

**APPENDIX L**

**AGENCY COMMENTS**



**SAMMAMISH PLATEAU WATER & SEWER DISTRICT  
2013 WASTEWATER COMPREHENSIVE PLAN  
AGENCY COMMENTS AND RESPONSES**

For Board of Commissioners review prior to inclusion in Final Plan

FORMAT:

Agency Comment numbered

KC#: King County comments

DOE#: Department of Ecology comments

ISS#: City of Issaquah comments

SAM#: City of Sammamish comments

NESSWD#: Northeast Sammamish Sewer & Water District comment

*Black-italicized text: District response to agency comment, immediately following the comment.*

**KING COUNTY**

KC1: Provide clarification to the plan with a list of the permitted industrial waste discharges within the District.

*Additional information regarding the Industrial Waste Discharge permits required has been added to Section 1.4.11.1 under King County – Land Use Jurisdiction.*

*The current list of Industrial Waste Discharge permits is now included in Appendix B.*

KC2: Affirm that the District has coordinated with the City of Sammamish to ensure that future growth within the City's emerging Town Center will be adequately served.

*The Town Center is primarily located in the Inglewood East Sewer Basin. The southwest portion of the Town Center is in the North Sunnyhills basin. As with the remainder of the District, anticipated flows from the Town Center are included in the demands for the sewer basin. The Town Center demands are specifically considered as an addition to general growth rates within the City of Sammamish and anticipated to grow over the next twenty years.*

*The Inglewood East Basin is in the north section of the District, and is intended to flow to the King County North Diversion project discussed in Section 4.4 of the Plan. Construction of the North Diversion eliminates District sewer capacity concerns in the northern system for several years. However, King County Metro has not yet programmed construction of the North Diversion, and there may be capacity limitations restricting development, including Town Center, if the North Diversion is delayed.*

KC3: Section 4.5: Provide clarification of the evaluation of reclaimed water use opportunities as required by Revised Code of Washington 90.48.120(2).

*Additional information regarding reclaimed water use has been provided in Section 4.5.*

KC4: Page 4-6: Provide clarification to discussion regarding the King County Conveyance System Improvements (CSI). The Plan references "Task 260 South Sammamish Basin Task Summary" published in 2003. The 2007 CSI Program update is the current guiding Wastewater Treatment Division (WTD) conveyance system projects.

*Section 4.4.1 has been updated to reference the 2007 CSI Program update. Sections 4.4.5 and 4.4.6 have been similarly updated.*

KC5: Section 4.XX: We (*the UTRC*) understand that the timing of any construction of a CSI project by King County could impact the District's operations. Adding text noting that construction of any CSI project by the County will be coordinated with the District through review of facilities design under KCC 28.84.050 and interlocal agreements between with District and WTD will help to ensure that facilities are designed and built using criteria and design standards that meet both the needs of the District and WTD.

*Section 4.4.2 has been updated to reference the 2007 CSI Program update.*

KC6: When a utility has a proposed project within unincorporated King County, please contact the King County Department of Transportation (KCDOT), Traffic and Engineering Services Section for coordination with the County's annual overlay program. Failure to do so may result in the denial of the permit to work within the right-of-way (ROW) once an overlay of the road section has been completed.

*Comment noted.*

*The District does coordinate with King County, City of Sammamish and City of Issaquah on their annually proposed overlay projects. In general if the District receives the preliminary overlay candidate roads in the District's service area they are reviewed for overlap with proposed District projects. If there are specific District projects proposed within the next 6 years, the District will contact the overlay agency to determine whether any changes to District CIP or overlay schedule are appropriate.*

*For most municipal agency overlay projects in the District, the District will identify facilities that will require work associated with the overlay, such as raising valve cans and manhole lids. This adjustment work may be included in the agency's project through an interlocal agreement, or done separately under a District contract for asphalt patches.*

#### **CITY OF ISSAQUAH**

Iss1: Sewer Service Boundary - Please verify the boundary as it relates to the Issaquah Highlands area within Issaquah city limits. This area is currently served by the City with the exception of the Lakeside development area, so does it make sense to show as a future when the withdraw of service area has already occurred. Also verify the legend as it appears the future and current boundary line types are reversed.

Typical for all figures, most only show the future and does not show the current. Unless the future is defined as to when, consider showing both boundaries in all figures.

*Several annexation actions that added both water and sewer service areas to the District were taken before the Urban Growth Boundary (UGB) was established, and now include areas annexed for sewer service outside of the UGB. The decision to only show the District Corporate Limits and the Future Sewer Service Boundary was made to avoid confusion with both existing and future sewer service boundaries that cross back and forth.*

*Figure 1-3 has been modified to show both the existing Corporate Limit and existing Sewer Annexed Area as created through multiple annexation actions. Figure 1-3b has been added to specifically show the existing Sewer Annexed Area and the Future Sewer Service Area for comparison.*

*With respect to the Issaquah Highlands area in particular Section 1.4.12.1 has been updated to include a further explanation of the Issaquah Highlands area boundary. No formal action has been taken to withdraw from the District's Corporate limits the areas in the Issaquah Highlands where all service is provided by the City of Issaquah. The Corporate limit boundary will be adjusted when this formal action has been completed.*

- Iss2: Policies stated within Executive Summary - It seems that some of the items listed are more statements rather than policy [ie., bullets 3 and 4). Consider removing statements from policy. Could add those removed items under a different topic.

*It was not practical to list each of the actual policies in the Executive Summary, so the points included were to summarize the policies presented later in the Plan. The lead paragraph in the Executive Summary Policy section has been modified to reflect the bullet points represent a summary of policies.*

- Iss3: The latest Issaquah Comprehensive Plan amendment is 2014. There was also a 2013 amendment. Correct amended date accordingly as it relates to your Plan data cut-off date (page 1-11].

*Section 1.4.11.3 has been updated to reference the later plan.*

- Iss4: In describing boundary with Issaquah under Adjacent Wastewater Purveyors (pg 1-12), consider revising language to read "The District's sewer service boundary within Issaquah's corporate boundary can be generally...". On figure 1-4, Sammamish State Park is not within Issaquah's corporate limits or current service area. Our future service area would incorporate a portion of the State Park, up to and west of Issaquah Creek.

*Section 1.4.12.1 paragraph 1 has been updated to reference the City's corporate limits rather than sewer service area.*

*Figure 1-4 has been corrected to show Lake Sammamish State Park as unincorporated King County.*

- Iss5: Section 1.5, Service Area - The way it is stated in the 3rd sentence, it is implied that the District is the provider of water and sewer service to the City of Issaquah, when it only provides service to a small portion. This is also repeated in section 1.8. Revise the language as necessary.

*The language in Sections 1.5 and 1.8 has been revised for clarification.*

- Iss6: Land Use - The Land Use/Zoning information for Issaquah appears not to be current. The Central Issaquah Plan was incorporated in early 2012.

*Figure 1-10 – Future Land Use has been updated with the current City of Issaquah Zoning.*

Iss7: In Section 1.7, in the last paragraph, it is stated that approximately half of the district's customers are on septic systems. But in section 1.8.2.8 it is indicated that there are 3,486 septic systems. The statements do not seem to be consistent.

*The figures in Section 1.7 compare septic users to the entire District water service area, including rural areas and urban areas provided sewer service by Northeast Sammamish Sewer and Water District (NESSWD). The figures in Section 1.8.2.8 are for septic systems in the District's sewer service area, and do not include rural areas or NESSWD sewer service areas.*

Iss8: In figure 1-11, Lk Sammamish is labeled incorrectly as Lk Washington.

*Figure 1-11 has been corrected*

Iss9: Planning Data, Section 2.1 - In section 1.4.11.3 it was indicated that the latest, 2010, Issaquah Comp. Plan was used, but here it is indicated that the 2006 Plan was used. The Issaquah Comp. Plan has been amended several times with the latest amendments occurring in 2013 and 2014. It would be recommended that at least the 2012 amendment be used.

*The Updated Issaquah Comprehensive Plan Amendment land use was reviewed. Mixed Use zoning has been added over a portion of the area along E. Lake Sammamish Parkway, and also the addition of a Lakeside Urban Village zone on the upper portion of an area previously identified as Mining.*

Iss10: Projections/pipe degradation - In section 2.5.5 it is implied that there is expected pipe degradation, yet there is no annual CIP to account for this anticipated system degradation or policy indicating that when a basin has been identified in reaching a designated gpad I/I, that a replacement/rehabilitation project would correct the I/I.

*The District is implementing an Asset Management Program to identify where pipe repair and/or replacement would occur. The average District I/I rate of 536 gallons per acre per day (gpac) is less than half of the buildout assumption of 1,100 gpac. This figure, frequently used in the King County area, is used for a conservative figure for buildout conditions. A methodical condition monitoring program was implemented in 2014 as part of the District's Asset Management Program, and the results are tracked in the Computerized Maintenance Management System (CMMS). The District is utilizing a combination of flow monitoring, CCTV and manhole inspections to identify potential problem areas.*

*The District's Operations program includes funds each year for addressing I/I through manhole rehabilitation, and sewer main repair if required. The District has not established a standard for a specific level of I/I that would be unacceptable, but with the programs in place problem areas are addressed before they become a problem. The District's rate model incorporates funding for capital expenditures associated with system degradation.*

Iss11: In figure 4-3, the boundary line in the figure is not consistent with that shown in the legend.

*Figures 4-3 through 4-9 have been corrected to have a matching boundary and legend.*

Iss12: Sammamish Plateau Storage Project – Verify, but by description this project sounds like it occurs within Issaquah city limits vs. Sammamish. Correct city as necessary.

*Section 4.4.6 Sammamish Plateau Storage Project description has been corrected to indicate the likely location of the project is in the City of Issaquah.*

Iss13: In table 5-3, the Generators Load Test seems to be repeated several times. Correct table as necessary.

*Table 5-3 has been corrected to remove the extra references to load testing the generators.*

Iss14: In table 6-3, Requirements for Connection to Sewer, for 'No Action, Failing OSS' under 'Existing Development w/Septic Systems', Issaquah's requirement is to connect to sewer where feasible. Provide clarification in table.

*Table 6-3 has been modified to reflect Issaquah's requirements.*

#### **CITY OF SAMMAMISH**

Sam1: Coordinate with the City of Sammamish Department of Community Development to make sure the most current land use data is used.

*The District works with the City of Sammamish to ensure that land use data is updated, with particular attention paid to the Town Center area.*

Sam2: Sewer projects should be coordinated and/or aligned with the City of Sammamish's Capital Improvement Plan

*The District reviews the City of Sammamish Capital Plans as they are adopted, and further has periodic meetings with the City's Public Works department personnel to assist in coordination even before plans are adopted.*

Sam3: 1.4.9. Local Permits: There may be more local permits required than just the referenced right-of-way permits, such as a shoreline substantial development permit.

*Section 1.4.9 has been clarified that the first paragraph is referencing work in the Right-of-Way, and other permits are referenced in the next paragraph. The list in the second paragraph is not intended to be complete.*

Sam4: 1.5.1.4. Critical Areas: The plan referenced King County's data for critical areas. The City of Sammamish has more detailed information and updated maps for parts of Sammamish. Please insure that the most current information is utilized.

*The District will consult with the City regarding critical area information on projects, and will add any digital information that is available to the District mapping system.*

Sam5: 1.8.2.1 Gravity System: Please consider a policy that prefers the sewer line follow the public right-of-way as opposed to acquiring more private easements.

*The District has identified gravity sewer service as the preferred method of service provision as it is still the most efficient overall method for providing sewer service. Acquisition of private easements is limited to those situations where it provides the best overall result for providing efficient and economical sewer service.*

*District design standards indicate that sewer mains shall be located in public-right-of-way in preference to easements. When necessary, easements are preferred to follow access routes, such as private roads and driveways , rather than cross country routes.*

Sam6: Table 2-7: How many of the Sewer Customers shown in the unincorporated King County are in the Klahanie PAA area? Please distinguish that information and show in the table.

*Table 2-7 has been updated to show the portion of unincorporated King County sewer customer projections.*

Sam7: 3.5.1.3 Grease Interceptors: These should not be required if other emerging technologies become available. Include policies which make provision for the use of the best tool for accomplishing the same outcome. Please consider simplifying the process and related regulations.

*The District's FOG policy has recently been updated to allow for the consideration of emerging technologies. The updated program is included in Appendix H.*

Sam8: Page 3-23: The City of Sammamish continues to receive complaints regarding the smell at the Inglewood Lift Station.

*The Inglewood Hills Corridor Odor Evaluation Report was completed in October 2014. The report recommended installation of an odor control system, which is included in the 2015 Capital Budget.*

Sam9: Chapter 4: It's unclear what the plan is for providing sewer to un-sewered locations within the District.

*The District has developed conceptual plans where sewers could be extended to serve un-sewered areas in the District. The District works with property owners or neighbors that are required to connect to the sewer system or have indicated an interest in having sewers installed to identify specific sewer projects. The District facilitates extension by one of the three methods listed, and described more completely in Chapter 6. However, there is no time frame associated with any specific project or area, as it is generally based on property owner needs.*

*Analysis of future extensions to un-sewered locations will include business case analysis to ensure projects are economically viable and mitigate ratepayer subsidies to new or future sewers related to capital expansion.*



Sam10: Chapter 4: Make sure that the Town Center needs have been accounted for.

*The Town Center is primarily located in the Inglewood East Sewer Basin. The southwest portion of the Town Center is in the North Sunnyhills basin. As with the remainder of the District, anticipated flows from the Town Center are included in the demands for the sewer basin. The Town Center demands are specifically considered as an addition to general growth rates within the City of Sammamish and anticipated to grow over the next twenty years.*

*The Town Center needs may be impacted by policy and capital programming considerations of King County.*

Sam11: 4.3.1 Lift Station Power: Be sure the District has sufficient wet well capacity for the lift station if a generator is not available.

*The District has six lift stations that do not have on-site generators, as indicated in Table 4-1. The District has four portable generators that are used to power these lift stations during power outages. The systems are designed to hold 2 hours of peak wet-weather flow as noted in Section 4.3.2. The District is expanding its fuel storage facilities to have fuel available to power the generators during power outages.*

Sam12: Be sure the District has planned appropriately for unforeseen emergencies such as earthquakes and long power outages. Coordinate with the cities on emergency response whenever possible.

*The District has an adopted Emergency Plan, and actively participates in the King County and Zone 1 emergency planning and response groups which include both the City of Issaquah and the City of Sammamish.*

Sam13: Table 4-2: Do not forget City of Sammamish permits, such as right-of-way use permits and a shoreline substantial development permit.

*All required permits would be identified during a more complete alternatives analysis associated with moving this project forward. Table 4-2 has been modified to add Right-of-Way permit to the third alternative, and the shoreline substantial permit to all three alternatives.*

Sam14: Figure 4-4: The City of Sammamish would prefer to see the East Lake Sammamish Parkway alignment as the preferred alternative for the Northern Diversion. The City believes, while it may be more costly, it has less overall impacts on the environment.

*Comment noted and will be conveyed to King County for their further consideration.*

Sam15: Table 6-3: The City of Sammamish will be reviewing code to make sure adequate flexibility exists related to remodels on septic and when a connection to sewer would be required.

*Comment noted. The District's requirement for connections and required transition from septic to sewer service will follow land use jurisdiction regulations.*

Sam16: Table 6-3: Has the District considered a category called "Government Facilities"?

*In Table 6-3, Requirements for Connection to Sewer, Government Facilities would most likely be considered under "Building Permit" for new facilities. The actual requirement to connect to sewer for new or existing facilities would be based on the land use jurisdiction and King County Health Department requirements.*

**NORTHEAST SAMMAMISH SEWER AND WATER DISTRICT**

NESSWD1: Northeast Sammamish had no comments on the 2013 Wastewater Comprehensive Plan.

**DEPARTMENT OF ECOLOGY** (Letter dated 6/12/2014)

DOE1: Executive Summary: Please state the need and purpose for a General Sewer Plan.

*The need and purpose for the General Sewer Plan is described in the first paragraph of Chapter 1 on Page 1-1.*

*"This 2013 Wastewater Comprehensive Plan for the Sammamish Plateau Water and Sewer District (District) addresses the District's comprehensive planning needs for wastewater collection and transmission for the next 20 years. This plan was prepared in accordance with the provisions of the WAC Section 173-240-050, General Sewer Plan, and WAC 173-240-060, Engineering Report."*

*We do not feel this statement needs to be repeated in the Executive Summary.*

DOE2: Footer: The title of the document identifies it as the 2013 WASTEWATER COMPREHENSIVE PLAN; please include a reference that this is a general sewer plan and will be approved as a general sewer plan. Change the date to reflect the year submitted

*See response to DOE1 and Page 1-1 of the Plan where the clarification of this plan as a General Sewer Plan is provided.*

*The Plan is named the 2013 Plan as that is more representative of the information provided within the Plan. The Plan provides a snapshot of the District at a point in time. The data regarding existing customers is from the end of 2011. Calling this the 2014 Plan would not reflect the data included in the Plan.*

DOE3: Chapter 1.4.10.5: Pg, 41 refers to Ecology approving on-site plans for those operations over 14,500 gpd. Revise the narrative to reflect that flow to ground disposal between 3500 gpd and 100,000 gpd is regulated by the Dept. of Health as a large on-site sewage disposal system:

RCW 70 118B 010 (3) "Large on-site sewage system" means an on-site sewage system with design flows of between three thousand five hundred gallons per day and one hundred thousand gallons per day. unless there is industrial wastewater element to the influent:

RCW 70.118B.010 (4) ...A system into which storm water or industrial wastewater is discharged is not included in the definition of on-site sewage system.

*Sections 1.4.10.5 and 1.4.10.7 has been modified to identify the Washington State Department of Health as the state agency with the jurisdiction for comprehensive regulation of Large On-Site Systems.*

DOE4: Chapter 1.5: Include a narrative of the legal description of the District's boundaries shown in figure 1-2 in an appendix or direct me to where these are located if already included.

*WAC 173.240.050 requires a map of the District's boundary be provided, which is shown on numerous figures. The District's boundary has been created through multiple annexations, and, each approved by agencies, including the Boundary Review Board, as they occur. A list of the section, township and ranges included in the Sewer Comprehensive Plan study area is included in the SEPA Checklist, under question A. Background, 12. Location of the Proposal.*

DOE5: Chapter 1.5.1.1: Please show the location and indicate the direction of flow of major streams.

*Major streams are shown on Figure 1-8 Floodplain Map. Some additional stream names have been added to those provided on the original figure. Directionality has further been provided on those major streams only.*

DOE6: Chapter 1.8.1.1: There is a geography error on pg. 1-22, which says "The STP ... is located west of Interstate 405 approximately 2 miles north from the junction of Interstate 5 and Interstate 405." The plant is actually located north of 1-405 and just over a mile east of 1-5.

The narrative on Pg 1-22 cites that the STP "experiences an average wet weather flow of 115 mgd...", but should say that it is designed for an average wet weather flow of 115 mgd.

*The text in Section 1.8.1.1 has been corrected as noted.*

DOE7: Figure 1-13: Please add the city of Duvall and the city of Snoqualmie wastewater treatment plants to Figure 1-13 (plants within 20 miles).

*Figure 1-13 is intended to show the King County Regional Wastewater System. The Cities of Duvall and Snoqualmie are not part of the King County system, which is why they were not shown on the figure. The Duvall Wastewater Treatment Plant and the Snoqualmie Reclamation Plant locations have been added to the figure.*

DOE8: Figure 1-14: The Gravity Mains legend appears to have a typo; it refers to green color symbol as  $\leq 8"$  and the gold symbol also as  $< 8"$ ; is one supposed to say  $> 8"$ ?

*Figure 1-14 has been corrected to indicate  $> 8"$  in the legend with the gold/orange symbol.*

DOE9: Table 2-2

9A Table 2-2 references 2011 ERU numbers; update with the current ERU number.

9B Please review the percentage and number of non-residential customers.

9C There are three large high-schools in the service area and multiple middle-schools and elementary schools as well as a large hospital; are these counted as nonresidential?

9D Please show how ERUs attributable to this non-residential category totals 1165.

*9A The District's information regarding existing customers is from the end of 2011. The development of the Comprehensive Plan takes considerable time, and the data used to develop*

*the plan is obtained at the beginning of that work effort. In addition, the District made a major change to the billing program used to track existing customers. The decision to not update the figures for current customers was made as District staff is working to learn how to use the new software to achieve demands that can be updated throughout the year.*

*9B The percentage and number of non-residential customers appears to be correct, and is similar to results reported in the 2012 Water Comprehensive Plan Amendment. The District is very heavily residential.*

*9C The schools and medical facilities are reported as non-residential. The only facility that might be considered a hospital in the District's service area is Marionwood, a skilled nursing and transitional care facility.*

*9D The Equivalent Residential Units (ERUs) in this category are developed by assigning an ERU count to each sewer account. The ERU count for each account is based on the meter size providing water service to the account. The Meter size to ERU conversion is provided in Section 2.2 under the ERU definition.*

DOE10: Table 2-3: Table 2-3 references 2011 sewer connection numbers; update with the current 2014 sewer connection numbers.

*The District's information regarding existing customers is from the end of 2011. Due to a major change to the billing program used to track existing customers, the decision was made to not update the figures for current customers at this time. District staff is working to learn how to use the new software to achieve demands that can be updated throughout the year.*

DOE11: Table 2-4: Current (2011) District Population by Jurisdiction. Table 2-4 references 2011 population; update with the current population if known.

*The population is estimated based on single-family customer counts and multi-family unit counts. The District's information regarding existing customers is from the end of 2011. Due to a major change to the billing program used to track existing customers, the decision was made to not update the figures for current customers at this time.*

DOE12: Probably in Chapter 2 or 3: List all establishments producing industrial wastewater, approximate the quantity of wastewater and periods of production, and assess the industrial wastewater insofar as it may affect the sewer system.

*See the answer to King County comment 1. A list of current Industrial Waste Discharge Permits in the District has been added as Appendix B.*

DOE13: Table 2-7 to Table 2-12: Tables 2-7 to 2-12 use the projections for 2012 instead of actual figures. Update all ERUs to 2014, and project growth rates from that point. Revise narrative to reflect current ERUs.

*The District's information regarding existing customers is from the end of 2011. Due to a major change to the billing program used to track existing customers, the decision was made to not update the figures for current customers at this time. The base year has been retained as 2011.*

DOE14: Table 2-13: Current (2011) Sewer RCE. Change year to 2014, and reflect the use for November 2013 to March 2014 period.

*The District's information regarding existing customers is from the end of 2011. Winter water consumption looked at every customer account usage during the winter period of November 2010 – February 2011. Due to a major change to the billing program used to track existing customers, the decision was made to not update the figures for current customers at this time. Obtaining this level of data requires additional programming that is currently being developed.*

DOE15: Table 2-14: 2005-2011 District Sewer RCE Summary – Add years 2012-2014 to this table.

*See answer to DOE Comment 14.*

DOE16: Table 2-15: Current (2011) Sewer RCE by Customer Class. Change year to 2014, and reflect use for the November 2013 to March 2014 period.

*See answer to DOE Comment 14.*

DOE17: Table 2-16: Current (2011) Sewer ERU by Jurisdiction. Change year to 2014.

*See answer to DOE Comment 14.*

DOE18: Table 2-18: SAM0164A and SAM021A Data presented as dry weather days, but it rained almost 2-inches at Seattle weather station in the three December days before the sample date; justify why this is considered to be valid dry-weather day. Would an excessively “wet” dry weather flow skew the Base I/I calculation in Table 2-19 lower?

*The flow monitoring by King County was only conducted in the winter and spring, and so the dates selected were believed to be the best representative days. It would not skew the base I/I lower, but would rather skew it higher.*

*Base I/I was not used in any modeling or capacity evaluation in the Plan. It is an indicator if there is persistent infiltration in a particular area, which provides the District with some indication of the types of I/I investigative and rehab techniques that would be most effective for those identified areas.*

DOE19: Table 2-24: Pg 2-29. The domestic flow column is calculated based on the assumed average through 2011 flow of 155 gpcd calculated in Table-2-14; comment 16 above requests that data be added for years 2012-2014.

*See answer to DOE Comment 14.*

DOE20: Evaluate the alternatives with regard to life-cycle cost; especially pump stations. Discussion should include a table that shows the cost per ERU or RCE, in terms of both debt service and O&M costs, of all facilities existing and proposed during the planning period. All costs necessary for the improvement should be included, and should include power costs, pump and other equipment replacement costs, easement costs, maintenance, and be presented as a present worth or a monthly ERU/RCE cost for comparison of the alternatives.

*It is not clear what specific portion of the document is referenced with this comment. The comment may be referring to WAC 173-240-050 (I) which requires:*

*A discussion, including a table, that shows the cost per service in terms of both debt service and operation and maintenance costs, of all facilities (existing and proposed) during the planning period.*

*The intent of this requirement has been covered in Chapter 8, which provides a proposed 6-year Financial Plan (Table 8-6), including capital and maintenance costs versus available revenues, and a cost per service break-down illustrating future rate impacts in Table 8-7.*

DOE21: Chapter 2.5.5 and Chapter 2.6

21A. WASTEWATER FLOW PROJECTION. This cites that the I/I rate recommended by Ecology is 1100 gpad; please note that this statement is not correct and Ecology does not promote use of this number as a benchmark where there is local experience in observed I/I. Please remove references to an Ecology threshold and rely instead on the District's experiences.

Ecology's guidance in the Criteria Book in C1-1.3:

Sewer systems shall be designed and constructed to achieve total containment of sanitary wastes and maximum exclusion of infiltration and inflow (I/I).

And C1-3.3.3:

I/I allowances for existing systems should be made from actual flow data to the greatest extent possible.

Please evaluate the I/I projections used for planning based and rely on I/I experienced by the District. Revise Table 2-25, 2-26 and 2-27 to reflect what the I/I rate is determined to be based on experience with the SPW&SD system, and do not refer to an assumed Ecology default threshold as justification. In addition, discuss what measures the District will take to address I/I flow for those areas that are excessive, or that may have an identifiable inflow.

21B. Table 2-23 shows that SAM0023; SAM001A, and SAM023 have the highest I/I gpad rate. SAM001A is located less than half-a-mile from SAM003, and SAM023 is also within half-a-mile of SAM003. Further investigation of these three points and whether the monitoring equipment was operating reliably, or if these are the result of inadequate past construction may be worthwhile in the interest of modeling accuracy and credibility.

21C. SAM014 is located adjacent to Issaquah Creek, and would appear to be particularly susceptible to I/I from faulty pipelines near the creek, faulty manholes, or illicit foundation dewatering connections. It also has a large area of retail and commercial in the area. The data from this point should be reviewed for modeling accuracy and credibility, and reducing I/I if feasible and cost-effective.

*21A. We agree that the reference of 1,100 gpad being threshold established by Ecology is erroneous. It is actually a reference to an old King County (Metro) standard. The Regional Needs Assessment Report: Regional Infiltration and Inflow Control Program (March 2005) published by King County Department of Natural Resources Wastewater Treatment Division references the 1,100 gpad standard, but has established a standard of 1,500 gpad for new sewers with a 7 percent per decade degradation to 2,000 gpad after 40 years.*

*Section 2.5.5 has been modified to clarify the original source of the 1,100 gpad figure.*

*Table 2-25 provides a summary of peak flows under existing population and I/I conditions. Due to what are consistently low existing I/I rates, we felt it would be inappropriate to assume that I/I would remain low as the system ages. We adopted an ultimate I/I rate of 1,100 gpad for modeling and design, seeing this as fairly conservative for evaluating available capacity, consistent with the old King County Standard, but more aggressive than the newly adopted standard. These ultimate flows are what are shown in Tables 2-26 and 2-27.*

*21B. The information presented was provided by King County as part of their monitoring program. At the time of this data acquisition, the District did not have any independent flow monitoring capabilities in these areas, such as lift station pumping volumes. The District has recently acquired portable monitoring equipment, and has additionally installed monitoring equipment at the confluence of these primarily gravity flow basins.*

*21C. Only a small portion of the SAM014 basin is located near Issaquah Creek. However, some of the oldest sewer in this basin was installed in soils that are underlain by peat. The District is aware of this condition and monitors these segments on a regular basis.*

DOE22: Chapter 3.2.2.3: Sanitary Flow: The Thiessen Polygon method used to generate flow to manholes is adequate for the order of magnitude used in the General Sewer Plan, but may require a more deterministic approach for design parameters in those areas where pipelines and pump stations are marginally over/under capacity. Please do a sensitivity analysis to identify where such an analysis might be valuable prior to design and construction, and tag in the report that these areas should be subject to a preliminary report before design.

*As noted in Section 9.4.1.1, all projects associated with existing facilities are verified with field information prior to moving forward with a capital improvement project. Many of the areas identified as surcharged are along E. Lake Sammamish Parkway, and the future system in that area will be the subject of a design study associated with the North Diversion project decision. The District also requires evaluations from potential developers to determine if a lift station, gravity sewer, or grinder pump installations are the best course before development is approved.*

DOE23: Chapter 3.2.2.4: Revise use of the 1100 gpad in the model (see comment DOE21) Run the model with I/I assumptions consistent with existing I/I experience and projections based on most probably scenario. Adjust Figures 3-4, 3-5 and 3-6.

*The existing system was modeled with existing domestic and I/I flows. The only deficiencies identified under this scenario were deficiencies corrected by the North Diversion project. This is illustrated in Figures 3-4, 3-5, and 3-6.*

*As noted in the response to DOE 21, the District is using 1,100 gpad for the buildout condition as a conservative estimate of system degradation over time. Modeling for both the 20-year and buildout flows used the 1,100 gpad figure. The 20-year flows did not identify any additional capacity deficiencies, even with a significantly larger I/I value than the existing system scenario (that included existing domestic and existing I/I flows).*

*KCDNR is now suggesting a figure of 1,500 gpad for new systems, degrading at 7% per decade to a maximum of 2,000 gpad after 40 years. (Regional Needs Assessment Report: Regional Infiltration and Inflow Control Program, March 2005) Using this same degradation rate would result in a peak hour I/I rate of approximately 700 gpad. Use of 700 gpad would likely be viewed as unreasonably low for this area as a buildout scenario.*

DOE24: Chapter 4.4.2.1.3 & 4.4.2.2.3: East Lake Sammamish Trail Alignment: Does the cost anticipate additional easement costs? See June 7, 2014 article in Seattle Times regarding easement restrictions in the Eastside Rail Corridor. This East Lake Sammamish trail appears to have the same easement restrictions as the Eastside Rail Corridor, and warrants investigation. See Haggart v. United States.

This article alludes to that the additional \$140M, over and above the purchase price paid to the BNSF for Railroad Eastside Rail Corridor, was for easements for biking and trail use. Therefore you might infer that pipeline easements will be another additional cost since they aren't biking or trail use. Please clarify this for the Plan discussion and include any additional easement costs in Table 4-6 and Appendix 1 cost estimates.

*Please reference KC4 and KC5 comments and responses. The North Diversion project would be a KCDNR project under their 2007 CSI program and program update currently in development. The alternatives analysis in the District Plan is provided as a starting point for the KCDNR project. King County is also currently developing the East Lake Sammamish Trail project in the trail corridor proposed for use as in the Trail Alignment. King County will be in a position to understand the full requirements associated with use of the trail corridor for the North Diversion as part of their alternatives analysis.*

*Your source of information regarding the Eastside Rail Corridor will be provided to KCDNR to ensure they are aware of this information when completing their alternatives analysis.*

DOE25: Chapter 4.5: Water Reuse: Could King County WTD be interested in reclaiming water via a scalping plant in an amount that would reduce the need for the storage facilities referenced in Chapter 4.4.5 and 4.4.6? Opportunities exist that may be feasible.

*This question would be addressed as part of the King County CSI program. During previous District water reuse reports it was noted that a scalping plant for irrigation uses would not reduce peak wastewater flows as the peak wastewater period is during a season when irrigation is minimal.*

DOE26: Chapter 6.3.2: Chapter 6.3.2 Grinder Pumps: Ecology commends the Sammamish Plateau Water and Sewer District for their grinder pump policy. We believe this is in the interest of Ecology, the Sammamish Plateau Water and Sewer District and the homeowner to prevent sanitary sewer overflows that could threaten customer health and well being, and the water quality of District waterways.

*Comment noted.*

DOE27: The WAC requires specific information, specifically:

(ii) Existing sewers. The location, size, slope, capacity, direction of flow of all existing trunk sewers, and the boundaries of the areas served by each.

(iii) Proposed sewers. The location, size, slope, capacity, direction of flow of all existing trunk sewers, and the boundaries of the areas served by each.



A part of this information is contained in the Plan, but generally the size, slope, capacity is not included. Please propose how the District will present this information, whether in an appendices or on a drawing or in a table. The 7-series of figures look appropriate if the size, slope, and capacity can be added or referenced.

*Maps with model node numbers are now provided in Appendix G – Hydraulic Modeling Results, that will allow correlation of the information provided in Appendix G tables with the location of individual pipes.*

DOE27b: Figure 1-5 document page 53: Please provide another topo map that meets the requirements of the WAC. Topo map should have all the streets on it as well as surface drainage.

WAC 173-240-050(3)(d)(v). Topography and elevations. Topography showing pertinent ground elevations and surface drainage must be included, as well as proposed and existing streets.

*Figure 1-5 has been revised to include surface water streams and existing streets. Note that not all minor street names are included due to limitations of the mapping presentation. The surface drainage information is also included on Figure 1-8 Floodplain Map.*

DOE28: Please Indicate the locations of controlled overflows, if any (should not be any).

All existing and potential discharge locations from lift or pump stations should be noted. If none, indicate so.

*There are no controlled overflow locations in the District's existing system. Uncontrolled overflows could occur as the result of a system failure, such as a plugged line or mechanical failure at a lift station. Section 1.8.2 has been modified to reference there are no controlled overflow locations in the District's system. Section 4.3 has been modified to note the potential for uncontrolled overflows at each lift station, and the potential discharge locations for each lift station have been added to Table 4-1.*

DOE29: Figure 1-1(Figure 1-11): Per WAC 173-240-050(3)(d)(vii), the location of all existing private and public wells or other sources of water supply, water storage reservoirs and treatment plants, and water transmission facilities need to be provided. The District information is acceptable, but show private-ownership and any community wells in addition to District wells.

*The District has added the Class B private wells and water systems identified on the King County Groundwater Program Groundwater Well Viewer located within the District. These are shown on Figure 1-11.*

