

Executive Summary

The Wellhead and Source Water Protection Plan (WHPP) for the City of Chanhassen primarily addresses the ten municipal water supply wells used by the City. Wells 2, 3, 7, 8, 9, 10, 12, 13, and 14 are primary water supply wells and are completed in the Prairie du Chien/Jordan aquifer, Well 4 is a primary water supply well and is open to the Prairie du Chien/Jordan, Tunnel City (formerly Franconia), and Wonewoc (formerly Ironton/Galesville) aquifers. Well 11 is classified as an Emergency Backup well. The Wells 5 and 6 are currently classified as Inactive so these two wells were not included in the delineation of the Chanhassen Wellhead Protection Area. The former Middle School Well was sealed in April 2011.

This Plan was prepared in accordance with the applicable portions of the State of Minnesota Wellhead Protection Rules (Minnesota Rules 4720.5100 through 4720.5590). In Part 1 of the WHPP, Wellhead Protection Areas (WHPAs) and the Drinking Water Supply Management Area (DWSMA) were delineated. The DWSMA extends into the cities of Deephaven, Eden Prairie, Excelsior, Greenwood, Minnetonka, Orono, Shorewood, and Tonka Bay.

This document comprises Part 2 of the WHPP 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 Chanhassen's alternative water supply contingency strategy.

Part 1 of the WHPP was completed in August 2002 and updated in February 2011 to incorporate six new wells along with inclusion of fracture-flow analysis. The update was approved by the Minnesota Department of Health on May 20, 2011. In addition to the delineation of the WHPAs and DWSMAs, Part 1 of the WHPP included an assessment of the vulnerability of the Chanhassen municipal wells and the associated DWSMA to contamination. In accordance with Minnesota Rules 4720.5550, Chanhassen Well # 11 (currently an Emergency Backup well) was identified as vulnerable to surface

contamination, while the rest of the Chanhassen municipal wells were identified as being not vulnerable to surface contamination. In the Part 1 report, the uppermost source water aquifer within the DWSMA was identified as having mostly low vulnerability to surface contamination with one small area in Chanhassen near Well 11 and two areas within the Eden Prairie city limits identified as having moderate vulnerability.

Since the aquifer vulnerability in the DWSMA is classified as Low or Moderate, Chanhassen's Wellhead and Source Water Protection Program is targeting non-municipal wells, potential Class V well locations (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), and storage tanks within the DWSMA. The City will also focus on educating city staff, residents, and business owners of the City of Chanhassen, as well as those in the portions of the cities of Deephaven, Eden Prairie, Excelsior, Greenwood, Minnetonka, Orono, Shorewood, and Tonka Bay within the DWSMA, regarding wellhead and source water protection. In addition, the City of Chanhassen will gather or compile new or updated information for future revisions of the WHPP.

The following goals have been identified for Chanhassen'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.
- The City will provide information and promote activities that protect the source water aquifers that provide water to the municipal system. This will include increasing public awareness of the Wellhead and Source Water Protection Program and groundwater-related issues, and management of the identified potential contaminant sources within the DWSMA.
- The City will continue to collect data to support future wellhead and source water protection efforts.

These goals will be accomplished through implementation of this WHPP

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

- Privately-owned wells
 - Promoting proper management of existing active wells in the DWSMA. Again, this includes working with the neighboring jurisdictions into which the DWSMA extends to promote proper management of existing active wells in the DWSMA.
 - Encouraging the proper sealing of all unused wells within the DWSMA. This includes working with the neighboring jurisdictions into which the DWSMA extends to promote sealing of any unused wells within the DWSMA,
- Potential contaminant source properties
 - Providing information to owners of properties that may contain Class V wells,
 - Provide information to owners of properties where storage tanks are located that will encourage proper operation and maintenance of the storage tanks,
 - Periodically obtain information on the status of wells and storage tanks from the regulating agencies to to maintain an up-to-date potential contaminant source database for the DWSMA and allow timely recognition of potential issues that could affect the Chanhassen municipal water supply or DWSMA.
- Public education
 - Distribution of the Chanhassen Consumer Confidence Report for the water supply system,
 - Distribution of information on the proper operation and maintenance of private wells,
 - Post WHPP information on the City of Chanhassen website at <http://www.ci.chanhassen.mn.us/>,
 - Inclusion of wellhead and source water protection into the City’s planning process,
 - Working with the cities of Deephaven, Eden Prairie, Excelsior, Greenwood, Minnetonka, Orono, Shorewood, and Tonka Bay to the extent practicable to identify appropriate public education opportunities for any residents within the portions of the DWSMA that extend into these jurisdictions,
 - Distribution of a Wellhead and Source Water Protection informational brochure.
- Continued data collection
 - Recording static and pumping water levels in the Chanhassen municipal wells,
 - Collection of additional local geologic and hydrogeologic data as it becomes available or via undertaking hydrogeologic studies,
 - Collection of data on potential contaminant sources within the DWSMA.