

FOR BOARD ACTION

Agenda Item # 4

Meeting Date:

2/24/04

SUBJECT: Groundwater Protection Issues

PREPARED BY: Joseph S. Hensel, Manager, Environment & Facilities

ITEM DESCRIPTION:

At the January Board meeting the USGS presented information on the current groundwater study "Evaluating the Effects of Vegetative Buffers Along the Edge of the Decorah Shale, Rochester, Minnesota". The Board was informed by staff that RPU was in the process of drafting a "white paper" on the Decorah Edge and cooperating with several City Departments in the evaluation of options for groundwater protection along the Decorah Edge by means of establishing criteria for approving proposals for development. A copy of the draft white paper is provided separately. This white paper will be peer-reviewed and receive Board input prior to being finalized for consideration at the March Board meeting.

Management has invited Phil Wheeler, Rochester-Olmsted Planning Director and Terry Lee, Olmsted County Water Coordinator, to provide information to the Board on the value of the Decorah Edge with respect to groundwater quality benefits and aquifer recharge/infiltration. Mr. Wheeler will also provide information on land development regulations that are being considered.

Management wants to inform the Board that RPU has requested an opportunity to review proposed development on the Decorah Edge, as a referral agency during the General Development Plan (GDP) review process. It would be Management's intention for staff to evaluate information provided with GDPs and identify groundwater issues and concerns. Attached to this FBA is a draft "Groundwater Protect Checklist" created by RPU staff, in collaboration with State, City and County representatives, that is proposed for submittal by developers as a GDP information supplement.

UTILITY BOARD ACTION REQUESTED:

The Board is requested to direct staff to:

- 1) Adopt the attached "Groundwater Protection Checklist" as a supplemental tool for staff's review of GDPs, and
- 2) Request that the Planning Department require the "Groundwater Protection Checklist" to be prepared and submitted by developers as an Appendix B Section E GDP Informational Supplement.


General Manager

2-20-04
Date

ROCHESTER PUBLIC UTILITIES

GENERAL DEVELOPMENT PLAN REVIEW

GROUNDWATER PROTECTION CHECKLIST:

- Is the proposed development within a drinking water supply management area (DWSMA) for any public water supply wells? (contact RPU for DWSMA maps of Rochester municipal wells)
- Is the parcel within a 50-year time-of-travel (TOT) zone for any municipal wells? (contact RPU for municipal well TOT maps)
- Is the Decorah edge present within the parcel proposed for development? (Note: bedrock mapping is available from Planning Dept.)
- Elevation of Decorah formation in the vicinity of proposed development.
 - ✓ Elevation of upper contact _____
 - ✓ Elevation of lower contact _____
- Parcel land area above, between and below Decorah contacts:
 - ✓ Area upgradient of upper Decorah contact _____ acres
 - ✓ Area between Decorah contacts _____ acres
 - ✓ Area below lower Decorah contact _____ acres
- Are there any wetlands, springs, seeps or ponds evident on the parcel?
- Are there any sinkholes or other Karstic features?
- Will the proposed development cause dewatering of the Decorah edge seeps and wetlands by pumping or by cutting and excavating upgradient of them?
- Range of depth to first encountered bedrock on the parcel:
 - ✓ Minimum _____ feet
 - ✓ Maximum _____ feet
- Range of depth to ground water on the parcel:
 - ✓ Minimum _____ feet
 - ✓ Maximum _____ feet
- Have areas that will be disturbed been identified and mapped?
- Have area that will be restored been identified and mapped?
- What percent of the existing vegetation will be disturbed?
 - ✓ Woodland _____%
 - ✓ Upland grassland _____%
 - ✓ Wetland _____%
 - ✓ Mixed vegetation _____%

- Estimate of existing impervious surface?
_____ acres
_____ percent
- Estimate of post-construction impervious surface?
_____ acres
_____ percent
- Are there up-gradient sources of nitrates (for example, crop fields, manure spreading, septic systems)?
- Are there any water quality data available for the upper aquifer immediately up-gradient of the parcel (especially nitrate data)?
- Is there a drainage plan, or will one be prepared prior to final plat approval?
- Will storm water be infiltrated on the site?
- Will intercepted groundwater flows be reinfiltated on the site?
- Storm water management basins:
_____ area of proposed storm water detention basins
_____ area of proposed storm water infiltration basins
- Will any of the following detailed assessments be performed:
 - ✓ First Order Soil Survey
 - ✓ Hydrogeological assessment
 - ✓ Environmental Assessment Worksheet