Draft Summary of the Agriculture Stormwater Sub-Group Meeting

October 12, 2011 9:30-12:30

Department of Ecology Building

Lacey, WA

Attendees: Heather Kibbey (City of Everett), Monte Marti (Snohomish Conservation District), Rick Haley (Skagit County), Clare Flannigan (NRCS), Karen Bishop (Whidbey Island Conservation District), Bob Cusimano (ECY), Jim Cowles (Washington Dept. of Agriculture), Dino Marshalonis (EPA), Tim Determan (Dept. Health), Karla Heinitz (WA Conservation Commission), Andrew Brousseau (UW), and Carol Smith (WA Conservation Commission).

Updated Crop Map Summaries

Jim provided a pdf and hard copies of agricultural land summaries for Puget Sound and for each county in Puget Sound. There are 243 dairies and 375,130 acres of agricultural land identified in these maps for the Puget Sound region. This is likely an underestimate of acreage because the maps do not yet include all pastureland, although this category is being added as data are updated each year. The maps can be viewed at: http://www.ecy.wa.gov/programs/wq/psmonitoring/ps_monitoring_docs/SWworkgroupDOCS/Oct2011ProgressRptAgwrkgrp.pdf.

The maps do not include small scale agriculture/hobby farms. At the July meeting, George Boggs from the Whatcom Conservation District provided windshield survey information on types and numbers of animals in that district. The results have been posted to the ag/stormwater website. Clare and Rick pointed out that similar data exist for King and Skagit Counties, and they will provide those data to Carol to be distributed to the group prior to the next meeting. Carol will ask the other Puget Sound districts if they have similar information.

Review of the Pesticide Monitoring Program

Jim Cowles (Dept. of Ag) reviewed the WA Dept of Agriculture/Ecology pesticide monitoring program. This program monitors surface waters utilized by salmon and located in high potential pesticide use areas. There are five sample sites in the agricultural areas of Skagit and two in the urban areas of King County. These are intensively sampled on a weekly basis from late March through mid-September. USGS collection methods are used, and the tests look for 160 different pesticides.

They rarely find exceedances, and when they do, they have a tiered approach to address the problem starting with education and outreach, followed by best management practices (BMP) requirements, ending with regulatory action. Jim displayed an example in the Marion Drain (Yakima) where exceedances were addressed through education and outreach with landowners. Follow-up monitoring then indicated that pesticide levels fell within limits.

Discussion of Agricultural Pesticide Monitoring

The group agreed that this program is comprehensive, well-designed, and addresses the agricultural pesticide monitoring needs in general. There are three areas of additional interest

that the group would like to pursue: 1) conduct additional monitoring during storm events; 2) conduct additional monitoring in another WRIA that has significant agricultural land; and 3) measure copper. However, the top priority is to maintain the existing baseline program. These additional needs would require separate funding and would not replace any components of the existing program.

Recommendations for Stormwater Pesticide Monitoring on Agricultural Lands

1) Broad scale monitoring such as status and trends is not the most cost-effective method to monitor pesticides in Puget Sound water bodies. We recommend a more targeted approach that combines source ID and program or watershed scale effectiveness monitoring. The Dept of Agriculture and Ecology's current program provides a valuable foundation for pesticide monitoring in the state and uses source ID and effectiveness monitoring. We recommend continued reliance and funding for this program to serve as the baseline for stormwater agricultural pesticide monitoring.

2) We recommend seeking funding to augment the current Ag/ECY pesticide monitoring program to monitor toxics inputs during peak flow events, including copper. This could start as a pilot program in the Skagit Basin. It would be a first priority to maintain the existing pesticide monitoring program. The addition of this action would not replace any aspect of the current pesticide monitoring program.

3) We recommend seeking funding to conduct pesticide monitoring in another agriculture-intensive basin using the same infrastructure in the existing program. This would help test the assumption that pesticide use in Skagit is representative of Puget Sound.

Fecal and Nutrient Monitoring Review

Tim Determan (Dept. of Health) summarized their monitoring program for fecal coliform in Puget Sound. The latest report can be found at:

http://www.doh.wa.gov/ehp/sf/Pubs/fecalreport.pdf

Over 1,000 sites are monitored in Puget Sound for classification uses. This does not include urban and industrial areas where shellfish harvest is not allowed. Systematic random sampling is employed, and federal standards and methodology are followed. Peak flow monitoring is done in selected areas such as the Samish, Nisqually, and Skokomish deltas and Henderson and Eld Inlets. When levels of concern are noted, the DOH interacts with the local entities to try to resolve problems before they worsen.

On a twelve year rotational basis, DOH conducts drain-to-drain surveys. Small scale agriculture plays an important role in this monitoring and more information is needed regarding their presence and impact. Many others in the group agreed that hobby farms, including stable (horse) operations are a big problem. We agreed to spend the January meeting discussing available information and developing recommendations for future studies.

The group agreed that ambient monitoring for fecal coliform is vital as a baseline and required by national shellfish standards, but we also need source ID and effectiveness monitoring to address the agricultural issues. We discussed the need to calculate loading from key tributaries.

This would be effective only in areas where the land use is predominantly agriculture. Mixed land use areas would not work. The same issues exist for nutrient monitoring, where nitrogen loading is the greatest concern. Also, the group stated to include a component of habitat monitoring, such as riparian habitat, in the effectiveness studies.

In addition to ambient, source ID, and effectiveness monitoring, the group agreed that a broader effectiveness study is also a priority to examine the effectiveness of BMPs across a watershed or sub-watershed. This need has been stated in the overall Puget Sound stormwater strategy already, but the group wanted to continue to elevate the issue here.

Recommendations for Fecal and Nutrient Monitoring

1) We recommend a focus on source ID and program or watershed scale effectiveness monitoring for nutrient and fecal coliform associated with agriculture, coupled with ambient stations located in key reaches based upon land use. Existing ambient monitoring programs, such as the one conducted by DOH should be maintained. When areas of concern arise, the results should trigger source ID and effectiveness monitoring along with assistance by local entities to address the issues. The working model would be:

    a. ambient or peak flow monitoring detects a problem,

    b. source ID is used to identify the source(s) of the problem,

    c. local entities, such as conservation districts, assist landowners in addressing the problem(s),

    d. effectiveness monitoring is conducted to assure that the problem has been resolved. Include riparian condition in the effectiveness monitoring.

    e. rely on a regulatory backstop in areas of unwilling or inadequate participation.

2) We recommend a watershed or sub-watershed based approach to monitor the effectiveness of agricultural BMPs across a broader scale.

3) We support the existing status and trends monitoring program that is proposed for the Puget Sound stormwater group as a means to determine broad scale status and trends for watershed health and salmon habitat.

Visitor

Andrew Brousseau attended. He is a graduate student at the UW with an interest in phosphorus fertilizer budgeting. He works for Dr. Sally Brown, who specializes in biosolids and might be a good future contact for that topic.

Next Steps

- A briefing of this meeting will occur at the full stormwater workgroup meeting on October 19. Guidance will be obtained to determine the best way to present our recommendations to the full group for a vote.
- Carol will ask the Puget Sound conservation districts for data regarding hobby farms.
- Rick and Claire will send hobby farm information to Carol for Skagit and King Counties. Post meeting note: Rick has sent the Skagit information. Thanks!
- Carol will distribute the hobby farm information to this group prior to the next meeting. We will focus on discussing hobby farms/small scale ag at that meeting.

Next Meeting

Our next ag/stormwater meeting will be January 25 from 12:30-3:30 in Everett.