

Minutes of the Moorhead Wellhead Protection Team Meeting #1

**Moorhead City Hall, Council Chambers
Thursday, December 6, 2012
6:00 PM**

Present: Bruce Albright, Mark Altenburg, Jay Buchtink, Kevin Campbell, Su Hattenberger, Bruce Jaster, Sam Jenkins, Kevin Kassenborg, Kris Knutson, Paul Krabbenhoft, Kristie Leshovsky, Tim Magnusson, Michelle Malott, Cliff McLain, Ralf Mehnert-Meland, George Minerich, Julie Nash, Steve Schroeder, Bill Schwandt, Li Zhang, and Gould Zimmerman.

Absent: Heidi Durand, Bill Borgen, Lynn Foss, Kevin Heazlett, Wayne Ingersoll, Kevin Nelson, Casey Serocki, Richard Soule, and Jeff Winter.

1. Welcome and Introductions.

Members introduced themselves and the jurisdiction they represent.

2. Overview of Wellhead Protection Process.

George Minerich reviewed the purpose of the Wellhead Protection (WHP) Plan, which is to prevent human-caused contaminants from entering our water supply wells and to protect all who use our water supply from adverse health effects associated with groundwater contamination. He also reviewed the components of the WHP Plan. The WHP Plan consists of two parts. Part I is essentially a hydrology study defining wellhead protection areas (WHPAs) and drinking water supply management areas (DWSMAs). Part II is the management plan for the wells and aquifers. The key of a successful management plan is the cooperation between districts, groundwater users, and residents.

3. Presentation on Progress regarding Amendment to Moorhead's Wellhead Protection Plan.

Kris Knutson started the presentation by summarizing the water resources, including the Red River, the Moorhead Aquifer, and the Buffalo Aquifer, for Moorhead's Water Treatment Plant (MWTP). The MWTP was built in 1995 to maximize river water use and save groundwater. Groundwater level in the Buffalo Wells increased 10 to 15 feet after 1995.

Knutson also summarized the threats of contamination to aquifers. The threats include highway projects, localized contamination from truck stops, buried fuel tanks, inappropriate wastewater treatment, and shallow wells. The Moorhead Aquifer has a thick layer (80-100 feet) of clay on the top, therefore, has low vulnerability to contamination. However, the Buffalo Aquifer is topped with sand and gravel and has much higher vulnerability.

Knutson also reviewed the schematic of the MWTP processes and MWTP's average demand, maximum daily demand, and annual water usage.

Cliff McLain reviewed the history of the federal and state regulations on WHP requirements, definitions of WHPA and DWSMA, and five criteria for delineating WHP boundaries. The five criteria include time-of-travel, flow boundaries, daily volume of water pumped, groundwater flow field, and aquifer transmissivity. McLain also summarized the general content of a WHP Plan. Part I of a WHP Plan focuses on assessment of the data elements, delineation of the WHPA and DWSMA, and assessment of well and DWSMA vulnerability. Part II of a WHP Plan is the management plan for the wells and aquifers and discusses WHP issues, problems, and opportunities. McLain then introduced Moorhead's Wellhead Protection Team members.

Knutson summarized the progress of the Moorhead WHP Plan. An amendment to Part I of the WHP Plan was completed in October 2012 and the updated DWSMA, WHPA, and vulnerability was submitted to the Minnesota Department of Health (MDH) for review. Once MDH approves the Part I Amendment, a public meeting will be held.

As compared to the 2003 WHP Plan, the 2012 amendment used revised well pumping rates, new precipitation data, new soil data, and less recharge from surface water. As a result, the WHPA and DWSMA for the Moorhead Aquifer expanded and the WHPA and DWSMA for the North Buffalo Aquifer and South Buffalo Aquifer shifted to the south. The vulnerability in the vicinity of the Buffalo Aquifer Moorhead Public Service wells and across their DWSMAs ranges from low to high, and the vulnerability in the vicinity of the Moorhead Aquifer Moorhead Public Service wells is very low.

Knutson also reviewed the steps to develop a WHP Plan, Part II. Part II serves as a function plan for WHP. Part II will be amended based on recommendations from the Moorhead Wellhead Protection Team.

The steps to develop Part II of the WHP Plan include:

- Hold scoping meeting with MDH.
- MDH scoping decision.
- Inventory of potential contamination.
- Develop and write management portion of plan.
- Submit plan to Local Units of Government (LUGs) for comment.
- Consider comments received by LUGs.
- Hold public hearing.
- Submit plan to MDH for approval.

- MDH review.
- MDH approval.
- Provide notice to LUGs of plan approval.
- Begin plan implementation.

4. Open Discussion.

The team held open discussions and the key points discussed included the following:

- A conservative 20-year travel time is used in the model for developing WHPA and DWSMA. If existing well fields pump more water during drought condition, the model does not need to be rerun. However, if a new well field is drilled, the model will be rerun to delineate new WHPAs and DWSMAs.
- Potential contamination sources include BNSF fueling locations, truck stops, superfund sites, etc.

5. Set Date for Next Meeting.

The date of the next Wellhead Protection Team meeting will be Thursday, January 17, 2013.

6. Adjourn.

The meeting adjourned at 7:30 PM.