

Criteria:

1. All UIC wells will be required to go through an established pre-treatment process, this may include but is not limited to oil water separator, filtrations to eliminate contaminants as determined by testing. This includes those wells that are to be receiving run off from the roofs of the buildings.
2. Monitoring Wells – three down gradient, one up gradient. Location of monitoring wells will be as close as possible but no more than 600 feet of operating UIC well cluster.
3. Monitoring stations will be placed at each **inflow** location where water is entering the UIC well from the surface. Detailed locations attached.
 - a) Inflow from the bio swale, the Oil/Water separator
 - b) Existing OW-1 to monitor southern boundary cluster
 - c) Existing OW-2 to Monitor south end of parking lot
 - d) Existing OW-3
 - e) Propose OW-4 Cluster in SW Parking lot area
 - f) Proposed OW-5 to be placed up-gradient of UIC sites. Preferably SE corner of property.
4. Prior to approval of the UIC wells, all surface water will be channeled away from the wells at all times. The wells are to be fitted with safety valves that insure untested water cannot enter the well until such time that the testing process is complete.
5. Baseline monitoring – Prior to UIC Wells being brought online
 - a) Water Level Monitoring – Water levels will be measured in all wells during the drilling and testing of each UIC well. Well level reports will be submitted to Olympic View Water and Sewer District, Department of Health, Department of Ecology. This will continue until all wells have been drilled and tested. Reports will not be required during any time where wells are secured and are not receiving any outside water.
 - b) Sampling – One initial baseline sampling of each upgradient and downgradient well. Sampling to include
 1. Field parameters (pH, temperature, specific conductance, dissolved oxygen, oxidation reduction potential and turbidity)
 2. Primary and secondary drinking water inorganic chemical characteristics listed in Tables 5 and 6 of WAC 246-290-310
 3. Diesel-, oil-, and gasoline-range organics
 4. BTEX (benzene, toluene, ethylbenzene and xylenes)
 5. PAHs (Polycyclic aromatic hydrocarbons) ;
 6. Pesticides and herbicides
 7. Phosphorous
 8. Coliform
 9. Other analytes, if any required by Department of Ecology or Department of Health
 - c) Perform five (5) additional samplings of the upgradient and downgradient Project monitoring wells. Samplings to include list above. Baseline samplings events will be spread out evenly over the year prior to the UIC wells being brought online, on approximately eight-week intervals, with at

- least two (2) being taken during “flush events”, with the final baseline sampling to culminate in approximately October 2018.
1. Any analyte detected during any previous monitoring event
 2. Field parameters (pH, temperature, specific conductance, dissolved oxygen and turbidity)
 3. Selected petroleum hydrocarbon-related constituents (diesel-, oil-, and gasoline-range organics and benzene, toluene, ethylbenzene and xylenes)
 4. Polycyclic aromatic hydrocarbons;
 5. Pesticides and herbicides
 6. Other analytes, if any required by Department of Ecology or Department of Health
- d) Perform eight (8) samplings of stormwater prior to introduction into the UIC wells. Samples to be drawn at the source of storm water during rain event. All parties will meet onsite at a time stormwater is present to agree upon the sampling locations. At least four during “flush event” throughout the construction period.
1. Field parameters (pH, temperature, specific conductance, dissolved oxygen and turbidity)
 2. Primary and secondary drinking water inorganic chemical characteristics listed in Tables 5 and 6 of WAC 246-290-310
 3. Selected petroleum hydrocarbon-related constituents (diesel-, oil-, and gasoline-range organics and benzene, toluene, ethylbenzene and xylenes)
 4. Polycyclic aromatic hydrocarbons;
 5. Pesticides and herbicides
 6. Phosphorus
 7. Coliform
 8. Other analytes, if any required by Department of Ecology or Department of Health
 9. Routine sample, including total coliform, e-coli (Raw Water Test at DC)
6. Ongoing monitoring Year 1 & 2 - After UIC wells are online and operational. Testing and reporting will be quarterly with one quarter each year during the wet season and preferably following a “flush event”.
- a) Water Level Monitoring – Water levels will be measured in all monitoring wells, upgradient and downgradient. Use of pressure transducers to continue to monitor water levels at all up-gradient and down-gradient wells shall continue until such time that Olympic View Water and Sewer District, the Department of Health and the Department of Ecology agree to cease monitoring. In no event shall water level monitoring be stopped between the first drilling and the end of the second year of approved operation.
 - b) Sampling – Quarterly sampling of all monitoring sites and inflow sites. One quarter sampling will include but not be limited to the following.
 1. Field parameters (pH, temperature, specific conductance, dissolved oxygen, oxidation reduction potential and turbidity)
 2. Primary and secondary drinking water inorganic chemical characteristics listed in Tables 5 and 6 of WAC 246-290-310

3. Diesel-, oil-, and gasoline-range organics
4. BTEX (benzene, toluene, ethylbenzene and xylenes)
5. PAHs (Polycyclic aromatic hydrocarbons)
6. Pesticides and herbicides
7. Phosphorous
8. Coliform
9. Other analytes, if any required by Department of Ecology or Department of Health
10. Any other analyte noted in a prior sample.

Remaining three (3) quarters will include, but are not limited, to the following sampling,

1. Any analyte detected during any previous monitoring event
2. Field parameters (pH, temperature, specific conductance, dissolved oxygen and turbidity)
3. Selected petroleum hydrocarbon-related constituents (diesel-, oil-, and gasoline-range organics and benzene, toluene, ethylbenzene and xylenes)
4. Polycyclic aromatic hydrocarbons;
5. Pesticides and herbicides
6. Other analytes, if any required by Department of Ecology or Department of Health

7. On-going monitoring, Years 3 – 8, water quality monitoring shall include semi-annual testing and monitoring.

a) Semi-annual during wet season, for a minimum of five (5) years, water quality monitoring should include the following:

1. Any analyte detected during any previous monitoring event
2. Field parameters (pH, temperature, specific conductance, dissolved oxygen and turbidity)
3. Select primary and secondary drinking water , inorganic chemical characteristics listed in Table 5 of WAC 246-290-310 (attached). This includes cadmium, chromium, copper, lead, mercury, Nitrate (as N), Nitrite (as N), silver and zinc
4. Gasoline-, diesel- and oil-range organics
5. BTX (benzene, toluene, ethylbenzene, xylenes)
6. PAHs (polycyclic aromatic hydrocarbons)
7. Pesticides and herbicides,
8. Phosphorous
9. Coliform
10. Other analytes as required by Department of Ecology (Ecology) or DOH

b) During the dry-season, semiannual monitoring event for a minimum of the next five (5) years, water quality monitoring should be conducted for the following:

1. Any analyte detected during any previous monitoring event
2. Field parameters (pH, temperature, specific conductance, dissolved oxygen and turbidity)
3. Gasoline-, diesel- and oil-range organics

4. Phosphorous
 5. Coliform
 6. Other analytes as required by Department of Ecology (Ecology) or DOH
8. Subsequent annual water quality monitoring requirements will need to be assessed following the completion of the monitoring described above. At a minimum the following will be required:
- a) Any analyte detected during any previous monitoring event
 - b) Field parameters (pH, temperature, specific conductance, dissolved oxygen and turbidity)
 - c) Gasoline-, diesel- and oil-range organics
 - d) Phosphorous
 - e) Coliform
 - f) Other analytes as required by Department of Ecology (Ecology) or DOH
9. Reporting – Prior to UIC Wells being brought online
- a) All reports will be submitted directly to the Olympic View Water and Sewer District, Department of Health Regional Engineer, Department of the Water and the Department of Ecology within two weeks of sampling.
 - b) A copy of the UIC operation and maintenance procedures and guidelines to be followed by the school will be held by Olympic View Water and Sewer District. Any changes to or updates of the procedures or guidelines will be forwarded to the water district upon adoption by ESD. Completed maintenance documentation will be submitted annually to the water district.
 - c) Failure to perform all maintenance in a timely manner, within 30 days of the proposed schedule, shall require that the safety valves be closed until such time that the maintenance has been performed and proof of performance is provided to OVWSD
10. Costs – All costs of testing shall be borne by the School District. The school district will select a certified lab approved by the District. The lab will bill the school district directly.
11. Sampling – OVWSD or its agent will be responsible for obtaining required samples and transporting them to the agreed upon laboratory for testing. The cost of obtaining the sample and transportation to the lab will be based on current Olympic View Water and Sewer District miscellaneous fees, as adopted by the Board of Commissioners. Bills will be sent to: ??, due within 30 days. Failure to pay the billings within 30 days will result in a penalty of 5%/month for each month past 30 days.
12. If a spill or a release is known to occur at the site, OVWSD will be notified immediately and the safety valves to the all UIC wells will be closed. All storm water will be captured and will not be released to the wells. Samples of the spill will be taken and sent to the lab for analysis. Reopening of the valves to allow storm water to enter the UIC wells will not occur until the samples meet standards set within this contract. The need for additional samples and the duration of the increased sampling will be established by OVWSD.

13. In the event that samples do not meet established standards, ESD will immediately establish a fund for future treatment plant upgrades and/or additional costs related to the loss of Deer Creek as a potable water source in the event that the contamination reaches the District water source. This includes, but is not limited to actual water purchased to replace water historically produced by Deer Creek, and RCE (Regional Capacity Equivalents) charged by the City of Seattle, due to the loss of Deer Creek water production. This fund shall be set at an amount equivalent to the projected cost of the change in treatment that would be required by Deer Creek if the contaminated water reached the treatment plant necessitates a change in treatment process by the Department of Health and Water Quality Engineers.

If the sample data from the upgradient well fails to meet established standards, ESD will continue to provide monitoring as detailed. Any increase in contaminant levels at the lower monitoring wells will require that ESD establish a treatment plant fund, proportional to the change in contaminant levels.