

MOORHEAD PUBLIC SERVICE COMMISSION
ACTION ITEM (COMMISSION ACTION REQUESTED)

Agenda Item #7
January 8, 2013

Public Informational Meeting on
Part I of the Wellhead Protection Plan

RECOMMENDATION:

The General Manager respectfully requests the Commission hold a public meeting regarding Part I of the Wellhead Protection Plan.

BACKGROUND:

The Moorhead and Buffalo Aquifers play an important role as a redundant supply of water that may be needed in the event of a 1930s-type drought or contamination of the Red River. One component for protection of groundwater resources is mandated by the State of Minnesota and defined as “wellhead protection.” Wellhead protection is enforced under the State of Minnesota Wellhead Protection Rule and under Minnesota Statute 4720.5330. Minnesota Statute 4720.5330 requires a public meeting be held to gather input regarding Part I of the Wellhead Protection Plan (Plan). The updated Part I Plan was presented to the Commission on October 23, 2012 (see attached). In addition, the final Plan was submitted to Local Units of Government on December 20, 2012. The only significant change to the draft Plan was that parcels to the east of the Buffalo River on the south Buffalo Aquifer well field were removed from the Drinking Water Supply Management Area (DWSMA). The updated DWSMA information was presented at a public meeting that included affected landowners in the DWSMA parcels. This meeting was held on December 6, 2012, in the Moorhead City Council Chambers and was broadcasted on MCAM.

If members of the public would like a copy of the updated Part I Plan, it is available at <http://buffaloaquifer.com/index.php/wellhead-protection-plan.html>. In addition, copies of the Part I Plan will be available to the Commissioners and the public at the January 8, 2012, Commission meeting.

KEY ISSUES:

- Wellhead protection is enforced under the State of Minnesota Wellhead Protection Rule and under Minnesota Statute 4720.5330.
- Minnesota Statute 4720.5330 requires a public meeting be held to gather input regarding Part I of the Plan.

FINANCIAL CONSIDERATIONS: None.

Respectfully submitted,



Bill Schwandt
General Manager

Division/Response Person: Kristofer Knutson, Water Division Manager.

Attachments:

October 23, 2012, Commission Item to Approve Draft Part 1 of Wellhead Protection Plan
Part I of Wellhead Protection Plan from Leggette, Brashears, and Graham (available on-line and at meeting)

MOORHEAD PUBLIC SERVICE COMMISSION
ACTION ITEM (COMMISSION ACTION REQUESTED)

Agenda Item #10
October 23, 2012

Approve Draft Part 1 of the Wellhead Protection Plan

RECOMMENDATION:

The General Manager respectfully requests the Commission approve the Draft Part 1 of the Wellhead Protection Plan (WHPP).

BACKGROUND:

The Moorhead and Buffalo Aquifers play an important role as a redundant supply of water that may be needed in the event of a 1930s drought or contamination of the Red River. One component for protection of groundwater resources is mandated by the State of Minnesota and defined as “wellhead protection.” Wellhead protection is enforced under the State of Minnesota Wellhead Protection Rule. The Wellhead Protection Rule specifies that municipalities are required to delineate, inventory, and manage an inner wellhead management zone. The wellhead management zone is generally defined by the location of the aquifer and is comprised of the overlaying parcels in the capture zone for contamination. The wellhead management zone is enforced under a formal wellhead protection plan. The purpose of the plan is to generally protect the aquifer from contamination, but also encompasses zoning and planning actions to ensure aquifer protection.

The wellhead protection planning process has two components to ensure the safety of the aquifers. Part 1 of the WHPP requires delineation of the Wellhead Protection Area (WHPA) and Drinking Water Supply Management Area (DWSMA), as well as a vulnerability assessment. Part 2 involves the creation of the actionable items of the WHPP. Typically, Part 2 includes goals and objectives for the protection of the aquifer, in addition to an evaluation program and contingency plan. The first WHPP was completed in 2003 by Moorhead Public Service (MPS) staff with the assistance of Barr Engineering (Part 1) and Bayerl Water Resources (Part 2).

The Wellhead Protection Rule requires a ten-year update by MPS to the WHPP that will be due on September 10, 2013. To complete the ten-year update of the Part 1 WHPP, MPS staff retained Leggette, Brashears & Graham, Inc., in addition to consultant Cliff McLain. Changes reflected in the updated Part 1 of the WHPP include updated modeling software, new soil data, and revised well pumping rates (see the attached report from Leggette, Brashears & Graham, Inc.). The addition of updated parameters into the respective aquifer models were used to update the 20-year capture areas for the Moorhead and Buffalo Aquifers and ensure that the models reflect the actual characteristics of the aquifers.

The most significant change to the Moorhead Aquifer was the usage of the numerical groundwater flow model, “MODFLOW.” The usage of the updated model, in addition to other data, slightly expanded the 20-year capture zone for the Moorhead Aquifer. Further details will be presented by Water Division Manager Kris Knutson and Cliff McLain at Tuesday’s meeting. For the Buffalo Aquifer, a conjunctive delineation was used to account for surface water runoff that reaches the vulnerable portions of the groundwater capture areas and recharges the Buffalo Aquifer. The addition of this delineation was applied to delineate the DWSMA of the Buffalo Aquifer wells and resulted in a potential increase of the DWSMA near the Buffalo River.

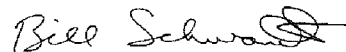
Amendments to the Part I WHPP were submitted to Minnesota Department of Health (MDH) for approval on October 8, 2012. Upon approval of the plan by MDH, a public meeting will be held to discuss the updated Part I WHPP in late November 2012. According to the Minnesota Wellhead Protection Rule, MPS will have until September 10, 2013, to amend the entire WHPP.

KEY ISSUES:

- The Wellhead Protection Rule requires a ten-year update by MPS to the WHPP that will be due on September 10, 2013.
- The addition of updated parameters into the respective aquifer models were used to update the 20-year capture areas for the Moorhead and Buffalo Aquifers and ensure that the models reflect the actual characteristics of the aquifer.

FINANCIAL CONSIDERATIONS: None.

Respectfully submitted,



Bill Schwandt
General Manager

Division/Response Person: Li Zhang, Water Division Engineer, and Kristofer Knutson, Water Division Manager.

Attachments:

Draft Report from Leggette, Brashears & Graham, Inc. (PSC Only)