

**Stillaguamish Bacteria Microbial Water Quality Assessment (MWQA)
Stakeholder Workshop Summary – FINAL**

May 17, 2011

1:00 - 4:00 p.m.

Peace Lutheran Church
1717 Larson Rd., Silvana, WA 98287

Participants

1. Stacy Aleksich, LID Specialist, Snohomish Conservation District (SCD)
2. Bill Best, Member, Stillaguamish River Clean Water District (CWD) Advisory Board
3. Chris Betchley, Vice Chair, CWD Advisory Board
4. Bill Blake, Natural Resources Manager, City of Arlington
5. Bill Bowe, Water Quality Specialist, SCD
6. Steve Britsch, Water Quality Project Specialist, Snohomish County Surface Water Management (SWM)*
7. Jody Brown, Fisheries Biologist, Stillaguamish Tribe
8. Tim Clancy, Co-Chair, Warm Beach Stewards
9. Ken Clarke, Storm Water Technician, City of Arlington
10. Kyle Deerkop, Shellfish Biologist, Upper Skagit Tribe
11. Pete Domoto, Island County Beach Watcher/Camano Island Resident
12. Sean Edwards, Senior Planner, SWM*
13. Cindy Flint, Watershed Steward, SWM*
14. Stef Frenzl, Communications Specialist, SWM
15. Gina Gray, Integration Specialist, Stillaguamish Tribe
16. Sheila Hagen, GIS Analyst, SWM*
17. Chuck Hazleton, Chair, Stillaguamish River Flood Control District
18. Jeff Hutchison, Environmental Health Specialist, Snohomish Health District (SHD)
19. Bob Landles, Warm Beach Resident
20. Monte Marti, Manager, SCD*
21. Cara McKinnon, Agricultural Inspector, Washington Department of Agriculture
22. Caitlin Price, Farm Planner, SCD
23. Michael Purser, Senior Habitat Specialist, SWM*
24. Brent Raasina, Senior Sanitarian, SHD*
25. Dave Ridgeway, CWD Advisory Board
26. Jon Schmidt, Public Works Supervisor, SWM
27. Lawrence Sullivan, Public Health Advisor, Washington Department of Health, Office of Shellfish and Water Protection
28. Ralph Svrjcek, TMDL Coordinator, Washington Department of Ecology
29. Mary Lou White, Project Manager/Field Biologist, Wild Fish Conservancy
30. Kelly Wynn, Utilities Manager, Water and Wastewater Services (for Warm Beach Christian Camp)

* Stillaguamish MWQA Project Team

Information Packet

- Stillaguamish MWQA Stakeholder Workshop Agenda

- PowerPoint presentation hand-out (6 slides per page) – “Stillaguamish Bacteria Microbial Water Quality Assessment: Project Overview and Data Summary Report.” (5/17/11)
- Stillaguamish MWQA Project Work Plan (5/12/11)
- Stillaguamish MWQA Fecal Coliform Data Summary Report (5/17/11)
- Stillaguamish MWQA Project Key Reference List (5/17/11)
- Workshop Evaluation Form

Welcome and Orientation

Sean opened the workshop at 1:10 p.m. and thanked everyone for participating. Sean reviewed the workshop purpose and desired outcomes. The purpose of the workshop was to convene water quality stakeholders to identify priority areas for pro-active bacterial pollution source identification and control based on Snohomish County's analysis of the most current fecal coliform data available for the Stillaguamish watershed.

Desired outcomes included identification of the following:

- Data gaps and research needs
- Partnership opportunities
- Coordination needs
- Bacterial pollution “hot spots”
- High use water recreation areas
- Available resources

Cindy Flint reviewed the workshop agenda, process, ground rules, and “parking lot” flip chart for documenting sidetrack issues.

Stillaguamish MWQA Project Overview

Sean presented a 20-minute PowerPoint overview of the bacterial pollution problem in the Stillaguamish watershed and how this project seeks to address it. Fecal coliform is used as an indicator of bacterial pollution from human and animal fecal waste. Freshwater fecal coliform levels in the Stillaguamish watershed exceed standards for primary contact recreation and marine fecal coliform levels dictate whether the Port Susan and South Skagit Bay shellfish areas are open for commercial harvest. Current fecal coliform data should be used to guide investment of public resources for water quality protection and restoration, which is part of the central purpose of Snohomish County's Stillaguamish River Clean Water District (CWD).

This Stillaguamish MWQA project seeks to improve water quality in the Stillaguamish watershed by proactively identifying sources of point and non-point bacterial pollution and removing those sources. The MWQA methodology is based on World Health Organization, National Research Council, and Environmental Protection Agency bacteria studies to assess human health risk. The MWQA process involves the following steps:

1. Existing fecal coliform data are used to rank sampling sites according to the percentage of samples that exceed specific criteria.

2. The results of this initial ranking are reviewed with stakeholders who provide supplemental input to help prioritize specific areas for phased contaminant source surveys.
3. The project team conducts contaminant source surveys in the field during the dry and wet seasons. The survey includes walking the stream where landowner permission is granted, documenting observations of water quality conditions, and collecting water quality samples of suspected bacterial pollution discharges.
4. Information from the field survey is compiled in a written report. Any pollution sources identified through the field survey are referred to the responsible agencies for cooperative clean up with the landowners.

The Stillaguamish MWQA project team includes staff members from Snohomish County Surface Water Management, Snohomish Conservation District, and Snohomish Health District. The 2011 budget of \$97,500 for this project is assumed to be sufficient to conduct the field survey work in one sub-basin. Following this stakeholder workshop, the project schedule includes preparation for the dry season field survey, which must be completed sometime between the beginning of July and the end of September. The wet season field survey must then be completed between the beginning of October and the end of December. From January through March, 2012, the field survey results will be documented in a final report. This information will then be presented at a follow up stakeholder workshop in April 2012. Depending on Snohomish County's 2012 budget, SWM could conduct a similar effort in one or more additional sub-basins.

Stillaguamish Fecal Coliform Data Summary Report

Steve Britsch and Michael Purser presented a 20-minute PowerPoint summary of SWM's analysis of the most current and available fecal coliform data. This presentation focused on highlights from the hard copy of the data summary report that was provided in the workshop information packet.

Steve reviewed Washington State's primary contact recreation standards for fecal coliform bacteria in fresh water as defined in WAC 173-201A. Steve also explained the MWQA ranking process, which evaluates water quality monitoring sites based on the percentage of the most recent 30 samples collected during dry and wet seasons that exceed 200 colonies/100 mL. Thirty samples provides 95% statistical confidence that the analysis has less than 10% error.

The MWQA ranking groups are as follows:

- "A" ($\leq 10\%$ of samples exceed 200 colonies/100 mL)
- "B" ($> 10\% - 30\%$ of samples exceed standard)
- "C" ($> 30\% - 50\%$ of samples exceed standard)
- "D" ($> 50\% - 75\%$ of samples exceed standard)
- "E" ($> 75\%$ of samples exceed standard)

Fecal coliform data analyzed for this workshop was provided by SWM, Warm Beach Christian Camp, City of Arlington, Washington Department of Ecology, and Stillaguamish Tribe.

Michael presented the results of SWM's analysis, which evaluated data from more than 120 sample sites. Thirty-seven sites had at least thirty samples collected over the past ten years. None of the sites were ranked as "D" or "E." However, four of the sites ranked as "C" (Portage Creek at Highway 9, Lake Martha Creek at Soundview Drive, Old Stillaguamish Channel at Matterand, and Jorgensen Slough below tidegate). Sixteen of the sites were ranked as "B." The remaining seventeen sites were ranked as "A."

The three top sub-basins, based on sampling sites with the highest fecal coliform levels, included Church Creek, Portage Creek, and Lower Stillaguamish. Michael reviewed the data for all sampling sites (5) within the Church Creek and Portage Creek sub-basins and the top eight sampling sites within the Lower Stillaguamish sub-basin, which had a total of twenty-seven sites.

Sean noted that the sub-basin boundaries used for this project were originally developed for the Stillaguamish salmon recovery plan. As delineated for that purpose, the Lower Stillaguamish sub-basin covered the entire floodplain from the marine shoreline to the confluence of the North and South forks. Using this very large sub-basin for the Stillaguamish MWQA project is challenging because it includes twenty-seven sampling sites having between 12 and 30 samples, and multiple sub-drainages, including Happy Hollow, Glade Bekken, Miller Creek, Sunday Lake, and March Creek.

Group Discussion of Priority Areas

Following the presentations, Cindy led the group through a discussion of the pros and cons of conducting the contaminant source survey work for this project in each of the three top sub-basins. The objective for this part of the workshop was to supplement the data summary report with stakeholder input to help participants identify one priority sub-basin to recommend to SWM for pro-active bacterial pollution source identification and clean-up in 2011. Participants were asked to focus their input on the desired outcomes identified at the beginning of this workshop (i.e., data gaps, research needs, etc.).

For each of the top three sub-basins Sheila Hagen displayed GIS maps of potential human sources and potential animal sources of bacterial pollution. Poster-size hard copies of these two maps were distributed to participants. Sean explained the information displayed on each of the two map types. Potential human sources included municipal sewer lines, on-site septic systems, and public access areas. Potential animal sources included locations of private and commercial kennels, horse stables, Snohomish Conservation District animal survey data, animal handling facilities, and commercial/industrial facilities such as dairies permitted by Ecology.

Sean noted that specific sites of suspected bacterial pollution should be reported to SWM's water quality hotline (425-388-6481) for investigation by qualified staff that can validate complaints and initiate clean-up actions. SWM's water quality reporting brochures were provided. Sean also noted that the CWD Discretionary Fund is available to provide financial assistance to help landowners clean up many types of bacterial pollution problems. Hard copies of SWM's CWD brochure, which includes information

about the Discretionary Fund, were provided as part of a three-panel CWD educational display during this workshop.

The pros and cons recorded during the group discussion are presented below.

Church Creek Sub-basin

Pros:

- Close to shellfish beds (proximity)
- Potential partnership opportunity with Stanwood
- Size of watershed seems doable
- Lots of historical data available
- Lots of restoration sites
- Low human population
- Church Creek Park at lower reach (public access)
- Wooded area near Church Creek Park where kids might play
- Low flow issues could dovetail w/ water quality issues for education
- Sno. Co. has additional IDDE info
- Collaboration opportunity to address manure issues in Church Creek via SCD

Cons:

- Relatively low flow, esp. upper half of the sub-basin = less FC loading in marine water
- Western half of lower watershed in Stanwood (outside CWD)
- Low human population (less primary contact)
- Not a lot of concentrated animal areas

Portage Creek Sub-basin

Pros:

- Good partnership opportunity w/ Arlington
- Relatively small sub-basin = more doable
- Concentrated areas of older on-site septic systems (pre-1990)
- Higher in the watershed = makes sense to start at upstream end of problem
- Reach out to upper Portage community where we have not done much work
- SCD farm survey will be targeting upper Portage area
- Water recreational areas

Cons:

- Furthest from the shellfish areas

Lower Stillaguamish Sub-basin

Pros:

- Opportunity to address Stanwood wastewater treatment plant concerns
- Potential higher impact on shellfish protection

- High recreational use
- High bacteria loading
- High growth pressure
- Glade Bekken sub-drainage area is within CWD
- Partnership opportunity w/ SCD in Glade Bekken (recent farm survey)
- Heavy recreational fishing use during pink salmon seasons
- Hatt Slough boat launch toilet becomes unsanitary
- Includes Blue Stilly WDFW recreational area
- Heavy summer residential and recreational use area
- Opportunity to clean up pollution in area prone to flooding

Cons:

- Largest and most complex sub-basin
- At downstream end of entire watershed
- Do we have enough resources to conduct CSS in such a large and complex area?
- Highest potential for failure
- Large part of the sub-basin not in CWD
- Equipment vandalization risk
- Unknown whether Stanwood wants to partner

Voting for Priority Areas

Following the group discussion of the top three sub-basins, Cindy led the group through a simple voting process. Each participant recorded their single vote in secret by writing the name of the top priority sub-basin on a post-it note. SWM staff did not vote. Cindy collected all of the votes and posted each one on a single flip chart under the name of the corresponding sub-basin.

Voting results:

- Portage Creek Sub-basin = 16 votes
- Lower Stillaguamish Sub-basin = 3 votes
- Church Creek Sub-basin = 2 votes

Cindy and Sean then asked the group whether anyone objected to these voting results. Dave Ridgeway and Chuck Hazleton expressed concern that the Warm Beach area, including the area slated for residential development by the McNoughton Group, was not given higher priority despite the long-standing bacterial pollution issues in that area and the potential downstream impacts from hundreds of new homes with on-site septic systems. Sean acknowledged that the Lower Stillaguamish sub-basin delineation was so large that it lumped together a lot of different sub-drainage areas of concern. Sean offered to work with the Warm Beach stakeholder community on a parallel track to address their concerns while moving forward with the field survey work in Portage Creek.

Wrap-up

Sean reviewed the flip chart notes recorded during the workshop for Portage Creek data gaps and research needs, but did not have time to review the other two sub-basins or the parking lot notes. Flip chart notes on data gaps and research needs for each sub-basin are recorded below.

Portage Creek Data Gaps and Research Needs:

- SCD inventory scheduled for 2011 (farm survey)
- Ecology study – Action Plan – targeted
- SCD – Harvey-Armstrong grant report
- Take another look at Fish Creek fecal coliform data
- Conduct seasonal water quality trends analysis
- SCD – Lower Stilly TMDL final report

Lower Stillaguamish Data Gaps and Research Needs:

- Stanwood wastewater treatment plant data/impact
- Recreational fishing impact to water quality

Church Creek Data Gaps and Research Needs:

- Loading and flow data – wet and dry
- SWM review Warm Beach “wet well” (a.k.a., “Dike Pond”) DNA source tracking data/report from Stillaguamish Tribe (and others)
- SWM obtain list of National Foods chicken manure recipients via SCD (all sub-basins)
- PDS – obtain demographic data

Parking Lot (for sidetracks and other issues)

- Need clear written procedures for coordination of enforcement of water quality laws (Ecology, Snohomish County, SCD, SHD, and tribes)
- Lervick Tide Gate has silted in – no flow out of tidegate at Stilly Tribe sampling site #170
- Need to use marine fecal coliform standard for some stations (e.g., Warm Beach Canoe Channel)
- Lower Stilly bacterial pollution sources – more chicken farms – locations of distribution
- New bacterial pollution source ID methods may be less costly – King County and Ecology have information
- Warm Beach area has high concentration of older on-site septic systems
- McNoughton Group development project in Seven Lakes area – opportunity to prevent potential water quality impacts from hundreds of new homes with on-site septic systems
- Stanwood wastewater treatment plant – timing of treated effluent discharge to Old Stilly Channel and whether that impacts shellfish areas
- Need to conduct outreach and provide toilet facilities for recreational fishermen
- On-site septic systems incentives/help for failures

- SHD should consider designating Marine Recovery Areas to help protect shellfish tidelands

Sean will prepare a written summary of the workshop and distribute it to all workshop participants for their review and feedback. Participants were encouraged to fill out their workshop evaluation forms in order to help the project team understand what worked well and what did not. Sean invited participants to contact him directly if they have anything else to say about the workshop or the project.

The workshop was adjourned at 4:05 p.m.

Summary of Feedback from Workshop Evaluation Forms

Fourteen evaluation forms were received from participants. Results are summarized below.

| | Strongly Disagree | Disagree | Not Sure | Agree | Strongly Agree |
|---|---------------------------------------|----------|------------------------------------|-------|----------------|
| The workshop was a valuable use of my time. | | | | 11 | 3 |
| The purpose of the workshop was clear. | | | | 9 | 5 |
| The workshop was the right length of time. | | | 1 | 10 | 3 |
| If you disagreed with the statement above, was the (meeting) length.....? | <input type="checkbox"/> Too Long (1) | | <input type="checkbox"/> Too Short | | |
| I feel that my contributions to the discussions will be utilized by leadership. | | 1 | 3 | 6 | 1 |

| Please rate each of the following aspects of the workshop: | | | | | |
|---|-----------|--|---------|------|-----------|
| | Very Poor | Poor | Average | Good | Excellent |
| The workshop location | | | | 8 | 6 |
| The workshop facilitation | | | | 6 | 8 |
| The workshop materials | | 1 (data in materials did not match presentation) | | 8 | 5 |

| What did you like most about this workshop? |
|--|
| <ul style="list-style-type: none"> • Good Presentation regarding the purpose and desired outcome of the workshop. • Arrived at the outcome. Good interaction • Surprisingly congenial group discussions. Well facilitated. • The prioritization process. Format nicely structured. Facilitation was skillfully executed. • Cindy smiling • Well run • Many stakeholders represented and provided opinions. • Discussing data • Excellent range of county and other attendees. Lots of good cross-talk and info sharing. • Good opportunity to meet players in watershed. Great opportunity to get input from many players. • Good coordination & input from community • Well organized |

What did you like least about this workshop?

- A lot of information to digest, diverse perspectives, limitations regarding the entire watershed, how to focus on specific problem areas.
- Sunshine outside....
- The cookies (I needed coffee!!)
- Too many folks not participating.
- Could only pick one basin
- Inter collaboration.
- Still a bit rushed
- Group involvement

Other Comments:

- How will addressing fecal impacts in Portage Creek address/impact achieving the primary contact standard for recreational use throughout the basin, and especially at recreational shoreline areas?
- As a citizen participant I did not feel qualified to address or advise in the process. It was a great educational experience for me.
- What do we do different than past efforts to make sure we solve the problems we find.
- Replace elected officials should solve many of the issues presented.
- Keep up the good work.