

Yacolt Conference Call To Discuss Infiltration Site Assessment Work To Date
June 16, 2011

Participants: Pete Roberts, Chuck McDonald, Tim Caire, Stuart Childs (for some of discussion), John Peterson, Doug Quinn, Steve Praither, Dave Knight, John Stormon, Cathi Read

Chuck and Pete reviewed the information on the agenda that was previously sent by Chuck (see back of this page).

Following questions from David and John about the information presented on the agenda, Chuck said he would send them the following additional information within a week:

- A map of the local area showing location of:
 - the two infiltration test holes;
 - proposed trench;
 - existing MW4;
 - proposed new monitoring wells; and
 - any other information that might be helpful to envisioning the area.
- A memo that includes:
 - more explanation of how the flow rate and rate/area numbers were derived (Number 3 on agenda)
 - information on MW4 (Steve has drillers' log)
 - A 'factor of safety' discussion regarding infiltration assumptions and planning for future design – Cathi not sure if this will be in the memo or in the final Facilities Plan? *(Note: John sent relevant reference material to Chuck soon after the conference call)*

David was not able to say when Ecology would respond, but as soon as possible.

Some additional comments from David and John:

- Overall, the results from the infiltration testing look promising. David and John don't see any reason not to proceed with planning for this area.
- Ecology wants to see proposed location of monitoring wells before they are drilled; don't want to see money spent unnecessarily on improperly-sited monitoring wells
- Concerned that MW4 might be too far from proposed trench site to be used in the long term as a monitoring well
- Suggest having 'good folks' on site during drilling to observe (as much as possible) groundwater flow during drilling; if it is different than anticipated, could alter sites of remaining monitoring wells to be drilled
- There is usually a slow decrease in infiltration once a trench begins to be used
- Involve hydrogeology experts at Kennedy Jenks and ask them to verify that the proposed strategy and locations of trench and monitoring wells will, in their opinion, work for
 - Measuring flow rate with accuracy and precision
 - Sampling groundwater

Our next conference call will be on **Thursday, August 18 at 10:00 a.m.** to discuss collection system layout and a monitoring update. Cathi will send everyone call-in instructions soon.

AGENDA
Yacolt Infiltration discussion
Thursday, June 16, 2011
10:00 am

1. Infiltration site review – Hoag Street
 - a. General location - Hoag Street, south of Verizon substation
 - b. Soil type – Loamy surface soil with gravels and cobbles at 22”-40” below surface, depending on location
 - c. Soil designation – Yacolt Loam
2. Infiltration plan – performed excavation of two holes, 4’ X 4’ X 8’ deep.
 - a. Provided water flow at a consistent rate using a 2” water line maintaining a constant head-rate controlled by a float valve.
 - b. Tested for 18 hours +/-.
3. Infiltration results - 7’-8’ deep reaching loamy – sandy skeletal soils with gravels, cobbles and boulders.

Location	Flow rate	Rate/Area
a. Site #1	1.4 gpm	126 gpd/1563 sf
b. Site #2	3.2 gpm	307 gpd/641 sf
4. Result assessment – Ground will take flow
 - a. 20 year projected flow rate = 198,000 gpd
 - b. Trench requirement = 391 li. Ft. (max)
 - c. Trench preliminary design = 800 li. Ft. for dose and rest cycles
 - d. Trench depth – 7’-8’ bgs.
5. Monitoring well locations
 - a. Install well immediately north of proposed infiltration site in an upgradient position
 - b. Install well at south edge of property (20 acre site – 680’ south) in a down gradient position
 - c. Use MW 4 located - west of site for 3rd well (2,200’ west) for third well to provide triangulation and determine flow direction and gradient.
6. Next steps – obtaining agreement in principle with property owner
 - a. obtaining well drilling quotes
 - b. Contract for driller
 - c. Begin monitoring as described in GSP
7. Other
8. Questions