

Preliminary Re-Evaluation of Discharges from Washington's Water Treatment Plants

Water Quality Program
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1.0 Background

The Washington State Department of Ecology (Ecology) reissued the current version of the Water Treatment Plant NPDES Waste Discharge General Permit (WTPGP), effective date September 1, 2014. At the same time, Ecology reissued a reorganized and slightly expanded *Fact Sheet for NPDES Waste Discharge General Permits, Water Treatment Plants*, dated July 16, 2014 (Fact Sheet). The Fact Sheet provided the reasoning and supporting data to establish the basis for the terms of the WTPGP. Note that the WTPGP provides coverage for discharges of treated filter backwash wastewater only to surface water.

More than 11 years have passed since Ecology's most recent evaluation of Washington State's water treatment industry and review of the facts and assumptions used in the Fact Sheet. Indications exist that some of those operating conditions and assumptions have changed. For example:

- Although the population of the State has increased substantially during the past 10 to 15 years, the number of water treatment plants (WTPs) covered by the WTPGP has remained fairly constant (30 to 34).
- In 2008, Ecology collected monitoring data from WTP filter backwash wastewater that suggested that the arsenic in some of those wastewaters may have the potential to pollute the groundwater if discharged to the ground in sufficient volume (Ecology, 2017 draft in review). The current WTPGP required permittees to monitor and report the arsenic concentrations in their discharges during the third year of the permit (beginning September 2016).

2.0 Purpose

The purpose of this preliminary re-evaluation is to compare the amounts and characteristics of the filter backwash wastewaters discharged to waters of the State by WTPs not presently covered by the WTPGP with those of the WTPs currently covered. Waters of the State include both surface water and groundwater. Ecology will use the results; (1) To validate some of the assumptions underlying the WTPGP and related policies, and (2) To inform the scope and requirements of future permits.

This preliminary re-evaluation was *not* to develop new requirements for WTPGP permittees, but only to bring Ecology's understanding of the water supply industry's potential impact on waters of the State more up to date. Thus, neither exactitude nor pre-determined error limits were required of the calculations and estimates.

3.0 Walk-Through of the Re-Evaluation

3.1 Gathering Current Data

This re-evaluation relied on data readily available from the Washington State Department of Health (DoH) [Water System Data database](#) and the Ecology Permitting and Reporting Information System ([PARIS](#)). Permitted WTPs originally provided to Ecology the information in the PARIS database. Ecology queried the DoH for the following information concerning the public water supply systems that it permits:

- Name and location.
- Source of raw water.
- Treatment processes employed at each WTP.
- Actual Production Rate and maximum Production Rate of finished water.
- Method or location of disposal of filter backwash wastewater.

In June and August 2014, DoH provided to Ecology the requested information to the extent it was readily available from the DoH Water System Data database, along with additional data regarding:

- Number of full-time residents served by each water system (Population).
- Number of connections served by each water system (Connections).
- Treatment objectives for each water source.

DoH limited the data to only those WTPs that were currently active, processed source water that required treatment, and were likely to generate a wastewater that required discharge. Ecology considered those raw water sources identifiable as “groundwater under the direct influence of surface water” (e.g., from a Ranney well) to be the same type as surface water.

After merging, reorganizing, and deleting duplicate records from the data files, Ecology filled in additional data for the 34 WTPs that had applied to Ecology for WTPGP coverage at some time during the past 6 years. The available relevant data for the current 31 WTPGP applicants are provided in Appendix A. Ecology also extracted water usage information from public sources for specific water systems (i.e., Lacey, Pasco, and Seattle) (Thurston Regional Planning Council, 2012; U.S. Army Corps of Engineers, 2014; Seattle Public Utilities, 2015, respectively).

Although the relationships among the water supply systems, WTPs, raw water sources, and treatment goals and methods were sometimes complex, Ecology consolidated the WTP and raw water source data into unique water supply systems and then used the terms “water supply system” and “WTP” interchangeably. This simplification provided data that were sufficiently accurate and detailed for the limited goals of this re-evaluation. Ecology thus began its analysis with data for 934 unique water supply systems, which are listed in Appendix B.

3.2 Calculation-Enabling Assumptions

This section identifies and explains the seven main assumptions upon which this re-evaluation was based and their potential consequences. The first five assumptions enabled assignment of an estimated wastewater discharge volume to each water supply system. The last two assumptions enabled Ecology to distinguish dischargers to surface waters from dischargers to the ground.

1. Ecology assumed for each of the 934 water supply systems considered in this re-evaluation that the wastewater Discharge Rate was equal to the corresponding backwash generation rate. The consequences of this assumption may be over-estimations of backwash volumes and/or under-estimations of wastewater Discharge Rates.
2. Ecology assumed that the relationships between the steps in the numerical pathway derived for this re-evaluation (See Section 3.3) were continuous functions. Depending on the representativeness of the water supply system data, the consequences of this assumption may be either under- or over-estimations of the wastewater Discharge Rates.
3. Ecology elected to use the largest of the three available estimates of the number of Connections serviced by each of the 31 water supply systems with sufficient data (i.e., 27 systems) to develop the most conservative (smallest) estimates of finished water Production Rates for the other water systems. The consequences of this assumption may be under-estimations of the wastewater Discharge Rates for those other water systems that may have had out-of-date Population or Connection data.
4. For those 37 water supply systems that produced more than 2,000,000 gallons per day (gpd) of finished water and for which no better data were readily available, Ecology assumed that their wastewater Discharge Rates were 1.0% of their finished water Production Rate. This fraction (1.0%) was less than the corresponding fractions for any of the other 15 systems with sufficient data (which ranged from 1.1% to 16.7%). The consequences of this assumption may be under-estimations of the Discharge Rates for those 37 large water supply systems.
5. Ecology used the smaller values of either the average or median wastewater Discharge Rates for those 138 water supply systems that generated less than 1,000 gpd of wastewater as the assumed conservative (smaller) rates for the smallest 550 water supply systems that lacked other data. The consequences of this assumption may be under-estimations of the Discharge Rates for those 550 smallest water supply systems.
6. For each water supply system for which its type of raw source water was not certain, in priority order:
 - Ecology assumed the source type was surface water if the DoH data contained mention of a surface water body, disinfection, or a Ranney well.
 - Ecology assumed the source type was groundwater if the DoH data contained mention of a well, except Ranney wells.

7. For each water supply system for which its type of discharge location (i.e., receiving water) was not certain, Ecology assumed that:
- If the raw water source type was surface water, the type of discharge location was also surface water.
 - All hatcheries discharged to surface water.
 - If the raw water source type was groundwater and treatment was required, the type of discharge location was to the ground. (If a WTP did not need to filter its raw source groundwater, it would not generate any filter backwash wastewater.)

3.3 Deriving and Applying a Numerical Pathway

Depending on the available data, Ecology performed one or more calculations for each water supply system or treatment plant to estimate its Discharge Rate of filter backwash wastewater. The main steps of this pathway were:

Population → Connections → Production Rate → Wastewater Discharge Rate

Where possible, Ecology generally relied upon:

- Reported data rather than calculated data.
- Data located further to the right-hand end of the pathway.

For example, if we knew the Production Rate of finished water from a WTP, we did not calculate an estimated Production Rate from the known Population data. Figure 1 is a flowchart illustrating the numerical pathway. Figure 2 is a small excerpt of the final spreadsheet that may help illustrate some of the calculations detailed in the rest of this section. Figures 3 through 6 display the relationships among the steps of the pathway. Readers should refer frequently to these figures when making sense of the following sub-sections.

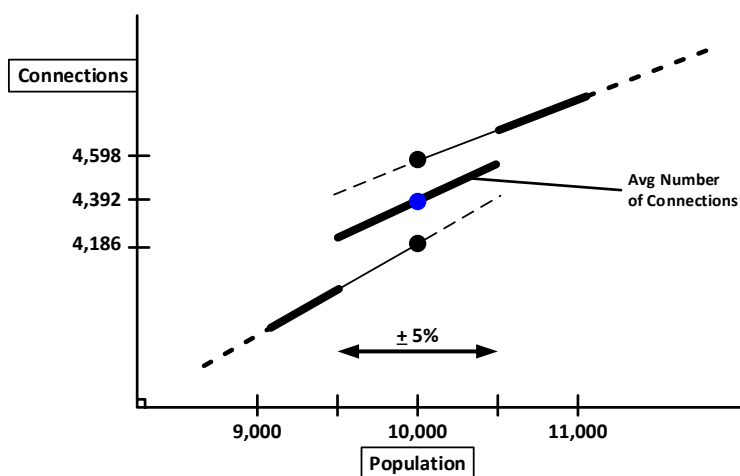
3.3.1 Estimating Numbers of Connections from Populations Served

Ecology evaluated the correlation between Population and Connections through non-parametric analysis by using Kendall's coefficient of concordance as described by Zar (1999). For the 934 records that contained values for both Population and Connections, those two parameters showed significant concordance ($p < 0.05$). Ecology then plotted in Figure 3 Population versus the number of Connections for three different ranges of Population (<10K, 10K to <80K, and >80K). Separating the data into three ranges greatly improved the correlation between Population and the number of Connections.

Figure 3 shows the three resultant curves and equations defining the relationship between Population and Connections and their corresponding coefficient of determination values (R^2), where Population is on the x -axis, and the number of Connections is on the y -axis. Ecology used

these curves with Population values reported by the WTPs either to DoH or to Ecology to estimate the number of Connections served by each water supply system (only if the Population was greater than 100).

The transitions between the three curves were not continuous. For example, a Population of 10,000 yielded an estimated 4,186 Connections from the “<10K” graph, and 4,598 Connections from the “10K to <80K” graph (Figure 3). To reduce the difference between the three plotted Population ranges, Ecology averaged the Connection results for Population values within 5% of the matching points (10,000 persons for the first and second graphs, and 80,000 persons for the second and third graphs). See the sketch immediately below for a generalized visualization of one such averaging. This process generated a total of 208 new estimates of Connections based upon Population.



Each of the 934 water supply systems thus had one, two, or three values for their number of Connections: As provided by DoH (Column D in Figure 2); As reported to Ecology by the WTPGP permittees (Column E in Figure 2); and As estimated based upon the Population values reported by DoH (Column F in Figure 2). Since Washington State has grown and developed continually during the last decade, Ecology elected to use the largest of those numbers of Connections for each water supply system for subsequent calculations (Column G in Figure 2).

3.3.2 Estimating Finished Water Production Rates from Numbers of Connections

Ecology next established relationships between the number of Connections served by a water supply system and its Production Rate of finished water. For those water supply systems with at least 200 Connections, Ecology plotted in Figure 4 the Production Rate versus the number of Connections for two different ranges of Connections (<6K and >5K). Separating the data into two ranges improved the correlation between the number of Connections and the Production Rates.

Figure 4 shows the two resultant curves and equations defining the relationship between Connections and Production and their corresponding R^2 values, where the number of Connections is on the x -axis, and the Production Rate is on the y -axis. Ecology used these

curves with the total numbers of Connections (Column G in Figure 2) to estimate the finished water Production Rates for each water supply system (Column J in Figure 2).

The transition between the two curves was not continuous. For example, 5,500 Connections yielded an estimated Production Rate of 1,785,267 gpd from the “<6K” graph, and 1,699,102 gpd from the “>5K” graph (Figure 4). To reduce the difference between the two plotted Connection ranges, Ecology averaged the Production results for Connection values within 5% of the matching point (5,500 Connections). This process generated a total of 167 estimates of Production Rates (Column J in Figure 2) based upon the number of Connections of each supply system.

For those water supply systems with fewer than 200 Connections, Ecology plotted in Figure 5 the lesser of either the source capacity (Column R in Figure 2) or the production maximum capacity (Column H in Figure 2) versus the finished water Production Rate for two different ranges of maximum capacity (<1M and <6M). Separating the data into these two ranges improved the correlation between the maximum capacities and Production Rates.

Since the actual Production Rate should not be greater than either of these two capacities, Ecology selected the smaller value of either the source capacity or the production maximum capacity to ensure a conservative estimate of the Production Rate (Column K in Figure 2). Figure 5 shows the two resultant curves and equations defining the relationship between maximum capacity and Production and their corresponding R^2 values, where the selected maximum capacity is on the **x**-axis, and the Production Rate is on the **y**-axis.

The transition between the two curves was not continuous. For example, a maximum capacity of 1,000,000 gpd yielded an estimated Production Rate of 269,128 gpd from the “<1M” graph, and 366,880 gpd from the “<6M” graph. To reduce the difference between the two plotted Connection ranges, Ecology averaged the Production results for maximum capacity values within 5% of the matching point (1,000,000 gpd). This process generated a total of 325 estimates of Production Rates based upon the maximum capacity of each supply system.

Each of 384 water supply systems (the first two excerpt sections shown in Figure 2) thus had up to three estimates of their finished water Production Rates: As reported by the WTPGP permittees or other published source (i.e., Lacey, Pasco, and Seattle) (Column I in Figure 2); As estimated based on their number of Connections if at least 200 (Column J in Figure 2); and As estimated based the lesser of their production maximum capacity or the source capacity (Column K in Figure 2). Since the reliability of these three estimates varied, Ecology selected for each water supply source the estimated Production value used in subsequent calculations (Column L in Figure 2) in this priority:

- First: As reported by the WTPGP permittees or other published source.
- Second: As estimated based on their number of Connections.
- Third: As estimated based the lesser of their production or source capacity.

3.3.3 Estimating Wastewater Discharge Rates from Finished Water Production Rates

Fifteen of the WTPGP permittees reported both their average Production Rates and daily backwash Discharge Rates from October 2014 through January 2015. Ecology plotted in Figure 6 the Discharge Rates versus the Production Rates for two different ranges of Production (<500K and >500K). Separating the data into two ranges improved the correlation between the Production Rates and the Discharge Rates.

Figure 6 shows the two resultant curves and equations describing the relationship between the Production Rate and the Discharge Rate and their corresponding R² values, where the Production is on the **x**-axis, and the Discharge is on the **y**-axis.

The transition between the two curves was not continuous. For example, 500,000 gpd of finished water Production yielded an estimated 38,513 gpd of wastewater discharge from the “<500K” graph, and 39,840 gpd from the “>500K” graph. To reduce the difference between the plotted Production ranges and to account for Production Rates greater than 2,000,000 gpd, Ecology (1) Averaged the two Discharge Rate results for Production Rate values between 300,000 and 500,000 gpd, and (2) Estimated the wastewater Discharge Rate to be 1% of the Production Rate for Production Rates greater than or equal to 2,000,000 gpd. The apparent decrease in estimated Discharge Rates for finished water Production Rates greater than 1,100,000 gpd (illustrated in the second graph in Figure 6) may have indicated a greater motivation for water supply systems to minimize wastage as the volumes grew very large. This process generated 369 estimates of Discharge Rates (Column N in Figure 2) based upon the finished Production Rate for each water supply source.

The remaining 550 water systems (typically very small) had insufficient information available to support an estimate of backwash Discharge Rates based upon finished water Production Rates. Therefore, Ecology used the already known or estimated 138 smallest backwash Discharge Rates (all those less than 1,000 gpd) (Column N in Figure 2) and the corresponding finished water Production Rates (Column L in Figure 2) to determine the average and median backwash Discharge Rates for seven ranges of reported full-time residential Populations served by the water supply systems. Table 1 lists these estimated average and median backwash Discharge Rates for the seven Population ranges. Ecology elected to use the more conservative (smaller of the average and median) estimated rate for each Population range to assign estimated Discharge Rates (Column N of Figure 2) for the remaining 550 water systems.

[Note that the estimated average finished water Production Rates for the 550 small WTPs were *back-calculated* from the relationship between the estimated average Production Rates for the 138 WTPs with Discharge Rates less than 1,000 gpd, and their estimated wastewater average Discharge Rates. This relationship was:

$$\text{Back-Calculated Production} = (-0.006276) \times (\text{Wastewater Discharge})^2 + (31.40716) \times (\text{Wastewater Discharge}) + 1,005$$

with an R² of 0.9995. These estimates of average Production Rates (Column L in Figure 2) were determined for information only and were not used in any calculations going forward.]

3.4 Identifying or Assigning the Type of Discharge Location

The next steps in this re-evaluation were to determine the type of location to which each water supply system discharged its backwash wastewater (i.e., the type of receiving water). As noted in Section 3.1, all of the records provided by DoH identified water suppliers that likely produced wastewater that required discharge to either surface water or groundwater. Most groundwater treatment plants do not discharge their backwash wastewater to surface waters (DoH, 2014), and most surface water treatment plants do discharge their production wastewater back to surface waters. Therefore, for those water systems that did not report the type of their discharge location, Ecology employed the known types of raw water sources to indicate the discharge location type. The final discharge location types are listed in Column P of Figure 2.

First, Ecology assigned raw source water types in the priority order as shown below for each water system for which its type of source water was not certain.

1. If the DoH data contained mention of a surface water body, disinfection, or a Ranney well, Ecology assumed the source type was surface water. The number of surface water sources was 171, excluding those water supply systems with a WTPGP.
2. If the DoH data contained mention of a well (except Ranney wells), Ecology assumed the source type was groundwater. The number of groundwater sources was 681, excluding the water supply systems with a WTPGP.
3. If the DoH data contained no such indications, Ecology identified the source type as unknown. The number of unknown sources was 68.

Second, Ecology assigned types of discharge locations (i.e., receiving waters) in the priority order as shown below for each water system for which its type of discharge location was not certain.

1. If the source type was surface water, Ecology assumed the type of discharge location was also surface water. The number of discharges to surface water was 162, excluding those water supply systems with a WTPGP.
2. Ecology assumed that all hatchery supply systems discharged to surface water. Of the 162 discharges to surface water, fish hatcheries accounted for 11.
3. If the source type was groundwater and the DoH data indicated that treatment was required, Ecology assumed the type of discharge location was to the ground. The number of discharges to the ground was 268.
4. If the source type was groundwater and the DoH data did not indicate that treatment was required (per the “Treatment Required?” column in Appendix B and Column S in Figure 2), Ecology identified the type of discharge location as unknown.

5. If the source type was unknown, Ecology identified the type of discharge location as unknown. The total number of water supply systems that discharged to an unknown location type was 474.

3.5 Summarizing the Results

Finally, Ecology determined several summary statistics for each of the following four groups of water supply systems:

- Ecology-permitted WTPs that *must treat* their raw source water and that discharge backwash wastewater *to surface water* (total of 30).
- Non-permitted WTPs that *must treat* their raw source water and that *probably* discharge backwash wastewater *to surface water* (total of 162).
- Non-permitted WTPs that *must treat* their raw source water and that *probably* discharge backwash wastewater *to the ground* (total of 268).
- Non-permitted WTPs for which the type of discharge location was *unknown* (total of 474).

Table 2 summarizes these results, and the following section discusses their significance.

4.0 Discussion

Table 2 shows the ratios of estimated wastewater Discharge Rates to estimated finished water Production Rates. For example, if the average finished water Production Rate for a WTP that discharged wastewater to the ground was 1,733 thousand gpd, then the average amount of wastewater discharged was $(1.2\%) \times (1,733 \text{ thousand gpd}) = 21 \text{ thousand gpd}$ (~22 thousand gpd due to rounding).

For the 30 Ecology-permitted WTPs, the ratios were 0.9% and 1.6% (based on median and average rates, respectively). These ratios of waste to product appeared reasonable, though possibly a little low. The comparable ratios for the non-Ecology-permitted WTPs were considerably lower. Therefore, the Discharge Rate estimates for non-Ecology-permitted WTPs were probably substantial under-estimates of their actual Discharge Rates. Therefore, the overall potential impact to waters of the State from non-Ecology-permitted WTPs was probably substantially greater than this re-evaluation indicated.

4.1 Unpermitted Water Treatment Plants

WTPs in Washington State that meet all of the following conditions must apply to Ecology for an NPDES wastewater discharge general permit (WTPGP).

- Produce potable water or “industrial” water (primary treatment/settled water) where the treatment and distribution of water is the primary function of the facility.
- Have an actual Production Rate equal to or greater than 35 thousand gpd of treated product water (finished water) as determined on an average monthly basis.
- Discharge wastewater effluent to surface water.
- The wastewater discharge is from water treatment filtration processes (filter backwash, sedimentation/pre-sedimentation basin washdown, sedimentation/clarification, or filter-to-waste).
- The water treatment works are not part of a larger, permitted facility.

The cells highlighted in pink in Table 2 show that many non-Ecology-permitted WTPs probably discharge backwash wastewater to surface waters of the State and produce finished water at rates that would require application to Ecology for an NPDES general permit. The average finished water Production Rate per WTP that probably discharged to surface water (4,850 thousand gpd) was much greater than the minimum Production Rate that would require coverage under the WTPGP (35 thousand gpd). However, the corresponding median rate was only 10 thousand gpd. Therefore, up to half of the 162 associated WTPs might have produced greater than 35 thousand gpd of finished water.

The possibility also exists that some of the 268 non-Ecology-permitted WTPs that probably discharged backwash wastewater to the ground actually discharged to surface water. If their finished water Production Rate exceeded 35,000 gpd, then they also would be required to apply for coverage under the WTPGP. Appendix C contains a list of those water supply sources that produced at least an estimated 25,000 gpd of finished water, and that: (1) Probably discharged to surface water (45 each); and (2) Probably discharged to the ground (152 each). A goodly number of these water supply sources may meet the thresholds requiring coverage under the WTPGP.

4.2 Discharges to the Ground

The current WTPGP Fact Sheet employed certain facts and assumptions to determine whether discharges of treated backwash wastewater presented a significant potential to pollute waters of the State. The available data analyzed in this re-evaluation indicated that some of those facts and assumptions must be updated. Specifically, the considerations regarding wastewater discharges to the ground greatly underestimated the Discharge Rates actually occurring.

The Fact Sheet stated, “In Washington State as of December 1997, 20 water treatment plants (WTPs) with more than 100 residential connections were identified as discharging wastewater to land.” However, in mid-2014, we have identified approximately 97 WTPs with more than 100 residential connections that probably have discharged wastewater to land. This five-fold increase merits a closer look at the possible effects of those discharges.

The Fact Sheet employed two models to assess the potential that wastewater discharges to the ground might adversely affect groundwater quality. The criteria that must be met were the secondary maximum contaminant levels for total dissolved solids (TDS) and chloride (500 milligrams per liter (mg/L) and 250 mg/L, respectively). The two scenarios were a one-time discharge and a daily discharge for a 90-day period.

- Ecology determined that the acceptable size of a one-time discharge of “typical” WTP wastewater, which contained 1,000 mg/L of TDS, was 3,000 gallons. The largest volume modeled for a one-time discharge was 10,000 gallons. Ecology elected not to require WTPGP coverage for WTPs that discharged less than and up to this one-time typical discharge volume and concentration.

Ecology also stated in the Fact Sheet that the discharge to the ground of 25 pounds of salt per day did “not typically demonstrate reasonable potential to violate ground-water criteria for chloride and total dissolved solids...” Dilution of 25 pounds of salt to obtain the typical TDS concentration of 1,000 mg/L required 3,000 gallons of water, similar to the description above.

- Ecology’s scenario for ongoing daily discharges assumed a 20 gpd discharge containing 60,000 mg/L chloride. Scaling that chloride concentration down to the “typical” WTP wastewater concentration of 1,000 mg/L of TDS required increasing the Discharge Rate to 1,980 gpd. Ecology elected not to require WTPGP coverage for WTPs that discharged less than and up to this ongoing daily Discharge Rate.

For both scenarios, Ecology set the upper limits of the expected impacts to groundwater quality to create final concentrations in the groundwater most affected by the discharges of roughly 500 mg/L TDS and 250 mg/L chloride. The cells highlighted in yellow in Table 2 show that the probable Discharge Rates of wastewater to the ground from a single WTP (1.2 thousand and 22 thousand gpd, based upon the median and average, respectively) exceeded the rates assumed in the Fact Sheet up to 11-fold.

5.0 Conclusions and Recommendations

1. More than a decade of growth and development in Washington State has resulted in the likely addition of up to several dozen WTPs that are not currently covered under Ecology’s WTPGP, but that meet the thresholds requiring coverage.

Ecology should directly contact the water supply systems listed in Appendix C (as a start), learn about their operations, and inform them of the relevant NPDES wastewater discharge permitting requirements, as necessary.

2. Ecology's understanding of the water treatment industry may have become outdated. More large systems operate now than in the past. More of those systems probably discharge their backwash wastewater to the ground than in the past. The volumes of those wastewater discharges to the ground are likely greater than Ecology had assumed in the past.

Ecology should re-evaluate the potential threat to the quality of the groundwaters of the State from discharges of WTP wastewater to the ground, and use the new information to inform improvements to the WTPGP and Agency policies. The first step should be to require WTPs currently covered by the WTPGP to provide to Ecology data about the rates of their discharges to the ground and the concentrations in those discharges of specific pollutants. The pollutants of interest should be selected from among chloride, iron, manganese, and total dissolved solids.

6.0 References

- Seattle Public Utilities. “Current Water Supply Conditions and Outlook, January 22, 2015.” Webpage <http://www.seattle.gov/util/MyServices/Water/AbouttheWaterSystem/WaterSupply/>, accessed on 1/26/2015. [11]
- Thurston Regional Planning Council. “Case Studies of Water Efficiency in Thurston County.” December 2012. [11]
- United States Army Corps of Engineers. “Columbia Water Supply Project, Pasco, Washington, Environmental Assessment.” Walla Walla District, October 2014. [11]
- Washington State Department of Ecology. “Investigation of Discharges from Water Treatment Plant Filter Backwash, Draft.” Ecology Publication No. 16-03-0xx. December 18, 2017 draft. [2]
- Washington State Department of Health. Email from Michael J. Means, DoH, to James Maroncelli, Ecology, on June 6, 2014. [9]
- Washington State Department of Health. Data files assembled by Michael J. Means and Ginny Stern, DoH, and provided to Ecology on June 6 and August 27, 2014. [9]
- Zar, Jerrold H. *Biostatistical Analysis, Fourth Edition*. Prentice Hall, New Jersey, 1999. [11]

Tables

Table 1. Assumed Wastewater Discharge Rates for Small Water Suppliers with Small Populations

Full-Time Residential Population	Number of Water Systems with Data	Discharge Rate of Backwash Wastewater			Number of Water Systems Assigned a Value
		Range of Values, Reported and Estimated (gpd)	Average (gpd)	Median (gpd)	
0	56	14 - 966	370	310	117
1 - 20	37	27 - 966	356	310	338
21 - 40	11	310 - 895	354	534	43
41 - 60	13	182 - 966	558	621	17
61 - 80	9	92 - 990	416	409	12
81 - 100	6	310 - 966	557	546	8
101 - 236	6	131 - 966	712	849	15
	Total = 138				Total = 550

gpd = Gallons per day.

Bold = Value selected for substitution.

Table 2. Summary of Water Production, Wastewater Discharge, and Receiving Water Type

	Number of WTPs	Production Rates for Finished Water			Discharge Rates for Backwash Wastewater									
		Total Production (Kgpd)	Average Production per WTP (Kgpd)	Median Production per WTP (Kgpd)	Based on Average Rates				Based on Median Rates					
					Total Discharge (Kgpd)	Standard Deviation (Kgpd)	Discharge per WTP (Kgpd)	Wastewater Discharge per Finished Production	Total Discharge (Kgpd)	Discharge Rates For Each Individual WTP			Discharge per WTP (Kgpd)	Wastewater Discharge per Finished Production
										10th %ile (Kgpd)	Median (Kgpd)	90th %ile (Kgpd)		
Reported Values for Permitted WTPs Discharging to Surface Water	30	110,831	3,694	450	1,786	95	60	1.6%	990	4.3	33	120	33	0.9%
Estimated Values for Non-Permitted WTPs Discharging to Surface Water	162	785,724	4,850	10	8,360	419	52	1.1%	50	0.31	0.31	28	0.31	<0.1%
Estimated Values for Non-Permitted WTPs Discharging to the Ground	268	464,571	1,733	31	5,803	136	22	1.2%	325	0.19	1.2	29	1.2	<0.1%
Estimated Values for Non-Permitted WTPs Discharging to Unknown Location	474	133,958	283	10	1,926	25	4.1	1.4%	147	0.31	0.31	0.56	0.31	0.1%
Total Estimated Values for Non-Permitted WTPs	904	1,384,254	1,531	10	16,090	193	18	1.2%	280	0.31	0.31	10	0.31	<0.1%

Kgpd = Thousands of gallons per day.

WTP = Water treatment plant. Those WTPs with an actual average monthly production rate of equal to or greater than 35 Kgpd of treated product water and who discharge backwash effluent to surface water must apply to Ecology for coverage under an NPDES discharge permit.

162 = Indication that up to 80 WTPs have been operating at a production level that requires coverage under an NPDES discharge permit, but who do not have coverage.

268 = Indication that certain assumptions in the Fact Sheet (e.g., typical backwash discharge rates are 1,980 and 3,000 gpd) may not be sufficiently protective of groundwater quality.

Figures

Figure 1. Flowchart of the Numerical Pathway.

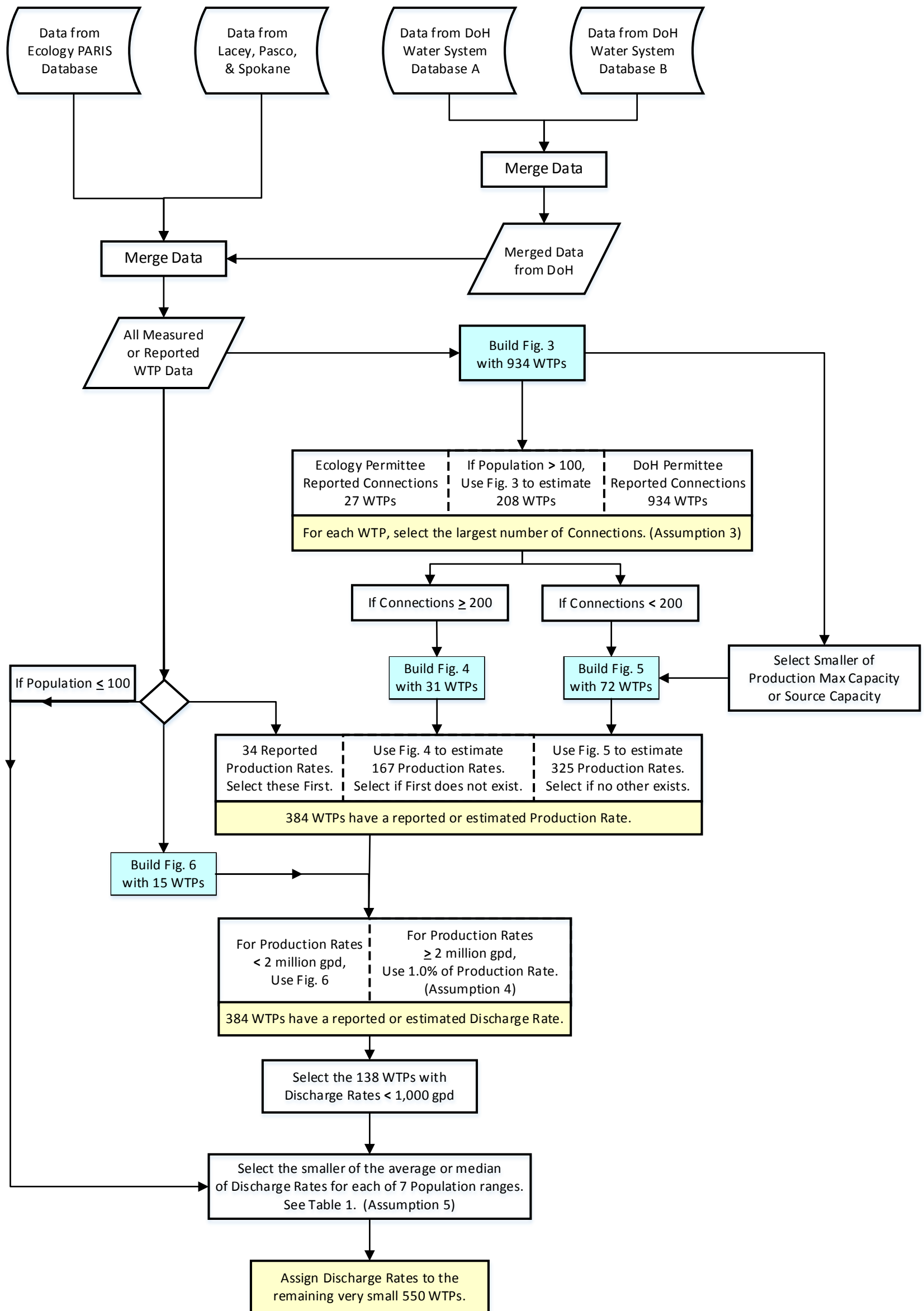


Figure 2. Excerpts from the Calculations Spreadsheet

Columns:	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U
	Black Bold = Provided by Ecology Permittees OR Other Published Data	S = Surface water W = GW well WW = Well of a wellfield	Green Fill = Merged DoH Data.	Light Blue Fill = Calculated per Figure 3 Equations (PopToConn).			Pink Fill = Copied from WTPs-AllInfo-20150114.xls Permittees2015Jan tab.		Blue Fill = Calculated per Figure 4 Equations (ConnToProd).		Dark Blue Fill = Calculated per Figure 5 Equations (MaxCapsToProd), and Table Cell BT57. (Use avg: 100-			Dark Green Fill = Calculated per Figure 6 OR 1% of Production Rate.		WF = Wellfield SP = Spring SE = Seawater		Olive Fill = Best guess per Notes tab #26.		Dark Pink Fill = Back-Calc'd from WWAvg Discharge.	
	WTP Name OR Water System Name (Unique)	Water System Plant Name OR WTP-Name - SourceName	FullTime ResidPop (DoH)	Total Cnnctns (DoH)	Total Cnnctns (Permittee)	Total Cnnctns (Calc from DoH Pop)	Total Cnnctns (Use These)	Production MaxCap (gpd)	Production Actual Avg (gpd) (Use 1st)	Production (gpd) Estimated Average (Calc from TotConn) (Use 2nd)	Production (gpd) Estimated Average (Calc from MaxCaps) (Use 3rd)	Production Est Avg (gpd) (Use These)	Production ActualPeak (gpd)	WW Avg Discharge (gpd)	WW Max Discharge (gpd)	WW Recipient Type	SrcSrc Type	Source Capacity (gpd)	Treat Req	Treat Objective	EcyGenPrmt Number
30 Permitted WTPs	RAYMOND WATER DEPARTMENT	Surface WTP - S Fork Willapa River	2,970	1,564	1,400	1,513	1,564	2,000,000	500,000	452,189	763,684	500,000	2,000,000	52,200		SW-K	S	2,016,000	Y	Control Disinfection Byproducts	WAG641007
	RICHLAND, CITY OF	S01 - Surface Water & Wellfield	51,150	23,407	23,875	21,316	23,875	36,000,000	11,176,438	19,381,055	1,745,803	11,176,438	30,880,000	111,764		SW-K	WF		Y	Remove Organics & Color	WAG645000
	RYDERWOOD IMPROVEMENT & SERVICE DISTRICT	Ryderwood WTP, CAMPBELL CREEK	432	289	432	241	432	144,000	95,000	120,494	61,254	95,000	143,000	4,666		SW-K	S	144,000	Y	Remove Particulates	WAG641011
	WILLAPA VALLEY WATER DISTRICT	Willapa Valley WTP, STRINGER CREEK	2,000	728	728	1,046	728	500,000	200,000	204,997	167,304	200,000	375,000	11,460		SW-K	S	500,000	Y	Remove Particulates	WAG641013
	WOODLAND, CITY OF	Lewis River SWTP, LEWIS RIVER	5,255	2,398	2,660	2,519	2,660	3,000,000	731,000	795,342	1,223,266	731,000	1,628,000	38,000	240,000	SW-K	S	3,000,000	Y	Remove Fe & Mn	WAG641021
354 Non-Permitted WTPs with Column L Calculated from Population or Connections	BLANCHARD EDISON WATER ASSN. INC.	Wells 1, 3, and 4	980	496		530	530			148,208	177,981	148,208		8,520		G-P	WW	547,200	Y	Remove Fe & Mn	none
	BOGACHIEL STATE PARK	Well #1	1	15			15				23,581	23,581		871		G-P	W	66,240	Y	Remove Fe & Mn	none
	BOISTFORT VALLEY	Adna & Wildwood WTPs, LTL MILL CREEK	2,289	850		1,188	1,188			339,380	114,604	339,380		21,862		SW-P	S	288,000	Y	Remove Particulates	none
	BONNEY LAKE WATER DEPARTMENT	Ballpark Wells	35,123	14,391		15,218	15,218			9,184,859	691,297	9,184,859		91,849		G-P	WF	1,828,800	Y	Remove Fe & Mn	none
	BOSTON HARBOR	S08 WF(S06 & S07)	880	261		478	478			133,420		133,420		7,478		UnK	W				none
	BOXX BERRY FARM WATER SYSTEM	Well	2	3			3				5,126	5,126		131		G-P	W	14,400	Y	Remove Inorganics	none
	BRON-YR-AUR Investments	Well #1- AFL782	0	1			1				28,195	28,195		1,087		G-P	W	79,200	Y	Remove Particulates	none
	CAMANO WATER ASSOCIATION	Wells 6, 7, and 8	2,588	1,036		1,332	1,332			382,328	423,148	382,328		26,668		G-P	WF	1,152,000	Y	Remove Fe & Mn	none
	CAMP KALSMAN WATER SYSTEM	Wellfield (Wells 1 & 2)	1	30			30				30,758	30,758		1,211		G-P	WF	86,400	Y	Remove Fe & Mn	none
CAMPBELLS GLEN	Well 2, 3, WF and well 4	62	29			29				4,101	4,101		99		G-P	W	11,520	Y	Remove Fe & Mn	none	
550 Non-Permitted WTPs with Column N Determined from Table 1, and Column L Back-Calculated from Column N.	110 AVENUE WATER SYSTEM	WELL	11	4			4					10,138		310		UnK	W				none
	2533 #201	WELL #1	12	4			4					10,138		310		UnK	W				none
	304TH & 92ND - 245	WELL #1	23	11			11					11,337		354		UnK	W				none
	50TH VIEW WATER SYSTEM	WELL #1	11	3			3					10,138		310		UnK	W				none
	77-489 WATER SYSTEM	WELL #1	10	4			4					10,138		310		UnK	W				none
	ADAMS RD COMMUNITY ASSN	AGA816 WELL 1	39	18			18					11,337		354		UnK	W				none
	ARLINGTON FISH HATCHERY	WELL #1	6	3			3					10,138		310		SW-P	W				none
	BEACHWOOD RESORT	Well 1	4	19			19					10,138		310		G-P	W		Y	Remove Fe & Mn	none
	Bear Mountain Water District	Lakeview WTP - Lake Chelan	82	43			43					16,282		546		SW-P	S				none
	BEAR VIEW ESTATES #1	Well 1	10	5			5					10,138		310		UnK	W				none
	BISCAY VILLA	Arsenic Treatment Plant	24	12			12					11,337		354		UnK	W				none
	BIXBY WATER SYSTEM	BIXBY WELL	5	5			5					10,138		310		UnK	W				none
	BLAKE ISLAND STATE PARK WTR	Wells 1, 2 & 3	5	27			27					10,138		310		UnK	W				none
	BLAKELY IS. MAINTENANCE COMM.	HORSESHOE LAKE	20	120			120					10,138		310		SW-P	S				none
	BOB OKE GAME FARM	Well 1	2	2			2					10,138		310		UnK	W				none
	BOGACHIEL REARING PONDS	SPRING	5	2			2					10,138		310		SW-P	S				none
	BOISE PAPER - PCA - WALLULA	Boise Cascade WTP - COLUMBIA RIVER	0	1			1					10,138		310		SW-P	S				none
	BONZAI WATER COMPANY	WELL 1	18	7			7					10,138		310		UnK	W				none
	BOX CANYON	NICKEL CREEK	0	4			4					10,138		310		SW-P	S		Y	Remove Particulates	none
	BREWER WATER SUPPLY	SPRING	6	3			3					10,138		310		SW-P	S				none

Wastewater Recipient Types: SW = Surface water; G = Groundwater; N = None; UnK = Unknown; K = Known; and P = Presumed.

Figure 3. Population versus Connections

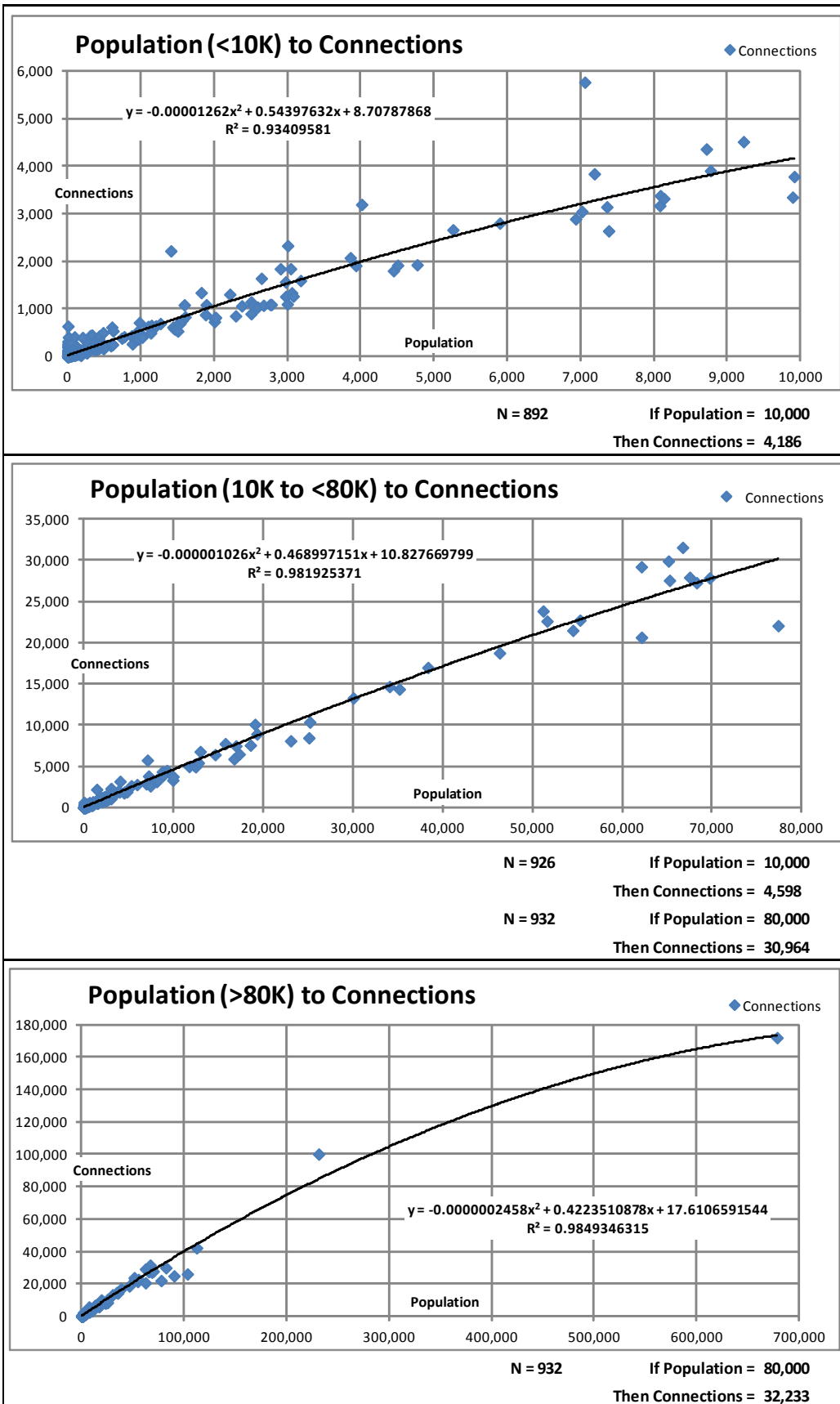
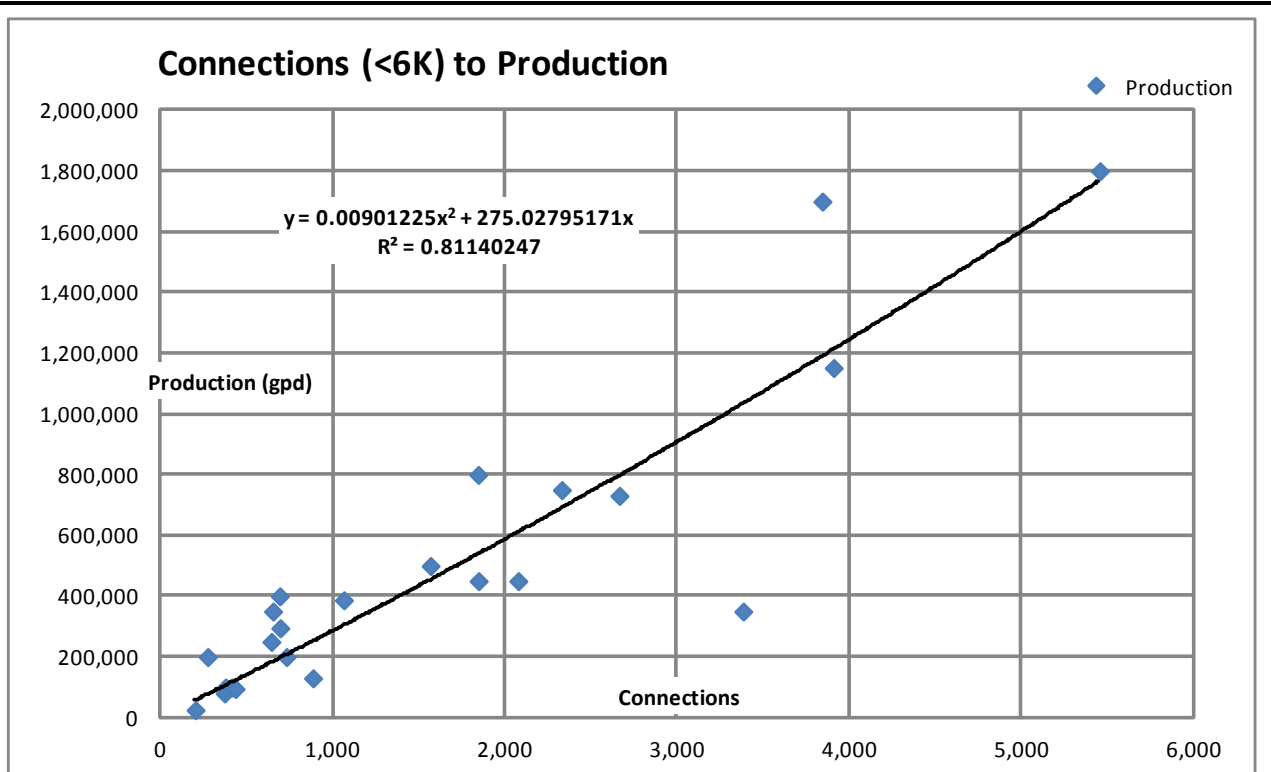
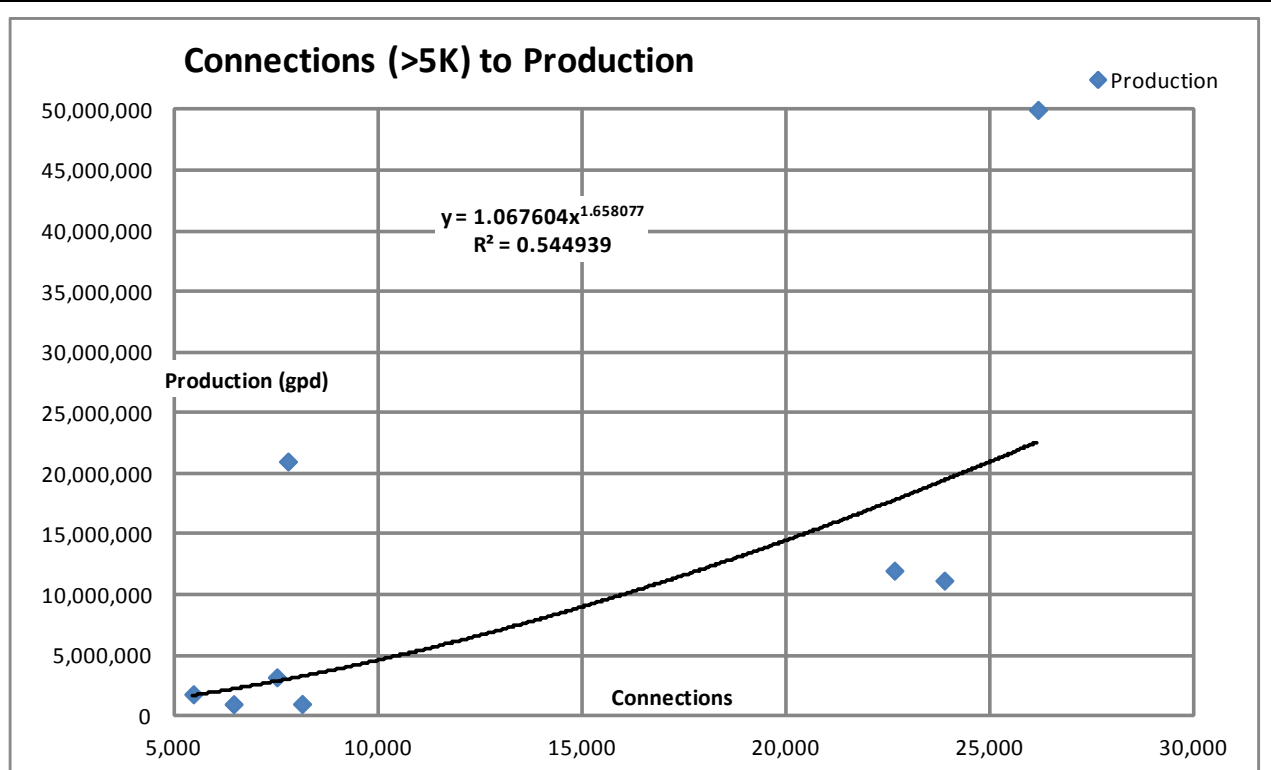


Figure 4. Connections versus Production



If Connections = 5,500 N = 24
 Then Production = 1,785,267



If Connections = 5,500 N = 8
 Then Production = 1,699,102

Figure 5. Source or Production Maximum Capacity versus Production

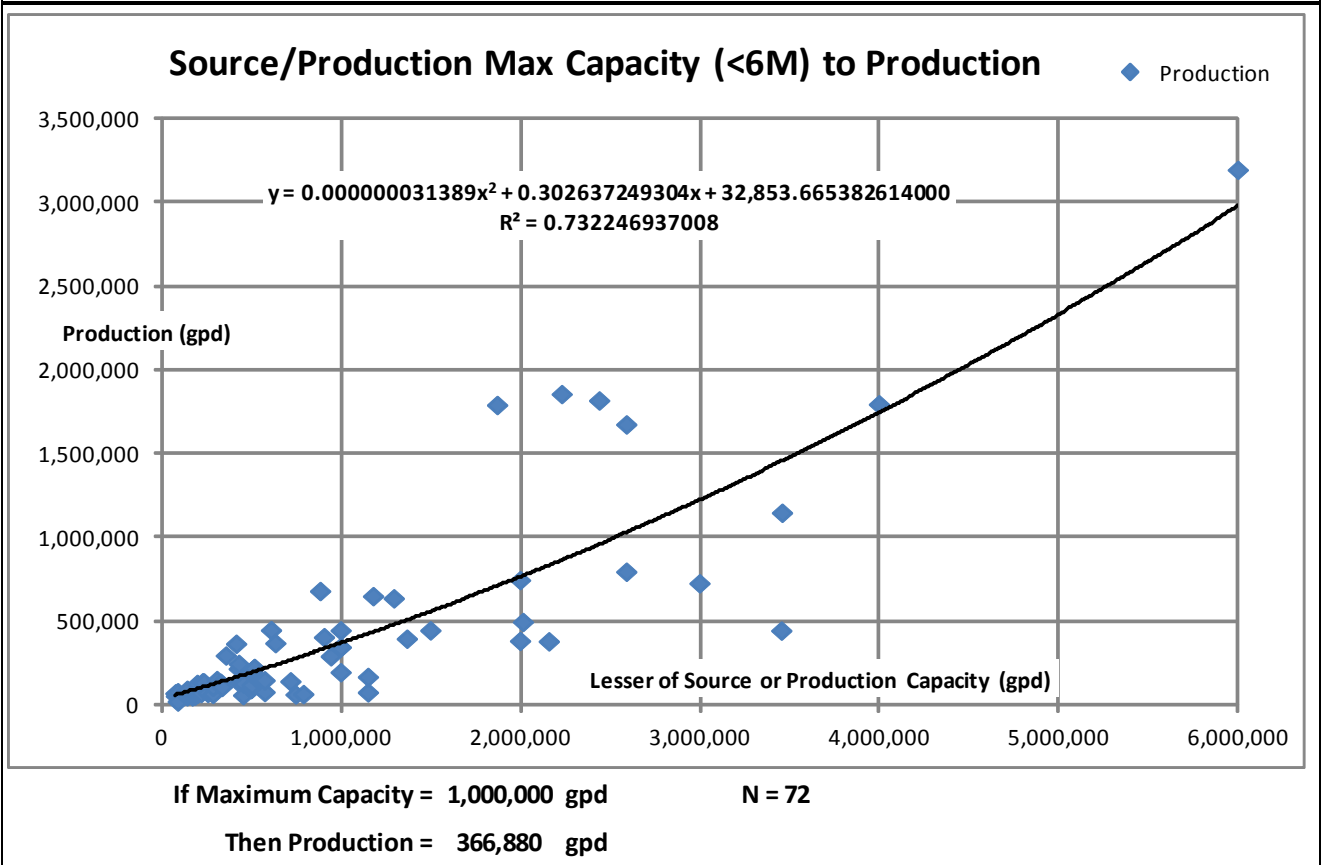
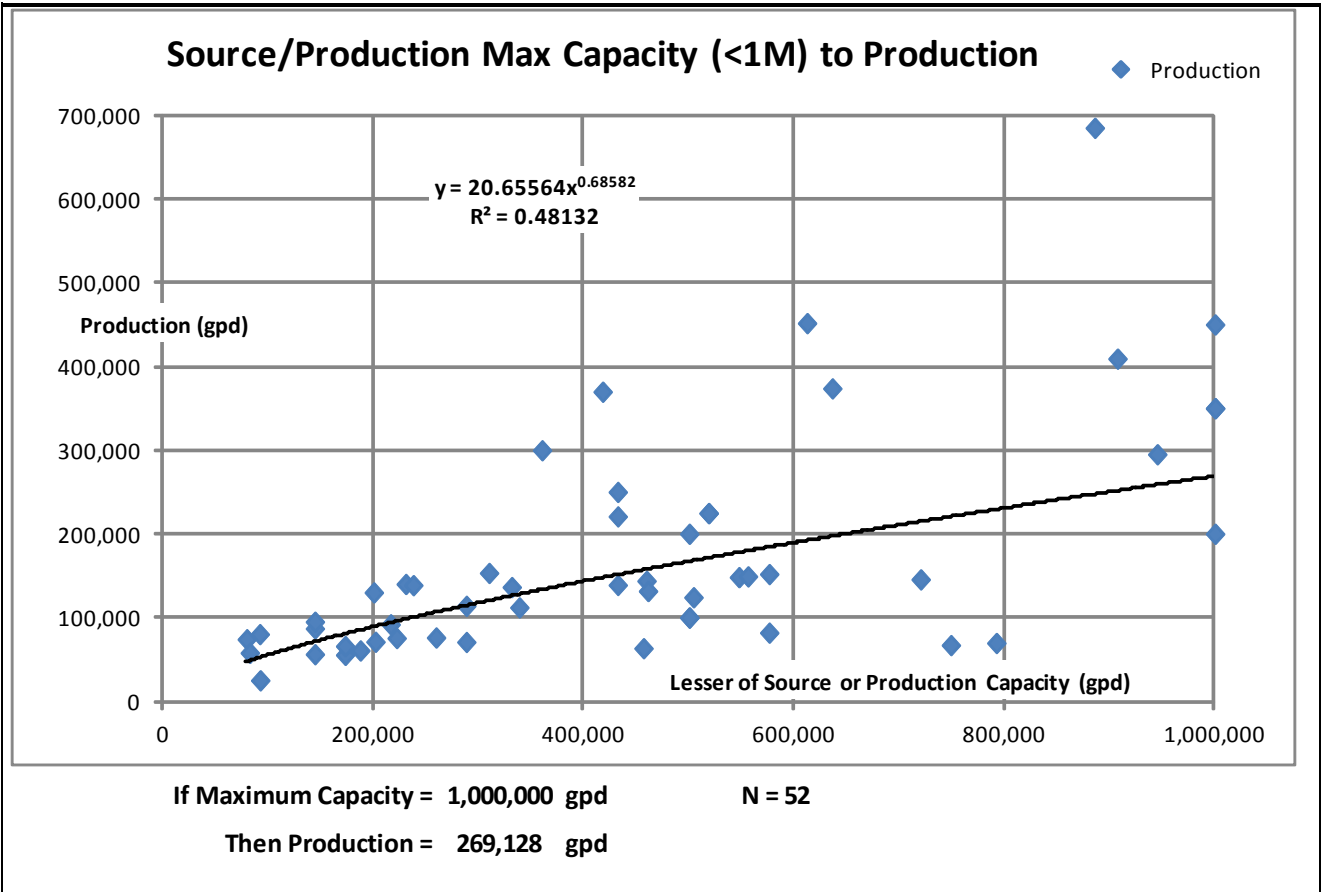
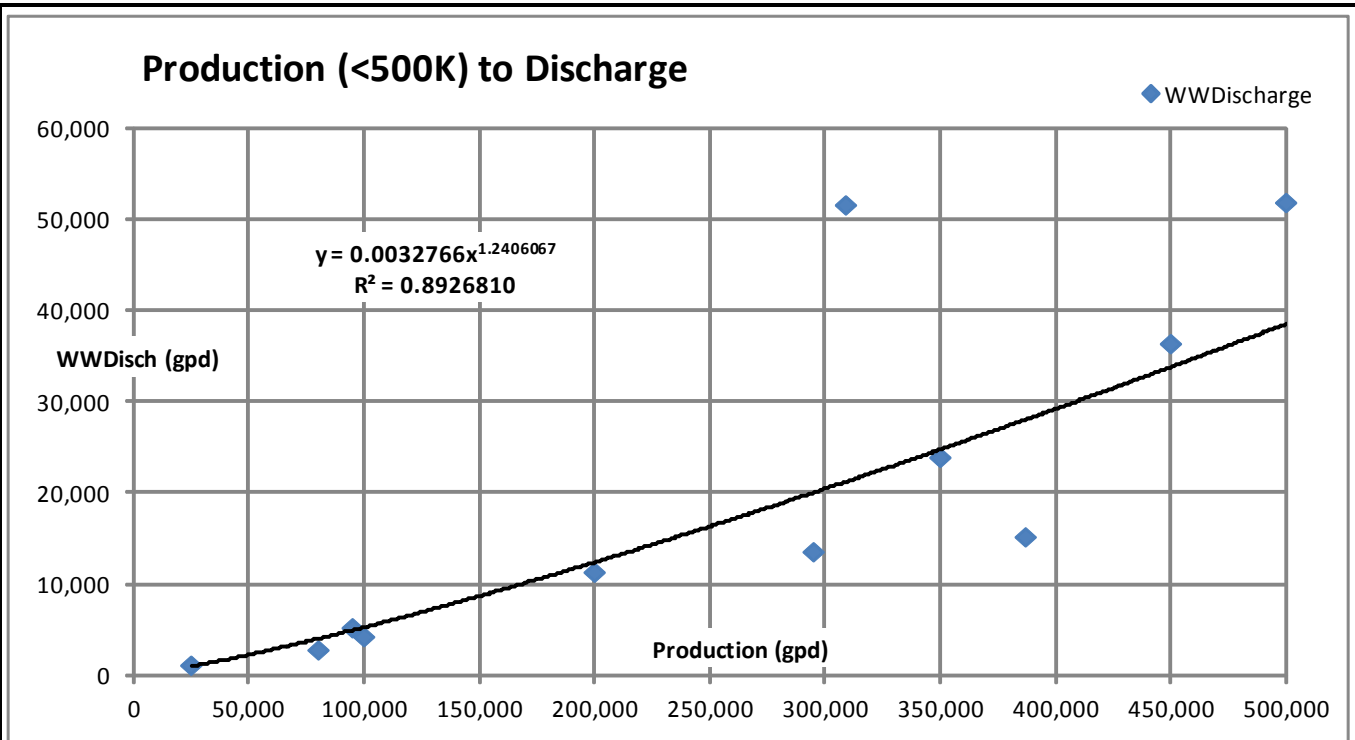
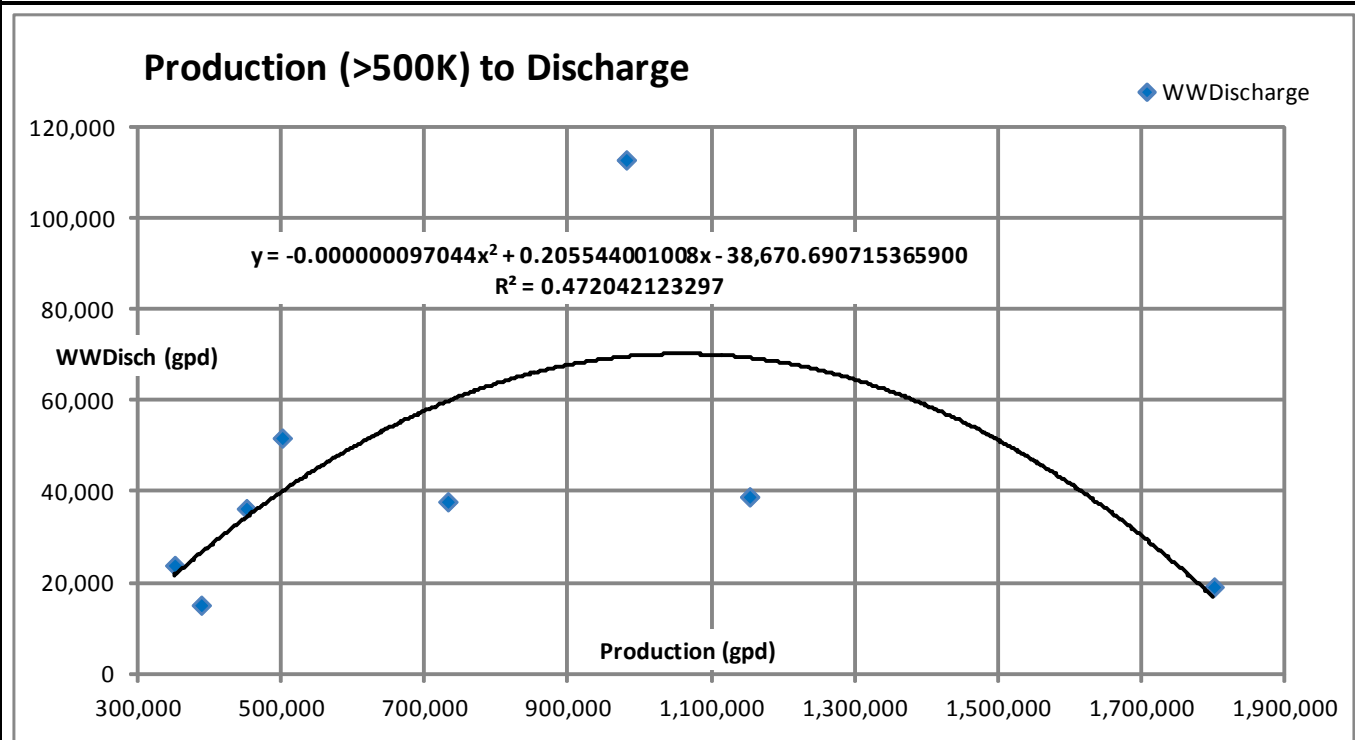


Figure 6. Production versus Discharge



If Production = 500,000 gpd N = 11
 Then Discharge = 38,513 gpd



If Production = 500,000 gpd N = 8
 Then Discharge = 39,840 gpd

Appendix A

Available Data for Ecology-Permitted Water Treatment Plants

Appendix A. Available Data for Ecology-Permitted Water Treatment Plants

Facility Name	Permit No.	Latest NOI	Water Source	Full-Time Residential Population (DoH)	Connections (DoH)	Connections (Permittee)	Production MaxCapacity (gpd)	Production ActualAverage (gpd)	Production Peak (gpd)	Raw Water Treatment Methods	Wastewater Generation Processes
Aberdeen WTP	WAG641026	2/7/2014	surface	16,920	7,498	6,200	6,000,000	3,200,000	4,500,000		
Anacortes WTP	WAG643002	2/27/2014	surface	15,734	7,771	7,771	42,000,000	21,000,000	30,000,000	Coagulation Flocculation pH Adjustment Rapid sand filtration Settling basin	Filter backwash Filter-to-waste Presedimentation wash down Sedimentation wash down
Arlington WTP	WAG647003	8/24/2012	87% GWI 3% Airport wellfield 10% Purchased	14,598	6,437		2,460,000	980,000	1,390,000	Prechlorination Flocculation Rapid sand filtration pH Adjustment	Filter backwash Filter-to-waste
Camas WTP	WAG641006	10/6/2014	surface	23,020	8,117		1,500,000	1,000,000	1,100,000	Coagulation pH Adjustment Rapid sand filtration	Filter backwash Filter-to-waste
Castle Rock WTP	WAG641025	1/27/2014	surface	2,373	1,061	950	2,000,000	387,000	1,200,000		
Cathlamet WTP	WAG641009	8/8/2014	surface Elochoman R	1,530	692	600	22,680	7,080	14,832	Pre-chlorination Coagulation Rapid sand filtration	Filter backwash Filter-to-waste
Chehalis WTP	WAG641012	8/7/2014	surface	7,185	3,838	3,700	4,500,000	1,700,000	4,100,000	Coagulation Rapid sand filtration Flocculation pH Adjustment Pre-chlorination Settling basin	Filter backwash Filter-to-waste Sedimentation wash down
Chinook Water District WTP	WAG641027	3/3/2014	surface Freshwater Creek	768	412	365	500,000	100,000	300,000	Membrane filtration	Filter backwash
Clallam County PUD 1 Glass [Port Angeles Composite]	WAG641010	12/16/2013	surface Morse Creek	8,085	3,379	3,379	1,000,000	350,000	600,000	Membrane filtration Coagulation Flocculation Pre-chlorination	Filter backwash Filter-to-waste
CUSICK WTP	WAG647000	3/3/2014	surface Pend Oreille R	420	374	300	500,000	100,000	350,000	Coagulation Rapid sand filtration	
Everett Water Filtration Plant	WAG643009	2/11/2014	surface Spada Reservoir in Sultan R Basin	103,000	26,172	26,081	141,000,000	50,000,000	117,000,000	Pre-chlorination Coagulation Flocculation Rapid sand filtration pH Adjustment Other (fluoridation & post-chlorination)	Filter backwash Filter-to-Waste Other
Friday Harbor WTP	WAG643005	3/4/2014	surface Trout Lake	3,040	1,808	1,843	1,000,000	450,000	650,000	Coagulation Flocculation pH Adjustment Rapid sand filtration Settling basin	Filter backwash Filter-to-waste

Appendix A. Available Data for Ecology-Permitted Water Treatment Plants

Facility Name	Permit No.	Chemical Additives	Wastewater Avg Discharge (gpd)	Wastewater Max Discharge (gpd)	Discharge To:
Aberdeen WTP	WAG641026				trib to Wishkah R
Anacortes WTP	WAG643002	Alum (Hydrex 3211) Chlorine (Cl2) Organic polymer (Hydrex 3572) Soda ash (Na2CO3) Sodium hydroxide (NaOH)			Skagit R
Arlington WTP	WAG647003	Sodium hypochlorite (NaClO)	123,318	284,000	85% to unlined ConstrTrtmntWetland/Stillaguamish R 15% to water reclamation facility
Camas WTP	WAG641006	Sodium hypochlorite (NaClO) Sodium hydroxide (NaOH)			Lacamas Lake
Castle Rock WTP	WAG641025		40,000		Infiltration pond to Cowlitz R
Cathlamet WTP	WAG641009	Sodium hypochlorite (NaClO) Organic polymer (Ultrion 8185) Other (Nalclear 8170) 7,300 gal several times each day	1,951		Elochoman R
Chehalis WTP	WAG641012	Chlorine (Cl2) Lime (CaO or Ca(OH)2)			Coal Creek
Chinook Water District WTP	WAG641027	Chlorine (Cl2) Other (ACH)			Unnamed Freshwater Creek
Clallam County PUD 1 Glass [Port Angeles Composite]	WAG641010	Alum Soda ash (Na2CO3) Sodium hydroxide (NaOH)			Morse Creek
CUSICK WTP	WAG647000				Pend Oreille R
Everett Water Filtration Plant	WAG643009	Organic polymer (nonionic acylamide powder)			Lake Chaplain
Friday Harbor WTP	WAG643005	Potassium Chlorine (Cl2) Soda ash (Na2CO3)			Unnamed stream to Margos Lake

Appendix A. Available Data for Ecology-Permitted Water Treatment Plants

Facility Name	Permit No.	Latest NOI	Water Source	Full-Time Residential Population (DoH)	Connections (DoH)	Connections (Permittee)	Production MaxCapacity (gpd)	Production ActualAverage (gpd)	Production Peak (gpd)	Raw Water Treatment Methods	Wastewater Generation Processes
Hoquiam WTP	WAG641000	2/21/2014	surface West fork, Hoquiam R	8,770	3,904	3,904	3,460,000	1,152,000	3,400,000	Coagulation Flocculation Pre-chlorination	Filter backwash Filter-to-waste
Indian Creek Water Plant (Ilwaco)	WAG641001	6/18/2014	surface Indian Creek	1,262	689	689	1,369,000	400,000	890,000	Coagulation Flocculation pH Adjustment Rapid sand filtration Other (CAC)	Filter backwash Filter-to-waste
Kalama WTP	WAG641023	5/5/2014	GWI Kalama R	2,900	1,518	1,841	2,592,000	800,000	1,296,000	Diatomaceous earth filtration	Filter backwash
Leavenworth WTP	WAG645001	7/23/2014	surface (?) Icicle Creek	3,000	2,326	1,400	2,000,000	750,000	1,300,000	Coagulation Activated carbon Green sand	
LISECC, Inc Lummi Island Scenic Estates	WAG643004	7/28/2014	surface reservoir	120	200	186	92,000	25,000	35,000	Coagulation	Filter backwash
Long Beach WTP	WAG641019	3/11/2014	surface	3,854	2,073	2,073	1,500,000	450,000	780,000	Coagulation Membrane filtration pH Adjustment Screening	Filter backwash
Lynden WTP	WAG643003	12/23/2013	surface Nooksack R	12,730	5,449		4,000,000	1,800,000	4,900,000	Coagulation Flocculation pH Adjustment Rapid sand filtration	Filter backwash Filter-to-waste Sedimentation wash down
McNeil Island Stewardship WTP	WAG643008	2/21/2014	surface Butterworth Reservoir	271	271	1	1,000,000	200,000	300,000	Coagulation Flocculation pH Adjustment Rapid sand filtration Settling Basin	Filter backwash Filter-to-waste Presedimentation wash down Sedimentation wash down
Morton WTP	WAG641016	3/6/2014	surface Connelly Creek	1,140	630	650	1,000,000	350,000	600,000	Coagulation pH Adjustment Flocculation Rapid sand filtration	Filter backwash Filter-to-waste Sedimentation wash down
Pasco WTP	WAG647001	1/30/2014	surface Columbia R	51,590	22,649	22,649	24,000,000	12,000,000	24,000,000	Coagulation Flocculation Settling basin Screening	Filter backwash
Purdue Lake Treatment Plant	new	12/22/2014	surface Purdue Lake		882		200,000	130,000	185,000	Coagulation Flocculation Settling basin	Filter backwash Filter-to-waste Presedimentation wash down Sedimentation wash down

Appendix A. Available Data for Ecology-Permitted Water Treatment Plants

Facility Name	Permit No.	Chemical Additives	Wastewater Avg Discharge (gpd)	Wastewater Max Discharge (gpd)	Discharge To:
Hoquiam WTP	WAG641000	Alum Chlorine (Cl ₂) Organic polymer Sodium hydroxide (NaOH)	53,115	140,000	West fork, Hoquiam R
Indian Creek Water Plant (Ilwaco)	WAG641001	Alum Chlorine (Cl ₂) Organic polymer Soda ash (Na ₂ CO ₃)			Bear Creek
Kalama WTP	WAG641023	Sodium hypochlorite (NaClO) Sodium bisulfite (NaHSO ₃)			Kalama R
Leavenworth WTP	WAG645001	Chlorine (Cl ₂)			Icicle Creek
LISECC, Inc Lummi Island Scenic Estates	WAG643004	Alum Chlorine (Cl ₂)	1,120	1,170	No Name Creek to a man-made lake
Long Beach WTP	WAG641019	Other (Aluminum chlorohydrate)	36,500		Infiltration basin to Mountain Spring Reservoir Willapa Bay
Lynden WTP	WAG643003	Lime (CaO or Ca(OH) ₂) Alum Sodium hypochlorite (NaClO) Organic polymer	19,087		Nooksack R
McNeil Island Stewardship WTP	WAG643008	Soda ash (Na ₂ CO ₃) Sodium hypochlorite (NaClO) Alum Potassium Organic polymer			Butterworth Reservoir Eden Creek
Morton WTP	WAG641016	Chlorine (Cl ₂) Soda ash (Na ₂ CO ₃) Organic polymer (EC-462)	24,806		Tilton R
Pasco WTP	WAG647001	Chlorine (Cl ₂) Alum			Columbia R
Purdue Lake Treatment Plant	new	Potassium Sodium hypochlorite (NaClO) Other (Ferric chloride)			Raccoon Creek

Appendix A. Available Data for Ecology-Permitted Water Treatment Plants

Facility Name	Permit No.	Latest NOI	Water Source	Full-Time Residential Population (DoH)	Connections (DoH)	Connections (Permittee)	Production MaxCapacity (gpd)	Production ActualAverage (gpd)	Production Peak (gpd)	Raw Water Treatment Methods	Wastewater Generation Processes
Raymond WTP	WAG641007	12/30/2013	surface	2,970	1,564	1,400	2,000,000	500,000	2,000,000	Coagulation Flocculation pH Adjustment Settling basin Other (multi-media filtration)	Filter backwash Filter-to-waste
Richland WTP	WAG645000	2/24/2014	surface Columbia R	51,150	23,407	23,875	36,000,000	11,176,438	30,880,000	Coagulation Flocculation Rapid sand filtration	Filter backwash Filter-to-waste
Ryderwood WTP	WAG641011	7/18/2014	surface Campbell Creek	432	289	432	144,000	95,000	143,000	Coagulation Flocculation Activated carbon pH Adjustment Rapid sand filtration Screening Settling basin	Filter backwash
South Bend WTP	WAG641008	2/28/2014	surface Martin Creek Electric Creek	1,888	1,029	1,085	864,000	360,000	828,000		
Stevenson WTP	WAG641020	1/13/2014	surface LaBong Creek	1,200	640	640	1,000,000	250,000	339,000	Coagulation Flocculation Rapid sand filtration	Filter-to-waste
Vader WTP	WAG641004	3/7/2014	surface Cowlitz R	920	369	369	91,600	80,200	104,800	Coagulation Activated carbon pH Adjustment Other (multi-media filtration)	Filter-to-waste
Willapa Valley Water District WT	WAG641013	1/23/2014	surface Stringer Creek	2,000	728	728	500,000	200,000	375,000	Prechlorination Coagulation Rapid sand filtration	Filter backwash Filter-to-waste
Woodland WTP	WAG641021	3/3/2014	surface Lewis R	5,225	2,398	2,660	3,000,000	731,000	1,628,000	Prechlorination Coagulation Flocculation pH Adjustment Rapid sand filtration	Filter backwash Filter-to-waste

All data = From Permittee, except as noted.
 DoH = Washington State Department of Health.
 gpd = Gallons per day.
 NOI = Notice of Intent.
 WTP = Water treatment plant.

Appendix A. Available Data for Ecology-Permitted Water Treatment Plants

Facility Name	Permit No.	Chemical Additives	Wastewater Avg Discharge (gpd)	Wastewater Max Discharge (gpd)	Discharge To:
Raymond WTP	WAG641007	Chlorine (Cl ₂) Organic polymer (cationic)	52,200		South Fork Willapa R
Richland WTP	WAG645000	Chlorine (Cl ₂) Lime Other (Polyaluminum chloride)			Columbia R and constructed wetland [2,400 cuyd sludge solids/year] [operates only 3 months each year]
Ryderwood WTP	WAG641011	Alum Organic polymer Soda ash (Na ₂ CO ₃) once per 8 hours	4,666		Campbell Creek
South Bend WTP	WAG641008		53,355		Infiltration ditch to Martin Creek to Johnson Slough
Stevenson WTP	WAG641020	Alum Chlorine (Cl ₂)			Rock Creek
Vader WTP	WAG641004	Sodium hypochlorite (NaClO) Soda ash (Na ₂ CO ₃) Polymer	3,880		1-Mile vegetated ditch to Olequa Creek
Willapa Valley Water District WT	WAG641013	Chlorine (Cl ₂) Organic polymer (Magnafloc LT7990)	11,460		Stringer Creek
Woodland WTP	WAG641021	Soda ash (Na ₂ CO ₃) Sodium hypochlorite (NaClO) Organic polymer (cashum)	38,000	240,000	Lewis R

All data = From Permittee, except as noted.
 DoH = Washington State Department of Health.
 gpd = Gallons per day.
 NOI = Notice of Intent.
 WTP = Water treatment plant.

Appendix B

Condensed List of Water Supply System Data from the Department of Health

Appendix B. Condensed List of Water Supply System Data from the Department of Health

Water Supply System	WTP ID Number	Water Supply Source/Plant Name	Source Type	Source Capacity (gpm)	Full-Time Residential Population	Total Connections	Treatment Required?	Treatment Objective (Purpose)	Group/Type	WTPGP Number
110 AVENUE WATER SYSTEM	1507001	WELL			11	4			B/GRP	none
2533 #201	04217001	WELL #1			12	4			B/GRP	none
304TH & 92ND - 245	55590001	WELL #1			23	11			B/GRP	none
50TH VIEW WATER SYSTEM	05203001	WELL #1			11	3			B/GRP	none
77-489 WATER SYSTEM	01801001	WELL #1			10	4			B/GRP	none
ABERDEEN, CITY OF	00050001	Wishka River (S01)			16,920	7,498			A/Comm	WAG641026
ADAMS RD COMMUNITY ASSN	01977001	AGA816 WELL 1			39	18			A/Comm	none
AIRWAY EXPRESS INN INC	83830002	Well 3			45	15			A/Comm	none
ALAMO ORCHARD WATER SYSTEM	01578001	LAKE CHELAN			4	2			B/GRP	none
ALBERTSON	06498001	WELL 1			5	2			B/GRP	none
ALECK BAY PARK WATER SYSTEM	01338001	AGK113 WELL 1			36	51			A/Comm	none
ALLYN SHOP	AA473001	WELL #1	W	3	0	1	Y	Organics & Color Removal	A/TNC	none
ALPENHORN CAFE	01815001	Well #2 - AFQ792	W	15	0	2	Y	Particulate (Turbidity) Removal	A/TNC	none
ALPINE HILLS	01826001	Lot 25			360	136			A/Comm	none
ALTA VISTA #2	06213001	Well 2			12	6			B/GRP	none
ALTA VISTA #4	06939001	ALTA VISTA #4			5	4			B/GRP	none
ALTA VISTA #8	06940001	Well 1			5	5			B/GRP	none
AMERICAN CAMP	NP020001	AFL683 WELL			0	3			A/TNC	none
AMERICOLD LOGISTICS	87510001	Well #1 - ABR083	W	180	0	3	Y	Particulate (Turbidity) Removal	A/NTNC	none
AMES LAKE WATER ASSOC INC	02055001	Well 8 (American Hills)			2,995	1,097			A/Comm	none
ANACORTES, CITY OF	02200001	SKAGIT RIVER			15,734	7,771			A/Comm	WAG643002
ANDALS CUSTOM MEATS	18161001	WELL #1			8	3			B/GRP	none
ANDERSON IS. FERRY LANDING	44942001	Well ACN797			0	1			B/GRP	none
ANDERSON-SCHMIDT	02373001	WELL			10	4			B/GRP	none
ANTHONY ROAD NORTH	03722001	WELL #1			24	4			B/GRP	none
ANTHONY ROAD SOUTH	03723001	WELL #1			15	5			B/GRP	none
Arcadia Montessori School WS	AC785001	Well			0	1			B/GRP	none
ARCO AM/PM (FAC 5840)	01109001	Arco Well			0	1			A/TNC	none
ARLINGTON FISH HATCHERY	AA459001	WELL #1			6	3			B/GRP	none
ARLINGTON WATER DEPT	02950002	Haller Bridge Wellfield			14,598	6,437			A/Comm	WAG647003
AROMATICS	ad027001	Well #1 - BCE632			0	2			B/GRP	none
ARTONDALE WATER SYSTEM	03160002/3	Well #9 Tank Site ABE930; Well #10 Swanson	W	615	4,766	1,924	Y	Iron & Manganese Removal	A/Comm	none
ASKO	17293001	WELL #1			10	4			B/GRP	none
Auburn, City of	03350006	Well 5B			55,258	22,764			A/Comm	none
AUTUMN LANE MHP	03421001	LAKE SAMISH			21	14			B/GRP	none
AUVIL FRUIT COMPANY INC	03427001	Well #3	W	400	72	56	Y	Inorganics Removal/Treatment	A/Comm	none
AVISTA UTILITIES	93349001	WELL 1			0	1			B/GRP	none
AWAD #51	AC913001	Well #1	W	32	0	1	Y	Inorganics Removal/Treatment	A/TNC	none
BABIJ	03851001	SHIFRIN			11	3			B/GRP	none
BABY ISLAND HEIGHTS WATER ASSOC	03660001	Well #1 - AGA958; Well #2 - AGA955	WW	18	150	89	Y	Iron & Manganese Removal	A/Comm	none
BADGER MOUNTAIN ESTATES	03730001	Well #1, Well #4 - AGH823	W	155	13	7	Y	Iron & Manganese Removal	B/GRP	none
BARLEAN S WATER SYSTEM	06429001	Well # 1 - AFG145	W	5	3	4	Y	Inorganics Removal/Treatment	A/NTNC	none
BARNEYS CORNER WATER SYSTEM	02453001	Barney's Corner Partnership, Well #1 - AEF360	W	30	0	3	Y	Iron & Manganese Removal	A/TNC	none
Barrel Springs Winery	AC642001	WELL #1			2	2			B/GRP	none
BASIN VIEW WATER ASSOCIATION	04530002	Othello Manor Water System			60	22			A/Comm	none
BASS LAKE #1	52343001	WELL			21	8			B/GRP	none
BASS LAKE #2	61344001	WELL #1			22	9			B/GRP	none

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BATTLE GROUND WATER DEPT, CITY OF	04700004	Wells 7 - ABB112 (12"), 8, and 9	WW	350	16,710	5,923	Y	Iron & Manganese Removal	A/Comm	none
BAYDO WATER	07972001	WELL #1			5	3			B/GRP	none
BAYVIEW BEACH WATER DISTRICT	05535001/2	Wells 1, 2, & 3	WF	319	950	445	Y	Iron & Manganese Removal	A/Comm	none
BEACHWOOD RESORT	04978001	Well #1 Unapproved	W	0	4	19	Y	Iron & Manganese Removal	A/TNC	none
Bear Mountain Water District	07155001	Lakeview WTP - Lake Chelan			82	43			A/Comm	none
BEAR VIEW ESTATES #1	06323001	Well 1			10	5			B/GRP	none
BEAR VIEW ESTATES #2	06216001	WELL #1			8	6			B/GRP	none
BEARDSLEY COVE WATER SYSTEM	05266001	WELL			18	5			B/GRP	none
BEAU LODGE WATER SYSTEM	06964001	WELL #1			0	1			B/GRP	none
BELLINGHAM-WATER DIVISION, CITY OF	05600001	Nooksack/Lake Whatcom			90,000	24,978			A/Comm	none
BELWOOD PARK	05640001	WTP S01 & S02 / Well #1 AGN787; Well #2 -	W	91	67	25	Y	Iron & Manganese Removal	A/Comm	none
BENSTON DRIVE EAST COMMERCIAL W.S.	AA209001	Well #1			0	6			B/GRP	none
Berachah at Buck Creek	08940001	BUCK CREEK			5	16			A/TNC	none
BERG, HERB	22151001	DRILLED WELL			19	9			B/GRP	none
Bertelsen Winery Water System	AC304001	Well BBF900	W	30	0	1	Y	Iron & Manganese Removal	A/TNC	none
BEVERLY BEACH IMPROVEMENT CLUB	06147001	Well #2 - AGA957, ATEC	W	125	53	115	Y	Iron & Manganese Removal	A/Comm	none
BEVINS WATER	91920001	BEVINS			10	4			B/GRP	none
BIBLE BAPTIST CHURCH	06395001	Well 1 BAA963	W	5	1	2	Y	Iron & Manganese Removal	A/TNC	none
BIG HANAFORD TRAILER PARK	06675001	WELL #1			23	9			B/GRP	none
Big Soos Water System	AC866001	Well			2	1			B/GRP	none
Birch Bay Square Water Operation	02395001	WELL #1			0	45			A/NTNC	none
BISCAY VILLA	07164001	Arsenic Treatment Plant			24	12			B/GRP	none
BIXBY WATER SYSTEM	62149001	BIXBY WELL			5	5			B/GRP	none
BLACK DIAMOND WATER DISTRICT	07221001	S.FORK/LITTLE RIVER			447	217			A/Comm	none
BLAKE ISLAND STATE PARK WTR	SP080001	Wells 1, 2 & 3			5	27			A/TNC	none
BLAKELY IS. MAINTENANCE COMMISSION	18539001	HORSESHOE LAKE			20	120			A/TNC	none
BLAKELY ISLAND FIELD STATION/SPU	07445001	SPENCER LAKE			2	2			B/GRP	none
BLANCHARD EDISON WATER ASSN. INC.	07450001	Wells 1, 3 (AER330), & 4	WW	250	980	496	Y	Iron & Manganese Removal	A/Comm	none
BOB OKE GAME FARM	06256001	Well 1			2	2			B/GRP	none
BOGACHIEL REARING PONDS	31573001	SPRING			5	2			B/GRP	none
BOGACHIEL STATE PARK	sp090001	WELL #1 - AKP036	W	46	1	15	Y	Iron & Manganese Removal	A/TNC	none
BOISE PAPER - PCA - WALLULA	07597001	Boise Cascade WTP - COLUMBIA RIVER			0	1			A/NTNC	none
BOISTFORT VALLEY	07610001/2	Adna WTP / Wildwood WTP - Little Mill Creek	S	200	2,289	850	Y	Particulate (Turbidity) Removal	A/Comm	none
BONNEY LAKE WATER DEPARTMENT, CITY	07650003	Ball Park Well Field	WF	1,270	35,123	14,391	Y	Iron & Manganese Removal	A/Comm	none
BONZAI WATER COMPANY	07515001	WELL 1			18	7			B/GRP	none
BOSTON HARBOR	07850001	S08 WF(S06 & S07)			880	261			A/Comm	none
BOX CANYON	NP040001	NICKEL CREEK	S	0	0	4	Y	Particulate (Turbidity) Removal	A/TNC	none
BOXX BERRY FARM WATER SYSTEM	AB395001	Well #1 - ALS184	W	10	2	3	Y	Inorganics Removal/Treatment	A/TNC	none
BRAKER THOMAS ORCHARD	08168001	Braker Well #2 - AFH704			3	9			B/GRP	none
BREWER WATER SUPPLY	06944001	SPRING			6	3			B/GRP	none
BRICKHOUSE	00052001	BRICK HOUSE			5	2			B/GRP	none
BRIDGEWATER WATER SYSTEM	01176001	WELL #1			6	3			B/GRP	none
BRIGHTON CREEK #2 WATER SYSTEM	04029001	Brighton Creek #2			1	7			B/GRP	none
BRIM TRACTORS	07069001	WELL #1 - AFT854 (BRAUN 6")	W	0	0	2	Y	Iron & Manganese Removal	A/TNC	none
BROCKWAY 1 #208	05053001	WELL 1			15	6			B/GRP	none
BROETJE ORCHARDS	08690001	Well #1			37	10			A/Comm	none
BRON-YR-AUR Investments	07219001	Well #1- AFL782	W	55	0	1	Y	Particulate (Turbidity) Removal	A/TNC	none

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BRUTUS WATER SYSTEM	08914001	Highland Camano Well - AGA689	W	50	45	27	Y	Inorganics Removal/Treatment	A/Comm	none
BRYAN WATER SYSTEM	00521001	AHO WATER SYSTEM			13	5			B/GRPB	none
BUCKLIN	66936001	S02 Well #2 BUCKLIN			225	92			A/Comm	none
Burbank Business Park	ab436001	Well #4	W	450	0	16	Y	Inorganics Removal/Treatment	A/NTNC	none
BURBANK LDS CHURCH	09355001	Well #1			0	1			A/TNC	none
BURBANK SHELL	AA220001	Well #1 - AGM130	W	22	0	1	Y	Inorganics Removal/Treatment	A/TNC	none
BURBANK WEST WAY	08183001	AEL427 WELL 1			0	1			B/GRPB	none
BUSH POINT TERRACE COMM CLUB, INC.	09930002	Iron & Manganese Treatment			55	38			A/Comm	none
BUTLER WATER SYSTEM	41496001	WELL #1			2	1			B/GRPB	none
BYBEE, CLYDE W.	03392001	Well #1 - AHA143			16	6			A/NTNC	none
BYWATER BAY	02043001	Well #1 and #2 - AAB870 (ALPINE CT)	W	30	400	215	Y	Iron & Manganese Removal	A/Comm	none
C AND C WATER	07557001	CARNAHAN WELL 1			8	2			B/GRPB	none
CALMAN JAMES L.	02011001	JIM CALMAN			40	12			A/Comm	none
CALMOR COVE CLUB	10562001	LAKE SAMISH			17	49			A/Comm	none
CAMANO CO-OP WATER & POWER CO	10600002	Lost Meadows Well 2			953	527			A/Comm	none
CAMANO HILLS WATER COMPANY INC	01429001	AGA704 Well 1			135	133			A/Comm	none
CAMANO ISLAND DENTAL CENTER	01867001	Well 1 - BAA967	W	5	0	1	Y	Particulate (Turbidity) Removal	A/TNC	none
CAMANO SHORES COMMUNITY	10744001	Wellfield Wells 1 & 2	WF	95	67	57	Y	Iron & Manganese Removal	A/Comm	none
CAMANO SUNSET WATER SYSTEM	26951001	CAMANO SUNSET			45	15			A/Comm	none
CAMANO WATER ASSOCIATION	10750003	WF Wells 6, 7, and 8	WF	600	2,588	1,036	Y	Iron & Manganese Removal	A/Comm	none
CAMAS MUNICIPAL WATER SEWER	10800007	Boulder & Jones Creeks			23,020	8,117			A/Comm	WAG641006
CAMP DAVID JR	10837001	SANBORN CREEK			0	2			B/GRPB	none
CAMP GHORMLEY	27550001	Well 3 and 5			10	17			A/TNC	none
CAMP HARMONY	31596001	Well No. 1			1	3			B/GRPB	none
CAMP KALSMAN WATER SYSTEM	AA875001	Wellfield Wells 1 & 2 (S01 & S02)	WF	60	1	30	Y	Iron & Manganese Removal	A/TNC	none
CAMP LAKEVIEW	08019001	WELL #1			4	11			A/TNC	none
CAMP LUTHERWOOD	12641001	LAKE SAMISH			4	42			A/TNC	none
CAMPBELLS GLEN	10988001	WF Wells 2, 3, and 4 - AGA796	W	8	62	29	Y	Iron & Manganese Removal	A/Comm	none
CANYON CREEK TRACTS	11011001	WELL #1			24	8			B/GRPB	none
CAPELITO WATER SYSTEM	01686001	WELL			11	3			B/GRPB	none
CARBONADO WATER DEPT	11100001	CARBONADO SPRINGS			610	246			A/Comm	none
CARR, JACK WATER SYSTEM	41353001	Well #1			14	6			B/GRPB	none
CARSON	11340001	BEAR CREEK			2,669	1,073			A/Comm	none
CASCADE LUMBER INC	57599001	WELL A			0	1			B/GRPB	none
CASCADE PEAKS RESORT	01970001	WELL #1 - AMF954 (10")	W	75	2	633	Y	Iron & Manganese Removal	A/TNC	none
CASCADE RIDGE WATER SYSTEM	04947001	WELL			10	4			B/GRPB	none
CASCADE VIEW ROAD WATER SYSTEM	28020001	Well AGA820			26	15			A/Comm	none
CASHMERE WATER DEPARTMENT	11700003	Water Treatment Plant	S	2,400	3,055	1,335	Y	Particulate (Turbidity) Removal	A/Comm	none
CASTLE ROCK MUNICIPAL WATER	11800002	Cowlitz River			2,373	1,061			A/Comm	WAG641025
CATHLAMET WATER DEPT	11850001	ELOCHOMAN RIVER			1,530	692			A/Comm	WAG641009
CATTLE POINT WATER DISTRICT	42751001	Sea Water Reverse Osmosis			55	40			A/Comm	none
CEDAR CREEK CORRECTIONS CENTER	11882001	Wellfield WELL #2 (No Tag)	W	55	480	208	Y	Particulate (Turbidity) Removal	A/Comm	none
CEDAR CREEK SDA CHURCH	58451002	Well #1 - AEL967	W	2	0	1	Y	Particulate (Turbidity) Removal	A/TNC	none
CEDAR RAPIDS GROCERY	46980001	WELL #1			0	9			B/GRPB	none
CEDAR SHORES	04953001	Cedar Shores Well #1 - AKB304 (2-PUMPS)	W	107	90	39	Y	Iron & Manganese Removal	A/Comm	none
CEDAR TREE	AA048001	WELL 1			11	1			B/GRPB	none
CENTER ISLAND WATER SYSTEM	12140001	Lopez Sea Water			14	139			A/TNC	none

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CHANNEL LANE WATER ASSOCIATION	01499001	WELL #1			10	4			B/GRPB	none
CHANNEL VIEW WATER SYSTEM	04204001	WELL			4	4			B/GRPB	none
CHARBONNEAU PARK	09626001	Well 2			0	33			A/TNC	none
CHARLENE HEIGHTS WELL CO	12239001	Charlene Well #1	W	60	30	12	Y	Particulate (Turbidity) Removal	A/Comm	none
CHATEAU STE MICHELLE - VINEYARD 8	04424001	Well - Vineyard 8			2	3			A/NTNC	none
CHEHALIS RV PARK	88122001	12250P/CHEHALIS			8	402			A/TNC	none
CHEHALIS WATER DEPARTMENT	12250001	Chehalis WTP			7,185	3,838			A/Comm	WAG641012
CHELAN CO PUD - CHELAN RIDGE	00631001	LAKE CHELAN			90	36			A/Comm	none
CHELAN WATER DEPT, CITY OF	12300001	Lake Chelan			7,380	2,638			A/Comm	none
CHELATCHIE PRAIRIE GENERAL STORE	60653001	CT6 Required			0	1			A/TNC	none
CHENEY, CITY OF	12400004	Well 5			8,714	4,359			A/Comm	none
CHERRYWOOD VILLAGE	45164001	WELL NO 1 ACN796	W	35	100	36	Y	Iron & Manganese Removal	A/Comm	none
CHEVRON TERMINAL	06122001	WHATCOM PUD 1 UNTRTD SURFACE			0	1			B/GRPB	none
Chewelah Peak Community Water Co.	07469001	Chewelah Peak WTP			20	46			A/TNC	none
CHINOOK WATER DISTRICT	12800001	FRESH WATER CREEK			768	412			A/Comm	none
CHRISTINA PARK II WATER SYSTEM	03320001	WELL #1			12	4			B/GRPB	none
CHRYSTAL SPRINGS WATER SYSTEM	23481001	CHRYSTAL SPRINGS			6	3			B/GRPB	none
Chuckanut Avenue Water System	AC696001	Well 1			5	2			B/GRPB	none
CHUCKANUT MANOR RESTAURANT	12954001	WELL #1			2	3			A/TNC	none
CHURCH OF JESUS CHRIST OF LATTERDAY	11165001	AGA534 WELL 1			0	1			A/TNC	none
CLARK PUBLIC UTILITIES	13333008/26/30	Hazel Dell 15 & 21; South Lake WF (S58 & S59); Hockinson 110	WF	5,000	82,071	30,025	Y	Iron & Manganese Removal	A/Comm	none
CLARKS RESTAURANT	13346001	Well #1			0	1			A/TNC	none
Classic Hi-Crop	36460001	WELL #1 - ABR894	W	75	0	1	Y	Particulate (Turbidity) Removal	A/TNC	none
CLE ELUM WATER DEPARTMENT	13500002	Yakima River	S	1,500	1,820	1,339	Y	Particulate (Turbidity) Removal	A/Comm	none
CLEAR LAKE GRACE BRETHERN CAMP INC	08242001	Well #1 - AFL749	W	20	3	6	Y	Particulate (Turbidity) Removal	A/TNC	none
CLEMENTZ FIRST EDITION	13640001	Treatment Plant 1			6	4			B/GRPB	none
CLINTON WATER DISTRICT	13900001	Wellfield 08; Wells 6 & 7	WF	150	1,560	759	Y	Iron & Manganese Removal	A/Comm	none
COACH COUNTRY CORRAL	13915001	WELL # 1 - ACM797	W	150	170	82	Y	Iron & Manganese Removal	A/Comm	none
COLUMBIA CREST WINERY	17641001	Winery Well	W	300	3	8	Y	Inorganics Removal/Treatment	A/NTNC	none
COLUMBIA ELEMENTARY SCHOOL	14129001	Well 1			0	2			A/NTNC	none
COLUMBIA GENERATING STATION	92024001	Columbia River	S	350	0	35	Y	Particulate (Turbidity) Removal	A/NTNC	none
COLUMBIA RIVERFRONT RV PARK	00946003	Well #4 - AGF769	W	50	0	76	Y	Iron & Manganese Removal	A/TNC	none
ConAgra Foods Lamb Weston - Plant	06152001	Well #1	W	60	0	1	Y	Inorganics Removal/Treatment	A/NTNC	none
CONNER WATER	01841001	Treatment Plant 1			5	2			B/GRPB	none
CONNER, H. WATER	05492001	WELL			5	2			B/GRPB	none
CONNER-DEAN WATER SYSTEM	07108001	SEA WATER			4	2			B/GRPB	none
COOPER POINT ESTATES	02306001	WELL #1 - BBP866	W	35	36	11	Y	Particulate (Turbidity) Removal	A/Comm	none
CORNERSTONE COMMUNITY CHURCH	AA553001	Well #1 - AKF742	W	32	0	1	Y	Iron & Manganese Removal	A/TNC	none
COUGAR ROCK CAMPGROUND	NP140001	Bobo Creek			0	209			A/TNC	none
COULEE DAM WATER DEPT	15400001	Coulee Dam WTP - East Side Water			1,096	628			A/Comm	none
COUNTRY HOUSE RESTAURANT	06217001	Well #1 - AFS005	W	31	0	2	Y	Iron & Manganese Removal	A/TNC	none
COUNTRY MEADOWS EAST WATER SYS #2	62021001	CME #4 Well #1 - ACA204; Well #2	W	40	40	16	Y	Iron & Manganese Removal	A/Comm	none
COUNTRY MERCANTILE	51851001	Well #1 - AFQ253	W	20	0	1	Y	Inorganics Removal/Treatment	A/NTNC	none
COUNTRY ROSE B & B	04440001	WELL #1			1	2			B/GRPB	none
COUNTRY WOODS ESTATES	02759001	COUNTRY WOODS ESTATES			16	4			B/GRPB	none
COUPEVILLE KINGDOM HALL W S	00550001	WELL #1			2	2			B/GRPB	none
COUPEVILLE, TOWN OF	15550001/2	Ft Casey Wellfield, Wells 4, 7, and 2-87	WW	441	2,210	1,303	Y	Iron & Manganese Removal	A/Comm	none

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COVENANT CHRISTIAN SCHOOL	15596001	WELL # 1 - AGK336	W	27	0	2	Y	Inorganics Removal/Treatment	A/NTNC	none
COVINGTON WATER DISTRICT	41650001/4	Witte Wellfield, 264th Well			38,320	17,016			A/Comm	none
COWLITZ FOOD AND FUEL	69130001	WELL #1 BBP459	W	18	0	2	Y	Particulate (Turbidity) Removal	A/TNC	none
CRESCENT WATER ASSN	16020001	Crescent Lyre R. WTP			1,878	875			A/Comm	none
CROSS VALLEY WATER DISTRICT	16270001	Wells 5, 6, and 10	WF	1,550	17,280	6,499	Y	Iron & Manganese Removal	A/Comm	none
CROSSROADS BAR AND GRILL	00683001	Well #1- AGG489			0	1			A/TNC	none
CRYSTAL MOUNTAIN INC	16400001	Elizabeth & Silver Creeks			35	155			A/Comm	none
CUSICK, CITY OF	17000001	Pend Oreille River			420	374			A/Comm	WAG647000
CUSTOM ORCHARD 1	07993001	Well #1	W	30	18	8	Y	Inorganics Removal/Treatment	A/TNC	none
CUSTOM ORCHARD 2	17080001	Spring			15	9			B/GRP	none
DAMM	06338001	WELL #1			10	4			B/GRP	none
DARST TOWNSDIN-BONACCI	15936001	WELL A			8	3			B/GRP	none
DAVE WATERS WATER SUPPLY	04488001	WELL #1			5	2			B/GRP	none
DAVID DAY WATER SYSTEM	02176001	WELL #1			22	5			B/GRP	none
DAVIS HEAD HOMEOWNERS	18133001	Wells 3 - ABO643, and 4	W	8	12	33	Y	Particulate (Turbidity) Removal	A/TNC	none
DAVIS, GENE	02799001	WELL #1			3	2			B/GRP	none
DAWNVIEW CREST	03061001	WELL #1			7	5			B/GRP	none
DAY CREEK CHAPEL	04447001	WELL #1 - AEH793	W	10	6	2	Y	Particulate (Turbidity) Removal	A/TNC	none
DECEPTION PASS MARINA INC	15025001	Cornet Bay, AGA528	W	50	6	9	Y	Iron & Manganese Removal	A/TNC	none
DECEPTION PASS SP - CORNET BAY	sp212001	Cornet Bay Well #2 - AHB804	W	10	0	3	Y	Particulate (Turbidity) Removal	A/TNC	none
DEEP ROCK WELL	18395001	WELL			20	6			B/GRP	none
DEER CREEK WATER ASSOCIATION	18418001	WF Wells #1 and #2	WF	500	1,130	492	Y	Iron & Manganese Removal	A/Comm	none
DEER LAGOON GRANGE	01716001	AGA533 WELL			0	1			B/GRP	none
DEER LAKE HAVEN INC	18450001	AGA844 WELL 1			90	49			A/Comm	none
DELTA GROCERY WATER SYSTEM	08255001	Well 1			2	2			A/TNC	none
DESALVO WATER SYSTEM	03756001	WELL DESLAVO			12	5			B/GRP	none
DEVRIES ROAD COMMUNITY ASSN	15948001	WELL #1			76	39			A/Comm	none
DIAMOND LAKE SEWER DISTRICT	19207001/2/3	Wellfield; Wells 2R & 3; S03 and S06	WF	800	601	613	Y	Iron & Manganese Removal	A/Comm	none
DIAMOND POINT WATER SYSTEM	06536001	WELL 1	W	50	90	37	Y	Iron & Manganese Removal	A/Comm	none
DISCOVERY GROVE	03669001	Well #1			24	11			B/GRP	none
DISCOVERY GROVE #2	03670001	Well #1			16	6			B/GRP	none
DMS WATER ASSOCIATION	08433001	WELL 1			16	3			B/GRP	none
DODSON IGA MARKET	19570001	Well			0	3			A/TNC	none
DOE BAY WATER USERS ASSOC	19600001	Mountan Lake			281	276			A/Comm	none
DONNAS MINI MARKET WATER SYSTEM	44189001	AGB910 WELL 1			0	2			A/TNC	none
DOOR SLAMMER	36741001	WELL #1 AKY119	W	32	3	2	Y	Iron & Manganese Removal	A/TNC	none
DOUBLE L MOBILE HOME PARK	19890001	WELL #1	W	30	58	25	Y	Iron & Manganese Removal	A/Comm	none
DRY SORT DOMESTIC	06731001	Unapproved Well #1 - ABR960	W	100	0	3	Y	Particulate (Turbidity) Removal	A/NTNC	none
DUGUALLA COMMUNITY INC	20250001	WF Wells 1 & 2	WF	350	450	205	Y	Iron & Manganese Removal	A/Comm	none
DUNCKLEY WATER SYSTEM	05163001	WELL			10	2			B/GRP	none
DUPLEX WATER SYSTEM	01478001	FELLER 267TH			5	2			B/GRP	none
Eagle Ridge Cabins-Ovenells WS	AB132001	Well			1	8			B/GRP	none
EAGLE RIDGE WATER SYSTEM	24731001	Wells 1 & 2	WF	300	250	137	Y	Iron & Manganese Removal	A/Comm	none
EAST ENTRANCE MT RAINIER	NP840001	FALLS CREEK			0	2			A/TNC	none
EAST NORTH BEACH COMM WATER ASSN	21351001	SINGLE WELL			10	18			A/TNC	none
EASTGATE	22030002	Wells #2 - AGA590, & 3	W	30	76	38	Y	Inorganics Removal/Treatment	A/Comm	none
EASTRIDGE #2 - 347	04570001	WELL #1			24	6			B/GRP	none

Appendix B. Condensed List of Water Supply System Data from the Department of Health

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EASTRIDGE WEST - 344	04868001	WELL #1			21	6			B/GRP	none
EASTSOUND WATER USERS ASSOCIATION	22170001/5	Wells 5, 7, 12; Purdue Lake Reservoir	WF	86	1,589	1,081	Y	Iron & Manganese Removal	A/Comm	none
EATONVILLE WATER DEPT	22300001	Treatment Plant Well #6 - AHG991	WW	200	2,758	1,090	Y	Particulate (Turbidity) Removal	A/Comm	none
Ebe Farms LLC Water System	AC811001	Well			0	0			B/GRP	none
ECKLEY, BOB SHORT PLAT	51653001	WELL 1			5	2			B/GRP	none
EDGEWATER BEACH WATER CO	22416001	WELL #3 - AFG892	W	65	73	39	Y	Iron & Manganese Removal	A/Comm	none
EDGEWATER MOBILE ESTATES	22421001	WELL #1 - AGF717 (Groundwater)			64	32			A/Comm	none
EDWARDS, DONNA M	05755001	WELL #1			3	1			B/GRP	none
EL CAMANO COMMUNITY CLUB	22593001				49	26		Disinfection & Fe/Mn Treatment	A/Comm	none
ELDER, JOHN - WATER SYSTEM	19987001	24050L/EVERETT			5	3			B/GRP	none
Electron Headworks Water System	AC632001	Spring Source			0	1			B/GRP	none
ELGERWOOD MAINTENANCE	09131001	AGA695 WELL	W	57	110	46	Y	Iron & Manganese Removal	A/Comm	none
ELIZA ISLAND BEACH CLUB	22895001	Reverse Osmosis WTP			3	122			A/TNC	none
ELK HEIGHTS - 247	52614001	Wellfield (S01 & S02)	WF	55	98	39	Y	Iron & Manganese Removal	A/Comm	none
ELK HEIGHTS WATER ASSOCIATION	AA359001	Well #1			7	2			B/GRP	none
ELOCHOMAN SALMON HATCHERY	FW035001	DOMESTIC WELL			11	8			B/GRP	none
ENERGY, DEPT OF/100K	00177002	Export Line	S	50	0	5	Y	Particulate (Turbidity) Removal	A/NTNC	none
ENERGY, DEPT OF/200E	41866002	Export Line			0	100			A/NTNC	none
ENERGY, DEPT OF/200W	00100001	WTP / EXPORT LINE	S	5,100	0	189	Y	Particulate (Turbidity) Removal	A/NTNC	none
ENERGY, DEPT OF/300 AREA	41840002	Columbia River			0	20			A/NTNC	none
ENGEN, AL WATER SYSTEM	07353001	WELL #1			5	2			B/GRP	none
ENSLow 1 386	07018001	ENSLow #1			14	5			B/GRP	none
ENSLow 2 387	07019001	ENSLow #2			12	5			B/GRP	none
ENSLow 3 388	07020001	ENSLow #3			15	5			B/GRP	none
ENTERPRISE ESTATES WATER ASSOC.	23480001	WELL # 1			184	45			A/Comm	none
EVERETT PUBLIC WORKS DEPT. CITY OF	24050001	SULTAN RVR-CLMBK DAM			103,000	26,172			A/Comm	WAG643009
EVERGREEN SKY RANCH COMMUNITY	24165001/2/3	Wells #1, #2 - AAB169, and #3 - AAB170	W	10	44	22	Y	Particulate, Iron, & Manganese Removal	A/Comm	none
EVERGREEN VALLEY WATER SYSTEM	02150001/2	Well #1 - Exempt; Well #2	W	100	35	203	Y	Iron & Manganese Removal	A/Comm	none
EVERGREEN VISTA - 308	31881001	WELL #1			50	17			A/Comm	none
EVERSON LIVESTOCK AUCTION (CAFE)	57484001	Well 1	W	0	0	1	Y	Particulate (Turbidity) Removal	A/TNC	none
EVERSON, CITY OF	24200001	WF - Wells 4, 5, & 6	WF	290	2,500	895	Y	Iron & Manganese Removal	A/Comm	none
EVERYBODY S STORE	07622001	WELL #1			0	1			A/TNC	none
FAIRFIELD MHP	02601001	Well 1			66	25			A/Comm	none
FAITH COMMUNITY CHURCH	06287001	Well #1 - ACL561			2	2			A/TNC	none
FALL CITY WATER DISTRICT #127	24550001/2	Fall City Main Wells # 2, 1R; Heathercrest Well #3 - AFJ209	WF	630	2,776	1,089	Y	Iron & Manganese Removal	A/Comm	none
FALL CITY WATER DISTRICT (RUTH)	02006001	Rutherford Well, Well #4 - AFJ212	W	20	46	17	Y	Inorganics Removal/Treatment	A/Comm	none
FARM BOY DRIVE IN	24645001	WELL #1 NO TAG	W	20	0	2	Y	Iron & Manganese Removal	A/TNC	none
FASMArt INC	25840001	Well #1 - AHC755			0	1			A/TNC	none
FAWN LAKE MAINTENANCE COMM	24713001	Wells #3 - AHB622; and #4	W	160	1,014	402	Y	Iron & Manganese Removal	A/Comm	none
FAZON ROAD WATER ASSOCIATION	24717001	WELL # 1			24	14			B/GRP	none
FENTON	AA368001	WELL #1			12	3			B/GRP	none
Ferguson Dairy Water System	AC755001	Well 1			4	3			B/GRP	none
FERNDALe	24850002	Well Water Treatment Plant			12,290	5,099			A/Comm	none
FERNDALe MOBILE VILLAGE	24840001	WELL #1			85	54			A/Comm	none
FIANDER	63432001	WELL #1			5	2			B/GRP	none
FIELD ROAD WATER SYSTEM	06227001	WELL 1			7	5			A/TNC	none
FIFe BSA CAMP	25032001	Strawberry Creek WTP			2	35			A/TNC	none

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FIFTEENTH FAIRWAY CONDOMINIUMS	03045001	Well #1			20	5			B/GRPB	none
FINISTERRE SERVICES	07988001	WELL #1			0	8			B/GRPB	none
FIRE MT SCOUT RESERVATION	25155001	UNNAMED STREAM			1	22			A/TNC	none
FLEMINGS PLATT WATER ASSOCIATION	25610001	Well 1			84	30			A/Comm	none
FOOTHILLS COMMUNITY CHURCH	25774001	Well #1 - ACW895; Well #2	W	40	0	2	Y	Particulate (Turbidity) Removal	A/TNC	none
FOREST GROVE MOBILE HOME PARK	25934001	Well # 2 - AGN433	W	19	51	26	Y	Iron & Manganese Removal	A/Comm	none
FOREST PARK WATER SYSTEM	25943001	WELL #1 - ACM800	W	60	120	52	Y	Iron & Manganese Removal	A/Comm	none
FORKS CREEK SALMON HATCHERY	09014001	FORKS CREEK SPRING			10	3			B/GRPB	none
FORT APARTMENTS	26079001	Well #1 - AFL777			18	8			B/GRPB	none
FORTY NINE DEGREES NORTH	03799001	49 North WTP			1	2			A/TNC	none
FOUR-EVER SPRING	01090001	SPRING			12	4			B/GRPB	none
FOX HOLLOW WATER SYSTEM	08372001	WELL 1			10	5			B/GRPB	none
FOX ISLAND MUTUAL WATER	26300001/2	Well #21, Well #24 - ALK138	W	425	3,075	1,265	Y	Iron & Manganese Removal	A/Comm	none
FREELAND WATER AND SEWER DISTRICT	26450002	Wells A & B	WF	251	617	533	Y	Iron & Manganese Removal	A/Comm	none
FRENCHMANS BAR PARK	AA289001	WELL #1 - ACF198	W	200	2	2	Y	Iron & Manganese Removal	A/TNC	none
FRIDAY HARBOR, TOWN OF	26595001	TROUT LAKE+AUG 1&2			3,040	1,808			A/Comm	WAG643005
FULLER WATER	07282001	WELL #1 FULLER WTR			6	3			B/GRPB	none
GADDIS WATER SYSTEM	51427001	WELL #1			5	2			B/GRPB	none
GALITTOIRE BED & BREAKFAST	00714001	WELL			1	2			B/GRPB	none
GARWOOD	04263001	PUMA WELL #1			6	2			B/GRPB	none
Gated Sanctuary Water System	AC211001	Well 1			3	2			B/GRPB	none
GAYLE CREEK WATER SYSTEM	05057001	WELL			8	4			B/GRPB	none
GBH TRUST	02275001	WELL #1			0	3			B/GRPB	none
GEE CEE S TRUCKSTOP	37247001	WELL A; WELL #1 WW ABR978	WW	75	5	10	Y	Particulate (Turbidity) Removal	A/NTNC	none
GENISIS GARDEN WATER SYSTEM	02209001	WELL			9	6			B/GRPB	none
GEORGIA MANOR WATER ASSOC	27450001	Well #2 - AGK333	W	20	76	28	Y	Iron & Manganese Removal	A/Comm	none
GETCHELL, JOHN A	49424001	JOHN A. GETCHELL			6	2			B/GRPB	none
GHORBANI	AA452001	WELL #1 GHORBANI			24	12			B/GRPB	none
GIG HARBOR SPORTSMEN S CLUB	52014001	Well - ACN759	W	22	1	16	Y	Particulate (Turbidity) Removal	A/TNC	none
GILES, DAN	60951001	WELL #1			5	2			B/GRPB	none
GLACIER VISTA	07749001	GV WELL 1			100	33			A/Comm	none
GOAT PEAK WATER SYSTEM	06288001	WELL #1			8	3			B/GRPB	none
GOLDEN ROAD WATER SYSTEM	04067001	WELL			15	4			B/GRPB	none
GOOSEBUMP RIDGE WATER SYSTEM	05302001	WELL #1			8	3			B/GRPB	none
GOSS LAKE PARK COMMUNITY	28575001	Wells #1 - AGA788; & #2	W	25	150	140	Y	Inorganics Removal/Treatment	A/Comm	none
GOVER RIPLEY	36806001	RIPLEY RENTAL PROP.			10	4			B/GRPB	none
GRAHAM COMMUNITY WELL	06361001	WELL #1			2	2			B/GRPB	none
GRANDMAS HOUSE BED & BREAKFAST	01778001	SPRING			2	2			B/GRPB	none
GRANITE SHORES WATER SYSTEM	29062001	SACHEEN LAKE			0	30			A/TNC	none
GRANT WATER SYSTEM	08447001	WELL 1			4	2			B/GRPB	none
GRASSLANDS WATER SYSTEM	29172001/2/3	WF: S01, S02, Wells #1, #2 - AFL852	WF	74	260	75	Y	Particulate (Turbidity) Removal	A/Comm	none
GRAVES CREEK CAMP	NP320001	Spring			0	6			A/TNC	none
GRAY GABLES	05693001	WELL #1			12	5			B/GRPB	none
Green Acre Farms, Inc. - Island #1	ab826001	Well #1 - APT371	W	60	0	8	Y	Particulate (Turbidity) Removal	A/TNC	none
Green Acres Water System	ab860001	Well #1 - APT077	W	30	14	8	Y	Inorganics Removal/Treatment	A/NTNC	none
GREEN COVE ESTATES	03863001	WELL #1			19	6			B/GRPB	none
GREEN, BOBBIE	16527001	Well #1			0	1			A/NTNC	none

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GREENBRIAR WATER SYSTEM #2	01504001	Well #1			11	4			B/GRPB	none
GREENWATER VILLAGE ASSOCIATION	29805001	Well	W	20	22	29	Y	Particulate (Turbidity) Removal	A/TNC	none
GRIFFITH PRIDAY STATE PARK	SP322001	Well #1 AGF026	W	45	3	5	Y	Particulate (Turbidity) Removal	A/TNC	none
GUEMES ISLAND RESORT	30110001	Wells - AER306	W	4	2	13	Y	Iron & Manganese Removal	A/TNC	none
GUEMES SEAVIEW WATER SYSTEM	02164001	GUEMES SEAVIEW WATER SYSTEM			5	4			B/GRPB	none
GUNN S WATER SYSTEM	05150001	WELL 1			6	2			B/GRPB	none
GUSHING GEYSER WATER WORKS	59301001	WELL			20	8			B/GRPB	none
H&I GROCERY	06526001	WELL #1			1	2			A/TNC	none
HADLOCK 37	06786001	WELL #1			3	1			B/GRPB	none
HAMILTON AL	30705001	Burger King			0	8			A/NTNC	none
HAMILTON, DEAN	02418001	WELL #1			11	5			B/GRPB	none
HAMILTON, REGGIE #1	05652001	MAGIC LIVING HOMES			0	2			B/GRPB	none
HAMMERSLEY SHORES	03305001	WELL #1			4	2			B/GRPB	none
HANCOCK PUBLIC SUPPLY	00135001	HANCOCK			10	4			B/GRPB	none
HANSON TERRY	06211001	GW1 WELL 1			2	4			B/GRPB	none
HARBOR HILLS COMMUNITY WATER	33860001	Wells 1, 2, 3 - AGA818	W	160	925	396	Y	Iron & Manganese Removal	A/Comm	none
HARRIS CUSTER ESTATES WATER ASSN	17035001	WF Wells 1 & 2	WF	74	194	61	Y	Iron & Manganese Removal	A/Comm	none
HARRISON JEWELL SS 2510	02643001	WELL #1			9	3			B/GRPB	none
HARRISON WATER	31480001	Treatment Plant 1			10	4			B/GRPB	none
HARRISON-RUSNAK	35688001	WELL			7	3			B/GRPB	none
HART CREEK SUMMER HOMES	31495001	Hart Creek			2	54			A/TNC	none
HARTMANS LOG CABIN RESORT INC	47671001	Well #2 - AHC837	W	10	0	133	Y	Particulate (Turbidity) Removal	A/TNC	none
HARTSTONE POINTE	31569001/2	S01			306	438		Disinfection & FE/MN	A/Comm	none
HASHAGEN WATER SYSTEM	03991001	WELL			6	6			B/GRPB	none
HAT ISLAND COMMUNITY INC	31593001/2	Wells 1,2,3,4,5,& 6; RO Plant Seawater	WF	154	40	272	Y	Iron & Manganese Removal	A/Comm	none
HAZEL DELL MOBILE PARK	31975001	WELL #1 AGF757			24	20			A/Comm	none
HEMMI ROAD WATER ASSOCIATION	32350001	Wells #2 and #3	W	300	236	181	Y	Iron & Manganese Removal	A/Comm	none
HGH INC WATER SYSTEM	02141001	Well #1 - ACC170	W	21	0	1	Y	Inorganics Removal/Treatment	A/TNC	none
HIDDEN MEADOWS #1	02294001	WELL #1			15	6			B/GRPB	none
HIDDEN MEADOWS #2	02295001	WELL #2			15	6			B/GRPB	none
HIDDEN MEADOWS #3	02296001	WELL #3			15	6			B/GRPB	none
HIDDEN VALLEY GUEST RANCH	32648001	Well 1			6	5			B/GRPB	none
HIDE-AWAY WATER COMPANY INC	66586001	WF Wells 1 & 2	WF	105	240	128	Y	Iron & Manganese Removal	A/Comm	none
HIGGINS	02139001	Well #1			16	5			B/GRPB	none
HIGH BANK WATER ASSOC.	26956001	WELL #1			8	3			B/GRPB	none
HIGHLAND HIGH SCHOOL	32745001	Well #1			0	2			A/NTNC	none
HIGHLAND MEADOWS	32785001	AGA829 WELL 1			70	30			A/Comm	none
HIGHLINE WATER DISTRICT	40650001/2/3	Des Moines WF; McMicken Heights Well AEC950; & Tye Well AFR835	W	1,100	68,258	27,303	Y	Iron & Manganese Removal	A/Comm	none
HIGHWAY 6 CHEVRON	06228001	WELL #1 HWY 6 CHEV			0	2			A/TNC	none
HILLTOP WATER OWNERS ASSOCIATION	33364001	Well #2 - AFM071	W	8	72	57	Y	Inorganics Removal/Treatment	A/Comm	none
HINTON, GERALD	36861001	HINTON WELL			5	2			B/GRPB	none
HOBSON, JIM	01406001	WELL #1			4	2			B/GRPB	none
HOGUE RANCHES	00417001	WELL #1			3	1			B/GRPB	none
HOGUE RANCHES - HOME PLACE	33663001	Well #1			8	5			B/GRPB	none
HOLDEN VILLAGE	33666001	Copper Creek			50	47			A/Comm	none
HOLLINGSWORTH WATER ASSOC INC	64450001	Spring Well			22	13			B/GRPB	none

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HOLM	04691001	WELL #1			12	6			B/GRPB	none
HOLM 2	05469001	WELL #1			24	6			B/GRPB	none
HOMEPORT WATER SYSTEM	90882001	WELL #1 - ACM761 (HOMEPORT)	W	40	0	1	Y	Iron & Manganese Removal	A/TNC	none
Honeybear Growers LLC	ab710001	Well #1 - AEQ552	W	50	0	3	Y	Inorganics Removal/Treatment	A/NTNC	none
HOQUIAM WATER DEPARTMENT	34350001	Hoquiam (S01 & S02)			8,770	3,904			A/Comm	WAG641000
HOVANDER FARMS	03269001	WC PUD #1			3	2			B/GRPB	none
HOZOMEEN NO 1	NP360001	HOWLETT CREEK			0	6			A/TNC	none
HOZOMEEN WATER SYSTEM	NP370001	HOZOMEEN CREEK	S	14	0	25	Y	Particulate (Turbidity) Removal	A/TNC	none
HUFF AND PUFF DRIVE IN	00801001	WELL #1			10	5			A/TNC	none
HUMES	35816001	WELL #1 ASHFORD			10	5			B/GRPB	none
HUND WATER SYSTEM	05579001	WELL #1			10	4			B/GRPB	none
Hunter Bay Water System	AC453001	Seawater treatment	SE	9	10	19	Y	Inorganics Removal/Treatment	A/TNC	none
HUNTERS WATER DISTRICT	34889001	S01, S02, & S03 WTP; Well #3 - BCH092	WW	175	160	68	Y	Inorganics Removal/Treatment	A/Comm	none
HURRICANE RIDGE	NP390001	SURFACE; Idaho Springs	S	15	0	3	Y	Particulate (Turbidity) Removal	A/TNC	none
HUSUM HILLS GOLF COURSE	34859001	Well #1			3	2			A/TNC	none
IFA NURSERIES INC.	03068001	WELL #1			0	1			B/GRPB	none
ILWACO WATER DEPARTMENT, CITY OF	35500001	Ilwaco WTP			1,262	689			A/Comm	WAG641001
INDIANOLA WOODS	02631001	WELL #1			15	6			B/GRPB	none
Industrial Development Complex	92023001	Columbia Gen Station - Intertie			0	16			A/NTNC	none
INN AT TATOOSH MEADOWS	26031001	WELL #1 SITE ONLY-NNM			2	5			B/GRPB	none
Intalco Aluminum Corporation WS	35800001	WHATCOM COUNTY PUD#1	S	100	0	1	Y	Particulate (Turbidity) Removal	A/NTNC	none
IONE WATER DEPT	35900001/2/3	Wells #1, #2, #3; and Well #5 - New Park Well	W	400	395	295	Y	Iron & Manganese Removal	A/Comm	none
IRENE RHINEHART PARK	07696001	Well #1	W	0	0	1	Y	Particulate (Turbidity) Removal (filtered)	A/TNC	none
ISLAND SPRING H2O COMPANY	50724001	WELL #1			20	8			B/GRPB	none
ISLAND TYME B & B	02669001	WELL #1			2	2			B/GRPB	none
ISLAND VIEW LUD 9	36260001	LUD #9 TREATMENT PLANT			75	38			A/Comm	none
IVERSEN, MARK	01941001	IVERSEN, MARK			5	2			B/GRPB	none
JACKSON TIMBER	05192001	WELL #1			4	2			B/GRPB	none
JACOBSON, R WATER SYSTEM	01559001	WELL			6	3			B/GRPB	none
JADESTONE GALLERY	58379001	WELL #2			0	1			B/GRPB	none
JAMES, HEIGL/JANIS	58290001	WELL #1			5	2			B/GRPB	none
Jardin Del Sol Water System	AC302001	Well 1			0	1			B/GRPB	none
Jensen 1816 WATER SYSTEM	07772001	WELL 1			10	4			B/GRPB	none
JOHNS RIVER LODGE	36788001	AGF301 WELL 1			4	2			A/TNC	none
JOHNSON JOSEPH WATER SYSTEM	01217001	LAKE CHELAN			4	2			B/GRPB	none
JONES ISLAND STATE PARK	SP343001	AGK140 DUG WELL 1			0	6			A/TNC	none
Judel Marketing International Inc	18171001	Well #1			0	1			B/GRPB	none
JUNIPER BEACH WATER DISTRICT	37250001	Wellfield & Wells 3, 4, 6, 7, & TR Camano	WF	55	111	133	Y	Iron & Manganese Removal	A/Comm	none
JUSTUS SPRING VALLEY SUPPLY	37300001	UNDERGROUND SPRING; Well #1	SP	7	1	3	Y	Particulate (Turbidity) Removal	A/NTNC	none
KALALOCH CAMPGROUND	NP450001	Kalaloch WTP			15	94			A/TNC	none
KALAMA, CITY OF	37550001	Ranney Well Water Plant			2,900	1,518			A/Comm	WAG641023
KAPOWSIN WATER DISTRICT	37750001	SURFACE SPRING			70	35			A/Comm	none
KEEP	06209001	WELL #1			6	4			B/GRPB	none
Keizer Meats Water System	AC380001	Well 1			0	1			B/GRPB	none
Kelso LDS Church	47129001	LDS WELL 1			0	1			A/TNC	none
KELSO, CITY OF	38000001	RANNEY			12,288	5,235			A/Comm	none
KENANNA RV PARK	38010001	Well #1			7	94			A/TNC	none

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KENNEWICK, CITY OF	38100002/3	Columbia River, Ranney Collector 5 - GWI			77,347	22,098			A/Comm	none
KENT WATER DEPARTMENT	38150007	212th WTP			66,693	31,598			A/Comm	none
KEYPORT WATER	38550001	Well #2 - AAA002	W	400	1,005	422	Y	Iron & Manganese Removal	A/Comm	none
KID VALLEY CAMPGROUND	04972001	WELL #1 - AGF728	W	13	0	21	Y	Particulate (Turbidity) Removal	A/TNC	none
KINETH CLAIM COMMUNITY WATER	14371001	Well 1 - AGA916	W	30	65	30	Y	Iron & Manganese Removal	A/Comm	none
KING COUNTY WATER DISTRICT 111	41900001/2/3/4/5	Wells 3, 5, 6, and 9; Duberry Hill Flouride Station	W	2,079	20,000	5,269	Y	Iron & Manganese Removal	A/Comm	none
KING COUNTY WATER DISTRICT NO 90	41150002	Well 2, 3 & Wojewodski Well; S02 & S03 Wellfield	WF	500	18,000	7,356	Y	Iron & Manganese Removal	A/Comm	none
KIRK AVE WATER SYSTEM	59889001	WELL #1			21	9			B/GRP	none
KLICKITAT SALMON HATCHERY	08933001	INDIAN FORD SPRING 1			15	4			B/GRP	none
KLICKITAT WATER SYSTEM	42800001	WF Well #1 - AFL828 (Lower)	WW	235	433	180	Y	Iron & Manganese Removal	A/Comm	none
KNAPPTON COVE	03702001	WELL ON PROPERTY			6	2			B/GRP	none
KNUCKLES ESTATES	42930001	Well #1			21	8			B/GRP	none
KNUTSON WATER SYSTEM	02263001	WELL 1			6	2			B/GRP	none
KRIEG WATER SYSTEM	43172001	Well			2	2			B/GRP	none
KTW Orchards	ac017001	Well #1 - AHK975	W	32	5	5	Y	Inorganics Removal/Treatment	A/TNC	none
LA WIS WIS CAMPGROUND	FS485001	CLEAR CREEK - Disinfection	S	45	0	37	Y	Particulate (Turbidity) Removal	A/TNC	none
LACAMAS FARMSTEADS	02117002	Wells #1 - AEF346, & #2	W	175	408	154	Y	Iron & Manganese Removal	A/Comm	none
LACEY WATER DEPARTMENT	43500003/6	Hawks Prairie S19 & S31; Well #1 - AAB877; Fire Station	W	800	67,482	27,964	Y	Iron & Manganese Removal (filtered)	A/Comm	none
LACKAMAS ELEMENTARY SCHOOL	ab023001				0	2		FE/MN-H2S-Arsenic Removal	A/NTNC	none
LAFFERTYS SOUTHSORE WATER SYSTEM	43529001	Lake Chelan			10	74			A/TNC	none
LAKE CHELAN RECLAMATION DISTRICT	43783001	Lake Chelan Rec Dist WTP			3,175	1,593			A/Comm	none
LAKE EASTON #1	02259001	Well #1			15	6			B/GRP	none
Lake Erie Water System	02663001	DUG WELL			13	7			B/GRP	none
LAKE MARGARET WATER SYSTEM	44200002	Lake Margaret			400	152			A/Comm	none
LAKE MERIDIAN ESTATES (MHP)	23341001	Well # 1			154	77			A/Comm	none
LAKE TUCK	44965001	WELL #1 AAB177	W	80	143	54	Y	Iron & Manganese Removal	A/Comm	none
LAKEDALE WATER SYSTEM	45085001	Neva Lake			4	32			A/TNC	none
LAKEHAVEN UTILITY DISTRICT	41997002/07/10-13/15/17	Wells 9, 17, 17a/b, 19, 19a, 20, 20a, 21, 22, 22a/b, 23, 23a, 29, & 9-64	W	10,025	112,000	42,335	Y	Iron, Manganese & Inorganics Removal	A/Comm	none
LAKEWOOD WATER DISTRICT	45550003/15/18/20/22	Interlaaken D-3 ACY107; Angle Lane S-1; View Rd N-1 ACY127; Deepwood; Country Place	W	1,800	69,705	27,881	Y	Iron & Manganese Removal	A/Comm	none
LAMB-WESTON PASCO	73920001/2/3	Wells #1, #2, #3, #4 (AFQ251), #5, #6	W	415	0	1	Y	Inorganics Removal/Treatment	A/NTNC	none
LAND RECOVERY INC LANDFILL WS	07617001	WELL 1			0	3			B/GRP	none
LANGLEY WATER	45960001	Treatment Plant 1			8	3			B/GRP	none
LARCH CORRECTIONS CENTER	06461001	Wells #3 (AFP634); & 4	W	65	480	496	Y	Particulate (Turbidity) Removal	A/Comm	none
LATHIM	54964001	WELL #1 BYRON & DESSIE			5	2			B/GRP	none
LAURELWOOD WATER ASSOCIATION	62114001	WELL			22	12			B/GRP	none
LEAVENWORTH, CITY OF	46500002	Icicle Creek WTP			3,000	2,326			A/Comm	WAG645001
LEDGEWOOD BEACH WATER DISTRICT	46650003	Well #3 - AGA913	W	50	177	132	Y	Iron & Manganese Removal	A/Comm	none
LEE, SHARON & JACK	05317001	WELL #1			3	2			B/GRP	none
LENORA WATER AND SEWER DISTRICT	01281001	Well #2 (Lancelot Well)			12	246			A/TNC	none
LENSING, C.H.	58227001	WELL #1			5	2			B/GRP	none
LEWIS CO FIRE DIST #5 STATION #3	AA142001	Well 1			0	1			B/GRP	none
LEWIS CO WTR SWR DIST #6	44240001	FE/MN & Disinfection			350	262			A/Comm	none
LEWIS RIVER GOLF COURSE	37105001	WELL #1 AGF706			68	27			A/Comm	none
LEWIS RIVER SALMON HATCHERY	47043001	Domestic Well			9	5			B/GRP	none

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LEWISVILLE HEIGHTS	02126001	WELL 204 AAF514			24	12			B/GRP	none
LIBERTY CAFE	28370001	WELL #1 AFK922			3	3			A/TNC	none
LIBERTY CALL B&B	55189001	WELL #1			3	2			B/GRP	none
LIGO WATER SYSTEM	07093001	Well #2 - AHA157			0	4			A/NTNC	none
LIMEKILN STATE PARK	sp017001	Well #2 - AES858	W	3	5	8	Y	Iron & Manganese Removal	A/TNC	none
LISECC	43290001	Dickinson Lake			120	200			A/Comm	WAG643004
Little Butte Water System	49120001	Little Butte WTP-LAKE CHELAN			48	32			A/Comm	none
LITTLE SQUIRT	04618001	WELL #1			8	3			B/GRP	none
LIVINGSTON BAY COMMUNITY ASSN	47628001	Well 1 - AGA771	W	60	120	68	Y	Iron & Manganese Removal	A/Comm	none
LOCKWOOD APARTMENTS	77667001	WELL # 1			10	8			B/GRP	none
LOFALL WATER	03960001	WELL 1 ABZ663			4	3			B/GRP	none
LOG CABIN	NP570001	LAKE CRESCENT			5	41			A/TNC	none
LONG BEACH WATER DEPARTMENT	48000001	SWTP			3,854	2,073			A/Comm	WAG641019
LONG POINT WATER COMPANY INC	48050001	WF Wells 2, 3, & 4	WF	85	182	79	Y	Iron & Manganese Removal	A/Comm	none
LONGMIRE	NP580001	ZURLO CREEK	S	200	15	123	Y	Particulate (Turbidity) Removal	A/NTNC	none
LONGVIEW WATER DEPARTMENT	48100002	Mint Farm S8 WF(S04, 5, 6 & 7)	WF	0	40,878	17,226	Y	Iron & Manganese Removal	A/Comm	none
LOST LAKE CG - TONASKET RD	FS585001	Spring	SP	20	0	32	Y	Particulate (Turbidity) Removal	A/TNC	none
LOST LAKE PROPERTY OWNERS ASSN	48345001	Wells 1,2	WF	235	736	382	Y	Iron & Manganese Removal	A/Comm	none
LOST WOODS WELL	62127001	WELL #1			21	9			B/GRP	none
Lowell Johnson Park Water System	ab637001	Well 1			0	1			A/TNC	none
LUMMI POINT WATER ASSOCIATION	48875001	Wells #1 - AFM077-4	W	10	2	15	Y	Iron & Manganese Removal	A/TNC	none
LWWSD - AGATE HEIGHTS	52957001	Giesbrecht 10	W	484	165	39	Y	Iron & Manganese Removal	A/Comm	none
LWWSD - SOUTH SHORE WATER SYSTEM	95910001	Lake Whatcom			9,912	3,780			A/Comm	none
LYNDEN WATER DEPARTMENT	49150001	NOOKSACK			12,730	5,449			A/Comm	WAG643003
M & M S QUICKSTOP GROCERY & DELI	27586001	DRILLED WELL			3	2			A/TNC	none
MABANA SHORES ASSOCIATION	49600001	Wells #1, #2 (AGA684), #3, #5, & #6	W	8	48	42	Y	Iron & Manganese Removal	A/Comm	none
MABERRY PACKING LLC	49890001	WELL #1			6	50			A/TNC	none
MAC THOM ORCHARDS	07359001	Well #1	W	26	12	9	Y	Inorganics Removal/Treatment	A/TNC	none
MADRONA COMMUNITY, INC	02154001	STRAWBERRY CREEK	S	13	0	27	Y	Particulate (Turbidity) Removal	A/TNC	none
MADRONA PARK LLC	05793001	WELL #1 MADRONA PARK			24	10			B/GRP	none
MALLARD BAY RESORT	04193001	Well 2			4	52			A/TNC	none
MANTHEYS COUNTRY MOBILE PARK	50900001	WELL #1			120	58			A/Comm	none
MAPLE HILL PARK	09356001	Well #1 - AGA977	W	31	35	18	Y	Inorganics Removal/Treatment	A/Comm	none
MARBLE WATER SYSTEM	01649001	SPRING			5	3			B/GRP	none
MARINE HILL WATER SYSTEM	04344001	WELL #1			15	4			B/GRP	none
MARINERS COVE BEACH CLUB INC	51730001	Wells 1, 2, 3, 4, & 5	WF	74	300	149	Y	Iron & Manganese Removal	A/Comm	none
MARTINEZ WATER SYSTEM	42677001	WELL #1			10	2			A/TNC	none
MARYSVILLE ESTATES-AQUA HILLS WS	09404001	Well #1 - AGB793	W	20	100	49	Y	Iron & Manganese Removal	A/Comm	none
MARYSVILLE UTILITIES	51900001	Stillywell			62,115	20,683			A/Comm	none
MASSIE, MICHAEL C	63737001	WELL 1			5	1			B/GRP	none
MAURY MUTUAL WATER CO	52100002	Well #1 - AFJ062	W	50	236	95	Y	Iron & Manganese Removal	A/Comm	none
MAXVALE	07486001	WELL #1 AGN726 ZINSKI			21	7			B/GRP	none
Maxwelton Water System	10811001	Well 1			0	5			A/NTNC	none
MAYR BROTHERS HATCHERY	FW023001	00050/ABERDEEN			4	2			B/GRP	none
MAYSE	02534001	WELL #1 HP			15	6			B/GRP	none
MC GEE-LENHART (COMM.) WATER	01056001	WELL			5	2			B/GRP	none
MC NABB (COMM) WATER SYSTEM	26442001	WELL			5	2			B/GRP	none

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MCCLEARY, CITY OF	52250001	WF (S02 & S03)	WF	840	1,600	829	Y	Iron & Manganese Removal	A/Comm	none
MCGRATH	32561001	MAJDALI			10	3			B/GRP	none
MCGREGOR COMPANY	15151001	WELL 1			0	1			B/GRP	none
MCHAVERN INC	44357001	Lake McMurray			12	37			A/TNC	none
MCKEEVER	84325001	Well #1			15	6			B/GRP	none
MCKENNA WATER DISTRICT	03521001/2	Wells #3 & #4	W	150	600	261	Y	Iron & Manganese Removal	A/Comm	none
MCKINNEY, W. WATER SYSTEM	37941001	WELL #1			5	2			B/GRP	none
MCNEIL ISLAND WATER	52900001	Eden Creek and Butterworth Lakes			271	271			A/Comm	WAG643008
MEADOWBROOK HOMEOWNERS ASSN	03449001	AGB996 WELL 1	W	36	35	15	Y	Iron & Manganese Removal	A/Comm	none
Mercy Water System	ad112001	Iron and Manganese Removal			3	3			B/GRP	none
Meridian Meadows Water System	AC523001	We;; 1			18	6			B/GRP	none
MERIDIAN SCHOOL COMPLEX	ab234001	Hemmi Road Intertie			0	3			A/NTNC	none
METALINE FALLS, TOWN OF	54250001	Metaline Falls WTP			344	237			A/Comm	none
METALINE WATER DEPT	54350001	Linton Creek			179	93			A/Comm	none
MILLER ORCHARD	07205001	LAKE CHELAN			7	13			B/GRP	none
MILTON, CITY OF	54950003	Corridor Wells 1 & 2			8,078	3,169			A/Comm	none
MINERAL POINT COMMUNITY CLUB	55038001	Seawater Source			16	17			A/TNC	none
MINIELLY - SUTTON	17815001	WELL 1			5	2			B/GRP	none
Mission Ranch Estates Water System	AA868001	Well # 1			2	1			B/GRP	none
MITCHELL POINT WATER ASSN	55370001	Seawater Source			64	39			A/Comm	none
MOORE WATER SUPPLY	07981001	MOORE SPRING UNAPPROVED			10	4			B/GRP	none
MORAN STATE PARK-CASCADE LAKE	SP540001	Moran & Cold Creeks			10	37			A/TNC	none
MORAN STATE PARK-MOUNTAIN LAKE	SP541001	Unnamed Creek	S	9	0	7	Y	Particulate (Turbidity) Removal	A/TNC	none
MORRIS, DAVE (LL-0704)	04016001	WELL #1			17	3			B/GRP	none
MORTON, CITY OF	56250001	SW Tmt Plant			1,140	630			A/Comm	WAG641016
MORTON, JERRY & BARBARA	46061001	EAST WELL #1			3	1			B/GRP	none
MOSSY ROCK WATER ASSOCIATION	23594001	WELLHEAD			10	7			B/GRP	none
MOUNT BAKER MOBILE HOME PARK	56874001	WELL #1			87	35			A/Comm	none
MOUNT BAKER SCHOOL DISTRICT-	01468001	WELL #1			0	1			A/NTNC	none
MOUNT BAKER SKI AREA - WHITE	01357001	RAZORHONE CREEK	S	21	0	2	Y	Particulate (Turbidity) Removal	A/TNC	none
MOUNTAIN CREEK ESTATES 2	02203001	WELL			24	9			B/GRP	none
MOUNTAIN MEADOWS FARM LLP	03803001	Well AFJ085	W	30	0	1	Y	Iron & Manganese Removal	A/TNC	none
MOUNTAIN VIEW COMMUNITY ASSN	04741001	WELL #1			12	5			B/GRP	none
MOUNTAIN VIEW INN WATER SYSTEM	35590001	AGB545 WELL			5	8			B/GRP	none
MOUNTAIN VIEW KINGDOM HALL WS	04048001	WELL			0	1			A/TNC	none
MOUNTAIN VIEW SUBDIVISION	03774001	Well 1	W	47	30	13	Y	Iron & Manganese Removal	A/Comm	none
MOUNTAINEERS - STEVENS LODGE	03022001	STEVENS PASS UNTRTD DANGER LAKE			0	1			B/GRP	none
MR ELECTRIC	04505001	WELL #1			0	1			B/GRP	none
MUD LAKE - 262	46640001	WELL #1			8	4			B/GRP	none
Munn, D Water System	34425001	WELL 1			17	10			B/GRP	none
MUTINY SANDS CLUB	57900001	AGA813 WELL 1	W	250	14	65	Y	Iron & Manganese Removal	A/TNC	none
MUTINY VIEW MANOR COMMUNITY CLUB	57930001	Wells 1,2	WF	120	173	73	Y	Iron & Manganese Removal	A/Comm	none
NASELLE	58350001	Naselle WTP, Lane Creek	S	300	1,473	563	Y	Particulate (Turbidity) Removal	A/Comm	none
NAUMANN, BILL	40740001	BILL NAUMANN WELL			5	2			B/GRP	none
NE SAMMAMISH SEWER & WATER	75265002	Well 3 and 4	W	600	8,134	3,318	Y	Inorganics Removal/Treatment	A/Comm	none
NECK POINT COVES INC	58675002	Seawater			4	32			A/TNC	none
Nefarious Cellars Winery	ab203001	Well #1 - ALF268	W	8	0	1	Y	Particulate (Turbidity) Removal	A/TNC	none

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NEMAH SALMON HATCHERY	01890001	WELL #1			9	4			B/GRPB	none
NEW UTSALADY WATER SYSTEM INC	59200001	Wells 1 & 3	WF	60	126	147	Y	Iron & Manganese Removal	A/Comm	none
NILE VALLEY COMMUNITY CHURCH	04513001	Well #1			2	2			A/TNC	none
NINE CANYON RANCH	06559002	Well #1 (IX)			49	15			A/Comm	none
NINE MILE STORE	59555001	Well 1			4	4			A/TNC	none
NISQUALLY HIGHLANDS 364	00953001	WELL #1 - BCK265	W	50	162	55	Y	Iron & Manganese Removal	A/Comm	none
NISQUALLY PINES COMMUNITY CLUB	59591001	WF (S04, S05, S07)			2,000	795			A/Comm	none
NISQUALLY REACH NATURE CENTER	fw020001	S01, Well #1 - BBP867 (6)"	W	17	1	2	Y	Iron & Manganese Removal	A/TNC	none
NOEL CANNING	07143001	Well #1			0	1			A/NTNC	none
NORTH BAINBRIDGE WATER CO	59994002/3	Well #7 - AEK852; Well #9 - AAB455	W	900	4,443	1,800	Y	Iron & Manganese Removal	A/Comm	none
NORTH BEACH WATER	63000001	New Plant			4,010	3,194			A/Comm	none
NORTH BELLINGHAM GOLF COURSE	04235001	WILDER RANCH BARN WELL			0	5			A/TNC	none
NORTH BLUFF ASSOCIATION	60140001	Well 2, Well 2 - AGA926	W	30	17	25	Y	Inorganics Removal/Treatment	A/TNC	none
NORTH BOON WATER SYSTEM	18821001	Well #1 - AGA873	W	30	75	30	Y	Iron & Manganese Removal	A/Comm	none
North Fork Comm Library - Kendall	AC316001	Well 1 BAA593	W	30	0	1	Y	Particulate (Turbidity), Fe, Mn, H2S	A/TNC	none
NORTH PENINSULA	05122002/5/6	WF Kingston S05, S06, S12, S13, & S21 WTP - AAC601 KI 7 (12")	WF	995	12,427	4,971	Y	Iron & Manganese Removal	A/Comm	none
NORTH PERRY AVE WATER DISTRICT	60950004	S10 Riddell Road			18,533	7,589			A/Comm	none
NORTH RIVER SCHOOL DIST 200	08741001	Well 2			2	6			A/NTNC	none
Northwest Energetic-Alpha Rd	08093001	WELL #1			0	1			B/GRPB	none
Oakdell Egg Farm East Water System	ac613001	Nitrate Treatment Plant			0	1			B/GRPB	none
OBSTRUCTION ISLAND COMMUNITY CLUB	00270001	Seawater			24	31			A/TNC	none
OCEAN ACRES INCORPORATED	62846001	WELL			6	9			B/GRPB	none
OCEAN SHORES WATER DEPT	63008002	Treatment Plant #2 Shallow Wells; WF (S04, 11, 12, 13 & 15)	WF	1,550	7,054	5,765	Y	Disinfection Byproducts	A/Comm	none
OCEAN SPRAY CRANBERRIES	63012001	WELL #6 AHL350	W	500	0	2	Y	Particulate (Turbidity) Removal	A/NTNC	none
OCEAN VIEW PLACE	64701001	OCEAN VIEW PLACE			8	3			B/GRPB	none
OHANAPECOSH	NP670001	No-Name Creek	S	0	0	243	Y	Particulate (Turbidity) Removal	A/TNC	none
OKANOGAN WATER DEPARTMENT, CITY	63200001	Well #4			2,525	1,071			A/Comm	none
OLD BELL.	10816001	WELL #1			8	4			B/GRPB	none
OLD HALL	53970001	UNAPPROVED WELL #1			6	2			B/GRPB	none
OLGA WATER USERS INC	63400001	CASCADE STREAM			276	130			A/Comm	none
OLIVERS	06712001	WELL 1			2	3			B/GRPB	none
OLYMPIC VIEW WATER & SEWER DISTRICT	63600001	Deer Creek sources 03 & 04			12,938	6,812			A/Comm	none
OLYMPIC VISTA WATER SYSTEM	32976001	WELL			10	4			B/GRPB	none
OPELSKY	28890001	WELL #1			5	2			B/GRPB	none
ORIENT WATER COMPANY	64300001	Oreint WTP-E DEER CR			100	55			A/Comm	none
ORTING, CITY OF	64500004/6/7	Well #3 - APM024; Well #4; & SR162 Well	W	650	6,930	2,889	Y	Iron & Manganese Removal	A/Comm	none
OTHELLO MANOR WATER SYSTEM	64845001	AFL233 WELL 1			400	152			A/Comm	none
OUR LADY OF VALLEY CATHOLIC CHURCH	41522001	Well #1 - AGJ155	W	23	1	2	Y	Particulate (Turbidity) Removal	A/TNC	none
OVERRA ROAD #2	01333001	WELL #1 AGN634 OVERRA #2			16	6			B/GRPB	none
OYSTER CREEK INN	65189001	OYSTER CREEK			0	1			A/TNC	none
OYSTER POINT	60679001	WELL #1			10	4			B/GRPB	none
PACIFIC BLUEBERRIES	03704001	WELL #1			0	2			A/TNC	none
PAGES MOBILE HOME PARK	65600001	Treatment Plant 1			0	1			B/GRPB	none
PAR IV GOLF LEARNING CENTER	03654001	WELL #1			0	1			B/GRPB	none
PARADISE	NP680001	EDITH CREEK			0	114			A/TNC	none

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PARADISE ESTATES WATER DEPT INC	66090001	Paradise CC			200	394			A/Comm	none
PARADISE ESTATES WATER DEPT INC	66090001/2	Well #2 - AFM 943; Well #4 - AFM936 (Paradise CC)	W	59	200	394	Y	Iron & Manganese Removal	A/Comm	none
PARADISE WATER ASSOC	13960001	WELL #1 AGF041			45	62			A/Comm	none
PARISEAU ORCHARD - BRIDGEPORT CAMP	07441001	WELL 1			0	5			B/GRP	none
PARKLAND LIGHT & WATER COMPANY	66200007	WELL #8 ACN718	W	1,600	25,050	8,477	Y	Iron & Manganese Removal	A/Comm	none
PARKWOOD APARTMENTS	18160001	Wells #1 and #2 - AEJ170	W	40	60	20	Y	Particulate (Turbidity) Removal	A/Comm	none
PARRIS WATER SYSTEM	01708001	KRAPF WELL			8	3			B/GRP	none
PASCO WATER DEPARTMENT	66400001/2	Columbia River, West Pasco WTP	S	4,200	51,590	22,649	Y	Particulate (Turbidity) Removal	A/Comm	WAG647001
PAUL SAM	32746001	WELL #1			5	2			B/GRP	none
PAVILION AT SENTRY PARK	02417001	WELL #1 - AFK561	W	0	0	2	Y	Particulate (Turbidity) Removal	A/TNC	none
PE ELL, TOWN OF	66750001	Pe Ell SWTP			935	412			A/Comm	none
PEACEFUL VALLEY CHURCH SCHOOL	01036001	WELL 1			0	1			B/GRP	none
PENN COVE WATER AND SEWER DISTRICT	66950003	Wells #2 - AGA780; & #3	W	140	460	255	Y	Iron & Manganese Removal	A/Comm	none
PERCIE ROAD WATER ASSOCIATION	67020001	Wells 1, 2, 3	WF	500	250	107	Y	Iron & Manganese Removal	A/Comm	none
PESCHKE, ARNOLD	57301001	PESCHKE WELL #1			8	3			B/GRP	none
PETERSON WATER SYSTEM #5	01633001	WELL			16	6			B/GRP	none
Phillips 66 Company	55450001	WHATCOM CO. PUD #1	S	40	0	1	Y	Particulate (Turbidity) Removal	A/NTNC	none
PICHININI	03439001	WELL #1			9	3			B/GRP	none
PILCHUCK 26 TRACTS	67375001	Purchased surface water; 24050L/EVERETT	PU	0	66	23	N	Particulate (Turbidity) Removal (filtered)	A/Comm	none
PINE CLIFFS MAINT CO INC	67503001	Well #1			18	39			A/TNC	none
PINELOCH SUN BEACH CLUB	67640001	Well #1 - AFT399	W	200	90	409	Y	Particulate (Turbidity) Removal	A/Comm	none
PIONEER FARM MUSEUM	67713001	Well ACN778	W	20	0	1	Y	Iron & Manganese Removal	A/TNC	none
PIONEER PARK WATER SYSTEM	67717001	Well #1 - AGA988	W	25	65	36	Y	Iron & Manganese Removal	A/Comm	none
PLANTATION RIDGE 1	06172001	WELL #1			15	6			B/GRP	none
PLEASANT VALLEY - 307	38081001	WELL #1 AEF412	W	5	50	17	Y	Inorganics Removal/Treatment	A/Comm	none
POLE ROAD WATER ASSOCIATION	68350001/2	East WF; West WF Wells 2, 2A, & 2B	WF	360	1,500	681	Y	Iron & Manganese Removal	A/Comm	none
POLNELL HEIGHTS WATER ASSOCIATION	68370001	WF Wells 1 and 4	WF	13	50	30	Y	Iron & Manganese Removal	A/Comm	none
PONDERAY NEWSPRINT CO - BLUE MOON	41664001	WELL 1 (BLUE MOON)			0	2			B/GRP	none
PONDILLA ESTATES COMMUNITY ASSOC	68430001	WF Wells 1 & 2	WF	19	50	30	Y	Iron & Manganese Removal	A/Comm	none
PORT ANGELES COMPOSITE	43296003	Morse Creek Microfiltration WTP			8,085	3,379			A/Comm	WAG641010
PORT ANGELES, CITY OF	68550001	Elwha River WTP			19,038	10,114			A/Comm	none
PORTER CREEK SALOON	05816001	WELL #1			0	1			A/TNC	none
POSSESSION BEACH WATERFRONT PARK	38041001	WELL			3	2			B/GRP	none
PRAIRIE ACRES WATER SYSTEM	69157001	WELL # 1 AET039	W	28	90	47	Y	Particulate (Turbidity) Removal	A/Comm	none
PRAIRIE ESTATES WATER SYSTEM	30984001	Well #1 AET038	W	25	39	18	Y	Arsenic & Inorganics Removal/Treatment	A/Comm	none
PRICE AND PASLAY ORCHARD	07265001	WELL 1			4	8			B/GRP	none
PRICHARDS WESTERN ANGLERS	45651001	SPRING			0	1			B/GRP	none
PROSPECT WATER ASSN INC	01842001	Well #1 - AFL835	W	100	92	39	Y	Particulate (Turbidity) Removal	A/Comm	none
PROSSER, CITY OF	69750001	All Sources + Wellfield			5,894	2,800			A/Comm	none
PSE Ferndale Generating Station	05121001	PUD #1 WHATCOM COUNTY-UNTREATED SUR			0	1			B/GRP	none
PUD #1 OF ASOTIN COUNTY	93343007	Surface Standby #1			19,264	8,945			A/Comm	none
PUYALLUP, CITY OF	70050005	Rec Center Well 17			34,030	14,701			A/Comm	none
QUAIL RUN	11278001	QUAIL RUN WELL AGN769	W	148	66	22	Y	Particulate (Turbidity) Removal	A/Comm	none
QUARTERMASTER HEIGHTS WATER ASSN	70250001	Well #1 - AFJ054	W	80	74	33	Y	Particulate (Turbidity) Removal	A/Comm	none
QUILCENE NATIONAL FISH HATCHERY	fw585001	Well 6			5	8			B/GRP	none

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QUIMPER	05783001/2/4/5	New Kively Well 4 (AGS219), SO6 (GCS SO3 ABC314 Willison), S11, & S14	W	165	7,355	3,142	Y	Disinfection, Iron & Manganese Removal, Corrosion	A/Comm	none
RADER FARMS LABOR CAMP	56829001	WELL			2	11			A/TNC	none
RAINIER RIDGE WATER SYSTEM	01361001	Well 1			9	6			B/GRP	none
RAINIER SCHOOL	70850001	South Prairie Creek & Well 5	S	800	450	287	Y	Particulate (Turbidity) Removal	A/Comm	none
RAUBUCK ROAD - 282	06047001	WELL #1			18	6			B/GRP	none
RAVENS REACH	01031001	FE/MN Removal			42	16			A/Comm	none
RAVER SUBSTATION	BP480001	WELL			0	1			B/GRP	none
RAYMOND WATER DEPARTMENT	71500001	Surface WTP - S Fork Willapa River	S	1,400	2,970	1,564	Y	Disinfection Byproducts (filtered)	A/Comm	WAG641007
RED CLOUD 2 #276	05732001	WELL #1			18	6			B/GRP	none
Relwof Water System	AB428001	Well			8	2			B/GRP	none
RENTON, CITY OF	71850005	Maplewood			62,100	29,246			A/Comm	none
REPUBLIC SDA CHURCH	05976001	WELL 1			0	1			B/GRP	none
RESORT AT DEER HARBOR	18430001	Desalination Plant	SE	15	3	33	Y	Inorganics Removal/Treatment	A/TNC	none
RHODENA BEACH WATER DISTRICT	72150001	Arsenic Treatment			152	69			A/Comm	none
RICHLAND, CITY OF	72250001/5	N. Richland Wellfield-SSF; Wellian Wy/S12-15; S01 - Surface Water	WF	2,778	51,150	23,407	Y	Organics & Color Removal	A/Comm	none
RIDGEVIEW ESTATES COMMUNITY ASSN.	26791001	Well #1 - AGA849			75	37			A/Comm	none
RIGGLEMAN ORCHARDS INC	20540001	Well 1			10	5			A/TNC	none
RISTUBEN, OLIVER J.	02545001	RISTUBEN, OLIVER			3	2			B/GRP	none
RIVER BEND WATER SYSTEM	72752001	River Bend WTP - Pend Oreille River			30	77			A/Comm	none
RIVER OAKS RV PARK & CAMPGROUND	13644001	CT6 Required			30	30			A/Comm	none
RIVER OF LIFE COMMUNITY CHURCH	08495001	Well #2 - AHH044	W	30	0	2	Y	Iron & Manganese Removal	A/TNC	none
RIVERCREST MOBILE PARK	33431001	Wells 1 and 2	WF	34	42	15	Y	Iron & Manganese Removal	A/Comm	none
RIVERSIDE VILLA	72842001	Well #1 - AFK897	W	40	120	64	Y	Iron & Manganese Removal	A/Comm	none
RIVERVIEW BIBLE CAMP	03987001	Spring Creek			4	10			A/TNC	none
ROARING CREEK	73126001	ROARING CREEK			0	34			A/TNC	none
ROBINWOOD LANE WATER SYSTEM	06857001	LOT M1 WELL			23	6			B/GRP	none
ROCHE HARBOR WATER SYSTEM INC	73230001	Roche Harbor Lake #2 (Briggs Lake)	S	350	329	445	Y	Particulate (Turbidity) Removal (filtered)	A/Comm	none
ROCKAWAY BEACH WATER	73450001	Taylor Well			190	69		Fe/Mn Removal	A/Comm	none
ROCKY POINT CAMPGROUND	07210001	WELL #1 - AFK810	W	5	0	27	Y	Iron & Manganese Removal	A/TNC	none
ROCKY RIDGE WATER ASSOC.	39754001	ROCKY RIDGE COMM WEL			20	8			B/GRP	none
ROLLING HILLS-GLENCAIRN	74000001	Wells #1, #3 - ALA614, & #4	W	120	868	428	Y	Iron & Manganese Removal	A/Comm	none
ROOSEVELT WATER SYSTEM	74160001	Well #1 - AFL832			198	79			A/Comm	none
ROSARIO	74270001	CASCADE LAKE			585	221			A/Comm	none
ROSE AVENUE WATER ASSOCIATION	66932001/2	Wells #1, #2 (No Tag)			53	20			A/Comm	none
Rosedale Market Water System	22587001	Treatment Plant 1			0	1			B/GRP	none
ROSLYN, CITY OF	74400001	Roslyn WTP-DOMERIE CREEK			976	710			A/Comm	none
ROSS ELECTRIC OF WA. INC	20006001	WELL #1			3	2			B/GRP	none
ROSS POWER HOUSE	74398001	ROSS POWER HOUSE			0	1			B/GRP	none
ROWAND MACHINERY CO	74575001	Treatment Plant 1			3	1			B/GRP	none
ROYAL BLUFF RANCH	07994001	Well #1 - AFA239	W	45	5	17	Y	Iron & Manganese Removal	A/TNC	none
ROYAL PACIFIC ORCHARD	07286001	Wells #1 - ACX177; & #2	W	10	0	17	Y	Inorganics Removal/Treatment	A/TNC	none
RUSTEMEYER MOBILE HOME PARK	75028001	WELL #1 RUSTEMEYER MHP			44	22			A/Comm	none
RYDERWOOD IMPROVEMENT & SERVICE	75100001	Ryderwood WTP / Campbell Creek	S	100	432	289	Y	Particulate (Turbidity) Removal	A/Comm	WAG641011
SACKMAN S OLD WELL	02231001	WELL			6	2			B/GRP	none
SADDLE MOUNTAIN WINERY	30951001	WELL 1			1	2			B/GRP	none

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Salish Sea Water System	AC941001	RO WTP			26	6			A/Comm	none
SALKUM HEIGHTS WATER #1	AA336001	WELL #1 ACW401			15	6			B/GRP	none
SALKUM HEIGHTS WATER #2	AA335001	WELL #1 AGC712			2	1			B/GRP	none
SALMON LA SAC CG/CLE ELUM RD	FS810001	Salmon La Sac Creek			0	49			A/TNC	none
SAMISH PARK	15064001	SAMISH SPRING			4	3			A/TNC	none
SAMMAMISH PLATEAU WATER & SEWER	40900001/2/5/6	Wells #2.1, #2.2, #4R, #11.2, #11.1, #12R (AEC911), and # 13R (AAS174)	WF	2,900	54,468	21,522	Y	Iron & Manganese Removal	A/Comm	none
SAN JUAN GOLF & COUNTRY CLUB	AA248001	Well 1			4	3			A/TNC	none
SAN JUAN VISTA	75800001	Wells #1 (no tag), and #2	W	10	64	30	Y	Iron & Manganese Removal	A/Comm	none
SANCTUARY	37994001	WELL			18	6			B/GRP	none
SANDPIPER BEACH RESORT	75879001				1	31		Disinfection & FE/MN Removal	A/TNC	none
SARATOGA BEACH OWNERS ASSN	76240001	Wells 1 and 2	WF	120	425	206	Y	Iron & Manganese Removal	A/Comm	none
SARATOGA SHORES COMMUNITY CLUB	76250001	Well 2 - AGA721	W	30	25	39	Y	Iron & Manganese Removal	A/Comm	none
SARATOGA TERRACE WATER	10516001	AGA716 WELL	W	65	30	18	Y	Iron & Manganese Removal	A/Comm	none
SARATOGA WATER DISTRICT	76300001	Wells #2 and #3 - AGA785	W	200	458	208	Y	Iron & Manganese Removal	A/Comm	none
Satsop Business Park	18777001	Well #1 - AGF073 (GWI)			0	23			A/NTNC	none
SAUK RIVER CHRISTIAN CAMP	76452001	Frustration Creek			0	3			B/GRP	none
SCATCHET HEAD WATER DISTRICT	76470001	WF Wells 2 and 3	WF	230	900	410	Y	Iron & Manganese Removal	A/Comm	none
SCHAEFER COUNTY PARK	76592001	Well 1 AFC714 CT6 Required	W	100	0	1	Y	Particulate (Turbidity) Removal	A/TNC	none
SCHAFFER STATE PARK	sp790001	Well 2			3	21			A/TNC	none
SCHNEIDER, K. WATER SYSTEM	76716001	WELL #1			5	2			B/GRP	none
SCHURMAN, WILLIAM L	49516001	WILLIAM SCHURMAN			5	2			B/GRP	none
SE 176TH STREET	35179001	WELL			20	8			B/GRP	none
SEA VIEW WATER COMPANY	77148001/2	WF Wells #1, #2, & #3 - ABR011	WF	180	494	190	Y	Iron & Manganese Removal	A/Comm	none
SEAL BEACH	37379001	SEAL BEACH			6	4			B/GRP	none
SEATTLE PUBLIC UTILITIES	77050002	Tolt River	S	83,280	678,000	172,207	Y	Particulate (Turbidity) Removal	A/Comm	none
SEATTLE RIFLE AND PISTOL	02725001	WELL #1	W	25	1	2	Y	Iron & Manganese Removal	A/TNC	none
SEATTLE YACHT CLUB - HENRY ISLAND	77138001	Seawater Source			1	11			A/TNC	none
SEAWAY HOLLOW ASSOCIATION	77160001	Well #1 - AEH766	W	12	2	19	Y	Iron & Manganese Removal	A/TNC	none
SEAWEST WATER SYSTEM	37544001	AGA981 WELL			36	25			A/Comm	none
SEDGWICK WATER	04860001	WELL #1			14	4			B/GRP	none
SELLS WATER SYSTEM	38181001	WELL #1			18	7			B/GRP	none
SEQUIM BAY PARK TRUST	08466001	Well 3 - ABB441			5	2			B/GRP	none
Seven Oaks Driving Range WS	AB808001	Well 1	W	0	0	1	Y	Iron & Manganese Removal	B/GRP	none
SHADY GROVE COURT	33430001	Treatment Plant 1			14	4			B/GRP	none
SHELLY-RAMERMAN	03188001	SHELLY-RAMERMAN WELL #1			8	2			B/GRP	none
SHIRONA WATER SYSTEM	78373001	Wells 1, 2 and S03	WF	84	243	102	Y	Iron & Manganese Removal	A/Comm	none
SIERRA COUNTRY CLUB	78975001	Well #1 - AGA973	W	57	355	209	Y	Disinfection Byproducts	A/Comm	none
SIERRA HOMEOWNER S ASSOCIATION WS	04643001	Well 1 & 4	W	120	355	144	Y	Iron & Manganese Removal	A/Comm	none
SILVER MAPLE RV PARK	79260001	WELL # 1			7	31			A/TNC	none
SIMON WELL	36821001	WELL 1			8	4			B/GRP	none
SIX LOTS WATER SUPPLY	06472001	Well #1			12	4			B/GRP	none
SKAGIT CO PUD - ALGER	01400001	Well AER350	W	75	210	122	Y	Iron & Manganese Removal	A/Comm	none
SKAGIT CO PUD - CEDARGROVE	11917001	Well #2			400	158			A/Comm	none
SKAGIT CO PUD - POTLATCH BEACH	69034001	Seawater Source			70	32			A/Comm	none
SKAGIT CO PUD ROCKPORT	73600001	Rockport SP			148	53			A/Comm	none
SKAGIT CONSERVATION ASSOCIATION	48476001	DEVILS LAKE			2	10			B/GRP	none

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SKAGIT COUNTY PUD 1 JUDY RES	79500001	Judy Reservoir			65,118	29,938			A/Comm	none
SKAGIT VIEW VILLAGE WATER SYSTEM	96879001	Well 1 AET015	W	100	78	70	Y	Iron & Manganese Removal	A/Comm	none
SKI TUR VALLEY	79740001	Spring #1	SP	25	0	37	Y	Particulate (Turbidity) Removal	A/TNC	none
SKYMEADOWS COMMUNITY	42705001	Wells 1 and 2	WF	35	51	26	Y	Iron & Manganese Removal	A/Comm	none
SKYWAY WATER & SEWER	38800003	Well #9 AFT341	W	160	9,890	3,347	Y	Iron & Manganese Removal	A/Comm	none
SLAVIC GOSPEL CHURCH WATER SYSTEM	aa034001	Well 1	W	60	0	1	Y	Iron & Manganese Removal	A/TNC	none
SMARTY MARTYS	04306001	Well #1 - BBP352 (6")	W	20	2	3	Y	Particulate (Turbidity) Removal	A/TNC	none
SMITH G. L. WATER SYSTEM	62014001	WELL			2	1			B/GRP	none
SMITH-EDWARD	03146001	WELL			9	3			B/GRP	none
SMUGGLERS HAVEN WATER SYSTEM	25582001	WELL			6	3			B/GRP	none
SNAKE RIVER VINEYARDS	80798001	WELL #1 - ALB503	W	30	3	3	Y	Inorganics Removal/Treatment	A/NTNC	none
SNO PUD 1 - LAKE STEVENS	80907002	Lake Stevens Well #1 - AGB694; and Well #2	W	1,200	46,298	18,782	Y	Iron & Manganese Removal	A/Comm	none
SNO PUD 1 - KAYAK	23111001	Well #2 - BBF570; and #3	W	300	917	367	Y	Iron & Manganese Removal	A/Comm	none
SNO PUD 1 - SUNDAY LAKE	85205001	Well #3 - ABG638	W	130	390	156	Y	Iron & Manganese Removal	A/Comm	none
SNOHOMISH, CITY OF	80915001	Pilchuck River			9,220	4,514			A/Comm	none
SNOQUALMIE WATER	81080003/4	North Wellfield TP (Well #8); South Wellfield TP (Wells 1R & 2)	WW	1,800	11,700	4,992	Y	Iron & Manganese Removal	A/Comm	none
SNOW CREEK	01220001	Well #1 - AEA126 (CT6 Required)	W	30	40	41	Y	Iron & Manganese Removal	A/Comm	none
SNOW CREEK ACCESS	36851001	SNOW CREEK			0	60			A/TNC	none
SNOW CREEK WATER SYSTEM	81100001	SPRING 1			13	7			B/GRP	none
SNOWBLAZE	81120001	Snowblaze WTP			60	143			A/Comm	none
Snug Harbor Resort Water System	01573001/2	Seawater; Well #1; and Well # 4 - APR106 (shallow well)	W/SE	4,002	0	19	Y	Inorganics, Iron, & Manganese Removal; RO	A/TNC	none
SOL DUC RESORT CAMPGROUND	NP800001	Sol Duc WTP, Stream #1, unnamed	S	35	0	66	Y	Particulate (Turbidity) Removal	A/TNC	none
SOUND VIEW WATER ASSOCIATION	02030001	WELL			7	3			B/GRP	none
SOUTH BAINBRIDGE WATER SYSTEM INC	81451001	S13 & S14			2,500	1,145		FE/MN	A/Comm	none
SOUTH BAY BED & BREAKFAST W.S.	05769001	WELL #1			3	2			B/GRP	none
SOUTH BAY FIRE DEPT OLD STATION 81	05347001	WELL #1 OLD STA 81			0	1			A/TNC	none
SOUTH BAY FIRE STA 81	06755001	WELL #1			0	2			A/TNC	none
SOUTH BEND WATER DEPARTMENT	81500001	South Bend WTP			1,888	1,029			A/Comm	WAG641008
SOUTH BLAKELY MAINTENANCE ASSN	00768001	Spencer Lake			4	13			B/GRP	none
SOUTH PRAIRIE, TOWN OF	82300002	Upper Well			485	159			A/Comm	none
South Whatcom Fire Authority WS	AC651001	Well			3	1			B/GRP	none
SOUTHWOOD WATER SYSTEM	82844011/16/20	Country Park 2; Emerald Terrace; Silver Creek Well - AKJ211	W	529	30,000	13,313	Y	Iron & Manganese Removal	A/Comm	none
SPAHR VUE WATER ASSOCIATION	82846002	Well #2			21	11		Fe/Mn Removal	B/GRP	none
SPANAWAY WATER COMPANY	82850008/9	Well #4; Well #6 - AEC909	W	2,100	25,153	10,392	Y	Iron & Manganese Removal	A/Comm	none
SPEELYAI SALMON HATCHERY	82957001	WELL #1			4	6			B/GRP	none
Spencers Landing Water System	AC046001	Seawater	SE	2	0	4	Y	Inorganics Removal/Treatment	B/GRP	none
SPO CO - FISH LAKE PARK	54300001	Old Myers Resort			3	3			B/GRP	none
SPRING POINT HOMEOWNERS	83335001/2	Lakes Jay & Clyde	SE	20	90	70	Y	Particulate (Turbidity) Removal	A/Comm	none
ST MICHAEL PARISH	07169001	WELL #1 ST MICHAELS			0	1			A/TNC	none
STANWOOD WATER DEPT, CITY OF	83650003	Bryant Wells			7,017	3,046			A/Comm	none
Stemilt Associates - Mattawa	ac327001	Well #1 - BAM586	W	31	0	5	Y	Inorganics Removal/Treatment	A/TNC	none
STEMILT IRRIGATION DISTRICT	84056001	Spring #1			168	55			A/Comm	none
STEVENS CO PUD - CHATTAROY SPRING W	12249002/3	Original Well - AKT796; Second Well - APM867			138	46			A/Comm	none
Stevens Pass Nordic Center	aa967001	Well #1 - ALE113	W	3	0	2	Y	Iron & Manganese Removal	A/TNC	none

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STEVENS PASS WATER SYSTEM	84245001	TYE RESERVOIR	S	40	18	19	Y	Particulate (Turbidity) Removal	A/NTNC	none
STEVENS WATER DEPT	84250001	Stevenson WTP, LA BONG CR	S	300	1,200	640	Y	Particulate (Turbidity) Removal	A/Comm	WAG641020
STEWART RANCH	84293001	WELL 1			8	8			B/GRPB	none
STURGEONS TRAILER HARBOR	03985001	WELL #1 AGF077			13	50			A/TNC	none
SUBURBAN PROPANE WATER SYSTEM	04272001	DUG WELL			0	1			B/GRPB	none
SUCIA ISLAND ST PARK-SHALLOW BAY	64681001	AGK141 GWI WELL 5			0	3			A/TNC	none
SUCIA ISLAND STATE PARK	SP900001	Wells #1 - AGK121; #2, #3, & #4 (GWI)	W	10	0	13	Y	Particulate (Turbidity) Removal	A/TNC	none
SULTAN WATER DEPARTMENT	84770001	Lake # 16			4,500	1,915			A/Comm	none
Summit Lk Moran SP Water System	37350001	AGK130 GWI WELL 1			0	2			A/TNC	none
SUMMIT VIEW COMMUNITY	20664001	WELL #1			16	9			B/GRPB	none
SUMNER WATER SYSTEM	01235001	SUMNER			6	3			B/GRPB	none
SUN ACRES SATELITE	00492001	WELL #1 AAF513			8	3			B/GRPB	none
SUN MOUNTAIN RESORT	85135001	Sun Mountain WTP-Patterson Lake	S	80	0	121	Y	Particulate (Turbidity) Removal	A/NTNC	none
SUNDANCE MOBILE HOME SALES	07825001	AES785 SUNDANCE WELL 1			0	1			B/GRPB	none
SUNDOWN M RANCH	31314001/2	Wells 2 & 3			8	121			A/NTNC	none
SUNLIGHT SHORES COUNTRY CLUB	33039001	Drilled Well			150	77			A/Comm	none
SUNNYBANK WATER SYSTEM	01266001	Lake Chelan	S	53	89	37	Y	Particulate (Turbidity) Removal	A/Comm	none
SUNRISE HILLS COMMUNITY W S	85818001	WF WellsS #1 & #2	WF	75	177	87	Y	Iron & Manganese Removal	A/Comm	none
SUNRISE NO 12	NP850001	FROZEN LAKE			0	15			A/TNC	none
SUNRISE POINT WATER CO	85900001	Wells 1 & 2 WF	WF	73	16	37	Y	Iron & Manganese Removal	A/Comm	none
SUNSET LAKE YOUTH CAMP	86125001	Well #2	W	75	3	35	Y	Iron & Manganese Removal	A/TNC	none
SUNSET MOUNTAIN COMMUNITY WS	05123001	WELL #1			9	5			B/GRPB	none
SUNSET WEST	61761001	AGA743 WELL	W	38	75	35	Y	Iron & Manganese Removal	A/Comm	none
SUNSHINE DELI	11601001	WELL #1			3	1			A/TNC	none
SUNVISTA/SUNLIGHT BEACH	85160001	Wells 1 and 2	WF	113	300	163	Y	Iron & Manganese Removal	A/Comm	none
SUNWOOD WATER SYSTEM	62034001	Well #1	W	100	198	109	Y	Iron & Manganese Removal	A/Comm	none
SURFCREST RESORT CONDOMINIUMS	86430001	Well #1 - AGF025	W	60	6	62	Y	Iron & Manganese Removal	A/TNC	none
SURFSIDE HOMEOWNERS	86470004	WF (S6,7,8,9,12,13) Deep J Wells	WF	820	1,405	2,217	Y	Iron & Manganese Removal	A/Comm	none
SWAUK CG/CLE ELUM RD	FS909001	Unnamed Spring			0	12			B/GRPB	none
SWEET HOME ESTATES 1	AA393001	Well #1 - AFT 784			2	1			B/GRPB	none
SWEET WATER 2	AA167001	WELL #1			10	4			B/GRPB	none
SWIFT CREEK ESTATES A WA N P	49834001	AFB089 UNNAMED SPRING	SP	10	0	47	Y	Particulate (Turbidity) Removal	A/TNC	none
T16 RANCH - HACIENDA	03395001	Hacienda Well #1			6	7			B/GRPB	none
TAGGARES WATER SYSTEM	aa547001	Well #1			0	1			A/TNC	none
TALKING RAIN BEVERAGE COMPANY	04748001	TALKING RAIN WELL			0	1			B/GRPB	none
TALL CEDARS ESTATES WATER ASSOC.	87120001	WELL #3 AHP141	W	60	100	44	Y	Iron & Manganese Removal	A/Comm	none
TANAWAX 49TH WATER SYSTEM	04638001	WELL			12	4			B/GRPB	none
TAPPS ISLAND WATER SYSTEM	87181001	Well 4, 5 and Wellfield S07	WF	360	1,500	530	Y	Iron & Manganese Removal	A/Comm	none
TAYLOR ROAD WATER SYSTEM	87195001	AGA548 WELL 1			50	19			A/Comm	none
The Buttes	08253001	WELL #1 AEF450	W	500	962	365	Y	Iron & Manganese Removal	A/Comm	none
The Cheese Farm	ad051001	S01 / S01 BHE724	W	25	0	1	Y	Iron & Manganese Removal	A/TNC	none
The Russell Group Water System	08262001	Well 1 AFG162	W	20	0	1	Y	Particulate (Turbidity) Removal	A/TNC	none
THOUSAND TRAILS - LEAVENWORTH	88126001	Clear Creek	S	40	3	273	Y	Particulate (Turbidity) Removal	A/TNC	none
THREE PONDS MOBILE PARK & APTS.	01125001	WELL #3 ACW438	W	75	113	37	Y	Iron & Manganese Removal	A/Comm	none
THREE RIVERS WINERY	07430001	Well 2			0	1			A/TNC	none
Thunderbird Park	88220001	SURFACE			2	101			A/TNC	none
THUNDERBIRD TERRACE WATER SYSTEM	05067001	UNNAMED STREAM			72	28			A/Comm	none

Appendix B. Condensed List of Water Supply System Data from the Department of Health

Water Supply System	WTP ID Number	Water Supply Source/Plant Name	Source Type	Source Capacity (gpm)	Full-Time Residential Population	Total Connections	Treatment Required?	Treatment Objective (Purpose)	Group/Type	WTPGP Number
TIFFANYS RESORT	88305001	WELL #1- ACV835	W	30	3	50	Y	Particulate (Turbidity) Removal	A/TNC	none
TILTON RIVER MOBILE HOME PARK	56700001	WELL #1 ABS176	W	40	50	24	Y	Inorganics Removal/Treatment	A/Comm	none
TIMBERLAKE COMMUNITY CLUB INC	88370001	Booser Pump Station; Well #2 - AFK577 (8")	WW	250	2,015	817	Y	Iron & Manganese Removal	A/Comm	none
TIMBERLAND LIBRARY SALKUM	22114001	Well #1 - AFM986	W	17	0	1	Y	Particulate (Turbidity) Removal	A/TNC	none
TISH HINKLEMAN - 265	61946001	TISH-HINKLEMAN			20	7			B/GRP	none
TOUTLE RIVER RV PARK	AB282001	S01 & S02; Well #1 - AKJ409	W	100	1	313	Y	Disinfection; Particulate (Turbidity)	A/TNC	none
TOWNE-PRATT-TOWNE	40329001	WELL #1			14	3			B/GRP	none
TOWNSHIP 29 WATER ASSOCIATION	00484001	Well #1 - AGA946	W	35	38	24	Y	Inorganics Removal/Treatment	A/Comm	none
TRACT C MINNEAPOLIS BEACH	88975001	Lake Chelan			24	16			A/Comm	none
TRAILER CORRAL	27808001	Well #1 - ABV511			7	29			A/TNC	none
TRANSALTA CENTRALIA GENERATION	65484001/2	Skookumchuck-Membrane Plant, TriMite SWTP			0	36			A/NTNC	none
TRUE HEART CENTER WATER SYSTEM	07839001	WELL 1			5	2			B/GRP	none
TSUGAWA FARMS 1	02343001	Wellfield			0	7			B/GRP	none
TULALIP LDS CHURCH	35684001	AGB931 WELL	W	65	0	1	Y	Iron & Manganese Removal	A/TNC	none
TURNBULL NWR HELM BUNKHOUSE	02483001	WELL #1			2	1			B/GRP	none
TURTLE ROCK EAST	03013001	WELL 1			10	4			B/GRP	none
TYREE, MELODIE	05832001	WELL #1			5	2			B/GRP	none
TYSON FRESH MEATS INC	14131001	Well 1			0	1			A/NTNC	none
UHS W. S.	03613001	WELL #1			4	2			B/GRP	none
U-NEEK RV CENTER	05545001	WELL #1 AEN882			0	2			B/GRP	none
Union Gospel Mission Camp	03554001	UGM Well #1	W	18	6	15	Y	Particulate (Turbidity) Removal (filtered)	A/TNC	none
UPPER FARM ROAD	25597001	UPPER FARM			3	1			B/GRP	none
UPPER PRESTON WATER ASSN	90700001	Well A AFJ203	W	65	60	60	Y	Inorganics Removal/Treatment	A/Comm	none
US NAVAL RADIO STATION(T)JIM CRK	11496001	Bld. #85 Well - AGB800	W	78	0	51	Y	Iron & Manganese Removal	A/NTNC	none
USCG LORAN C STATION GEORGE	CG255001	DOMESTIC WELL			0	1			B/GRP	none
Utsalady Bay Shore Water System	AB944001	Well #1			5	2			B/GRP	none
VADER-ENCHANTED VALLEY	90900001	COWLITZ RIVER			920	369			A/Comm	WAG641004
Valley Freightliner	03509001	WELL #1 WOOL			0	3			A/TNC	none
Valleyview Christian Church	04753001	Well #1			0	1			A/TNC	none
VALUE FORD	06747001	WELL #1 AGF068			0	1			B/GRP	none
VANCOUVER, CITY OF	91200001/04/05/12	WF WS #7 Well #1 ABR665 & Well #2 AFP658; Ellsworth WTP Well #1	WW	25,720	231,000	100,266	Y	Iron & Manganese Removal	A/Comm	none
VASILE, ED	21599001	WELL			5	2			B/GRP	none
VAUGHAN PUMPS	aa938001	WELL #1 ABP132	W	10	0	2	Y	Organics & Color Removal	A/NTNC	none
VETERANS OF FOREIGN WARS, POST 7392	90879001	Wells #1 & #2 - AGA532	W	5	0	15	Y	Iron & Manganese Removal	A/TNC	none
VICTOR WATER ASSOCIATION	91650001	WELL #1			43	22			A/Comm	none
VIEW ACRES SATELLITE	00062001	Well #1 - AAF519			13	5			B/GRP	none
VIEW ROYAL WATER SYSTEM	28494001	WELL #1			1,433	613			A/Comm	none
VIKING COVE	05373001	WELL #1			7	4			B/GRP	none
VIKING VILLAGE MOBILE HOME PARK	91908001	AGF741 GROUND A			25	16			A/Comm	none
VILLAGE AT FIELDS POINT	03213001	LAKE CHELAN			1	6			B/GRP	none
Vineyard	12700001	WELL #1			0	1			A/TNC	none
VINLAND	91923003	AFC506 Edge 5			2,973	1,258			A/Comm	none
VISTA WATER CORP.	25744001	WELL #1			24	8			B/GRP	none
VISTAIRE WATER SYSTEM	57414002	BAA966 Well B	W	200	160	75	Y	Iron & Manganese Removal	A/Comm	none
VITAMIN R WATER SYSTEM	05213001	WELL #1			15	6			B/GRP	none
VOS, SELWYN WATER SYSTEM	53389001	WELL #1			10	4			B/GRP	none

Appendix B. Condensed List of Water Supply System Data from the Department of Health

Water Supply System	WTP ID Number	Water Supply Source/Plant Name	Source Type	Source Capacity (gpm)	Full-Time Residential Population	Total Connections	Treatment Required?	Treatment Objective (Purpose)	Group/Type	WTPGP Number
WAHL WATER ASSOC	92150001	Well #4 - ABB020	W	10	165	68	Y	Particulate (Turbidity) Removal	A/Comm	none
WALCZAK WATER INC	92350001	WELL #3	W	100	256	72	Y	Iron & Manganese Removal	A/Comm	none
WALKER FOUR WATER SYSTEM	05808001	WELL #1			10	4			B/GRP	none
WALKER HEIGHTS WATER ASSOCIATION	02033001	WELL			10	5			B/GRP	none
WALLACE, WILLIAM M.	04968001	WELL #1			3	2			B/GRP	none
WARM BEACH WATER ASSOCIATION	93000001/2	Wells #3R, #4 - ABR309	W	100	1,450	580	Y	Iron & Manganese Removal	A/Comm	none
WASHINGTON BEEF LLC	93061001/2	Well #3 - AFL804; Well #4	W	1,200	0	7	Y	Particulate (Turbidity) Removal	A/NTNC	none
WASHINGTON SOLDIERS HOME COLONY	64700001	Well #2, & Well #4 - APP312	W	170	177	19	Y	Iron & Manganese Removal	A/Comm	none
WASHOUGAL SALMON HATCHERY	FW007001	BOB S CREEK			10	5			B/GRP	none
WASHOUGAL TIMBER TRAILS	11883002	S02 Well #2 - AHM911 (6" Unapproved)	W	10	1	94	Y	Inorganics Removal/Treatment	A/TNC	none
WATER DISTRICT 19	38900002	Beall/Ellis			2,641	1,640			A/Comm	none
WATERLOO ACRES COMMUNITY WATER	93580001	AGA872 WATERLOO ACRES			125	46			A/Comm	none
WAUCONDA CAFE	27739001	S01 & S02 / Well #2 - BCN787	W	14	2	2	Y	Particulate (Turbidity) Removal	A/TNC	none
WEESE	03953001	Treatment Plant 1			10	4			B/GRP	none
WEST BEACH ROAD ASSOCIATION	17970001	AGA969 WELL 1	W	20	40	19	Y	Iron & Manganese Removal	A/Comm	none
WESTSIDE WATER ASSN	94950003	Canyon Well Arsenic Treatment			520	225			A/Comm	none
WEYERHAEUSER ELEMENTARY SCHOOL	59103001	Wells 1 & 3	WF	70	2	2	Y	Iron & Manganese Removal	A/NTNC	none
WEYERHAEUSER FORESTRY NURSERY	05721001	Well #1 - BCK253 (24")	W	100	0	1	Y	Particulate (Turbidity) Removal (filtered)	A/NTNC	none
WEYERHAEUSER VAIL SHOP	95610001	WELL #1			0	3			B/GRP	none
WHEEL HOUSE WHEEL UI GROUP	38589001	WELL 1			3	2			B/GRP	none
WHITE CLIFF FARM	03190001	WELL #1			8	3			B/GRP	none
WHITE RIVER CAMPGROUND #11	NP960001	CASTO CREEK	S	0	0	112	Y	Particulate (Turbidity) Removal	A/TNC	none
WHITE RIVER ENTRANCE	NP940001	KLICKITAT CREEK	S	6	0	115	Y	Particulate (Turbidity) Removal	A/TNC	none
WHITE SALMON, CITY OF	96350003	Buck Creek			3,930	1,908			A/Comm	none
WHITE T T WATER SYSTEM	03994001	WHITE, T.T.			4	2			B/GRP	none
WHITNEY #515	07888001	WHC1 WELL 1			12	4			B/GRP	none
WICKS, GORDON	47002001	WELL			5	2			B/GRP	none
WIKES, GLENN	00172001	WELL # 1			5	2			B/GRP	none
Wildwood Resort Condo Assn WS	96888001	Well #2 AGK307	W	4	8	27	Y	Particulate (Turbidity) Removal	A/TNC	none
WILEY THEATER	65059001	WELL #1 AGR732	W	20	0	2	Y	Particulate (Turbidity) Removal	A/TNC	none
Wilgus Housing Water System	ab933001	Well #1 - APT851	W	0	0	2	Y	Inorganics Removal/Treatment	A/TNC	none
WILLAPA NATIONAL WILDLIFE	35814001	HQ UNIT STREAM			1	3			B/GRP	none
WILLAPA VALLEY WATER DISTRICT	97100001	Willipa Valley WTP, Stringer Creek	S	350	2,000	728	Y	Particulate (Turbidity) Removal (filtered)	A/Comm	WAG641013
WILLIAMS, C. (COMM.) WATER SYSTEM	01057001	WELL			10	4			B/GRP	none
WILLOW BAY RESORT INC	97225001/2	Well #1 - ABR827, Well #2 - AHC902	W	50	7	48	Y	Particulate (Turbidity) Removal	A/TNC	none
Windy Point Fruit Ranch	AA432001	Tasting Rm Domestic Well	W	12	4	3	Y	Inorganics Removal/Treatment	A/TNC	none
WINNWOOD	97520001	WELL #1 AGN707	W	78	109	41	Y	Iron & Manganese Removal	A/Comm	none
WINTER LANE	03279001	WELL 1			7	4			B/GRP	none
WISER LAKE KINGDOM HALL JEHOVAHS	61494001	NEW WELL #1	W	13	0	1	Y	Iron & Manganese Removal	A/TNC	none
WISH POOSH CG/CLE ELUM RD	FS992001	Well #1 - AFT389	W	50	0	24	Y	Particulate (Turbidity) Removal	A/TNC	none
WOLLOCHET HARBOR CLUB INC	98075002	Upper Well #1 - AEF226; Upper Well #2	W	75	218	89	Y	Iron & Manganese Removal	A/Comm	none
WOOD, MELVIN WATER SYSTEM	02591001	WELL 1			3	2			B/GRP	none
WOODFORD	00994001	WOODFORD			9	3			B/GRP	none
WOODGLEN PRD WATER SYSTEM	06529001	Well 1			40	20			A/Comm	none
WOODLAND FOURSQUARE CHURCH	35868001	WELL #1			1	2			A/TNC	none
WOODLAND, CITY OF	98200001	Lewis River SWTP	S	2,100	5,255	2,398	Y	Iron & Manganese Removal	A/Comm	WAG641021
WORKMAN WATER II	55434001	WELL #1			5	3			B/GRP	none

Appendix B. Condensed List of Water Supply System Data from the Department of Health

Water Supply System	WTP ID Number	Water Supply Source/Plant Name	Source Type	Source Capacity (gpm)	Full-Time Residential Population	Total Connections	Treatment Required?	Treatment Objective (Purpose)	Group/Type	WTPGP Number
WSP - FIRE TRAINING ACADEMY	34874001	Well 1			0	15			A/TNC	none
WYCKOFF FARMS	98673001	Stokely Well	W	20	99	25	Y	Inorganics Removal/Treatment	A/Comm	none
WYCKOFF FARMS - SUNNY HOP	02507001	Hop Union Well			0	3			A/TNC	none
YACHT HAVEN WATER COOPERATIVE	98980001	RO plant			35	17		RO plant	A/Comm	none
YAK CO - FAIRWAY ESTATES	AA484001	Well #1 - AEG050			16	10			B/GRP	none
YAKIMA WATER DIVISION, CITY OF	99150001	Naches River WTP			65,238	27,593			A/Comm	none
YMCA CAMP REED	12988001	Camp Reed Spring WTP			2	6			A/TNC	none
YODELIN WATER SYSTEM	29316001	Well #1 - AKG591	W	20	0	40	Y	Particulate (Turbidity) Removal	A/TNC	none
YORK-WILEY SHARE WATER SYSTEM	01335001	WELL #1			6	2			B/GRP	none
YUST WATER SYSTEM	40014001	WELL			8	3			B/GRP	none
ZOLLERS OUTDOOR ODYSSEYS	aa049001	Zollers Well - AFE046	W	27	0	1	Y	Particulate (Turbidity) Removal	A/TNC	none
ZYLSTRA SHORT PLAT WATER ASSOC.	18368001	WELL #1			5	2			B/GRP	none

WTP ID = Water Treatment Plant Identification.

WTPGP = Water Treatment Plant Wastewater Discharge General Permit.

gpm = Gallons per minute.

Source Types: S = Surface water.

SE = Seawater.

SP = Spring.

W = Well.

WF = Well field.

WW = Well in well field.

Group Types: A = Group A.

Comm = Community.

GRP = Group B.

NTNC = Non-Transient Non-Community.

TNC = Transient Non-Community.

Appendix C

List of Water Supply Systems that Merit Further Inquiry

Appendix C. List of Water Supply Systems that Merit Further Inquiry

Water Supply Source Name (Probable Discharge to Surface Water)	Estimated Production (gallons per day)
SEATTLE PUBLIC UTILITIES	518,891,260
King County Water District (published)	116,000,000
BELLINGHAM-WATER DIVISION, CITY OF	38,359,494
KENNEWICK, CITY OF	29,376,354
SKAGIT COUNTY PUD 1 JUDY RES	28,205,398
YAKIMA WATER DIVISION, CITY OF	24,637,506
PORT ANGELES, CITY OF	4,665,313
ENERGY, DEPT OF/200W	3,948,365
PUD #1 OF ASOTIN COUNTY	3,805,701
Snug Harbor Resort Water System	2,819,559
OLYMPIC VIEW WATER & SEWER DISTRICT	2,422,561
KELSO, CITY OF	1,795,200
SNOHOMISH, CITY OF	1,425,112
LWWSD - SOUTH SHORE WATER SYSTEM	1,370,354
CHELAN WATER DEPT, CITY OF	1,017,770

Water Supply Source Name (Probable Discharge to Surface Water)	Estimated Production (gallons per day)
SULTAN WATER DEPARTMENT	649,015
WHITE SALMON, CITY OF	571,081
LAKE CHELAN RECLAMATION DISTRICT	465,738
CASHMERE WATER DEPARTMENT	448,789
CARSON	393,911
CLE ELUM WATER DEPARTMENT	384,421
BOISTFORT VALLEY	339,380
CRESCENT WATER ASSN	279,879
NASELLE	220,759
ROSLYN, CITY OF	199,813
COULEE DAM WATER DEPT	176,272
COLUMBIA GENERATING STATION	168,221
Purdue Lake Treatment Plant	130,000
ROCHE HARBOR WATER SYSTEM INC	124,172
HARTSTENE POINTE	122,191

Water Supply Source Name (Probable Discharge to Surface Water)	Estimated Production (gallons per day)
LONGMIRE	114,604
CARBONADO WATER DEPT	93,382
ROSARIO	89,667
RAINIER SCHOOL	79,675
DOE BAY WATER USERS ASSOC	76,594
THOUSAND TRAILS - LEAVENWORTH	75,754
LEWIS CO WTR SWR DIST #6	72,676
BLACK DIAMOND WATER DISTRICT	69,137
OHANAPECOSH	67,364
LAKE MARGARET WATER SYSTEM	62,137
Intalco Aluminum Corporation WS	61,254
COUGAR ROCK CAMPGROUND	57,875
SUN MOUNTAIN RESORT	51,073
SUNNYBANK WATER SYSTEM	27,170
ENERGY, DEPT OF/100K	25,632

Water Supply Source Name (Probable Discharge to Groundwater)	Estimated Production (gallons per day)
VANCOUVER, CITY OF	209,270,542
LAKEHAVEN UTILITY DISTRICT	53,887,571
CLARK PUBLIC UTILITIES	32,003,230
LACEY WATER DEPARTMENT	25,189,190
LAKESWOOD WATER DISTRICT	25,065,347
HIGHLINE WATER DISTRICT	24,209,653
SAMMAMISH PLATEAU WATER & SEWER	17,581,722
SNO PUD 1 - LAKE STEVENS	13,885,248
BONNEY LAKE WATER DEPARTMENT, CITY	9,184,859
SOUTHWOOD WATER SYSTEM	7,358,296
SPANAWAY WATER COMPANY	5,490,982
PARKLAND LIGHT & WATER COMPANY	5,455,940
CROSS VALLEY WATER DISTRICT	3,038,181
BATTLE GROUND WATER DEPT, CITY OF	2,880,217
OCEAN SHORES WATER DEPT	1,861,022
NORTH PENINSULA	1,822,896
FERNDAL	1,795,598

Water Supply Source Name (Probable Discharge to Groundwater)	Estimated Production (gallons per day)
SNOQUALMIE WATER	1,679,516
SKYWAY WATER & SEWER	1,367,466
NE SAMMAMISH SEWER & WATER DISTRICT	1,106,382
LAMB-WESTON PASCO	1,038,241
QUIMPER	1,014,770
ORTING, CITY OF	963,204
ARTONDALE WATER SYSTEM	684,880
Burbank Business Park	679,301
SURFSIDE HOMEOWNERS	654,033
WASHINGTON BEEF LLC	649,538
NORTH BAINBRIDGE WATER CO	641,287
FOX ISLAND MUTUAL WATER ASSOCIATION	451,618
FALL CITY WATER DISTRICT #127	409,176
EATONVILLE WATER DEPT	406,611
CAMANO WATER ASSOCIATION	382,328
COUPEVILLE, TOWN OF	373,663
EVERSON, CITY OF	369,719

Water Supply Source Name (Probable Discharge to Groundwater)	Estimated Production (gallons per day)
EASTSOUND WATER USERS ASSOCIATION	307,837
TIMBERLAKE COMMUNITY CLUB INC	299,770
MCCLEARY, CITY OF	239,347
CLINTON WATER DISTRICT	233,497
POLE ROAD WATER ASSOCIATION	224,714
TAPPS ISLAND WATER SYSTEM	224,714
WARM BEACH WATER ASSOCIATION	217,388
OCEAN SPRAY CRANBERRIES	214,840
PERCIE ROAD WATER ASSOCIATION	214,840
LWWSD - AGATE HEIGHTS	210,101
AUVIL FRUIT COMPANY INC	184,354
CASCADE PEAKS RESORT	177,704
DIAMOND LAKE SEWER DISTRICT	171,979
DEER CREEK WATER ASSOCIATION	170,346
FAWN LAKE MAINTENANCE COMM	153,230
KEYPORT WATER	151,901
COLUMBIA CREST WINERY	151,344

Appendix C. List of Water Supply Systems that Merit Further Inquiry

Water Supply Source Name (Probable Discharge to Groundwater)	Estimated Production (gallons per day)	Water Supply Source Name (Probable Discharge to Groundwater)	Estimated Production (gallons per day)	Water Supply Source Name (Probable Discharge to Groundwater)	Estimated Production (gallons per day)
EAGLE RIDGE WATER SYSTEM	151,344	DUGUALLA COMMUNITY INC	69,584	THREE PONDS MOBILE PARK & APTS.	48,468
HEMMI ROAD WATER ASSOCIATION	151,344	SUNVISTA/SUNLIGHT BEACH	67,701	GRASSLANDS WATER SYSTEM	47,943
FREELAND WATER AND SEWER DISTRICT	149,150	KLICKITAT WATER SYSTEM	67,053	HARRIS CUSTER ESTATES WATER ASSN	47,943
BLANCHARD EDISON WATER ASSN. INC.	148,208	SARATOGA BEACH OWNERS ASSN	65,861	MARINERS COVE BEACH CLUB INC	47,943
The Buttes	145,548	CEDAR SHORES	64,740	SUNRISE POINT WATER CO	47,418
BAYVIEW BEACH WATER DISTRICT	143,774	JUNIPER BEACH WATER DISTRICT	64,740	WEYERHAEUSER ELEMENTARY SCHOOL	45,835
HARBOR HILLS COMMUNITY WATER SYSTEM	140,077	HIDE-AWAY WATER COMPANY INC	63,748	EDGEWATER BEACH WATER CO	33,322
SNO PUD 1 - KAYAK	138,894	LACAMAS FARMSTEADS	63,329	SARATOGA TERRACE WATER	33,322
LARCH CORRECTIONS CENTER	138,631	BYWATER BAY	62,137	TULALIP LDS CHURCH	33,322
SCATCHET HEAD WATER DISTRICT	136,379	DRY SORT DOMESTIC	61,254	UPPER PRESTON WATER ASSN	33,322
MUTINY SANDS CLUB	133,556	PROSPECT WATER ASSN INC	61,254	CAMP KALSMAN WATER SYSTEM	30,758
ROLLING HILLS-GLENCAIRN	131,644	SCHAEFER COUNTY PARK	61,254	CHARLENE HEIGHTS WELL CO	30,758
WOLLOCHET HARBOR CLUB INC	118,504	SKAGIT VIEW VILLAGE WATER SYSTEM	61,254	ConAgra Foods Lamb Weston - Plant	30,758
FRENCHMANS BAR PARK	114,604	SUNWOOD WATER SYSTEM	61,254	FOREST PARK WATER SYSTEM	30,758
VISTAIRE WATER SYSTEM	114,604	WALCZAK WATER INC	61,254	Green Acre Farms, Inc. - Island #1	30,758
PINELOCH SUN BEACH CLUB	113,994	WEYERHAEUSER FORESTRY NURSERY	61,254	LIVINGSTON BAY COMMUNITY ASSN	30,758
LOST LAKE PROPERTY OWNERS ASSN	112,086	SNO PUD 1 - SUNDAY LAKE	60,647	NEW UTSALADY WATER SYSTEM INC	30,758
PARADISE ESTATES WATER DEPT INC	109,760	CAMANO SHORES COMMUNITY	58,741	SLAVIC GOSPEL CHURCH WATER SYSTEM	30,758
AMERICOLD LOGISTICS	106,615	SIERRA COUNTRY CLUB	57,875	SURFCREST RESORT CONDOMINIUMS	30,758
HUNTERS WATER DISTRICT	104,575	BELWOOD PARK	56,716	TALL CEDARS ESTATES WATER ASSOC.	30,758
WASHINGTON SOLDIERS HOME COLONY	102,516	EVERGREEN VALLEY WATER SYSTEM	56,202	ELGERWOOD MAINTENANCE ASSOCIATION	29,220
BADGER MOUNTAIN ESTATES	96,223	SIERRA HOMEOWNER S ASSOCIATION WS	55,430	BRON-YR-AUR Investments	28,195
COACH COUNTRY CORRAL	94,084	GOSS LAKE PARK COMMUNITY	53,652	ELK HEIGHTS - 247	28,195
QUAIL RUN	93,221	LONG POINT WATER COMPANY INC	53,652	EASTGATE	26,145
MCKENNA WATER DISTRICT	91,896	SHIRONA WATER SYSTEM	53,138	BRUTUS WATER SYSTEM	25,632
TOUTLE RIVER RV PARK	86,967	LAKE TUCK	51,073	COLUMBIA RIVERFRONT RV PARK	25,632
IONE WATER DEPT	81,918	QUARTERMASTER HEIGHTS WATER ASSN	51,073	DECEPTION PASS MARINA INC	25,632
SEA VIEW WATER COMPANY	76,133	US NAVAL RADIO STATION(T)JIM CRK	50,034	DIAMOND POINT WATER SYSTEM	25,632
HAT ISLAND COMMUNITY INC	75,474	WINNWOOD	50,034	Honeybear Growers LLC	25,632
CEDAR CREEK CORRECTIONS CENTER	74,050	Classic Hi-Crop	48,468	LEDGEWOOD BEACH WATER DISTRICT	25,632
BEVERLY BEACH IMPROVEMENT CLUB	73,553	GEE CEE S TRUCKSTOP	48,468	MAURY MUTUAL WATER CO	25,632
MUTINY VIEW MANOR COMMUNITY CLUB	71,125	SKAGIT CO PUD - ALGER	48,468	NISQUALLY HIGHLANDS 364	25,632
PENN COVE WATER AND SEWER DISTRICT	71,073	SUNRISE HILLS COMMUNITY W S	48,468	WISH POOSH CG/CLE ELUM RD	25,632
SARATOGA WATER DISTRICT	70,775	SUNSET LAKE YOUTH CAMP	48,468		