Report to the Full Workgroup
from Wastewater Flow and Loadings Workgroup
July 22, 2005

Question 2 of workgroup concept: "Evaluate opportunities and potentials for phosphorus source control."

The workgroup considered phosphorus from residential laundry detergents, commercial laundry detergents, dish washing detergents, industrial solvents and cleaners.

Spokane County had a staff person visit several local supermarkets for a survey of laundry and dish washing products locally available. Based on the survey results the phosphorus ban for residential laundry detergents is effective. Dish washing detergents are not currently banned, though one local jurisdiction is considering one. The phosphorus content is variable by type: powders (% phosphate varies 0 to 7.4 %), tablets (% phosphate varies 0 to 8.7 %), gels (% phosphate varies 0 to 5 %), and gel packs (% phosphate 8.7 %). The no phosphate products are not as common and were not found in the common discount markets, such as WalMart. Currently they cost roughly 20% more. If the nil phosphate dish detergents were more common, they would presumably be more affordable. A informal web survey was discussed and it was noted that other communities have banned dish washing detergents, but the estimated benefits were variable and not quantifiable.

Commercial laundry detergents are not banned locally but are banned elsewhere. A check with West Coast Hospitality found that nil phosphate detergents are used because of phosphate bans in other locations. They buy and distribute from a centralized location and they are motivated to comply with the most stringent local requirement. It has not been checked if this rationale applies to other local commercial laundries and hotel/motel facilities.

Industrial solvent and cleaners are not regulated for phosphorus content though local pretreatment ordinances could be revised to do so in the future. The City of Spokane has been doing a industrial user survey that includes inquiries about phosphorus use for several years. The survey results have been summarized for the workgroups considerations. A numbers of commercial and industrial categories contribute phosphorus. The sample is not frequent enough and is variable enough that quantification of impact is not dependable. But sampling does show trends indicating that some sectors are reducing phosphorus inputs and that more can be accomplished through source control efforts.

A web survey does find case studies and recommendations on substitute products and conservation measures to reduce phosphorus loadings, BOD loadings, and flow. The case studies also commonly documented cost savings. The case studies infer that phosphorus limitations need not translate to an economic burden. Technical assistance

resources are available (Minnesota Technical Assistance Program – MnTAP http://mntap.umn.edu/ and USEPA)

Recommendations:

1) It seems appropriate to revise pretreatment requirements to encourage and/or require reductions in phosphorus loading at industrial and commercial sources.

2) Residential phosphorus reductions are more appropriately encouraged by consumer education efforts possibly with parallel discussions with regional retail outlet managers about availability of low and nil phosphate dish washing detergents.

Final Notes:

On Wednesday July 20, 2005, the Liberty Lake Water and Sewer District did pass a resolution requesting the residents of Liberty Lake to purchase nil phosphate dish washing detergents.

The Full Work Group requested the flow and loadings work group to continue efforts to quantify potential reductions in phosphorus loading to the wastewater system from dish washing detergents and various industrial sources.