

EXHIBIT "K"

WATER QUANTITY MONITORING

Post-development measurement of the site weather, stream discharge and groundwater levels aid in verifying conclusions derived from MODFLOW simulation modelling of the shallow aquifer. Post development monitoring of recharge facility performance will verify facility performance. Monitoring will be performed by the Cascadia project engineer and if requested may be witnessed by Pierce County.

The monitoring of precipitation, stream discharge and groundwater levels will be recorded by a continuous datalogger. The datalogger will have a non-resetting circular memory. Downloading of the stream discharge and water levels will be done at least monthly to reduce the potential for data loss via equipment failure. The precipitation recorder will be calibrated to 0.01 inches per tip. Output will be in an ASCII format file with a date stamp and no more than one 15 minute value per line.

(a) A discharge gage will be re-installed in Canyonfalls Creek at the Tacoma Public utilities District bridge approximately 100 meters upstream of the Troutlodge Fish Egg Hatchery. Approximately 21 months of continuous baseline discharge were measured from November 1995 to July 1997. The stage / discharge rating curve established during baseline stream discharge collection will be re-established during post-development monitoring. Monitoring will begin with the start of development in Phase I and continue until two years after full buildout of Phase I.

(b) Borings to be located near infiltration facilities R1, R2, and R3 will be converted to water level measurement wells with continuous-recording instruments installed. Monitoring shall begin with the start of development in each catchment and continue for one year after full development of each catchment.

(c) Continuous water level measurements will be taken at existing wells TW-2 and TW-3. Monitoring will begin with the start of development in Phase I and continue until two years after full buildout of Phase I.

(d) A recording weather station will be installed on site to document rainfall, evaporation, and temperature. The County also maintains a climate gage located approximately 5 miles southwest of the project. Monitoring will begin with the start of development in Phase I and continue until two years after full buildout of Phase I.

(e) All infiltration facilities will be monitored monthly with a stage crest gage to determine whether they are adequately sized, designed and maintained to accommodate the design storm. Monitoring shall verify that drawdown rates (infiltration) are faster than or equal to the design infiltration rate. Monitoring shall begin with the start of

development in each catchment and continue for one year after full development of each catchment.

(f) Wetland stage/crest measurements will be collected at least monthly at Wetland 4 and Orting Lake, except during Spring (March through May) when more frequent measurements may be collected for comparison with baseline data. Monitoring will begin with the start of development in the catchment and continue through 75% buildout of the tributary area.

(g) Reporting: yearly status reports will provide a record of stage and discharge, rating curves, site observations and infiltration / detention facility performance. Any data deletions or record discrepancies will be reported.