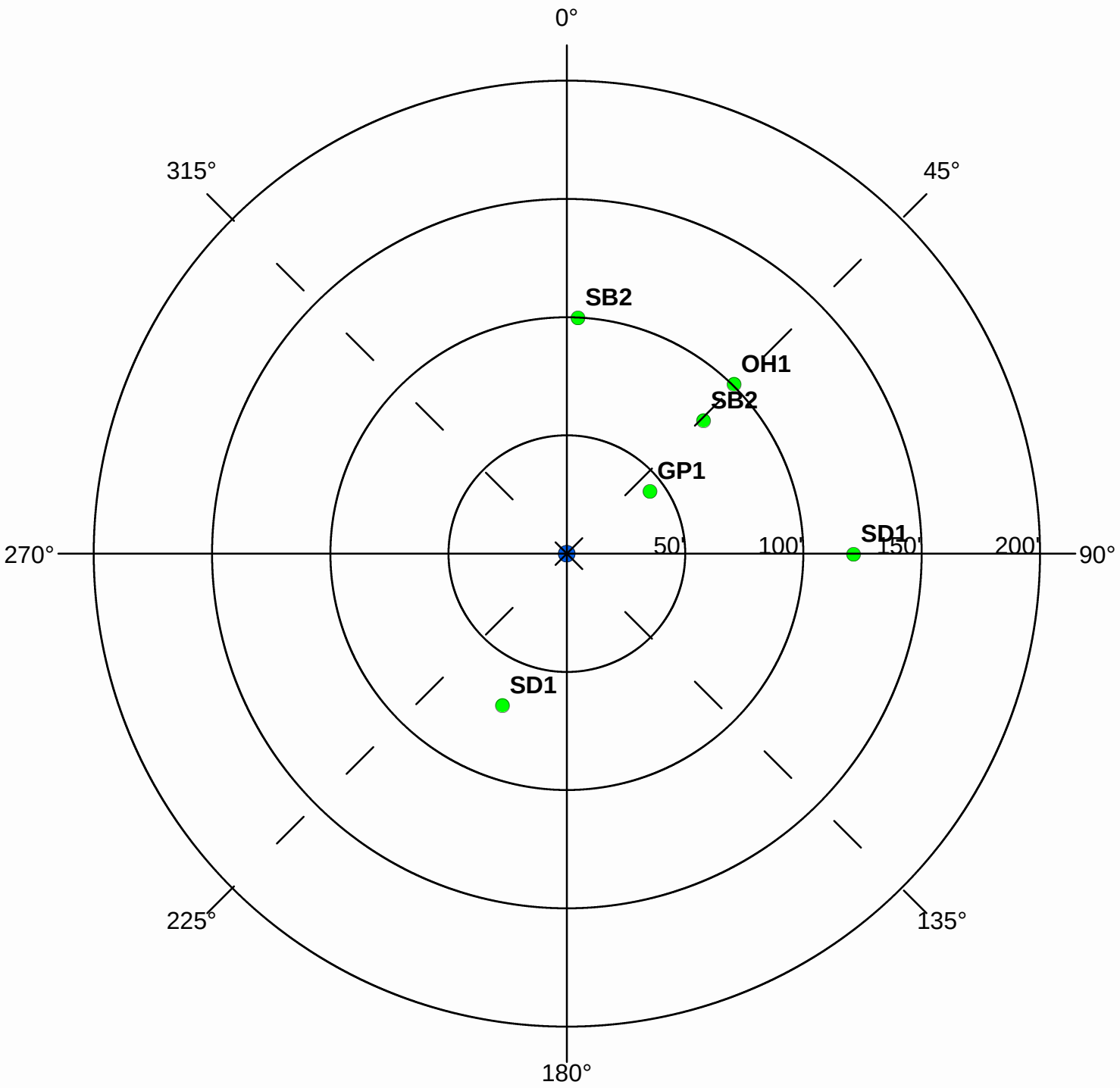
[5] A community public water-supply well must be a minimum of 50 feet from a petroleum tank or container, unless the tank or container is used for emergency pumping and is located in a room or building separate from the community well; and is of double-wall construction with leak detection between walls; or is protected with secondary containment.

This form is based on the new isolation distances in Minnesota Rules, Chapter 4725, related to wells and borings adopted August 4, 2008, and Minnesota Rules, Chapter 4720, related to wellhead protection.

PWS ID / FACILITY ID	1270001 S04	UNIQUE WELL NO.	133389

SETBACK DISTANCES	All potential contaminant sources must be noted on sketch.

Record the distance and approximate compass bearing of each potential contaminant source from the well, and identify the source using the "Source Code". Unlabeled points on the map are unsealed wells.



Were the isolation distances maintained for the new sources of contamination?	(Y)	N	N/A
Is the system monitoring existing nonconforming sources of contamination?	Y	N	(N/A)

Reminder Question: Were the wellhead protection measure(s) implemented?

INSPECTOR	Freitag, John	DATE	8 - 6 - 2013

PWS ID / FACILITY ID	1270001 S04	UNIQUE WELL NO.	133389

RECOMMENDED WELLHEAD PROTECTION (WHP) MEASURES	WHP MEASURE IMPLEMENTED? Y or N	DATE VERIFIED

COMMENTS

For further information, please contact:

Minnesota Department of Health
Drinking Water Protection Section
Source Water Protection Unit
P.O. Box 64975
St. Paul, Minnesota 55164-0975

Section Receptionist: 651-201-4700
Division TDD: 651-201-5797 or MN Relay Service @ 1-800-627-3529 and ask for 651-201-5000

Environmental Health Division
Drinking Water Protection Section
P.O. Box 64975
St. Paul, Minnesota 55164-0975

INNER WELLHEAD MANAGEMENT ZONE (IWMZ) - POTENTIAL CONTAMINANT SOURCE INVENTORY (PCSI) REPORT

PUBLIC WATER SYSTEM INFORMATION

PWS ID 1270001 **COMMUNITY**
NAME Bloomington
ADDRESS Bloomington Water Superintendent, 1700 West 98th Street, Bloomington, MN 55437

FACILITY (WELL) INFORMATION

NAME Well #5
FACILITY ID S06
UNIQUE WELL NO. 603079
COUNTY Hennepin

IS THERE A WELL LOG OR ADDITIONAL CONSTRUCTION INFORMATION AVAILABLE?
☐ YES (Please attach a copy)
☐ NO ☐ UNDETERMINED

PWS ID / FACILITY ID	1270001 S06	UNIQUE WELL NO.	603079

PCSI CODE	ACTUAL OR POTENTIAL CONTAMINATION SOURCE	ISOLATION DISTANCES (FEET)				LOCATION	
		Minimum Distances		Sensitive Well[1]	Within 200 Ft. Y / N / U	Dist. from Well	Est. (?)
		Community	Non-community				
Agricultural Related							
*AC1	Agricultural chemical buried piping	50	50		N		
*AC2	Agricultural chemical multiple tanks or containers for residential retail sale or use, no single tank or container exceeding, but aggregate volume exceeding 56 gal. or 100 lbs. dry weight	50	50		N		
ACP	Agricultural chemical tank or container with 25 gal. or more or 100 lbs. or more dry weight, or equipment filling or cleaning area without safeguards	150	150		N		
ACS	Agricultural chemical storage or equipment filling or cleaning area with safeguards	100	100		N		
ACR	Agricultural chemical storage or equipment filling or cleaning area with safeguards and roofed	50	50		N		
ADW	Agricultural drainage well[2] (Class V well - illegal[3])	50	50		N		
AAT	Anhydrous ammonia tank (stationary tank)	50	50		N		
AB1	Animal building, feedlot, confinement area, or kennel, 0.1 to 1.0 animal unit (stockyard)	50	20	100/40	N		
AB2	Animal building or poultry building, including a horse riding area, more than 1.0 animal unit	50	50	100	N		
ABS	Animal burial area, more than 1.0 animal unit	50	50		N		
FWP	Animal feeding or watering area within a pasture, more than 1.0 animal unit	50	50	100	N		
AF1	Animal feedlot, unroofed, 300 or more animal units (stockyard)	100	100	200	N		
AF2	Animal feedlot, more than 1.0, but less than 300 animal units (stockyard)	50	50	100	N		
AMA	Animal manure application	use discretion	use discretion		N		
REN	Animal rendering plant	50	50		N		
MS1	Manure (liquid) storage basin or lagoon, unpermitted or noncertified	300	300	600	N		
MS2	Manure (liquid) storage basin or lagoon, approved earthen liner	150	150	300	N		
MS3	Manure (liquid) storage basin or lagoon, approved concrete or composite liner	100	100	200	N		
MS4	Manure (solid) storage area, not covered with a roof	100	100	200	N		
OSC	Open storage for crops	use discretion	use discretion		N		
SSTS Related							
AA1	Absorption area of a soil dispersal system, average flow greater than 10,000 gal./day	300	300	600	N		
AA2	Absorption area of a soil dispersal system serving a facility handling infectious or pathological wastes, average flow 10,000 gal./day or less	150	150	300	N		
AA3	Absorption area of a soil dispersal system, average flow 10,000 gal./day or less	50	50	100	N		
AA4	Absorption area of a soil dispersal system serving multiple family residences or a non-residential facility and has the capacity to serve 20 or more persons per day (Class V well)[2]	50/300/150[4]	50/300/150[4]	100/600/300[4]	N		
CSP	Cesspool	75	75	150	N		
AGG	Dry well, leaching pit, seepage pit	75	75	150	N		
*FD1	Floor drain, grate, or trough connected to a buried sewer	50	50		N		
*FD2	Floor drain, grate, or trough if buried sewer is air-tested, approved materials, serving one building, or two or less single-family residences	50	20		N		
*GW1	Gray-water dispersal area	50	50	100	N		
LC1	Large capacity cesspools (Class V well - illegal)[2]	75	75	150	N		

PWS ID / FACILITY ID	1270001 S06	UNIQUE WELL NO.	603079

PCSI CODE	ACTUAL OR POTENTIAL CONTAMINATION SOURCE	ISOLATION DISTANCES (FEET)				LOCATION	
		Minimum Distances		Sensitive Well[1]	Within 200 Ft. Y / N / U	Dist. from Well	Est. (?)
		Community	Non-community				
MVW	Motor vehicle waste disposal (Class V well - illegal)[2]	illegal	illegal		N		
PR1	Privy, nonportable	50	50	100	N		
PR2	Portable (privy) or toilet	50	20		N		
*SF1	Watertight sand filter; peat filter; or constructed wetland	50	50		N		
SET	Septic tank	50	50		N		
HTK	Sewage holding tank, watertight	50	50		N		
SS1	Sewage sump capacity 100 gal. or more	50	50		N		
SS2	Sewage sump capacity less than 100 gal., tested, conforming to rule	50	20		N		
*ST1	Sewage treatment device, watertight	50	50		N		
SB1	Sewer, buried, approved materials, tested, serving one building, or two or less single-family residences	50	20		N		
SB2	Sewer, buried, collector, municipal, serving a facility handling infectious or pathological wastes, open-jointed or unapproved materials	50	50		Y	70	N
*WB1	Water treatment backwash holding basin, reclaim basin, or surge tank with a direct sewer connection	50	50		N		
*WB2	Water treatment backwash holding basin, reclaim basin, or surge tank with a backflow protected sewer connection	20	20		N		
Land Application							
SPT	Land spreading area for sewage, septage, or sludge	50	50	100	N		
Solid Waste Related							
COS	Commercial compost site	50	50		N		
CD1	Construction or demolition debris disposal area	50	50	100	N		
*HW1	Household solid waste disposal area, single residence	50	50	100	N		
LF1	Landfill, permitted demolition debris, dump, or mixed municipal solid waste from multiple persons	300	300	600	N		
SVY	Scrap yard	50	50		N		
SWT	Solid waste transfer station	50	50		N		
Storm Water Related							
SD1	Storm water drain pipe, 8 inches or greater in diameter	50	20		N		
SWI	Storm water drainage well[2] (Class V well - illegal[3])	50	50		N		
SM1	Storm water pond greater than 5000 gal.	50	35		N		
Wells and Borings							
*EB1	Elevator boring, not conforming to rule	50	50		N		
*EB2	Elevator boring, conforming to rule	20	20		N		
MON	Monitoring well	record dist.	record dist.		N		
WEL	Operating well	record dist.	record dist.		N		
UUW	Unused, unsealed well or boring	50	50		N		
General							
*CR1	Cistern or reservoir, buried, nonpressurized water supply	20	20		N		
PLM	Contaminant plume	50	50		N		
*CW1	Cooling water pond, industrial	50	50	100	N		
DC1	Deicing chemicals, bulk road	50	50	100	N		
*ET1	Electrical transformer storage area, oil-filled	50	50		N		
GRV	Grave or mausoleum	50	50		N		
GP1	Gravel pocket or French drain for clear water drainage only	20	20		Y	25	N
*HS1	Hazardous substance buried piping	50	50		N		
HS2	Hazardous substance tank or container, above ground or underground, 56 gal. or more, or 100 lbs. or more dry weight, without safeguards	150	150		N		
HS3	Hazardous substance tank or container, above ground or underground, 56 gal. or more, or 100 lbs. or more dry weight with safeguards	100	100		N		
HS4	Hazardous substance multiple storage tanks or containers for residential retail sale or use, no single tank or container exceeding 56 gal. or 100 lbs., but aggregate volume exceeding	50	50		N		
HWF	Highest water or flood level	50	N/A		N		
*HG1	Horizontal ground source closed loop heat exchanger buried piping	50	50		N		
*HG2	Horizontal ground source closed loop heat exchanger buried piping and horizontal piping, approved materials and heat transfer fluid	50	10		N		
IWD	Industrial waste disposal well (Class V well)[2]	illegal[3]	illegal[3]		N		
IWS	Interceptor, including a flammable waste or sediment	50	50		N		
OH1	Ordinary high water level of a stream, river, pond, lake, reservoir, or drainage ditch (holds water six months or more)	50	35		N		

PWS ID / FACILITY ID	1270001 S06	UNIQUE WELL NO.	603079

PCSI CODE	ACTUAL OR POTENTIAL CONTAMINATION SOURCE	ISOLATION DISTANCES (FEET)				LOCATION	
		Minimum Distances		Sensitive Well[1]	Within 200 Ft. Y / N / U	Dist. from Well	Est. (?)
		Community	Non-community				
*PP1	Petroleum buried piping	50	50		N		
*PP2	Petroleum or crude oil pipeline to a refinery or distribution center	100	100		N		
PT1	Petroleum tank or container, 1100 gal. or more, without safeguards	150	150		N		
PT2	Petroleum tank or container, 1100 gal. or more, with safeguards	100	100		N		
PT3	Petroleum tank or container, buried, between 56 and 1100 gal.	50	50		N		
PT4	Petroleum tank or container, not buried, between 56 and 1100 gal.	50[5]	20		N		
PU1	Pit or unfilled space more than four feet in depth	20	20		N		
PC1	Pollutant or contaminant that may drain into the soil	50	50	100	N		
SP1	Swimming pool, in-ground	20	20		N		
*VH1	Vertical heat exchanger, horizontal piping conforming to rule	50	10		N		
*VH2	Vertical heat exchanger (vertical) piping, conforming to rule	50	35		N		
*WR1	Wastewater rapid infiltration basin, municipal or industrial	300	300	600	N		
*WA1	Wastewater spray irrigation area, municipal or industrial	150	150	300	N		
*WS1	Wastewater stabilization pond, industrial	150	150	300	N		
*WS2	Wastewater stabilization pond, municipal, 500 or more gal./acre/day of leakage	300	300	600	N		
*WS3	Wastewater stabilization pond, municipal, less than 500 gal./acre/day of leakage	150	150	300	N		
*WT1	Wastewater treatment unit tanks, vessels and components (Package plant)	100	100		N		
*WT2	Water treatment backwash disposal area	50	50	100	N		
Additional Sources (If there is more than one source listed above, please indicate here).							
Potential Contamination Sources and Codes Based on Previous Versions of this Form							
	none found within 200' of this well.						

* New potential contaminant source.

[1] A sensitive well has less than 50 feet of watertight casing, and which is not cased below a confining layer or confining materials of at least 10' in thickness.

[2] These sources, known as Class V underground injection wells, are regulated by the federal U.S. Environmental Protection Agency.

[3] These sources are classified as illegal by Minnesota Rules, Chapter 4725.

[4] Isolation distance is determined by average flow per day or if a facility handles infectious or pathological wastes.

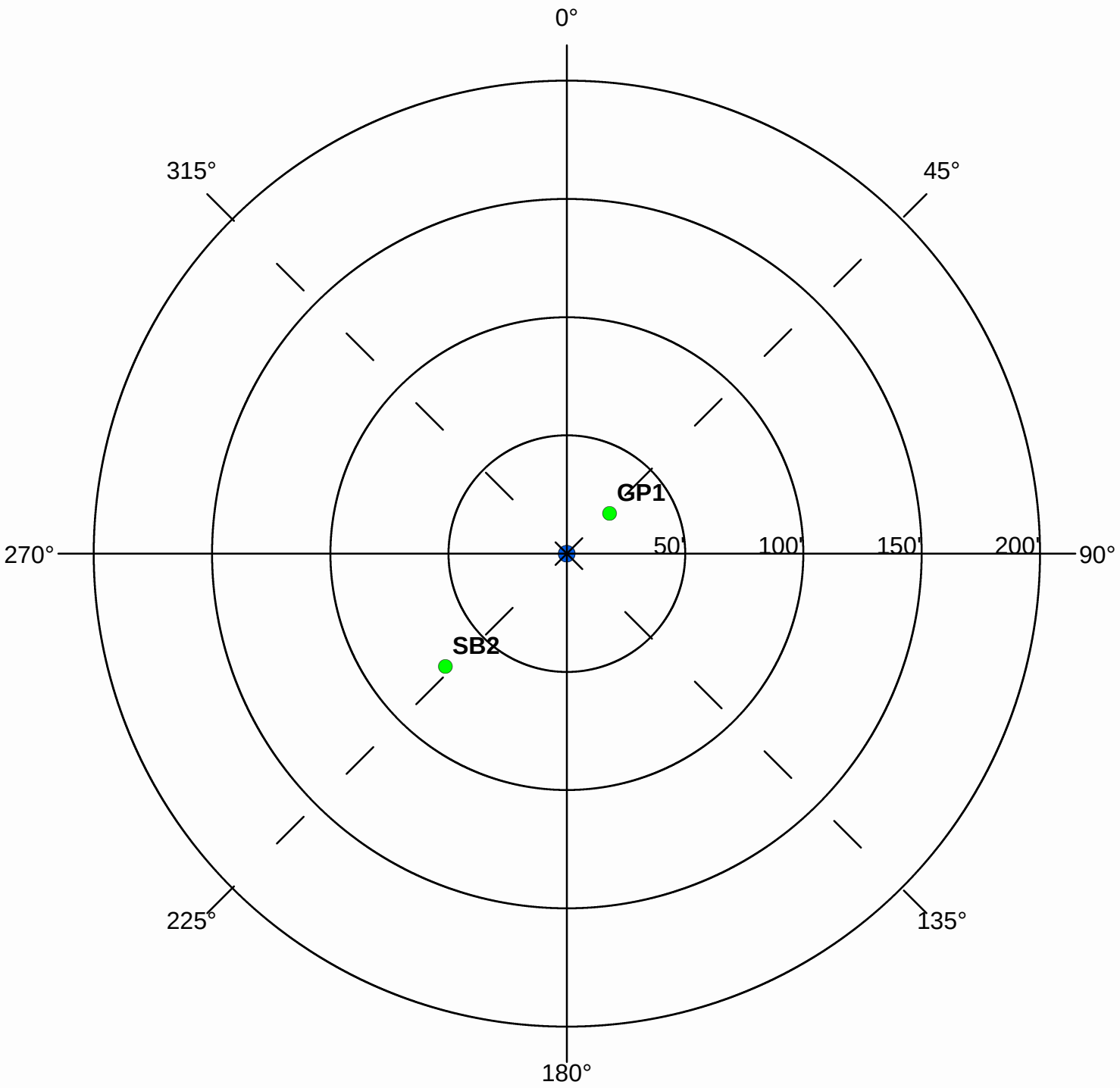
[5] A community public water-supply well must be a minimum of 50 feet from a petroleum tank or container, unless the tank or container is used for emergency pumping and is located in a room or building separate from the community well; and is of double-wall construction with leak detection between walls; or is protected with secondary containment.

This form is based on the new isolation distances in Minnesota Rules, Chapter 4725, related to wells and borings adopted August 4, 2008, and Minnesota Rules, Chapter 4720, related to wellhead protection.

PWS ID / FACILITY ID	1270001 S06	UNIQUE WELL NO.	603079

SETBACK DISTANCES	All potential contaminant sources must be noted on sketch.

Record the distance and approximate compass bearing of each potential contaminant source from the well, and identify the source using the "Source Code". Unlabeled points on the map are unsealed wells.



Were the isolation distances maintained for the new sources of contamination?	(Y)	N	N/A
Is the system monitoring existing nonconforming sources of contamination?	Y	N	(N/A)

Reminder Question: Were the wellhead protection measure(s) implemented?

INSPECTOR	Freitag, John	DATE	8 - 6 - 2013

PWS ID / FACILITY ID	1270001 S06	UNIQUE WELL NO.	603079

RECOMMENDED WELLHEAD PROTECTION (WHP) MEASURES	WHP MEASURE IMPLEMENTED? Y or N	DATE VERIFIED

COMMENTS

For further information, please contact:

Minnesota Department of Health
Drinking Water Protection Section
Source Water Protection Unit
P.O. Box 64975
St. Paul, Minnesota 55164-0975

Section Receptionist: 651-201-4700
Division TDD: 651-201-5797 or MN Relay Service @ 1-800-627-3529 and ask for 651-201-5000

Environmental Health Division
Drinking Water Protection Section
P.O. Box 64975
St. Paul, Minnesota 55164-0975

INNER WELLHEAD MANAGEMENT ZONE (IWMZ) - POTENTIAL CONTAMINANT SOURCE INVENTORY (PCSI) REPORT

PUBLIC WATER SYSTEM INFORMATION

PWS ID	1270001	**COMMUNITY**
NAME	Bloomington	
ADDRESS	Bloomington Water Superintendent, 1700 West 98th Street, Bloomington, MN 55437	

FACILITY (WELL) INFORMATION

NAME	Well #6	**IS THERE A WELL LOG OR ADDITIONAL CONSTRUCTION INFORMATION AVAILABLE?**
FACILITY ID	S07	☐ **YES** (Please attach a copy)
UNIQUE WELL NO.	603080	☐ **NO** ☐ **UNDETERMINED**
COUNTY	Hennepin	

PWS ID / FACILITY ID	1270001 S07	**UNIQUE WELL NO.**	603080

PCSI CODE	ACTUAL OR POTENTIAL CONTAMINATION SOURCE	ISOLATION DISTANCES (FEET)				LOCATION	
		Minimum Distances		Sensitive Well[1]	Within 200 Ft. Y / N / U	Dist. from Well	Est. (?)
		Community	Non-community				
Agricultural Related							
*AC1	Agricultural chemical buried piping	50	50		N		
*AC2	Agricultural chemical multiple tanks or containers for residential retail sale or use, no single tank or container exceeding, but aggregate volume exceeding 56 gal. or 100 lbs. dry weight	50	50		N		
ACP	Agricultural chemical tank or container with 25 gal. or more or 100 lbs. or more dry weight, or equipment filling or cleaning area without safeguards	150	150		N		
ACS	Agricultural chemical storage or equipment filling or cleaning area with safeguards	100	100		N		
ACR	Agricultural chemical storage or equipment filling or cleaning area with safeguards and roofed	50	50		N		
ADW	Agricultural drainage well[2] (Class V well - illegal[3])	50	50		N		
AAT	Anhydrous ammonia tank (stationary tank)	50	50		N		
AB1	Animal building, feedlot, confinement area, or kennel, 0.1 to 1.0 animal unit (stockyard)	50	20	100/40	N		
AB2	Animal building or poultry building, including a horse riding area, more than 1.0 animal unit	50	50	100	N		
ABS	Animal burial area, more than 1.0 animal unit	50	50		N		
FWP	Animal feeding or watering area within a pasture, more than 1.0 animal unit	50	50	100	N		
AF1	Animal feedlot, unroofed, 300 or more animal units (stockyard)	100	100	200	N		
AF2	Animal feedlot, more than 1.0, but less than 300 animal units (stockyard)	50	50	100	N		
AMA	Animal manure application	use discretion	use discretion		N		
REN	Animal rendering plant	50	50		N		
MS1	Manure (liquid) storage basin or lagoon, unpermitted or noncertified	300	300	600	N		
MS2	Manure (liquid) storage basin or lagoon, approved earthen liner	150	150	300	N		
MS3	Manure (liquid) storage basin or lagoon, approved concrete or composite liner	100	100	200	N		
MS4	Manure (solid) storage area, not covered with a roof	100	100	200	N		
OSC	Open storage for crops	use discretion	use discretion		N		
SSTS Related							
AA1	Absorption area of a soil dispersal system, average flow greater than 10,000 gal./day	300	300	600	N		
AA2	Absorption area of a soil dispersal system serving a facility handling infectious or pathological wastes, average flow 10,000 gal./day or less	150	150	300	N		
AA3	Absorption area of a soil dispersal system, average flow 10,000 gal./day or less	50	50	100	N		
AA4	Absorption area of a soil dispersal system serving multiple family residences or a non-residential facility and has the capacity to serve 20 or more persons per day (Class V well)[2]	50/300/150[4]	50/300/150[4]	100/600/300[4]	N		
CSP	Cesspool	75	75	150	N		
AGG	Dry well, leaching pit, seepage pit	75	75	150	N		
*FD1	Floor drain, grate, or trough connected to a buried sewer	50	50		N		
*FD2	Floor drain, grate, or trough if buried sewer is air-tested, approved materials, serving one building, or two or less single-family residences	50	20		N		
*GW1	Gray-water dispersal area	50	50	100	N		
LC1	Large capacity cesspools (Class V well - illegal)[2]	75	75	150	N		

PWS ID / FACILITY ID	1270001 S07	UNIQUE WELL NO.	603080

PCSI CODE	ACTUAL OR POTENTIAL CONTAMINATION SOURCE	ISOLATION DISTANCES (FEET)				LOCATION	
		Minimum Distances		Sensitive Well[1]	Within 200 Ft. Y / N / U	Dist. from Well	Est. (?)
		Community	Non-community				
MVW	Motor vehicle waste disposal (Class V well - illegal)[2]	illegal	illegal		N		
PR1	Privy, nonportable	50	50	100	N		
PR2	Portable (privy) or toilet	50	20		N		
*SF1	Watertight sand filter; peat filter; or constructed wetland	50	50		N		
SET	Septic tank	50	50		N		
HTK	Sewage holding tank, watertight	50	50		N		
SS1	Sewage sump capacity 100 gal. or more	50	50		N		
SS2	Sewage sump capacity less than 100 gal., tested, conforming to rule	50	20		N		
*ST1	Sewage treatment device, watertight	50	50		N		
SB1	Sewer, buried, approved materials, tested, serving one building, or two or less single-family residences	50	20		N		
SB2	Sewer, buried, collector, municipal, serving a facility handling infectious or pathological wastes, open-jointed or unapproved materials	50	50		Y	65	N
*WB1	Water treatment backwash holding basin, reclaim basin, or surge tank with a direct sewer connection	50	50		N		
*WB2	Water treatment backwash holding basin, reclaim basin, or surge tank with a backflow protected sewer connection	20	20		N		
Land Application							
SPT	Land spreading area for sewage, septage, or sludge	50	50	100	N		
Solid Waste Related							
COS	Commercial compost site	50	50		N		
CD1	Construction or demolition debris disposal area	50	50	100	N		
*HW1	Household solid waste disposal area, single residence	50	50	100	N		
LF1	Landfill, permitted demolition debris, dump, or mixed municipal solid waste from multiple persons	300	300	600	N		
SVY	Scrap yard	50	50		N		
SWT	Solid waste transfer station	50	50		N		
Storm Water Related							
SD1	Storm water drain pipe, 8 inches or greater in diameter	50	20		Y	63	N
SWI	Storm water drainage well[2] (Class V well - illegal[3])	50	50		N		
SM1	Storm water pond greater than 5000 gal.	50	35		N		
Wells and Borings							
*EB1	Elevator boring, not conforming to rule	50	50		N		
*EB2	Elevator boring, conforming to rule	20	20		N		
MON	Monitoring well	record dist.	record dist.		N		
WEL	Operating well	record dist.	record dist.		N		
UUW	Unused, unsealed well or boring	50	50		N		
General							
*CR1	Cistern or reservoir, buried, nonpressurized water supply	20	20		N		
PLM	Contaminant plume	50	50		N		
*CW1	Cooling water pond, industrial	50	50	100	N		
DC1	Deicing chemicals, bulk road	50	50	100	N		
*ET1	Electrical transformer storage area, oil-filled	50	50		N		
GRV	Grave or mausoleum	50	50		N		
GP1	Gravel pocket or French drain for clear water drainage only	20	20		Y	24	N
*HS1	Hazardous substance buried piping	50	50		N		
HS2	Hazardous substance tank or container, above ground or underground, 56 gal. or more, or 100 lbs. or more dry weight, without safeguards	150	150		N		
HS3	Hazardous substance tank or container, above ground or underground, 56 gal. or more, or 100 lbs. or more dry weight with safeguards	100	100		N		
HS4	Hazardous substance multiple storage tanks or containers for residential retail sale or use, no single tank or container exceeding 56 gal. or 100 lbs., but aggregate volume exceeding	50	50		N		
HWF	Highest water or flood level	50	N/A		N		
*HG1	Horizontal ground source closed loop heat exchanger buried piping	50	50		N		
*HG2	Horizontal ground source closed loop heat exchanger buried piping and horizontal piping, approved materials and heat transfer fluid	50	10		N		
IWD	Industrial waste disposal well (Class V well)[2]	illegal[3]	illegal[3]		N		
IWS	Interceptor, including a flammable waste or sediment	50	50		N		
OH1	Ordinary high water level of a stream, river, pond, lake, reservoir, or drainage ditch (holds water six months or more)	50	35		N		

PWS ID / FACILITY ID	1270001 S07	UNIQUE WELL NO.	603080

PCSI CODE	ACTUAL OR POTENTIAL CONTAMINATION SOURCE	ISOLATION DISTANCES (FEET)				LOCATION	
		Minimum Distances		Sensitive Well[1]	Within 200 Ft. Y / N / U	Dist. from Well	Est. (?)
		Community	Non-community				
*PP1	Petroleum buried piping	50	50		N		
*PP2	Petroleum or crude oil pipeline to a refinery or distribution center	100	100		N		
PT1	Petroleum tank or container, 1100 gal. or more, without safeguards	150	150		N		
PT2	Petroleum tank or container, 1100 gal. or more, with safeguards	100	100		N		
PT3	Petroleum tank or container, buried, between 56 and 1100 gal.	50	50		N		
PT4	Petroleum tank or container, not buried, between 56 and 1100 gal.	50[5]	20		N		
PU1	Pit or unfilled space more than four feet in depth	20	20		N		
PC1	Pollutant or contaminant that may drain into the soil	50	50	100	N		
SP1	Swimming pool, in-ground	20	20		N		
*VH1	Vertical heat exchanger, horizontal piping conforming to rule	50	10		N		
*VH2	Vertical heat exchanger (vertical) piping, conforming to rule	50	35		N		
*WR1	Wastewater rapid infiltration basin, municipal or industrial	300	300	600	N		
*WA1	Wastewater spray irrigation area, municipal or industrial	150	150	300	N		
*WS1	Wastewater stabilization pond, industrial	150	150	300	N		
*WS2	Wastewater stabilization pond, municipal, 500 or more gal./acre/day of leakage	300	300	600	N		
*WS3	Wastewater stabilization pond, municipal, less than 500 gal./acre/day of leakage	150	150	300	N		
*WT1	Wastewater treatment unit tanks, vessels and components (Package plant)	100	100		N		
*WT2	Water treatment backwash disposal area	50	50	100	N		
Additional Sources (If there is more than one source listed above, please indicate here).							
Potential Contamination Sources and Codes Based on Previous Versions of this Form							
	none found within 200' of this well.						

* New potential contaminant source.

[1] A sensitive well has less than 50 feet of watertight casing, and which is not cased below a confining layer or confining materials of at least 10' in thickness.

[2] These sources, known as Class V underground injection wells, are regulated by the federal U.S. Environmental Protection Agency.

[3] These sources are classified as illegal by Minnesota Rules, Chapter 4725.

[4] Isolation distance is determined by average flow per day or if a facility handles infectious or pathological wastes.

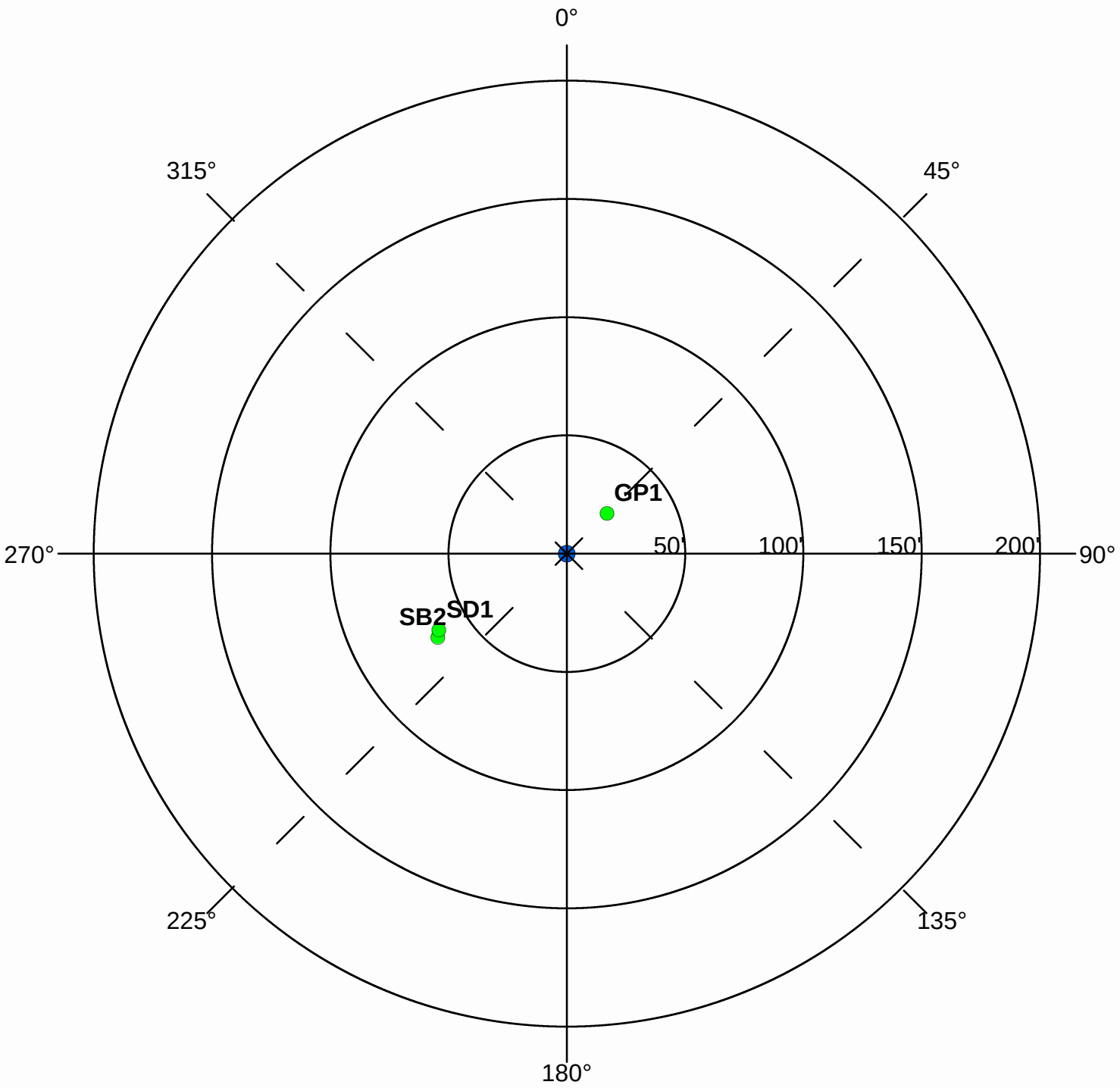
[5] A community public water-supply well must be a minimum of 50 feet from a petroleum tank or container, unless the tank or container is used for emergency pumping and is located in a room or building separate from the community well; and is of double-wall construction with leak detection between walls; or is protected with secondary containment.

This form is based on the new isolation distances in Minnesota Rules, Chapter 4725, related to wells and borings adopted August 4, 2008, and Minnesota Rules, Chapter 4720, related to wellhead protection.

PWS ID / FACILITY ID	1270001 S07	UNIQUE WELL NO.	603080

SETBACK DISTANCES	All potential contaminant sources must be noted on sketch.

Record the distance and approximate compass bearing of each potential contaminant source from the well, and identify the source using the "Source Code". Unlabeled points on the map are unsealed wells.



Were the isolation distances maintained for the new sources of contamination?	(Y)	N	N/A
Is the system monitoring existing nonconforming sources of contamination?	Y	N	(N/A)

Reminder Question: Were the wellhead protection measure(s) implemented?

INSPECTOR	Freitag, John	DATE	8 - 6 - 2013

PWS ID / FACILITY ID	1270001 S07	UNIQUE WELL NO.	603080

RECOMMENDED WELLHEAD PROTECTION (WHP) MEASURES	WHP MEASURE IMPLEMENTED? Y or N	DATE VERIFIED

COMMENTS

For further information, please contact:

Minnesota Department of Health
Drinking Water Protection Section
Source Water Protection Unit
P.O. Box 64975
St. Paul, Minnesota 55164-0975

Section Receptionist: 651-201-4700
Division TDD: 651-201-5797 or MN Relay Service @ 1-800-627-3529 and ask for 651-201-5000

Appendix D

Written Comments on the Wellhead Protection Plan

March 10, 2014

Bob Cockriel, Wellhead Protection Manager
City of Bloomington
1700 West 98th St.
Bloomington, MN 55431

RE: City of Bloomington Wellhead Protection Plan
Metropolitan Council District 5
Referral File No. 21142-2

Dear Mr. Cockriel:

Thank you for submitting Part 2 of the city of Bloomington wellhead protection plan (WHPP). Metropolitan Council (Council) staff review completed plans under the provisions of Minnesota Rules, Chapter 4720.

The Council reviews wellhead protection plans to ensure consistency with information reported in the Council's master water supply plan, including: population and water demand information, predicted issues associated with water supply development, and identified opportunities for inter-jurisdictional cooperation. This wellhead protection plan provides a good overview of the supply source and measures to protect it. Council staff review finds the wellhead protection plan to be consistent with the metropolitan area master water supply plan, with the following technical comments:

According to the Minnesota DNR website, Jordan Formation observation well no. 27001, located in the southern portion of Bloomington, shows a declining trend over the observation period 1965-2013, in contrast to the statement on page 10 of the WHPP that "potentiometric levels in the Jordan Sandstone fluctuate seasonally and have not shown a decreasing trend over the past several years."

The city is commended for planning to track the number of MDH Well Owner's Handbooks sent to residents with private wells. Such information tracking is critical for determining the effectiveness of wellhead protection measures. In addition, the city is commended for including the Minnesota Technical Assistance Program (MnTAP) in the tools available for businesses to manage solid and hazardous wastes in high vulnerability portions of the DWSMA. The Metropolitan Council encourages businesses to contact MnTAP regarding water conservation measures that can be undertaken to reduce demand on aquifers and reduce business operating expenses.

The integration of the WHPP with the city's planning process is a critical task in strengthening groundwater protection. The city is encouraged to share lessons learned in this process with surrounding communities.

The Council encourages cooperation among communities to sustainably develop and protect drinking water supplies. The city's effort to organize a wellhead protection coordinating committee with DWSMA-overlapping governmental units is commended.

The city is encouraged to increase conservation efforts in order to achieve an average residential water demand of 75 gallons per capita per day or less by 2018. This goal was identified in the 2006 Metropolitan Council letter of comment for the most recent City of Bloomington Water Supply Plan.

This letter completes the Council's review process. On behalf of the Council, I thank you for your effort in preparing this plan. Please send us a copy of the finalized WHPP, if any revisions are made. Should any questions arise on the Council's review comments or on the process it followed, please feel free to contact Brian Davis of the Council's Environmental Services Division at (651) 602-1519 or brian.davis@metc.state.mn.us.

Sincerely,

Keith Buttleman
Assistant General Manager, Environmental Quality Assurance

cc: Steve Elkins, Metropolitan Council District Member, District 5
Michael Larson, Metropolitan Council Sector Representative
John Freitag, Minnesota Department of Health

Appendix E

Water Quality Information

Water Quality Report

for Bloomington, MN • 2012 Test results

City of Bloomington Minnesota

June 2013

Inside

WQR 2. Where does your tap water come from?

WQR 3. FAQs.

WQR 4. 2012 Water quality results.

Top-rated utility services

Bloomington residents love their water

In a 2012 community survey conducted by the National Research Center in which thousands of residents were contacted to get their views of Bloomington as a place to live and work, utility services ranked first among peer cities. For example, 89 percent rated the City's drinking water as excellent or good.

Bloomington residents have long enjoyed the taste of Bloomington's drinking water. In a blind taste test at the 2011 Home Improvement Fair, City of Bloomington water was compared glass-to-glass with bottled water. City water was selected as having a better taste by more than 80 percent of taste-testers. Considering that one bottle of designer water costs as much as 5,376 equivalent-sized bottles of City water, Bloomington citizens are indeed receiving quality water at a bargain price.

The City is constantly looking for opportunities to improve the quality and efficiency of the water and sewer services it provides. The City and the Minnesota Department of Health regularly test samples of Bloomington's water for contaminants. *See page WQR4.*

The Sam H. Hobbs Water Treatment Plant, built in 1973, and remodeled in 2002 can produce 14 million gallons of treated, drinkable water per day. The lime-softening plant operates 24 hours a day, every day of the year. Utility operators who work at the water plant also serve as the 24-hour contact people for water emergencies.

Try a rain garden. It adds interest to your yard and promotes wise water use.

Residents play an important role in conserving Bloomington's water. Daily water demand in Bloomington has grown from a few million gallons per day in the early 1960s, to 10 million gallons on an average winter day and 20-25 million gallons on an average summer day.

Residents can reduce their outdoor water consumption by following the tips below.

Lawn watering tips

- Water early in the morning to minimize evaporation.
- Step on the grass; if it springs back when you move your foot, it does not need water.
- Adjust sprinklers to avoid watering sidewalks and driveways.
- Check your sprinkler system for leaks and broken sprinkler heads.
- Know your soil and its watering needs.
- Never water faster than the ground can absorb.
- Cut grass no shorter than two inches to reduce evaporation and promote deep root growth.
- Aerate your lawn as needed.

Making safe drinking water

The City of Bloomington works hard to provide you with high-quality, safe, reliable drinking water that meets every federal and state water quality requirement. This report contains information about the sources, treatment process and history of our water system. The results of water quality monitoring on Bloomington's water sources from January 1 to December 31, 2012, by the Minnesota Department of Health, the city of Minneapolis and Bloomington's laboratories can be found on page WQR4. The City's goal is to advance residents' understanding of drinking water and heighten awareness of the need to protect precious water resources.

Get involved

Public Works welcomes input on water quality issues. For information, contact the Water Quality Supervisor at 952-563-4905.

If you have questions about your water or need assistance, give us a call or visit the City's website at www.ci.bloomington.mn.us.

Water Plant (24 hours a day)
952-563-4905
TTY (8 a.m. to 4:30 p.m., M - F)
952-563-8740

Este informe contiene información muy importante. Si necesita una traducción del mismo, sírvase llamar al 952-563-4944 V/TTY.

Bản báo cáo này có các thông tin rất quan trọng. Nếu quý vị cần bản dịch tiếng Việt, xin gọi số 952-563-4944 V/TTY.

Warbixintaan waxaa ku jira macluumaad aad muhiim u ah. Haddii aad u baahan tahay in laguu turjumo, fadlan la xiriir 952-563-4944 V/TTY.

Protecting our public water supply

Wellhead protection benefits everyone in the community

In its ongoing effort to protect the wellhead, Utilities labels all storm water catch basins within a 5,000 foot radius of the City's six groundwater wells with storm drain markers. These markers, with the words "No dumping, only rain in the drain," are displayed on both public and private storm sewer infrastructure inlets within the earmarked area, *see map right*, to remind people to help protect our community's valuable drinking water resource.

A well-managed wellhead protection plan not only benefits the City's drinking water, but also the storm water that eventually flows to the rivers downstream. Wellhead protection prevents contaminants from entering areas that contribute water to the public water supply. The areas are determined by geologic and hydrologic criteria such as the physical characteristics of the aquifer and the effects that pumping has on the rate and direction of groundwater movement. A management plan identifies potential sources of groundwater contamination, monitors for the presence of specific contaminants, and manages existing and future land and water uses that pose a threat to groundwater quality.

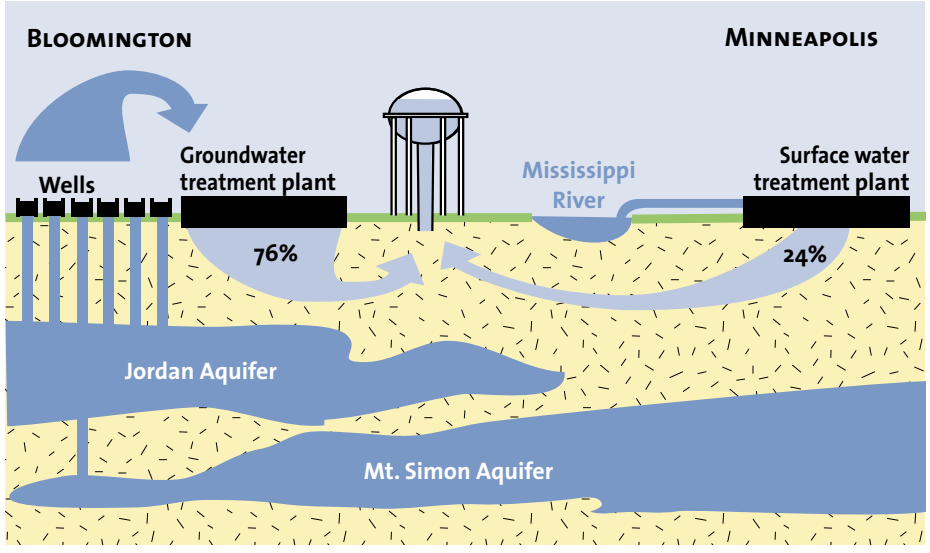
The *Minnesota Groundwater Protection Act of 1989* granted the Commissioner of Health authority to develop wellhead protection measures for wells serving public water supplies; this rule does not apply to private wells. This action was in response to the 1986 amendment of the federal *Safe Drinking Water Act* in which states are required to implement wellhead protection programs for public water supply wells.

While a wellhead protection plan gives public water suppliers another useful tool for providing a safe drinking water supply to their customers, the long-term goals are beneficial to all residents of Minnesota. These goals reduce the need for costly treatment facilities, new wells and removal of contaminants from groundwater.

If you would like more information about wellhead protection, contact Bob Cockriel at 952-563-8774 or the Minnesota Department of Health Source Water Protection Unit at 651-201-4700.

Lawn sprinkler © BigStockPhoto.

The source of Bloomington's tap water



Bloomington wells

Fulfilled 76 percent of water needs in 2012

The City's water plant draws raw (untreated) groundwater from six deep wells. The wells extend downward between 376 and 963 feet into the Jordan, Prairie du Chien-Jordan, Franconia-Mount Simon and Jordan-St. Lawrence Aquifers, porous underground rock formations that hold vast amounts of water. The Midwest has a very rich water supply.

The City drew 3.46 billion gallons of water, 76 percent of Bloomington's needs, from these deep groundwater wells in 2012. The Bloomington City Council continues to monitor water usage and takes appropriate actions to encourage the wise use of water.

Mississippi River

Supplied 24 percent of water needs in 2012

To meet demand that exceeds production capabilities during peak periods, Bloomington purchases treated water from the city of Minneapolis. Treated water from our plant is blended with similarly treated water from Minneapolis and sent throughout Bloomington's distribution system. All of Bloomington's consumers receive a blend of water from these two sources.

Minneapolis' surface water treatment plant takes its raw water from the Mississippi River. In 2012, the City purchased nearly 1.1 billion gallons of water from Minneapolis, which supplied the remaining 24 percent of Bloomington's water needs.

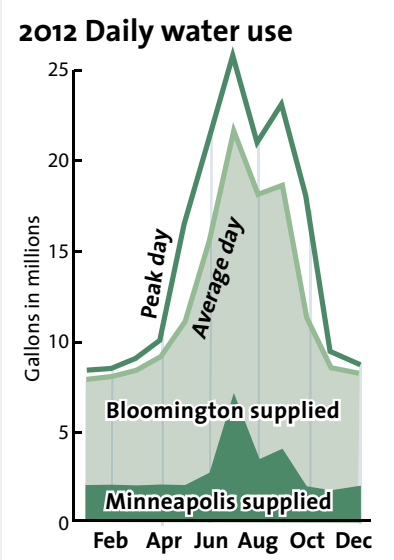
Website keywords: Water treatment.

How much is used?

In 2012, residents and businesses in Bloomington used almost 4.6 billion gallons of water, 321 million more than 2011. The average was 12.6 million gallons of water per day last year.

The chart below shows the peak day and average day of water use for each month during 2012, as well as the average amount of water treated at the City's plant and purchased from Minneapolis. To get a more accurate picture of the actual water consumed, peak day data was adjusted to account for fluctuations in the City's reservoir levels.

Website keywords: Water usage.



The earth has roughly 326 million cubic miles of water, and humans have consumed about three-tenths of a percent of this water. Studies have shown that the average person in the United States uses 80 - 100 gallons of water per day, with the largest amount coming from the flushing of toilets. An estimated 85 percent of this water consumption is received from public water facilities with the remaining percentage coming from private wells or other sources.

Interesting and Useful Water Facts © allaboutwater.org

St. Cloud Technical College

A career in the water industry is waiting for YOU!

St. Cloud Technical College's Water Environment Technologies program provides you with the skills you need to land a great job in this rapidly growing industry.

There are many benefits to this program:

- Hands-on learning.
- Twelve-month program.
- Metro and St. Cloud locations.
- Ninety-five percent placement rates.

For more information on this career program, call St. Cloud Technical and Community College at 1-320-308-5952 or e-mail instructor Bill Spain at bspain@sctcc.edu.

Water treatment process

1. The softening process begins when lime, in the form of slakened quicklime, is mixed with raw water in one of the City's two contact solids basins. Each basin holds about half a million gallons of water.

2. The lime-and-water mixture causes a chemical reaction that results in calcium and magnesium (the main components of hardness) forming insoluble particles called flocs. As these floc particles grow in size, they settle to the bottom of the contact solids basins. The solids are removed, dewatered and used as a USDA-approved source of lime by Minnesota farmers to stabilize the pH in farm fields.

3. The water enters a recarbonation basin where it is adjusted to the proper pH by adding carbon dioxide. A precise amount of chlorine is added to discourage bacterial growth as the water travels through the City's distribution system.

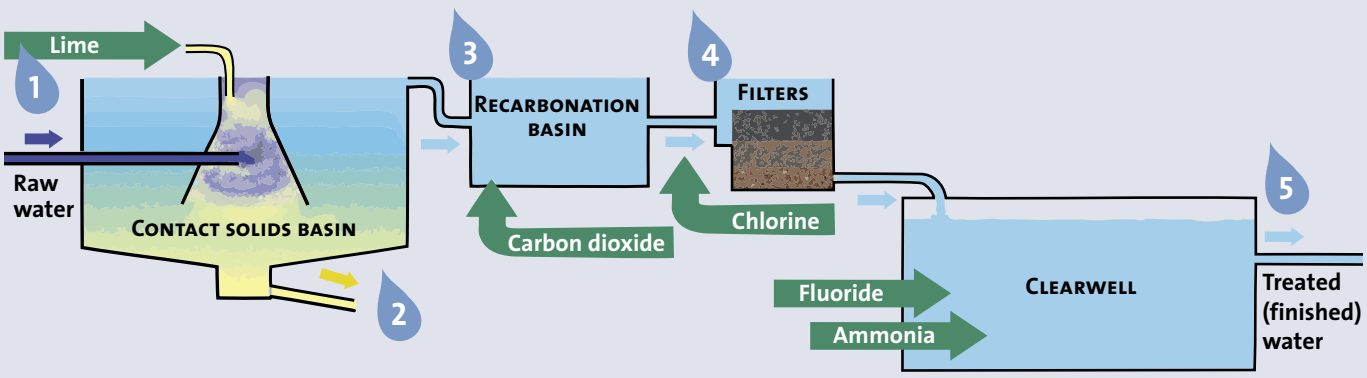
4. The water is filtered to remove any remaining particles. Then it enters an underground reservoir called a clearwell where small quantities of fluoride and ammonia are added. Because fluoride promotes strong teeth and bones, fluoridation is mandated by state law at a dosage of 0.9 - 1.5 ppm. Ammonia works with the chlorine as a disinfectant. Now softened and disinfected, the water is ready for use by residents and businesses.

5. The finished water from the City's treatment plant is pumped into the distribution system, where it is mixed with treated water purchased from the city of Minneapolis.

Website keywords: Treatment process.

Water testing

The Tri-City/William Lloyd Analytical Laboratory is certified by the Minnesota Department of Health to treat and test water. In 2012, the lab performed more than 21,000 tests on Bloomington's water supply, analyzed 78 state-mandated bacteria tests for new water main construction projects and conducted water quality analysis of 162 Bloomington water bodies.



Frequently asked questions about Bloomington's water

Should I get a water filtration system?

Because Bloomington's water surpasses all federal and state standards, home filtration systems are not necessary. However, if you choose to purchase a filtration system for aesthetic or medical reasons, keep the following in mind:

- Find out if the filter you are considering is capable of removing substances that concern you.
- Look for filters that have been certified by NSF International (an independent testing group) and Underwriters Laboratory (UL).
- Follow the manufacturer's maintenance instructions carefully.

Water softening

The City's lime-softening process removes most of the hardness in Bloomington's water, reducing it from 19 grains per gallon to about 5.2 grains per gallon finished water. (Zero grains water is ultra soft, 19 grains is considered raw.) The water is also treated to be noncorrosive. This helps prevent unsafe levels of lead and copper from leaching into the water from home plumbing. Home softening systems can further reduce water hardness, usually by adding a small amount of sodium.

Bloomington is one of approximately 24 Minnesota municipal utilities divisions that soften water. Most municipalities choose not to soften their water.

Other questions?

Feel free to contact us at any time with your questions about drinking water. Call the Water Treatment Plant at 952-563-4905.

Website keywords: Water FAQs.

Why is the water from my faucet cloudy?

Occasionally, the City receives calls regarding water that appears cloudy or milky. Usually indicating the presence of either oxygen or calcium, cloudy water is perfectly safe to drink.

Oxygen in water: Sometimes water fresh from the tap appears cloudy. Within a minute or two, the cloudiness rises toward the top of a glass and before long the whole glass is crystal clear. This is caused by excess oxygen escaping from the water.

Changes in water temperature and pressure can cause the oxygen dissolved in it to reach a supersaturated state where more oxygen is in the water than it can hold. When the water passes through a faucet, the disturbance is enough to release the excess oxygen out of the water, forming microscopic bubbles. The bubbles are so tiny that it takes them a long time to rise through the water. No harm will come from using oxygenated water and you need not take any corrective action if you experience it.

Calcium in water: The chemistry of water is surprisingly complex and many factors influence how it behaves. The City treats Bloomington's water so that it is slightly prone to deposit a trace of calcium sediment as it travels through our distribution system. This reduces the likelihood that it might corrode water mains or leach lead or copper from customers' plumbing and fixtures. *See right.* Usually, this calcium sediment remains at the bottom of the water mains, unnoticed by water users.

However, the calcium can be stirred up when a large volume of water is

drawn through a water main in a short time. Events that can increase water velocity include firefighting, water main breaks, hydrant maintenance and filling water or street-cleaning trucks' tanks at a hydrant. If you happen to turn on your cold water right after such an event, you may draw some of the stirred-up water into your pipes.

When calcium causes cloudiness, it is usually noticed in cold water. Let a glassful of the cloudy water sit for about 30 minutes and the calcium, appearing as a white or grayish substance, may settle to the bottom of the glass. Though it may be visually unappealing, such water is perfectly safe to drink or use for cooking.

To clean calcium sediment from your system, we recommend that you wait an hour or two to allow the water in the main to settle. Then, open a large faucet, such as a bathtub faucet, and let the cold water run for about 20 minutes. This will draw clean water through your system and should remove any remaining calcium from your pipes.

If you have any concerns or if your water remains cloudy after taking these steps, call 952-563-4905.

For people with compromised immune systems

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised people, such as people with cancer undergoing chemotherapy, people who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly and infants, can be particularly at risk of infections.

These people should seek advice from their health care providers about drinking water. Environmental Protection Agency and Centers for Disease Control guidelines on

appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline: 1-800-426-4791.

Approximately 85 percent of U.S. residents receive their water from public water facilities. The remaining 15 percent supply their own water from private wells or other sources.

Water facts © AllAboutWater.org.

Lead in water

Lead in drinking water is primarily from the components associated with service lines and home plumbing. The City is responsible for providing high-quality drinking water, but cannot control the materials used in home plumbing.

Minimizing exposure to lead

Lead pipes, solder, brass faucets and other plumbing in your home pose the greatest threat of adding dangerous levels of lead to your water. A few simple practices can minimize your exposure to lead from your home.

First, always use cold water for your cooking and drinking. If your plumbing contains lead, hot water will draw more lead out of it. Second, allow your cold water to run for 30 seconds to two minutes. This flushes out any water that may have been in your pipes long enough to pick up higher concentrations of lead. If you are concerned about lead in your water, you may have your water tested.

The presence of lead ranks among the most common health concerns people have about drinking water. Recent studies suggest that levels of lead once thought to be safe can pose risks, especially to unborn babies and children.

If present, infants and children who drink water containing lead in excess could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.

Fortunately, over years of regular and rigorous monitoring, Bloomington's water has never been found to be a significant source of lead.

For more information, call the Safe Drinking Water Hotline at 1-800-426-4791 or visit www.epa.gov/safewater/lead. If you are concerned about your home's lead levels, our laboratory can test your water for a fee. *See page WQR2.*

Filter, Shower head, Faucet, Woman drinking, Boy drinking © BigStockPhoto.

Water purity

Information provided by the United States Environmental Protection Agency

Drinking water sources in the United States, both tap water and bottled water, include rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over or through the ground, it dissolves naturally occurring minerals and, sometimes, radioactive material. Water also picks up substances resulting from animal or human activity.

To ensure that tap water is safe to drink, the Environmental Protection Agency (EPA) regulates the amounts of certain contaminants in water provided by public systems. The Food and Drug Administration regulates contaminants in bottled water to provide the same public health protection.

Drinking water, including bottled water, may be expected to contain reasonably small amounts of some contaminants. Their presence does not necessarily indicate that the water poses a health risk. Information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline at 1-800-426-4791.

Contaminants that may be present in source untreated water

Microbial contaminants, such as viruses and bacteria, may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.

Inorganic contaminants, such as salts and metals, can occur naturally or result from urban storm runoff, industrial or domestic wastewater discharges, oil and gas production, mining and farming.

Pesticides and herbicides come from a variety of sources such as agriculture, urban stormwater runoff and residential uses.

Organic chemical contaminants, including synthetic and volatile organic chemicals, are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff and septic systems.

Radioactive contaminants can occur naturally or be the result of oil and gas production and mining activities.

2012 Water quality results

The Minnesota Department of Health and City staff regularly test samples of Bloomington's water for many contaminants. Some substances were detected in trace amounts in the drinking water. Only those substances that were detected appear on the table; many results are not listed because the substances were not found at any time in 2012 by tests designed to detect them. Some substances are tested less than once per year; in such cases, the most recent results and the test dates are reported.

Some contaminants do not have Maximum Contaminant Levels (MCL) established. These "unregulated contaminants" are assessed using federal standards known as health risk limits to determine if they pose a threat. If unacceptable levels of an unregulated contaminant are found, the response is the same as if an MCL has been exceeded; the water system must inform its customers and take corrective actions.

The table's upper portion summarizes test results performed on Bloomington water. The lower portion shows results for Minneapolis water because we blend Minneapolis treated surface water with the Bloomington Water Plant's treated groundwater.

The Minnesota Department of Health has made a determination as to how vulnerable Bloomington's source water may be to future contamination incidents. If you wish to obtain the entire source water assessment, please call 651-201-4700 or 1-888-345-0823 during normal business hours, or view the assessment online at www.health.state.mn.us/divs/eh/water/swp/swa.

Detected substance	Amount detected	Maximum (MCL)	Target (MCLG)	Typical source of substance	Type	Meets standards?
City of Bloomington						
Chlorine (ppm)	Avg. = 2.09 (1.9 to 2.3)	4 MRDL	4 MRDLG	Water additive used to control microbes	R	Yes
Copper (ppm)	90% = 0.03 (0 of 30 sites over AL)	AL = 1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits	R	Yes
Fluoride (ppm)	Avg. = 1.05 (0.96 to 0.99)	4	4	State of Minnesota requires all municipal water systems to add fluoride to the drinking water to promote strong teeth; erosion of natural deposits; discharge from fertilizer and aluminum factories	R	Yes
Haloacetic Acids (HAA5) (ppb)	Avg. = 12.47 (nd to 20.3)	60	0	By-product of drinking water disinfection	R	Yes
Lead (ppb)	90% = 5 (2 of 30 sites over AL)	AL = 15	0	Corrosion of household plumbing systems; erosion of natural deposits *See page WQR 3.*	R	Yes
Sodium (ppm) (07/03/2008)	5.4	U	U	Erosion of natural deposits	U	NA
Sulfate (ppm) (07/03/2008)	12.6	U	U	Erosion of natural deposits	U	NA
Total Coliform Bacteria	Avg. = 1% **	>5% present	0 present	Naturally present in the environment	R	Yes
Trihalomethanes (TTHM) (ppb)	Avg. = 15.33	80 (.4 to 2.2)	0	By-product of drinking water disinfection	R	Yes
City of Minneapolis						
Chlorine (ppm)	Avg. = 3.28 (2.3 to 4)	4 MRDL	4 MRDLG	Water additive used to control microbes	R	Yes
Copper (ppm)	90% = 0.07 (0 of 51 sites over AL)	AL = 1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits	R	Yes
Fluoride (ppm)	Avg. = 1.05 (0.4 to 1.1)	4	4	State of Minnesota requires all municipal water systems to add fluoride to the drinking water to promote strong teeth; erosion of natural deposits; discharge from fertilizer and aluminum factories	R	Yes
Haloacetic Acids (HAA5) (ppb)	Avg. = 51.15 (1.3 to 90.08)	60	0	By-product of drinking water disinfection	R	Yes
Lead (ppb)	90% = 3.2(1 of 50 sites over AL)	AL = 15	0	Corrosion of household plumbing systems; erosion of natural deposits	R	Yes
Nitrate (as nitrogen) (ppm)	0.2	10.4	10.4	Runoff from fertilizer use; leaching from sewage; erosion of natural deposits	U	NA
Sodium (ppm)	11.1	U	U	Erosion of natural deposits	U	NA
Sulfate (ppm)	23	U	U	Erosion of natural deposits	U	NA
Total Coliform Bacteria	Avg. = 1% **	>5% present	0 present	Naturally present in the environment	R	Yes
Trihalomethanes (TTHM) (ppb)	Avg. 54.84 (8.8 to 105.9)	80	0	By-product of drinking water disinfection	R	Yes
Turbidity (NTU)	Avg. 0.6 (0.2 to 0.27)	TT	NA	Soil runoff	R	Yes

Detected substance	Unit	Removal achieved	Removal required	Typical source of substance	Quarters out of compliance
City of Minneapolis					
Total organic carbon	% Removed	46 to 59.1%	25 to 30%	Naturally present in the environment	0

Key

MCL **Maximum Contaminant Level.** The highest level allowed in drinking water. MCLs are set as close to MCLG as feasible using the best available treatment technology.

MCLG **Maximum Contaminant Level Goal.** Below this level there is no known or expected health risk. MCLGs allow for a margin of safety.

U **Unregulated**, but monitoring is required by the State of Minnesota. No limits have been set for this compound.

R **Regulated.**

NA **Not Applicable.**

AL **Action Level.** An amount that, if exceeded, triggers a specific response that a water system must follow.

TT **Treatment Technique.** A required process intended to reduce the level of a contaminant.

ppb **Parts Per Billion.** Units of a substance, in pure form, found in every billion units of water.

ppm **Parts Per Million.** Units of a substance, in pure form, found in every million units of water.

NTU **Nephelometric Turbidity Unit.** A measure of water clarity.

MRDL **Maximum Residual Disinfectant Level.**

MRDLG **Maximum Residual Disinfectant Level Goal.**

90% Value obtained after disregarding the 10 percent of the samples taken that had the highest levels.

cfu **Colony Forming Unit.**

nd **No Detection.**

** Follow-up sampling showed no contamination present.

Water glass © Jupiterimages Corporation.

Appendix F

Wellhead Protection Program Evaluation Template

CITY OF BLOOMINGTON, MINNESOTA

Wellhead Protection Program Evaluation

Evaluation Completed By
(Wellhead Protection Manager): _____

Date Evaluation Completed: _____

Plan Evaluation Frequency (according to wellhead protection plan):

- ☐ **1 year**
- ☐ **2.5 years**

Copies of Evaluation Presented or Sent to:

☐ Minnesota Department of Health
Environmental Health Division
Source Water Protection Unit
P.O. Box 64975
St. Paul, MN 55164-0975

☐ Bloomington City Council
(Date Presented)

☐ City's Wellhead Protection File

I. Changes to Water System, Delineations, or Contaminant Sources

A. List the unique number and locations of new wells installed since the last plan evaluation:

Unique Well Number	Date Online	Delineation Completed?
.		

B. List any new facilities or changes in current facilities in the drinking water supply management area(s) that may be of concern with regard to groundwater quality (list the facility name and nature of concern):

Facility Name	Change	Distance to Well	Well Number	Date Change Made

C. Was any component of the contingency plan implemented by your system at any time since the last program evaluation?

- ☐ **Yes (What was the reason?_____)**
- ☐ **No**

List changes that are needed in the contingency plan and <u>update the plan accordingly</u>:

1.

2.

3.

II. Wellhead Protection Plan Evaluation Approaches

In letters A-D below, complete the sections that apply to the evaluation approaches that were specified in your wellhead protection plan (Chapter 6).

A. Sampling the quality of groundwater throughout the drinking water supply management area. ***(Summarize efforts or attach report of sampling results and conclusions.)***

B. Documenting inventory control of potential contaminants. ***(Summarize efforts.)***

C. Documentation of the implementation of wellhead protection measures. ***(Summarize efforts.)***

D. Using monitoring data that are required by existing laws and rules in effect at the time of plan adoption. ***(List data used and summarize conclusions made from data.)***

III. New Wellhead Protection Data

List any new data that relates to wellhead protection delineations or source management (i.e., groundwater study results, water quality monitoring data, well construction logs, etc.) that may be used during the next update of the wellhead protection plan:

Nature of Data	Source of Data

IV. Plan Implementation Administrative and Financial Concerns

A. Estimate the annual expense of plan implementation for each plan year including staff time and actual dollar amount spent.

Year	Annual Expense	Year	Annual Expense
1	$	6	$
2	$	7	$
3	$	8	$
4	$	9	$
5	$	10	$

B. Estimate full-time equivalency (FTE) spent on wellhead protection implementation in terms of percentage of FTE.

FTE = _____%

C. Has the wellhead protection budget been adequate to conduct wellhead protection implementation activities during the last evaluation period?

☐ **Yes** ☐ **No**

If no, where could it improve?

D. Itemize difficulties incurred during your plan implementation.

1.

2.

3.

4.

Appendix G

Bloomington Water Emergency and Conservation Plan

CERTIFICATION OF ADOPTION
WATER EMERGENCY AND CONSERVATION PLAN

City or Water System Name: City of Bloomington

Name of Person Authorized to Sign
Certification on Behalf of the System: Mark E. Bernhardson

Title: City Manager

Address: 1800 West Old Shakopee Road

Telephone: 952/563-8700 Fax: 952/563-8754

E-mail: mbernhardson@ci.bloomington.mn.us

I certify that the Water Emergency and Conservation Plan approved by the Department of Natural Resources has been adopted by the city council or utility board that has authority over water supply services.

Signed: Date: 1/4/2008

Fax (651/772-7977) or mail this certification to: **DNR Waters**
1200 Warner Road
St. Paul, MN 55106

RECEIVED
JAN 16 2008
DNR
Waters

Minnesota Department of Natural Resources

DNR Waters, 1200 Warner Road, St. Paul, MN 55106
Telephone: (651) 772-7910 Fax: (651) 772-7977

September 28, 2007

City of Bloomington
Mark Bemardson, City Manager
1800 West Old Shakopee Road
Bloomington, MN 55364

Dear Mr. Bernardson:

RE: WATER EMERGENCY AND CONSERVATION PLAN APPROVAL, CITY OF BLOOMINGTON

Our office has completed the review of your Emergency and Conservation Plan (now called Water Supply Plan) for public water supply authorized under DNR Permit 1973-1429. I am pleased to advise you that in accordance with Minnesota Statutes, Section 103G.291, Subdivision 3, and on behalf of the Commissioner of Natural Resources, I hereby approve your Plan. This approval is effective upon the Department's receipt of a completed copy of the attached "Certification of Adoption" form. Please return the form to my office as soon as the City officially adopts the Plan.

We do wish to point out that the City's average residential per capita demand over the past five years was 91 gallons/day, which is higher than the 2002 metropolitan average of 75 gallons/day. Your Plan includes a thorough discussion of possible demand reduction options such as lawn watering restrictions, conservation rate structures, education programs and plumbing retrofit programs, but does not commit to implementing any of these programs. Please be advised that both the DNR and Metropolitan Council strongly support adoption of these types of conservation approaches and we encourage the City to give them serious consideration. Future amendments to your water supply permit for additional volume authorizations may be contingent on implementation of some type of additional conservation measures.

Thank you for your efforts in planning for the future of the City of Bloomington's water supply and for conserving the water resources of the State of Minnesota. If you have any questions or need additional assistance with your water appropriation permit, please contact Area Hydrologist Kate Drewry at 651-772-7919, in our Metro area office.

Sincerely,

Dale E. Homuth
Regional Hydrologist

Enclosure

c: Robert Cockriel, City of Bloomington Utility Superintendent
Chris Elvrum, Metropolitan Council
Kate Drewry, Area Hydrologist
Laurel Reeves, Water Appropriation Program Manager

Metropolitan Council

Environmental Services

December 19, 2006

RECEIVED
DEC 21 2006
DNR
Waters

Julie Ekman
Minnesota Department of Natural Resources
1200 Warner Rd.
St. Paul, MN 55106

Re: Water Supply Plan – City of Bloomington
Metropolitan Council File Referral No. 19923-1
Metropolitan Council District 5

Dear Ms. Ekman:

The Metropolitan Council (Council) has completed its review of Bloomington's water supply plan update as required under Minnesota Statutes, Section 473.859, subd.3. As agreed upon, please include the following comments with the Department of Natural Resources' comments on the water supply plan.

The city calculated its average residential per capita demand over the past 5 years to be 91.2 gallons/day, which is higher than the 2002 metropolitan average of 75 gallons per capita per day (gpcd). The conservation section of the plan describes programs designed to lower this demand. The Council encourages the city to continue implementing its programs and potentially develop others targeted at lowering residential demand.

The city is reminded that if there are any changes in demand projections or in other areas of the water supply plan, the city will need to provide the Council with the updated information as an amendment to the water supply plan when it submits its 2008 comprehensive plan.

This letter completes the Council's review process. Should any questions arise on the Council's review comments or on the process it followed, please feel free to contact Sara Bertelsen at (651) 602-1035.

Sincerely,

Keith Buttleman
Assistant General Manager, Environmental Quality Assurance

Cc: Robert Cockriel, City of Bloomington
Russ Susag, Metropolitan Council Member, District 5
Denise Engen, Metropolitan Council Sector Representative

Water Emergency and Conservation Plan

Bloomington, Minnesota

Introduction

The **Water Emergency and Conservation Plan for Bloomington, Minnesota**, was prepared to comply with Minnesota State Statutes 103G.291, Subd. 3, which requires all municipal suppliers serving more than 1,000 customers to have a plan approved by the Department of Natural Resources (DNR) before January 1996. The original plan was submitted in October 1995 and revised in November 1997. This is a plan update, which is required every ten years.

A Water Supply Plan is also a required element of the Metro Area Community Local Comprehensive Plans. The Water Supply Plan should be submitted to the Metropolitan Council at the same time the Water Emergency and Conservation Plan is submitted to the DNR. If forecasts change before submitting the complete 2008 Comprehensive Plan, an amended Water Supply Plan will need to be included at that time.

The **Water Emergency and Conservation Plan** and **Metropolitan Council Water Supply Plan for Bloomington, Minnesota**, were organized as directed using the provided template. This entire plan is divided into four parts. The first three parts, Water Supply System Description and Evaluation, Emergency Response Procedures and Water Conservation Planning apply statewide. Part IV relates to comprehensive plan requirements that apply only to communities in the Seven-County Twin Cities Metropolitan Area.

Abbreviations

Several abbreviations and acronyms are used throughout this document. A listing of these abbreviations and acronyms follows.

DNR .....Minnesota Department of Natural Resources
EU .....Equivalent Unit
GPCD.....Gallons Per Capita Per Day
GPED .....Gallons Per Employee Day
GPD.....Gallons Per Day
GPM.....Gallons Per Minute
ICI .....Industrial/Commercial/Institutional
MG .....Million Gallons
MGD .....Million Gallons Per Day
MGY .....Million Gallons Per Year
PDCJ .....Prairie du Chien-Jordan
PSI.....Pounds Per Square Inch

PART I. WATER SUPPLY SYSTEM DESCRIPTION AND EVALUATION

This section contains detailed information on Bloomington's existing water supply system. This information is used to evaluate the ability of the system to meet current and future demands. This information is also used to aid in the development of the emergency and conservation plans.

GENERAL INFORMATION

DNR Water Appropriation Permit Number(s)	731429
Name of Water Supplier	City of Bloomington
Address	1800 West Old Shakopee Rd.
Contact Person	Robert Cockriel
Title	Utility Superintendent
Phone Number	952-563-8774
E-Mail Address	rcockriel@ci.bloomington.mn.us

A. ANALYSIS OF WATER DEMAND.

Historic Water Demand
See Table 1 for the past 10 years' water demand. The table categories are similar to those suggested in the template.

Water Use Trends
Variations in the water usage are typical of systems in this geographic area. Residential customer water demands during the winter are quite consistent and predicable, but summer demands can be quite variable. The reason for the variability during the summer is that a large portion of the summer consumption involves outdoor uses which are greatly influenced by weather conditions; *the hotter and dryer the weather, the more water use is experienced*. More specific to Bloomington is the large hospitality industry and employment base, and its ability to create huge and variable demands. For example, in the wake of September 11, consumer travel stopped, the hospitality industry (hotels, Mall of America, airport, retail stores) experienced record low attendance, industry scaled back production because products could not be transported, and water consumption to hit an un-anticipated low. *Do not underestimate the impact (both positive and negative) of significant events.* Growth in population and service connections were relatively flat over the ten-year period, but the per capita water use (both residential and total) seems to be slowly declining. Again, the variability seen is greatly influenced by weather conditions. Historical records show Bloomington's low percentage of unaccounted for water. The vast majority of the unaccounted for water is a result of authorized use by the treatment plant, various Public Works operations, and documented users.

TABLE 1 Historic Water Demand

Year	Total Population	Population Served	Total Connections	Residential Water Sold (MG)	ICI Water Sold (MG)	Wholesale Deliveries (MG)	Total Water Sold (MG)	Total Water Pumped (MG)	Percent Unmetered/ Unaccounted	Average Demand (MGD)	Maximum Demand (MGD)	Residential GPCD	Total GPCD
1996	88700	88700	25033	2966.4	1584.7	0	4551.1	2940.2	0.4%	12.5	28.2	91.6	140.6
1997	88080	88080	25123	2685.6	1615.0	0	4300.6	2843.9	1.4%	11.8	29.6	83.5	133.8
1998	88375	88375	25202	2664.3	1637.6	0	4301.9	2618.1	3.3%	11.8	25.9	82.6	133.4
1999	88538	88538	25245	2577.3	1458.2	0	4035.5	2766.9	4.5%	11.1	27.7	79.8	124.9
2000	88545	88545	25454	2869.2	1669.0	0	4538.2	2018.2	5.0%	12.4	23.5	88.8	140.4
2001	85172	85172	25549	2939.7	1645.7	0	4585.4	1374.1	0.1%	12.6	32.3	94.6	147.5
2002	85172	85172	25555	2550.5	1572.0	0	4122.5	2509.6	5.0%	11.3	24.6	82.0	132.6
2003	85400	85400	25615	3420.7	1631.0	0	5051.7	3789.0	0.1%	13.8	32.6	109.7	162.1
2004	85172	85172	25656	2734.6	1565.1	0	4299.7	3631.0	6.6%	11.8	24.5	88.0	138.3
2005	85442	85442	25221	2554.7	1640.4	0	4195.1	3515.9	7.5%	11.5	31.5	81.9	134.5

Residential. Water used for normal household purposes, such as drinking, food preparation, bathing, washing clothes and dishes, flushing toilets, and watering lawns and gardens.

Institutional. Hospitals, nursing homes, day care centers, and other facilities that use water for essential domestic requirements. This includes public facilities and public metered uses. You may want to maintain separate institutional water use records for emergency planning and allocation purposes.

Commercial. Water used by motels, hotels, restaurants, office buildings, commercial facilities, both civilian and military.

Industrial. Water used for thermoelectric power (electric utility generation) and other industrial uses such as steel, chemical and allied products, food processing, paper and allied products, mining, and petroleum refining.

Wholesale Deliveries. Bulk water sales to other public water suppliers.

Unaccounted. Unaccounted for water is the volume of water withdrawn from all sources minus the volume sold.

Residential Gallons per Capita per Day = total residential sales in gallons/population served/365 days. **Total Gallons per Capita per Day** = total water withdrawals/population served/365 days.

NOTE: Non-essential water uses defined by Minnesota Statutes 103G.291, include lawn sprinkling, vehicle washing, golf course and park irrigation and other non-essential uses. Some of the above categories also include non-essential uses of water.

TABLE 2 Large Volume Users

Customer	Gallons per year	% of total annual use
Mall of America	139,101,000	3.3%
Cypress Semiconductor	58,923,000	1.4%
Seagate – Nord Ave. facility	52,832,000	1.3%
Seagate – W. 77th facility	50,310,000	1.2%
Sheraton Bloomington Hotel	36,905,000	0.9%
Marriott Hotel	24,250,000	0.6%
Thunderbird Hotel	24,220,000	0.6%
Seagate – Computer Ave. facility	20,319,000	0.5%
L'Hotel Sofitel	20,240,000	0.5%
Georgetown Park	19,331,000	0.5%

Guidelines for Developing Public Water Supply Emergency and Conservation Plans define large volume customers as users that consumed more than five percent of the total production. No customers have met this criteria. The largest volume customer for Bloomington is the Mall of America (not including the anchor stores). The preceding table identifies the then largest water consumption customers in Bloomington during 2005.

B. TREATMENT AND STORAGE CAPACITY

TABLE 3(A) Water Treatment

Water Treatment Plant Capacity	14 MGD

Water Treatment Process *including solids management*.
Bloomington's treatment process is conventional lime softening through a contact solids basin (mixing, flocculation, and sedimentation), recarbination, chlorination, filtration, fluoridation, and ammonia addition for a chloramine disinfectant residual in the distribution system. The solids generated, approximately seven cubic yards per million gallons treated, are gravity concentrated and land applied as a certified agricultural liming product through the Minnesota Department of Agriculture (MDA).

TABLE 3(B) Storage Capacity

Total Storage Capacity		**Average Day Demand** (average of last 5 years)
30 MG		12.2 MGD
Type of Structure	Number of Structures	Total Gallons
Elevated Storage	3	6 MG
Ground Storage	4	24 MG

The storage capacity available has historically been and continues to be adequate to meet the maximum hour demand. The maximum hour demand is defined as the greatest demand anticipated for the water system over a period of a few hours.

C. WATER SOURCES.

The Bloomington public water supply consists of two separate sources, a groundwater source and a surface water source. The groundwater source is provided by six water wells pumping directly to a lime softening treatment plant located within the city of Bloomington. The Bloomington plant is run 24 hours a day, producing a consistently high quality product with a variation in output depending on the time of year. The surface water portion of the supply, purchased wholesale from the City of Minneapolis, is also lime-softened water. The Minneapolis portion of the supply is stored in two 10-million gallon reservoirs located at 82nd and Penn in Bloomington. The water is pumped from the 20 MG "82nd Street Reservoir" into the Bloomington distribution system based upon system demand. The reservoir is used primarily as a peaking facility.

The water in the distribution system is a blend of these two finished potable waters. The yearly average of Bloomington treated water versus the Minneapolis purchased water is 75% to 25%. Both supplies are stored and pumped from separate, isolated reservoirs into the distribution system based upon demand.

TABLE 4(A) Total Water Source Capacity for System (excluding emergency connections)

Total Capacity of Sources	43,700 GPM or 62.9 MGD
Firm Capacity (largest pump out of service)	36,300 GPM or 52.3 MGD

The water treated at the Bloomington Water Treatment Plant is pumped into the distribution system using four high service pumps located at the plant. The capacity of the pumps is 18.0 MGD and the firm capacity is 12.2 MGD.

The water purchased from Minneapolis is pumped from the 82nd Street Reservoir Pumping Station into the Bloomington distribution system based on system demand. The 82nd Street Pumping Station has five high service pumps with a capacity of 44.9 MGD and a firm capacity of 34.3 MGD.

Combined, the system capacity is 62.9 MGD with a firm capacity of 52.3 MGD.

Bloomington does have the ability to float on the City of Minneapolis water system, via gravity feed, using two bypasses. The bypass operation does not require any pumps within the City of Bloomington. The *estimated capacity* of the two lines is 30,000 GPM.

TABLE 4(B) Groundwater Sources

Well # or name	Unique Well Number	Year Installed	Well & Casing Depth (ft)	Well Diameter (in)	Capacity (GPM)	Geologic Unit	Status
1	222910	1973	345 / 440	34x20	2100	PDCJ	Active Use
2	222911	1973	315 / 390	30x24	2100	PDCJ	Active Use
3	222912	1974	450 / 953	30x24x20x16	2100	Hinckley	Active Use
4	133389	1978	282 / 376	30x24	2100	PDCJ	Active Use
5	603079	2001	307 / 405	30x24x18	2100	PDCJ	Active Use
6	603080	2001	298 / 399	30x24x18	2100	PDCJ	Active Use

Status: Active use, Emergency, Standby, Seasonal, Peak use, etc.
Geologic Unit: Name of formation(s), which supplies water to the well

All wells, except number three, obtain water from the Prairie du Chien-Jordan aquifer. Well number three obtains water from the Hinckley aquifer. The capacity of the wells is 18.1 MGD. The firm capacity of the wells is 15.1 MGD, which is slightly higher than the designed treatment plant capacity of 14 MGD. All wells are actively used. Treatment plant staff operates all the wells and rotates the use to balance run time hours on an annual basis.

TABLE 4(C) Surface Water Sources

This table does not apply to the Bloomington report.

TABLE 4(D) Wholesale or Retail Interconnections

Water Supply System	Capacity (GPM/MGD)	Wholesale or retail
City of Minneapolis	30 MGD	Retail

Bloomington is considered one of the Minneapolis consecutive systems. Two supply lines run down Oliver and Knox Avenues from 60th Street in Minneapolis, through Richfield, to the 82nd Street Reservoirs. The current contract with the City of Minneapolis allows for a maximum purchase of 30 MGD to be delivered through the 36-inch and 42-inch supply lines feeding the 82nd Street Reservoir. The bypasses are exercised monthly to maintain their operability, but are designed primarily for emergency diversion of water around the reservoir/pumping station and directly into the Bloomington distribution system.

In 1984, a capacity test was conducted on these two transmission lines supplying water from Minneapolis to Bloomington. The Minneapolis maximum supply capability was determined to be 31.2 MGD.

TABLE 4(E) Emergency Interconnections

Water Supply System	Capacity (GPM/MGD)	Note any limitations on use
City of Edina	12000 GPM	Connection location and water quality differences may severely limit system performance.

There are two 8-inch connections between Bloomington and Edina's distribution systems. The connections were provided to improve service along a uniquely situated commercial area between the two communities. If the connections were ever used for emergency purposes, the performance of Bloomington's distribution system would be very low, based on the connection locations, system pressures, and water quality differences between the two communities.

Distribution system interconnection with other cities or private wells do not exist and are not being considered at this time.

D. DEMAND PROJECTIONS.

TABLE 5 Ten Year Demand Projections

Year	Population Served	Average Day Demand (MGD)	Maximum Day Demand (MGD)	Projected Demand (MGY)
2007	86894	13.3	36.2	4840
2008	87140	13.4	36.4	4876
2009	87386	13.5	36.6	4911
2010	87632	13.6	36.8	4947
2011	87919	13.6	36.9	4964
2012	88206	13.6	37.0	4980
2013	88493	13.7	37.1	4996
2014	88780	13.7	37.2	5013
2015	89067	13.8	37.4	5029
2016	89354	13.8	37.5	5046
2020	90503	13.9	37.6	5062
2030	93000	14.3	38.6	5226

Projection Methods
The water demand projections were based on the 1998 Black & Veatch Water Supply Master Plan data (using a residential use of 90 GPCD and an employee use of 45 GPED). The methodology used was linear extrapolations projection data. The population projection methodology on the 2010 and 2020 forecasts was based on assumptions of future growth in residential units based on available land and redevelopment trends; future people per household by type of unit; and future vacancy rates. The methodology on 2030 Met Council forecasts is summarized online at

http://www.metrocouncil.org/metroarea/ForecastMethodology.htm. The methodology used on the 2006 to 2016 yearly forecasts were linear extrapolations of the 2000, 2010 and 2020 forecasts.

The population forecasts were prepared in the late 1990's for use in the 2000 Comprehensive Plan Update. They are outdated and currently in the process of being updated based on new information.

E. RESOURCE SUSTAINABILITY

Sustainable water use is defined as the use of water to provide for the needs of society, now and in the future, without unacceptable social, economic, or environmental consequences.

TABLE 6 Monitoring Wells

Unique well number	Type of well (production, observation)	Frequency of Measurement (daily, monthly etc.)	Method of Measurement (steel tape, SCADA etc.)
222910	Production	monthly	SCADA
222911	Production	monthly	SCADA
222912	Production	monthly	SCADA
133389	Production	monthly	SCADA
603079	Production	monthly	SCADA
603080	Production	monthly	SCADA

Records of water levels for each of Bloomington's production wells is maintained by the Utility.

The DNR Waters Division, in conjunction with federal and local units of government, maintains and measures approximately 750 observation wells around the state. Ground water level data are available online at www.dnr.state.mn.us/waters or by contacting the Ground Water Level Monitoring Manager, DNR Waters, 500 Lafayette Road, St. Paul, MN 55155-4032, or calling (651) 259-5700.

Water Level Data.
The following is a trend graph of dynamic water levels for each of Bloomington's six wells since their origination. Although the average level varies from year to year, continued pumping does not appear to be causing a reduction in the aquifer level.

Natural Resource Impacts
There are no known natural resource features that are or could be influenced by water withdrawals from our municipal production wells.

Sustainability
Groundwater modeling, both steady state and time-varying conditions, was performed as part of the 1998 Black & Veatch Water Supply Master Plan. The model utilized data from the Metropolitan Ground Water Modeling Project at the MPCA, high capacity and observation well data for Hennepin, Scott, and Dakota Counties from the Department of Natural Resources, and results from the Bloomington Well Head Protection modeling performed by Barr Engineering. The model did not indicate any negative impact on aquifer sustainability. A recent groundwater study indicated that excess aquifer capacity is discharged into the Minnesota River.

Source Water Protection Plans

The emergency procedures in this plan are intended to comply with the contingency plan provisions required in the Minnesota Department of Health's (MDH) Wellhead Protection Plan (WHP) and Surface Water Protection Plan (SWP).

Date WHP Plan Adopted:	April 2004
Date for Next WHP Update:	April 2014
SWP Plan:	☐ In Process ☐ Completed ☒ Not Applicable

F. CAPITAL IMPROVEMENT PLAN (CIP)

Adequacy of Water Supply System
The current water supply installations, treatment facilities, and distribution system are adequate to sustain the current and projected water demands.

Proposed Water Sources
No new production wells are planned in the current CIP.

Water Source Alternatives
No new water sources are being proposed.

Preventative Maintenance
Due to the infrastructure age, current preventative maintenance programs, and recent capital improvements to water treatment plants, pumping stations, SCADA, and distribution transmission mains, no areas have been identified as “prone to fail” and, hence, no capital improvements are planned.

PART II. EMERGENCY RESPONSE PROCEDURES

Water emergencies can occur as a result of vandalism, sabotage, accidental contamination, mechanical problems, power failures, drought, flooding, and other natural disasters. The purpose of this emergency plan is to establish proper emergency response procedures for implementation in the event of a water-related emergency. This plan contains essential information for reference and will be incorporated into the City of Bloomington's overall emergency response plan.

Federal Emergency Response Plan

Section 1433(b) of the Safe Drinking Water Act as amended by the Public Health Security and Bioterrorism Preparedness and Response Act of 2002 (Public Law 107-188, Title IV – Drinking Water Security and Safety) requires community water suppliers serving over 3,300 people to prepare an Emergency Response Plan.

Bloomington has prepared and completed the plan, and received certification as noted below.

Community water suppliers, like Bloomington, that have completed the Federal Emergency Response Plan and submitted the required certification to the U.S. Environmental Protection Agency have satisfied Part II, Sections A, B, and C.

Emergency Response Plan	Contact Person	Contact Number
Emergency Response Lead	Gregg Randahl	952-563-4909
Alternate Emergency Response Lead	Robert Cockriel	952-563-8774
Emergency Response Plan Certification Date	June 2004	

Operational Contingency Plan. An operational contingency plan that describes measures to be taken for water supply mainline breaks and other common system failures as well as routine maintenance is recommended for all utilities. Bloomington has such an operational contingency plan at the Utility Division offices.

A. Emergency Telephone List

The emergency telephone list and emergency contact responsibilities are outlined and included in the City's overall emergency plan. Because this plan is a public document, personnel contact information will not be included.

B. Current Water Sources and Service Area

Quick access to concise and detailed information on water sources, water treatment, and the distribution system in addition to detailed maps of the system showing the treatment plants, water sources, storage facilities, supply lines, interconnections, and other information is useful in an emergency. These records and maps exist and staff can access the documents in the event of an emergency at the Utility Division offices.

C. Procedure for Augmenting Water Supplies

See Part 1, Section C, Water Sources, for information regarding augmenting water supplies.

Interconnections with adjacent distribution systems can be used for emergency and auxiliary water supply. However, consideration must be given to water quality and pressure differences between distribution systems when evaluating potential interconnections. Consideration must also be given to the levels of raw water treatment provided by the adjacent communities. This is particularly important between two well supplies where one is softened and the other is not. The blend of these two waters would result in a chemical precipitation reaction that could eventually lead to severe occlusion of the distribution piping. In order for Bloomington to stay in compliance with the EPA Lead and Copper Rule, Bloomington must meet the water quality parameter as outlined in the Bloomington Optimal Corrosion Control Treatment Desk-Top Evaluation. Mixing of non-treated water with our softened water would make these quality parameters unattainable and, hence, place Bloomington in violation of the SDWA. It is also worth noting that a mixing of these different water types would also affect water sensitive industrial users, such as computer component manufacturers.

D. Allocation and Demand Reduction Procedures

During periods of limited water supplies, public water suppliers are required to allocate water based on the priorities established in Minnesota Statutes 103G.261.

Water Use Priorities (Minnesota Statutes 103G.261)

First Priority. Domestic water supply, excluding industrial and commercial uses of municipal water supply, and use for power production that meets contingency requirements.

> *NOTE:* Domestic use is defined (MN Rules 6115.0630, Subp. 9), as use for general household purposes for human needs such as cooking, cleaning, drinking, washing, and waste disposal, and uses for on-farm livestock watering excluding commercial livestock operations which use more than 10,000 gallons per day or one million gallons per year.

Second Priority. Water uses involving consumption of less than 10,000 gallons per day.

Third Priority. Agricultural irrigation and processing of agricultural products.

Fourth Priority. Power production in excess of the use provided for in the contingency plan under first priority.

Fifth Priority. Uses, other than agricultural irrigation, processing of agricultural products, and power production.

Sixth Priority. Non-essential uses. These uses are defined by Minnesota Statutes 103G.291 as lawn sprinkling, vehicle washing, golf course and park irrigation, and other non-essential uses.

A staged response to emergency conditions will be implemented based on the appropriate trigger conditions. The requested customer response will be in proportion to the existing or predicted emergency condition and as dictated by state statute. Table 8 lists the priority ranking, average day demand, and demand reduction potential for each customer category.

Mild Condition Measures

1. Inform the public through the media that a trigger condition has been reached and users should reduce consumption.
2. Inform public of the implementation of odd/even sprinkling restrictions, where odd-numbered addresses are permitted to water on odd-numbered days, and even-numbered addresses are permitted to water on even-numbered days. A warning or fine issuance is implemented as an enforcement mechanism.
3. Issue warnings/fines for runoff due to over-watering and for watering paved surfaces.

Moderate Condition Measures

1. Inform public of increasing severity of conditions and request users to continue to reduce consumption.
2. Continue odd/even sprinkling ban and restrict all sprinkling between noon and six p.m.
3. Prohibit ornamental uses.
4. Request industrial and commercial customers to modify processes where possible, and increase recycling.

Severe Condition Measures

1. Request consumers to continue to reduce consumption.
2. Prohibit all outdoor water uses.
3. Prohibit all water uses involving consumption in excess of 10,000 gallons per day.
4. Require industrial and commercial water users to stop operations and conserve available water for essential health and safety issues.

Table 8 Water Use Priorities

Customer Category	Allocation Priority	Average Day Demand (GPD)	Demand Reduction Potential (GPD) *
Residential	1 and 5	8,000,000	6,500,000
Services using less than 10,000 GPD	2		
Institutional, Commercial, and Industrial	1 and 5	5,100,000	2,000,000
Non-essential	6	Anything in excess of 13.1 MGD	
	TOTALS	13,100,000	8,500,000

** Demand Reduction Potential is the demand experienced after implementing reduction procedures.*

Notification Procedures

Past announcements of water restrictions have been successfully disseminated to the public via the City website, Bloomington Sun, a weekly publication, WCCO radio, and local cable television. These three media sources will continue to be used for future communication to the general public. The Director of Public Works, at the direction of the City Manager, will be responsible for implementation of the appropriate demand reduction measures. The measures previously discussed will be implemented in the order presented as demands approach the supply capacity of the water system allowing for adequate fire protection at all times. Enforcement of the restrictions is the key to demand reduction.

Triggers for Allocation and Demand Reduction Actions

The below triggers are intended as guidelines for use in imposing the emergency demand reduction measures.

- ☒ Water Demand
- ☒ Treatment Capacity
- ☒ Storage Capacity
- ☒ Groundwater Levels
- ☒ Pump, Booster Station or Well Out of Service
- ☒ Governor's Executive Order – Critical Water Deficiency (required by statute)
- ☒ Water Main Break
- ☒ Loss of Production
- ☒ Security Breach
- ☒ Contamination

The experience and judgment of the Bloomington staff must also be considered since there are numerous significant trends, such as storage levels versus time of day, weather forecasts, and the impact of weekends and holidays on demands, that are best interpreted on a continuous basis by the operating personnel. Remember, the potential for water availability problems during the onset of a drought are almost impossible to predict.

The Governor's Task Force, which is directed by the DNR and is comprised of various agencies in addition to several public water power suppliers, has established a program to monitor surface water availability. Surface water conditions may be used as an indicator of potential ground-water conditions since a portion of some aquifers' recharge is derived from surface water. Other aquifers (such as the Prairie du Chien-Jordan aquifer) bleed into surface water through cracks in the confining layers, as evidenced in the southern boundary of Bloomington where it borders the Minnesota River. The Task Force should be consulted during drought conditions to obtain information that may be useful in predicting potential declining groundwater levels.

Each of the listed triggers is intended to result in the implementation of emergency demand reduction procedures. In addition to meeting any of the following trigger conditions, Bloomington with initiate the same outdoor water use restrictions imposed by the Minneapolis City Engineer as authorized by the Minneapolis City Council.

Mild Condition Triggers

Situation: Water demands for each of the previous three consecutive days are greater than 90 percent of the total water supply capacity of the system (44 MGD), in addition to all of the following:

a) less than one-half inch of precipitation over the previous seven days
b) maximum air temperatures of approximately 80 degrees or higher
c) continued dry and warm weather forecast

Moderate Condition Triggers

Situation: Mild condition demand reduction measures have been implemented, but demands have not been sufficiently reduced. Water demands approaching the system capacity, in addition to all of the following:

a) less than one-half inch of precipitation over the previous seven days
b) maximum air temperatures of approximately 80 degrees or higher
c) continued dry and warm weather forecast
d) finished water storage reservoir water levels drop to less than 50 percent of capacity (30 MG divided by two or 15 MG) on three consecutive days. However, adequate treated water pumping capacity is still available to refill storage.
e) firm capacity of the well field has declined to approximately the plant design capacity.
f) Governor's Drought Task Force indicates that surface water levels are approaching critically low levels and the Task Force member utilities have implemented drought response procedures.

Severe Condition Triggers

Situation: Moderate condition demand reduction measures have been implemented but demands have not been sufficiently reduced. Water demands greater than the system supply capacity, in addition to all of the following:

a.) less than one-half inch of precipitation over the previous seven days
b.) maximum air temperatures of approximately 80 degrees or higher
c.) continued dry and warm weather forecast
d.) finished water storage reservoir water levels drop to less than 50 percent of capacity on three consecutive days. Adequate treated water pumping capacity is not available to refill storage.
e.) Governor declares by executive order that there is a critical water deficiency (M.S. 103G.291).

Public Water Supply Appropriation During Deficiency.
Minnesota Statutes 103G.291, Subdivision 1.

Declaration and conservation.
(a) If the governor determines and declares by executive order that there is a critical water deficiency, public water supply authorities appropriating water must adopt and enforce water conservation restrictions within their jurisdiction that are consistent with rules adopted by the commissioner.
(b) The restrictions must limit lawn sprinkling, vehicle washing, golf course and park irrigation, and other nonessential uses, and have appropriate penalties for failure to comply with the restrictions.

E. Enforcement

A public information program to inform customers of emergency conditions, stressing the importance of compliance with the restrictions, will be implemented concurrently with the trigger condition. It is anticipated that enforcement of water restrictions will be rare; however, having enforcement mechanisms in place will allow for a timely response. The City will continue the $25 per violation surcharge which is assessed against the property and added to a customer's bill, associated with the odd/even sprinkling program. A warning would be issued prior to imposing the fine. The service will be shut off and a reconnection fee established pursuant to Section 11.02(c) of the City code, which would be imposed after three violations in a season. This program would be maintained and enforced as necessary based on the severity of the water shortage. The Utilities Division, with the assistance of other City departments during an emergency, would be charged with the enforcement of the program.

F. Authority to Implement Water Emergency Responses

Bloomington's City Manager has the authority to implement emergency water responses.

PART III. WATER CONSERVATION PLAN

The purpose of this section is to update the water conservation plan for Bloomington. This section evaluates the conservation potential of the Bloomington service area and presents a recommended plan for a water conservation program. The role of water conservation in terms of water resource planning is reviewed, conservation potential is evaluated for each major class of customer, specific potential conservation program activities are evaluated, and a recommended plan is presented.

A. Conservation Goals

The following section establishes goals for various measures of water demand.

Unaccounted Water (calculate five-year averages with data from Table 1)	
Average annual volume unaccounted water for the last 5 years	126,499,000 gallons
Average percent unaccounted water for the last 5 years	3.9 percent
AWWA recommends that unaccounted water not exceed 10%. Describe goals to reduce unaccounted water if the average of the last 5 years exceeds 10%.	
Bloomington is below the recommended goal.	

Residential Gallons Per Capita Demand (GPCD)	
Average residential GPCD use for the last 5 years (use data from Table 1)	91.2 GPCD
In 2002, average residential GPCD use in the Twin Cities Metropolitan Area was 75 GPCD. Describe goals to reduce residential demand if the average for the last 5 years exceeds 75 GPCD.	
In 2002 Bloomington's average residential GPCD was 82; very close to the stated average. Bloomington will continue public education on wise water use and stress the importance of conservation.	

Total Per Capita Demand
The per capita demand trend is flat to slightly declining. Bloomington will continue public education on wise water use and stress the importance of conservation.

Peak Demands (calculate average ratio for last five years using data from Table 1)	
Average maximum day to average day ratio	2.3
If peak demands exceed a ratio of 2.6, describe the goals for lowering peak demands.	
Bloomington is below the recommended goal.	

The City of Bloomington's conservation goal is to supply an adequate amount of potable water to meet the normal demands of the customers and allow for system growth, while promoting the wise use of water as a responsible person practice. The ultimate benefit may be to potentially delay and/or reduce the need to increase the water supply capacity in the future.

B. Water Conservation Programs

1. **Metering**.

Metering is widely recognized as an essential requirement for any water utility's effort to measure and reduce water demand. A large majority, but not all, of the water utilities in the United States meter the volume of water delivered to customers and base their charges on metered consumption. Studies have demonstrated that water demand decreases on the order of 20 percent when customers are metered and billed on water consumption. The DNR/ Metropolitan Council guidelines strongly encourage full metering of customers served by the utility.

The City has a very proactive metering program where all residential and ICI water customers served by the City are metered. Residential meters are read once every two months. Larger commercial accounts are read every month. The City performs radio frequency readings for all ICI accounts.

The City has a meter change-out program in place. One staff member is dedicated full time to meter removals, testing, repairs and replacements. The utility also has a meter shop with a test bench.

There is an ongoing random testing program for commercial meters. Every commercial meter that is removed is tested for accuracy.

The City meters all public buildings such as park buildings and fire stations. All record keeping and billing of these accounts is internal to the City.

Table 10 (A) shows the number of metered connections in 2005 and the customer meter maintenance and replacement schedule. Table 10 (B) shows the number of treatment plant source water meters, meter testing schedule, and the average age of the meters.

TABLE 10 (A) Customer Meters

	Number of Connections	Number of Metered Connections	Meter testing schedule (years)	Average age/meter replacement schedule (years)
Residential	24090	24090	Random (250/yr)	25 yrs / 25 yrs
Institutional, Commercial, Industrial	1131	1131	Random	5 yrs / 10 yrs
TOTALS	25221	25221		

TABLE 10 (B) Water Source Meters

	Number of Meters	Meter testing schedule (years)	Average age/meter replacement schedule (years)
Water Source (wells/intakes)	6	Annual check	10 years / As needed
Treatment Plant	1	Annual check	4 years / As needed

2. **Unaccounted for Water**

A distribution system water audit is a systematic analysis performed to account for all water withdrawn by a water utility. Causes of "unaccounted for" water include meter inaccuracy, unmetered uses (both authorized and unauthorized), leakage, and other system losses (such as water consumed in the operation of the treatment plant). Water audits identify, quantify and verify these losses. The performance of a water audit is analogous to a business taking inventory of its stock.

Unaccounted for water in the entire Bloomington system is very low, less than four percent of the total yearly demand. The unaccounted for water is a result of authorized use at the water treatment plant, and use by public works personnel in field operations. Bloomington performs water audits annually and leak detection as needed.

3. **Conservation Water Rates**

a. Current Rate Structure

The City has for many years billed for water based on the volume consumed, at a uniform rate plus a minimum service charge. This meets the DNR/Metropolitan Council standards for a water conserving rate structure. The rate presently charged is $1.89 per thousand gallons, with a minimum service charge based on the size of the meter. The basic charge does not include any volume. Rate changes are evaluated each fall of the year. The last rate change was in 2005.

Bloomington bills residential water customers every other month and all ICI customers monthly.

The water rates are designed to recapture the annual operation and maintenance costs of the utility and to provide a capital reserve for future utility projects. Additional capital costs are recovered through special assessments and connection charges. Special assessments are levied by the City at the time the City provides an accessible water system to the property. These are gradually repaid by property owners over a period of years, but act as a lien on the property and usually are paid in full when a parcel is sold. The current assessment rate varies and is based on the adjusted front footage of the property at the time of development. City staff develops the guidelines for special assessments and connection charges and periodically revises the rates.

Bloomington has a 20-year contract with the City of Minneapolis with respect to this wholesale water purchasing that expires in 2017. The wholesale rate structure used is a typical multiple step wholesale purchasing arrangement. The base rate of the structure is the current Minneapolis residential declining block rate or "inside" rate.

b. Alternative Rate Structures

The DNR/Metropolitan Council conservation plan guidelines state that uniform rates are acceptable. There are two alternative rates that are also acceptable, increasing block and seasonal. Both rates are common among water utilities where water shortages occur and conservation is a significant issue. Seasonal rates and increasing block rates are both intended to price water so that the rate reflects the greater expense of meeting larger demands and peak demands.

An increasing block rate structure is premised on incrementing the unit price of the water per increment of greater water usage. This is perhaps the most common conservation-oriented rate. If the increase in price for larger blocks of consumption are large enough, it can serve as an incentive for conservation.

A seasonal rate structure prices the unit price of water higher during the peak demand season as compared to the rest of the year. This particular structure is useful in encouraging customers to reduce landscape water demands. The ultimate goal of this structure is to conserve water and to potentially reduce or postpone capital facilities construction undertaken solely to meet peak demand. Seasonal rates are designed to send a price signal to the consumer which is indicative of the higher costs associated with the greater demands placed on the system.

The seasonal rate is usually preferable to the increasing block rate. The increasing block rate is more complex to administer. The increasing block rate also tends to charge large water users higher rates, regardless of their efficiency. Some utilities have circumvented this problem by calculating seasonal surcharges on a customer-by-customer basis.

In economic terms, water demand is considered elastic. This means that an increase in price tends to result in a decrease in demand. The degree of price elasticity of water demand has been studied on many occasions and the reported findings vary considerably. Factors such as type of water use, customer type, existing water use efficiency, and the socioeconomic characteristics of the community are a few of the variables that affect the elasticity coefficient. Suburban communities are likely to have lower elasticity coefficients, i.e., higher seasonal water rates may be viewed by customers as relatively insignificant. The AWWA publication *Water Conservation* notes that price elasticity varies between indoor and outdoor uses, with elasticity coefficients as follows.

- Indoor use: -0.26% The percent reduction in consumption equals 0.26 times the increase in price.

- Outdoor use: -0.40% The percent reduction in consumption equals 0.40 times the increase in price.

A more aggressive approach to demand reduction would be the implementation of a seasonal or increasing block rate structure. Implementing an increasing block, seasonal rate, or excess use surcharge may reflect the higher cost of purchasing water from Minneapolis for peak demands. In reality, the increased costs to purchase additional water from Minneapolis would be offset by the revenue received for the increased usage. So, the net effect of these rates would be to penalize the user for utilizing the water for outside uses. The City currently bills residential customers (defined as any meter less than 1.5 inches) on a two-month billing cycle. Monthly billing would mirror a price increase as a result of a rate change better, by sending a quicker price signal to the customer. This could potentially result in lower demand. However, monthly billing of all residential customers would require a substantial increase in the City's effort to read the meters and prepare

the bills which, in turn, would drive up the unit price of the water consumed.

Additional studies would be necessary to ensure that rate restructuring would provide adequate revenue recovery, and be acceptable to the community. The studies would also have to address the current billing cycles to ensure that any change in the rate structure is equitable to all customers.

4. **Regulation**

a. Section 11.23 of the Bloomington City Code authorizes the City Council to limit water usage by adopting a resolution setting forth restrictions on water usage and penalties for non-compliance.

Another significant requirement limiting water usage is the federal law requiring water-efficient plumbing fixtures nationwide. These requirements have been in force since January 1994 for residential water users and 1997 for commercial water users.

b. Additional Ordinances. A number of other ordinances could be considered. Ordinances are generally unpopular with customers and costly to monitor and/or enforce, but can be effective in achieving conservation if they are enforced. Most ordinances prohibit uses of water for one of two reasons – the use is clearly wasteful and irresponsible, or the ordinance is instituted as a short-term measure in response to a drought or other emergency.

Ordinances that may be considered include:

- Prohibition of landscape irrigation water running off private property.

- Prohibition of watering during peak daylight hours, between noon and 6:00 p.m. This general time span is considered an inefficient time to water due to potentially high evaporation rates.

- Requirement for water-efficient irrigation systems for new ICI development.

- Requirement for automatic sprinkler systems to have rain-monitoring equipment to automatically disable sprinkling system on rainy days. This is currently a State Plumbing Code requirement.

With the exception of customers' water uses which impact others, or are outright wasteful of water, or are emergency related, it is recommended that the City's conservation program invest more time and effort in other measures such as education, customer assistance and incentives. Educating customers on the prudence of not watering between noon and 6:00 p.m. can in itself be an effective means of limiting demand during the period. It has not, however, been proven to reduce overall water consumption. Note: Bloomington staff concurs with the inefficiency of watering between noon and 6:00 p.m. Creation of a "6:00 p.m." peak would have a significant impact on the utility's electrical conservation programs and practices. Research is needed to address all the potential problems with a "6:00 p.m." peak, including, but not limited to, electrical, water system hydraulics, and staffing issues.

It is recommended that watering restrictions be reserved for implementation during water shortages. Furthermore, water savings due to these measures would not be included when determining the required capacity of the system, rather, remain as a safety factor for emergency conditions.

Enforcement

If the City Council approved a watering restriction or ban, Utility staff would monitor and enforce the City for violators.

Non-compliance penalties are $25 per violation and assessed to the property owner. If there are more than two warnings, the Utility has the option to shut the water service off.

Below is the adopted City Code.

Bloomington City Code:
SEC. 11.23. RESTRICTED HOURS FOR SPRINKLING.

(a) **Restrictions on water usage.** Whenever it is determined by either the Mayor or the City Council that a shortage of water supply may be imminent, either may act in accordance with the procedures hereinafter described to limit the uses of City water and the times and hours during which water from the City water supply may be used.

(b) **Council action.** The City Council may act by resolution to limit water usage. The resolution shall state in detail the restrictions imposed on water usage and the charge for instances of non-compliance. The restrictions shall become effective 24 hours after passage of the resolution. The Council shall take such action as is reasonably practicable to inform the general public of the imposition of the restrictions on water usage and of the charges and other penalties which could be imposed for violation of such restrictions.

(c) **Action by the Mayor.** The Mayor may act by filing with the City Clerk a written certification that there is an imminent shortage of water supply. The certification shall specify in detail the restrictions on water usage and the charge for instances of non-compliance and shall become effective 24 hours after being filed. The City Clerk shall endorse on each filing the time and date of filing. The Mayor shall take such action as is reasonably practicable to inform the general public of the imposition of restrictions on water usage and of the charges and other penalties for violation of such restrictions. Restrictions imposed by the Mayor may be revoked by written directive from the Mayor to the City Clerk, who shall endorse on such directive the date and time of receipt, or by action of the City Council.

(d) **Penalties.**

(1) For each instance of non-compliance with water usage restrictions imposed by this section, a charge of up to $25.00 shall be assessed against the property on which the violation occurred and added to the water bill for such premises. The amount of the charge shall be specified by the Council in its resolution and the Mayor in his certification to the City Clerk.

(2) Failure to comply with water usage restrictions after two warnings shall be cause for the discontinuance of water service.

(3) Failure to comply with water usage restrictions shall be a petty misdemeanor punishable by the maximum fine allowed by law for such offenses.

(Code, 1958 S 30.22; Ord. No. 81-27, 6-29-81)

5. **Education and Information Programs**

Water conservation programs to be successful, must combine technical measures (which directly reduce water consumption), with educational efforts to instruct and encourage customers to implement those measures. A wide range of materials has been developed on the subject of water conservation by various organizations. One organization that has done an extraordinary amount of research and publication on the topic of water conservation is the American Water Works Association.

Water conservation requires changes in customers' habits, and education is necessary to convince customers to change those habits. The need for conservation should be explained. The explanation should include the benefits of conservation for both the community and the customer. A separate program for education of school-age children is a very effective component of any educational conservation program.

The seven key steps in developing an information campaign are summarized as:

1. Develop a clear and persuasive statement of purpose.
2. Choose an appropriate theme.
3. Identify key target groups.
4. Select members for a water conservation committee.
5. Identify communication paths, resource materials and volunteers.
6. Design and implement specific campaigns.
7. Ensure effective coordination and follow-through.

Community involvement is a key element to the success of a water conservation program. The City should continue to disseminate information and provide educational assistance on conservation issues using any of the following forums:

- Present AWWA conservation videos on the Bloomington public access television channel.

- Notify community groups and schools of the availability of water conservation-oriented literature and videos for their use. A City staff member could assist with the presentation of the material, if desired.

- Provide information booths at various community functions (celebrations, sporting events, etc.) for dissemination of conservation-oriented information.

The educational program should emphasize the prudent use of water for irrigation. Demonstration gardens can provide excellent examples of the use of conservation-oriented landscape. Local nurseries can be requested to participate in the educational program. Information regarding proper watering techniques to reduce water use and increase the drought tolerance of vegetation should be part of the educational effort.

Education Programs
Bloomington typically performs four to 10 (water quality report, two to four different handouts at public buildings, public school presentations, water plant tours, and various articles in City or other public communication materials) educational programs annually, depending on the weather, time of year, and/or other conditions. Bloomington does not track educational efforts beyond six months and did not enclose any materials. No educational efforts were initiated as an emergency or drought management effort, as neither condition has occurred.

Proposed Education Programs
The City is always looking for new educational programs to present to the public in the aforementioned venues.

6. **Retrofitting Programs**

Plumbing retrofit programs have been undertaken by numerous utilities to assist customers in reducing indoor water consumption. Retrofit programs typically offer low flow showerheads, low flow faucet aerators, and devices to decrease the volume used for toilet tank flushing. The designs of these programs vary in the level of effort and expense devoted to distribution and installation of the fixtures.

There has been a proliferation of plumbing retrofit items offered on the marketplace due to demand from conservation programs. Many different versions of retrofit devices are available, and the design and performance of these items have steadily improved.

Faucet retrofits are usually accomplished by installing low flow aerators. They are available in flow rates as low as 0.5 gpm, with the typical aerator having a rate of one gpm. These lower flow rates are significantly lower than the non-conserving faucets, which ordinarily flow four gpm or greater. Typically, customers have had few objections to the performance of faucet aerators. They are easily installed by screwing them onto the faucet. Faucet aerators conserve energy as well by reducing the use of hot water.

Showerhead retrofits are accomplished by removing the old showerhead and replacing it with a new low flow model. To comply with the requirements of the Federal Energy Policy Act, the showerhead must use 2.5 gpm or less. These are now the only showerheads legally available. Older, non-conserving showerheads used five gpm or greater. Many of the early models of the water-conserving showerheads were not well received by the customers. The designs have greatly improved. Similar to faucets, showerheads also conserve energy by reducing the use of hot water.

Many devices are available for tank toilet retrofits. These can be classified into six groups.

- Fixed volume displacement devices.
- Variable volume displacement devices.
- Mechanical devices with fixed cycle times.
- Mechanical devices with variable cycle times.
- Mechanical devices with user-controlled cycle times.
- Dual flush devices.

As an alternate to retrofitting existing toilets, new ultra low flush (ULF) models could be installed which meet the federal water efficiency requirement of 1.6 gallons or less. To promote the installation of ULF toilets, many utilities in water-short areas of the country (Los Angeles, Tucson, New York City, etc.) have undertaken ULF toilet rebate programs where the utility pays a share of the customer's cost for purchase of a new ULF toilet to replace an existing high-consumption toilet.

One of the most important considerations in implementation of a plumbing retrofit program is the method by which retrofit kits are distributed to customers. Methods include, but are not limited to:

- *Depot program*. Customers are advised that kits are available for them to come and pick up if they are interested.

- *Mass mailing*. Kits are mailed to customers.

- *Door-to-door*. Crews distribute the kits directly to customers. Some of these programs include follow-up surveys to answer questions and verify installation.

If the City considered a retrofitting program, it would be recommended that the City use the depot method. Plumbing retrofit kits would be made available for customers that are interested in picking up a kit and installing the kit themselves. It is hard to estimate how many customers served by the City will participate.

Retrofitting Programs
Bloomington encourages the use of efficient plumbing fixtures but currently has no plans to institute a formal incentive program.

PART IV. ITEMS FOR METROPOLITAN AREA PUBLIC SUPPLIERS

Minnesota Statute 473.859 requires water supply plans to be completed for all local units of government in the seven-county Metropolitan Area as part of the local comprehensive planning process. Much of the required information is contained in Parts I-III of these guidelines. However, the following additional information is necessary to make the water supply plans consistent with the Metropolitan Land Use Planning Act upon which local comprehensive plans are based. Communities should use the information collected in the development of their plans to evaluate whether or not their water supplies are being developed consistent with the Council's Water Resources Management Policy Plan.

Water Supply Policy Statement
Bloomington Utility Mission Statement: "Bloomington is committed to deliver quality water and dependable wastewater services of outstanding value to our customers through responsible and creative stewardship of the assets we manage."

Impact on the Local Comprehensive Plan
This plan should have a minimal impact on the local comprehensive plan.

Demand Projections

Year	Total Community Population	Population Served	Average Day Demand (MGD)	Maximum Day Demand (MGD)	Projected Demand (MGY)
2010	87632	87632	13.6	36.8	4947
2020	90503	90503	13.9	37.9	5062
2030	93000	93000	14.3	38.6	5226

Population projections should be consistent with those in the Metropolitan Council's *2030 Regional Development Framework* or the Communities 2008 Comprehensive Plan update**.** If population served differs from total population, explain in detail why the difference (i.e., service to other communities, not complete service within community, etc.).
Population projection data was taken from the Met Council's *2030 Regional Development Framework.*