

PACIFIC groundwater GROUP

KING COUNTY WATER DISTRICT #90 2014 WELLHEAD PROTECTION PLAN

August 14, 2014

**KING COUNTY WATER DISTRICT #90
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Prepared for:

**King County Water District #90
15606 SE 128th Street
Renton, WA 98059
425.255.9600
www.kcwd90.com**

Prepared by:

**Pacific Groundwater Group
2377 Eastlake Avenue East, Suite 200
Seattle, Washington 98102
206.329.0141
www.pgwg.com**

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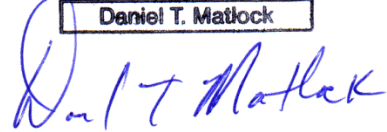
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SIGNATURE

This report, and Pacific Groundwater Group's work contributing to this report, were reviewed by the undersigned and approved for release.

Dan Matlock
Principal Hydrogeologist
Washington State Hydrogeologist No. 714

1.0 INTRODUCTION

This 2014 Wellhead Protection Plan (WHPP) for King County Water District #90 (District) has been prepared to meet requirements of Washington Administrative Code (WAC) 246-290-135, which mandates that purveyors of water systems using groundwater sources develop and implement a wellhead protection program. The goal of the wellhead protection program is to help the District manage their groundwater supply wells and to understand the contaminant risks posed to these sources.

The District currently purchases 75-percent of their water from Seattle Public Utilities and produces the remaining 25-percent from the District's wellfield of three wells. The wellfield is located in a rural area within the Cedar River Valley, approximately 5.5 miles southeast of the City of Renton (Figure 1). Ground elevation of the valley in the vicinity of the wellfield is approximately 150 feet above sea level and rises to elevations of over 400 feet in uplands to the north and south of the valley.

This 2014 WHPP report is organized in the following sections:

- Section 1: Introduction. Contains background information on the report.
- Section 2: Hydrogeologic Setting. Presents the regional and local hydrogeologic features related to the District's groundwater supplies.
- Section 3: Wellhead Protection Area Delineations. Discusses the methods used to delineate the wellhead protection areas and presents the results of the analyses.
- Section 4: Risk Assessment. Presents a discussion of land use and an inventory of potential and confirmed sources of contamination, particularly those within the wellhead capture zones.
- Section 5: Wellfield Susceptibility and Contingency. Identifies sites that represent the greatest potential risk to groundwater quality and contingency plans in the event of degraded water quality.
- Section 6. Managing Risk. Describes the District's Spill Response Plan and recommendations.

This 2014 WHPP was prepared according to the Washington State Department of Health's (DOH) Wellhead Protection Program Guidance Document (DOH, 2010). The WHPP must contain the following elements at a minimum:

- Wellhead capture zone delineations for the 0.5-, 1-, 5-, and 10-year times of travel for each water supply source based on a method approved by DOH (Section 3)
- An inventory of known and potential contaminant sources (Section 4)
- Documentation that the District has notified owners and operators of known and potential contaminant sources/sites that they are within delineated wellhead capture zones, as well as the regulatory agencies and local governments that regulate these sources/sites (Appendix A)

- Contingency plans for alternative sources of drinking water should any of the primary sources become threatened (Section 5)
- Documentation that the District has coordinated with emergency spill responders regarding wellhead protection areas, the contingency plans, and other results of this WHPP (Appendices A and E)

This work was performed, and this report prepared, by Pacific Groundwater Group (PGG) in accordance with generally accepted hydrogeologic practices at this time and in this area for the exclusive use of King County Water District #90 for specific application to the study area. No other warranty, expressed or implied, is made.

2.0 HYDROGEOLOGIC SETTING

The Puget Sound Lowland has been glaciated several times, shaping the geology and hydrogeology of the area. The most recent was the Vashon Stade of the Fraser Glaciation. Deposits of the Vashon Stade and of older, pre-Fraser Glaciations are exposed in the uplands and valley walls near the District's wellfield.

As the glacier advanced, rivers and streams emanating from its terminus transported and deposited considerable quantities of silt, sand, and gravel that are referred to as advance outwash deposits. Former drainages were blocked by the advancing ice to form temporary lakes where clay and silt were deposited before being buried by sand and gravel as the ice continued to advance. As the glacier overrode the advance outwash deposits, compact mixtures of unsorted silt, sand, and gravel were deposited in a tight matrix that was smeared across the landscape. These compact, unsorted deposits are identified as glacial till. Finally, as the ice retreated debris within the ice was either dumped with little sorting in moraine deposits, or was sorted by rivers and streams once again emanating from the terminus of the glacier. Material deposited from rivers and streams that formed as the ice retreated are identified as recessional outwash.

In surficial geology maps such as Figure 2, abbreviations are commonly used to identify and refer to geologic deposits or formations. For example, the advance outwash deposits, glacial till, and recessional outwash deposits of the Vashon Stade are typically abbreviated as Qva, Qvt, and Qvr respectively. Names and abbreviations of geologic deposits exposed at land surface in the vicinity of the District's wellfield are presented in the legend in Figure 2. In the following paragraphs, abbreviations for geologic deposits appear in parentheses.

Vashon recessional outwash is exposed in the uplands north of the District's wellfield; however, in the majority of the uplands the recessional outwash is absent and Vashon till is exposed at land surface (Figure 2). In the walls of the Cedar River Valley, Vashon advance outwash (Qva) is exposed in addition to older, pre-Fraser glacial deposits (Qpf). Further upstream and southeast of the District's wellfield, sandstone and claystone Tertiary bedrock is exposed that can contain abundant coal beds.

As the glaciers retreated, the regional glacial lake drained and the Cedar River incised a channel through the older glacial and non-glacial deposits. The floor of the Cedar River Valley is filled with younger alluvium deposited by the river and described as moderately

sorted cobbles, gravel, sand, and sandy silt (Qyal) that overlies pre-Fraser glacial deposits (Booth, 1995). Near the sides of the valley, the Qyal may be overlain or interbedded with mass-wastage deposits (Qmw). The valley represents a regional groundwater discharge point and the Qmw have accumulated where groundwater-saturated soil has moved downslope from the Qva/Qpf contact (Booth, 1995).

Drilling at the District's wellfield indicates that an old channel feature generally oriented east-west underlies the site (Figure 3). The channel was subsequently filled with deposits of sand and gravel. Based on the thickness of the sand and gravel deposits, Wells 1 and 2 are located closer to the center of the channel feature than Well 3. At Well 1, the supply aquifer within the sand and gravel deposits is over 145 feet thick compared to 44 feet thick at Well 3.

The supply aquifer is confined by 22 to 33 feet of overlying silt and clay, which pressurizes groundwater levels at the wellfield to approximately 12-13 feet above ground surface. The aquifer is underlain by very silty, fine sand with occasional gravel and organic material.

The aquifer recharge area likely extends upstream within the valley and would also include inflow from the surrounding upland aquifers that discharge to the valley flow system. All water moving through the valley would ultimately discharge back to the Cedar River. Water levels suggest an upward gradient at the wellfield, which is consistent with a discharge zone. Local hydraulic connections between the river and the District's supply aquifer are limited by the low permeability silt/clay confining unit that overlies the aquifer. The regional extent of the confining bed in the vicinity of the District's wellfield has not been defined.

3.0 WELLHEAD PROTECTION AREA DELINEATIONS

This section documents the methods used to delineate wellhead protection areas (WHPAs) and presents the results of the delineation analyses. Analytical modeling methods based on our understanding of the groundwater flow system were used to delineate WHPAs. These methods are consistent with recommendations in the Washington State Department of Health Wellhead Protection Guidance (DOH, 2010). Also, as recommended in the DOH Guidance, this section includes consideration of vertical components of potential contaminant transport pathways.

Time-related "capture zones" were estimated for the District's supply wells for 0.5-, 1-, 5-, and 10-year travel times. A capture zone is the area that supplies groundwater recharge to a pumping well—in other words, it's "zone of contribution." In natural systems, capture zones are not circular but elongated, with most capture occurring from areas that lie upgradient of the wellhead. Each capture zone has a stagnation point—the maximum "point of capture" downgradient of the wellhead. A time-related capture zone is the area that supplies groundwater recharge to a pumping well within a specified period. The capture zone encompasses portions of the aquifer that surround the well.

Capture zones are defined in two dimensions within the aquifer in which the well is completed. Mapped capture zones are projections up to land surface of capture areas defined within the completion aquifer. It should be recognized that additional travel time is often

required for contaminants originating at the land surface to reach completion aquifers. This is particularly true for confined and deep aquifers, where downward vertical transport can take decades or centuries.

Time-related capture zones provide a basis for developing monitoring plans, land-use inventories, and data collection plans. They are used in conjunction with the results of the aquifer vulnerability assessment.

3.1 CAPTURE ZONE ANALYSIS METHODS AND RESULTS

Capture zones for Wells 1, 2, and 3 were delineated using “GFLOW”, a two-dimensional analytical element model (Haitjema, 2007). GFLOW assumes steady-state conditions where flow rates, pumping stresses, and head gradients are in continuous equilibrium. It assumes an aquifer with constant thickness, infinite aerial extent, uniform head gradient, and uniform transmissivity. Given the close proximity of the District’s three wells, they were modeled as a single pumping location (wellfield).

Input to the model for the District’s wells included the following parameters:

- Pumping rate
- Aquifer transmissivity
- Hydraulic gradient and flow direction

The pumping rate modeled for the wellfield was 500 gallons per minute, or 94,244 ft³/day, which is the combined instantaneous rate authorized by the District’s groundwater right G1-25195P.

Aquifer transmissivity was modeled as 20,000 gpd/ft, or 2,673 ft²/day based on the Well 2 pump test analysis (Robinson, Noble & Saltbush, 2008). This equates to a hydraulic conductivity of 33.4 ft/day assuming an aquifer thickness of 80 feet, which is the length of the Well 2 screened interval.

Groundwater levels in the alluvial aquifer in the Cedar River valley were contoured by the United States Geological Survey (USGS) for an investigation of water resources in Southwestern King County (Woodward et al., 1995). Hydraulic gradient is a similar parameter to the slope, or grade, of land surface. Hydraulic gradient refers to the difference in water level elevation between two points, divided by the lateral distance between these points parallel to groundwater flow direction. Based on the regional USGS study, the hydraulic gradient in the alluvial aquifer in the vicinity of the wellfield was estimated to be 0.0055 ft/ft and the flow direction is east to west, consistent with the river gradient.

The model GFLOW simulates pumping water levels and drawdowns in the completion aquifer. Based on estimated groundwater flow patterns, GFLOW employs particle tracking routines to trace groundwater flow patterns upgradient from the pumping well. PGG delineated capture zones within GFLOW by plotting out particle traces associated with specified travel times within the aquifer. The results of the capture zone analysis are presented in Figures 2 and 4.

4.0 RISK ASSESSMENT

Potential contaminant sources within the delineated capture zones for the District's wellfield were investigated and mapped using data from the following sources:

- Data regarding zoning and present land use were obtained from King County Assessor's records
- Data regarding environmental sites and facilities were obtained from the Washington State Department of Ecology's (Ecology) Facility / Site database

Information from these sources were classified and plotted on geographic information system (GIS) coverages to assess whether existing and potential contaminant sources were located within the vicinity of the District's wellfield and delineated capture zones.

In addition, known regional environmental sites of interest outside the District's wellfield capture zones are discussed briefly in the following.

4.1 ZONING AND PRESENT LAND USE

King County's Assessor's records were used to identify allowable land use or zoning in the vicinity of the District's wellfield, current land use and "parcels of concern," and to identify potential on-site septic systems.

4.1.1 Zoning

King County's Assessor's records were used to identify zoning in the vicinity of the District's wellfield. As presented in Figure 4, land with the 0.5- and 1-year delineated capture zones is zoned entirely residential by King County. Land within the 5-year capture zone is also zoned residential with the exception of a single parcel zoned industrial that extends into the southern portion of this capture zone. Land within the 10-year capture zone is zoned residential with the exceptions of an area in the southern portion where one parcel zoned industrial is located (same industrial parcel that extends into 5-year capture zone) and the Coal Mine Hazard Area also extends into the 10-year capture zone. The King County Sensitive Areas Ordinance identifies coal mine hazard areas as those areas directly underlain by, adjacent to, or affected by abandoned coal mine workings such as entrances to the mine, passageways between mine shafts, tunnels, or air shafts.

Among the zoning categories in the vicinity of the District's wellfield, those zoned as industrial are most likely to comprise threats to groundwater quality. The only industrial parcel in the delineated capture zones is along SE Renton-Maple Valley Road (Figure 4).

4.1.2 Present Land Use and "Parcels of Concern"

The County's Assessor data includes a description of the current land use in each parcel. A GIS analysis was used to identify land uses that could pose a risk to groundwater quality in the vicinity of the District's wellfield. Parcels where potential activities could result in a release of contaminants to groundwater were identified as "parcels of concern."

In the capture zones delineated for the District's wellfield, parcels of concern were identified on properties currently used as convenience stores with gas, farms, office buildings, service buildings, and public utility (King County Water District #90). These parcels are presented in Figure 4 and identified in Table 1. The District will notify all owners of the parcels shown in Table 1 that they are located in a wellhead protection area. An example letter is included in Appendix A.

The **Cedar Rapids Market** is a convenience store and gas station located on SE Renton-Maple Valley Road (Table 1 and Figure 4). The following underground storage tanks (USTs) are and were present at the site according to Ecology's online UST database (Appendix B, identified as Cedar Rapids Grocery):

- Tank 5: double wall, steel clad with corrosion resistant composite, 15,000 gallon tank for leaded¹ gasoline storage, installed January 5, 2001 and *operational* (status date April 16, 2001)
- Tank 6: double wall, steel clad with corrosion resistant composite, 10,000 gallon tank for leaded¹ gasoline storage, installed January 5, 2001 and *operational* (status date April 16, 2001)
- Tank 1: single wall, dielectric coated steel, 2,000 gallon tank for unleaded gasoline storage; installed June 10, 1987 and *removed* (removal date not reported, status date August 6, 1996)
- Tank 2: single wall, dielectric coated steel, 6,000 gallon tank for unleaded gasoline storage; installed June 10, 1978 and *removed* (removal date not reported, status date August 6, 1998)
- Tank 3: single wall, material not reported, 6,000 gallon tank for unleaded gasoline storage; installed June 10, 1978 and *removed* (removal date not reported, status date August 6, 1978)
- Tank 4: single wall, material not reported, 400 gallon tank for diesel storage; installed June 10, 1978 and *closed in place* (closure date not reported, status date August 6, 1978)

The operational Tanks 5 and 6 have automatic tank gauging systems to detect releases, automatic shutoffs to prevent overfill, and spill buckets/spill box systems for spill prevention. Piping for both tanks is double walled and has automatic line leak detectors.

The **Jones & Jones Horse Farm** is located immediately east of the District's wellfield. The farm offers horse training, boarding, rehabilitation, and conditioning. Aerial imagery suggests that the farm may have manure piles just to the southeast of the wellfield.

Lake Sawyer Towing (Cottages) is located on SE Renton-Maple Valley Road in a parcel immediately south of the Cedar Rapids Market. According to the King County Assessor's records, six small cabins were built on the property in 1953. Photos on the King County website suggest these cabins may be in disrepair and no longer used (Appendix C).

¹ Leaded gasoline is identified in Ecology's UST Site/Tank Summary database as the substance stored in Cedar Rapids Market Tanks 5 and 6. This may be a clerical error as the Clean Air Act Amendments of 1990 mandated the elimination of lead from all U.S. motor fuel by January 1, 1996, 1

The **vacant office building** identified on SE Renton-Maple Valley Road is discussed in Section 4.2.1 under the Target Equipment Rentals site. The Sunset Material **service building** and King County Water District #90 **public utility** site are discussed in Section 4.2.2.

4.1.3 On-Site Septic Systems

On-site septic systems pose a risk to groundwater quality where they are relatively high in density and/or where hazardous wastes are discharged to them. Potential contaminants from septic systems include pathogenic organisms (bacteria and parasites), nitrogen compounds, and toxic substances.

The extent to which pathogens are transported in the subsurface away from a septic drain field depends on the type of pathogen and the chemical and physical conditions in the subsurface. In general, if a septic system is properly sited, constructed, and maintained, the transport of microorganisms will be limited. Household hazardous chemicals such as cleaners, polishes, waxes, and paints can be transported to groundwater via a septic system. In some areas, business and commercial facilities use on-site septic for sewage disposal. Business, commercial, and industrial operations that utilize on-site systems need to take special precautions to avoid contamination of their wastewater.

Ammonia and nitrate are highly soluble in water and can be expected in detectable quantities where portions of an aquifer are affected by septic system discharges. Nitrate is regulated in drinking water since ingestion can result in methemoglobinemia, or “blue baby” syndrome. Other sources of nitrate include fertilizers, farms, feedlots, and natural mineral deposits. The maximum contaminant level (MCL) for nitrate is 10 mg-N/L.

King County Assessor’s data were used to identify potential on-site septic systems in the vicinity of the District’s wellfield. Although the City of Renton is the designated sewer provider for the East Renton Plateau, connection to the sewer is only required if a property is within 200 feet of an available sewer main and one of the following is true:

- The current septic system is failing or failed
- The property is developing as part of a subdivision
- The property owner has chosen to be involved in a local improvement district (LID) for sewer connection

The City of Renton’s Sewer Service Area extends into the northwestern portion of the study area and into the 5- and 10-year capture zones for the District’s wellfield (Figure 4). However, no City of Renton sewer mains were identified in the area. Therefore, all developed parcels in the vicinity of the capture zones delineated for the District’s wellfield likely have on-site septic. The County Assessor’s data were used to identify properties within the wellfield capture zones that are non-vacant or have assessment values greater than zero. This process identified the following number of parcels with potential on-site septic systems:

- 5 parcels within the 0.5-Year capture zone
- 7 parcels within the 1-Year capture zone inclusive of those in the 0.5-Year capture zone

- 47 parcels within the 5-Year capture zone inclusive of those in the 0.5- and 1-Year capture zones
- 85 parcels within the 10-Year capture zone inclusive of those in the 0.5-, 1-, and 5-Year capture zones

4.2 ENVIRONMENTAL SITES AND FACILITIES

Ecology maintains an on-line Facility / Site Database of sites of environmental interest to the agency, including:

- State Cleanup sites
- Federal Superfund sites
- Hazardous Waste Generators
- Solid Waste Facilities
- Underground Storage Tanks
- Dairies
- Enforcement

A map search of the Facility / Site Database in the study area identified two State Cleanup sites and three additional sites of environmental interest. Available information for these sites are summarized below and locations are presented in Figure 4. Ecology database entries for these sites are reproduced in Appendix D. The District will notify all owners of environmental sites that they are located in a wellhead protection area. An example letter is included in Appendix A.

4.2.1 State Cleanup Sites

The Target Equipment Rental and King County Shops sites are state cleanup sites regulated by Ecology that are located within the District's wellfield capture zones.

The **Target Equipment Rental** site is located approximately 1,250 feet southeast of the District's Well 1 and is within the 5-Year capture zone for the wellfield (Figure 4). According to Ecology's online UST database, the following USTs had been installed at the site (Appendix B):

- Tank 1: steel, single wall, 2,000 gallon tank for diesel storage; installed April 15, 1985 and *removed* June 2, 1994
- Tank 2: steel, single wall, 1,000 gallon tank for leaded gasoline storage; installed April 15, 1985 and *removed* June 2, 1994
- Tank 3: material, construction, capacity, and substance stored not reported; installed December 31, 1964 and *removed* (status date August 6, 1996, removal date not reported)

In 1994 Ecology was notified of a release at this site from a leaking underground storage tank (LUST) that impacted groundwater with unspecified petroleum products and impacted soil with gasoline range petroleum. Subsequently, an Independent Remedial Action was completed that remediated petroleum impacts to groundwater. In March 2006

Ecology issued a No Further Action (NFA) decision for the site following completion of the Independent Remedial Action (Appendix D). In April 2006 the property was transferred from Lake Kathleen LLC to Bulwark Construction, Inc., and the NFA may have been sought in association with the anticipated sale. According to King County Assessor's records, the property is currently owned by Maple Valley Developer LLC and is described as Office Building (vacant). Digital aerial images of the site suggest it is paved.

The **King County Shops** site is located about 2,900 feet southeast of the District's Well 1 and is within the 10-Year capture zone for the wellfield (Figure 4). The property was developed as early as the 1920s for the Indian Mine by the Jones and Cedar Mountain Coal Properties, which subsequently re-opened as the New Black Diamond Mine. Structures including a circular tank on the western portion of the property and buildings on the eastern portion of the property appear in 1930s maps and aerial photos. The driveway that currently bisects the property into west and east halves, originally connected to mining tunnels in the hillside.

A 1966 property survey indicates that site features included a fire water storage tank (originally a dorr thickener for mining operations), equipment shed, carpenter shop, electrical shop, paint shop, tire shop and storage, a wash rack, black smith shop, grease and fuel storage, and offices. The survey also indicates two wells (one artesian), and a spring were located on the property (Appendix C).

According to King County (personal communication, Jon Cassidy, 2014) they may have purchased the property from a coal mining company but the date is unknown. The main shop building was constructed in 1928, likely by the previous owner. King County Roads owned and occupied the property until the mid-1970s when they relocated to the Renton Highlands facility. After King County vacated in the mid-1970s, the property was leased. In about 1998 King County sold the property to the present owner, Goodnight Properties Inc. A search of King County Assessor's records indicates that the property may have been owned or leased by Richard and Rose Schroeder prior to sale to Goodnight Properties, Inc. Information about current use of this property by Sunset Materials is summarized in Section 4.2.2.

Ecology's online UST database indicates the following USTs were *removed* from the property in 1999 (Appendix B). King County indicated they were responsible for the 1999 UST removals (personal communication, Jon Cassidy, 2014).

- Tank 1: 1,100 gallons for leaded gasoline storage
- Tank 2: 4,500 gallons for diesel storage
- Tank 3: 5,000 gallons for heating fuel storage

Information regarding potential contamination and cleanup associated with the USTs, and any Phase I Environmental Site Assessments were requested from King County, but had not been received when this WHPP was finalized; relevant information will be provided to the District separately. The facility, identified as King County Shops, has been included in Ecology's LUST database since 1998 with associated confirmed groundwater and soil petroleum contamination (Appendix D). According to the Facility Database, an Independent Action cleanup was started.

In response to a request from PGG, Ecology reported that there are no documents in their Facility/Site database regarding the King County Shops. Copies of Ecology records in the Toxic Cleanup and Northwest Regional Office were requested, but had not been received at the time this WHPP was finalized; relevant information will be provided to the District separately.

4.2.2 Additional Sites of Environmental Interest

The additional sites of environmental interest within capture zones delineated for the District's wellfield represent sites with industrial stormwater discharge permits and a site identified as a Hazardous Waste Generator/Planner.

The **Sunset Materials** is an active facility located approximately 3,000 feet southeast of the District's Well 1 and is within the 10-Year capture zone (Figure 4). The site is located on the property owned by Goodnight Properties, Inc. and formerly owned and operated by King County. Based on their website, Sunset Materials sell commercial and residential landscaping materials and accept the following materials for recycling: land clearing debris, brush, stumps, sod, topsoil, concrete, and asphalt. An industrial stormwater general permit was issued to Sunset Materials in 1999 to regulate discharge of potentially contaminated stormwater to state waters (Appendix D).

The following information was provided by a representative of Sunset Materials (personal communication, Paula Pozzi, 2014). Brush grinding, screening bark, and concrete crushing (once a year) are the only processes at the Maple Valley facility. Company vehicles are maintained on-site at a paved, concrete loop road. Vehicles drive over a concrete pit and are worked on from below; no vehicle maintenance occurs in unpaved portions of the property. The circular tank that appears in the western portion of the site in the 1966 property survey (Appendix C) and aerial photos was removed from the property. Catch basins with filtration socks are used to manage stormwater at the site.

The **District's treatment facility** on Jones Road is included in Ecology's Facility Database because the District had a municipal to ground stormwater discharge IP permit from 2001 to 2006 (Figure 4 and Appendix D). The treatment facility is located within the 10-Year capture zone.

According to the Facility Database, **Boeing** had a facility inside the District's 10-year capture zone that was identified as a Hazardous Waste Generator in 1991 and a Hazardous Waste Planner in 1992 (Figure 4 and Appendix D). No additional information is available through Ecology's Facility Database and it is unknown if this facility was ever operational. Boeing is not identified as a buyer or seller of this property in the King County's Assessors website.

4.3 REGIONAL ENVIRONMENTAL SITES OF INTEREST

The Queen City Farms and Cedar Hill Landfill sites (Figure 1) are located outside the capture zones delineated for the District's wellfield, but are of significant environmental interest in the vicinity and are therefore briefly described below.

4.3.1 Queen City Farms

Queen City Farms is a 324-acre site located approximately 3 miles southeast of the District's wellfield and outside the 10-Year capture zone. Groundwater and soil at the site were contaminated by over 50 years of industrial land use, including disposal of hazardous waste in unlined ponds, and reprocessing and recovery of solvents. The primary contaminants of concern are heavy metals, chlorinated volatile organic compounds, semivolatile organic compounds, polychlorinated biphenyl (PCBs) and polynuclear aromatic hydrocarbons (PAHs).

Site cleanup is regulated by the Environmental Protection Agency (EPA) under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). Queen City Farms was added to the National Priorities Lists in 1984. Considerable cleanup efforts were completed at the site in the 1980s and 1990s. Remedial efforts completed to date include extensive excavation of contaminated soil and pond sludge, and construction of a barrier wall and protective cap.

In 2013 the EPA reviewed the site to assess whether cleanup-goals were being attained and whether threats to human health and the environment were present. The review indicated that the areas with groundwater concentrations of trichloroethene (TCE) above cleanup levels did not extend beyond the site boundaries with the exception of a small area along the edge of the site boundary with the Cedar Hills Landfill. To address groundwater plume migration, the EPA is working with the responsible parties to design a groundwater extraction and treatment system (USEPA, 2013). The 2013 EPA review concluded that while further groundwater cleanup was needed, there was currently no exposure to human health risks posed by this contamination (personal communication, Jannine Jennings, 2014).

Groundwater quality is monitored at the Queen City Farms site twice a year and the EPA project manager reviews the data annually to evaluate whether the groundwater-impacted area is moving or expanding, particularly toward property boundaries and off-site wells. The data are also evaluated for consistent (i.e. not decreasing) groundwater concentrations that might suggest additional remedial action is required (personal communication, Jannine Jennings, 2014).

Following initiation of the new treatment process, EPA does not anticipate any new activity at the site for some time if it is found to be performing as designed. Routine monitoring data will be provided to EPA annually and another site review will be conducted in 2018 (personal communication, Jannine Jennings, 2014).

On-going management by the EPA will maintain current remedies and implement contingencies and new remedial actions as necessary.

4.3.2 Cedar Hills Regional Landfill

The Cedar Hills Regional Landfill is the only remaining landfill in King County and is located at 16645 228th Avenue Southeast, approximately 2.5 miles east of the District's wellfield and outside the 10 year capture zone (Figure 1). Waste from transfer stations located throughout King County is consolidated and taken to the Cedar Hills Landfill for disposal. The 940-acre landfill receives over 800,000 tons of solid waste annually.

The groundwater flow systems and groundwater quality at the landfill are monitored by King County Solid Waste Division and reports are publically available. Groundwater at the landfill occurs in the regional aquifer and additionally in perched zones. The regional aquifer occurs in pre-Vashon deposits and is the shallowest, laterally-extensive water bearing unit beneath the landfill. Quarterly contour maps of groundwater levels reflect a north and northeasterly flow direction in the regional aquifer with discharge to Issaquah Creek (King County, 2013). Monitoring indicates there is no significant seasonal variation in horizontal groundwater flow paths in the regional aquifer. The perched zones are not laterally continuous and therefore flow directions are not evaluated for the monitoring program.

Groundwater quality at the landfill has been impacted by historic activities at the adjacent Queen City Farms property, which is described above. During 2012, groundwater quality at the landfill in the regional aquifer exceeded state cleanup criteria for arsenic, iron, manganese, and select chlorinated volatile organic compounds, including TCE, vinyl chloride, and cis-1,2-dichloroethene. Monitoring of perched groundwater quality at the landfill in 2012 indicated exceedances of state cleanup criteria for arsenic, iron, manganese, total dissolved solids, and the chlorinated volatile organic compounds 1,1-dichloroethane and vinyl chloride (King County, 2013).

Based on King County's evaluation of groundwater flow paths, the Cedar Hills landfill is not directly downgradient of the District's wellfield. Ongoing monitoring at the landfill by the County and oversight by Ecology will identify degradation of groundwater quality to offsite receptors by the landfill.

5.0 WELLFIELD SUSCEPTIBILITY AND CONTINGENCY

Surface contamination and migration of contaminated groundwater from upgradient sources represent potential risks to water quality at the District's wellfield.

Groundwater susceptibility to potential surface contamination at the wellfield is minimized by the 22 to 33 feet thick confining layer of silt and clay above the aquifer. This confining layer pressurizes groundwater levels to approximately 12 to 13 feet above ground surface. Risk of migration of contaminated groundwater from upgradient sources is reduced because land use in the delineated capture zones for the District's wellfield is largely residential and only two confirmed or suspected contaminated sites have been identified, one of which was issued a No Further Action. The following sites likely pose the greatest risk to groundwater quality at the wellfield among the properties identified in the risk assessment for this WHPP:

- Cedar Rapids Market: potential risk of petroleum contamination from UST or vehicle fueling
- Jones & Jones Horse Farm: potential risk of elevated nitrates or coliform from animal waste
- Sunset Materials/King County Shops: potential risk of solvent or petroleum from former coal mine or Roads maintenance shops; potential risk of petroleum contamination from vehicle maintenance or leaking vehicles

- Lake Sawyer Towing: potential risk of solvent or petroleum contamination from vehicle storage or maintenance

Additionally, hazardous materials could be released due to vehicle accidents along SE Jones Road or SE Renton-Maple Valley Road within the capture zones modeled for the wellfield.

The USTs at the Cedar Rapids Market are double walled and have automatic tank gauging systems to detect releases, automatic shutoffs to prevent overfill, and spill buckets/spill box systems for spill prevention. Piping for both tanks is double walled and has automatic line leak detectors. These best management practices significantly reduce the risk of contamination from the gas station.

Compliance water quality monitoring that is routinely conducted by the District has not revealed any contaminant impacts to the supply wells. Nitrate levels for all three supply wells have been consistently below detection levels of 0.2 mg/L indicating that the system is not being affected by anthropogenic sources.

Based on our understanding of the Sunset Materials operation, current land use likely poses fewer risks than land use during the coal mine and King County Roads Shop operations. Current management practices of maintaining vehicles at designated, paved areas reduce the risk of hazardous material releases. Potential groundwater contamination associated with the former mining and shop operations would not represent a new release, and may have naturally degraded or stabilized over time if they were ever present.

Actions the District may consider for managing groundwater contamination risks are described in Section 6. In the event that groundwater contamination is detected at the wellfield, the District has an intertie with Seattle Public Utilities that could be used to meet the entire system demand while remedial actions could be undertaken.

6.0 MANAGING RISK

Risk of contamination of the District's supply wells is reduced by the relatively low amount of development in the vicinity and the low permeability silt and clay layer that overlies the production aquifer. However, there are proactive measures the District can take to further minimize the risk of groundwater quality impacts.

6.1 SPILL RESPONSE

The District has developed a response plan for potential hazardous material spills in the vicinity of their well sources and system lines (Appendix E). The plan identifies potential sources of spills at the wellfield, reservoir, and system lines; and immediate actions, notifications, and follow-up actions in the event of a spill.

The District's spill responders are:

- Josh Deraitus, Operations Manager, 425-766-7918
- John Brittenham, Foreman, 425-766-7916

- Darcey Peterson, Assistant General Manager (General Manager as of October 1, 2014), 425-255-9600

6.2 COMMUNICATION AND OUTREACH

Among the properties identified in the risk assessment for this WHPP, the following sites likely pose the greatest risk to groundwater quality at the wellfield:

- Cedar Rapids Market
- Jones & Jones Horse Farm
- Sunset Materials/King County Shops
- Lake Sawyer Towing

UST operation and maintenance at Cedar Rapids Market are regulated by Ecology and PGG believes they have the appropriate experience to evaluate whether the facility is following best management practices. However, it may be prudent for the District to make contact with the Cedar Rapids Market to educate the operators about the District's wellfield and to ask to be included on any spill or leak reports to Ecology.

We understand that the District has notified Cedar Rapids Market, Jones & Jones Horse Farm, Sunset Materials, and Lake Sawyer Towing that they are within delineated wellfield capture zones (Appendix A). It may be beneficial for the District to work with these facilities on best management practices that could reduce the risk of contaminant releases. For example, managing manure piles on the Horse Farm further away from the wellfield, or maintaining paving and spill response kits at Sunset Materials and Lake Sawyer Towing.

In addition, PGG understands that the District has notified Ecology of the capture zones delineated for the wellfield and nearby potential contaminant sources, and has notified the Maple Valley Police Department and King County Fire District 43 regarding the wellfield capture zones as they are incident/spill responders for the area.

6.3 REGIONAL CLEANUP SITE AWARENESS

The EPA regulates the Queen City Farms cleanup. Because the number of local citizens actively interested in the site is limited, the EPA currently does not maintain a mailing or email list. However, the EPA project manager maintains a list of people who have expressed an interest and tries to provide these people with updates and notifications of any changes to the cleanup plan. PGG recommends that the District be added to this list by contacting:

Jannine Jennings
 EPA Remedial Project Manager
 206-553-2724
jennings.jannine@epa.gov

Technical reports are available for the public at:

- <http://yosemite.epa.gov/R10/cleanup.nsf/sites/Queen%20City>

King County does not support a distribution list for documents related to the Cedar Hills Regional Landfill; however, some documents are available at the following:

- http://your.kingcounty.gov/solidwaste/facilities/documents.asp#cedar_reports
- <http://your.kingcounty.gov/solidwaste/facilities/cedar-hills-development.asp>
- King County Library System

The 2013 Annual Report and 2014 First Quarterly Report should be available by early August 2014.

King County Solid Waste Division holds community meetings so staff can discuss conditions and activities at the Cedar Hills Regional Landfill with members of the public. The meetings are held at least twice a year (April and October) at the King County Library System Service Center at 960 Newport Way NW in Issaquah. The standing agenda includes landfill operations, construction, and environmental monitoring; gas-to-energy updates; and question and answer periods. Meeting notes are available at:

- <http://your.kingcounty.gov/solidwaste/facilities/cedar-hills-meetings.asp>

PGG recommends that the District be added to the community meeting email notification list by using the County's online comment form (link below) and attend upcoming meetings as deemed appropriate.

- <http://your.kingcounty.gov/solidwaste/contacts/comment-form.asp?PID=110>

6.4 MONITORING WELLS

Migrating plumes of groundwater contamination can be very narrow and consequently can be difficult to intercept with monitoring wells. The number of monitoring wells in the vicinity of the District's wellfield required to detect impaired groundwater quality in sufficient time to respond would be considerable, and the associated monitoring program likely prohibitively expensive. Therefore, PGG does not recommend that the District adopt a monitoring program other than compliance monitoring required by DOH. Instead, PGG recommends outreach and education to local neighbors and businesses regarding best management practices, wellfield susceptibility, and the implications to the District's operation and customers in the event of impaired groundwater quality.

7.0 REFERENCES

- Booth, D.B., 1995. Surficial Geologic Map of the Maple Valley Quadrangle, King County, Washington. U.S. Geological Survey Miscellaneous Field Studies Map MF-2297.
- Cassidy, Jon, 2014. Personal email communication between Jon Cassidy of King County with Inger Jackson of Pacific Groundwater Group. July 22, 2014.

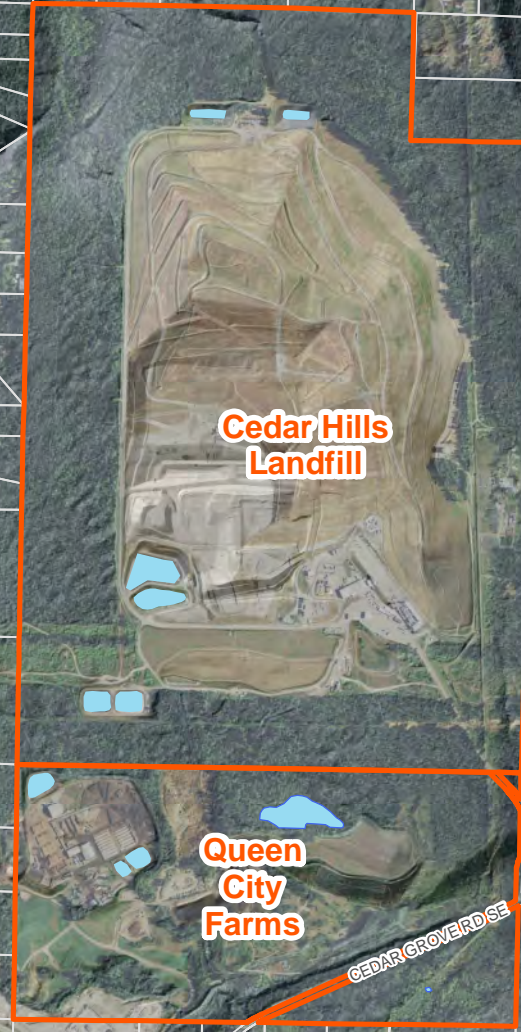
- Haitjema, H.M., 2007. GFLOW version 2.1.2. Analytic Element Modeling of Groundwater Flow.
- Jennings, Jannine, 2014. Personal email communication between Jannine Jennings of USEPA with Inger Jackson of Pacific Groundwater Group.
- King County Department of Natural Resources and Parks Solid Waste Division. April 2013. Cedar Hills Regional Landfill 2012 Groundwater Data Evaluation.
- Pozzi, Paula, 2014. Personal communication between Paula Pozzi of Sunset Materials with Inger Jackson of Pacific Groundwater Group. July 23, 2014.
- Robinson, Noble & Saltbush, Inc., 2008. King County Water District No. 90 Construction and Testing of Well 2. Consultant's report prepared for King County Water District #90. June 2008.
- U.S. Environmental Protection Agency, 2013. Fourth Five-Year Review Report for Queen City Farms WAD980511745 Maple Valley King County, Washington. Prepared by USEPA Region 10. September 2013.
- Washington State Department of Health, 2010. Washington State Wellhead Protection Program Guidance Document. June 2010 DOH 331-018 (Revised).
- Woodward, D.G., Packard, F.A., Dion, N.P., and Sumioka, S.S., 1995. Occurrence and Quality of Ground Water in Southwestern King County, Washington. U.S. Geological Survey Water-Resources Investigations Report 92-4098. Prepared in cooperation with the State of Washington Department of Ecology, Regional Water Association of South King County, and Seattle-King County Department of Public Health.

Table 1. Summary Information for KCWD #90 Production Wells

Well	Ground Elevation (ft NAVD 88)	Static Water Elevation (ft NAVD 88)	Completion (Screen) Intervals (ft NAVD 88)	Recommended Pumping Rate (gpm)
Well 1	151.5	164.4	23.5 to 16.5 6.5 to -3.5 -13.5 to -23.5 -33.5 to -43.5	100
Well 2	148.5	161.4	98.5 to 33.6 -36 to -41.5	120
Well 3	150	162.9	105 to 63	200

Table 2. Parcels of Concern Identified in Vicinity of KCWD #90 Wellfield Capture Zones Based on Present Land Use

Map ID, Figure 4	Property Name	Present Land Use Description	Address	Capture Zone Area(s)
1	King County Water District	Public Utility	18420 SE Jones Rd	5-Year
2	Jones & Jones Horse Farm	Farm	18301 SE Jones Road	0.5-, 1-, and 5-Year
3	Jones & Jones Horse Farm	Farm	18301 SE Jones Road	0.5-, 1-, and 5-Year
4	Jones & Jones Horse Farm	Farm	18301 SE Jones Road	5-Year
5	Jones & Jones Horse Farm	Farm	18833 SE Jones Rd	5- and 10-Year
6	Lake Sawyer Towing (Cottages)	Service Building	18015 SE Renton-Maple Valley Rd	5- and 10-Year
7	Cedar Rapids Market	Convenience Store with Gas	18015 SE Renton-Maple Valley Rd	5-Year
8	Office Building (Vacant)	Office Building	18017 SE Renton-Maple Valley Rd	5- and 10-Year
9	Sunset Materials	Service Building	18825 SE Renton-Maple Valley Rd	5- and 10-Year

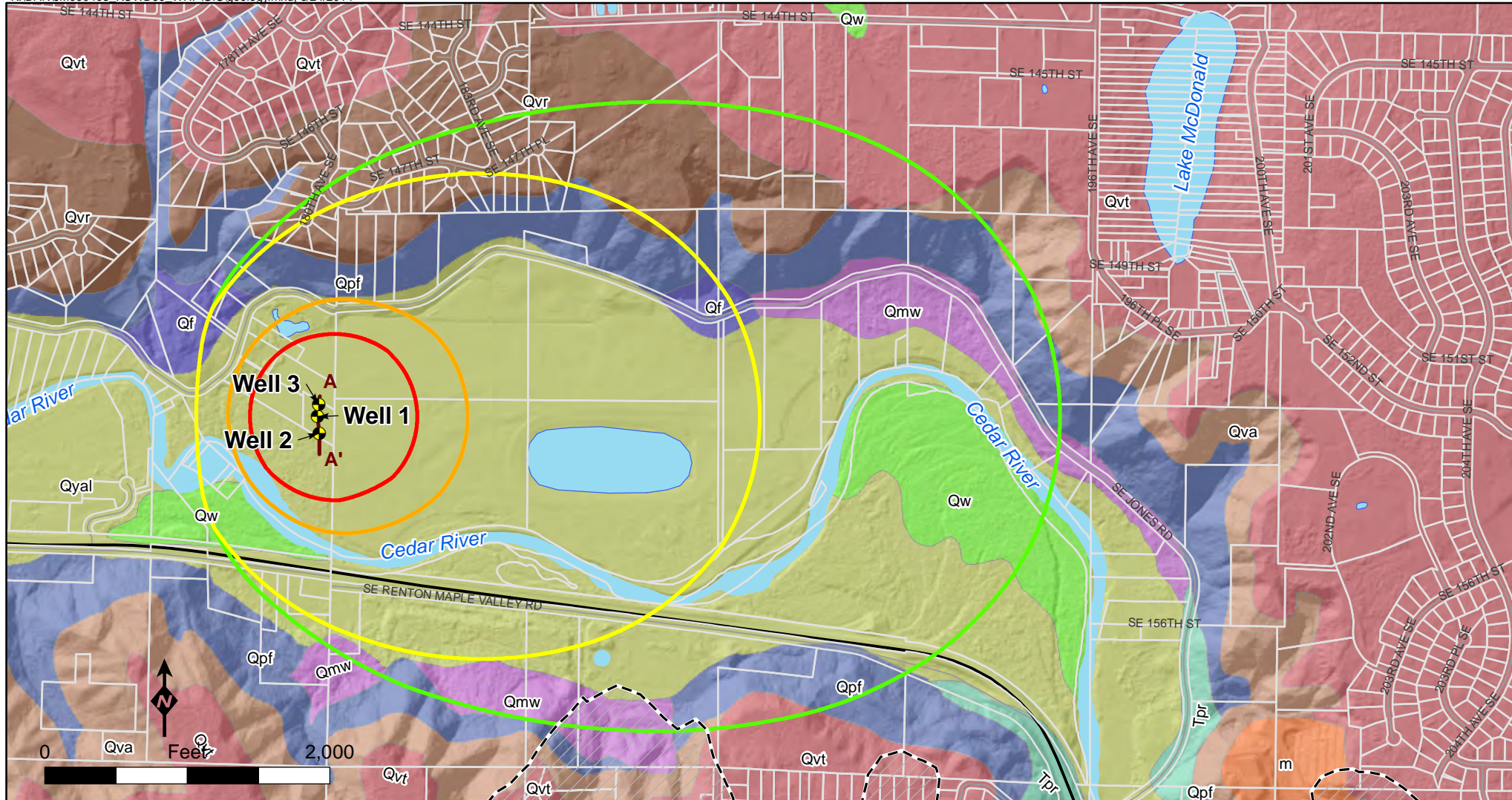


KCWD #90
Wellfield Vicinity



0 Feet 2,000

0 Miles 0.5

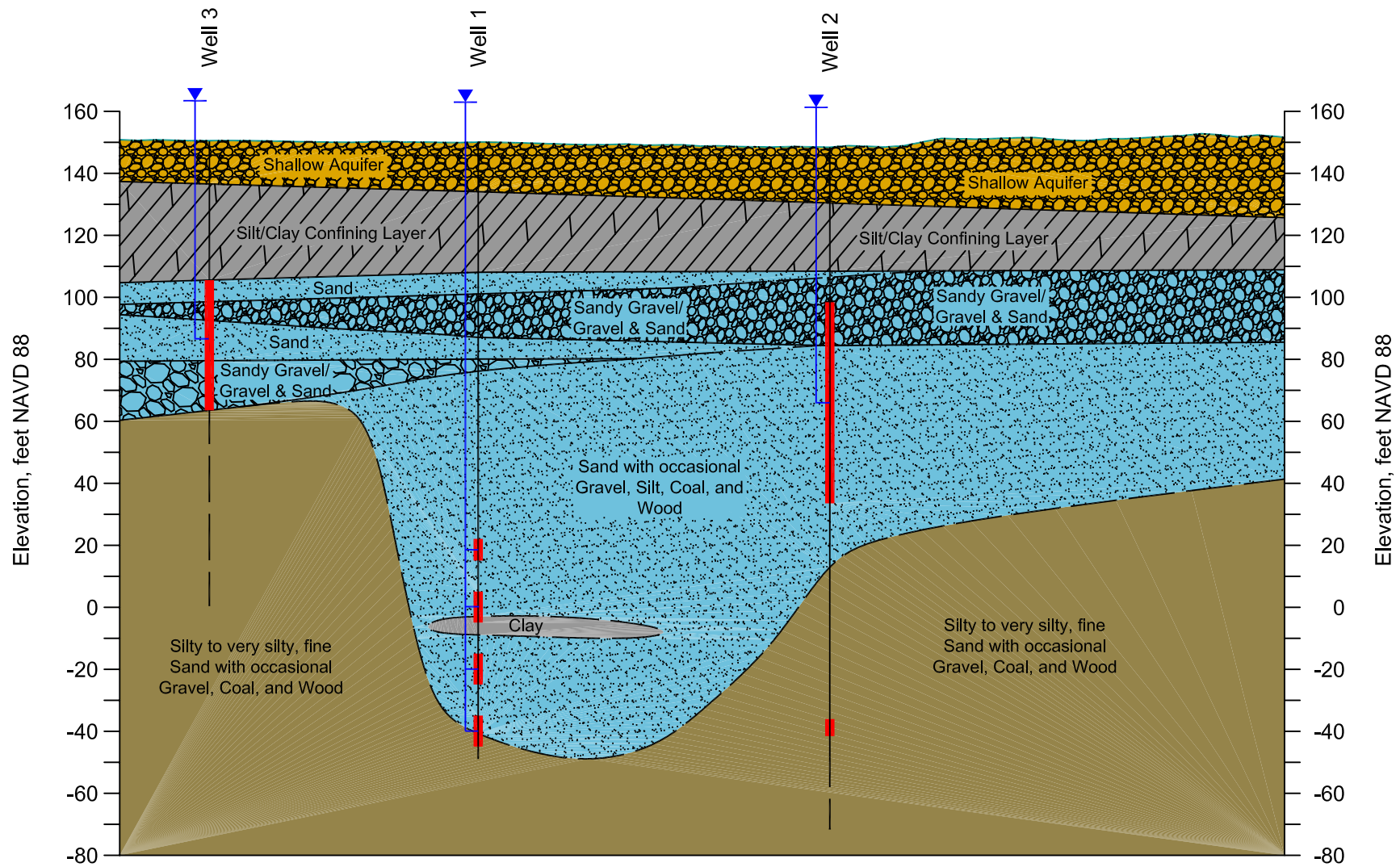


- KCWD #90 Well Locations
- Cross Section Alignment
- Wellhead Protection Capture Zones
- 6 Month WHPCZ
- 1 Year WHPCZ
- 5 Year WHPCZ
- 10 Year WHPCZ

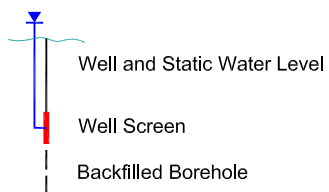
- Coal Mine Hazard Areas (from King County)
- Surficial Geology
- Modified land (Holocene), m
- Wetland deposits (Holocene), Qw
- Mass-wastage (Holocene/Pleistocene), Qmw
- Alluvial fan deposits (Holocene), Qf






- Younger alluvium (Holocene), Qyal
- Recessional outwash deposits, Qvr
- Till, Qvt
- Advance outwash deposits, Qva
- Sedimentary deposits of pre-Fraser glaciation age (Pleistocene), Qpf
- Renton Formation (late and middle Eocene), Tpr

Figure 2
Surficial Geology in
KCWD #90 WHP
Study Area



LEGEND



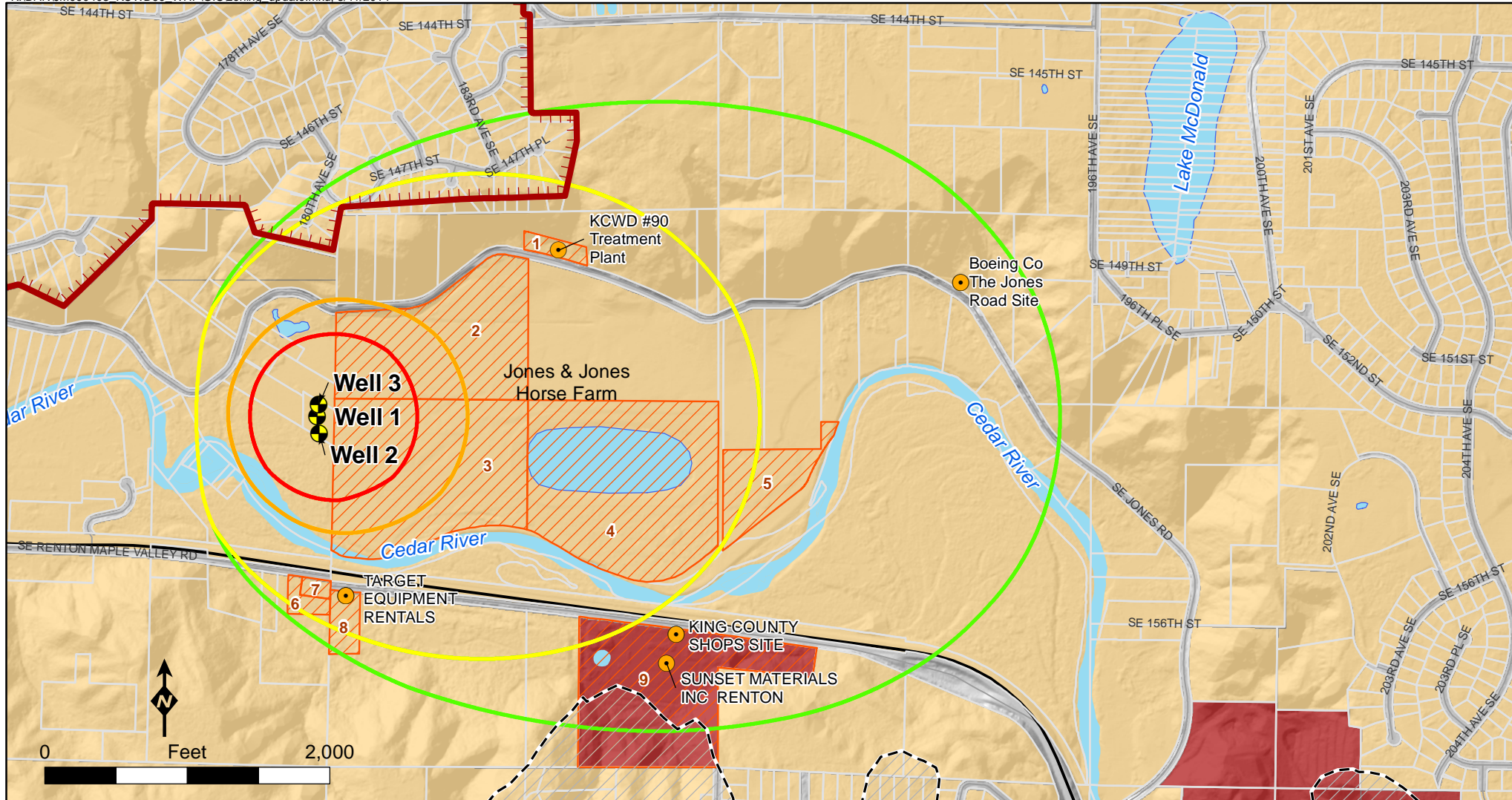
-  Shallow Sand and Gravel Aquifer
-  Silt/Clay Confining Layer
-  Production Aquifer, predominantly Sand
-  Production Aquifer, predominantly Sand and Gravel
-  Silty to Very Silty Fine Sand

Horizontal Scale in Feet
0 25 50
0 25 50
Vertical Scale in Feet

FIGURE 3
Conceptual Hydrogeologic Cross
Section A-A', KCWD #90 Wellfield

KCWD #90 2014 Wellhead Protection Plan
June 2014





- | | |
|--|---|
| KCWD #90 Well Locations | Hazardous Sites (Facility/Site Database) |
| Wellhead Protection Capture Zones | King County Wastewater System Service Area (City of Renton) |
| 6 Month WHPCZ | Parcel of Concern (ID Number Tied to Table) |
| 1 Year WHPCZ | Coal Mine Hazard Areas (from King County) |
| 5 Year WHPCZ | Zoning Categories |
| 10 Year WHPCZ | Industrial |
| | Residential |

Figure 4
Zoning, Parcels of
Concern, and
Hazardous Sites

APPENDIX A
DOCUMENTATION OF NOTIFICATIONS

Date

Address of local business (see Table 1 of main WHPP report)

Re: King County Water District Wellhead Protection Plan

To Whom It May Concern:

King County Water District #90 (District) has developed a Wellhead Protection Plan to help maintain drinking water quality for our community's residents. The Plan is based on Washington Department of Health WAC 246-290-135(3) regulations. As part of the Plan, a map was prepared that shows the area around the District's drinking water wells where a chemical spill on the ground may cause contamination of the well/aquifer. These areas are Wellhead Protection Areas (WHPA). The Plan also requires an inventory of potential sources of groundwater contamination within these wellhead protection areas.

The primary purpose of this letter is to notify you that your facility is located within our WHPA. Since your business or the activities conducted at your facility may involve the use of chemicals (e.g., gasoline, underground storage tanks, manure, hazardous waste, etc.), and the potential exists that a chemical spill from your facility may adversely impact the District drinking water supply, please notify the District immediately if a chemical spill occurs at your facility. All spills should be reported by dialing 911 and requesting that the King County Fire District #43 and King County Health Department be contacted.

Thank you for assisting us in protecting our water supply and groundwater resources. If you have any questions, please contact me at (425) 255-9600.

Sincerely,

Tom Hoffman.
General Manager
KCWD #90

Date

Michelle Bennett, Police Chief
Maple Valley Police Department
22017 SE Wax Road, Suite 100
Maple Valley, WA 98038

Re: King County Water District #90 Wellhead Protection Plan

Dear Chief Bennett:

King County Water District #90 (District) has developed a Wellhead Protection Plan to help maintain the drinking water quality for our community residents. The Plan is based on Washington Department of Health WAC 246-290-135(3) regulations. As part of the Plan, a map was prepared that shows the area around the District's drinking water wells where a chemical spill on the ground may cause contamination of the well/aquifer. These areas are Wellhead Protection Areas (WHPA).

As part of this Plan, the District must provide wellhead protection information to agencies responsible for incident/spill response procedures. It is important that you are aware of where potential contaminant releases could adversely impact the quality of our community's drinking water supply.

A map of the wellhead protection areas and adjacent transportation routes is enclosed for your review. An acknowledgement of receipt of this information or a response from your office as part of our wellhead protection plan documentation would be appreciated.

In the event of a spill or contaminant release, we would ask that you immediately notify the District and the Department of Ecology, so that we can take appropriate measures to deal with the problem.

Thank you for your attention in this matter. If you have any questions or would like a copy of the wellhead protection plan, please contact me at (425) 255-9600.

Sincerely,

Tom Hoffman.
General Manager
KCWD #90

Enclosed: Figure 1. Zoning, Parcels of Concern, and Hazardous Sites.

Date

Chief Scott Webster
King County Fire District 43
23775 SE 264th Street
Maple Valley, WA 98038

Re: King County Water District #90 Wellhead Protection Plan

Dear Chief Webster:

King County Water District #90 (District) has developed a Wellhead Protection Plan to help maintain the drinking water quality for our community's residents. The Plan is based on Washington Department of Health WAC 246-290-135(3) regulations. As part of the Plan, a map was prepared that shows the area around the District's drinking water supply wells where a chemical spill on the ground may cause contamination of the well/aquifer. These areas are Wellhead Protection Areas (WHPA).

As part of this Plan, the District must provide wellhead protection information to agencies responsible for incident/spill response procedures. It is important that you are aware of where potential contaminant releases could adversely impact the quality of our community's drinking water supply.

A map of the wellhead protection areas and adjacent transportation routes is enclosed for your review. An acknowledgement of receipt of this information or a response from your office as part of our wellhead protection plan documentation would be appreciated.

In the event of a spill or contaminant release, we would ask that you immediately notify the District and the Department of Ecology, so that we can take appropriate measures to deal with the problem.

Thank you for your attention in this matter. If you have any questions or would like a copy of the wellhead protection plan, please contact me at (425) 255-9600.

Sincerely,

Tom Hoffman.
General Manager
KCWD #90

Enclosed: Figure 1. Zoning, Parcels of Concern, and Hazardous Sites.

Date

Department of Ecology
Northwest Regional Office
3190 - 160th Ave. SE
Bellevue, WA 98008-5452

Re: King County Water District #90 Wellhead Protection Plan

Dear Department of Ecology:

King County Water District #90 (District) has developed a Wellhead Protection Plan to help maintain the drinking water quality for our community's residents. The Plan is based on Washington Department of Health WAC 246-290-135(3) regulations. As part of the Plan, a map was prepared that shows the area around the District's drinking water wells where a chemical spill on the ground may cause contamination of the well/aquifer. These areas are Wellhead Protection Areas (WHPA).

The enclosed map depicts the WHPA boundary, source wells, and identified potential contaminant sources. Also enclosed is a table with names and location information for each site. Please review the map and use it as a reference when inspecting and permitting the storage, use, and disposal of hazardous material within our WHPA.

Please note that the District has sent notices to each of these properties informing them of their location within the WHPA boundary. The District has also sent similar letters to properties with land uses that could contaminate groundwater quality.

Thank you for your attention in this matter. If you have any questions or would like a copy of the wellhead protection plan, please contact me at (425) 255-9600.

Sincerely,

Tom Hoffman.
General Manager
KCWD #90

Enclosures:

- Table 1. Environmental Site Mailing List for Wellhead Protection Area Notification
- Figure 1. Zoning, Parcels of Concern, and Hazardous Sites

Enclosure

Table 1. Parcels of Concern Identified in Vicinity of KCWD #90 Wellfield Capture Zones Based on Present Land Use

Map ID, Figure 4	Property Name	Present Land Use Description	Address	Capture Zone Area(s)
1	King County Water District	Public Utility	18420 SE Jones Rd	5-Year
2	Jones & Jones Horse Farm	Farm	18301 SE Jones Road	0.5-, 1-, and 5-Year
3	Jones & Jones Horse Farm	Farm	18301 SE Jones Road	0.5-, 1-, and 5-Year
4	Jones & Jones Horse Farm	Farm	18301 SE Jones Road	5-Year
5	Jones & Jones Horse Farm	Farm	18833 SE Jones Rd	5- and 10-Year
6	Lake Sawyer Towing (Cottages)	Service Building	18015 SE Renton-Maple Valley Rd	5- and 10-Year
7	Cedar Rapids Market	Convenience Store with Gas	18015 SE Renton-Maple Valley Rd	5-Year
8	Office Building (Vacant)	Office Building	18017 SE Renton-Maple Valley Rd	5- and 10-Year
9	Sunset Materials	Service Building	18825 SE Renton-Maple Valley Rd	5- and 10-Year



- Legend:**

 - KCWD #90 Well Locations
 - Hazardous Sites (Facility/Site Database)
 - Wellhead Protection Capture Zones
 - 6 Month WHPCZ
 - 1 Year WHPCZ
 - 5 Year WHPCZ
 - 10 Year WHPCZ
 - King County Wastewater System Service Area (City of Renton)
 - Parcel of Concern (ID Number Tied to Table)
 - Coal Mine Hazard Areas (from King County)
 - Zoning Categories**
 - Industrial
 - Residential

Enclosure
Figure 1.
Zoning, Parcels of
Concern, and
Hazardous Sites

APPENDIX B
DEPARTMENT OF ECOLOGY UNDERGROUND STORAGE
TANK DATABASE INFORMATION

Facility Name: CEDAR RAPIDS GROCERY

Tag(s): A5138

SITE INFORMATION

CEDAR RAPIDS GROCERY
18015 MAPLE VALLEY HWY
RENTON, WA 98055

RESP UNIT: NORTHWEST
UBI: 6020019750010001
PHONE: (425) 204-0838

COUNTY: KING
LAT: 47.440295
LONG: -122.070979

SITE IDs:
UST: 102424
FS: 231344

TANK INFORMATION

TANK NAME: 5			
STATUS: Operational		STATUS DT: 04/16/2001	PERMANENTLY CLOSED DT:
INSTALL DT: 01/05/2001		UPGRADE DT: 01/05/2001	PERMIT EXPIRATION DT: 12/31/2014
TANK		PIPING	
MATERIAL: Steel Clad with Corrosion Resistant Composite		MATERIAL: Flexible Piping	
CONSTRUCTION: Double Wall Tank		CONSTRUCTION: Double Wall Pipe	
CORROSION PROT: Corrosion Resistant		CORROSION PROT: None	
MANIFOLDED TANK:		SFC* at TANK:	
RELEASE DETECT: Automatic Tank Gauging		SFC* at DISP/PUMP:	
TIGHTNESS TEST: Every 5 Years		1ST REL DETECT: Automatic Line Leak Detector (ALLD)	
SPILL PREVENTION: Spill Bucket/Spill Box		2ND REL DETECT:	
OVERFILL PREVENT: Automatic Shutoff (fill pipe)		PUMPING SYSTEM: Pressurized System	
ACTUAL CAPACITY:			
CAPACITY RANGE:			
* SFC = Steel Flex Connector			
COMPARTMENT #	SUBSTANCE STORED	SUBSTANCE USED	CAPACITY
1	A Leaded Gasoline	A Motor Fuel for Vehicles	15000

TANK NAME: 6			
STATUS: Operational		STATUS DT: 04/16/2001	PERMANENTLY CLOSED DT:
INSTALL DT: 01/05/2001		UPGRADE DT: 01/05/2001	PERMIT EXPIRATION DT: 12/31/2014
TANK		PIPING	
MATERIAL: Steel Clad with Corrosion Resistant Composite		MATERIAL: Flexible Piping	
CONSTRUCTION: Double Wall Tank		CONSTRUCTION: Double Wall Pipe	
CORROSION PROT: Corrosion Resistant		CORROSION PROT: None	
MANIFOLDED TANK:		SFC* at TANK:	
RELEASE DETECT: Automatic Tank Gauging		SFC* at DISP/PUMP:	
TIGHTNESS TEST: Every 5 Years		1ST REL DETECT: Automatic Line Leak Detector (ALLD)	
SPILL PREVENTION: Spill Bucket/Spill Box		2ND REL DETECT:	
OVERFILL PREVENT: Automatic Shutoff (fill pipe)		PUMPING SYSTEM: Pressurized System	
ACTUAL CAPACITY:			
CAPACITY RANGE:			
* SFC = Steel Flex Connector			
COMPARTMENT #	SUBSTANCE STORED	SUBSTANCE USED	CAPACITY
1	A Leaded Gasoline	A Motor Fuel for Vehicles	10000

TANK NAME: 1			
STATUS: Removed		STATUS DT: 08/06/1996	PERMANENTLY CLOSED DT:
INSTALL DT: 06/10/1978		UPGRADE DT:	PERMIT EXPIRATION DT: 12/31/2002
TANK		PIPING	
MATERIAL: Dielectric Coated Steel		MATERIAL: Coated Steel	
CONSTRUCTION: Single Wall Tank		CONSTRUCTION: Single Wall Pipe	
CORROSION PROT: Sacrificial Anode		CORROSION PROT:	
MANIFOLDED TANK:		SFC* at TANK:	

RELEASE DETECT: Manual Inventory Control (daily)	SFC* at DISP/PUMP:
TIGHTNESS TEST:	1ST REL DETECT: Automatic Line Leak Detector (ALLD)
SPILL PREVENTION: Spill Bucket/Spill Box	2ND REL DETECT:
OVERFILL PREVENT: Automatic Shutoff (fill pipe)	PUMPING SYSTEM: Pressurized System
ACTUAL CAPACITY:	
CAPACITY RANGE: 1,101 to 2,000 Gallons	

* SFC = Steel Flex Connector

COMPARTMENT #	SUBSTANCE STORED	SUBSTANCE USED	CAPACITY
1	B Unleaded Gasoline	A Motor Fuel for Vehicles	2000

TANK NAME: 2

STATUS: Removed	STATUS DT: 08/06/1996	PERMANENTLY CLOSED DT:
INSTALL DT: 06/10/1978	UPGRADE DT:	PERMIT EXPIRATION DT: 12/31/2002

TANK	PIPING
------	--------

MATERIAL: Dielectric Coated Steel	MATERIAL: Coated Steel
CONSTRUCTION: Single Wall Tank	CONSTRUCTION: Single Wall Pipe
CORROSION PROT: Sacrificial Anode	CORROSION PROT:
MANIFOLDED TANK:	SFC* at TANK:
RELEASE DETECT: Manual Inventory Control (daily)	SFC* at DISP/PUMP:
TIGHTNESS TEST:	1ST REL DETECT: Automatic Line Leak Detector (ALLD)
SPILL PREVENTION: Spill Bucket/Spill Box	2ND REL DETECT:
OVERFILL PREVENT: Automatic Shutoff (fill pipe)	PUMPING SYSTEM: Pressurized System
ACTUAL CAPACITY:	
CAPACITY RANGE: 5,000 to 9,999 Gallons	

* SFC = Steel Flex Connector

COMPARTMENT #	SUBSTANCE STORED	SUBSTANCE USED	CAPACITY
1	B Unleaded Gasoline	A Motor Fuel for Vehicles	6000

TANK NAME: 3

STATUS: Removed	STATUS DT: 08/06/1996	PERMANENTLY CLOSED DT:
INSTALL DT: 06/10/1978	UPGRADE DT:	PERMIT EXPIRATION DT: 12/31/2002

TANK	PIPING
------	--------

MATERIAL:	MATERIAL: Coated Steel
CONSTRUCTION: Single Wall Tank	CONSTRUCTION: Single Wall Pipe
CORROSION PROT: Sacrificial Anode	CORROSION PROT:
MANIFOLDED TANK:	SFC* at TANK:
RELEASE DETECT: Manual Inventory Control (daily)	SFC* at DISP/PUMP:
TIGHTNESS TEST:	1ST REL DETECT: Automatic Line Leak Detector (ALLD)
SPILL PREVENTION: Spill Bucket/Spill Box	2ND REL DETECT:
OVERFILL PREVENT: Automatic Shutoff (fill pipe)	PUMPING SYSTEM: Pressurized System
ACTUAL CAPACITY:	
CAPACITY RANGE: 5,000 to 9,999 Gallons	

* SFC = Steel Flex Connector

COMPARTMENT #	SUBSTANCE STORED	SUBSTANCE USED	CAPACITY
1	B Unleaded Gasoline	A Motor Fuel for Vehicles	6000

TANK NAME: 4

STATUS: Closed in Place	STATUS DT: 08/06/1996	PERMANENTLY CLOSED DT:
INSTALL DT: 06/10/1978	UPGRADE DT:	PERMIT EXPIRATION DT: 12/31/2002

TANK	PIPING
------	--------

MATERIAL:	MATERIAL: Coated Steel
CONSTRUCTION: Single Wall Tank	CONSTRUCTION: Single Wall Pipe

CORROSION PROT: Sacrificial Anode		CORROSION PROT:	
MANIFOLDED TANK:		SFC* at TANK:	
RELEASE DETECT: Manual Inventory Control (daily)		SFC* at DISP/PUMP:	
TIGHTNESS TEST:		1ST REL DETECT: Automatic Line Leak Detector (ALLD)	
SPILL PREVENTION: Spill Bucket/Spill Box		2ND REL DETECT:	
OVERFILL PREVENT: Automatic Shutoff (fill pipe)		PUMPING SYSTEM: Pressurized System	
ACTUAL CAPACITY:			
CAPACITY RANGE: 111 TO 1,100 Gallons			
* SFC = Steel Flex Connector			
COMPARTMENT #	SUBSTANCE STORED	SUBSTANCE USED	CAPACITY
1	D Diesel	A Motor Fuel for Vehicles	400

UST_SiteTankDataSmry2014

Facility Name: TARGET EQUIPMENT RENTALS

Tag(s):

SITE INFORMATION

TARGET EQUIPMENT RENTALS **RESP UNIT:** NORTHWEST **COUNTY:** KING
 18017 SE RENTON-MAPLE **UBI:** 6003723240010001 **LAT:** 47.4622326783329
 RENTON, WA 98059 **PHONE:** (206) 872-8740 **LONG:** -122.100657297546

SITE IDs:
 UST: 100288
 FS: 2513

TANK INFORMATION

TANK NAME: 1			
STATUS: Removed		STATUS DT: 07/17/2007	PERMANENTLY CLOSED DT: 06/02/1994
INSTALL DT: 04/15/1985		UPGRADE DT:	PERMIT EXPIRATION DT: 07/01/1994
TANK		PIPING	
MATERIAL: Steel		MATERIAL: Steel	
CONSTRUCTION: Single Wall Tank		CONSTRUCTION: Single Wall Pipe	
CORROSION PROT: None		CORROSION PROT: None	
MANIFOLDED TANK:		SFC* at TANK:	
RELEASE DETECT: Weekly Manual Gauging		SFC* at DISP/PUMP:	
TIGHTNESS TEST:		1ST REL DETECT: Safe Suction (No Leak Detection)	
SPILL PREVENTION: None		2ND REL DETECT:	
OVERFILL PREVENT: None		PUMPING SYSTEM:	
ACTUAL CAPACITY:			
CAPACITY RANGE: 1,101 to 2,000 Gallons			
* SFC = Steel Flex Connector			
COMPARTMENT #	SUBSTANCE STORED	SUBSTANCE USED	CAPACITY
1	D Diesel	O Other	2000

TANK NAME: 2			
STATUS: Removed		STATUS DT: 07/17/2007	PERMANENTLY CLOSED DT: 06/02/1994
INSTALL DT: 04/15/1985		UPGRADE DT:	PERMIT EXPIRATION DT: 07/01/1994
TANK		PIPING	
MATERIAL: Steel		MATERIAL: Steel	
CONSTRUCTION: Single Wall Tank		CONSTRUCTION: Single Wall Pipe	
CORROSION PROT: None		CORROSION PROT: None	
MANIFOLDED TANK:		SFC* at TANK:	
RELEASE DETECT: Weekly Manual Gauging		SFC* at DISP/PUMP:	
TIGHTNESS TEST:		1ST REL DETECT: Safe Suction (No Leak Detection)	
SPILL PREVENTION: None		2ND REL DETECT:	
OVERFILL PREVENT: None		PUMPING SYSTEM:	
ACTUAL CAPACITY:			
CAPACITY RANGE: 111 TO 1,100 Gallons			
* SFC = Steel Flex Connector			
COMPARTMENT #	SUBSTANCE STORED	SUBSTANCE USED	CAPACITY
1	A Leaded Gasoline	A Motor Fuel for Vehicles	1000

TANK NAME: 3			
STATUS: Removed		STATUS DT: 08/06/1996	PERMANENTLY CLOSED DT:
INSTALL DT: 12/31/1964		UPGRADE DT:	PERMIT EXPIRATION DT:
TANK		PIPING	
MATERIAL:		MATERIAL:	
CONSTRUCTION:		CONSTRUCTION:	
CORROSION PROT:		CORROSION PROT:	
MANIFOLDED TANK:		SFC* at TANK:	

RELEASE DETECT:		SFC* at DISP/PUMP:	
TIGHTNESS TEST:		1ST REL DETECT:	
SPILL PREVENTION:		2ND REL DETECT:	
OVERFILL PREVENT:		PUMPING SYSTEM:	
ACTUAL CAPACITY:			
CAPACITY RANGE:			
* SFC = Steel Flex Connector			
COMPARTMENT #	SUBSTANCE STORED	SUBSTANCE USED	CAPACITY
1			

UST_SiteTankDataSmry2014

Facility Name: KING COUNTY SHOPS SITE

Tag(s):

SITE INFORMATION

KING COUNTY SHOPS SITE
18825 SE MAPLE VALLEY RD
MAPLE VALLEY, WA 980386317

RESP UNIT: NORTHWEST
UBI:
PHONE: () -

COUNTY: KING
LAT: 47.461763
LONG: -122.091939

SITE IDs:
UST: 437159
FS: 44299151

TANK INFORMATION

TANK NAME: TANK 1			
STATUS: Removed		STATUS DT: 12/10/1999	PERMANENTLY CLOSED DT:
INSTALL DT: 01/01/1900		UPGRADE DT:	PERMIT EXPIRATION DT:
TANK		PIPING	
MATERIAL:		MATERIAL:	
CONSTRUCTION:		CONSTRUCTION:	
CORROSION PROT:		CORROSION PROT:	
MANIFOLDED TANK:		SFC* at TANK:	
RELEASE DETECT:		SFC* at DISP/PUMP:	
TIGHTNESS TEST:		1ST REL DETECT:	
SPILL PREVENTION:		2ND REL DETECT:	
OVERFILL PREVENT:		PUMPING SYSTEM:	
ACTUAL CAPACITY:			
CAPACITY RANGE:			
* SFC = Steel Flex Connector			
COMPARTMENT #	SUBSTANCE STORED	SUBSTANCE USED	CAPACITY
1	A Leaded Gasoline	A Motor Fuel for Vehicles	1100

TANK NAME: TANK 2			
STATUS: Removed		STATUS DT: 12/10/1999	PERMANENTLY CLOSED DT:
INSTALL DT: 01/01/1900		UPGRADE DT:	PERMIT EXPIRATION DT:
TANK		PIPING	
MATERIAL:		MATERIAL:	
CONSTRUCTION:		CONSTRUCTION:	
CORROSION PROT:		CORROSION PROT:	
MANIFOLDED TANK:		SFC* at TANK:	
RELEASE DETECT:		SFC* at DISP/PUMP:	
TIGHTNESS TEST:		1ST REL DETECT:	
SPILL PREVENTION:		2ND REL DETECT:	
OVERFILL PREVENT:		PUMPING SYSTEM:	
ACTUAL CAPACITY:			
CAPACITY RANGE:			
* SFC = Steel Flex Connector			
COMPARTMENT #	SUBSTANCE STORED	SUBSTANCE USED	CAPACITY
1	D Diesel	A Motor Fuel for Vehicles	4500

TANK NAME: TANK 3			
STATUS: Removed		STATUS DT: 12/10/1999	PERMANENTLY CLOSED DT:
INSTALL DT: 01/01/1900		UPGRADE DT:	PERMIT EXPIRATION DT:
TANK		PIPING	
MATERIAL:		MATERIAL:	
CONSTRUCTION:		CONSTRUCTION:	
CORROSION PROT:		CORROSION PROT:	
MANIFOLDED TANK:		SFC* at TANK:	

RELEASE DETECT:	SFC* at DISP/PUMP:		
TIGHTNESS TEST:	1ST REL DETECT:		
SPILL PREVENTION:	2ND REL DETECT:		
OVERFILL PREVENT:	PUMPING SYSTEM:		
ACTUAL CAPACITY:			
CAPACITY RANGE:			
* SFC = Steel Flex Connector			
COMPARTMENT #	SUBSTANCE STORED	SUBSTANCE USED	CAPACITY
1	H Heating Fuel	B Space or Process Heating	5000

UST_SiteTankDataSmry2014

APPENDIX C
SELECT PHOTOS FROM KING COUNTY ASSESSOR'S WEBSITE
AND HISTORIC IMAGES OF KING COUNTY SHOPS SITE



Photo dates not reported on King County Assessor's Website

Appendix C Lake Sawyer Towing (Cottages) Photos from King County Assessor's Website

KCWD#90
2014 Wellhead Protection Plan

pgg



Photo dates not reported on King County Assessor's Website

Appendix C Lake Sawyer Towing (Cottages) Photos from King County Assessor's Website

KCWD#90
2014 Wellhead Protection Plan

pgg



Appendix C
King County Shops Site,
1937 Aerial Photo from
King County Maps Site

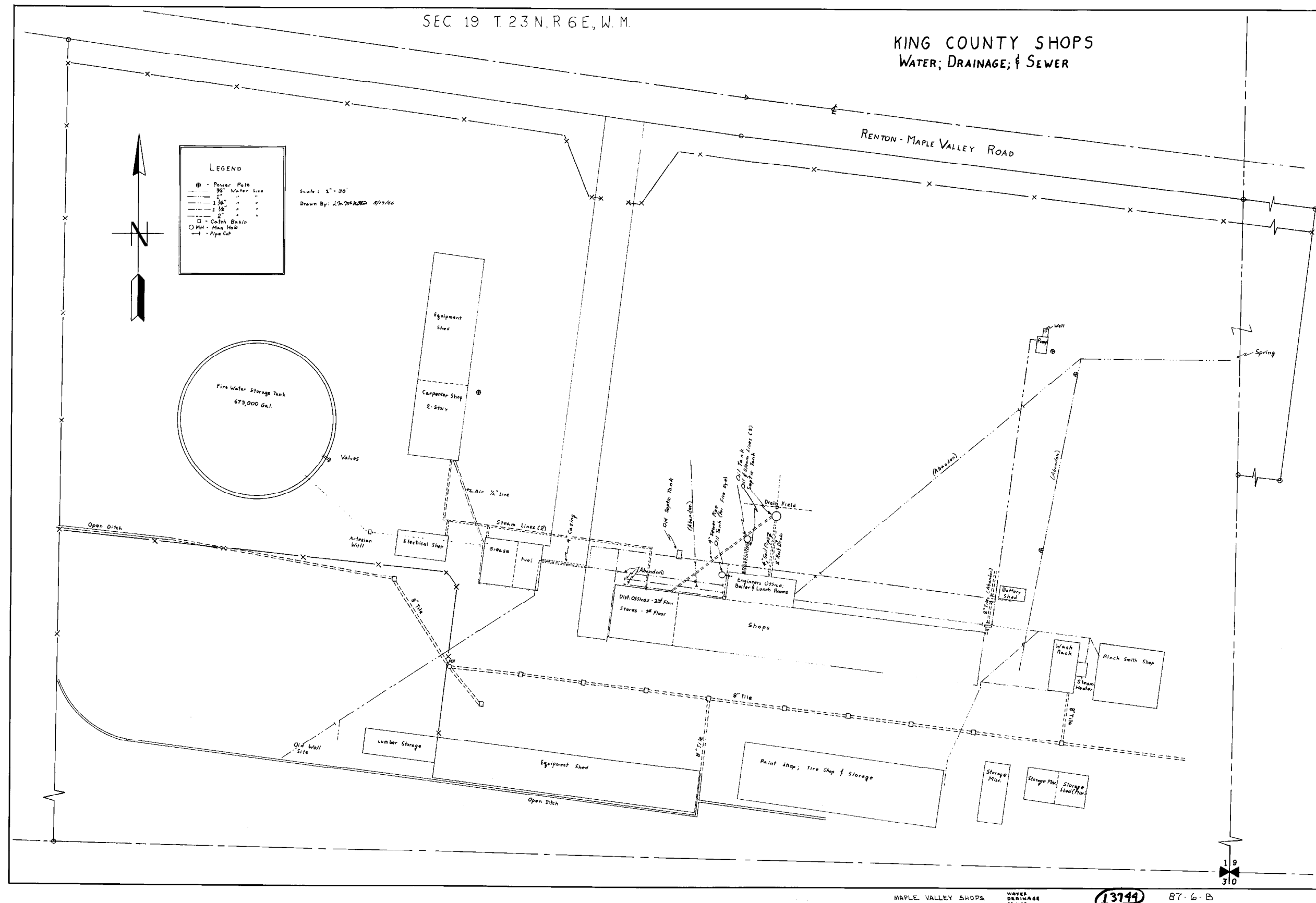
KCWD#90
2014 Wellhead Protection Plan



Appendix C

King County Shops Site, 1966 Site Survey from King County Maps Site

KCWD#90
2014 Wellhead Protection Plan



APPENDIX D
DEPARTMENT OF ECOLOGY FACILITY / SITE DATABASE INFORMATION

Facility/Site: 2513 TARGET EQUIPMENT RENTALS

Also known as: Dochnahl Equipment Rental, TARGET EQUIPMENT RENTAL, TARGET EQUIPMENT RENTALS



Address

18017 SE RENTON MAPLE
VALLEY HWY
RENTON WA 98058

Decimal Coordinates

Latitude: 47.46223
Longitude: -122.10066

Geographic Information

Ecology Region: NWRO

Legislative District: 11

WRIA: 8

County: King

Congressional District: 8

Tribal Land: No

Ecology Interactions

Interaction Description	Ecology Program	Ecology Program Phone	Program ID	Start Date	End Date
Independent Remedial Actn Prg	TOXICS	(360) 407-7224		7/28/1994	3/30/2006
Ecology staff reviewed IRAP reports and provide written determination indicating whether the cleanup meets Model Toxics Control Act (MTCA) standards.					
LUST Facility	TOXICS	(360) 407-7224	100288	6/6/1994	3/30/2006
A leaking underground tank cleanup site being cleaned up with Ecology oversight or review.					
Underground Storage Tank	TOXICS	(360) 407-7224	100288	10/27/1990	7/17/2007
Any one or combination of tanks (including connecting underground pipes) that is used to contain regulated substances and has a tank volume of ten percent or more beneath the surface of the ground. This term does not include any of the exempt UST systems specified in WAC 173-360-110(2) or any piping connected thereto. See WAC 173-360					

Industrial Codes (External Links Below)

No NAICS information is available for this facility site.

SIC Code	SIC Description
<u>7699</u>	REPAIR SHOPS & RELATED SERVICES-MISC

KING COUNTY

SITE I

TARGET EQUIPMENT RENTALS

CleanupSite ID: **5129**

FS ID: **2513**

Alternate Name(s): Dochnahl Equipment Rental, TARGET EQUIPMENT RENTAL, TARGET EQUIPMENT RENTALS

LOCATION:

[View Vicinity Map](#)

Address: **18017 SE RENTON MAPLE VALLEY**
RENTON 98058

Lat/Long: **47.46223 -122.10066**
Township/Range/Section: **23N 6E 19**

Legislative District: **11**
Congressional District: **8**

STATUS:

[View Site Web Page](#)

Ecology Status: **No Further Action**
WARM BIN#:

Responsible Unit: **Northwest**
Site Manager: **Edens, Mark**
Statute: **MTCA**

Is Brownfield?
Environmental Covenant?
Is PSI Site?

UST Site ID: **100288**
WRIA ID: **8**

NFA Received? **Yes** NFA Date: **3/30/2006** NFA Reason: **NFA-Independent Remedial Action Program Review**

ASSOCIATED CLEANUP UNIT(s)

culD	Cleanup Unit Name	Unit Type	Process Type	Unit Status	Size (Acres)	ERTS ID
5852	TARGET EQUIPMENT RENTALS	Upland	IRAP	No Further Action Required		N26223, N17177

SITE ACTIVITIES:

Applies to:	Related ID (Unit-LUST-VCP)	Activity Display Name	Status	Start Date	End Date	Legal Mechanism	Performed By	Project Manager
CleanupSite		Site Discovery/Release Report Received			7/28/1994			Atkinson, Elaine
CleanupSite		Initial Investigation / Federal Preliminary Assessment	Completed	9/29/1994	9/29/1994		Ecology	Atkinson, Elaine
CleanupSite		Site Status Changed to NFA			3/30/2006			
CleanupUnit	5852	Independent Report Review - Paid	Completed	7/28/1994	9/30/2005		Ecology	Atkinson, Elaine
Lust	3452	LUST - Notification		6/6/1994	6/6/1994			
Lust	3452	LUST - Report Received		12/26/1997	1/2/1998			
Lust	3452	LUST - Report Received		3/30/1998	5/28/1998			
Lust	3452	LUST - Report Received		10/2/1997	1/2/1998			
Lust	3452	LUST - Report Received		4/21/1997	4/25/1997			

Lust	3452	LUST - Report Received		1/31/1997	2/3/1997			
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AFFECTED MEDIA & CONTAMINANTS:

Media:

Contaminant:	Ground Water	Surface Water	Soil	Sediment	Air	Bedrock
Petroleum Products-Unspecified	R					
Petroleum-Gasoline			C			

Key:

B - Below Cleanup Level
C - Confirmed Above Cleanup Level
S - Suspected

R - Remediated
RA - Remediated-Above
RB - Remediated-Below

Facility/Site: KING COUNTY SHOPS SITE
44299151

Also known as:



Address

18825 SE MAPLE VALLEY RD

Decimal Coordinates

Latitude: 47.46176

Longitude: -122.09194

MAPLE VALLEY WA 98038-6317

Geographic Information

Ecology Region: NWRO

Legislative District: 11

WRIA: 8

County: King

Congressional District: 8

Tribal Land: No

Ecology Interactions

Interaction Description	Ecology Program	Ecology Program Phone	Program ID	Start Date	End Date
Underground Storage Tank	TOXICS	(360) 407-7224	437159	2/19/1998	
Any one or combination of tanks (including connecting underground pipes) that is used to contain regulated substances and has a tank volume of ten percent or more beneath the surface of the ground. This term does not include any of the exempt UST systems specified in WAC 173-360-110(2) or any piping connected thereto. See WAC 173-360					
LUST Facility	TOXICS	(360) 407-7224	437159	2/11/1998	
A leaking underground tank cleanup site being cleaned up with Ecology oversight or review.					

Industrial Codes (External Links Below)

No NAICS information is available for this facility site.

No SIC information is available for this facility site.

KING COUNTY

SITE ID:	KING COUNTY SHOPS	Cleanup Site ID: 9217	FS ID: 44299151
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Alternate Name(s):	KING COUNTY SHOPS, KING COUNTY SHOPS SITE
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LOCATION:	WRIA: 8	Lat/Long: 47.462 -122.092	View Vicinity Map
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Address:	18825 SE MAPLE VALLEY RD MAPLE VALLEY 98038-6317	Township 23N	Range 6E	Section 19	Legislative District: 11 Congressional District: 8
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STATUS:	Cleanup Started	Rank:	View Site Web Page	View Site Documents
----------------	------------------------	-------	------------------------------------	-------------------------------------

Responsible Unit: Northwest	Site Manager: Musa, Donna	Statute: MTCA
Is Brownfield?	Has Environmental Covenant?	Is PSI Site?
NFA Received?	NFA Date:	NFA Reason:

ASSOCIATED CLEANUP UNIT(s)

culID	Cleanup Unit Name	Unit Type	Process Type	Unit Status	Size (Acres)	ERTS ID
8909	KING COUNTY SHOPS	Upland	Independent Action	Cleanup Started		428753

SITE ACTIVITIES:

Applies to:	Related ID (Unit-LUST-VCP)	Activity Display Name	Status	Start Date	End Date	Legal Mechanism	Performed By	Project Manager
CleanupSite		Early Notice Letter(s)			4/18/2003			Pederson, Carrie
Lust	4766	LUST - Notification		2/11/1998	2/11/1998			
Lust	4766	LUST - Report Received		2/1/1998	2/11/1998			

AFFECTED MEDIA & CONTAMINANTS:

Media:

Contaminant:	Ground Water	Surface Water	Soil	Sediment	Air	Bedrock
Petroleum-Other	C		C			

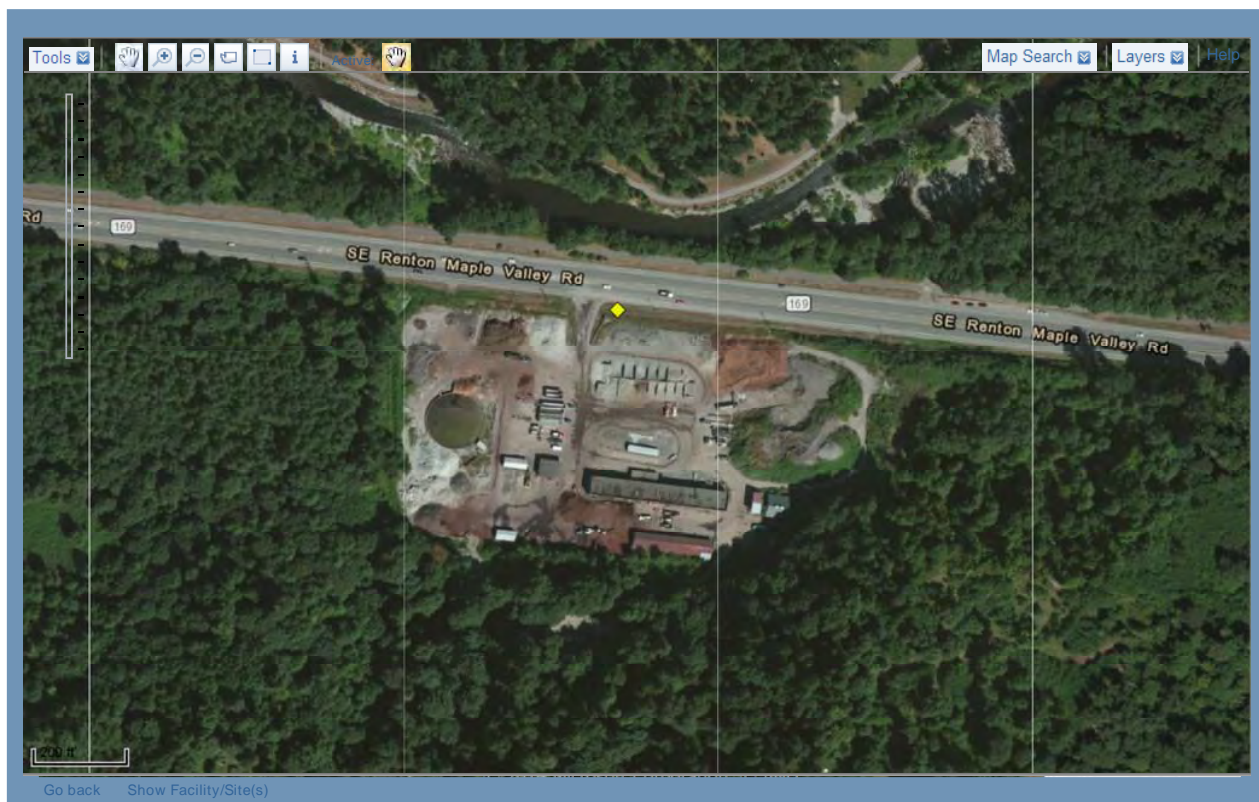
Key:

B - Below Cleanup Level
C - Confirmed Above Cleanup Level
S - Suspected

R - Remediated
RA - Remediated-Above
RB - Remediated-Below

Facility/Site: 6919 SUNSET MATERIALS INC RENTON

Also known as: SUNSET MATERIALS INC RENTON



Address

18825 RENTON MAPLE
VALLEY RD SE
RENTON WA 98058

Decimal Coordinates

Latitude: 47.461
Longitude: -122.092

Aerial photo of Sunset Materials Inc altered from photo in Ecology's Facility Database to be consistent with Facility address and company website. Latitude and longitude also altered from those reported in the Facility Database to be consistent with Facility address.

Geographic Information

Ecology Region: NWRO

Legislative District: 11

WRIA: 8

County: King

Congressional District: 8

Tribal Land: No

Ecology Interactions

Interaction Description	Ecology Program	Ecology Program Phone	Program ID	Start Date	End Date
Industrial SW GP	WATQUAL		WAR003784	12/22/1999	
General permit issued to industries to regulate the discharge of contaminated stormwater to state waters.					

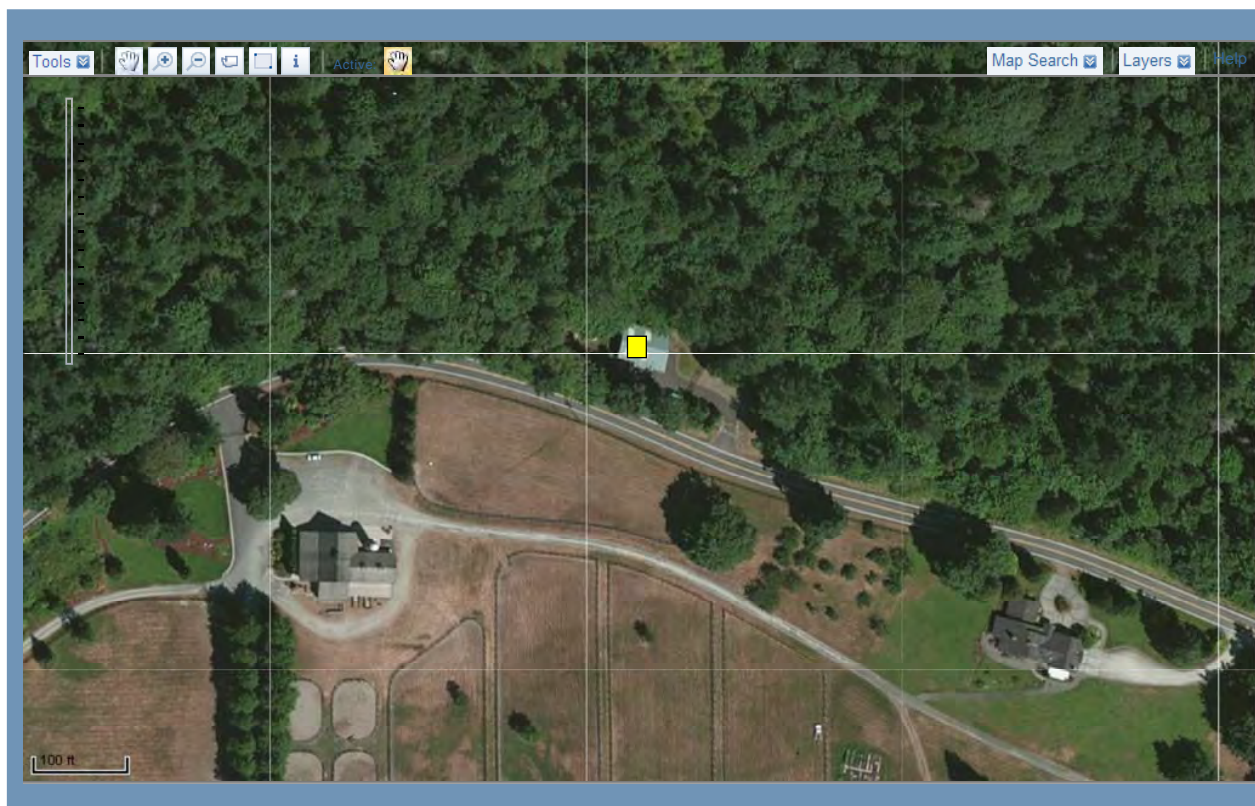
Industrial Codes (External Links Below)

No NAICS information is available for this facility site.

SIC Code	SIC Description
<u>2875</u>	FERTILIZERS MIXING ONLY

Facility/Site: KING CO WD 90
2366975

Also known as:



Address

18602 SE JONES RD
RENTON WA 98049

Decimal Coordinates

Latitude: 47.469
Longitude: -122.095

Aerial photo of KCWD#90 Treatment Plant altered from photo in Ecology's Facility Database to be consistent with Facility address and input from KCWD#90. Latitude and longitude also altered from those reported in the Facility Database to be consistent with Facility address.

Geographic Information

Ecology Region: NWRO

Legislative District: 5

WRIA: 8

County: King

Congressional District: 8

Tribal Land: No

Ecology Interactions

Interaction Description	Ecology Program	Ecology Program Phone	Program ID	Start Date	End Date
Municipal to ground SWDP IP	WATQUAL		ST0007433	5/16/2001	7/3/2006
Municipal to ground SWDP IP					

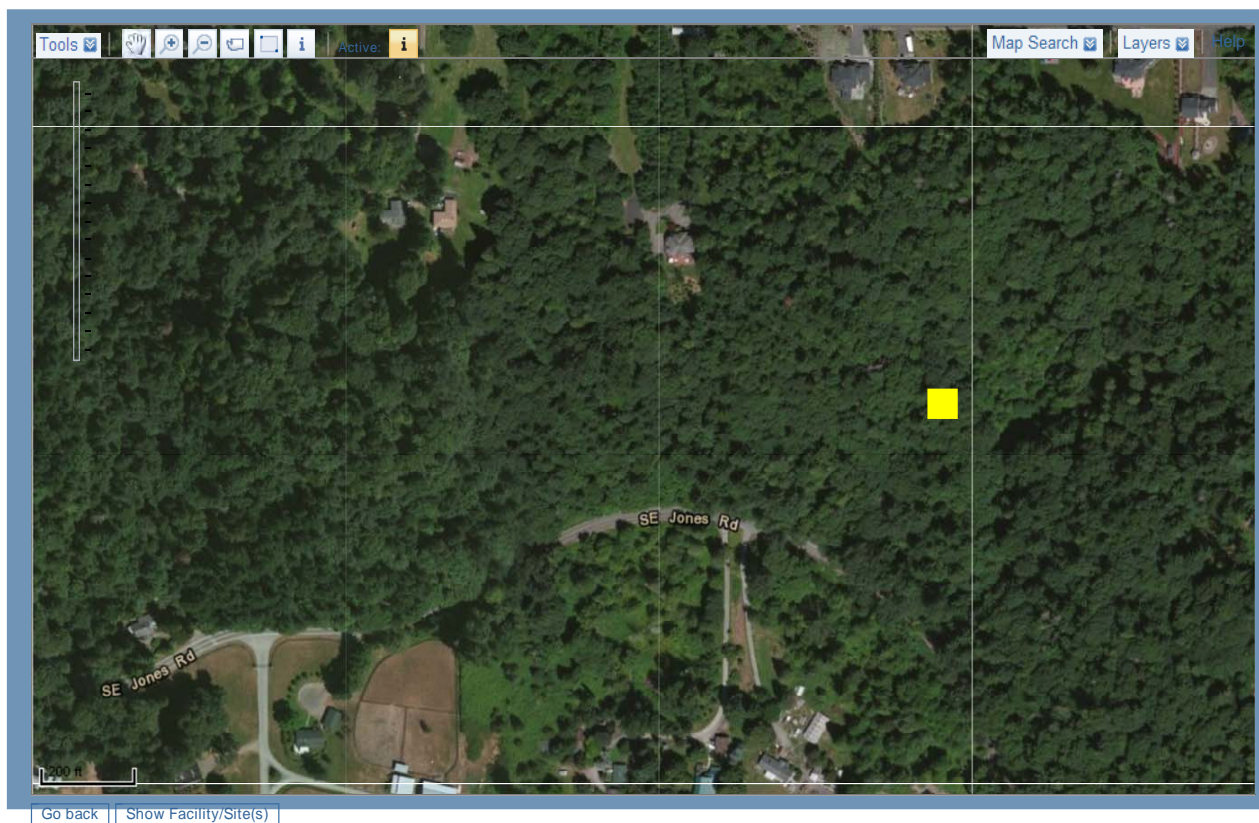
Industrial Codes (External Links Below)

No NAICS information is available for this facility site.

No SIC information is available for this facility site.

Facility/Site: Boeing Co The Jones Road Site
78839422

Also known as:



Address

S19 T23N R6E SE1/4 NE1/4 W
752 FT

Decimal Coordinates

Latitude: 47.468438
Longitude: -122.083366

Based on KCWD#90 input, the Boeing Co The Jones Site is located at 19208 SE Jones Road, Parcel 192306-9028. Aerial photo, latitude, and longitude of Boeing Co The Jones Road Site altered from photo and coordinates in Ecology's Facility Database to be consistent with KCWD#90 input.

MAPLE VALLEY WA 98038

Geographic Information

Ecology Region: NWRO

Legislative District: 5

WRIA: 8

County: King

Congressional District: 8

Tribal Land: No

Ecology Interactions

Interaction Description	Ecology Program	Ecology Program Phone	Program ID	Start Date	End Date
Hazardous Waste Planner	HAZWASTE	(360) 407-6731	WAD988474292	1/1/1992	6/1/1992
Under Chapter 173-307 WAC, facilities that report under Section 313 of the Emergency Planning/Community Right-To-Know Act (EPCRA), or that generate more than 2,640 pounds of hazardous waste per year, must prepare Pollution Prevention Plans.					
Hazardous Waste Generator	HAZWASTE	(360) 407-6023	WAD988474292	1/7/1991	10/28/1991
Facilities that generate any quantity of a dangerous waste. They may be classified as SQG, MQG, or LQG depending on hazardous waste generated for a given month.					

Industrial Codes (External Links Below)

No NAICS information is available for this facility site.

SIC Code	SIC Description
<u>9999</u>	NONCLASSIFIABLE ESTABLISHMENTS

APPENDIX E
KCWD #90 SPILL RESPONSE PLAN

Hazardous Materials Spill in Vicinity of Sources or System Lines

Assessment	<p>Both of the District water sources are vulnerable to hazardous materials spills in their vicinity. The District wellfield is located at a lower elevation and approximately 300 yards from a narrow, winding road. There is a diesel-powered generator on site within 30 feet of the wellhead. Potential sources of spills include:</p> <ul style="list-style-type: none"> • Hazardous materials spilled due to a vehicular accident on the nearby road. • Diesel fuel spilled from the generator fuel tank or while fueling the generator. <p>Water purchased from Seattle Public Utilities is stored in their Lake Youngs Reservoir. A gravel road circumnavigates the lake. Potential sources of spills include:</p> <ul style="list-style-type: none"> • Oil or fuel spill due to a vehicular accident on the nearby road. • Oil or fuel spill due to small airplane crash in the lake. <p>The majority of the transmission, distribution and meter service pipe is either some form of metal or asbestos cement pipe. There is a small amount of PEP and PVC pipe. Potential sources of contamination include:</p> <ul style="list-style-type: none"> • A petroleum chemical spill permeating the polymer-based pipe.
Immediate actions	<p>Safety of the public and responding personnel shall be a priority. Immediate actions taken include:</p> <ul style="list-style-type: none"> • Secure the site to protect public and personnel safety. • In case of injury in a vehicular accident, render first aid. • Isolate the contaminated water source or pipe. • Follow the lead of the Haz-Mat responders.
Notifications	<p>The extent of the spill will dictate who must be notified. The list includes:</p> <ul style="list-style-type: none"> • District Personnel: Field Foreman, Operations Manager, and General Manager, District Board of Commissioners. • 911 City of Renton Fire Department for urban area • 425.577.5656 Nor Com: Eastside Fire and Rescue for rural area • 800.521.0323 Washington State Department of Health • 206.205.3999 Seattle-King County Department of Public Health • Customers affected by spill. • 425.649.7000 Washington State Department of Ecology. Ecology 24-hour emergency number
Follow-up actions	<p>After the hazardous chemical has been cleaned up:</p> <ul style="list-style-type: none"> • Flush the contaminated water from the system. Follow procedures outlined by the Washington State Department of Ecology and Department of Health. • Obtain water samples and submit for analysis. • If spill is near the District well, grab a series of samples from the well field or neighboring wells and submit for analysis.

P 206.329.0141 | F 206.329.6968

2377 Eastlake Avenue East | Seattle, WA 98102

P 360.570.8244 | F 360.570.0064

1627 Linwood Avenue SW | Tumwater, WA 98512

www.pgwg.com

