Source Water Assessments
Fact Sheet for Public Water Supply Owners and Operators

Source Water Assessments Will Be Sent To All Public Water Systems in 2003

Beginning in March of 2003, the MDH Source Water Protection Unit will be sending out "Source Water Assessments" to all public water systems in Minnesota. This fact sheet helps explain Source Water Assessments and answers some basic questions you may have regarding the assessments. An example of a Source Water Assessment is attached. You may wish to refer to this example as you read the following information. Note that this fact sheet is focused primarily on ground water systems – the process for surface water systems is different (see discussion on back of this page).

What Is A Source Water Assessment?

A Source Water Assessment is a document – produced by MDH, provided to the public water system, and made available to the public – which summarizes a variety of information regarding the water sources used by a public water system. Specifically, the assessment includes the following:

- **A description of the drinking water source(s) used by the water system (i.e. your well or wells) and the area that contributes water to the source(s).** This will include a map showing the location of your water source(s).
- **A determination of the "susceptibility" of your drinking water source to contamination**. , Susceptibility describes how likely it is that a water source may become contaminated. For wells, susceptibility is based on well construction, the type of aquifer that supplies the well(s), and previous water sampling results.
- **Drinking water contaminants of concern to anyone using the water source.** For wells, this will be based on any detection of regulated contaminants during previous water sampling.

Along with the text portion of the assessment, a map will be generated showing the Inner Wellhead Management Zone for the well(s) or a Drinking Water Supply Management Area (DWSMA), if one has been approved. Note that only systems that have formally entered the wellhead protection planning process will have an approved DWSMA.

Why Are Source Water Assessments Being Created?

Under the 1996 amendments to the Safe Drinking Water Act, MDH is required to produce Source Water Assessments for all Minnesota's public water systems by May 30, 2003 – and make these assessments available to the public. The idea behind assessments is the creation of document that can provide a concise summary of available information regarding a water system's source(s). This information is then provided to both the public water system owner/operator and the public at large.

How Are Source Water Assessments Created?

Source Water Assessments are generated by MDH using existing data from water sampling, water system surveys, and well records. One Source Water Assessment will be produced for each public water system – even if the system has multiple wells. Once printed, assessments will be mailed to public water systems by MDH.

How and When Will the Source Water Assessments Be Sent Out To Public Water Systems?

Distribution will take place between March and May, and will be phased in over the state – beginning in the southwest portion of the state. After assessments have been mailed out – and time allowed for review by water system owners/operators – the assessment will be made available to the public on the MDH Web Site.

What Do I Need To Do With the Source Water Assessment?

There is no specific action *required* of the water system regarding the Source Water Assessment. However, *it is strongly recommended* that the owner/operator read over the assessment to make sure it is accurate before the information "goes public" on the MDH web site. Owners/operators are encouraged to review the assessment and contact MDH (Source Water Protection Planner) with corrections within 2 weeks of receiving the assessment.

Remember that these reports are generated automatically based on current information in the databases – which may miss some real time events (such as a well that was sealed last week). Owners/operators should look for these kinds of changes, and also check out whether their well was determined to be sensitive simply because construction data was not available. In these cases, well record info could change the well sensitivity and source – potentially impacting the types of wellhead protection measures recommended by MDH or adopted by the water system.

How Will Assessments Be Updated?

Assessments will be updated as soon as new information (such as well construction data) is added to the databases that are used to generate the assessments. The assessments shown on the web site will then be updated to reflect these changes.

What Exactly Is Going To Be On The Website?

No information on assessments will be posted on the website until after the water system has received the initial version of the assessment and had time to review it. Once the assessment has been sent out, and time given for response, information will be posted on the web site as follows:

- ***Community and Nontransient Noncommunity Public Water Systems***: Only the text portion of the assessment will appear on the web site until the system has an approved DWSMA – something that occurs once the system has entered the wellhead protection planning process. Once a DWSMA is approved, the assessment on the website will be updated to include a map of the DWSMA. However, due to security concerns, specific well locations will not be provided with the DWSMA maps.
- ***Transient Noncommunity Public Water Systems:*** For transient systems, only the text portion of the assessment will appear on the website. There will not be a map of the IWMZ or a well location posted.

A Source Water Assessment Is <u>Not</u> A Wellhead Protection Plan

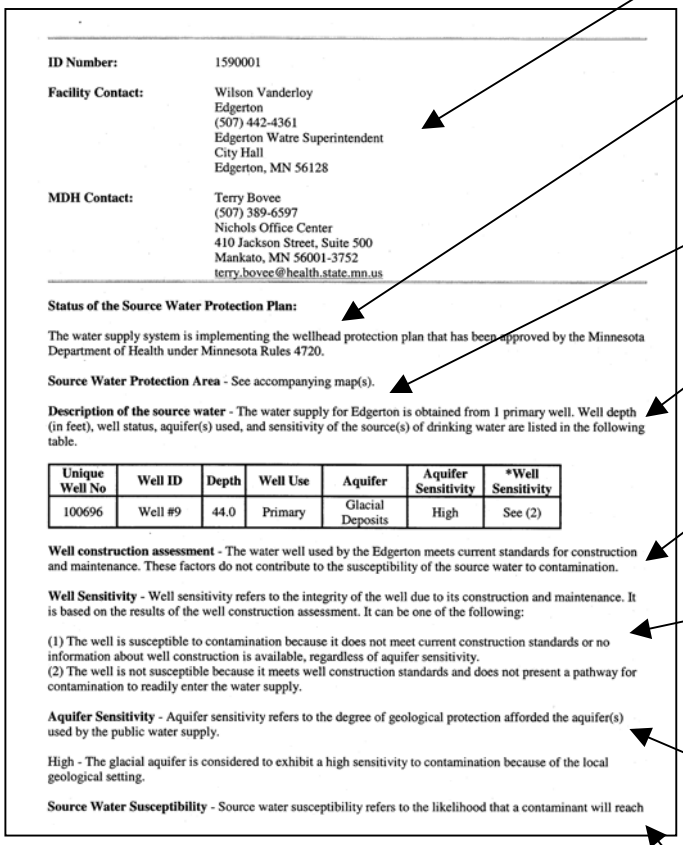
A Source Water Assessment and a Wellhead Protection Plan are two separate and distinct documents. However, the assessment can aid a water system in its wellhead protection process and provides an update of the system's progress in source water protection. Keep in mind that the assessment is a document produced by MDH, while the wellhead protection plan is developed by the public water system and its wellhead protection planning team.

How Is The Process Different For Public Water Systems Using Surface Water?

Due to the unique issues involved in creating assessments for surface water systems, and the limited number of surface water systems, source water assessments for water supplies using surface have been developed on a case-by-case basis, in close consultation with the water system. Surface water systems have already begun receiving their assessments and are well aware of their contents.

Example Source Water Assessment*

***Note that this is example only and specific language will be unique for each public water system.**



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Status of the Source Water Protection Plan:

The water supply system is implementing the wellhead protection plan that has been approved by the Minnesota Department of Health under Minnesota Rules 4720.

Source Water Protection Area - See accompanying map(s).

Description of the source water - The water supply for Edgerton is obtained from 1 primary well. Well depth (in feet), well status, aquifer(s) used, and sensitivity of the source(s) of drinking water are listed in the following table.

Unique Well No	Well ID	Depth	Well Use	Aquifer	Aquifer Sensitivity	*Well Sensitivity
100696	Well #9	44.0	Primary	Glacial Deposits	High	See (2)

Well construction assessment - The water well used by the Edgerton meets current standards for construction and maintenance. These factors do not contribute to the susceptibility of the source water to contamination.

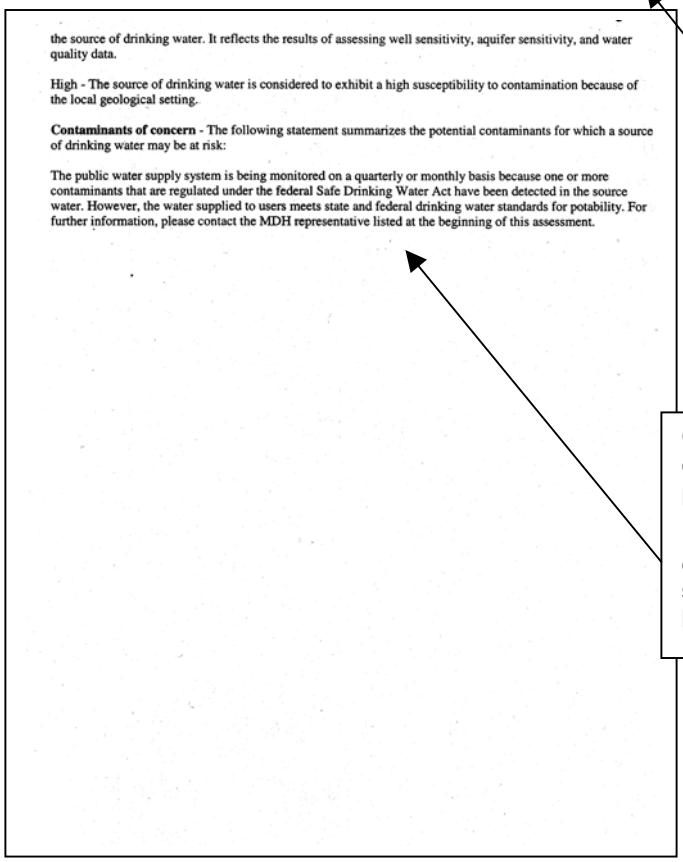
Well Sensitivity - Well sensitivity refers to the integrity of the well due to its construction and maintenance. It is based on the results of the well construction assessment. It can be one of the following:

(1) The well is susceptible to contamination because it does not meet current construction standards or no information about well construction is available, regardless of aquifer sensitivity.
(2) The well is not susceptible because it meets well construction standards and does not present a pathway for contamination to readily enter the water supply.

Aquifer Sensitivity - Aquifer sensitivity refers to the degree of geological protection afforded the aquifer(s) used by the public water supply.

High - The glacial aquifer is considered to exhibit a high sensitivity to contamination because of the local geological setting.

Source Water Susceptibility - Source water susceptibility refers to the likelihood that a contaminant will reach



the source of drinking water. It reflects the results of assessing well sensitivity, aquifer sensitivity, and water quality data.

High - The source of drinking water is considered to exhibit a high susceptibility to contamination because of the local geological setting.

Contaminants of concern - The following statement summarizes the potential contaminants for which a source of drinking water may be at risk:

The public water supply system is being monitored on a quarterly or monthly basis because one or more contaminants that are regulated under the federal Safe Drinking Water Act have been detected in the source water. However, the water supplied to users meets state and federal drinking water standards for potability. For further information, please contact the MDH representative listed at the beginning of this assessment.

Contact Information Given for public water supply and MDH SWP Planner.

Status of the Source Water Protection Plan Summarizes a system's status in wellhead protection planning process.

Source Water Protection Area Refers to the attached map, which will show either an IWMZ or a DWSMA.

Description of Source Water Summary of existing well and aquifer data. Also summarizes aquifer and well sensitivity, as described later in the assessment.

Well Construction Assessment This is a brief summary of information known about the construction of the well(s) in the system, based on a review of five key construction elements.

Well Sensitivity States whether a well is "susceptible" or "not susceptible" to contamination, based on the well construction assessment. Note that if well construction information is not available, a well will be considered susceptible.

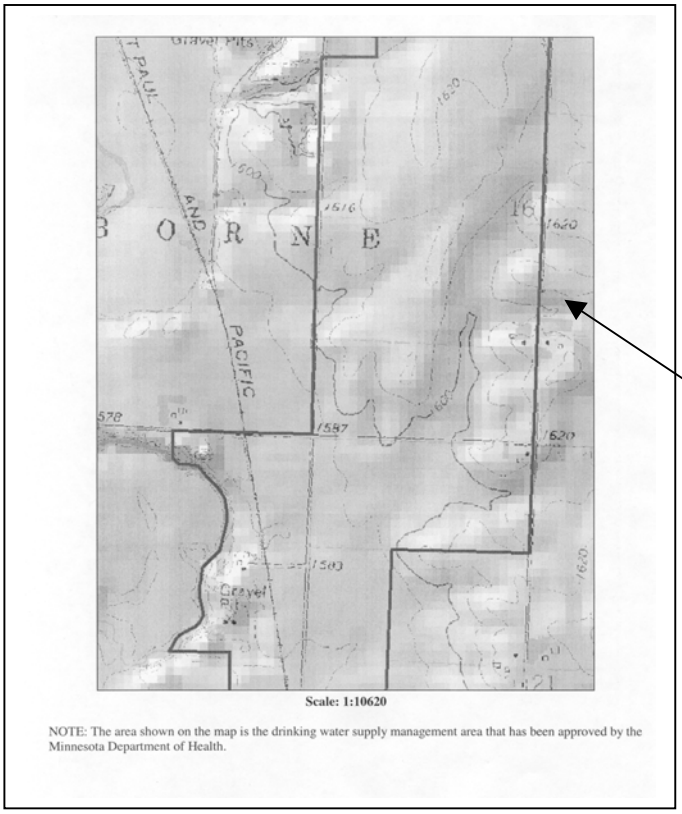
Aquifer Sensitivity States whether the aquifer supplying a well has "high" or "low" sensitivity to contamination, based on information available about the aquifer (or lack of information).

Source Water Susceptibility This is the overall assessment of the susceptibility of a water source to contamination. **This can be viewed as the "bottom line" of assessment, since it will impact decisions made on wellhead protection measures and the phasing in of systems into the wellhead protection program**.

The source(s) will be classified as either "high" or "low" susceptibility, based on well sensitivity, aquifer sensitivity, and water sampling results (regulated contaminants plus tritium). Note tritium results can "override" other elements in determining source water susceptibility.

Contaminants of Concern This section describes contaminants of concern for the water supply. The contents of the section are based primarily on the results of required water sampling.

If there has been a previous detection or MCL violation for a regulated contaminant, a paragraph indicating this will be inserted. Otherwise, a statement will appear indicating that no regulated contaminants have been detected in the source water.



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NOTE: The area shown on the map is the drinking water supply management area that has been approved by the Minnesota Department of Health.

Map of Inner Wellhead Management Zone or DWSMA (if approved) The last page of the assessment is map showing the Inner Wellhead Management Zone for the well(s) or a Drinking Water Supply Management Area (DWSMA) – if a DWSMA has been approved.

Note that the only maps served on the web site will be those of approved DWSMAs for public water systems (with specific well locations removed). Until the DWSMA has been approved, no map will appear on the website.