

Scatter Creek Aquifer Area Septic System Management Project

2nd Community Workshop
April 23, 2014 6:30-8:30 pm
Rochester Middle School



Public Health and Social Services Department
<http://www.co.thurston.wa.us/health>

Scatter Creek Citizen's Committee

- ❖ Sandra Adix
- ❖ Tom Budsberg
- ❖ Dave Dafoe
- ❖ Karen Deal
- ❖ Lowell Deguise
- ❖ Marlene Hampton

- ❖ Chanele Holbrook
- ❖ Roger Max
- ❖ Bruce Morgan
- ❖ Amanda Neice
- ❖ Maureen Pretell
- ❖ Gene Weaver



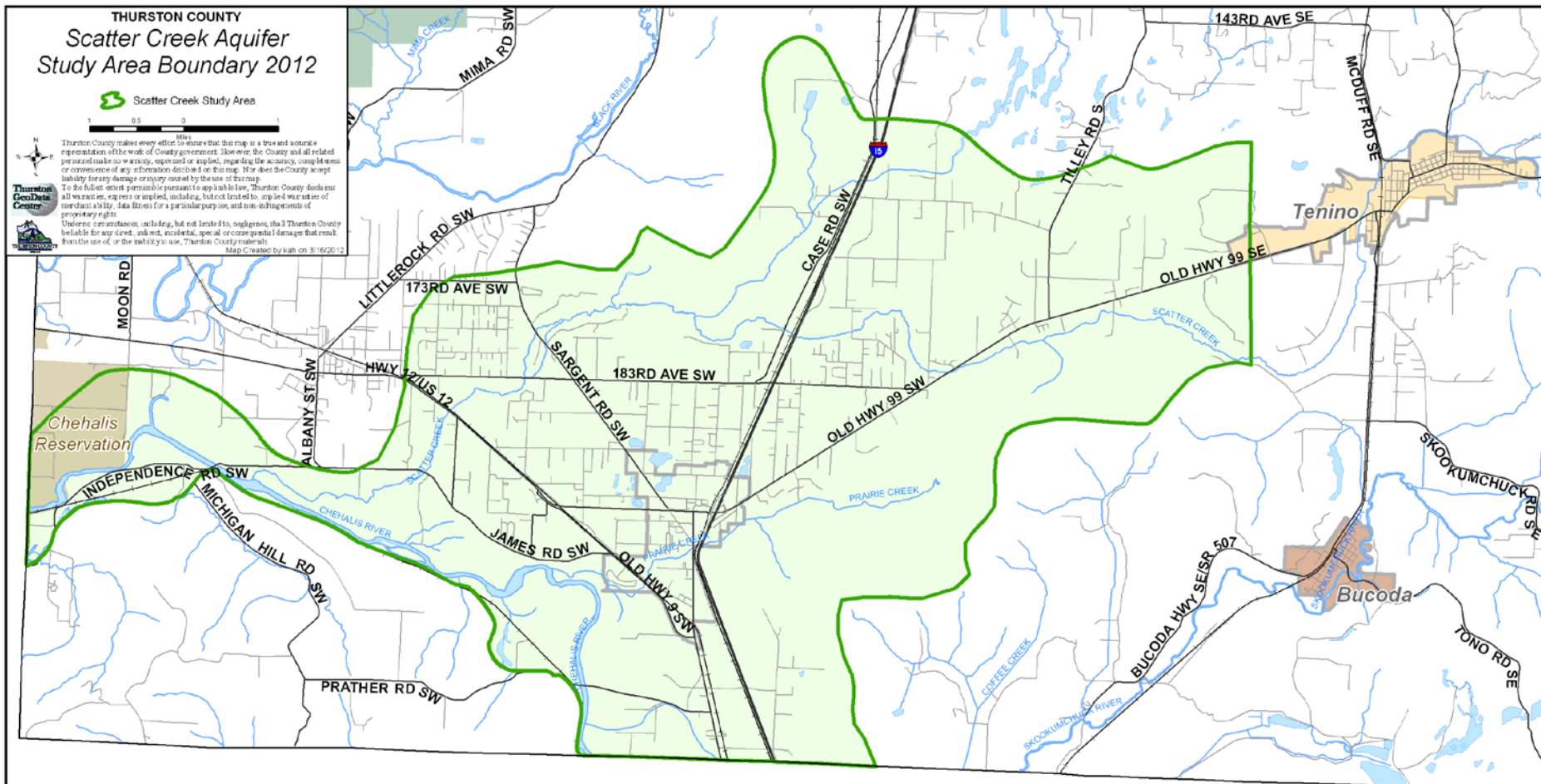
Public Health and Social Services Department
<http://www.co.thurston.wa.us/health>

THURSTON COUNTY Scatter Creek Aquifer Study Area Boundary 2012

Scatter Creek Study Area



Thurston County makes every effort to ensure that this map is a true and accurate representation of the work of County government. However, the County and all related personnel make no warranty, expressed or implied, regarding the accuracy, completeness or currency of any information described on this map. We do not accept any liability for any damage or injury caused by the use of this map. To the fullest extent permitted by law, the County disclaims all warranties, express or implied, including, but not limited to, implied warranties of merchantability, data fitness for a particular purpose, and non-infringement of proprietary rights. Under no circumstances, including, but not limited to, negligence, shall Thurston County be liable for any direct, indirect, incidental, special or consequential damages that result from the use of, or the inability to use, Thurston County materials. Map created by kiah on 3/16/2012



THURSTON COUNTY
WASHINGTON
SINCE 1882

Public Health and Social Services Department
<http://www.co.thurston.wa.us/health>

Scatter Creek Aquifer

- ❖ Very vulnerable groundwater supply
- ❖ Sole source of water for more than 1,000 public water systems and single family wells
- ❖ Over 18,000 people rely on the water



- ❖ Areas in the aquifer have been contaminated by land uses in past
- ❖ Policies and regulations put in place have helped protect water
- ❖ The area is transitioning from agricultural to rural residential



THURSTON COUNTY

Violet Prairie



0 600 1,200 2,400
Feet



 **Thurston County**
This map was prepared by the Thurston County Planning Department for the purpose of providing information to the public. It is not intended to be used for legal purposes. The County and its employees assume no liability for any errors or omissions in this map. The County reserves the right to modify this map at any time without notice.
© 2012 Thurston County Planning Department. All rights reserved. No part of this publication may be reproduced without prior written permission from the County of Thurston.

Septic System Management

- ❖ Focus of this project is looking at the impacts of septic systems on the aquifer.
- ❖ Have opportunity to examine future impacts and take action to protect safe drinking water

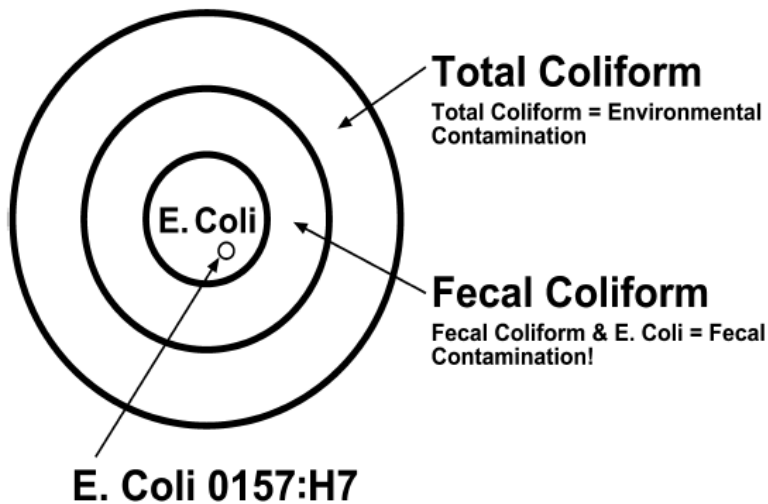


Public Health and Social Services Department
<http://www.co.thurston.wa.us/health>

Health Effects

Coliform Bacteria

TOTAL COLIFORM, FECAL COLIFORM AND E. COLI



Nitrates

- ❖ Infants
- ❖ Pregnant women
- ❖ Immune-compromised
- ❖ Standard 10 mg/l
- ❖ Precautions at 5 mg/l

Indicators

Other contaminants could be present

- Viruses
- Pharmaceuticals
- Pesticides



Public Health and Social Services Department
<http://www.co.thurston.wa.us/health>

Monitoring Results

...good news and bad news

- ❖ Since 2008 nitrate levels have dropped throughout the aquifer
- ❖ Oct 2013 sampling saw increases in nitrates and some unsatisfactory coliform bacteria samples



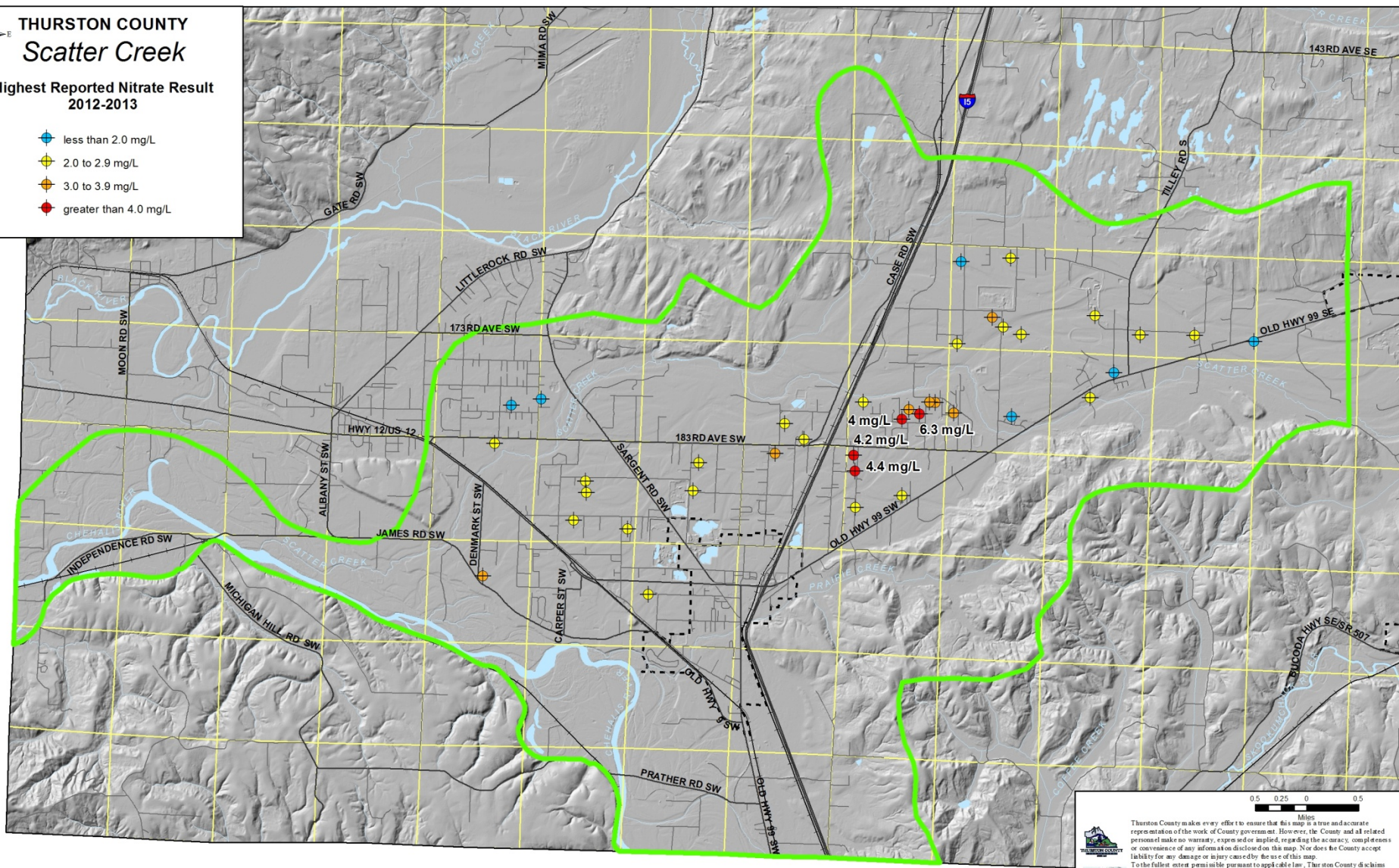




THURSTON COUNTY Scatter Creek

Highest Reported Nitrate Result
2012-2013

- less than 2.0 mg/L
- 2.0 to 2.9 mg/L
- 3.0 to 3.9 mg/L
- greater than 4.0 mg/L



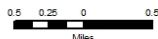
Thurston County makes every effort to ensure that this map is a true and accurate representation of the work of County government. However, the County and all related personnel make no warranty, expressed or implied, regarding the accuracy, completeness or convenience of any information disclosed on this map. Nor does the County accept liability for any damage or injury caused by the use of this map. To the fullest extent permitted by law, Thurston County disclaims all warranties, expressed or implied, including, but not limited to, implied warranties of merchantability, date fitness for a particular purpose, and non-infringement of proprietary rights. Under no circumstances, including, but not limited to, negligence, shall Thurston County be liable for any direct, indirect, incidental, special or consequential damages that result from the use of or the inability to use, Thurston County materials. Map Created by kah on 2/21/2014.



THURSTON COUNTY Scatter Creek Sample Sites 2013

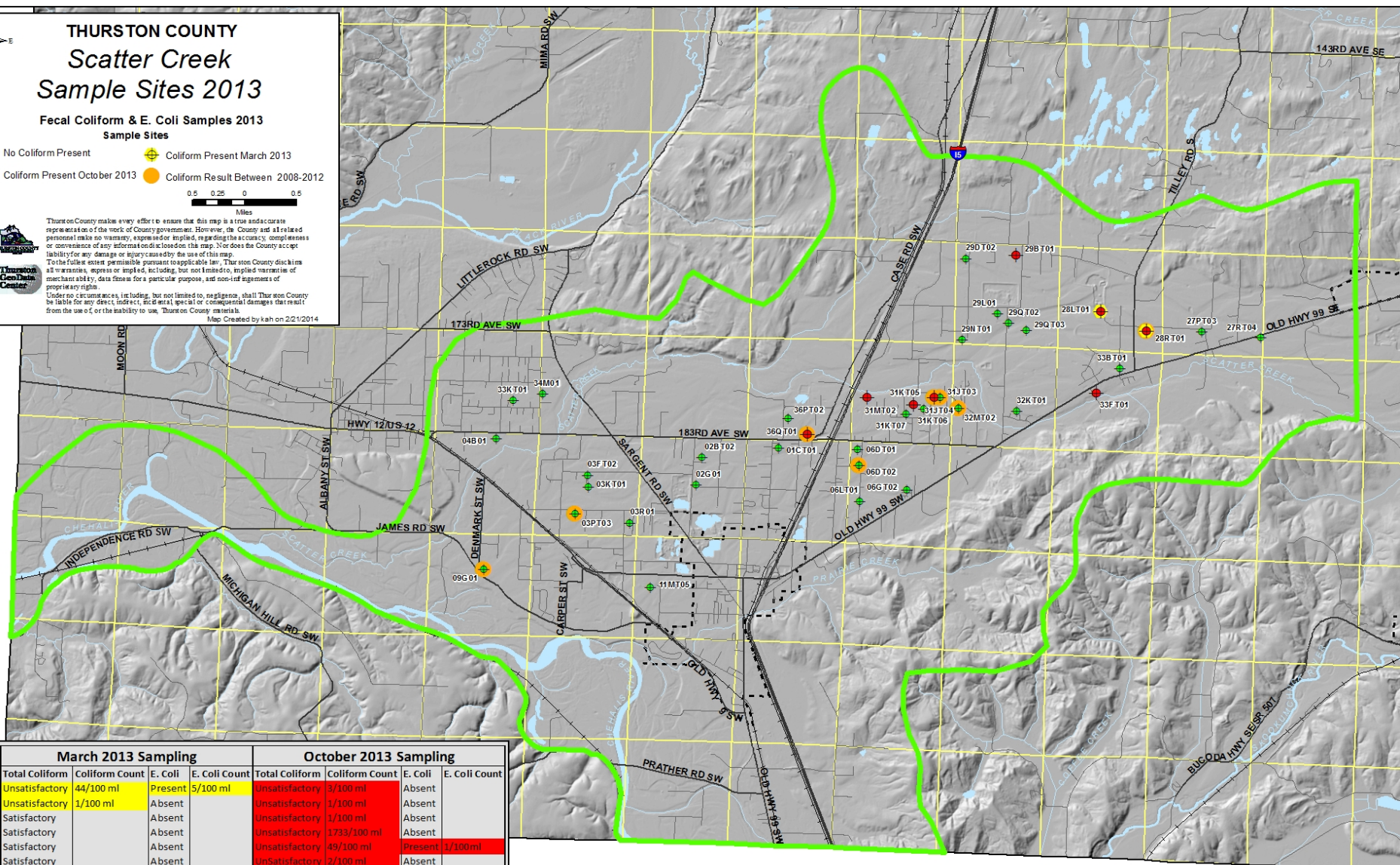
Fecal Coliform & E. Coli Samples 2013
Sample Sites

- No Coliform Present
- Coliform Present March 2013
- Coliform Present October 2013
- Coliform Result Between 2008-2012



Thurston County makes every effort to ensure that this map is a true and accurate representation of the work of County government. However, the County and all related personnel make no warranty, expressed or implied, regarding the accuracy, completeness or convenience of any information disclosed on this map. Nor does the County accept liability for any damage or injury caused by the use of this map. To the fullest extent permissible pursuant to applicable law, the County disclaims all warranties, express or implied, including, but not limited to, implied warranties of merchantability, data fitness for a particular purpose, and non-infringement of proprietary rights. Under no circumstances, including, but not limited to, negligence, shall Thurston County be liable for any direct, indirect, and/or consequential damages that result from the use of, or the inability to use, Thurston County materials.

Map Created by kah on 2/21/2014

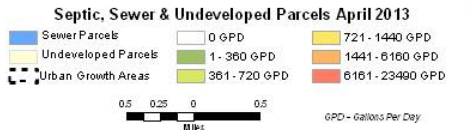


March 2013 Sampling					October 2013 Sampling				
Well ID	Total Coliform	Coliform Count	E. Coli	E. Coli Count	Total Coliform	Coliform Count	E. Coli	E. Coli Count	
28LT01	Unsatisfactory	44/100 ml	Present	5/100 ml	Unsatisfactory	3/100 ml	Absent		
28RT01	Unsatisfactory	1/100 ml	Absent		Unsatisfactory	1/100 ml	Absent		
29B T01	Satisfactory		Absent		Unsatisfactory	1/100 ml	Absent		
31JT04	Satisfactory		Absent		Unsatisfactory	1733/100 ml	Absent		
31KT05	Satisfactory		Absent		Unsatisfactory	49/100 ml	Present	1/100ml	
31MT02	Satisfactory		Absent		Unsatisfactory	2/100 ml	Absent		
33FT01	Satisfactory		Absent		Unsatisfactory	57/100 ml	Absent		
36QT01	Satisfactory		Absent		Unsatisfactory	27/100 ml	Absent		

Table does not include repeat samples.



THURSTON COUNTY Scatter Creek Septic Parcel Analysis 2013



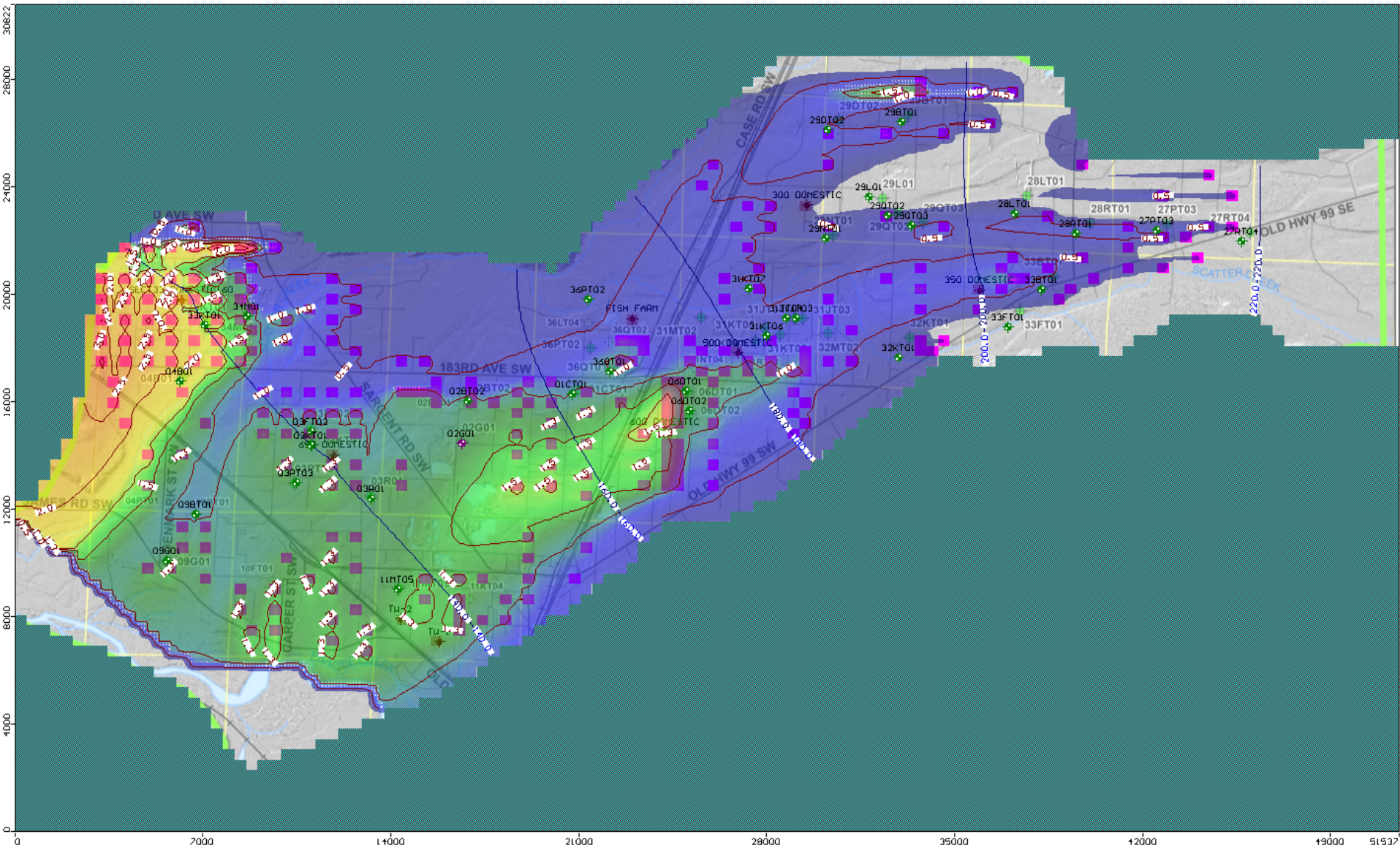
Thurston County makes every effort to ensure that this map is a true and accurate representation of the work of County government. However, the County and all related personnel make no warranty, express or implied, regarding the accuracy, completeness or absence of any information disclosed on this map. Nor does the County accept liability for any damage or injury caused by the use of this map.

To the extent that it is possible, pursuant to applicable law, Thurston County disclaims all warranties, express or implied, including, but not limited to, implied warranties of merchantability, date thereof for a particular purpose, and non-infringement of proprietary rights.

Under no circumstances, including, but not limited to, negligence, shall Thurston County be liable for any direct, indirect, or consequential damages that result from the use of or the inability to use, Thurston County maps.

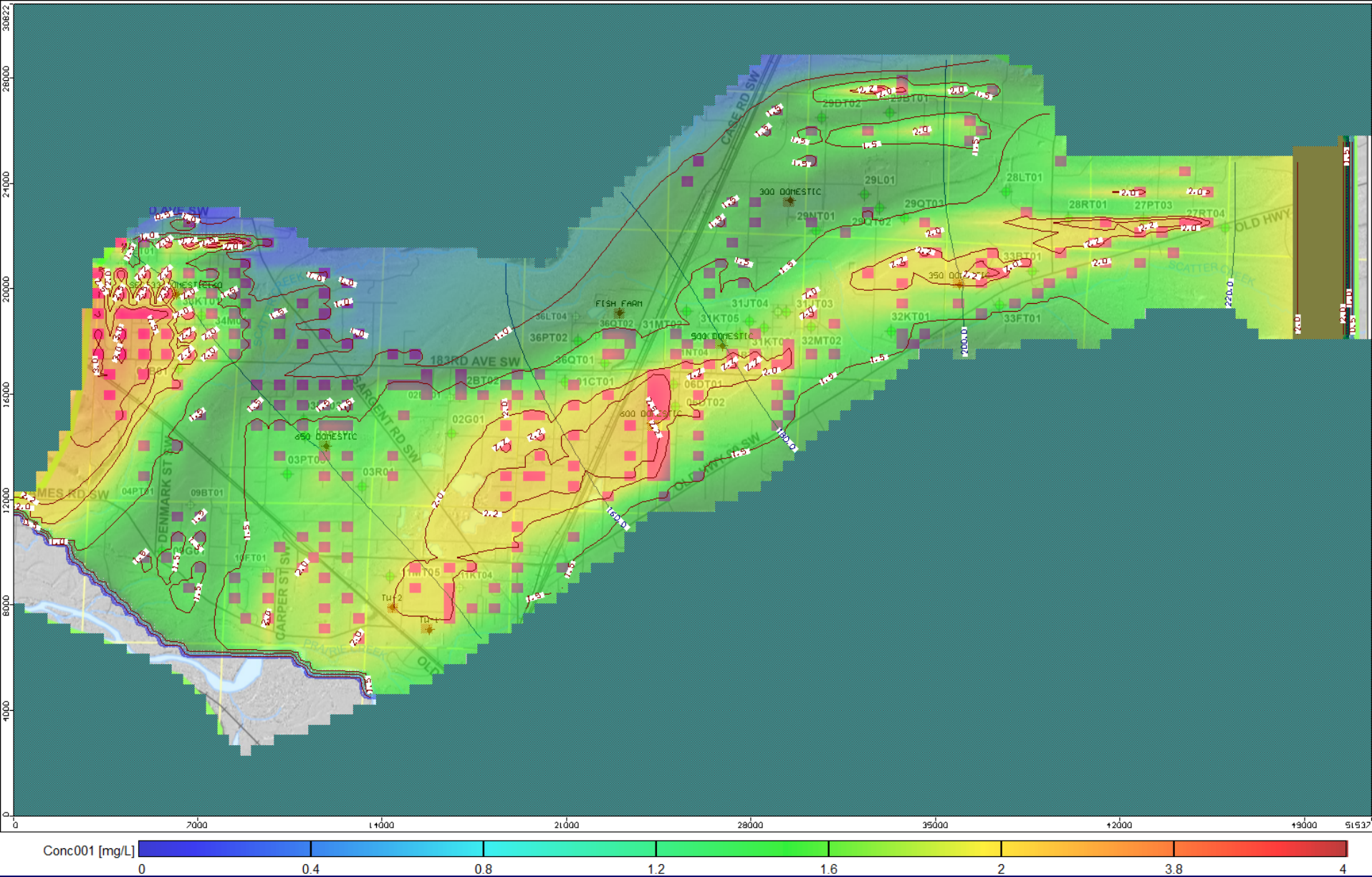
Map Created by ksk on 6/27/2013





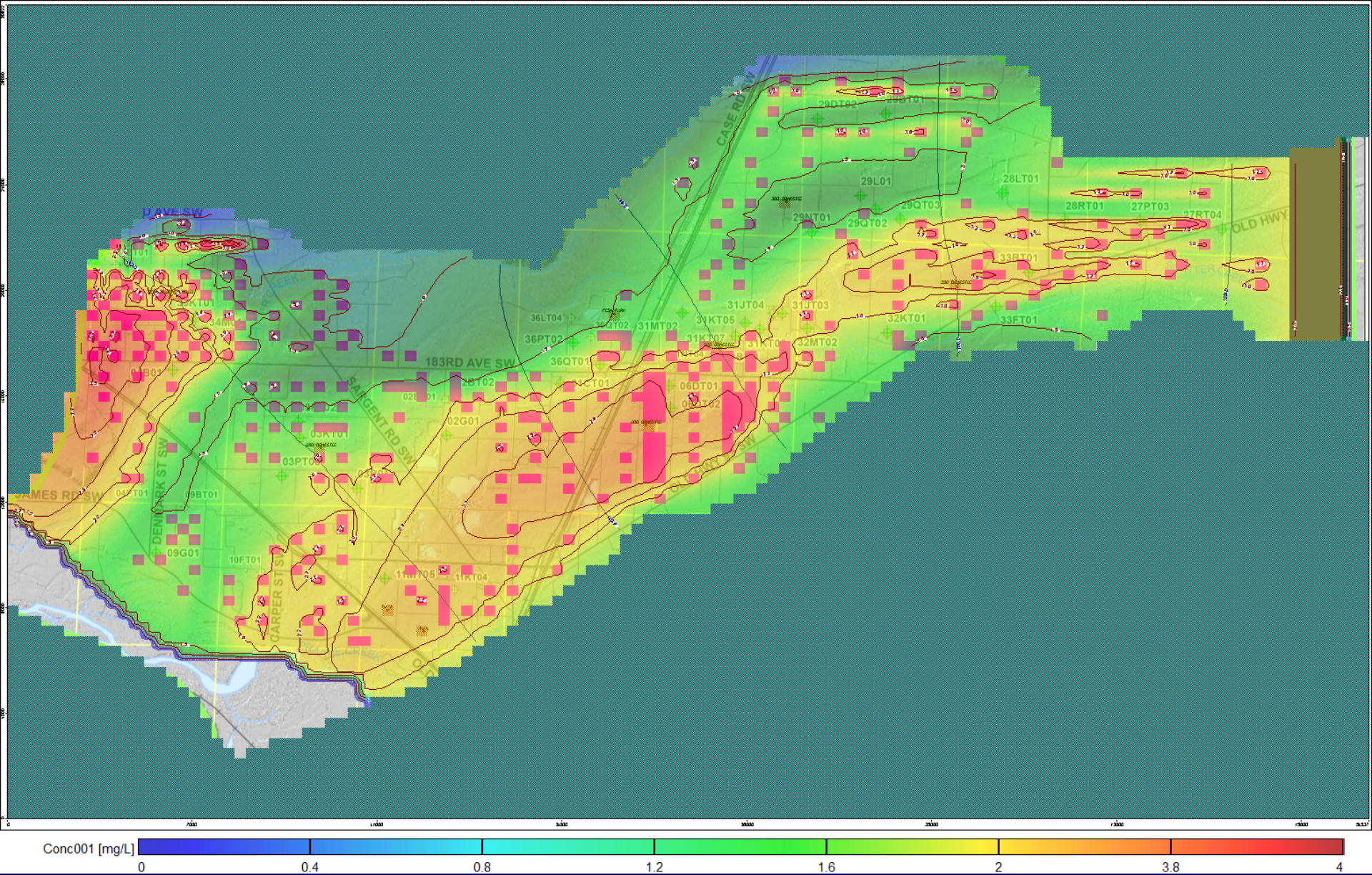
1st Model Scenario

Current septic systems only



2nd Model Scenario

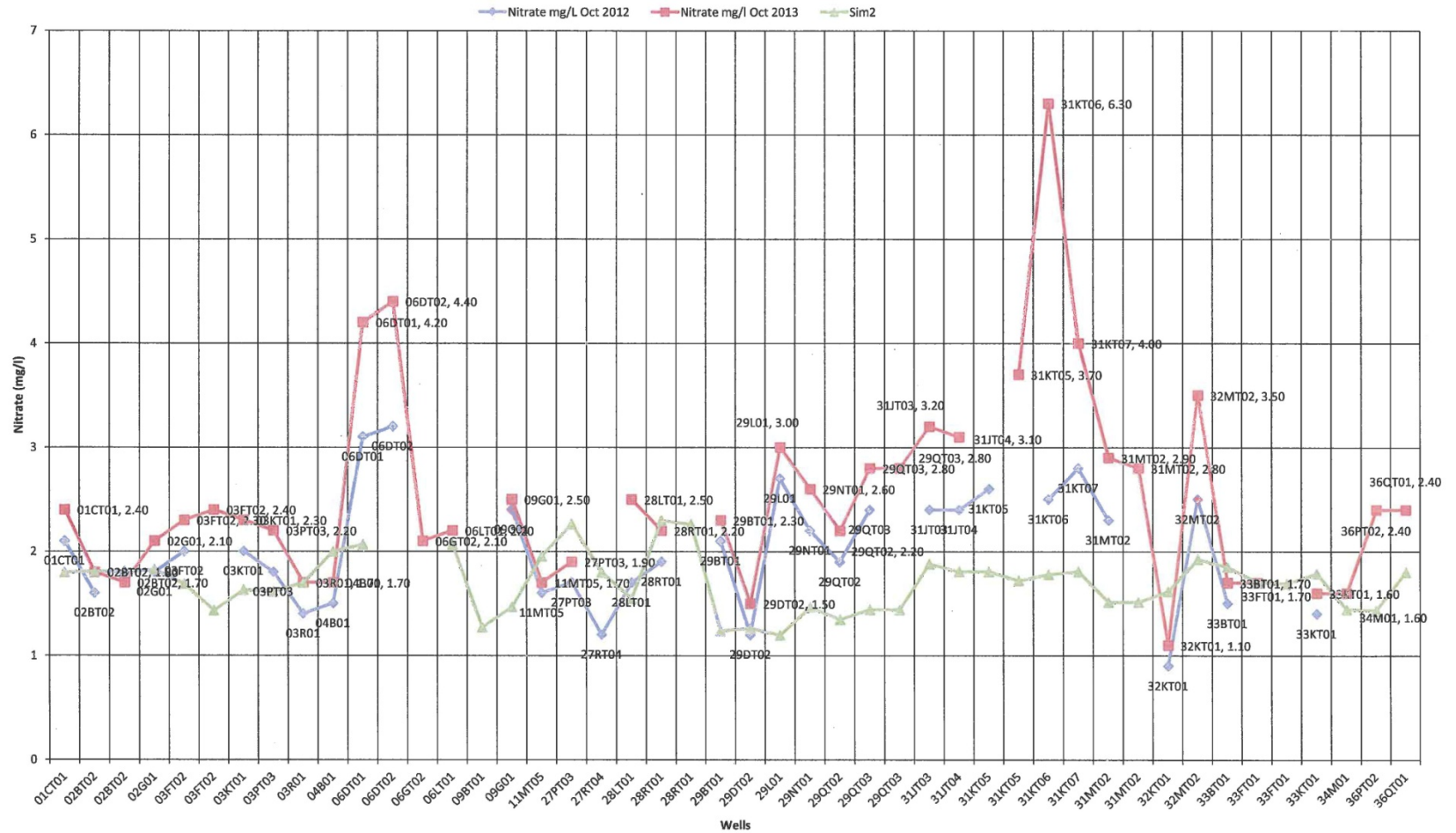
Adds all current legal lots + 2 mg/l nitrate from Tenino

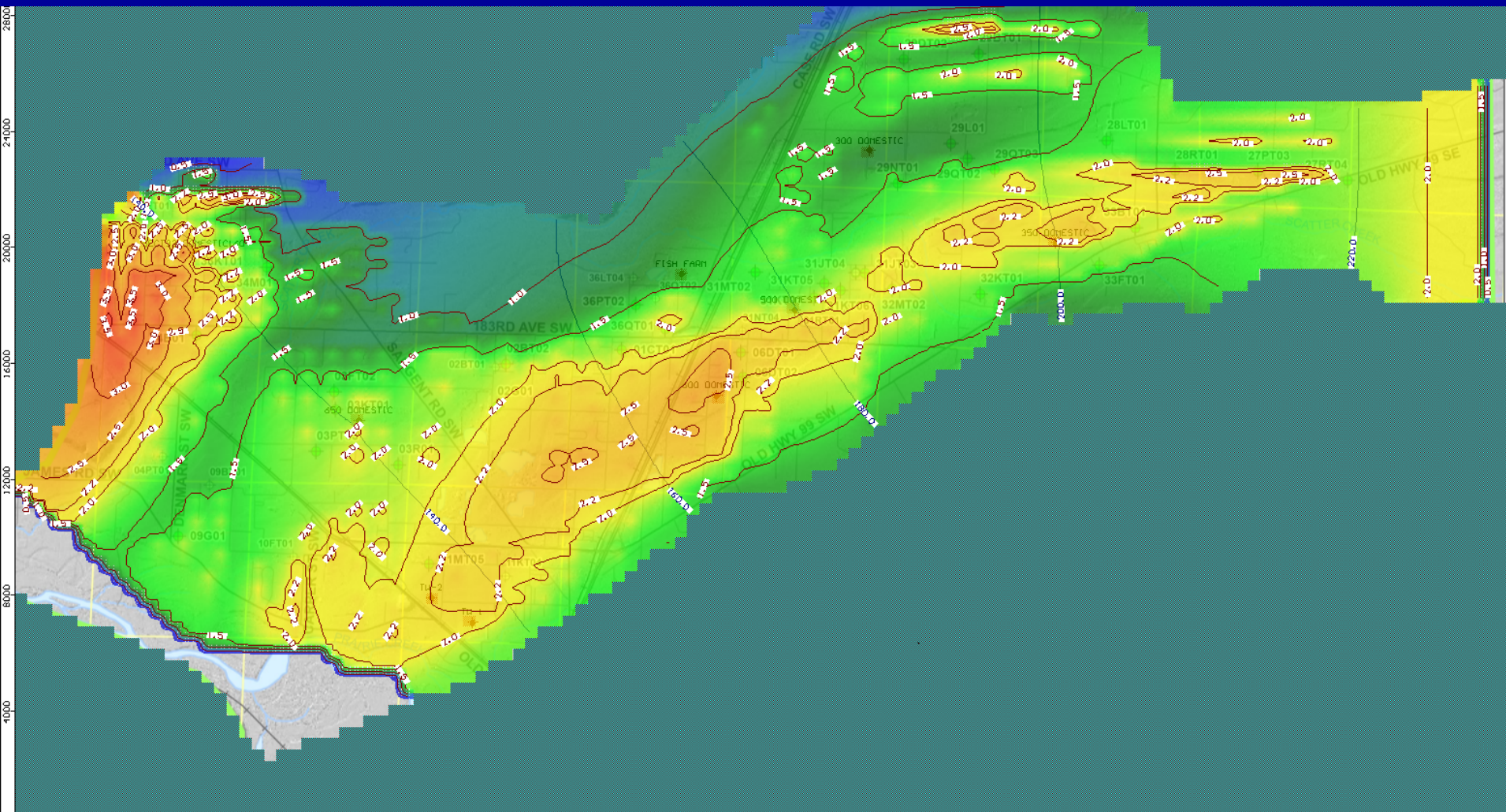


3rd Model Scenario

Assumes full build-out + 2 mg/l nitrate from Tenino

Nitrate GW Concentrations Comparison: October 2012 vs October 2013 vs Simulation 2

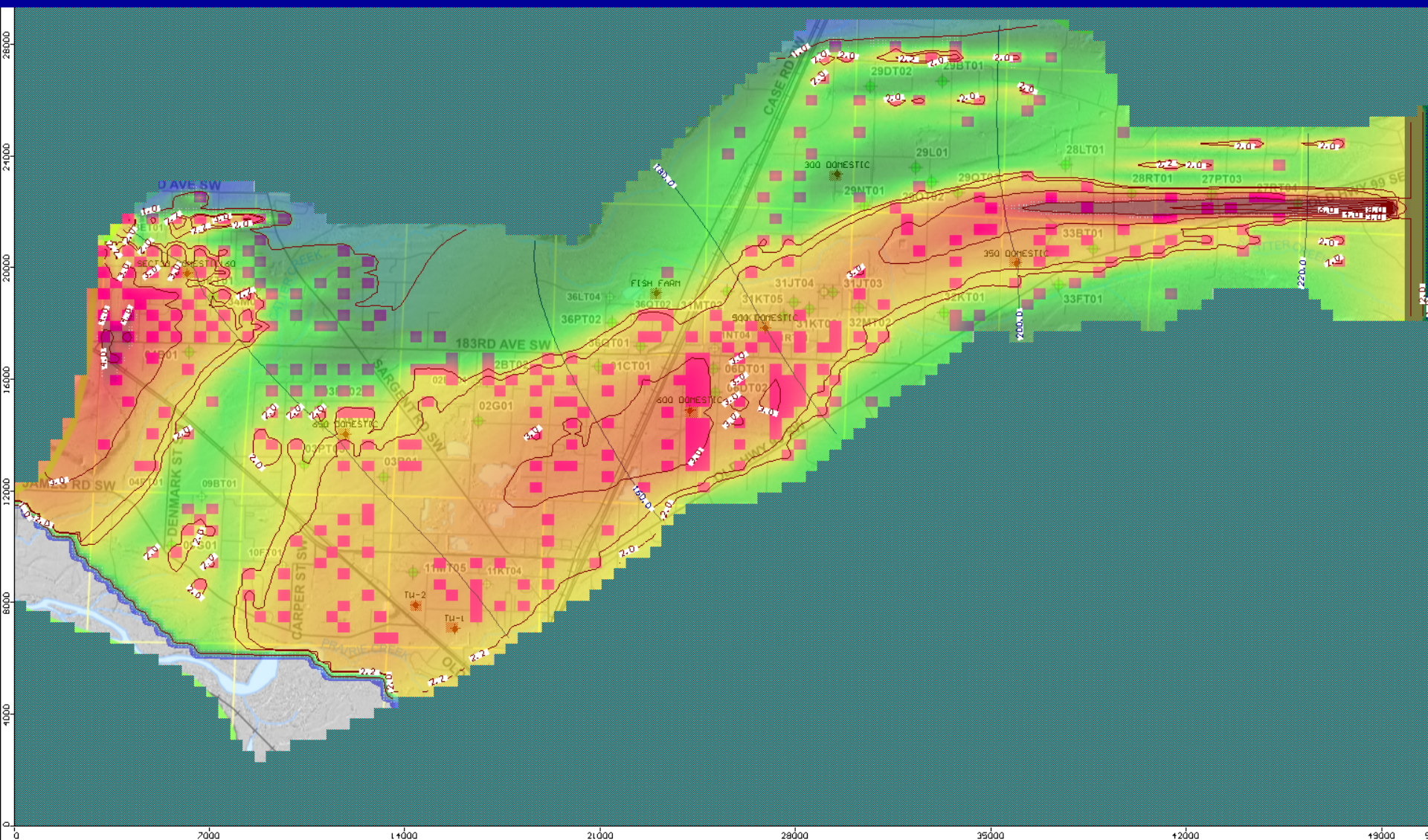




4th Model Scenario

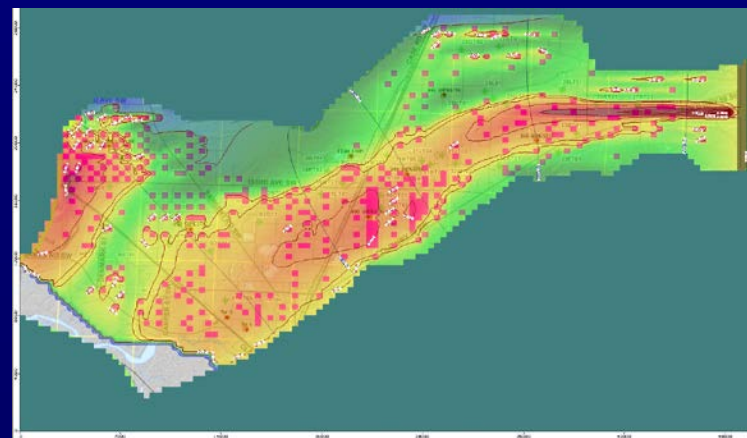
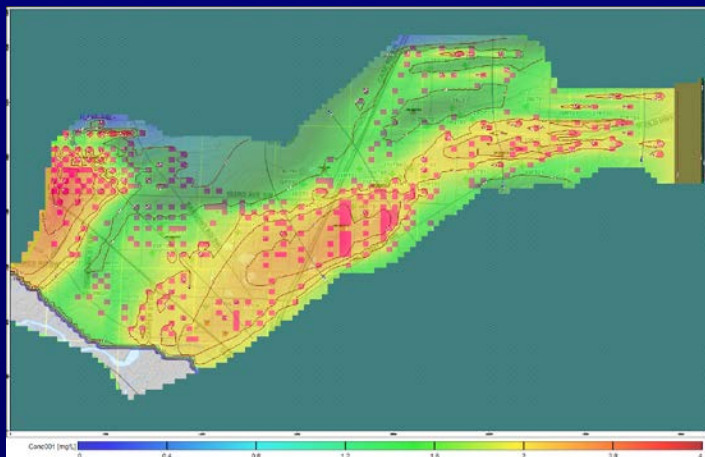
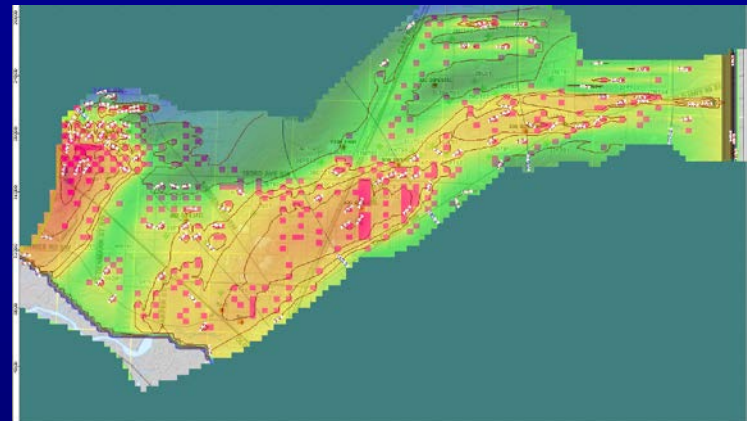
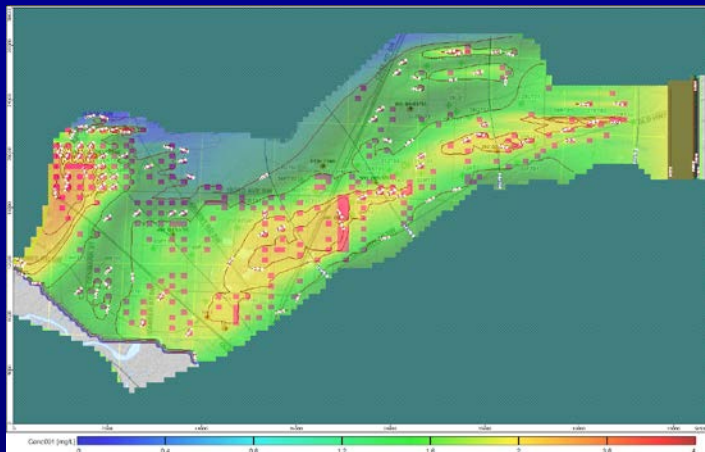
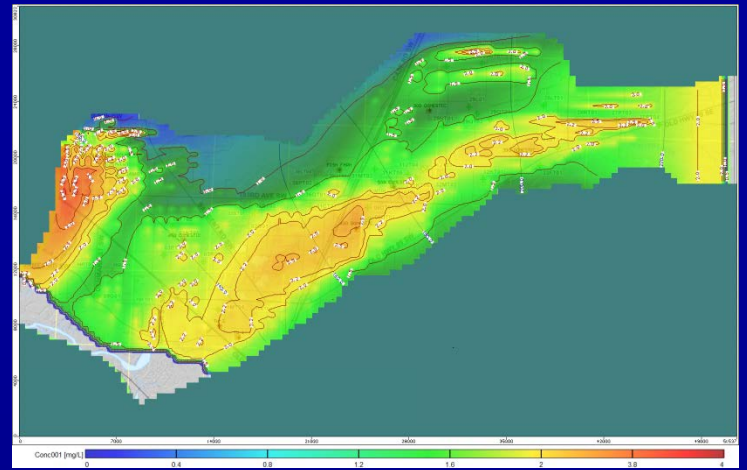
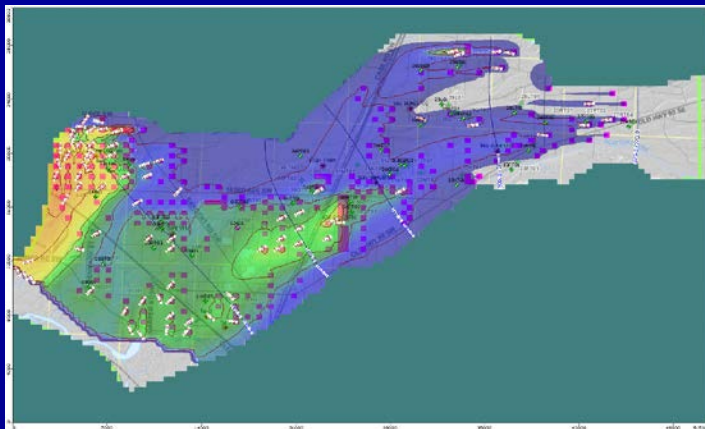
Current & legal lots + 2 mg/l Tenino + lawn fertilizer

All current & legal lots, lawn fertilizer, Tenino adj.



6th Model Scenario

Full build-out, lawn fertilizer, Tenino full capacity



Your Water, Your Neighbor's Water

Different perceptions of risk

- ❖ Are future conditions something that needs to be addressed?
- ❖ What issues/ideas/options should the committee consider?
- ❖ The best outcome will...





Public Health and Social Services Department
<http://www.co.thurston.wa.us/health>

Community Input

Your Job:

- ❖ Help us be sure we consider all options
- ❖ Help us understand how each option will affect people
- ❖ Help us identify who and what else we need to include in the process

So that we can make the best responsible decision to protect drinking water.

Recommendations

Citizens Committee develops draft recommendations

- Shared with Board of Health and community
- Recommendations refined

If a policy change is recommended, it must go through its own public process before being adopted

- Notice
- Public hearing
- Formal adoption by Board

Coming Up

- ❖ Next community workshop anticipated in September – feedback on draft recommendations
- ❖ Expect final committee recommendations presented to Board of Health by Nov/Dec.



Project Website:
www.co.thurston.wa.us/health/ehsc

360-867-2582



Public Health and Social Services Department
<http://www.co.thurston.wa.us/health>