

Scatter Creek Aquifer – Septic System Management Project

Purpose: To make sure water in the Scatter Creek Aquifer is safe to drink now and in the future.

Citizen's Committee notes: May 1, 2013, 6:15-8:15 pm. *Approved 6/5/13.*

Rochester School District Board Room
10140 Highway 12 SW, Rochester, WA 98579

Attending: Karen Deal, Chanele Shaw, Sandra Adix, Lowell Deguise, Gene Weaver, Tom Budsberg, Art Starry (staff), Marlene Hampton, Maureen Pretell, Bruce Morgan. **Facilitator:** Jane Mountjoy-Venning (staff). **Note taker:** Steve Petersen (staff). **Guests:** none. **Absent:** Roger Max, Scott Schimelfenig, Dave Dafoe.

Introductions

Agenda review and approval: approved

Approve April notes: Approved with addition of the sentence, "Finalize recommendations to present to the Board of Health, Health Officer, or Board of County Commissioners who are the ones that have the responsibility and authority to change laws and adopt policy that will implement the recommendations" to the last bullet in the section "overview of next phase of committee work."

Other housekeeping: June meeting will be at the Rochester School District board room.

Report on any community input, questions, etc.: A community member expressed concern to a committee member about the cost of hooking up to a sewer system, and that they would be willing to drink bottled water as an alternative. The committee member let them know that at this point there is no plan to require sewage hook-up.

Update on Groundwater Computer Model: Nadine Romero shared her progress building a computer groundwater model of the Scatter Creek Aquifer study area. She showed several draft maps of the aquifer. One showed the groundwater levels from the October 2012 and March 2013 well sampling, which showed that the groundwater level was about 10 feet higher in the spring across the aquifer. Another series graphically displayed the results from the March 2013 nitrate sampling, compared to nitrate levels from 2008. The nitrate levels have fallen substantially since 2008. During the discussion, Nadine pointed out a data gap, an area where we do not currently have any wells in the sampling program. Lowell Deguise shared data from sampling of his water system wells, and gave Nadine a copy of many years of data. He has some wells identified that are likely in the data gap area that may be able to be added to the program. After the maps are finalized, they can be posted to the website.

She also demonstrated how the model could show potential scenarios, such as how far, how deep, and at what concentrations nitrate contamination can move from a septic system or unlined manure lagoon over the course of several years. This led us to a discussion of what types of scenarios the committee would like to examine in the modeling effort.

Committee input into groundwater model scenarios: Discussion points and possible scenarios to model are listed below.

- Track historic rainfall data to see how rainfall affects nitrate concentrations.
- Truth or test the model to see when adding historic data, does it accurately predict current conditions.
- What caused the change in nitrate levels over the years?
- What caused the two hot-spots i.e. areas of nitrate contamination? What was the historic land-use in the areas or up-gradient from the areas?
- Model the effects of full build-out with current building and sewage treatment standards.
- Commercial land use activities, especially hotels or other businesses with a high sewage potential. It was noted that areas currently zoned for these types of businesses are in the Grand Mound sewage treatment service area.
- Where does the effluent from the Grand Mound sewer system go?
- Include map overlays in the displays of the computer model results.
 - Roads
 - Aerial views, especially when comparing historic to current data
 - Scatter Creek Wildlife area
 - Urban Growth Area boundaries and sewage treatment service area boundaries
- Model impact of the Tenino sewage treatment plant at full capacity.
- Model effect of extending sewers into “hot-spot” areas.
- Model the impact from high sewage volume/high nitrate concentration sources such as schools. Include a look at connecting schools to sewage treatment or advanced septic treatment options. Also, research and model the additional schools that are likely to be added to the area at full build-out.
- Hobby farm manure management and mis-management, i.e. a few acres with several horses or chickens and no manure collection.
- What are the nitrate contributions from septic vs. agriculture vs. wildlife?
- Model effects of high density housing compared to low density
- Model effects of clustering homes vs. spreading them out. Assumes the same number of homes on the same acreage.
- The fish farm is one of the largest single users of water. How does that water use effect nitrate concentration levels? How does a reduction in their water use affect the aquifer and Scatter Creek?
- How does removing water from one are of the aquifer and discharging it in another impact the aquifer? For example, Tenino city wells remove water from high in the aquifer, and discharge treated effluent further down-gradient.
- What is the impact of using new nitrogen-reducing technology for septic systems?
- It was noted that the aquifer study area is a low-income area. Financial assistance needs to be available to residents if changes are required. The financial impact of all recommendations will need to be evaluated.

Questions: What nitrate level is of concern in the Scatter Creek area? What level would trigger action or the need for intervention? i.e.: In computer modeling how much nitrate is too much? Are there other pollutants we should be looking at or modeling?

Decisions: Needed to postpone this decision again, due to time constraints.

Reminders:

- Nitrate and bacteriological contaminants are the primary septic system pollutants addressed by state and county law
- Natural background levels for nitrate are less than 2 mg/L
- Thurston County nitrate early warning level is 2 mg/L
- Thurston County nitrate contaminant action level is 4 mg/L
- Washington State nitrate drinking water trigger is 5 mg/L
- Maximum nitrate level for safe drinking water is 10 mg/L
- Nitrate levels in Scatter Creek Aquifer vary

Public Comment: none

Wrap up

- Review any tasks/commitments & timeframe
- Review notes, capture any missing points

DRAFT