

Appendix A

2008 Summary of Odor Complaints

The Wastewater Treatment Division (WTD) received and investigated 46 odor complaints in 2008. Of these complaints, 36 were determined to be attributable to WTD wastewater facilities.

Detailed information for each complaint is included in the table below. The table lists the complaints in four groups:

- **West Point Treatment Plant Area.** This area is adjacent to the West Point plant. There were three complaints in 2008; all were attributed to WTD facilities.
- **West Service Offsite Area.** This area encompasses the pump stations, regulator stations, and pipes that deliver wastewater to the West Point plant. These facilities are generally located north and east of the plant. The area received 19 complaints in 2008; 16 were attributed to WTD facilities.
- **South Treatment Plant Area.** This area is adjacent to South plant. There were six complaints in 2008; four were attributed to WTD facilities.
- **South/East Service Offsite Area.** This area encompasses the pump stations, regulator stations, and pipes that deliver wastewater to South plant. These facilities are generally located south and east of the plant. The area received 18 complaints in 2008; 13 were attributed to WTD facilities.

Location	Date	Complaint	Investigation Findings/Resolution
West Point Treatment Plant Area			
West Point Treatment Plant	5/27/08	Complainant sensed strong odors while riding down the hill near the plant and at his residence during the early morning hours.	Upon investigation, odors were sensed at plant entrance. All odor control units were in operation. No further action was taken. Complaint was designated as King County.
West Point Treatment Plant	7/16/08	Complainant (same as 5/27/08) sensed strong sewage odors while riding his bicycle down the hill towards the West Point plant.	On investigation, odors were noticed around the digester area and the northwest preaeration tank. Cleaning of the preaeration tank was completed and the digester covers were hosed down on 7/17/08.
West Point Treatment Plant	8/6/08	Complainant (same as 5/27/08 & 7/16/08) sensed ammonia odors from the West Point plant while riding his bicycle down the hill to the entrance.	Odors were not detected during investigation; however, several crew members detected odors in that area 45 minutes earlier. A possible source of odor could have been when operators were filling the northwest preaeration tank in the late afternoon. No further action was taken at this time.

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West Service Offsite Area			
Boeing Creek Park odor control unit	3/3/08	Complainant called the odor hotline to report strong odors near the Boeing Creek odor control stack that is designed as a tree snag.	During investigation, the drain valve for the odor control unit fan was found to be open. The drain valve was shut.
950 NW Carkeek Park Drive	3/7/08	Complainant sensed sewage odors near Piper Creek and observed greywater in the creek while hiking in Carkeek. Complaint was reported in a call from Seattle Public Utilities.	No odors or greywater were observed during the investigation. Complaint was designated as non-county.
10702 35th Avenue NE	3/12/08	Complainant sensed sewage odors but was not sure of the source.	The nearest facility is the Thornton Creek Siphon Inlet. During the investigation, slight sewage odors were detected coming from the hatches that lead to an aboveground vault. The hatches were resealed. The complainant was notified.
2530 Perkins Lane NE	5/23/08	Complaint was received from City of Lake Forest Park a few days after occurrence. Complainant contacted city about sensing strong rotten egg/methane odors on Perkins Lane, while walking her dog.	No odors were detected at the McAleer odor control unit during investigation. No further action was taken.
3637 Thorndyke Avenue	5/27/08	Complainant sensed strong odors near the Interbay Pump Station.	Upon investigation, it was found that parts of the ducting at the Wheeler Street odor control unit had disintegrated. The odor control unit at Wheeler Street was shut down on 5/30 for duct repair and the complainant was notified.
3213 Harbor Avenue	6/19/08	Initial complaint was received via e-mail from the Puget Sound Clean Air Agency (PSCAA). Complainant sensed sewage/methane odors inside his residence six times in the past month during the evening and early morning hours. The complainant lives next to the West Seattle Pump Station.	No odors were detected at the station at the time of investigation. During the investigation, the carbon was sampled and the condition of the carbon bed was good. An Odalog H ₂ S meter was installed at the exhaust vent to collect information from June 27 through July 24. Readings were 0 ppm (parts per million) for most of the time period; there were three days where there was a reading of 0.1 ppm (June 29, 30, and July 9.) The readings indicate these spikes lasted less than five minutes each.
Colman Park area (1800 Lake Washington Boulevard), Seattle	6/19/08	Complainant sensed strong rotten egg odors near Colman Park.	No odors were sensed at the nearest King County manhole at the time of investigation. Staff spoke with several groups of people who were out walking in the area and nobody had noticed any foul odors. No further action was taken at this time. The complaint was designated as non-county.

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60 South Spokane Street	6/26/08	Complainant sensed moderate rotten egg odors inside and outside complaint area.	No odors were sensed at the West Seattle Force Main Drop Structure during the investigation; however, the Bioxide chemical feed system at the West Seattle Pump Station and the carbon in the structure's odor control unit were found to be spent at the same time and may have allowed odors to escape. The carbon was changed out and staff worked with the vendor to ensure this situation does not reoccur.
3225 East Marginal Way/Hanford Regulator Station	7/8/08	Worker complained of foul odors over the past week near the regulator station.	On investigation, no odors were detected. The air-handling unit in the station was checked; it was found that the exhaust fan airflow was too high and may have been the cause of the odors the complainant sensed. The variable pitch sheaves on the gate room exhaust fan were adjusted.
Manholes near Highway 202 and 175th Street, Woodinville	7/15/08	Complainant sensed very strong odors every day for the past three weeks from manhole covers near the Woodinville Pump Station.	A medium sewer gas odor was sensed at the time of investigation. The manholes were sealed and the South plant was contacted to verify chemical dosing at the Hollywood Pump Station. The Bioxide dosage was increased on 7/18/08.
Manholes near Highway 202 and 175th Street, Woodinville	7/16/08	Complainant (same as 7/15/08) complaint sensed strong odors; this time complainant was not sure where the odor was coming from.	The manhole covers were sealed on 7/15/08 and the Bioxide dosage was increased at the Hollywood Pump Station on 7/18/08.
Perkins Lane/McAleer Odor Control Unit	8/2/08	Complainant sensed strong odors from the odor control unit on Perkins Lane in Lake Forest Park.	On investigation, odors were coming from the unit's exhaust. A work order was initiated to take a carbon sample from the unit to see if a change-out is needed. The pH of the carbon showed there was sufficient adsorption capacity. A worn boot was discovered on the ductwork and a temporary patch was installed. The worn boot was replaced with a new one.
19351 23rd Avenue NW - Manholes	9/10/08	Complainant sensed very strong rotten egg odors from manholes in the street in his neighborhood.	On investigation, it was discovered that Bioxide had run out at the Hidden Lake Pump Station. The chemical tank was refilled and the manholes near the complainant's home were sealed.
2303 NW 193rd Place	9/11/08	Initial complaint received via Ronald Wastewater District. Complainant sensed strong rotten egg odors from a manhole near the corner of her residence for several days.	Similar to the complaint on 9/10/08, Bioxide had run out at the Hidden Lake Pump Station. The chemical tank was refilled and the manholes were sealed near the complainant's home.

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35th Avenue West and Government Way	9/17/08	Complainant sensed sewer odors each morning (starting 9/1/08) from a ravine behind her apartment building.	<p>A slight sulfide odor was sensed upon investigation. A sewer main, which belongs to Seattle Public Utilities (SPU) is situated in the Kiwanis Ravine and the operator noticed one of the two PVC (polyvinyl chloride) lines tapping into the main was pulling apart with a 4-6 inches opening. The other PVC line was also showing signs of distress.</p> <p>The operator met with a SPU representative, who in turn issued a work order to repair the pipes. Designated as non-county complaint.</p>
Manholes near Wilmot Park, Woodinville	9/26/08	Complainant sensed strong "nauseating methane" odors from manholes along the Sammamish River Trail near Wilmot Park and where the trail goes under the highway.	<p>On investigation, no odors were sensed. The Hollywood Pump Station had been operating off and on a few weeks prior to the complaint (due to construction coordination) and the initial pumping may have contributed to odors coming out of the manholes downstream.</p> <p>The Hollywood Pump Station was checked to ensure that when the station is operating that the chemical pump is injecting Bioxide. The manholes near Wilmot Park and further downstream were caulked and sealed.</p>
4039-B 7th Avenue NE (Lake City Tunnel Regulator)	11/2/08	Complainant sensed odors off and on for the past week.	<p>On investigation, strong odors were sensed from the temporary mobile odor control unit discharge. The permanent odor control unit at the regulator station had been out of service for construction upgrades.</p> <p>A work order was generated and completed to add carbon to the mobile odor control unit.</p>
19602 Richmond Beach Drive NE	11/5/08	Complainant sensed intermittent odors during the past 7-10 days and thought they may be coming from a manhole located on 196th and Richmond Beach Drive.	<p>On investigation, moderate-to-strong sewage odors were sensed from nearby manholes, which were pressurized. The Bioxide system was off for the season at Hidden Lake Pump Station.</p> <p>Four manholes were sealed in the area. The complainant was notified of the findings.</p>
142 NW Canal Street Fremont Siphon Forebay	12/1/08	Complainant sensed a strong sewage odor in his house, which is directly connected to the county main.	<p>There have been past issues with pressurization in this line. The county will attempt to perform a smoke test to identify any leaks from the sewer into the house. Staff also suggested that the homeowner check his traps and roof vents.</p>

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South Treatment Plant Area			
South Treatment Plant (304 NW 2nd Street, Renton)	1/15/08	Complainant thought the odors may be coming from the Cedar Hills Landfill.	Complainant lives quite a distance away from the South Treatment Plant. Investigated area near residence and could not detect any sewage type odors, but did sense odors relating to "rotten" garbage. Staff informed complainant about the results of the investigation and suggested they contact PSCAA for further odor complaints. Designated as a non-county complaint
South Treatment Plant (13600 block of 53rd Avenue, Tukwila)	6/25/08	Odor complaint was recieved via e-mail from PSCAA. Complainant sensed rendering plant and ammonia-like odors on 6/19-6/20.	South plant is quite a distance from area of the complaint and was not the source of odors. Staff also checked the nearest King County facility, the Interurban Pump Station. No odors were detected around the pump station and H ₂ S levels coming out of the odor control unit exhaust was 15 parts per billion (ppb), which is considered low. Staff informed PSCAA of the findings. Complaint was designated as non-county.
South Treatment Plant (821 Powell Street)	7/17/08	Complainant sensed strong odors inside her building. There were no odors sensed outside of the building.	All odor control units at South plant were operating normally. There was a strong sludge odor emanating from secondary sedimentation tank 7 because of mechanical failure; it is possible the odors drifted into the complainant's heating, ventilation, and air conditioning system. The sheer pin for the sludge collector was replaced and the tank was drained and hosed to remove the odors.
South Treatment Plant	7/29/08	Complaint(s) were received via the City of Renton from the areas of Oaksdale Avenue (Extended Stay Hotel) and 555 Monster Road SW.	At the time of the investigation, all odor control units were in operation. The digester was opened for cleaning. Some rotted compost odor was sensed across the street from the plant a few days after the complaint was phoned in. Prechlorination of influent sewage was started. Plant and Assistant Plant Manager visited both businesses and informed personnel to call plant when odors are sensed.
South Treatment Plant	8/4/08	Complainant sensed very strong "rotten egg" odors at her place of employment (Extended Stay Hotel) located just east of the plant.	At the time of the complaint, a secondary tank that had been taken out of service had problems with a plugged drain valve and was not hosed in a timely manner. The tank was drained and hosed. The complainant was informed of the tank condition and corrective actions taken.

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South Treatment Plant	8/15/08	Complainant sensed strong odors while driving near the treatment plant two weeks prior to contacting South plant.	<p>No complaint response conducted due to the odor being sensed two weeks ago. The supervisor's log indicated no unusual plant activity occurring that day.</p> <p>The odor control unit checklists were checked and all units were operational and within pH and Oxidation Reduction Potential (ORP) parameter ranges. Prechlorination of influent sewage is continuing. No further action was taken at this time.</p>
South/East Service Offsite Area			
Heathfield Pump Station	2/11/08	Complainant sensed odors coming from the roll up doors of the pump station.	No odors were detected around the pump station at the time of investigation. The odor control unit was operating properly.
York Discharge Structure	3/10/08	Complainant informed Facilities Maintenance about very strong rotten eggs/manure odors coming from the odor control unit.	<p>No odors were detected at the time of investigation. Hydrogen Sulfide (H₂S) readings taken on 3/11/08 indicated that the carbon was not capturing the peak H₂S going into the unit.</p> <p>The carbon was changed on 3/19.</p>
8622 Fautleroy Way SW, Seattle	3/23/08	Complainant detected sewage odors one block north of ferry terminal and thought it might be coming from the Barton Pump Station.	<p>The odor control unit was in operation at the time of investigation, and no odors were sensed. The station was also checked the next day and again no odors were present.</p> <p>Complaint was designated as non-county.</p>
Hollywood Pump Station Force Main Discharge Structure	5/1/08	Complainant sensed odors by Sammamish River Trail next to the Hollywood Pump Station.	<p>On investigation, it was discovered that odors were coming from the manhole at the force main discharge structure.</p> <p>The manhole was sealed.</p>
North Mercer Pump Station	5/16/08	Complainant sensed rotten egg odor inside her residence, which is located west of the North Mercer Pump Station.	<p>The Pepcon odor control unit was operating normally at the time of investigation and no odors were sensed around the pump station.</p> <p>No further action was taken at this time.</p>
North Mercer Pump Station	5/19/08	Complainant sensed strong odors at same residence as 5/16/08 complaint.	At the time of complaint, the Pepcon odor control unit was out of service for salt recharging. The salt provides the chloride needed to oxidize the odorous sulfide gases. The unit was placed back in service and the complainant was informed.
South Mercer Pump Station	5/31/08	Complainant sensed strong odors in her yard, which is just north of the pump station.	<p>On investigation, no odors were sensed at the odor control unit exhaust or in complainant's yard. Carbon samples taken from scrubber showed that the media still had a high pH and adsorption capacity remaining.</p> <p>Operator switched to backup carbon odor scrubber.</p>

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Fauntleroy Dock Ferry Booth/Barton Pump Station	6/22/08	Ferry personnel sensed strong sewage odors at the ticket booth.	<p>Staff did not meet the two-hour response criterion. The odor control unit was checked two days after the complaint; no odors were sensed and low hydrogen sulfide was measured from the exhaust.</p> <p>The Purafil media in the odor control unit had been recently changed. No further action was taken.</p>
Hayes Nursery/ Issaquah-Hobart Road in Issaquah	6/23/08	Complainant sensed widespread odors at her business and also three miles away at her residence. Complainant thought it might be coming from Cedar Grove Composting facility.	<p>Staff gave complainant the phone number to PSCAA to file an odor complaint with the Agency. There are no King County facilities nearby the area of odors.</p> <p>The complaint was designated as non-county.</p>
3407 164th Place SE, Bellevue	6/28/08	Complainant sensed very strong rotten egg odors for the past few days. Complainant thought odors are from the Heathfield Pump Station.	<p>The odor control unit was operating at the time of investigation. No sewage odors were sensed around the pump station. The carbon in the odor control unit had been recently changed, (6/11/08).</p> <p>No further action was taken at this time. The complainant was informed of the results of the investigation. Complaint was designated as non-county.</p>
SE 5th Street & 118th Avenue SE, Bellevue	7/3/08	Complainant sensed very strong sewage odors outside near her residence, which is near the Wilburton Siphon Inlet Structure.	<p>An unsealed manhole cover that belongs to the city of Bellevue was noticed during the investigation. Slight odors were noticed when standing next to manhole.</p> <p>Staff informed the City of Bellevue. No further action was taken at this time.</p>
8824 42nd Avenue South	7/29/08	Complainant sensed odors (multiple times per month) from the manhole hatch in her backyard located across the street from the Henderson/Norfolk Inlet Regulator Station.	<p>There were whiffs of sewage sensed at the top of the hatch at the time of investigation (200-300 ppb H₂S). The odor control units at the regulator station were operating at the time of the complaint. The filters for the exhaust fan had some build-up of grease, which might have been preventing some of the foul air from being evacuated from the sewer into the odor control units.</p> <p>The fan filters were cleaned. The complainant was informed. If additional odors are sensed, the hatch will be caulked.</p> <p>No further complaints were received in 2008.</p>

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Lakeland Hills Pump Station	7/29/08	Complainant sensed odors that she thought were coming from the Lakeland Hills Pump Station.	<p>There was a slight odor noticed from the wet well intake at the time of investigation.</p> <p>No action was taken at this time. South plant personnel attempted to inform the complainant of the findings by phone on two occasions. There was no answer and no machine to leave a message.</p>
Issaquah Interceptor Manhole R17-38	8/5/08	Complainant informed South plant of odors emanating from a manhole that is part of the Issaquah Interceptor.	<p>No odors were sensed at the time of investigation.</p> <p>The manhole was sealed with silicone.</p>
Barton Street Pump Station	8/14/08	Supervisor of complainant phoned in to South plant about strong odors and said that an employee had to go visit a doctor and cannot come to work when it is hot and strong odors are present.	<p>At the time of investigation, moderate sewage-like odors were sensed at the top of the pump station from all hatches (120 – 160 ppb H₂S).</p> <p>The filter preceding the odor control unit had a lot of grease buildup and was changed. Samples taken after the filter change found very low hydrogen sulfide levels (2 – 6 ppb), except from two smaller vents still being investigated. The filters are now changed out on a weekly basis.</p> <p>The complainant was forwarded the findings and results from the investigation.</p>
Cranmar Creek Siphon Inlet Structure	8/18/08	Complainant sensed strong odors in his backyard, where the siphon inlet structure is located.	<p>There is a passive carbon unit attached to the vent; the carbon in the unit was changed out the day after the complaint was received (8/19/08).</p> <p>The carbon change-out usually occurs on an annual basis, but from now on it will be changed out on a biannual basis.</p>
3456 61st Avenue, West Seattle	10/23/08	Complaint was received from SPU, nine hours after citizen informed SPU.	<p>At the time of the investigation, no odors were present. The fan for the 63rd Avenue pump station at Alki was operating. Further investigation of the area pinpointed the odor emanating from a vent that could be a storm drain. There was no label designating it as King County or the City of Seattle.</p> <p>Geographic Information System (GIS) prints were obtained to identify the responsible party for maintaining the vent. The prints showed that the manhole belongs to Seattle. WTD staff shared the prints with SPU staff.</p> <p>The complaint was designated as non-county.</p>

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Wilburton Siphon Inlet Structure	12/10/08	Complainant sensed intermittent odors (mainly during the night) near her house, which is close to the Wilburton Siphon Inlet Structure.	<p>On investigation, it was found that the structure was not firmly sealed and the mobile odor control unit that was evacuating foul air from the structure was shut off.</p> <p>The lid of the structure was recaulked and the fan to the mobile odor control unit was restarted.</p>