Community Advisory Group – Reclaimed Water Infiltration Study

Meeting 3.2 – June 9, 2015 – Summary

Welcome and Initial Business
The meeting opened at 6:00 pm with Lisa Dennis-Perez, LOTT’s Public Communications Manager, as the meeting facilitator. Lisa began by asking for a volunteer from the Community Advisory Group to attend the July LOTT Board of Director’s meeting to provide a brief summary of the meeting. Scott Morgan agreed to attend. She then asked if any members of the public wished to make comments; none wished to do so.

Presentation: Phase 3 Implementation – Field Work and Preliminary Data
Jeff Hansen, lead consultant from HDR Engineering, provided an update on field work that has taken place since Phase 3 study implementation began, most of which is related to water quality characterization. He explained that characterization of wastewater and reclaimed water involves four rounds of sampling and water quality testing. Three sampling rounds have been completed, and preliminary data is available for two of those rounds (results are not back yet for the most recent sampling round). Jeff shared some highlights from the data, and how results compare to findings from other studies related to wastewater and reclaimed water quality. He explained that it is too early to draw any conclusions about the data, but he shared several different trends regarding treatment effectiveness, which varied depending on the chemical.

Maureen Canny:
Why are some chemicals detected during one phase of treatment, and not the next, but then they are detected at the end of the process? These samples are all taken on the same day but they do not represent the exact same drop of water as it moves from one stage of treatment to the next. Levels of these chemicals will fluctuate somewhat throughout the day. Some are very near their detection limits, meaning if they are slightly under the detection limit, the result will show as a “non-detect”, but if the level of chemical fluctuates up just slightly for the next sample, that sample will show the chemical as detected.

Jon Bennett:
Is there a control that represents water quality before infiltration started at Hawks Prairie Recharge Basins? Since the study began after the Hawks Prairie site had been in operation, we don’t have a true control that shows background water quality prior to the start of infiltration. We do have some samples from a point in time after the Hawks Prairie Recharge site had been off line for 15 months, but it doesn’t represent true background.

Scott Morgan:
What is between the Class A Reclaimed Water output at the Martin Way Reclaimed Water Plant and the input at the Hawks Prairie Recharge Basins? There is just pipe, about three and a half miles of pipe. It takes several hours for the water to travel from the plant to the recharge site, so some processes could be taking place during that travel time.

Holly Gadbaw:
Are there harmful effects from sucralose? Jeff indicated that at this point in the study, that question has not yet been addressed. It will be addressed later when we get into the risk assessment work. But in general, sucralose is looked at as an indicator of wastewater, not necessarily because of concern about its effects.
Karen Janowitz:
Will you be accounting for differences in rainfall, temperature, and other factors? Yes, we will be looking at the impact of those factors once we have all the data collected. That is why we are collecting samples at four different times of the year.

Holly Gadbaw:
Will the impact of rainwater be more of a factor at the Budd Inlet Treatment Plant than at the Martin Way Reclaimed Water Plant? It will likely be more of a factor, given the higher amount of combined stormwater that flows to the Budd Inlet plant.

Dick Wallace:
Were there differences in the raw wastewater as a result of the different contributions from the different plants? I’m not prepared to speak to that in detail tonight. We have noticed some difference, but it doesn’t appear significant. There are not great differences in industrial influences in the wastewater between the two plants.

Jeff then went on to explain the effort to characterize groundwater in and around the Hawks Prairie Recharge Basins. The approach involved identifying groundwater wells within two miles of the site. Well owners were contacted to ask permission to sample their wells. Sampling has taken place at 28 wells to date, at a variety of depths and in several aquifers, but data hasn’t yet been received from the laboratory. This type of sampling will also be conducted around a second site in Tumwater later this summer.

Dick Wallace:
Did you get a good distribution of sampling points in the area? It is not as good as we had hoped. There are not many wells immediately to the south of the site, and not many to the east either. However, we expect the groundwater moves predominantly to the west. There are a limited number of wells within a mile of the site to the west, and there are quite a few in the range of 1.5 to 2 miles to the west. The distribution of wells is not completely uniform, but we feel we have good coverage in the shallow aquifer.

Kim Hawkins, field sampling staff for HDR, explained the process for sampling groundwater and showed the group some of the equipment used for sampling.

Lyle Fogg:
How do you measure the depth to groundwater? We use the distance from the top of the well casing to groundwater, and account for the distance from the base of the measuring equipment to the top of the casement.

Janine Unsoeld:
How long does it take to complete the full sampling visit at each well? It takes about one hour for most visits; some take one and a half hours.

Did you contact homeowners by mail or other? We sent a letter by mail to ask for volunteers.

What were some of the reasons people did not want to participate? It is not clear why folks declined. Many just did not respond. Some people did share that they were concerned that use of their well might be at risk if we found contamination.
Bill Gill:
Is it an issue that FedEx won’t sign the chain of custody? *Kim indicated that it is not an issue. She includes the form in the cooler and seals the cooler, so the lab will know if the cooler seal has been broken. The lab is informed that the sample is on its way to them, so they will know if the cooler doesn’t arrive in time, and then it can be tracked down. We had one instance where the cooler arrived one day late. The samples were just past the 48 hour threshold, but they were still within holding temperature standards, so the lab was confident the samples were still valid. The data from that sample was flagged and the circumstances noted.*

Ruth Shearer:
What lab are you using to test the water? *The lab we use is Eurofins in Monrovia, California, which specializes in testing for residual chemicals.*

Jeff then briefly reviewed the sampling plan for characterizing water quality in surface waters, specifically in the Deschutes River, Woodland Creek, and a few tributaries. This work includes four sampling events spread out over several seasons, to account for variability in flows and seasonal inputs to surface water.

Dick Wallace:
Are you going to be sampling above and below the trout ponds? Isn’t it possible the trout farm could be introducing chemicals to the flow? *The sampling point at Beatty Springs is upstream from the trout farm to avoid that influence. The main stem sampling point is downstream from the trout farm, so those influences may show up, but that is okay since we are trying to characterize the existing water quality.*

Jon Bennett:
There are a lot of influences to Eagle Creek, including a large development and road runoff. *Yes, there are a lot of influences, and it would be great to sample up and downstream from these influences, but we are limited by budget.*

Jeff then reminded the group that the tracer study is the next piece of field work. Planning for this work is underway. The tracer field work will be conducted next year.

Dick Wallace:
Do you plan to put the tracers in next summer and track them for a year? *It is likely they would not be tracked for a full year. The standard is generally to track tracers for a maximum of six months.*

Maureen Canny:
Do you add the tracer continuously for six months? *Tracer would be added for a two week period and then tracked for six months.*

**Updates: Quality Assurance for Study Implementation and Potential Second Study Site**

Ben McConkey, LOTT Project Manager for the study, updated the advisory group on membership and activities of both the study Science Task Force and the Peer Review Panel. Both groups are involved in reviewing and advising the scientific work of the study. He then explained that two sites in Tumwater were assessed as possible future recharge sites, with the potential to also serve as a second site for study activities. The original site in Tumwater was found to have less infiltration capacity than anticipated, but an alternative site was found to be promising. It was purchased by LOTT recently, and will serve as the second site for study activities, beginning with groundwater and surface water sampling to build on the study’s characterization of background water quality conditions.

7-31-15
Holly Gadbaw and Dick Wallace:
Is there concern about the subdivision to the west of the site, which is lower in elevation than the site, or concern about stability in the steep bank toward the river? There is also a habitat enhancement project planned in that area. *Those things need to be considered when a more detailed evaluation of the site is completed. Ultimately, LOTT will need to have modeling done to determine how water travels below ground and where it might surface. The neighborhood next door would not likely be affected by recharge at this site, as the subdivision is well below the site and the homes are supplied by city water, not a shallow well.*

Karen Janowitz:
Isn’t it a concern that the water would enter surface water that close to the river? *Again, that needs to be considered when a more detailed evaluation of the site is completed. Future modeling work will provide information about how long it would take for the recharge water to travel to the river and that will help determine what level of treatment would have taken place by the time the water reaches the river.*

Holly Gadbaw:
Does LOTT own the site? *Yes, LOTT purchased the site this month.*

Does the TMDL have the potential to require LOTT to stop discharging to Budd Inlet in the summer? *Yes, that is a possibility, but the Budd Inlet/Capitol Lake portion of the Deschutes TMDL has been delayed. We are in limbo as we wait to learn what will be required, but we do expect that LOTT will be asked to reduce nitrogen loading to Budd Inlet further or to do some other kind of mitigation.*

Could the Martin Way Reclaimed Water Plant treat some of the water from the Budd Inlet Plant if needed? *The Martin Way plant treats water from the Lacey area. We are not set up to send wastewater from the Budd Inlet Plant back uphill for treatment at the Martin Way plant.*

Maureen Canny:
If Henderson does not work out, would Hawks Prairie be required to accept more water? *No, that is not likely, as treatment at the Martin Way plant is limited by the amount of flow that is generated in Lacey. We cannot increase reclaimed water production at the Martin Way plant until more flow is available in the Lacey area. It would likely be cost-prohibitive to send flow from the Budd Inlet plant uphill back to the Martin Way plant.*

**Updates: Policy and State of the Science**
Karla Fowler, LOTT’s Environmental Policy Director, explained the status of the state’s work to establish a new Reclaimed Water Rule and related guidance manual. There are very limited references to the topic of residual chemicals in both draft documents.

Dick Wallace:
What does Ecology mean when they say that compounds of emerging concern require more study? *Does that mean they don’t see a need for further regulation? They haven’t determined yet if further regulation is needed. They are leaving the door open to potentially require monitoring of these substances, if further study identifies that need.*

Jeff Hansen provided a brief update on the state of the science. There is a lot of attention being given to direct potable reuse in other parts of the country and also a lot of research evaluating different combinations of advanced treatment processes as alternatives to reverse osmosis.

Holly Gadbaw:
*Are*n’t we doing some of these treatment processes already, like sand filtration and soil aquifer treatment? *Yes, LOTT does use some of those processes already.*

7-31-15
Update: Public Involvement Activities
Lisa Dennis-Perez, LOTT Public Communications Manager, shared plans for several new exhibits in the WET Science Center that touch on topics related to the Reclaimed Water Infiltration Study. One of the new exhibits focuses entirely on the study. Another illustrates the process of infiltration with reclaimed water. A third focuses on source control messages, allowing visitors to scan various personal care and household products, learn why it is not a good idea to flush those products down the drain, and see how to dispose of products properly. She also shared recent efforts related to source control, including free medicine take-back kits that are provided to WET Science Center visitors free of charge and a new smart shopping pocket guide produced in collaboration with Thurston County. Recent outreach has also included presentations about the study to many community and professional groups and a new “look” for study updates so they will be easily recognizable for those interested in following news about the study.

Karen Janowitz:
When will the new exhibits be installed? We hope to have them installed this December.

Can we have time at a future meeting to play with the new exhibits? Yes, absolutely.

Tina Peterson:
How many people go through your education facility each year? We have about 17,000 visitors a year.

Discussion: Proposed Community Advisory Group Schedule
Lisa then reviewed a revised schedule with the Community Advisory Group. She asked the group if they would be interested in meeting again in early December to review more data from the field work. They indicated that they would like to meet in December.

Karen Janowitz:
What data will be available for review in December? We should be able, by December, to tell the full story about characterization for wastewater and reclaimed water. Data will likely be available regarding groundwater quality from the Hawks Prairie area and possibly also from the Henderson area site in Tumwater. It is possible that surface water background data will also be available by then. We will not yet have any data at that time from the tracer test.

Lisa explained that the new exhibits would not be in place by early December, so they would not be available to explore at the next meeting. However, by December there will be a new video recording system installed in the Board Room that will make it possible to video record meetings. She then asked the group if they wish to video record future meetings of the advisory group, and the group indicated that they agree to have their meetings recorded. (Preferences were expressed after the meeting that the meeting videos not be streamed live, but rather recorded and posted on LOTT’s website after the fact.)

The meeting adjourned at 9:00 pm.