

DOH COMMENT RESPONSE FORM

No.	DOH Comment	Water System Response	Page No.
DOH Comments, December 12, 2023			
Chapter 1			
1	On page 1-8, Future Service Area, the WSP discussed conditions in which the city will provide service to Mt. Adams Orchard Water System, as well as stating the system is within the FSA. Please add information in the WSP in the most appropriate location what the city's stance is on providing service to Fordyce Water Association or Underwood Water System in the future. Are any portions of their service areas within the FSA?	The City already provides water service to Mt. Adams Orchard water system. The City has no plans to provide water service to Fordyce Water Association or Underwood Water System. The text has been revised to reflect the reference to Mt. Adams Orchard water system under the "Retail Service Area" paragraph and references to the Fordyce Water Association and Underwood Water System are made under "Future Service Area."	1-8
2	On Figure 1-1, state what the solid red line is in the legend.	The solid red line in Figure 1-1 is part of the USGS base map and is noted as scenic areas; specifically, the Columbia River Gorge National Scenic Area and the White Salmon River Wild and Scenic Area. No changes to Figure 1-1 are proposed.	N/A
Chapter 2			
3	On page 2-8, please clarify if "No. of units" equals number of service connections. If or if not, please provide an explanation in a table footnote.	The number of units represents the housing or residential units in the system. The "units" would be equivalent to the term "connections" used by DOH in its WFI form. The number of units does not equate to the number of physical connections. A correction to the number of ERUs shown for residential units on Table 2-8 was made. See "Other Revisions Made to Plan Initiated by City and/or Consultant," Item C below.	2-12
4	Page 2-15, Projected Land Use, add to the discussion the potential for infill development and "middle housing." The state legislature has made a push to require or promote increased density and affordable housing. Due to the growth demand in White Salmon and the shortage of buildable land, discuss if the city will consider these methods to accommodate demands and affordable housing.	Added language regarding the City's Housing Action Plan to address affordable housing now and in the years to come.	2-15
Chapter 3			
5	Page 3-2, Water Quality Analysis, second paragraph - DOH recommends making a statement regarding the SDWA requirement that the treatment of Buck Creek requires the city to maintain a residual disinfectant concentration within the distribution system (WAC 246-290-662).	The recommended language was added to the text.	3-2

6	How is the system security? For example, with SCADA, are there any improvements needed to limit cybersecurity risks? Understanding this is sensitive information, DOH wants to make sure the city is addressing those risks. Address in Chapter 3 or Chapter 6, whichever is most appropriate.	System security information was not provided because the City does not wish to divulge any security system issues in a public document. Cybersecurity upgrades are discussed in Chapter 3.	3-22
7	On Table 3-8, current production is operating Well #2 at 24 hours a day and the plant online 24 hours a day; what about when conducting ASR; what about when turbidity is high? Add a footnote that explains whether the current production numbers shown in this table are the best case without the limiting operational constraints. Table E-1 lists source capacity for the wells pumping 20 hours a day.	A note will be added to Table 3-8 that production values provided are for all sources providing water for customer consumption. ASR is only conducted in the winter months when water demand is low and the turbidity in Buck Creek is suitable for the WTP operation (i.e., low turbidity). The source capacity on Table E-1 will be corrected to reflect 24-hour production from Well No. 2 since this well is artesian.	Table 3-8, 3-30, Table E-1, Appendix E
8	<ul style="list-style-type: none"> a) Table 3-13 shows the limiting component is transmission/distribution at 4,033 ERUs. b) What does that equate to in number of connections? c) When the city approves new construction for anything other than single-family residential, how do staff calculate the ERU component? 	<ul style="list-style-type: none"> a) The transmission main capacity value has been revised. See “Other Revisions Made to Plan Initiated by City and/or Consultant,” Item D. Revised transmission main capacity of 4,510 ERUs. b) Based on 2021 data, the number of units represents approximately 50.8 percent of the number of ERUs. For 4,510 ERUs, the number of units is projected to be 2,291. c) The ERUs for a multi-family residential complex are based on the number of individual living units (i.e., apartment, duplexes, etc.). The ERUs for non-residential is estimated by comparing the maximum capacity in gpm of the sized meter to maximum capacity of a 3/4-inch meter (30 gpm). As an example, a 2-inch meter has a maximum capacity of 160 gpm. The estimated number of ERUs for this meter would be the quotient of 160 and 30 gpm, or 5.3 ERUs. 	a) 3-50 and 3-51, Appendix E-1
9	On page 3-45 Model, when was the hydraulic model last calibrated with city staff? “Since the existing hydraulic model was previously calibrated, further reconciliation and calibration of the model for this WSP were not performed.” Does the City maintain this model in-house?	The hydraulic model was last calibrated with data provided by City staff in the previous WSP (i.e., 2012). An updated hydraulic model of the City’s system is maintained by Anderson Perry & Associates, Inc. and is used, when requested by the City.	N/A
10	Page 3-50: In Chapter 2, DOH read that the city’s ERU values are 215.5 gpd (ADD) and 554 gpd (MDD) using the year 2021 values; however, here the MDD is listed as 584.9 gpd per ERU. Table E-1 specifies 584.9.	MDD/ERU value has been changed to 554 gpd. Changes are reflected on Tables E-1, E-2, and E-3 and minor revisions were made to Tables 3-14, 3-15, and 3-16.	3-50 through 3-53, Appendix E

Chapter 4			
11	<p>On page 4-3, Service Metering:</p> <p>a) The WSP states that “new meters and AMR implementation is planned for 2022.” Please provide a status update. Did this occur or has the schedule been modified?</p> <p>b) The WSP discusses the intertie meter on SR14 but not the other two interties. Provide information on the meters at all three interties with the City of Bingen.</p>	<p>a) AMI has been successfully installed on all meters except the larger ones. The remaining 1.5-inch and 2-inch meters will be replaced in 2024. A drive-by, fixed AMI base station is anticipated be installed in 2024.</p> <p>b) Intertie meters were described in Chapter 3 under “Interties” on page 3-28. Reference was added to the text back to the “Interties” section. The text was also revised for the City’s preference to install a Master Meter Octave meter at SR 14 intertie instead of the proposed Siemens Sitrans meter.</p>	4-3
12	<p>On page 4-3, Distribution System Leakage/Chart 4-1, DSL appears to be trending slightly upwards instead of down. DOH requests the addition of 2022 and 2023 DSL values to see if this trend is changing following some meter upgrades and water main replacements. Adjust the text discussion to reflect new data.</p>	<p>The DSL values for 2022 (28.3 percent) and 2023 (27.0 percent) have been added to Chart 4-1. The additional data indicates a slight downward trend in DSL.</p>	4-4
13	<p>On page 4-6, Implementation of Water Loss Control Action Plan to Control Leakage, add a goal or discussion on when the city plans to be at the 10 percent or less DSL mark. White Salmon has one of the highest DSL values in the state; while any decrease to DSL would be an improvement, the city needs be working towards compliance with DSL as the end goal.</p>	<p>A WUE supply side goal of a DSL at 10 percent or less was not proposed as it was not considered realistically attainable within the six-year goal period. The City’s achievement of a DSL below 10 percent is difficult to predict given the magnitude of the current DSL and uncertainty of the source(s) of DSL within the system. With implementation of the WLCAP measures and two major infrastructure projects slated to upgrade the existing transmission main, the City’s DSL is anticipated to be below or near 10 percent by 2034.</p>	4-7
14	<p>On page 4-7, Customer Education on Water Use Efficiency Measures, the text does not discuss public education during the last planning cycle. Did the city provide annual education? How so? Provide a copy of written or published documents in the appendix.</p>	<p>In the fifth paragraph under Consumer Education on WUE Measures (page 4-7), the City’s primary effort for consumer education was through its monthly water bills. Samples of the WUE messages sent with the customer bills generated between June through December 2023 are provided in Appendix B. The text has also been revised to reflect the latest WUE messages. Reference to water conservation messages in the City’s newsletter was also added to the text and to Appendix B.</p>	4-8, Appendix B
15	<p>Please note that DOH will allow certain WUE measures to be counted as more than one measure, when used across multiple customer classes. Based on the presented measures in the text, the use of an inclining block rate across multiple customer classes and consumption histories on customer water bills would allow this. DOH will count each of these measures as the number of applicable customer classes in generic categories, such as single-family residential, multi-family residential, commercial, industrial, etc.</p>	<p>Noted.</p>	N/A

16	Table 4-3 states twice a recommendation to adopt a six-year goal. Because the city is seeking approval of a WSP and has over 1,000 connections, the goal should be adopted at the time of each WSP update.	Two goals (supply side and demand side) for a six-year period were proposed and adopted by the City. The City plans to revise these goals in 2028 to match the WSP planning period (2033). Adoption of new WUE goals in 2028 were highlighted in Chapter 4 and added to Table 8-2.	4-10 and 4-11, 8-6
Chapter 5			
17	Is the wellhead model still accurate following the removal of the dam? Did the removal of the dam have any effect on the wells? Provide an updated model, confirm the existing model information is still accurate, and add a date on the map confirming such, or provide a new map with calculated-fixed-radius time-of-travel zones until a new model can be done.	Water levels in Wells No. 1 and 2 were discussed at length in Chapter 3. Well No. 1 is completed in a semi-confined aquifer and Well No. 2 is completed in confined aquifer. Of the two wells, Well No. 1 is more likely to be affected by the Condit Dam removal. However, as discussed in Chapter 3, the static water level in Well No. 1 has steadily increased over time and appears to not to have been affected by the Condit Dam removal. An updated wellhead model does not appear warranted at this time.	N/A
18	State in Chapter 5 when the notification letters for the Wellhead Protection Program were last sent.	Notification was made in January 2022 and added to Table 5-1.	5-1
19	Discuss in Chapter 5 preliminary watershed planning efforts completed and steps to be completed in the future to establish watershed ownership and management for the use of the White Salmon River as a drinking water source.	Discussion was added to the end of Chapter 5.	5-2
Chapter 6			
20	Provide an Emergency Response Program. DOH understands the city's current program contains sensitive information. Provide the current program with sensitive information redacted or complete an Emergency Response Program using the DOH template (DOH Pub.# 331-211).	A copy of the City's Emergency Response Plan is provided in Appendix H.	Appendix H
21	Recordkeeping and Reporting, page 6-12 and 6-13; this section is missing the monthly treatment reporting and annual consumer confidence reporting.	Monthly treatment and annual consumer confidence reporting were added to Table 6-8 and to the text after Table 6-8.	6-13 and 6-14
22	Regarding Sanitary Survey Findings, DOH conducted a sanitary survey in 2023. As of the date of this letter, the survey letter has not been issued. The city will receive this letter in early 2024. Provide a discussion in this section on any significant findings or other pertinent information found during this survey. Update the Appendix with the 2023 letter once received.	The City received the DOH 2023 Sanitary Survey results documentation. A copy of the December 26, 2023, letter is provided in Appendix H. The text in Chapter 6 under Sanitary Survey Findings was revised to reflect the findings of the December 26, 2023, letter. The City has responded to the findings; please refer to Appendix H for documentation sent to the DOH.	6-12, Appendix H

Chapter 7			
23	Page 7-2 Policies and Requirements for Outside Parties; DOH does not understand this statement: "Developers intending to install water systems on the City's water system that are not specifically exempt in Washington Administrative Code (WAC) 246-290-125 need to submit the proposed improvements to the City for review and approval." We would think that all infrastructure that is connected to the City's water system will be submitted to the city, including the exemptions in WAC 246-290-125. WAC 246-290-125 applies to Group A water systems, not independent developers.	Sentence removed.	7-2
24	Page 7-2; general guidelines for storage and pump stations. Please note, based on the information provided in the plan, the approval of the plan will include a submittal exception for distribution mains. To receive an exception for storage tanks and pump stations, please refer to WAC 246-290-125(3).	The City is not pursuing submittal exception for storage and pump stations.	N/A
25	Construction Standards Specs, Water Main Installation: DOH was not able to locate a specification for horizontal separation for water main installation. The Water-Sewer Crossings section refers to Ecology criteria which includes horizontal separation-ECY C1-9.1; however, you do have a standard plan 4-10. What separation do you want from other utility lines?	Horizontal and vertical separation information was added to Standard Plan 1-1.	Std Plan 1-1
26	Construction Standards Specs, Page 26 E.1. DOH does not have a disinfection standard but does have acceptable standards for disinfection. WAC 246-290-120(4) (iii) requires disinfection procedures to conform with AWWA standards (C651) or other standards acceptable to the department which could be the WSDOT/APWA standard specifications (Division 7). To avoid a contractor calling the department directly to learn what must be done, please change the wording to the appropriate standards the city prefers.	Paragraph in Construction Standards was revised to reflect AWWA Standards C651 and other standards acceptable to DOH.	Page 26 of Const. Stds Specs
Chapter 8			
27	Page 8-6, System Measure Improvements Program; DOH did not see in the plan a discussion on workforce training and succession planning. How does the city plan for and address keeping required operators on staff?	A description of the City's work staff succession is provided in Chapter 6, after Table 6-2, Position Responsibilities and Qualifications. A system measure improvement program item is not warranted based on the City's present work staff succession activities.	6-2 and 6-3
28	DOH did not see any mention of the lead service line inventory and replacement plan requirement. Is this because the city is all non-lead? Note in the plan in the appropriate location and add the inventory (and any replacement projects) to the CIP.	LSL inventory measure was added to Table 8-2. Text regarding the LSL was revised in Chapter 3.	8-6, 3-23

Chapter 9			
29	In Chapter 9, DOH did not find a reference to the appendix for the proposed budget for the plan approval period. The budget was found in Appendix I. Please reference the budget in the text. If the reference is already there and we missed it, please disregard this comment.	Reference to Appendix I was added.	9-13
Appendices			
30	Appendix A, the WFI provided in the WSP with 2022 date, as well as a recent 2023 version available on Sentry, has the same number of active connections reported in 2020 of 1,908. Assumed connection numbers in the draft WSP do not correspond to the WFI numbers and do not seem like a realistic representation of a growing city. Provide an updated WFI to DOH as soon as possible correcting the number of connections.	The City's WFI has been revised and a copy is provided in Appendix A.	Appendix A
31	Appendix B, provide a signed copy of Resolution 2022-05-543.	A copy of Resolution 2022-05-543 has been added to Appendix B.	Appendix B
32	Appendix B, provide signed copies of the Local Government Consistency Determination Form from the city of White Salmon Planning Department, Klickitat County Planning Department, Skamania County Planning Department, and the city of Bingen Planning Department.	Completed Local Government Consistency Determination Forms have been added to Appendix B.	Appendix B
33	<p>Appendix G/Watershed Control Program:</p> <p>a) Provide any additional information from the last plan approval period and any missing items from the bulleted list in Section 5.3.3 of the Water System Planning Guidebook (DOH Pub.# 331-068).</p> <p>b) DOH has strong concerns regarding the lack of an active agreement with DNR. Why has the agreement with DNR not been renewed for over a decade? DOH generally requires a copy of the current, approved agreement to be in the WSP update. In an effort to not delay this update substantially, please discuss how the city will actively work to resolve this issue over the next couple years, provide a completion timeline, and add the completion of the agreement to the CIP.</p> <p>c) DOH Source Water Protection staff may provide additional comments following the issuance of this letter, if determined necessary.</p>	<p>a) Updated information on the Buck Creek Watershed was provided in the <i>Buck Creek Watershed Evaluation Report</i> provided in Appendix G. Details on watershed control program can be found in The Buck Creek Watershed Comprehensive Management Plan, DNR and City of White Salmon, August 2002 (not included in WSP due to size).</p> <p>b) The Watershed Agreement lapsed due to an oversight and the City handling other pressing matters. The City proposed to initiate development of a new watershed agreement with the DNR in April 2024 with a target completion date of March 2025. The development of a new watershed agreement is discussed in Chapters 5 and 8 (i.e., Table 8-2).</p> <p>c) No additional comments from DOH Source Water Protection staff were received by the City.</p>	<p>Appendix G</p> <p>5-2, 8-6</p> <p>N/A</p>
34	Appendix H, provide sampling maps. Maps may be combined if different sample types are adequately distinguished.	The sampling map was inadvertently left out of the submitted draft but has been added to the revised draft.	Appendix H

Other			
35	The final WSP must be stamped, signed, and dated by a Professional Engineer licensed in the State of Washington prior to DOH approval.	Noted.	N/A
36	The Department of Ecology has issued a comment letter regarding this submittal dated August 21, 2023. Please address the issues contained in the letter in the second draft submittal.	No issues were identified in the Ecology letter. Ecology agreed with the total annual quantity allowed under the City’s existing rights is correct at 1,468 acre-feet per year.	N/A
37	Provide signed SEPA checklist and signed Threshold Determination.	Signed SEPA Checklist and Threshold Determination were added to Appendix J.	Appendix J
38	The water system must meet the consumer input process outlined in WAC 246-290-100(8). Please include documentation of a consumer meeting discussing the Water System Plan prior to its approval, including public notice and signed meeting minutes.	Two public presentations were made on the WSP: May 18, 2022, and November 16, 2022, and are discussed in Chapter 10. Signed meeting minutes and the appropriate Public Notice are provided in Appendix B.	Chapter 10, Appendix B
39	<p>DOH interprets WAC 246-290-100 approval language to mean that the approved number of years is based on the “plan approval period” projections provided in the WSP, i.e., the date of the last projected year will be the year the WSP will be approved through. The Preplan Agreement and the Water System Planning Guidebook page 4, Plan Approval Period, also address this.</p> <p>A significant amount of time has occurred since the preplan meeting due to staff changes at the city, resulting in a delayed WSP submittal. As a result, the previously discussed “plan approval period” ending in 2031 would no longer result in a 10-year approval. If the city desires to maximize the life of the WSP with a 10-year approval, please revise all “plan approval period” projections to 2034 (assuming an approval sometime in 2024). Adjust this year as needed if the second draft is delayed for any reason. Additionally, make sure any text reference to the plan’s approval date is clear that ten years is based on provided data and is not guaranteed.</p> <p>The relevant sections include projections for population, service connections, and ERUs; capacity analysis; water demand forecast (before and after WUE savings); capital improvement program; and budget.</p>	<p>The WSP was revised to the 2024-2034-2044 planning periods. The revised planning periods primarily affected relevant sections of Chapters 2, 3, 4, 8, and 9.</p> <p>The WSP is only a plan; none of the population, water demand/consumption, capital improvement program, and system income/expense projections are guaranteed.</p>	Chapters 2, 3, 4, 8, and 9

40	When DOH is ready to approve the document, we will notify you. At that time, the governing body will need to officially approve the Water System Plan and send DOH documentation of plan approval by the governing body, such as a copy of the signed meeting minutes or a copy of the signed resolution. When the documentation is received, we will send a letter documenting DOH approval. Approval by the governing body before DOH notification may result in re-approvals.	Noted.	N/A
Other Revisions Made to Plan Initiated by City and/or Consultant			
A	Table 1-1, Water System History was revised to include notable 2023 activities.		1-4
B	Added reference to The Buck Creek Watershed Comprehensive Management Plan, DNR and City of White Salmon, August 2002.		1-7
C	The ERUs for the residential users (both inside and outside the City) shown on Table 2-8 were revised to reflect and equal the number of units.		2-12
D	Modeling of Existing Transmission Main - The value of 1,551 gpm for the transmission main capacity was under specific hydraulic conditions performed to compare the capacity of the existing 14-inch diameter main with potential new 16-inch and 20-inch diameter mains as replacements. In reviewing the hydraulics of the City’s system, this value does not appear correct as the calculated number of ERUs of 4,033 is below the actual number of ERUs being served. Yet, the existing transmission main appears to be able to handle existing peak flows satisfactorily. To better represent the transmission main’s peak capacity, the reservoir conditions at Los Altos and Spring Street reservoir tanks were set at an elevation of 888.0 feet (approximately 11 feet down at the Los Altos Reservoir and 1 foot down at the Spring Street Reservoir). This elevation was selected as approximately halfway level in the Los Altos Reservoir (below the OS and ES levels but still in the SB/FSS portion of the storage). Higher reservoir elevation levels would result in lower flows and, likewise, lower reservoir elevations would result in higher flows. This reservoir value was selected as a reasonable measure for the transmission capacity. The flow capacity of the transmission main under these conditions is 1,735 gpm. This new value was used to calculate the transmission main capacity.		3-49 and 3-50, Appendix E
D	The information on Table 4-3 was updated to reflect the current status of the WUE measures. The title was changed to include “Revised” to note this change.		4-11
E	In recalculating values for the revised planning period starting in 2024, the water consumption data used for the reservoir calculations in different service areas were revised to 2021 data. This change in the basis year affected some values but the overall comments and conclusions for the reservoir capacity analysis did not change. The reservoir calculation data provided in the Excel spreadsheet form in Appendix E were considered overly complicated and removed. This spreadsheet is available upon request.		Table 3-11, 3-39
F	Following revisions were made to Table 6-8, Summary of Records Maintained by the City of White Salmon: 1) Lead and Copper Sampling Results - minimum time of storage changed to 12 years. 2) Daily Source Meter Reports - changed to 10 years. 3) Added “Record of action taken to correct violations of primary drinking water standards and exceedances of State Action Levels” - 10 years retention. 4) Added “Level 1 or Level 2 Assessments or other summary of sanitary defects and corrective actions” - Five years after completion of the assessment or corrective actions.		6-13
G	Table 8-1, Capital Improvements Program, and Table 8-2, System Measure Improvements Table, were updated to reflect current conditions, primarily with respect to the projected schedule for improvements and measures.		8-3 through 8-7

H	Chapter 10 - Text for Chapter 10 was provided.	10-1
I	Appendix I - Several files were provided in duplicate. The duplicate files have been removed. In addition, the preliminary financial calculations spreadsheets were removed to save room in the WSP.	Appendix I

ADD = average daily demand
 AMI = advanced metering infrastructure
 AMR = automated meter reading
 APWA = American Public Works Association
 ASR = aquifer storage and recovery
 AWWA = American Water Works Association
 CIP = Capital Improvements Plan
 DNR = Washington State Department of Natural Resources
 DOH = Washington State Department of Health
 DSL = distribution system leak
 Ecology = Washington State Department of Ecology
 ERUs = equivalent residential unit
 ES = equalizing storage
 FSA = future service area
 FSS = fire suppression storage
 gpd = gallons per day
 gpm = gallons per minute
 LSL = lead service line
 MDD = maximum daily demand
 N/A = not applicable
 OS = operational storage
 SB = standby
 SCADA = supervisory control and data acquisition
 SDWA = Safe Drinking Water Act
 SEPA = State Environmental Policy Act
 SR 14 = State Route 14
 USGS = U.S. Geological Survey
 WAC = Washington Administrative Code
 WFI = Water Facilities Inventory
 WLCAP = Water Loss Control Action Plan
 WSDOT = Washington State Department of Transportation
 WSP = Water System Plan
 WTP = Water Treatment Plant
 WUE = water use efficiency