

RESOLUTION NO. H-3-2014

A RESOLUTION accepting the recommendations of the Scatter Creek Citizen Advisory Committee and directing the Public Health and Social Services Department to develop implementation of the Advisory Committee's recommendations through its own actions or coordination with other county departments and other agencies as time and resources allow.

WHEREAS, the Scatter Creek aquifer is a shallow, unconfined, extremely vulnerable ground water supply and is the sole source of drinking water for more than 18,000 area residents; and

WHEREAS, past sewage disposal practices and land use activities have resulted in elevated levels of nitrate and fecal coliform, violations of drinking water standards, increased public health risks, and water quality degradation; and

WHEREAS, the Thurston County Board of Health appointed a citizen advisory committee to help guide community discussion regarding the water quality of the Scatter Creek aquifer, on-site sewage system impacts, sewage system management issues, and to assist in the development of a ground water protection strategy; and

WHEREAS, the Advisory Committee evaluated the risks posed by on-site sewage systems under six different land use scenarios using the results of fate and transport simulations from the refined and calibrated numerical ground water model; and

WHEREAS, after two years of meetings with experts in water quality, ground water modeling, and public health, and the public, the Advisory Committee completed its evaluation and concluded:

- The aquifer is vulnerable to contamination from septic systems and land use activities;
- Elevated nitrogen levels in the aquifer have decreased over time and seem to be trending lower, and the ground water model predicts that average nitrate concentrations in the most vulnerable part of the study area will be less than half the maximum contaminant level of 10 mg/l;
- Current aquifer conditions and worst case model results do not warrant taking regulatory action at this time;
- Monitoring water quality trends, the accuracy of the ground water modelling, water quality deeper in the aquifer, the extent and duration of spikes in water contaminants, chemicals of emerging concern, and the presence of pathogens such as viruses should occur so action may be taken when needed;
- Zoning, land use and health regulations generally have protected the aquifer from nitrates and many other contaminants, however, health and land use regulations can

be strengthened to help assure the optimal placement of new septic systems and wells to minimize the potential for contaminating drinking water supplies;

- With proper information, education, and incentives, area residents will be good stewards and take action protect the aquifer; and

WHEREAS, the advisory committee developed recommendations on septic systems, well siting, ground water monitoring and data management, and education and outreach; and

WHEREAS, the ground water strategy and recommendations were reviewed by the Thurston County Board of Health; and

WHEREAS, the Thurston County Board of Health accepts the recommendations of the Advisory Committee as measures to help protect the Scatter Creek aquifer; and

WHEREAS, the Advisory Committee recommendations should be implemented as resources allow;

NOW, THEREFORE, THE THURSTON COUNTY BOARD OF HEALTH HEREBY RESOLVES that

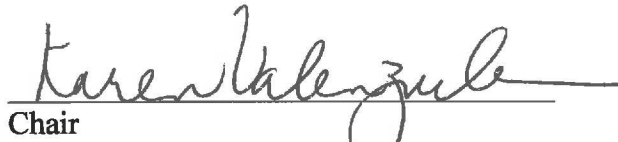
1. The recommendations of the Scatter Creek Advisory Committee attached hereto are hereby accepted.
2. The Public Health and Social Services Department is directed to develop implementation of the Advisory Committee's recommendations through its own actions or coordination with other county departments and other agencies, as time and resources allow.

ADOPTED: December 16, 2014

ATTEST:

BOARD OF HEALTH
Thurston County, Washington

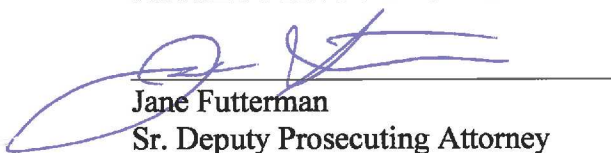

Clerk of the Board La Brea Bowmer

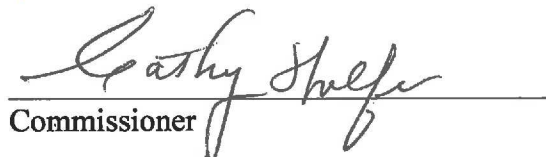

Chair

APPROVED AS TO FORM:

JON TUNHEIM
PROSECUTING ATTORNEY


Vice-chair


Jane Futterman
Sr. Deputy Prosecuting Attorney


Commissioner

Final Recommendations of the Scatter Creek Aquifer Citizen's Committee: 10/1/14

Scatter Creek Aquifer – Septic System Management Project

Well Siting Recommendations

1. Consider changing the shape (not the overall square footage) of well sanitary control areas from a circle with a 100-foot radius, to a shape that would be more protective and better take into account the groundwater flow.
2. Require developers to identify the location of septic systems and known pollution sources and locate wells in the safest locations that are likely to preserve and protect water quality to the maximum extent possible.
3. Consider revising health and land use regulations to give regulators the authority to require that wells be drilled in locations and that property be developed to minimize the risk to wells from recognized contamination sources.

Septic Recommendations

1. The health department should encourage and provide incentives for nitrogen-reducing septic system technologies where appropriate.
2. The health department should educate the public that alternative systems, such as composting toilets and incinerating toilets, can be permitted and installed in Thurston County. These systems should be recognized as an approved nitrogen-reduction and water conservation method.
3. The health department should routinely provide education and outreach to residents and businesses in the Scatter Creek Aquifer Area about septic system operation and maintenance.
4. Support the implementation of Article III, Section 5.1 that refers to new well siting. In the Scatter Creek Aquifer Area, particular attention should be paid to assure that septic systems are installed in locations that reduce the potential to create plumes of contamination that can adversely affect down gradient properties and wells.
5. Thurston County Environmental Health should work in partnership with Thurston County Public Works, City of Tenino, WA Department of Health, WA Department of Ecology, and others to assure that any new sewer treatment plants for towns and urban growth areas and any expansion of existing facilities take into account what is known about the aquifer vulnerability and geology. The health department should provide comment to pursue alternative sewage disposal methods.

Data and Monitoring Recommendations

1. Staff should develop a monitoring program to accomplish the following goals:
 - a) Collect data to systematically check on the water quality of the aquifer, see trends, and identify any emerging concerns; i.e. an early warning system.

- b) Evaluate the effects of changes in the environment, such as the effects of recommendations of this committee.
 - c) Check on the predictive accuracy of the computer groundwater model.
 - d) Monitor groundwater levels.
 - e) Collect information about water quality deeper in the aquifer.
 - f) Learn more about how pathogens such as viruses move in the aquifer.
 - g) Learn more about the presence and health effects from chemicals of concern such as pharmaceuticals, personal care products, stormwater contaminants, etc.
 - h) Better identify the cause of large fluctuations in nitrates.
 - i) Better identify the frequency and duration of water quality “spikes” that seem to be associated with heavy rainfall events.
 - j) Improve monitoring sites as needed, to better ensure reliability of sampling results.
2. Improve coordination to retrieve and analyze public, private, and tribal water quality data.
 3. Prioritize producing and publishing water quality data and maps at regular intervals so that the data is available to the public.
 4. Maintain the computer groundwater model that was developed for the project as a functional tool.

Education, Outreach and Community Input Recommendations

1. Offer “Septic Sense” workshops in the Scatter Creek Aquifer Area annually.
2. Offer “Keeping Your Well, well” workshops in the Scatter Creek Aquifer Area annually.
3. Continue to provide technical assistance services offered by the Thurston Conservation District and WSU Extension.
4. Explore, evaluate, and use effective multiple methods such as newsletters, newspapers, presentations, special events, displays, websites, social media, interactive methods, and other means to regularly share water quality protection messages, educate, and market services without alarming people.
5. Prioritize outreach to tenants/landlords, new home owners, new property owners, and students.
6. Develop a packet of water and sewage treatment options with pros and cons, upkeep and responsibilities of various systems to provide to people seeking building permits.
7. Make technical assistance available from the county for people with septic and well questions.
8. Establish an ongoing aquifer protection advisory group to meet annually and as needed for status updates and to address emerging issues.

Funding Recommendations

Estimated costs to fully implement the Scatter Creek Aquifer Citizen's Committee recommendations are \$212,100 of one-time costs. Annual costs range from \$114,200 to \$123,200, depending on options.

One-time costs include items such as:

- Drilling monitoring wells to examine the water deep in the aquifer, a current data gap;
- Staff time to implement code and policy changes;
- Time to research and develop new educational materials.

Ongoing annual costs include items such as:

- Routine ongoing groundwater monitoring and data management;
- Incentives to encourage the use of nitrogen-reducing septic system technology where appropriate;
- Regular education and outreach to area residents about actions to protect drinking water quality.

The Scatter Creek Aquifer Citizen's Committee does not recommend new fees or taxes.

They identified the following funding strategies to implement the recommendations. In priority order they are:

1. Seek grants where appropriate
2. Use existing stormwater fees
3. Seek funding from partners
4. Use existing fees