

## 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:** April 2, 2014, 6:15-8:15 pm *approved 5/7/14*

Violet Prairie Grange: 17104 Violet Prairie Road SE; Tenino, WA

**Attending:** Sandra Adix, Gene Weaver, Tom Budsberg, Maureen Pretell, Karen Deal, Amanda Neice, Roger Max, Lowell Deguise, Bruce Morgan, Art Starry (staff), Nadine Romero (staff).  
**Facilitator:** Jane Mountjoy-Venning (staff). **Note taker:** Kateri Wimsett (staff). **Guests:** Kathy Deguise. **Absent:** Chanele Holbrook, Marlene Hampton, Scott Schimelfenig, Dave Defoe.

### Introductions

**Agenda review and approval:** approved

**Approve March notes:** approved

**Other housekeeping:**

**Report on any community input, questions, etc.**

**Brief update on endangered species and how to handle our build-out assumptions:** The decision about pocket gophers has not yet been published in the Federal Register. Planning staff is checking daily.

**Tenino Wastewater Treatment/Reclaimed Water Plant:** Art Starry followed up on committee concerns about the sewage treatment plant. He met with Department of Ecology staff who oversees the Tenino treatment plant and its permit. Here are some key points from the meeting with Ecology and from the discussion at the Scatter Creek Citizen's Committee meeting.

- The effluent is treated to reclaimed water standards and is discharged into one small groundwater infiltration basin. The computer model has been updated based on this.
- The infiltration basin is at or below ground level; it does not include standing water or a pond. It is similar to a large septic drainfield.
- They are currently permitted to discharge .228 million gallons per day.
  - Currently their actual discharge is .15 million gallons per day, which is the capacity of their Phase 1 treatment plant.
  - Phase 2 treatment plant has not yet been built.
- The Tenino facility is not currently designed to accept septage, which is the waste from pumping septic tanks. To do so, it would be a tough challenge. The engineering plan would need to include changes and construction would be needed to receive and process septage.
- If asked, the Department of Ecology will consider a permit modification that would allow for the disposal of septage. The proposal would be approved only if the engineering analysis indicates that the Tenino Wastewater Treatment Plant will stay within their

permit discharge limits. This requires a plan from the project design engineer.

- Public notification is not required if the engineering analysis shows the plant will still comply with permit discharge standards after the modifications are made. Public notice is required if the plan expands capacity. Public notice is also required when the permit for the plan is renewed (every five years).
- Committee members asked where the solids left after treatment go. Art did not ask and does not know. They are required to go to an approved facility; the preferred use is for soil amendments.
- The permit requires regular groundwater monitoring, including for trihalomethanes, a by-product of disinfection. Department of Ecology issues and oversees the permit.

**Model Scenario Results:** Nadine Romero presented the details about scenario 5 and 6.

- Scenario 5 includes current homes, all legal lots with septic, lawn fertilizer, and Tenino Sewer Treatment Plant with the more accurate adjustments for current use.
- Scenario 6 – the worst-case scenario includes all the above plus the future full buildout, plus Tenino Sewer Treatment plant at full capacity.
- Caveats about the computer modeling:
  - The infiltration basin for Tenino's reclaimed water/treated sewage is actually 2 miles east of the aquifer study area boundary. For the computer model, we placed it just inside the model boundary.
  - For the computer model, the infiltration basin was assumed to be one cell (the smallest area that can be modeled). The actual infiltration basin is smaller.
  - In the geologic report done for the treatment plant, they found evidence of groundwater reversal. In the model, we assumed all the flow will go east to west, into the study area.
- The highest nitrate concentrations continue to be in the NW area of the aquifer study area. In scenario 6 – the worst-case scenario, the highest nitrate levels were 4.272 mg/l. There is also a larger plume on the eastern side of the study area than in earlier scenarios.

Points raised in the discussion:

- What about technology to bring down nitrates? Is it affordable, reliable, and dependable? Washington Department of Health has been conducting research on septic system technology that reduces nitrates. Their tests show that these systems are able to reduce the nitrate concentrations by 80 or 90% in controlled, ideal settings. They are now running pilot tests in real life settings to see how reliably they perform, and what type of maintenance they require. At the end, Washington Department of Health will write standards that specify if and how such systems can be permitted for use.
- The modeling shows a man-made impact to the water. What about clustering of houses? Is it worse for the water to have 10 septic systems spread out on single acre lots, or worse to have a cluster with say, 5 acres and 10 septic systems? Art – depends on what you are trying to do. The health department and planning discuss these types of issues.
- Not sure that there is a problem. Nitrate levels are at all time lows.
- Nadine -The model is predicting very accurately. The real world data has higher nitrate levels than the model, as older sources of nitrate contamination flushes through the system. She predicts in several years the nitrate levels are more likely to closely match scenario 3/5.
- Possible sources of nitrate in the aquifer system today include the septic systems and

cesspools in Tenino prior to the sewage treatment plant. There was an 80% failure rate and these were at the head of the aquifer. There were farms with poor wellhead protection practices, and those with problems applying or storing manure.

- An example of an area where many homes have been added and the nitrate levels dropped. 36 years ago in the *Brewer(?)* area there were four homes and the nitrate level was 1.8 mg/l. Today there are 600 homes there and the nitrate level is only 1.6 mg/l.
- If homes are to be built, they need the best methods for protecting the water. People need to know what and why systems are in place. We should ask "Do you want to drink this?" We must prepare for growth.
- Can't ignore what is happening. Wellhead protection for homes and farms is important.
- This is a solid process. The numbers seem right, the science is right.
- Recognition that we are enjoying improved water quality because of actions that others did in the past. It is our responsibility to the future residents in the area to keep the water safe for the future.

#### **April community workshop: April 23, 6:30-8:30 pm at Rochester Middle School**

Jane asked for input into the format for the upcoming community workshop. The goal of the workshop is to let people know what we have learned thus far and especially to get input from the community as the committee works on developing recommendations. Suggestions for the format:

- Include stations again – have valuable information, may be some who come who did not attend last time. Devote less time for stations at this workshop.
- Have presentation about monitoring and modeling results. Be sure to include a general introduction to the history of the geology of the area – something that would capture their imaginations and help folks understand why the aquifer works the way it does.
- Include question and answer time using similar format as before with written questions.
- Develop talking points similar to the yellow handout "The best outcome will..." Focus on a few facts that we keep coming back to.
- Jane asked the committee to try using a forced choice prioritization worksheet. She wanted both their input and their opinion about whether it would be a useful tool to use with participants at the workshop. Comments from the committee:
  - Yes, it could be a useful tool.
  - Must be clear that the choices are not mutually exclusive, the choice is just a means of prioritizing. It is not a vote.
- The committee discussed having small discussion groups at the workshop to gather input.
  - One possibility would be to have all the groups discussing the same questions. This requires a facilitator at each table to keep the group on topic and working through the questions.
  - Another suggestion was to have different topics and let participants choose which topic they wanted to go to. This would require staff with subject expertise in each topic and a method to respond if an overwhelming number of participants chose one or two topics. There was more enthusiasm from the committee for this approach.
- A committee member asked if this workshop could incorporate estimates for costs of various possible recommendations. We will not have good estimates by that time. Costs will be examined as we scope out recommendations.
- Not to capitalize on a tragedy, but using Oso as an example of the importance of

understanding the basic geology and knowledge of where you live.

- There was some interest in getting input from a microbiologist to speak about bacteria and ways of taking lessons from Mother Nature – looking at option of using waste as a resource.

Jane asked about visiting community groups to seek input, in addition to the community workshop. The committee thought this would be better done after we have drafted recommendations rather than at this time.

**Public Comment:** none

#### **Wrap up**

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