## City of Rainier Regular City Council Meeting November 7, 2022 6 p.m. Rainier City Hall

Mayor Jerry Cole called the council meeting to order at 6 p.m.

**Council Present:** Connie Budge, Scott Cooper, Robert duPlessis, Jeremy Howell and Mike Kreger

Council Absent: Levi Richardson and Denise Watson

City Attorney Present: No

**City Staff Present:** Gregg Griffith, Police Chief; W. Scott Jorgensen, City Administrator; Sue Lawrence, Public Works Director

### Flag Salute

Additions/Deletions from the Agenda: There were no additions or deletions from the agenda.

Mayor's Address: Mayor Jerry Cole read a proclamation declaring November National Domestic Violence Awareness Month.

Visitor Comments: There were no visitor comments at this time.

### Consider Approval of the Consent Agenda

Consider Approval of the October 3, 2022 Regular Council Meeting Minutes and Monthly Financial Statements—Council President Mike Kreger moved to approve the consent agenda. That motion was seconded by Councilor Scott Cooper and adopted unanimously.

### **New Business**

a. River's Edge Mobile Home Park Emergency City Utility Connection-Public Works Director Sue Lawrence said she has received a request for the mobile home park to connect to the city's sewer system at the end of Young Road. It's an emergency situation because the septage field used by the park has failed, and there are no alternatives. The park owner will build the line and do the work. There are 13 units at the park now and space for 20. That means there would be 13 connection fees but one major connection. But the question is, there is nothing in the city's municipal code that spells out what the fees should be, and she has to assess a connection fee. It can be done per individual unit or based on an estimate of flow load in the plant. She's also received requests from residents along Dyke Road to connect, but that may have to go under the rail line. Cole said it would probably be cheaper to do a line to Dyke Road than deal with the railroad. He supports doing a local improvement district or a latecomer's agreement to cover the costs of extending the line out that way. Councilor Connie Budge said the city should approach this with potential future development in mind. Lawrence said it would probably be a 16-to-20-inch line. Cooper said anyone in that area who wants to hook up to city services will have to annex into the city. Lawrence said she could see it being a gravity line from Young Road down.

City systems should be built with a 20-to-50-year expectation of growth. City Administrator W. Scott Jorgensen said that the city will have to stick with whatever it comes up with because there's another trailer park on the south side of town that's looking to hook into its systems. There are also many septic systems on the west side of town that are failing or pretty close to it. Cole said the charges should be based on individual units. Jorgensen said the city should also be mindful of timelines. A city ordinance states that properties have to annex in order to receive services, so those processes should be followed. Lawrence said she felt comfortable moving forward with the direction provided by council. b. Columbia River PUD Franchise Agreement Renewal—Brandon Staehely from Columbia PUD went over the changes in the proposed franchise agreement renewal. Budge moved to approve the agreement. That motion was seconded by Kreger and adopted unanimously.

a. River's Edge Mobile Home Park Emergency City Utility Connection—Owner Earl Scott addressed the council. He said the city was approached about the utility connection years ago. It was approved back then but did not happen. He obtained ownership of the park six or seven years ago and wants to hook up to the city sewer system. That's because state regulations prohibit him from repairing its septic system. Hooking up to the city's sewer system would enable him to bring seven more low-income housing units into the market. He only charges \$400 per month in rent and has the money saved up to move forward. Cole Informed Scott that he would have to annex into the city in order to hook up to services. c. Light Pole Insurance—Lawrence said the light poles are not currently covered under the city's insurance policy. She received an estimate. The city had to replace one of the poles because the driver who hit it was uninsured. That cost around \$9600. The insurance quote she received for the city's 96 poles is \$1700 per year for \$10,000 in coverage. Cole suggested that the city set aside \$2,000 annually into a light pole replacement fund. Cooper agreed. Lawrence said it could be created as a line item under the city's street fund. Council agreed by consensus.

d. Mutual Agreement and Order with the Oregon Department of Environmental Quality—Cole explained that outflows due to too much surface water get into the city's plant. The city spent \$50,000 on smoke testing to determine the inflow and infiltration sources. The main issue is the storm water, and this has caused the city to be fined over the last three to four years. Those fines have totaled around \$29,000. Of that, \$23,400 can be used on projects that can help solve the problem. Lawrence said that the smoke testing is done and she's waiting on the report. Cooper moved to approve the MAO with DEQ. That motion was seconded by Councilor Robert duPlessis and adopted unanimously.

### **Unfinished Business**

a. Fox Creek Update—Lawrence said the feasibility study should be finished soon. It may be ready in time for a council workshop in January.

b. Appointment to Planning Commission Position #5—Jorgensen confirmed that Nina Pogue is a registered voter in Oregon. She never changed her registration while temporarily living in Longview. He also confirmed with her that her legal last name is still Halk-Phillips. Budge moved to approve her appointment. That motion was seconded by Cooper

and adopted unanimously, with Kreger abstaining.

c. Updated City Administrator Job Description—Council agreed by consensus to table the matter until its next meeting.

d. Senior Center Agreement—Jorgensen explained that due to abstentions, there wasn't a full quorum when the previous vote was taken to approve the agreement. Council will have to take another vote. Budge suggested that a provision be added that the council appoint a liaison to the senior center. Kreger moved to approve the agreement as amended by Budge.

That motion was seconded by Councilor Jeremy Howell and adopted unanimously, with Cooper abstaining.

e. Downtown Beautification—Jorgensen presented the mockups he had put together for the banners. Cooper suggested having one depicting the Trojan nuclear facility. Other suggestions included having the Rainier Days logo and old pictures of the Sea Bees waterskiing and the River Rats. Council wanted to see the pictures enlarged, with a green background and white letters.

**Staff Report**—Lawrence said the SCADA system computer at the water treatment plant was replaced, and there is a new valve at the water plant. Work has started on replacing the roof at the old water plant. She is working with the city's IT provider to move the server downstairs and is getting an estimate for improvements to city hall. The report on the smoke testing should be ready for the council's December or January meeting. The First Street water line replacement has been completed, along with the fix to the apron on West 2<sup>nd</sup> and C streets. OSHA has been testing the air quality at city hall and the boat launch dock was rebuilt. Jorgensen said he's been working with the county assessor's office on mapping for the potential urban growth boundary land swap and fixing incorrect addresses in town. He toured Mountain Ministries and Riverside Community Church and met with representatives of the Red Cross about doing future blood drives at city hall. Updates have been made to the city's website.

**Council Reports**—duPlessis said the new gazebo looks great and he enjoyed attending the recent League of Oregon Cities conference in Bend. Kreger said the Trunk or Treat event was a success.

**City Calendar/Announcements**—Cole said the tree lighting event will take place at city hall December 4 at 5 p.m.

Cole adjourned the regular council session at 7:25 p.m. so the council could go into executive session.

**Executive Session--***The Rainier City Council will hold an executive session under ORS 192.660 (2)(i) to review and evaluate the employment-related performance of the chief executive officer of any public body, a public officer, employee or staff member who does not request an open hearing and ORS 192.660 (2)(f) to consider information or records that are exempt by law from public inspection.* 

The executive session was called to order at 7:36 p.m. and adjourned at 8:30 p.m.

Mayor Jerry Cole

W. Scott Jorgensen, City Administrator

#### CITY OF RAINIER CASH ON HAND/GENERAL LEDGER RECONCILIATION REPORT CHECKING ACCOUNTS AND LOCAL GOVERNMENT POOL ACCOUNT 9/1/2022-9/30/2022

| ACCOUNT REGISTER SUMMARY         |              | CKS/DEBITS | DEP/CREDITS |              |      |
|----------------------------------|--------------|------------|-------------|--------------|------|
| Ending Balance                   | 362,586.49   |            |             |              |      |
| PERS Deposits -                  |              |            |             |              |      |
|                                  |              |            |             |              |      |
| New Ending Balance               | 362,586.49   | 0.00       | 0.00        | 362,586.49   |      |
|                                  |              |            |             |              |      |
|                                  |              |            |             |              |      |
| BANK STATEMENT SUMMARY           |              | CKS/DEBITS | DEP/CREDITS |              |      |
| Ending Balance SHCU 760072-1     | 34,344.80    |            |             |              |      |
| Ending Balance SHCU 760072-2     | 489,960.14   |            |             |              |      |
| Deposits not Shown on Statement  |              |            | 4,900.51    |              |      |
| Outstanding Cks and Other Debits |              | 145,073.43 |             |              |      |
| PERS Outstanding                 |              | 21,545.53  |             |              |      |
| PERS Adjustment                  |              |            |             |              |      |
| Ending Balance                   | 524,304.94   | 166,618.96 | 4,900.51    | 362,586.49   | 0.00 |
|                                  |              |            |             |              |      |
|                                  |              |            |             |              |      |
| LGIP STATEMENT SUMMARY           |              |            |             |              |      |
| Beginning Balance                | 6,604,732.19 |            |             |              |      |
| Deposits                         |              |            | 10,881.91   |              |      |
| Withdrawals                      |              | 100,000.00 |             |              |      |
| Interest                         |              |            | 10,003.18   |              |      |
| S/C                              |              | 0.10       |             |              |      |
| Ending Balance                   | 6,604,732.19 | 100,000.10 | 20,885.09   | 6,525,617.18 |      |
|                                  |              |            |             |              |      |
| TOTAL CASH                       |              |            |             | 6,888,203.67 |      |

GENERAL LEDGER RECONCILIATION

9/1/2022-9/30/2022

|                           | 09/01/22     |            |            |             | 09/30/22     |
|---------------------------|--------------|------------|------------|-------------|--------------|
|                           | Beginning    | Total      | Total      |             | Ending       |
| Fund                      | Balance      | Revenue    | Expense    | Liabilities | Balance      |
| 10 General                | 2,078,966.32 | 209,147.05 | 317,513.77 |             | 1,970,599.55 |
| 20 Debt                   | 4,251.00     | 0.00       | 0.00       |             | 4,251.00     |
| 30 Sewer                  | 557,931.91   | 85,129.56  | 68,238.93  |             | 574,822.54   |
| 40 Water                  | 381,963.46   | 84,143.55  | 73,412.78  |             | 392,694.23   |
| 50 Timber                 | 1,673,358.14 | 0.00       | 5,940.83   |             | 1,667,417.31 |
| 60 Street                 | 207,823.06   | 13,776.55  | 18,824.69  |             | 202,774.92   |
| 65                        | 0.00         |            |            |             | 0.00         |
| 70                        | 0.00         |            |            |             | 0.00         |
| 81 Special Projects       | 229,587.72   | 0.00       | 13,137.32  |             | 216,450.40   |
| 83 Sewer Capital          | 1,036,250.23 | 6,733.50   | 29,850.94  |             | 1,013,132.79 |
| 84 Water Capital          | 432,650.01   | 100,321.70 | 120,109.66 |             | 412,862.05   |
| 85 Transportation Capital | 344,426.92   | 0.00       | 207.50     |             | 344,219.42   |
| 90 Library Trust          | 88,950.52    | 52.11      | 23.17      |             | 88,979.46    |
| General Ledger Total      | 7,036,159.29 |            |            |             | 6,888,203.67 |
|                           |              |            |            |             |              |

0.00

Completed by: \_\_\_\_\_ Date: \_\_\_\_\_ Approved by: \_\_\_\_\_ Date: \_\_\_\_\_

City of Rainier 2022/2023 Budget Year 9/30/2022 Budget Compared to Actual-Major Funds

|              | 2022/2023 | 9/30/2022  | 9/30/2022      |
|--------------|-----------|------------|----------------|
| General Fund | Budget    | YTD Actual | YTD % Variance |
| *Revenue     | 1,591,980 | 138,111    | 8.68%          |
| Expenditures | 1,440,361 | 371,428    | 25.79%         |
|              |           |            |                |
|              | 2022/2023 | 9/30/2022  | 9/30/2022      |
| Sewer Fund   | Budget    | YTD Actual | YTD % Variance |
| *Revenue     | 1,487,053 | 239,134    | 16.08%         |
| Expenditures | 1,778,036 | 191,022    | 10.74%         |
|              |           |            |                |
|              | 2022/2023 | 9/30/2022  | 9/30/2022      |
| Water Fund   | Budget    | YTD Actual | YTD % Variance |
| *Revenue     | 967,000   | 239,318    | 24.75%         |
| Expenditures | 1,177,491 | 194,374    | 16.51%         |
|              |           |            |                |
|              | 2022/2023 | 9/30/2022  | 9/30/2022      |
| Timber Fund  |           | YTD Actual | YTD % Variance |
| *Revenue     | 0         | 0          | 0.00%          |
| Expenditures | 254,412   | 41,857     | 16.45%         |
|              |           |            |                |
|              | 2022/2023 | 9/30/2022  | 9/30/2022      |
| Street Fund  | Budget    | YTD Actual | YTD % Variance |
| *Revenue     | 259,059   | 38,386     | 14.82%         |
| Expenditures | 453,555   | 57,277     | 12.63%         |
|              |           |            |                |

\*Excludes Beginning Balance

City of Rainier 2022/2023 Budget Year 9/30/2022 Budget Compared to Actual-Major Funds Budget Variance by Appropriation

|                              | 2022/2023 | 9/30/2022  | 9/30/2022      |
|------------------------------|-----------|------------|----------------|
| General Fund                 | Budget    | YTD Actual | YTD % Variance |
| *Revenue                     | 1,591,980 | 138,111    | 8.68%          |
| Expenditures                 |           |            |                |
| 10 General Government        | 91,143    | 29,317     | 32.17%         |
| 20 City Building Maintenance | 17,500    | 603        | 3.44%          |
| 30 Land Use & Development    | 30,058    | 4,210      | 14.01%         |
| 50 Library                   | 73,960    | 10,217     | 13.81%         |
| 60 Attorney                  | 9,600     | 1,660      | 17.29%         |
| 70 Finance & Administration  | 49,731    | 10,081     | 20.27%         |
| 80 Municipal Court           | 62,585    | 15,452     | 24.69%         |
| 90 Public Properties         | 179,423   | 63,155     | 35.20%         |
| 100 Police Department        | 926,361   | 236,733    | 25.56%         |
|                              | 2022/2023 | 9/30/2022  | 9/30/2022      |
| Sewer Fund                   | Budget    | YTD Actual | YTD % Variance |
| *Revenue                     | 1,487,053 | 239,134    | 16.08%         |
| Expenditures                 |           |            |                |
| Personnel Services           | 451,696   | 114,198    | 25.28%         |
| Material & Services          | 315,100   | 76,823     | 24.38%         |
| Capital Outlay               | 7,500     | 0          | 0.00%          |
| Transfers                    | 955,740   | 0          | 0.00%          |
| Contingencies                | 48,000    | 0          | 0.00%          |
|                              | 2022/2023 | 9/30/2022  | 9/30/2022      |
| Water Fund                   | Budget    | YTD Actual | YTD % Variance |
| *Revenue                     | 967,000   | 239,318    | 24.75%         |
| Expenditures                 |           |            |                |
| Personnel Services           | 486,105   | 123,653    | 25.44%         |
| Material & Services          | 212,550   | 70,721     | 33.27%         |
| Capital Outlay               | 7,500     | 0          | 0.00%          |
| Transfers                    | 462,336   | 0          | 0.00%          |
| Contingencies                | 9,000     | 0          | 0.00%          |
|                              | 2022/2023 | 9/30/2022  | 9/30/2022      |
| Timber Fund                  | Budget    | YTD Actual | YTD % Variance |
| *Revenue                     | 0         | 0          | 0.00%          |
| Expenditures                 |           |            |                |
| Material & Services          | 90,300    | 41,857     | 46.35%         |
| Capital Outlay               | 14,000    | 0          | 0.00%          |
| Contingencies                | 50,000    | 0          | 0.00%          |
| Propery Purchase Reserve     | 100,112   | 0          | 0.00%          |
|                              | 2022/2023 | 9/30/2022  | 9/30/2022      |
| Street Fund                  | Budget    | YTD Actual | YTD % Variance |
| *Revenue                     | 259,059   | 38,386     | 14.82%         |
| Expenditures                 |           |            |                |
| Personnel Services           | 68,076    | 19,330     | 28.39%         |
| Material & Services          | 126,150   | 37,947     | 30.08%         |
| Capital Outlay               | 7,500     | 0          | 0.00%          |
| Contingencies                | 27,000    | 0          | 0.00%          |
| Transfers                    | 224,829   | 0          | 0.00%          |

\*Excludes Beginning Balance

# Accounts Payable

Checks by Date - Summary by Check Date

User: Elisha Printed: 11/3/2022 9:48 AM



| Check No | Vendor No | Vendor Name                              | Check Date          | <b>Check Amount</b> |
|----------|-----------|--|---------------------|---------------------|
| 11600    | 3000      | ALS Group USA, Corp.                     | 09/07/2022          | 679.00              |
| 11601    | 2220      | Baker & Taylor                           | 09/07/2022          | 23.17               |
| 11602    | 520       | BCX, Inc.                                | 09/07/2022          | 2,462.50            |
| 11603    | 673       | Cintas Corporation                       | 09/07/2022          | 278.39              |
| 11604    | 2198      | Copies Today                             | 09/07/2022          | 140.53              |
| 11605    | 3514      | Core & Main LP                           | 09/07/2022          | 5,032.12            |
| 11606    | 2167      | Country Media Inc.                       | 09/07/2022          | 162.40              |
| 11607    | 008       | Daily News                               | 09/07/2022          | 5.00                |
| 11608    | 111       | Day Wireless System                      | 09/07/2022          | 164.77              |
| 11609    | UB*00041  | DON DEFORGE                              | 09/07/2022          | 54.83               |
| 11610    | 915       | Express Employment Professionals         | 09/07/2022          | 2,353.66            |
| 11611    | 303       | Galls, LLC-DBA Blumenthal Uniform        | 09/07/2022          | 309.84              |
| 11612    | 053       | Grainger                                 | 09/07/2022          | 428.78              |
| 11613    | 581       | Home Depot Credit Services               | 09/07/2022          | 763.49              |
| 11614    | UB*00039  | BUTCH JOHNSON                            | 09/07/2022          | 50.00               |
| 11615    | 020       | Lakeside Industries                      | 09/07/2022          | 299.22              |
| 11616    | 3824      | Rian Allen Snider Mirrored Lamp LLC      | 09/07/2022          | 5,000.00            |
| 11617    | 3644      | More Power Computers Inc                 | 09/07/2022          | 4.375.60            |
| 11618    | 3025      | Northstar Chemical Inc                   | 09/07/2022          | 1.025.65            |
| 11619    | 3345      | Occupational Safety Health & Wellness L  | 09/07/2022          | 182.00              |
| 11620    | 3817      | ODP Business Solutions                   | 09/07/2022          | 89.11               |
| 11620    | 060       | One Call Concepts Inc                    | 09/07/2022          | 27.60               |
| 11622    | 3047      | Portland Compressor                      | 09/07/2022          | 1.028.98            |
| 11622    | 382       | Postmaster                               | 09/07/2022          | 357.43              |
| 11625    | 152       | Purchase Power                           | 09/07/2022          | 500.00              |
| 11625    | 029       | Quill Corporation                        | 09/07/2022          | 239.98              |
| 11626    | 3363      | Rogers Machinery Co. Inc.                | 09/07/2022          | 1.406.00            |
| 11627    | 132       | SBRK Finance Holdings Inc. Springbrook ( | 09/07/2022          | 369.00              |
| 11628    | 132       | Star Rentals & Sales                     | 09/07/2022          | 2.488.10            |
| 11629    | 2126      | Sunset Auto Parts Inc                    | 09/07/2022          | 147.45              |
| 11630    | 2120      | Superior Tire Services                   | 09/07/2022          | 203.50              |
| 11631    | 1054      | The Automation Group Inc                 | 09/07/2022          | 4.526.85            |
| 11632    | UB*00042  | THE REDDING GROUP                        | 09/07/2022          | 5.00                |
| 11632    | 030       | True Value                               | 09/07/2022          | 85.03               |
| 11634    | 469       | United Battery                           | 09/07/2022          | 569 75              |
| 11636    | 101       | V O Printers Inc                         | 09/07/2022          | 106.64              |
| 11637    | UB*00040  | IENNIEFR WASHAM                          | 09/07/2022          | 50.00               |
| 11638    | 078       | Watking Tractor & Supply Co              | 09/07/2022          | 234.14              |
| 11630    | 3653      | West Vost & Associates Inc               | 09/07/2022          | 881 39              |
| 11640    | 035       | Wilcov & Flagel                          | 09/07/2022          | 708 12              |
| 11641    | 035       | Wilcox & Flegel                          | 09/07/2022          | 736.03              |
| 11041    | 035       | wheek a rieger                           | 09/07/2022          |                     |
|          |           |  | Total for 9/7/2022: | 38,551.05           |
| 11642    | UB*00049  | ROBERT & CHARLENE BUSHEK                 | 09/21/2022          | 5.20                |
| 11643    | 3825      | Cache Valley Electric Company            | 09/21/2022          | 60,903.15           |
| 11644    | 673       | Cintas Corporation                       | 09/21/2022          | 278.39              |

| Check No | Vendor No               | Vendor Name                           | Check Date           | Check Amount        |
|----------|-------------------------|---------------------------------------|----------------------|---------------------|
| 11645    | 3827                    | C-N-1 Locates, Ltd.                   | 09/21/2022           | 850.00              |
| 11646    | 097                     | Columbia County Treasurer             | 09/21/2022           | 142.40              |
| 11647    | 044                     | Columbia River PUD                    | 09/21/2022           | 277.65              |
| 11648    | 3669                    | Comcast Business                      | 09/21/2022           | 423.67              |
| 11649    | 3514                    | Core & Main LP                        | 09/21/2022           | 913.87              |
| 11650    | 3574                    | Correct Equipment, Inc.               | 09/21/2022           | 2,000.00            |
| 11651    | UB*00052                | DOHRMAN                               | 09/21/2022           | 50.00               |
| 11652    | UB*00045                | KATHY ELAM                            | 09/21/2022           | 50.16               |
| 11653    | UB*00046                | KATHY ELAM                            | 09/21/2022           | 5.00                |
| 11654    | 3830                    | David J. Elkin                        | 09/21/2022           | 4,118.75            |
| 11655    | 915                     | Express Employment Professionals      | 09/21/2022           | 563.55              |
| 11656    | 3831                    | First Citizens Bank & Trust Co. (CiT) | 09/21/2022           | 325.00              |
| 11657    | 394                     | GC Systems Inc                        | 09/21/2022           | 1.860.00            |
| 11658    | UB*00043                | lim Honkins                           | 09/21/2022           | 25.00               |
| 11659    | UB*00044                |                                       | 09/21/2022           | 50.00               |
| 11660    | 2074                    | Margaret I avelle                     | 09/21/2022           | 37.36               |
| 11661    | 2674                    | Leoway Engineering Solutions, LLC     | 09/21/2022           | 16 447 79           |
| 11662    | 2085                    | Leeway Engineering Solutions, LEC     | 09/21/2022           | 5 544 00            |
| 11662    | 5085                    | Lewis River Reforestation, Inc.       | 09/21/2022           | 4 302 34            |
| 11664    | 517<br>UD*00050         |                                       | 09/21/2022           | 4,302.34            |
| 11664    | UB*00030                | BRAD LINK                             | 09/21/2022           | 30.00               |
| 11665    | 3/12                    | Lower Columbia Engineering LLC        | 09/21/2022           | 207.50              |
| 11666    | 049                     | Mallory Company                       | 09/21/2022           | 38.70               |
| 11667    | 3021                    | Marlin Business Bank                  | 09/21/2022           | 1 200 00            |
| 11668    | 3644                    | More Power Computers, Inc.            | 09/21/2022           | 1,209.00            |
| 11669    | 3025                    | Northstar Chemical, Inc.              | 09/21/2022           | 930.75              |
| 11670    | 619                     | Northwest Parking Equip. Co.          | 09/21/2022           | 143.17              |
| 11671    | 182                     | NW Natural                            | 09/21/2022           | 28.65               |
| 11672    | 1007                    | NW Occupational Med. Ctr.             | 09/21/2022           | 720.00              |
| 11673    | 996                     | Oregon Department of Revenue          | 09/21/2022           | 529.10              |
| 11674    | 692                     | Potter Webster Company                | 09/21/2022           | 40.71               |
| 11675    | 096                     | Rainier Police Department             | 09/21/2022           | 311.00              |
| 11676    | 3354                    | Rainier School District               | 09/21/2022           | 3,264.54            |
| 11677    | UB*00048                | DANIEL RUNDELL                        | 09/21/2022           | 20.85               |
| 11678    | 1084                    | Scappoose Outfitters                  | 09/21/2022           | 18.50               |
| 11679    | 069                     | Sierra Springs                        | 09/21/2022           | 120.45              |
| 11680    | 3833                    | Brendan Smith                         | 09/21/2022           | 500.00              |
| 11681    | 022                     | Stephen D. Petersen, LLC              | 09/21/2022           | 755.00              |
| 11682    | UB*00047                | HEATHER THAYER                        | 09/21/2022           | 63.90               |
| 11683    | 089                     | USA Blue Book                         | 09/21/2022           | 358.33              |
| 11684    | UB*00051                | ED VANDOR                             | 09/21/2022           | 55.00               |
| 11685    | 3512                    | Verizon                               | 09/21/2022           | 209.04              |
| 11686    | 078                     | Watkins Tractor & Supply Co           | 09/21/2022           | 195.69              |
| 11687    | 3653                    | West Yost & Associates, Inc.          | 09/21/2022           | 7,342.16            |
| 11688    | 035                     | Wilcox & Flegel                       | 09/21/2022           | 358.51              |
| 11689    | 035                     | Wilcox & Flegel                       | 09/21/2022           | 649.84              |
|          |                         |                                       | Total for 9/21/2022: | 117,472.65          |
| 11606    | 3000                    | ALS Group USA Corp                    | 09/28/2022           | 517.00              |
| 11608    | UB*00053                | Brian Bundy                           | 09/28/2022           | 125.00              |
| 11600    | 673                     | Cintas Corporation                    | 09/28/2022           | 278.20              |
| 11099    | 075                     | Clatakania DUD                        | 07/20/2022           | 270.39<br>10 636 31 |
| 11701    | ∠ <del>44</del><br>2512 |                                       | 00/28/20122          | 10,020.21           |
| 11702    | 2826                    | Construction Management (NIW) I       | 00/28/2022           | / 33.08             |
| 11702    | 3820<br>2574            | Construction Managment NW, Inc.       | 09/28/2022           | 45,140.20           |
| 11/03    | 35/4<br>2806            | Correct Equipment, Inc.               | 09/28/2022           | 2,365.02            |
| 11704    | 3806                    | Denail water Solutions LLC            | 09/28/2022           | 2,039.35            |
| 11705    | UB*00054                | KYAN ELKINS                           | 09/28/2022           | 50.00               |

AP Checks by Date - Summary by Check Date (11/3/2022 9:48 AM)

| Check No | Vendor No | Vendor Name                      | Check Date                 | Check Amount |
|----------|-----------|----------------------------------|----------------------------|--------------|
| 11706    | 915       | Express Employment Professionals | 09/28/2022                 | 1,647.31     |
| 11707    | UB*00055  | DAVID HARVEY                     | 09/28/2022                 | 5.00         |
| 11708    | 778       | Kenneth Holly                    | 09/28/2022                 | 157.71       |
| 11709    | 3545      | InRoads Credit Union             | 09/28/2022                 | 1,292.21     |
| 11710    | 3545      | InRoads Credit Union             | 09/28/2022                 | 766.51       |
| 11711    | 3545      | InRoads Credit Union             | 09/28/2022                 | 10.16        |
| 11712    | 020       | Lakeside Industries              | 09/28/2022                 | 799.03       |
| 11713    | 3644      | More Power Computers, Inc.       | 09/28/2022                 | 3,108.60     |
| 11714    | 2259      | Otis Elevator Company            | 09/28/2022                 | 3,318.60     |
| 11715    | UB*00056  | AMY PAINTER                      | 09/28/2022                 | 130.00       |
| 11716    | 029       | Quill Corporation                | 09/28/2022                 | 316.97       |
| 11717    | 3080      | Ricoh USA, Inc.                  | 09/28/2022                 | 48.57        |
| 11718    | 1084      | Scappoose Outfitters             | 09/28/2022                 | 20.00        |
| 11719    | 069       | Sierra Springs                   | 09/28/2022                 | 47.64        |
| 11720    | 3835      | Solutions YES LLC                | 09/28/2022                 | 55.13        |
| 11721    | 135       | Star Rentals & Sales             | 09/28/2022                 | 2,380.00     |
| 11722    | 110       | The Chief                        | 09/28/2022                 | 60.00        |
| 11723    | 3512      | Verizon                          | 09/28/2022                 | 385.83       |
| 11724    | 3577      | Wasco County Landfill, Inc.      | 09/28/2022                 | 1,715.50     |
|          |           |                                  | Total for 9/28/2022:       | 86,161.62    |
| ACH      | 1123      | OR DEPT OF JUSTICE               | 09/30/2022                 | 627.00       |
| ACH      | FED TX    | EFT Federal tax dep              | 09/30/2022                 | 10,205.89    |
| ACH      | FICA      | EFT EE/ER FICA                   | 09/30/2022                 | 12,962.06    |
| ACH      | Medicare  | EFT EE/ER Medicare               | 09/30/2022                 | 3,031.44     |
| ACH      | OR ST Tx  | EFT Employee Oregon St Tx        | 09/30/2022                 | 6,767.69     |
| ACH      | PERSEE    | EFT PERS Employee /Employer Pa   | 09/30/2022                 | 5,702.71     |
| ACH      | PERSER    | EFT PERS Employer Paid           | 09/30/2022                 | 15,840.38    |
| ACH      | PERU      | EFT PERS Units                   | 09/30/2022                 | 2.48         |
| 11690    | 985       | AFLAC                            | 09/30/2022                 | 308.59       |
| 11691    | 077       | CIS Trust                        | 09/30/2022                 | 229.74       |
| 11692    | 3618      | Office of the Trustee            | 09/30/2022                 | 550.00       |
| 11693    | ORSGP     | Oregon Savings Growth Plan       | 09/30/2022                 | 2,400.00     |
| 11694    | 079       | Oregon Teamster Employer Trust   | 09/30/2022                 | 27,165.28    |
| 11695    | 995       | Teamsters Local No. 58           | 09/30/2022                 | 954.00       |
|          |           |                                  | Total for 9/30/2022:       | 86,747.26    |
|          |           |                                  | Report Total (131 checks): | 328,932.58   |

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# City of Rainier Fox Creek Culvert Feasibility Study

December 5, 2022

**City of Rainier** 

# **Presentation Overview**

- Background Information
- Overview and Description of Alternatives
- Conclusions of Alternatives
- Recommendations and Next Steps



Looking upstream at the Fox Creek from W. C Street



# **Location Map**

- Complex Ownership with City, ODOT and private segments
- Bisects many local businesses:
  - Don Pedro's Mexican Restaurant
  - Earth-N-Sun Wood Stove Shop
  - Rainier RV Center
  - Chevron
- Crosses Highway 30 (ODOT)
- Outlets to Fox Creek in area previously improved

# How did we get here?

**2015:** Heavy rain event caused debris to accumulate in the culvert leading to flooding on Hwy 30 and a sink hole developed in the private segment of the exist. culvert

**2016-2017:** Emergency culvert repair completed.

- ODFW sent notice to City for culvert being a fish passage barrier.
- The deadline to address these ODFW requirements has now passed

**2019:** Heavy rain event caused significant local flooding between W C Street and Hwy 30

**2020:** Hydraulic evaluation was completed and determined the Fox Creek culvert is undersized, in addition to being a barrier for fish passage.

**Current:** Feasibility Study by West Yost has developed 3 alternatives (5 options) with various sizes and configurations to resolve flooding and fish passage barrier issues.

• Replacement and upsizing of the exist. Hwy. 30 box culvert is anticipated to be a separate project completed by ODOT.

# **Overview of Alternatives**

- Alternative 1 Hydraulic Design Approach
  - Based on criteria for minimum flow depth and maximum velocity for fish species
  - Design to provide the **minimum size** structure
  - May not meet requirements for fish passage
    Alternative 1a Box culvert with open channel section
    Alternative 1b Continuous box culvert
- <u>Alternative 2 Stream Simulation Design Approach</u>
  - Preferred by state and federal agencies
  - Mimic natural conditions upstream and downstream of the culvert (slope, substrate, channel width ...),
  - Requirement: new structure span to be 1.5 times the active channel width.

Alternative 2a – Large arch culvert with open channel section

Alternative 2b – Continuous large arch culvert

- <u>Alternative 3 Maximize Daylighting</u>
  - Use the Stream Simulation approach
  - Maximize open channel section
- These alternatives do not include costs for ODOT box culvert replacement.

# **Description of Alternatives 1a – Small Structure with Stream Daylighting**

- **City Segment:** 15' wide by 100' long box culvert under W. C Street
- **ODOT Segment:** 15' wide by 100' long box culvert on Hwy 30
- **Private Segment:** Mix of open channel and 15' wide box culvert
- Estimated Cost: \$6,540,000
- Benefits/Risks:
  - 15' span may not meet future revision of fish passage requirements by ODFW
  - Difficult maintenance of the culvert due to small size



# **Description of Alternatives 1b – Small Continuous Culvert**

- Segment: Continuous 15' wide by 600' long box culvert
- 10' high structure with 7' clearance
- Estimated Cost: \$7,190,000
- Benefits/Risks :
  - 15' span may not meet future revision of fish passage requirements by ODFW
  - Difficult maintenance of the culvert due to small size



# **Description of Alternatives 2a – Large Structure with Stream Daylighting**

- **City Segment:** 30' wide by 100' long arch culvert under W. C Street
- **ODOT Segment:** 15' wide by 100' long bridge/culvert on Hwy 30
- **Private Segment:** Mix of open channel and 30' wide arch culvert
- Estimated Cost: \$7,530,000
- Benefits/Risks :
  - 30' span meets likely fish passage requirements
  - Best option for long-term maintenance



# **Description of Alternatives 2b – Large Continuous Culvert**

- Segment: Continuous 30' wide by 600' long arch culvert
- 10' high structure with 7' clearance
- Estimated Cost: \$8,980,000
- Benefits/Risks :
  - 30' span meets likely fish passage requirements
  - Best option for long-term maintenance
  - Most expensive option



# **Alternative 3 – Maximize Open Channel**

- **City Segment:** 30' wide by 100' long arch culvert under W. C Street
- **ODOT Segment:** 30' wide by 100' long bridge/culvert on Hwy 30
- Estimated Cost: \$6,790,000 (does not include real estate acquisition)
- Benefits:
  - Maximizes open channel segment and minimizes culvert segments
  - 30' span meets likely fish passage requirements
  - Lowest cost option
  - Best option for long-term maintenance
- Challenges:
  - Impacts Don Pedro's Mexican
    Restaurant



# Conclusions

- Alternative 1 is lowest cost for passage hydraulic design flow, but are not considered viable due to fish passage limitations and permitting
- Alternatives 2a and 2b better for permitting, but higher cost
  - Wider structure will function better under high flows and provide natural sediment and log/debris transport
  - Lower hydraulic scour forces and reduced likelihood of streambed material loss
  - Improved O&M access results in lower long-term maintenance costs
- Alternative 3 is best option for culvert replacement, but impacts local businesses
  - Better fish passage conditions
  - Visible/tangible public amenity and park setting benefits
  - Maximizing the extent of daylighting is expected to be more cost effective and beneficial to stream habitat.

# **Recommendations & Next Steps**

- Proceed with further evaluation of Alternative 2b or Alternative 3
- Identify funding sources and complete grant applications for next phase of work
- Complete Phase 1 Environmental Study and conduct additional geotechnical investigations
- Continue coordination with ODOT for Hwy 30 culvert replacement
- Discuss potential options/opportunities with local businesses and private property owners

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# DRAFT REPORT | NOVEMBER 2022

# City of Rainier Fox Creek Culvert Feasibility Study Report

PREPARED FOR

City of Rainier



PREPARED BY



# City of Rainier Fox Creek Culvert Feasibility Study Report

**Prepared for** 

# **City of Rainier**

West Yost Project No. 962-30-22-04

Project Engineer: Preston Van Meter, PE

Date

QA/QC Review: [Name]

Date



DRAFT REPORT | NOVEMBER 2022

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### LIST OF ACRONYMS AND ABBREVIATIONS

| ACE      | Annual Chance of Exceedance   |
|----------|---|
| CEP      | Continuous exceedance probability   |
| CFS      | Cubic Feet per Second   |
| CMP      | Corrugated Metal Pipe   |
| EL, Elev | Elevation   |
| ft/s     | Feet per Second   |
| H&H      | Hydrology and Hydraulics  |
| LCFRB    | Lower Columbia Fisheries Recovery Board   |
| LF       | Linear Feet   |
| mgd      | Million Gallons Per Day   |
| NAVD88   | North American Vertical Datum of 1988   |
| NMFS     | National Oceanographic and Aeronautic Association's Marine<br>Fisheries Service |
| NOAA     | National Oceanic and Atmospheric Administration                                 |
| ODFW     | Oregon Department of Fish and Wildlife  |
| ODOT     | Oregon Department of Transportation   |
| OWRD     | Oregon Water Resources Department   |
| 0&M      | Operation and Maintenance   |
| SPT      | Standard Penetration Test   |
| USGS     | United States Geological Survey   |

## **1.0 INTRODUCTION AND BACKGROUND**

Fox Creek is an open channel from its headwaters at the southern City of Rainier (City) City limits to West C Street in the center of town, flowing south to north. From West C Street, Fox Creek flows through a series of culverts, approximately 650 feet long, terminating at the Columbia River. There are at least three different owners of the series of culverts that contain Fox Creek. The City owns the upstream 66-inch corrugated metal pipe (CMP). Following is the 72-inch CMP owned by a private landowner, then into an 84-inch CMP (reportedly owned by the City, but not confirmed). Next it flows into an 8-foot by 4-foot box culvert owned by Oregon Department of Transportation (ODOT) and finally through the restored stream segment and into the Columbia River. The ground area between the culvert inlet and outlet is lower in elevation causing a low point on private property.

During heavy rain events in early December 2015, the culvert was overwhelmed with debris and material accumulating within the culvert and creating clogged points. As a result, major flooding occurred on Highway 30 and a sink hole developed in the area of the private property in the middle of the culvert threatening the three adjacent businesses.

In response to the formation of the sinkhole, a large portion of the culvert was replaced in 2017, and local drains were connected to the new culvert. In 2019, another large rain event, approximately a 10-year storm event, occurred that caused significant flooding on West C Street and Highway 30 and collapse of the culvert. When repairing the culvert, state regulatory agencies brought to light that this series of culverts is a fish passage barrier for migratory fish species found in Fox Creek, and this barrier should be remedied. In 2020 a hydraulic evaluation of the Fox Creek was performed and it was concluded that the culvert is undersized. Based on this hydraulic analysis, the City hired West Yost to conduct a Feasibility Study to analyze structure sizes and alternatives to amend flooding and fish passage. The findings are presented in this report. Feasible fish passage options that comply with state and federal regulations were a significant component in determining the various structure alternatives.

## **1.1 Project Area**

The project area Fox Creek Culvert (Project) is located in the City of Rainier, Oregon in Columbia County. The culvert runs under West C Street, an RV service center, a private vacant lot, a restaurant parking lot, and Highway 30 before discharging to an open channel which then confluences with the Columbia River (Figure 1). The Columbia River is approximately 900 feet north of the Project.





Figure 1. Fox Creek Existing Conditions

## Fox Creek Culvert Feasibility Study Report



## **1.2 Project Phasing**

The Project will be divided into two phases. Phase 1 will include upgrading the series of culverts leading up to the ODOT owned box culvert that passes under Highway 30. Phase 2 will include upgrading ODOT's segment of the Project. Phasing of the Project is necessary due to ODOT having different funding resources and a list of project prioritization throughout the state. A transition joint will be placed between the improved sections and the existing ODOT owned box culvert in order to make constructability simpler when ODOT can rehabilitate their segment. ODOT will oversee removing the transition piece.

## **1.3 Geotechnical Analysis**

The project location is near the northern extent of the Portland Basin, a structurally controlled lowlands where the Columbia River passes through. Based on the Geotechnical Technical Memorandum TM prepared by McMillen Jacobs Associates (see Appendix A), the footprint of the existing culvert system did not have significant depressions at the ground surface or cracking within the asphalt. Additionally, erosion at the culvert inlet and discharge point was not observed. However, there are steep sloping embankments downstream of the box culvert beneath Highway 30 that are covered with vegetation that was considered to be at-risk of erosion, particularly during heavy rain events.

To evaluate the subsurface conditions of the project area, a soil boring was completed on May 19, 2022 and was advanced to approximately 26.5 feet below the asphalt pavement surface on West 3<sup>rd</sup> Street. Groundwater was observed at 16 feet below the top of the asphalt. A Standard Penetration Test (SPT) was also completed on May 19, 2022. Details on the subsurface findings can be found in Appendix A. Background data investigation also revealed that two borings were completed in 2016 following the collapse of the culvert. Each of these historical borings was drilled to a depth of 36.5 feet below ground surface and the logs indicated that boulders were encountered at various depths.

The boring log revealed that soils in the project area are very loose to loose sandy soils down to a depth of approximately 22.5 feet, followed by a layer of sandy fat clay. These sandy soils are susceptible to liquefaction and lateral spread, and necessary measures, such as ground improvements, should be considered to mitigate these hazards. In the TM, only the soil bearing capacity for static conditions were provided. However, the design recommendation for the alternative analysis will be based on mitigating seismic hazards; therefore, excavating to a non-liquifiable layer (the clay layer at approximately 22.5 feet below ground surface) and backfilling approximately 8 feet with imported material to stabilize the ground conditions under the proposed structures will be required. Due to the loose sandy soils, trenching methods such as trench shoring or shielding will likely be the necessary during excavation. It is recommended that the subgrade be stabilized, and dewatering methods be utilized when preparing the subgrade in order to achieve the recommended bearing capacities. Further information can be found in the TM (Appendix A).

Potential flowing soils conditions due to the presence of groundwater and sandy soils may create ground surface subsidence, such as sinkholes. Imported crushed rock, approximately ¾-inch minus, should be used to backfill voids between the trench wall and the outside face of the shoring up to 2 feet above the groundwater level when trenching surpasses the groundwater level. The trench box can be backfilled with the onsite sandy soils from 1 foot above the groundwater level to the ground surface.



## 2.0 STREAM AND HABITAT ASSESSMENT

Wolf Water Resources (W2r) engineering staff, contracted by the City, walked Fox Creek on March 9, 2022 to survey the creek and assess its general hydraulic and geomorphic conditions. W2r found the culvert inlet is small relative to the creek channel width. The debris barrier (trash rack) at the inlet of the culvert at West C Street does appear to function, but debris accumulation at the barrier causes sediment to deposit at the inlet and upstream. Sedimentation and blockage was estimated at 50 percent of inlet capacity on the day of the site visit. Fish passage is impaired at low flows at the inlet due to a steep stream profile (where flow cascades over racked debris and deposits sediment) and inlet constriction causing high velocity. Passage is also impaired at higher flows due to velocity as the culvert is undersized.

In the vicinity of the culvert and immediately upstream of West C Street, the stream is a generally uniform U-shaped channel with steep banks. Instream habitat is simplified with few pools, riffles, or instream wood. Riparian and floodplain vegetation is sparse and poorly established, likely due to the incised channel and associated poor stream-floodplain connectivity and low groundwater levels. According to W2r, this general condition is due largely to the backwater effect of the undersized culvert at West C Street which prevents high flows from engaging the floodplain, but does not elevate low flow water surface elevations sufficiently to keep the water table high and promote healthy floodplain vegetation.

Fox Creek in the vicinity of the culvert (Figure 2) has three distinct sub-reaches: a reference reach, a backwater reach, and a downstream reach. Each of the sub-reaches are characterized below, with basic parameters summarized in Table 1. Flow in Fox Creek was measured during W2r's site visit and calculated as approximately 5 cubic feet per second (cfs). This flow could be considered a common winter (non-storm or low-receding limb) flow.



Figure 2. Fox Creek Characteristic Reaches



| Table 1. Fox Creek Characteristic Reach Parameters  |                         |                               |                  |   |
|---|-------------------------|-------------------------------|------------------|---|
| Reach Name  | Bank<br>Height,<br>feet | Active Channel<br>Width, feet | Average<br>Slope | Substrate   |
| Reference   | 1-3                     | 18 – 23                       | ~1.0%            | Naturally varying armored cobble (up to ~4")<br>bed with sand and gravel deposition<br>throughout |
| Backwater   | 3 – 5                   | $10 - 16^{(a)}$               | ~0.6%            | Depositional bars of sand and gravel (up to $\sim$ 1")  |
| Downstream  | 2 - 5                   | 15 – 20*                      | ~0.8%            | Sand and gravels, large (4" to 24") angular rock grade control at crossings                       |
| (a) Active channel within the backwater and downstream reaches are not geomorphically representative of Fox Creek due to infrastructure constraints and backwater conditions upstream of the culvert. |                         |                               |                  |   |

## 2.1.1 Reference Reach

The Reference Reach is characterized by a channel with a low bank height, relatively good in-channel and floodplain habitat structure, and meandering planform that makes contact with both valley margins over its length. The general active (bankfull) channel width is considered 20 feet, with the range of values shown in Table 1. This reach has naturally-occurring large wood which was observed to result in:

- Sorted gravels and other bed material size classes
- Progressive stream planform changes
- Pool and bar habitat
- Good floodplain connectivity
- Hydraulic diversity

### 2.1.2 Backwater Reach

The Backwater Reach is characterized by a U-shaped channel set into a high floodplain with sand and gravel deposition in the channel that are not consistent with the entrenchment of the channel. The backwater effects of the West C Street culvert extend significantly upstream (more than 1,000 feet) south of the road. The backwater condition appears to keep velocities low at higher flows and allows otherwise highly transportable material to settle out in the confined channel and the floodplain. Three constructed log weirs in the channel appear to be limiting continued vertical incision and causing small stream profile discontinuities, though they also show signs of rotting and flanking of flows (bank erosion around the weir).

This reach will become higher energy following a culvert retrofit, so an eventual culvert replacement design should consider channel adjustments in this reach to limit excessive adjustments that could lead to fish passage issues at the weirs or other locations.

### 2.1.3 Downstream Reach

The Downstream Reach located north of the Hwy 30 culvert is characterized by significant confinement between high banks that are vegetated with willow, dogwood, and other tree, shrub, and grass species. The creek is constrained here by the crossings and adjacent development and infrastructure. Just downstream of Highway 30, an old sewer crossing is armored with rock (with sill at approximate elevation of 12.3 feet NAVD88) which backwaters the culvert outlet (elev. 8.4 feet NAVD88) and inlet (elev. 10.9 feet NAVD88).



This may contribute to the backwater morphological effects noted in the upstream reach. The armoring at the pipe is not causing an observable profile break that would constitute a fish passage barrier.

Active channel width measurements and other parameters for the reference reach are documented in greater detail in Appendix B – Fox Creek Field Data Summary.

## **3.0 FISH PASSAGE AND DESIGN CRITERIA**

The culverts conveying Fox Creek through the City are a known priority fish passage barrier. The Oregon Department of Fish and Wildlife (ODFW) fish passage database shows a partial fish passage barrier at the Highway 30 crossing location (ID 3,242, assessment revised in 2019). It is unclear if the West C Street culvert is included in assessment for ODFW Crossing ID 3242, or if the field assessment includes only Highway 30.

Design of culverts for passage of aquatic species is required and enforced by both the ODFW and potentially the National Oceanographic and Aeronautic Association's Marine Fisheries Service (NMFS) depending on project funding, land ownership, and other factors. It is unclear if there will be a federal trigger for the Fox Creek crossing structure, so both ODFW and NMFS criteria are considered in this report.

Fish passage design requirements consider the species and life stages present in the system over time. ODFW has the Fox Creek basin listed as habitat for Coho Salmon and Winter Steelhead (Figure 3).



Figure 3. Fish Distribution in the Clatskanie Population Range of the Lower Columbia Management Unit (ODFW, 2011). Fox Creek (at right in rainier) Supports both Winter Steelhead & Coho Salmon



## Fox Creek Culvert Feasibility Study Report

Life history and seasonal timing of fish presence has been summarized (Figure 4 and 5) by species by the Lower Columbia Fisheries Recovery Board (LCFRB) in the Lower Columbia Fisheries Recovery Plan (recovery plan). These figures illustrate typical periods over which the stages of the salmonid lifecycle occur (Spawning, Emergence, Outmigration, Estuarine Rearing, and Ocean Rearing). Both Winter Steelhead and Coho are typically entering freshwater and spawning between November and May.



Figure 4. Life Cycle of Lower Columbia River Coho Salmon (LCFRB, 2010)




Figure 5. Life cycle of Lower Columbia River Winter Steelhead (LCFRB, 2010)

Due to the diversity in downstream travel time to the Columbia River Estuary from spawning grounds in the basin and complex life history of many salmonids, there are juveniles present in the lower estuary and seeking margin habitat refuge (as can be found in Fox Creek) throughout the entire year (Figure 6). Coho typically spend at least one year after hatching in fresh water before entering the ocean.







Fish passage design can be based on different approaches. For Fox Creek, two potential approaches for approval of the culvert replacement are the hydraulic design and stream simulation design. The hydraulic design approach requires detailed hydraulic modeling and identification of specific hydraulic criteria for high and low design flows to design the minimum structure size. In contract, the stream simulation design approach uses appropriate channel and floodplain characteristics upstream and/or downstream to guide the design of the new stream crossing structure. Each design approach is further described below.

#### 3.1 Hydraulic Design Approach

The first design approach considered was the Hydraulic Design due to the periods of time when each salmonid species and life stage of interest is present can be used to develop high and low fish passage flow criteria for a project. For low and high fish passage flows, hydraulic assessment must demonstrate that minimum flow depth and maximum velocity thresholds are met with the proposed culvert. The velocity thresholds are defined by the species, life stage, and crossing length (Table 2).

| Table 2. Maximum Allowable Average Velocity for Fish by Species and Lifestage (NMFS, 2011) |   |                                 |                    |  |  |
|--|---|---------------------------------|--------------------|--|--|
|  | М   | Maximum Average Velocity (ft/s) |                    |  |  |
| Culvert Length, feet   | Chinook, Steelhead,<br>Sockeye, and Coho Adults | Pink and Chum Adults            | Juvenile Salmonids |  |  |
| <60  | 6.0   | 5.0                             | 1.01               |  |  |
| 60-100   | 5.0   | 4.0                             | 1.0                |  |  |
| 100-200  | 4.0   | 3.0                             | 1.0                |  |  |
| 200-300  | 3.0   | 2.0                             | 1.0                |  |  |
| >300   | 2.0   | 2.0                             | 1.0                |  |  |

Depth criteria for Coho and Steelhead are:

- Adult salmonid minimum depth is one foot
- Juvenile salmonid minimum depth is six inches

#### **3.2 Stream Simulation Design Approach**

A second stream crossing structure design approach, the Stream Simulation Approach, was considered because it is the approach preferred by state and federal agencies. Instead of meeting specific hydraulic parameters, the stream simulation approach attempts to match natural conditions in the reach upstream and downstream of the crossing in terms of slope, substrate, channel width, and other parameters. Stream simulation design accounts for the long-term sediment dynamics in a system and improves both fish passage and long-term stability of the crossing by avoiding scour that might undermine a structure foundation or cause a break in the stream profile and supporting accumulation of woody material that occludes the crossing and restricts flood conveyance.

ODFW's stream simulation approach currently requires a structure span to be equal to or greater than the active channel width (ODFW, 2022), although this minimum is likely to be increased within the timeline of this Project. NMFS requires a minimum structure span to be 1.5 times the active channel width (NMFS, 2022), and this criterion is used in this analysis. Using the active channel width of the reference reach, the resulting minimum structure span is estimated to be 1.5 x 20 feet, or 30 feet.



Additional stream simulation design parameters include:

- Approximately matching upstream and downstream slopes
- Sufficient clearance to allow maintenance debris removal as needed (minimum 6 feet)
- Sufficient embedment to allow for intermittent scour of the substrate
  - Minimum 3 feet
  - Between 30 percent and 50 percent of the structure height
- Streambed materials should be similar in composition to those found naturally upstream and downstream
  - Erosion resistant materials may be incorporated for hydraulic roughness to avoid simplification to a plane-bedded morphology

#### **3.3 Culvert Length and Lighting Considerations**

The existing culvert is 650 feet long which is longer than a typical roadway crossing culvert. This introduces specific challenges for fish passage, including lack of lighting (natural or artificial). Fish prefer ambient natural lighting and are less likely to enter a dark culvert. One method of improving lighting conditions is to shorten the culvert by daylighting a section of the creek. However, other methods of appropriately lighting the culvert should be considered in greater detail during design and could include increasing interior clearance in the culvert, adding skylights, adding artificial lighting, among others.

#### 4.0 HYDROLOGY & HYDRAULICS

To appropriately size a passage structure/culvert using the hydraulic design approach, velocity and depth in the culvert under specific hydrologic conditions are checked against the requirements for the species and life stages present in the system.

Continuous exceedance probability (CEP) flows and peak flows are summarized in Table 3. CEP percentages refer to the expected portion of a given calendar year when the listed discharge is equaled or exceeded. Peak flows are referred to by the Annual Chance of Exceedance (ACE) for the listed discharge.

| Table 3. Discharge Summary   |                    |  |  |  |
|--|--------------------|--|--|--|
| Recurrence Interval<br>(or Flow Frequency)   | Flow Estimate, cfs | Notes                                  |  |  |
| 95% CEP  | <1                 | Low flow criterion                     |  |  |
| 50% CEP  | 3.9                | Juvenile criterion for depth, velocity |  |  |
| 5% CEP   | 42                 | How flow criterion                     |  |  |
| Q2 – 50% ACE   | 150                | Channel forming flow<br>(approximate)  |  |  |
| Q5 – 20% ACE   | 223                | -                                      |  |  |
| Q25 – 4% ACE   | 336                | -                                      |  |  |
| Q100 – 1% ACE  | 429                | Conveyance & floodplain criterion      |  |  |
| Source: USGS Streamstats 2022 (Mean annual precipitation 58.6 in,; Basin area 3.12 mi2 |                    |  |  |  |



These discharge values are not based on measured time series of flows (as no data is available); rather, they are estimated by regressions based on several basin characteristics including area and average annual rainfall. United States Geological Survey (USGS) Streamstats does not break out CEP flows by month, so the selected passage flows are a function of the entire calendar year as opposed to the actual time period during which fish are present. Two nearby streams (Tucca Creek and Sain Creek) which have available time series data were examined for suitability as reference streams from which seasonal CEP flows could be scaled, but neither was appropriate due to variation in basin size and rainfall amounts. Full Streamstats output is presented in Appendix C - USGS Streamstats Watershed and Flow Results.

#### 4.1 Culvert Hydraulics – Hydraulic Design Approach

Stream hydraulics within a new crossing structure were evaluated using the hydraulic design approach, as suggested during coordination with ODFW (2022). Structure hydraulics were calculated using Manning's Equation for normal depth and gradually varied flows and a spreadsheet calculator. A detailed spreadsheet summary is available in Appendix D. Using an iterative approach, minimum structure widths that meet depth and velocity criteria for Fox Creek were developed. Resulting parameters for the hydraulic design-based culvert are summarized below.

- Approximate minimum structure width (span): **15 feet** 
  - Sufficiently wide to limit velocity at high flows
- Overall structure / channel longitudinal slope: 0.5%
  - Approximately matches upstream & downstream
  - Sufficient to convey sediment
- Inset low flow channel slope: 0.25%
  - Meandering inset channel to confine low flows to passable depths
- Minimum vertical clearance channel bottom to structure soffit: 7 feet
  - Meets minimum fish passage culvert clearance criteria of 6 feet
  - Includes additional 1-foot clearance to allow for easier bed construction with large rock materials such that minimum clearance is met and access/maintenance clearance is retained
- Channel bottom Mannings Roughness (varies with depth): 0.035 to 0.08
  - Low roughness for high flows where flow depth is large relative to bed roughness elements
  - High roughness for low flows where flow depth is insufficient to overtop and deeply inundate bed roughness elements

Culvert hydraulics resulting from these parameters are summarized in Table 4. Results show that hydraulic fish passage requirements are met by:

- Velocities that are less than 2 ft/s during the 5% CEP flow (high fish passage flow)
- Depths exceeding the minimum depth criterion during low and intermediate flows

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| Table 4. Summary Hydraulics for a (15-foot) Structure Span |                                |                   |                       |                    |                   |                    |                        |
|--|--------------------------------|-------------------|-----------------------|--------------------|-------------------|--------------------|------------------------|
| Statistic  | Limiting Species/<br>Lifestage | Discharge,<br>cfs | Mannings<br>Roughness | Depth,<br>ft       | Depth<br>Criteria | Velocity,<br>ft/s  | Velocity<br>Criteria   |
| 100 year<br>flood  | -                              | 429               | 0.035                 | 6.9                | -                 | 6.3                | -                      |
| 2 year flood   | -                              | 150               | 0.035                 | 4.1                | -                 | 4.1                | -                      |
| 5% CEP   | Adult Salmonids                | 42                | 0.08                  | 3.3 <sup>(a)</sup> | 1.0 ft            | 1.5 <sup>(b)</sup> | <2 ft/s <sup>(c)</sup> |
| 50% CEP  | Juvenile Salmonids             | 3.9               | 0.08                  | 1.6 <sup>(a)</sup> | 0.5 ft            | 0.5 <sup>(a)</sup> | <1 ft/s                |
| 95% CEP  | Adult & Juveniles              | 1                 | 0.08                  | 1.2 <sup>(a)</sup> | 0.5 ft            | 0.3 <sup>(a)</sup> | <1 ft/s                |
| (a) Crean calls indicate the criteria is mot               |                                |                   |                       |                    |                   |                    |                        |

(a) Green cells indicate the criteria is met.

(b) Yellow cells indicate criteria is met but criteria is likely to change.

Recently updated criteria reduced this threshold to 1 ft/s as well as increasing the associated flow rate. If held to updated NMFS (c) hydraulic design guidance this culvert size is too narrow.

As a note, new federal fish passage guidance has been issued that stipulates that the high passage flow should be the 1% CEP discharge and the maximum average velocity during that flow should be 1 foot per second (ft/s) (NMFS, 2022). In the event ODFW updates Oregon state guidelines to reflect current NMFS guidance (or if NMFS becomes involved in the permit approval), the minimum required structure span using a hydraulic design approach would increase.

#### 4.2 Fox Creek Flood Conveyance

Depths of flow in the culvert at higher flows (2-year and 100-year) indicate that these flows can be conveyed in the 15-foot span by 7-foot deep structure, assuming it is not backwatered by the Columbia River. This would leave a minimum freeboard for flooding (initiating at West C Street) equal to the sum of the culvert wall thickness and burial depth. Future design work should analyze combined peak flow and backwater conditions to verify flood conveyance targets are met considering backwater conditions on the Columbia River.

#### **5.0 ALTERNATIVES ANALYSIS**

Three alternatives were analyzed for fish passage. Fish passage requirements generally control the size of crossing structures in fish bearing streams. Therefore, the fish passage design requirements (stream simulation and hydraulic design) discussed above were used to inform the range of structure sizes considered for this analysis. Alternative 1 includes a stream crossing structure design based on the hydraulic design approach, and Alternative 2 assumes a structure design based on the stream simulation design approach. These approaches and their resulting minimum structure sizes are considered a reasonable structure size range for evaluating benefits and construction costs.

Additionally, the alternatives consider daylighting for sections of the stream under both Alternatives 1 and 2. A third alternative includes maximized stream daylighting with crossings only at West C Street and Highway 30. Alternatives are summarized in Table 5 and discussed in greater detail below.



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| Table 5. Alternatives Summary Table  |                                 |                       |                                |  |   |  |
|--|---------------------------------|-----------------------|--------------------------------|--|---|--|
| Alternatives   | Fish Passage<br>Design Approach | Structure<br>Span, ft | Max<br>Structure<br>Length, ft | Programmatic<br>Fish Passage<br>Review | Notes   |  |
| 1A – Small Structures with<br>Stream Daylighting   | Hydraulic Design                | 15                    | 220                            | No                                     | High risk for future<br>passage deficiency and<br>maintenance<br>requirements, improved<br>habitat with daylighting |  |
| 1B – Small Continuous<br>Culvert   | Hydraulic Design                | 15                    | 600                            | No                                     | Highest risk for future<br>passage deficiency and<br>maintenance<br>requirements                                    |  |
| 2A – Large Structures with<br>Stream Daylighting   | Stream<br>Simulation            | 30                    | 220                            | Yes                                    | Low risk for future<br>passage deficiency and<br>maintenance<br>requirements, improved<br>habitat with daylighting  |  |
| 2B – Large Continuous<br>Culvert   | Stream<br>Simulation            | 30                    | 600                            | Yes                                    | Moderate risk for future<br>passage deficiency and<br>maintenance<br>requirements                                   |  |
| 3 – Large Structure with<br>Maximum Stream<br>Daylighting  | Stream<br>Simulation            | 30                    | 100                            | Yes                                    | Lowest risk for future<br>passage deficiency and<br>maintenance<br>requirements, best<br>habitat value              |  |
| (a) Recently updated criteria reduced this threshold to 1 ft/s as well as increasing the associated flow rate. If held to updated NMFS hydraulic design guidance, this culvert size is too narrow. |                                 |                       |                                |  |   |  |



#### 5.1 Alternative 1A – Small Structure Replacements with Stream Daylighting

Alternative 1A consists of a box culvert with a 15-foot-wide and 7-foot-high clearance for maintenance vehicle access that begins just upstream of West C Street, intercepting Fox Creek and diverting flows northwest approximately 100 feet where Fox Creek meets the proposed open channel. The box culvert has 1.5-foot-thick walls and will contain a mix of streambed gravels, cobbles, and boulders as the channel bed. The open channel downstream of the culvert will be approximately 70 feet wide with a maximum depth of 15 feet and include 18-foot high benched structural walls constructed of ecoblocks that will include daylighting to existing grade on both sides. The second box culvert begins at the downstream end of the proposed open channel and extends approximately 220 feet (see Figure 7). A transition joint will be installed to connect the proposed box culvert to the existing 4-foot by 8-foot ODOT owned box culvert. Routine maintenance including removing sediment, debris, and unwanted vegetation, is expected for this alternative. The existing culvert will be removed.



Figure 7. Plan and Section View of Alternative 1A



#### 5.2 Alternative 1B – Small Continuous Structure Replacements

Alternative 1B includes a box culvert with a 15-foot-wide and 7-foot-high clearance that intercepts Fox Creek upstream of West C Street, directing the flow in the northwest direction (Figure 8), and connects to the existing ODOT owned 4-foot by 8-foot box culvert. A transition joint will be installed to connect the two structures. The box culvert would be 600 feet long in total (including the ODOT section), have 1.5-foot-thick walls, and contain a mix of streambed gravels, cobbles, and boulders as the channel bed. The existing culvert will be removed. Routine maintenance would include removing sediment, debris, and unwanted vegetation.



Figure 8. Plan and Section View of Alternative 1B



#### **5.3 Alternative 2A – Large Structure Replacements with Stream Daylighting**

Alternative 2A would consist of a 30-foot-wide and 15-foot-high box culvert that directs Fox Creek in the northwest direction and extends 100 feet to a proposed open channel. The open channel downstream of the culvert would be approximately 70 feet wide with a maximum depth of 15 feet, and include 18-foot high benched structural walls constructed of ecoblocks that will include daylighting to existing grade on both sides. Following the open channel, a 30-foot-wide and 15-foot-high oblong CMP extending approximately 220 feet will divert flows toward Highway 30 where it will connect with the existing 4-foot by 8-foot ODOT owned box culvert. A transition piece will be installed to connect the two strictures. The existing culvert will be removed. Figure 9 depicts the plan and section view of Alternative 2A. Routine maintenance includes removing sediment, debris, and unwanted vegetation.



Figure 9. Plan and Section View of Alternative 2A

#### 5.4 Alternative 2B – Large Continuous Structure Replacements

Alternative 2B includes a 30-foot wide and 7-foot-high oblong CMP that intercepts Fox Creek upstream of West C Street and the existing culvert. The structure will direct the flow in the northwest direction and extend 600 feet long in total (including the ODOT section. A transition joint will be installed to connect the two structures. The structure will contain a mix of streambed gravels, cobbles, and boulders as the channel bed. Expected maintenance for this alternative includes removing sediment, debris, and unwanted vegetation. The existing culvert will be removed. Figure 10 shows the plan and section view of Alternative 2B.





Figure 10. Plan and Section View of Alternative 2B

## 5.5 Alternative 3 – Large Structure Replacement with Maximized Stream Daylighting

Alternative 3 includes the installation of a 30-foot wide, 100-foot-long and 15-foot high culvert that would intercept Fox Creek just upstream of West C Street, direct flows northwest underneath the street (Figure 11), and discharge to a proposed open channel. The open channel would flow in the northwest direction where it will bend approximately 30 degrees directing flows in the north direction to the Highway 30 crossing. A transition piece will be installed to connect the open channel to the existing ODOT owned 8-foot by 4-foot box culvert. The open channel sections would include 18-foot high benched structural walls constructed of Ecoblocks that will daylight to existing grade on both sides.

The relocation of a local restaurant and real estate acquisition within the Project vicinity would be necessary for this alternative. Although this would accrue additional costs, this would eliminate the importation of a significant amount of material necessary to stabilize ground conditions for structures. Therefore, overall this would lower cost and potentially allow the City to stay out of Federal funding and permitting.





Figure 11. Plan and Section View of Alternative 3

#### 5.6 Costs Analysis

Cost estimates were developed for the five alternatives presented above. The factors considered in the cost analysis include construction duration, traffic control, bypass, restoration, mobilization, and a 40 percent contingency. Costs such as permit fees, real estate acquisition, design, and coordination are not included in this analysis. Table 6 summarizes the anticipated construction costs for each alternative. A detailed cost breakdown is shown in Appendix E.

| Table 6. Summary of Preliminary Costs, dollars  |                |                |                |                |               |
|---|----------------|----------------|----------------|----------------|---------------|
| Description   | Alternative 1A | Alternative 1B | Alternative 2A | Alternative 2B | Alternative 3 |
| Excavation  | 600,000        | 425,000        | 800,000        | 750,000        | 1,000,000     |
| Shoring   | 600,000        | 1,000,000      | 600,000        | 1,000,000      | 400,000       |
| Subgrade Stabilization  | 150,000        | 280,000        | 280,000        | 550,000        | 180,000       |
| Ecoblocks   | 237,500        | NA             | 237,500        | NA             | 399,000       |
| Box Culvert/CMP   | 960,000        | 1,800,000      | 1,075,200      | 2,016,000      | 672,000       |
| Stream Bed Material   | 163,600        | 275,500        | 175,600        | 499,500        | 199,000       |
| Additional Items <sup>(a)</sup>   | 3,828,900      | 3,409,500      | 4,361,700      | 4,164,500      | 3,940,000     |
| Subtotal  | \$6,540,000    | \$7,190,000    | \$7,530,000    | \$8,980,000    | \$6,790,000   |
| (a) Includes clearing and grubbing, backfill, demolition, stream diversion, utility relocation, surface restoration, ODOT transition piece, |                |                |                |                |               |

(a) Includes clearing and grubbing, backfull, demolition, stream diversion, utility relocation, surface restoration, ODOT transition piec dewatering, paving traffic control, mobilization, contractor overhead and profit, market adjustment, and contingency.



#### 6.0 ALTERNATIVE EVALUATION AND RECOMMENDATIONS

Considering fish passage and stream functions, Alternatives 1a and 1b (the hydraulic design approach alternatives) are not recommended because:

- The hydraulic design approach may not be the accepted fish passage design approach, especially if there is a federal nexus (funding, etc.) that necessitates National Oceanic and Atmospheric Administration (NOAA)/NMFS review and not just ODFW review. Additionally, in lieu of a federal funding nexus, ODFW may revise state fish passage requirements for a hydraulic passage approach to be in-line with NMFS guidance that was made more restrictive during this analysis. The structure span described in Alternatives 1a and 1B is likely to be insufficient for hydraulic fish passage in the future
- The resulting stream habitat within the structure(s) would be lower quality due to:
  - Higher likelihood of stream bed simplification to plane bed morphology (flat section) or entrainment (flows confined against culvert wall which are undesirable) which are detrimental to fish passage;
  - Less opportunity for morphological diversity from habitat wood (embedded log) placement in or near the structure(s), as risk of debris accumulation would be too high with a small structure.
- City and ODOT maintenance would be more difficult with respect to:
  - Limited access (space to work) within a smaller structure that is also potentially very long, and
  - The risk of displacement/loss of streambed materials and subsequent required maintenance and replacement of the streambed by much higher, especially in a structure that will likely have at least one angle or bend, which tends to focus scour.

Alternatives 2 and 3 (which are based on the stream simulation design approach) are recommended:

- The wider structure span is based on geomorphic principles and more likely to function under higher future flows and natural sediment and large log (debris) transport processes that will occur during the lifespan of the structure(s).
- Maintenance costs will be reduced with the wider structure, as there will be:
  - Improved access for small machinery for faster and safer machine and crew work; and
  - Lower hydraulic scour forces and reduced likelihood of streambed material loss that would necessitate rock replacement to maintain fish passage depths and velocities.

Fox Creek daylighting options are recommended for the following:

- Daylighting options provide significantly better fish passage conditions due to increased lighting and increased slack water margin habitat at stream edges. Upstream and downstream migrating fish would be reluctant to enter long dark crossings associated with non-daylighting options.
- The daylighted stream would offer a visible/tangible public amenity and park setting benefits.



• Maximizing the extent of daylighting is expected to be more cost effective and beneficial to stream habitat, as daylighting costs would become incrementally lower but more beneficial to habitat as the daylighting segment(s) increases.

Stream reconnection associated with fish passage structure replacement will likely have to extend upstream of West C Street to some degree for connectivity / continuity reasons, and to appropriately consider the relatively "fine" sands and gravels present in this reach due to backwatering. Upstream restoration would reduce the risk of erosion / headcuts that form as future unimpeded flows approach the new crossing at West C Street, and reduce the risk of inadvertent fish passage barriers forming in this reach. Reconnection would also improve floodplain habitat and raise groundwater levels which will also improve floodplain planting survival.

#### 7.0 NEXT STEPS

The following list details the next steps required after selecting the preferred Alternative:

- Funding sources
- Phase 1 Environmental Study
- Further geotechnical investigation for contaminated soil
- Appraisal of restaurant relocation and real estate acquisition (Alternative 3)
- Detailed hydraulic analysis

# Appendix A

Preliminary Geotechnical Recommendation Technical Memorandum Prepared by McMillen Jacobs Associates



## **Technical Memorandum**

| To:   | Preston Van Meter<br>West Yost Associates | Project: | Fox Creek Culvert Feasibility Study    |
|---|---|----------|--|
| From:   | Wolfe Lang, PE, GE<br>Jeremy Fissel, PE   | cc:      | Sandrine Ganry<br>West Yost Associates |
| Date:   | June 20, 2022                             | Job No.  | 6353.0                                 |
| Subject: Preliminary Geotechnical Recommendations |   |          |  |

#### **Revision Log**

| Revision No. | Date          | Revision Description    |
|--------------|---------------|-------------------------|
| 0            | June 20, 2022 | Draft issued for review |
|              |               |                         |
|              |               |                         |

#### 1.0 Introduction and Background Information

#### 1.1 General

McMillen Jacobs Associates (MJ) has been retained by West Yost Associates to provide geotechnical engineering services for their feasibility study of the Fox Creek culvert in Rainier, OR. This memorandum includes a summary of our background review, site reconnaissance, geotechnical investigation, subsurface soil condition assessment, and preliminary geotechnical recommendations for the use in culvert design.

#### 1.2 **Project Description**

The site is located between West C and West B (Highway 30) Streets, and between West 2<sup>nd</sup> and West 3<sup>rd</sup> Streets in Rainier, Oregon. Open channel flow from Fox Creek enters the culvert system at West C Street and is conveyed west through a culvert system of various sizes, then to the north beneath West B Street where it discharges to open channel flow that confluences with the Columbia River. The culvert system traverses properties owned by The City of Rainier, private individuals, private businesses, and the Oregon Department of Transportation (ODOT).

The existing culvert system is 66-inch diameter corrugated metal pipe (CMP) at it's inlet, transitions to a 72-inch corrugated metal pipe (CMP), then to an 84-inch CMP. The 84-inch diameter CMP then feeds an 8 by 4-foot box culvert beneath Highway 30, which is ODOT jurisdiction. Figure 1 in Section 3.2 of this report shows the culvert alignment and approximate location of the various sizes of the system's components.

Ground surface subsidence had been documented in 2014 when a sinkhole developed above a section of the 66-inch diameter culvert within a portion of a privately owned property. A significant section of the culvert system in the affected area was replaced in 2017. This construction included discharging nearby storm drains into the repaired section.

Since replacement of this section of the culvert system, after heavy rainfall in February 2019 the properties between West C Street and Highway 30 had experienced flooding. It was noted that City of Rainier staff had not observed flooded conditions prior to the replacement of this section of the culvert system.

A hydraulic evaluation of the stormwater from Fox Creek and the existing culvert system was previously performed. Preliminary recommendations included an option of increasing the size of the entire culvert system. Another option identified would be to only increase the culvert sizes beneath West C Street and Highway 30, and then replace the remaining culvert portion with a fish-friendly stream channel.

#### 1.3 Site Description

The existing culvert system is generally located beneath nearly level to gently sloping terrain of a commercially and privately developed area of Rainier, Oregon. The alignment traverses beneath portions of asphalt and gravel parking lots used by the nearby business and residences. Figure 1 in Section 3.2 shows the approximate location of the culvert system relative to surrounding features.

## 2.0 Geologic Setting

The site is located in northwest Oregon along the boundary between the Coast Range and Willamette Valley physiographic provinces. More specifically it is near the northern extent of the Portland Basin, a subbasin of the Willamette Valley (Orr, 2000). The Portland Basin is a structurally controlled lowlands through which the Columbia River passes on route to the Pacific Ocean. The Columbia River is about 900 feet north of the Project site.

The site is underlain by the Eocene-aged volcaniclastic sedimentary rock member of the Goble Volcanics (Phillips, 1987). This unit consists of light-colored volcanic-lithic sandstone, siltstone and conglomerate with lesser amounts of ash tuff beds, breccia and coal and carbonaceous shale. This formation weathers to a bright red, clay-rich soil that is typically more than 100 feet thick.

## 3.0 Field Exploration and Laboratory Testing

#### 3.1 Site Reconnaissance

McMillen Jacobs completed a site reconnaissance on May 19, 2022. The purpose of the site reconnaissance was to identify potential geologic hazards associated with construction and installation of a new covert system.

Generally, the footprint of the existing culvert system, a gently sloping area, did not exhibit signs of subsurface instabilities, such as significant depressions at the ground surface or cracking in the asphalt

surface. The was however, standing water located at the junction of a gravel driveway and asphalt pavement near the central portion of the current alignment, on privately owned property.

Clearly identifiable erosion at the culvert system inlet and discharge point was not observed. There are steeply sloping banks downstream of the box culvert beneath Highway 30 which are covered with vegetation that we consider at-risk of erosion and potential instabilities, particularly during heavy rain events. Also, the water pool appeared to deepen a few feet downstream of the box culvert discharge, which may be indication of erosion.

#### 3.2 Geotechnical Exploration

To evaluate the subsurface conditions, one geotechnical soil boring (B-1) was completed on May 19, 2022. B-1 was advanced to approximately 26.5 feet below the asphalt pavement surface at West 3<sup>rd</sup> Street using solid stem auger drilling methods. The drilling was performed by Western States Soil Conservation, Inc., of Hubbard Oregon, using a trailer-mounted Simco drill. The approximate location of our recent exploration B-1 is shown below in Figure 1.



Figure 1: Site Plan of existing culvert system (approximate alignment shown in green) and soil boring locations.

Disturbed soil samples were collected using Standard Penetration Testing (SPT) techniques at 2.5-foot intervals using a standard 2-inch diameter split-barrel sampler and manual (cathead) hammer. In each test, the sampler was advanced 18 inches by dropping a 140-pound hammer 30 inches for each blow in accordance with ASTM D1586. The number of hammer blows for each six inches of penetration was recorded and the standard penetration resistance (designated as the letter N) of the soil was calculated as the sum of the number of blows required for the final 12 inches of sampler penetration.

A summary log of our recent soil boring is included in Attachment A. The stratigraphic contacts indicated on the boring log represent the approximate boundaries between soil types and actual transitions may be more gradual.

#### 3.3 Laboratory Testing

Representative samples were selected for moisture content testing. The moisture content tests were completed in accordance with ASTM D2216 by Breccia Geotechnical Testing, LLC, of Tigard, Oregon. The results of laboratory tests are graphically shown on the boring log and detailed results are provided in Attachment B.

#### 3.4 Previous Site Explorations

Logs of two previously completed soil borings by Redmond Geotechnical Services were found publicly, each dated September 2, 2016. The project identified on the available documents is CSWD Emergency Projects and CSWCD Rainier Sinkhole. Each boring was drilled to a depth of 36.5 feet below ground surface (bgs). The location of these borings, B-1 (2016) and B-2 (2016), are shown in Figure 1 in Section 3.2.

## 4.0 Subsurface Conditions

Recent boring B-1 encountered a 3.75-inch thick section of asphalt pavement underlain by about 12 inches of base aggregate. Fill was encountered beneath the pavement section and extended to a depth of approximately 10.5 feet bgs. The fill soils were generally, fine to mediums, poorly graded sand, with trace gravel and trace fines. N-values from SPT samples within the fill ranged from 4 to 11, indicating very loose to loose conditions. A 4-inch cobble was encountered in the fill stratum at B-1.

Similarly, fill was encountered in the historical borings B-1 (2016) and B-2 (2016). The respective boring logs cite the fill in the upper 13 and 8 feet. N-values from SPT tests ranged from 9 to 13 in the fill. Boulders at various depths are described on the historical boring logs within the fill stratum.

Beneath the fill, we encountered native alluvial soils comprised of gray and light brown poorly graded, fine to medium sand with trace fines that extended to a depth of about 22 feet bgs in B-1. Based on N-values, these soils were in a very loose to loose conditions. Laboratory test results for moisture content within the alluvial soils ranged from 9 to 29 percent.

In historical borings B-1 (2016) and B-2 (2016), the sandy fill soils were underlain by a 1-foot-thick layer of native soil comprised of very soft, wet, organic, sandy, clayey silt. This was followed by very loose, wet, clayey, silty fine sand with trace organics (SM). N-values from SPT samples obtained within the stratum ranged from 2 to 11. The color of the unit varied from bluish-gray at its surface and cited to change to orange-brown at 15 and 20 feet bgs in B-1 (2016) and B-2 (2016), respectively. Each of these historical boring terminated within the silty sand unit.

The final stratum encountered in our recent boring B-1, was a light brown and red-brown sandy fat clay (CH). Coarse sand to fine gravel-sized nodules of hard clay were apparent in the unit. The two SPT samples obtained within the unit were 39 and 50, while laboratory moisture content results were 40 and 44 percent. Based on SPT results, we consider this unit Residual Soil of Goble Volcanics. Our solid stem auger soil boring terminated within this unit due to practical auger refusal.

Groundwater was measured inside recent boring B-1 prior to backfilling. A groundwater depth of 16 feet below the top of the asphalt was observed.

## 5.0 Design and Construction Recommendations

The following sections includes preliminary geotechnical recommendations for the design and construction of a new culvert system. These recommendations are based on information derived from our recent soil boring, the historical soil borings, and the previous geotechnical issues documented at the site.

#### 5.1 Bearing Capacity

Based on the groundwater level and the loose sandy soils encountered, the project site is subject to seismic hazards such as liquefaction and lateral spread. Mitigation of these hazards would likely consist of ground improvement methods. We assume costs of such improvements are not within the Project budget. Therefore, we are providing recommendations for soil bearing capacity under static conditions only.

Our soil bearing capacity recommendations vary based on possible depths of the new culvert. These recommendations assume the subgrade soils are prepared in accordance with our recommendations in Section 5.1.1.

A net allowable bearing capacity of 2,000 pounds per square foot (psf) can be used in the design for culvert invert elevations and foundations up to 10 feet bgs, The subgrade soils at this depth are expected to be either loose sand fill, or loose native alluvial sandy deposits. Groundwater is not expected to be encountered at this depth.

Culvert invert elevations and other foundations below 10 feet bgs, can be designed using a net allowable bearing capacity of 1,500 psf. The soils at this depth are expected to be either loose, wet, sandy alluvial deposits or soft sandy clay. Groundwater can be expected below 10 feet bgs.

#### 5.1.1 Subgrade Preparation

To achieve the recommended bearing capacities provided in the above section, we recommend subgrade stabilization and dewatering methods be employed.

The foundation stabilization layer should consist of clean, open-graded, 2-inch to ¼-inch crushed aggregate. The foundation stabilization layer should be a minimum 12 inches thick and placed upon a reinforced geotextile fabric that provides both filtration/separation and reinforcement, The stabilization materials should be mechanically compacted using a drum roller in static mode. This subgrade stabilization backfill may also be used as the drainage layer for in-trench dewatering discussed in the subsequent sections.

#### 5.2 Excavations

We expect installation of a new culvert system to consist primarily of trenching methods. We also anticipate installation of deep structures, such as manholes at some locations within the alignment.

However, at the downsteam end of the culvert system at Highway 30 less conventional means to install a new drainage system are likely. This section of the alignment is part of a bridge structure owned by ODOT. Methods to increase the size of the culvert beneath the bridge may require modification or replacement of the bridge structure. Trenchless methods could be possible but are dependent of the structural entities of the existing bridge and the invert elevation of the underlying new culvert.

The following sections include our concerns regarding the construction activities to replace the existing culvert system within the City of Rainier's jurisdiction and the adjacent private properties.

#### 5.2.1 Trenching

The near surface soils at the site consist of sandy soils. Installation of the new culvert system using open cut or cut slope methods are likely not feasible based on City-owned easements and surrounding structures. Trench shoring or shielding will likely be necessary for installation. Based on our experience conventional trench box systems can be used during installation.

Groundwater in conjunction with the sandy soils within the trench zone could adversely impact the site. Potential flowing soil conditions may create ground surface subsidence, such as sinkholes. Voids between the trench wall and the outside face of the shoring should be immediately backfilled after the trench is shoring is placed. This backfill material should be imported crushed rock, approximately <sup>3</sup>/<sub>4</sub>-inch minus, when used beneath groundwater up to 2 feet above the groundwater level. The onsite sandy soils can be used to backfill the trench box system from 1 foot above the groundwater level to the ground surface.

#### 5.2.2 Boulders

The historic soil borings identified boulders in the upper 13 feet within the culvert alignment. Earthwork activities should expect removal and disposal of boulders.

#### 5.2.3 Groundwater Control

A groundwater level of 16 feet bgs was observed in our recent soil boring. Construction excavations below groundwater levels will require additional measures to minimize subgrade disturbance which can cause reduction of soil shear strengths. Unless a water-tight shoring system (such as steel sheet piles) is used to cutoff the groundwater inflow, a positive dewatering system will need to be used to lower the groundwater table. For the feasible dewatering system, vacuum wellpoints or deep gravity wells can be considered. In addition to wells or wellpoints installation, water collection, treatment and discharge systems of the groundwater will need to be considered.

#### 5.3 Trench Backfill

The current culvert alignment traverse beneath asphalt pavement, gravel driveways, and grass surfaced regions. Backfill of the drainage system should consist of imported crushed rock, approximately <sup>3</sup>/<sub>4</sub>-inch minus in grading where the finished surface is paved, subjected to vehicle loading, or within a zone that may impact adjacent structures.

Backfill material where surface settlement is not a concern, such as grass surface lawns and areas that do not include adjacent structures, can be the on-site excavated sandy soils. The on-site soils reused as backfill should have particle sizes greater than 4-inches removed and be free of organic matter, or soft, wet fine-grained soils.

All backfill materials should be compacted to 95 percent of the maximum dry density as determined by ASTM D698.

#### 5.4 Structural Fill

Where needed, structural fill should be placed on subgrade that has been mechanically compacted to firm and unyielding conditions. The subgrade should be dewatered prior to compaction and placement of fill.

Structural fill should consist of imported crushed rock with a grading of <sup>3</sup>/<sub>4</sub>-inch minus. Loose lifts of should be no more than 12 inches and compacted to at least 95 percent of the maximum dry density as determined by ASTM D698 (Standard Proctor). Lift thicknesses may need to be reduced depending on the contractor compaction equipment and methods. Structural fill should extend at least 12 inches beyond the footprint of the supported foundation.

#### 6.0 Closure

This memorandum was prepared for the Fox Creek Culvert Study in Rainier, Oregon. The data, analyses, and preliminary recommendations presented in this report are based on the subsurface conditions at the time that the geotechnical investigation for the project was completed. This report also contains information and data collected from other relevant studies, as well as our professional experience and judgement. Additional geotechnical investigations and analyses will be required for the detailed design of the culvert improvement project.

In the performance of geotechnical work, specific information is obtained at specific locations at specific times, and geologic conditions can change over time. It should be acknowledged that variations in soil conditions may exist between exploration and exposed locations and this report does not necessarily reflect variations between different explorations. The nature and extent of variation may not become evident until construction. McMillen Jacobs Associates is not responsible for the interpretation of the data contained in this report by anyone; as such interpretations are dependent on each person's subjectivity. If, during construction, conditions different from those disclosed by this report are observed or encountered, McMillen Jacobs Associates should be notified at once so we can observe and review these conditions and reconsider our recommendations where necessary.

The site investigation and this report were completed within the limitations of the McMillen Jacobs Associates approved scope of work, schedule, budget, and terms and the conditions of subcontract agreement. The services rendered have been performed in a manner consistent with the level of care and skill ordinarily exercised by members of the profession currently practicing under similar conditions in the same area. McMillen Jacobs Associates is not responsible for the use of this report in connection with anything other than the project at the location described above.

## 7.0 References

Orr, E.L. and Orr, W.N., 2000, Geology of Oregon, Kendall/Hunt Publishing Company, Fifth Addition.

Philips, W.M., 1987, Geologic Map of the Mount St. Helens Quadrangle, Washington and Oregon, Washington Division of Geology and Earth Resources, Open File Report 87-4.

## ATTACHMENTS

Attachment A – Boring Log

Attachment B – Laboratory Tests Results



**Attachment A – Boring Log** 

#### MOISTURE CONTENT

| DESCRIPTION | CONDITION  |  |
|-------------|--|--|
| Dry         | Absence of moisture, dusty, dry to the touch.    |  |
| Moist       | Damp, but no visible water.                      |  |
| Wet         | Visible free water, typically below water table. |  |

#### FINE-GRAINED SOIL CONSISTENCY

| RELATIVE<br>CONSISTENCY | <b>N, SPT</b><br>Blows/foot |
|-------------------------|-----------------------------|
| Very Soft               | 0 to 1                      |
| Soft                    | 2 to 4                      |
| Medium stiff            | 5 to 8                      |
| Stiff                   | 9 to 15                     |
| Very Stiff              | 16 to 30                    |
| Hard                    | > 30                        |

#### SOIL CONSTITUENCY DEFINITIONS

| CONSTITUENT            | COARSE-<br>GRAINED  | FINE-GRAINED   |
|------------------------|---|--|
| Major                  | Less than 50% fines:<br>SAND or GRAVEL  | More than 50% fines:<br>SILT, ELASTIC SILT,<br>LEAN CLAY, FAT CLAY,<br>ORGANIC SOIL                                      |
| Secondary              | 12% <sup>1</sup> or more fine-<br>grained:<br><b>Silty</b> or <b>Clayey</b>                         | 30% or more coarse-<br>grained:<br>Sandy or Gravelly   |
|                        | 5 to 12% <sup>1</sup> fine-grained:<br>with Silt or with Clay                                       | 15 to 30% coarse-grained:<br>with Sand or with Gravel  |
| Minor                  | 15% or more of a second<br>coarse-grained<br>constituent: <b>with Sand</b><br>or <b>with Gravel</b> | 30% or more total coarse-<br>grained and the lesser<br>coarse constituent is 15%<br>or more: with Sand or with<br>Gravel |
| 1. ASTM D2488 specifie | s more than 15% fines   |  |

#### ABBREVIATIONS

| SYMBOL | DEFINITION         |
|--------|--------------------|
| Н      | Atterberg Limits   |
| 0      | Moisture Content   |
|        | Blows per foot (N) |

#### COARSE-GRAINED SOIL DENSITY

| Relative Density | <b>N, SPT</b><br>Blows/foot |
|------------------|-----------------------------|
| Very Loose       | 0 to 4                      |
| Loose            | 5 to 10                     |
| Medium Dense     | 11 to 30                    |
| Dense            | 31 to 50                    |
| Very Dense       | > 50                        |

#### PERCENTAGE RANGE TERMS<sup>1,2</sup>

| DESCRIPTION  | RANGE      |  |  |  |
|--|------------|--|--|--|
| Trace  | < 5%       |  |  |  |
| Few  | 5 to 10%   |  |  |  |
| Little   | 15 to 25%  |  |  |  |
| Some   | 30 to 45%  |  |  |  |
| Mostly   | 50 to 100% |  |  |  |
| <ol> <li>Gravel, Sand and fines are estimated<br/>by mass. Other constituents such as<br/>organics, cobbles, and boulders are<br/>estimated by volume.</li> <li>Percentages per ASTM D2488.</li> </ol> |            |  |  |  |

#### PARTICLE SIZE DEFINITIONS

| DESCR |        | SIEVE SIZE                    |
|-------|--------|-------------------------------|
| DESCR | IPTON  | PER ASTM D2488                |
| FIN   | IES    | < #200 (0.075 mm)             |
|       | Fine   | #200 to #40 (0.075 to 0.4 mm) |
| SAND  | Medium | #40 to #10 (0.4 to 2 mm)      |
| 5.    | Coarse | #10 to #4 (0.4 to 4.75 mm)    |
| JEL   | Fine   | #4 to ¾ in. (4.75 to 19 mm)   |
| GRAV  | Medium | ¾ to 3 in. (19 to 76 mm)      |
| СОВ   | BLES   | 3 to 12 in. (76 to 305 mm)    |
| BOUL  | DERS   | > 12 in. (305 mm)             |



|                      | UNIFIED SOIL CLASSIFICATION SYSTEM (USCS) <sup>1</sup> |          |                  |                       |       |                        |                                |   |
|----------------------|--|----------|------------------|-----------------------|-------|------------------------|--------------------------------|---|
|                      | MA   | AJOR [   | DIVISIO          | ONS                   | SYMBO | DL                     | TYPICAL DESCRIPTION            | ALTERNATE DESCRIPTIONS  |
|                      | VE)  |          | CLEA             | AN GRAVELS            | GW    | 義者                     | WELL-GRADED GRAVEL             | WELL-GRADED GRAVEL WITH SAND  |
|                      |  | ). 4 SIE | ( 5              | ≤ 5% FINES)           | GP    |                        | POORLY GRADED GRAVEL           | POORLY GRADED GRAVEL WITH SAND                                      |
|                      |  | ON NO    |                  |                       | GW-GM |                        | WELL-GRADED GRAVEL WITH SILT   | WELL-GRADED GRAVEL WITH SILT AND SAND                               |
|                      | VELS   | AINED    | G                | RAVELS <sup>2,4</sup> | GW-GC |                        | WELL-GRADED GRAVEL WITH CLAY   | WELL-GRADED GRAVEL WITH CLAY AND SAND                               |
| VE)                  | GRA  | % RET/   | (5 -             | - 12 % FINES)         | GP-GM |                        | POORLY GRADED GRAVEL WITH SILT | POORLY GRADED GRAVEL WITH SILT AND SAND                             |
| DILS                 | -  | AN 50    |                  |                       | GP-GC |                        | POORLY GRADED GRAVEL WITH CLAY | POORLY GRADED GRAVEL WITH CLAY AND SAND                             |
| ED S(                |  | RE TH.   | GRA              | VELS WITH             | GM    |                        | SILTY GRAVEL                   | SILTY GRAVEL WITH SAND  |
| AINE<br>VED BY       |  | (MO      | (≥               | 12% FINES)            | GC    |                        | CLAYEY GRAVEL                  | CLAYEY GRAVEL WITH SAND   |
| -GR/                 |  | VE)      | CLE              | AN SANDS              | SW    |                        | WELL-GRADED SAND               | WELL-GRADED SAND WITH GRAVEL  |
|                      | 6 OR MORE F  | ( <      | ≤ 5% FINES)      | SP                    |       | POORLY GRADED SAND     | POORLY GRADED SAND WITH GRAVEL |   |
| COA<br>% OR h        |  |          |                  |                       | SW-SM |                        | WELL-GRADED SAND WITH SILT     | WELL-GRADED SAND WITH SILT AND GRAVEL                               |
| (509                 | NDS  | INED (   | S                | SANDS <sup>2,4</sup>  | SW-SC | //                     | WELL-GRADED SAND WITH CLAY     | WELL-GRADED SAND WITH CLAY AND GRAVEL                               |
|                      | SAN  | 6 RETA   | (5 – 12 % FINES) |                       | SP-SM |                        | POORLY GRADED SAND WITH SILT   | POORLY GRADED SAND WITH SILT AND GRAVEL                             |
|                      |  | N 50%    |                  |                       | SP-SC | ///                    | POORLY GRADED SAND WITH CLAY   | POORLY GRADED SAND WITH CLAY AND GRAVEL                             |
|                      |  | SS TH∕   | SANDS WITH       |                       | SM    |                        | SILTY SAND                     | SILTY SAND WITH GRAVEL  |
|                      |  | (LE      | (>               | FINES<br>12% FINES)   | SC    | []]]]                  | CLAYEY SAND                    | CLAYEY SAND WITH GRAVEL   |
| EVE)                 | SI   | LTS AI   | ND               |                       | ML    |                        | SILT                           | SILT WITH SAND OR GRAVEL;<br>SANDY OR GRAVELLY SILT                 |
| OILS                 |  | CLAYS    | 5                | INORGANIC             | CL    |                        | LEAN CLAY                      | LEAN CLAY WITH SAND OR GRAVEL;<br>SANDY OR GRAVELLY LEAN CLAY       |
| ED S<br>NO. 3        |  | (LL < 50 | )                | ORGANIC               | OL    | [222]                  | ORGANIC SOIL                   | ORGANIC SOIL WITH SAND OR GRAVEL;<br>SANDY OR GRAVELLY ORGANIC SOIL |
| <b>AINI</b><br>PASSE | SI   | LTS AI   | ND               |                       | МН    |                        | ELASTIC SILT                   | ELASTIC SILT WITH SAND OR GRAVEL;<br>SANDY OR GRAVELLY ELASTIC SILT |
| -GR                  |  | CLAYS    | 5                | INONGANIC             | СН    |                        | FAT CLAY                       | FAT CLAY WITH SAND OR GRAVEL;<br>SANDY OR GRAVELLY FAT CLAY         |
| FINE<br>6 OR N       |  | (LL ≥ 50 | )                | ORGANIC               | ОН    |                        | ORGANIC SOIL                   | ORGANIC SOIL WITH SAND OR GRAVEL;<br>SANDY OR GRAVELLY ORGANIC SOIL |
| (50%                 | SI   | LT/CL/   | AY <sup>2</sup>  | INORGANIC             | CL-ML |                        | SILTY CLAY                     | SILTY CLAY WITH SAND OR GRAVEL;<br>SANDY OR GRAVELLY SILTY CLAY     |
| HIGI                 | HLY OR   | GANIC S  | DILS             | ORGANIC               | РТ    | 77 77<br>77 77<br>77 7 | PEAT                           |   |

NOTES:

1. The USCS described here is based on ASTM standards D2487 & D2488.

2. Dual symbol materials (e.g., SP-SM) are used for soils between 5% and 12% fines or when liquid limit and plasticity index values plot in the CL-ML area of the plasticity chart, (LL: 12 -25, PI: 4-7).

3. ASTM D2488 specifies the use of dual symbol coarse-grained soils between 5% and 15% fines.

|                                       | BACKFILL, WELL, AND SAMPLE SYMBOLS |  |  |                            |  |              |                            |
|---------------------------------------|------------------------------------|--|--|----------------------------|--|--------------|----------------------------|
|                                       | Bentonite Chips                    |  |  | Grout                      |  | $\mathbb{X}$ | 2" OD Split Barrel Sampler |
|                                       | Concrete                           |  |  | Observation Well - Solid   |  |              | Shelby Tube Sample         |
|                                       | Sand                               |  |  | Observation Well – Screen  |  | Ser.         | Grab Sample                |
|                                       | Asphalt                            |  |  | Vibrating Wire Piezometer  |  | 00           | Rock Core Run              |
| · · · · · · · · · · · · · · · · · · · | Gravel                             |  |  | Measured Groundwater Level |  |              |                            |



#### Project: Fox Creek Culvert Feasibility Study Project Location: Rainier, OR Project Number: 6353.0

## Log of Boring B-1

| Date(s)<br>Drilled 05/19/                               | 2022         |                                   | Geotechr<br>Consulta | nical McN  | lillen Jacob  | s Assoc   | ciates E  | J. Fissel  |   | Chec<br>By     | <sup>cked</sup> W. Lang   |                   |
|---|--------------|-----------------------------------|----------------------|--|---------------|-----------|---|--|---|----------------|---|-------------------|
| Drilling Method/<br>Rig Type                            | Solid S      | tem Auger                         |                      | Drilling<br>Contractor   | Western       | States \$ | Soil Conservati   | ion, Inc.  | Total Depth<br>of Borehole 26   | .5 ft          |   |                   |
| Hole Diameter   | 4.25 in      |                                   |                      | Hammer We  | ght/Drop (lb/ | in.)/Type | e 140 lb / 30 ir  | n / Cathead Winch  | Ground Surface<br>Elevation/Datum   | 29.0           | ft  |                   |
| Location Wes  | t 3rd Stre   | et                                |                      | Coordinates  |               |           |   |  | Elevation Source  | Goo            | gle Earth   |                   |
| ELEV. (FT)<br>WATER LEVEL<br>DEPTH (FT)<br>SAMPI F TYPF | RECOVERY (%) | BLOW<br>COUNTS                    | SAMPLE NUMBER        | PENETRATIO<br>RESISTANCE<br>BLOWS/FT<br>10 20 30 44<br>1 1 1<br>WATER CONTE<br>(MC)<br>ATTERBERG LL<br>20 40 60 86 | USCS GRAPHIC  | USCS      |   | MATERIAL DES   | CRIPTION  |                | REMARKS<br>AND<br>TESTS   | BACKFILL/INSTALL. |
|   |              |                                   |                      |  |               | GW        | Hot Mix Apl   | halt - 3.75 inch<br>e <b>nt</b>  | es thick.   | /              |   | • •               |
| 24 5  | 50           | 5-5-6<br>(N=11)<br>2-3-2<br>(N=5) | S-1                  |  |               | SP        | Dry to mois<br>Graded GRA<br>coarse angu<br>trace cobble<br>fines.<br>Base Ag<br>Very loose t<br>SAND (SP); | t, gray and ligh<br>AVEL with Sand<br>Ilar gravel, fine<br>es up to 4 inch<br>ggregate<br>to loose, moist,<br>fine to medium | t brown, Well<br>(GW); fine to<br>to coarse sand,<br>particle size, trace<br>gray, Poorly Grad<br>, trace fine gravel | e<br>led<br>l, |   |                   |
|   | 50           | 2-2-2<br>(N=4)                    | S-3                  | • •  |               |           | trace fines.<br>Fill  |  |   |                |   |                   |
|   | 11           | 1-3-5<br>(N=8)                    | S-4                  | ■<br>D   |               |           | Encounter<br>feet; minin<br>Very loose t<br>brown, Poo<br>to medium   | red red-brown o<br>mal recovery.<br>to loose, moist,<br>rly Graded SAN<br>sand, trace fine                                   | coarse sand at 10<br>gray and light<br>ID (SP); mostly fin<br>es.   | /<br>/         |   |                   |
| -14 15<br>- 🗶 -   | 33           | (N=2)<br>1-0-1<br>(N=1)           | S-6                  | 0  |               | SP        | Alluviu<br>Becomes  | m<br>wet below 15 fa   | eet.  | (<br>i<br>ı    | Groundwater level<br>inside borehole<br>measured to be 16 feet    |                   |
| 9 20  | 11           | 6-2-2<br>(N=4)                    | S-7                  |  |               |           | Encounter   | red fibrous woo  | d fragment at 20  |                | bgs after drilling on<br>5/19/2022.                               |                   |
| 4 25  | 83           | 16-18-21<br>(N=39)<br>21-25-25    | S-9<br>S-10          | 0  |               | СН        | feet.<br>Hard, moist<br>Sandy FAT C<br>medium to<br>fine gravel s<br><b>Residua</b>                         | , light brown a<br>CLAY (CH); high<br>coarse sand, w<br>sized hard clay<br>al Soil of Goble                                  | nd red-brown,<br>plasticity, mostly<br>ith coarse sand to<br>nodules.<br><b>Volcanics</b>                             | <br> <br> <br> | Practical auger refusal<br>at 25 feet.                            |                   |
|   |              | <u>(19=50)</u>                    |                      |  |               |           |   |  |   |                | Borehole completed at<br>26.5 feet below ground<br>surface (bgs). |                   |
| <b>MC</b><br><b>JA</b><br>Ass                           |              | S<br>S                            |                      |  |               |           |   |  | E   | Bor            | ing B-1   |                   |



# **Attachment B – Laboratory Test Results**

| Breccia Geotech | nnical Testing, LLC.        | Natural Moisture Content (ASTM D2216) |       |           |  |
|-----------------|-----------------------------|---------------------------------------|-------|-----------|--|
| Client:         | McMillen Jacobs Associates  |                                       | By:   | JF        |  |
| Project Name:   | Rainier Fox Creek Culvert S | btudy                                 | Date: | 5/24/2022 |  |
| Project Number: | 6353.0                      |                                       | _     |           |  |

| Exploration ID       | B-1   | B-1   | B-1   | B-1     | B-1     | B-1     |
|----------------------|-------|-------|-------|---------|---------|---------|
| Samples ID           | S-1   | S-2   | S-3   | S-5     | S-6     | S-7     |
| Samples Depth (ft.)  | 2.5-4 | 5-6.5 | 7.5-9 | 12.5-14 | 15-16.5 | 17.5-19 |
| Moisture Content (%) | 19.9  | 10.2  | 22.4  | 9.6     | 25.1    | 28.5    |

| Exploration ID       | B-1     | B-1     |  |  |
|----------------------|---------|---------|--|--|
| Samples ID           | S-9     | S-10    |  |  |
| Samples Depth (ft.)  | 22.5-24 | 25-26.5 |  |  |
| Moisture Content (%) | 43.9    | 39.5    |  |  |

# Appendix B

Fox Creek Field Data Summary

Table 1. Active channel width data table – FC-01 located upstream of C Street.

| Location ID:          | FC-01                  | Photo view:       |  |
|-----------------------|------------------------|-------------------|--|
| Location:             | Fox Creek – Upstream   | Таре              |  |
|                       | of C ST culvert        | measurement       |  |
|                       |                        | value (#1826.jpg) |  |
| Observ. Date:         | 03-09-2022 1200 HRS    |                   |  |
| Distance from         | 1,200 upstream         |                   |  |
| Cuivert (It).         |                        |                   |  |
| Measured<br>ACW (ft): | 22                     |                   |  |
| Primary Visual        | Clear erosion/ cut-    |                   | CAST AND A CONTRACT OF A CONTR |
| Indicators:           | bank and deposition    |                   |  |
|                       | on rt bank             |                   |  |
| Channel               | Riffle-pool            |                   |  |
| morphology:           | Small madium gravala   |                   |  |
| substrate:            | Sinali, meulum graveis |                   |  |
| Bed substrate         | TBD                    | Tape across       |  |
| D50 (mm/in):          |                        | channel, looking  |  |
|                       |                        | U/S (#1827)       |  |
| Long. Slope:          | Estim. 1% <u>+</u>     |                   |  |
| Other notes:          | Second location        |                   |  |
| other notes.          | upstream and beyond    |                   |  |
|                       | influence of C ST      |                   |  |
|                       | culvert;               |                   |  |
|                       | Downed log spanning    |                   |  |
|                       | channel immediate u/s  |                   | A CANADA CANA  |
|                       | of measurement         |                   |  |
|                       | channel sand/gravel    |                   | and the second sec   |
|                       | bar                    |                   |  |
|                       |                        | View looking      |  |
|                       |                        | across channel    |  |
|                       |                        | from rt bank      |  |
|                       |                        | (#1828)           |  |
|                       |                        |                   |  |
|                       |                        |                   |  |
|                       |                        |                   |  |
|                       |                        |                   |  |
|                       |                        |                   |  |
|                       |                        |                   |  |
|                       |                        |                   |  |
|                       |                        |                   |  |
|                       |                        |                   |  |

Notes: ACW – active channel width; D/S – downstream; U/S – upstream; Long. - longitudinal

| Location ID:              | FC-02                  | Photo view:       |   |
|---------------------------|------------------------|-------------------|---|
| Location:                 | Fox Creek – Upstream   | Таре              |   |
|                           | of C ST culvert        | measurement       |   |
|                           |                        | value (#1831.jpg) |   |
| Observ. Date              | 03-09-2022 1210 HRS    |                   |   |
| Distance from             | 1,300 upstream         |                   | A Company of a second second second   |
| culvert (ft)              | (south)                |                   |   |
| Measured                  | 23                     |                   |   |
| ACW (ft)                  |                        |                   |   |
| Primary Visual            | Limit of scour/erosion |                   |   |
| Indicators                | on bench near channel  |                   |   |
| Channel<br>morphology     | Riffle-run, glide      |                   |   |
| Dominant bed<br>substrate | Small to large gravels |                   |   |
| Bed substrate             | TBD                    | Tape across       |   |
| D50 (mm/in)               |                        | channel, looking  |   |
|                           |                        | D/S (#1832)       |   |
| Long. Slope:              | Estim. 1% <u>+</u>     |                   |   |
| Other notes:              | Third location         |                   |   |
|                           | upstream and beyond    |                   | - AND A CONTRACT OF |
|                           | influence of C ST      |                   |   |
|                           | culvert;               |                   |   |
|                           | Inset bench on rt      |                   |   |
|                           | pank; visible flood    |                   |   |
|                           | ACW visible in photo   |                   |   |
|                           | #1832:                 |                   |   |
|                           | ,                      |                   |   |
|                           |                        | View looking      |   |
|                           |                        | upstream from     |   |
|                           |                        | measurement       |   |
|                           |                        | location (#1835)  |   |
|                           |                        |                   |   |
|                           |                        |                   |   |
|                           |                        |                   |   |
|                           |                        |                   |   |
|                           |                        |                   |   |
|                           |                        |                   |   |
|                           |                        |                   |   |
|                           |                        |                   |   |
|                           |                        |                   |   |
|                           |                        |                   |   |

Notes: ACW – active channel width; D/S – downstream; U/S – upstream; Long. - longitudinal

| Location ID:   | FC-03                  | Photo view:  |
|----------------|------------------------|--|
| Location:      | Fox Creek – Upstream   | Tape   |
|                | of C ST culvert        | measurement  |
|                |                        | value (#1841.jpg)  |
| Observ. Date   | 03-09-2022 1220 HRS    |  |
| Distance from  | 1,500 upstream         |  |
| Measured       | 18                     |  |
| ACW (ft)       | 10                     |  |
| Primary Visual | Rt bank limit taken as |  |
| Indicators     | edge of cobble & cut   |  |
|                | bank                   |  |
| Channel        | Riffle-run             |  |
| morphology     |                        |  |
| Dominant bed   | Medium gravels to      |  |
| substrate      | medium cobbles         |  |
| Bed substrate  | TBD                    | Tape across  |
| D50 (mm/in)    |                        |  |
|                |                        |  |
|                | <b>E</b> 11 - 40()     |  |
| Long. Slope:   | Estim. 1% <u>+</u>     |  |
| Other notes:   | Upstream-most          |  |
|                | location; adjacent to  | A CONTRACT OF A  |
|                | large terrace (field)  |  |
|                | west of stream;        |  |
|                | with grass on rt bank  | and the second s |
|                | & eroding vegetated    |  |
|                | Ift bank               |  |
|                |                        |  |
|                |                        |  |
|                |                        |  |
|                |                        | View looking   |
|                |                        | upstream from  |
|                |                        | measurement  |
|                |                        | location (#1844)   |
|                |                        |  |
|                |                        |  |
|                |                        |  |
|                |                        |  |
|                |                        |  |
|                |                        | and the second sec   |
|                |                        |  |
|                |                        |  |
|                |                        |  |
|                |                        |  |

Table 3. Active channel width data table – FC-03 located upstream of C Street.

Notes: ACW – active channel width; D/S – downstream; U/S – upstream; Long. - longitudinal

Table 4. Active channel width data table – FC-04 located upstream of C Street.

| Location ID:   | FC-04                   | Photo view:       |
|----------------|-------------------------|-------------------|
| Location:      | Fox Creek – Upstream    | Таре              |
|                | of C ST culvert         | measurement       |
|                |                         | value (#1841.jpg) |
| Observ. Date   | 03-09-2022 1230 HRS     |                   |
| Distance from  | 1,000 upstream          |                   |
| culvert (ft)   | (south)                 |                   |
| ACW (ft)       | 20                      |                   |
| Primary Visual | Rt bank limit taken as  |                   |
| Indicators     | edge of cobble & cut    |                   |
|                | bank                    |                   |
| Channel        | Run-glide               |                   |
| morphology     |                         |                   |
| Dominant bed   | Small to large gravels  |                   |
| substrate      | TDD                     |                   |
| Bed substrate  | IBD                     | happed Looking    |
| 050 (mm/m)     |                         |                   |
|                | Estine 10/ .            |                   |
| Long. Slope:   | Estim. 1% <u>+</u>      |                   |
| Other notes:   | Downstream -most        |                   |
|                | location; Extent on rt  |                   |
|                | bank taken as limit of  |                   |
|                | recent erosion/flow     |                   |
|                | (see position of person |                   |
|                | In photo), not at       |                   |
|                | next to channel         |                   |
|                | next to channel         |                   |
|                |                         |                   |
|                |                         | View looking      |
|                |                         | upstream from     |
|                |                         | measurement       |
|                |                         | location (#1848)  |
|                |                         |                   |
|                |                         |                   |
|                |                         |                   |
|                |                         |                   |
|                |                         |                   |
|                |                         |                   |
|                |                         |                   |
|                |                         |                   |
|                |                         |                   |
|                |                         |                   |

Notes: ACW – active channel width; D/S – downstream; U/S – upstream; Long. - longitudinal

# Appendix C

# USGS Streamstats Watershed and Flow Results

# StreamStats Report

 Region ID:
 OR

 Workspace ID:
 OR20220914230233650000

 Clicked Point (Latitude, Longitude):
 46.08663, -122.93877

 Time:
 2022-09-14 16:02:57 -0700



Collapse All

## > Basin Characteristics

| Parameter<br>Code | Parameter Description  | Value | Unit          |
|-------------------|--|-------|---------------|
| ASPECT            | basin average of topographic slope compass<br>directions from elevation grid       | 185   | degrees       |
| BSLOPD            | Mean basin slope measured in degrees   | 11.7  | degrees       |
| DRNAREA           | Area that drains to a point on a stream  | 3.09  | square miles  |
| DRNDENSITY        | Basin drainage density defined as total stream<br>length divided by drainage area. | 0.69  | dimensionless |
| ELEV              | Mean Basin Elevation   | 653   | feet          |

| Parameter<br>Code | Parameter Description  | Value | Unit      |
|-------------------|--|-------|-----------|
| ELEVMAX           | Maximum basin elevation  | 1190  | feet      |
| FOREST            | Percentage of area covered by forest   | 90.9  | percent   |
| I24H2Y            | Maximum 24-hour precipitation that occurs on average once in 2 years - Equivalent to precipitation intensity index | 2.1   | inches    |
| IMPERV            | Percentage of impervious area  | 2.65  | percent   |
| JANAVPRE2K        | Mean January Precipitation   | 9.08  | inches    |
| JANMAXT2K         | Mean Maximum January Temperature from 2K resolution PRISM 1961-1990 data   | 44.3  | degrees F |
| JANMAXTMP         | Mean Maximum January Temperature   | 44.4  | degrees F |
| JANMINT2K         | Mean Minimum January Temperature from 2K resolution PRISM PRISM 1961-1990 data                                     | 31.2  | degrees F |
| JANMINTMP         | Mean Minimum January Temperature   | 31.4  | degrees F |
| JULAVPRE2K        | Mean July Average Precipitation  | 0.75  | inches    |
| LC11BARE          | Percentage of barren from NLCD 2011 class 31   | 0     | percent   |
| LC11CRPHAY        | Percentage of cultivated crops and hay, classes 81 and 82, from NLCD 2011  | 0     | percent   |
| LC11DEVHI         | Percentage of area developed, high intensity,<br>NLCD 2011 class 24  | 0     | percent   |
| LC11DVL0          | Percentage of developed area, low intensity,<br>from NLCD 2011 class 22  | 2     | percent   |
| LC11DVMD          | Percentage of area developed, medium intensity, NLCD 2011 class 23   | 0     | percent   |
| LC11DVOPN         | Percentage of developed open area from NLCD 2011 class 21  | 6     | percent   |
| LC11FORSHB        | Percentage of forests and shrub lands, classes 41 to 52, from NLCD 2011  | 88    | percent   |
| LC11HERB          | Percentage of herbaceous from NLCD 2011<br>classes 71-74   | 4     | percent   |
| LC11IMP           | Average percentage of impervious area<br>determined from NLCD 2011 impervious dataset                              | 1.11  | percent   |
| LC11WATER         | Percent of open water, class 11, from NLCD 2011  | 0     | percent   |
|                   |  |       |           |
| Parameter<br>Code | Parameter Description  | Value | Unit               |
|-------------------|--|-------|--------------------|
| LC11WETLND        | ·<br>Percentage of wetlands, classes 90 and 95,<br>from NLCD 2011  | 0     | percent            |
| MAJ_ROADS         | Length of non-state major roads in basin   | 0     | miles              |
| MAXBSLOPD         | Maximum basin slope, in degrees, using ArcInfo<br>Grid with NHDPlus 30-m resolution elevation<br>data.   | 30    | degrees            |
| MAXTEMP           | Mean annual maximum air temperature over<br>basin area from PRISM 1971-2000 800-m grid                   | 60.3  | degrees F          |
| MIN_ROADS         | Length of non-state minor roads in basin   | 5.67  | miles              |
| MINBELEV          | Minimum basin elevation  | 19.7  | feet               |
| MINBSLOPD         | Minimum basin slope, in degrees, using ArcInfo<br>Grid with NHDPlus 30-m resolution elevation<br>data.   | 0.21  | degrees            |
| MINTEMP           | Mean annual minimum air temperature over<br>basin surface area as defined in SIR 2008-5126               | 40.2  | degrees F          |
| OR_HIPERMA        | Percent basin surface area containing high<br>permeability aquifer units as defined in SIR<br>2008-5126  | 23.1  | percent            |
| OR_HIPERMG        | Percent basin surface area containing high<br>permeability geologic units as defined in SIR<br>2008-5126 | 0     | percent            |
| ORREG2            | Oregon Region Number   | 10001 | dimensionless      |
| PRECIP            | Mean Annual Precipitation  | 58.7  | inches             |
| RELIEF            | Maximum - minimum elevation  | 1170  | feet               |
| SOILPERM          | Average Soil Permeability  | 0.76  | inches per<br>hour |
| STATE_HWY         | Length of state highways in basin  | 0     | miles              |
| STATSGODEP        | Area-weighted average soil depth from NRCS<br>STATSGO database   | 58.5  | inches             |
| STRMTOT           | total length of all mapped streams (1:24,000-<br>scale) in the basin                                     | 3.42  | miles              |
| WATCAPORC         | Available water capacity from STATSGO data using methods from SIR 2005-5116                              | 0.14  | inches             |
| WATCAPORR         | Available water capacity from STATSGO data using methods from SIR 2008-5126                              | 0.14  | inch per inch      |

## > January Flow-Duration Statistics

| Parameter<br>Code | Parameter Name               | Value | Units           | Min<br>Limit | Max Limit |
|-------------------|------------------------------|-------|-----------------|--------------|-----------|
| DRNAREA           | Drainage Area                | 3.09  | square<br>miles | 0.367        | 673.359   |
| IMPERV            | Percent Impervious           | 2.65  | percent         | 0            | 2.961     |
| PRECIP            | Mean Annual<br>Precipitation | 58.7  | inches          | 65.5923      | 151.2906  |

January Flow-Duration Statistics Parameters [LowFlow Jan Region01 2008 5126]

January Flow-Duration Statistics Disclaimers [LowFlow Jan Region01 2008 5126]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors.

January Flow-Duration Statistics Flow Report [LowFlow Jan Region01 2008 5126]

| Statistic                   | Value | Unit   |
|-----------------------------|-------|--------|
| January 5 Percent Duration  | 69.2  | ft^3/s |
| January 10 Percent Duration | 50.4  | ft^3/s |
| January 25 Percent Duration | 28    | ft^3/s |
| January 50 Percent Duration | 18.4  | ft^3/s |
| January 95 Percent Duration | 4.19  | ft^3/s |

January Flow-Duration Statistics Citations

Risley, John, Stonewall, Adam, and Haluska, Tana,2008, Estimating flow-duration and low-flow frequency statistics for unregulated streams in Oregon: U.S. Geological Survey Scientific Investigations Report 2008-5126, 22 p. (http://pubs.usgs.gov/sir/2008/5126/)

> December Flow-Duration Statistics

December Flow-Duration Statistics Parameters [LowFlow Dec Region01 2008 5126]

| Parameter<br>Code | Parameter Name               | Value | Units           | Min<br>Limit | Max Limit |
|-------------------|------------------------------|-------|-----------------|--------------|-----------|
| DRNAREA           | Drainage Area                | 3.09  | square<br>miles | 0.367        | 673.359   |
| PRECIP            | Mean Annual<br>Precipitation | 58.7  | inches          | 65.5923      | 151.2906  |
| BSLOPD            | Mean Basin Slope<br>degrees  | 11.7  | degrees         | 10.382       | 25.482    |

December Flow-Duration Statistics Disclaimers [LowFlow Dec Region01 2008 5126]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors.

December Flow-Duration Statistics Flow Report [LowFlow Dec Region01 2008 5126]

| Statistic                    | Value | Unit   |
|------------------------------|-------|--------|
| December 5 Percent Duration  | 52    | ft^3/s |
| December 10 Percent Duration | 42.9  | ft^3/s |
| December 25 Percent Duration | 31    | ft^3/s |
| December 50 Percent Duration | 16    | ft^3/s |
| December 95 Percent Duration | 2.38  | ft^3/s |

December Flow-Duration Statistics Citations

Risley, John, Stonewall, Adam, and Haluska, Tana,2008, Estimating flow-duration and low-flow frequency statistics for unregulated streams in Oregon: U.S. Geological Survey Scientific Investigations Report 2008-5126, 22 p. (http://pubs.usgs.gov/sir/2008/5126/)

> November Flow-Duration Statistics

November Flow-Duration Statistics Parameters [LowFlow Nov Region01 2008 5126]

| Parameter<br>Code | Parameter Name                | Value | Units           | Min<br>Limit | Max<br>Limit |
|-------------------|-------------------------------|-------|-----------------|--------------|--------------|
| DRNAREA           | Drainage Area                 | 3.09  | square<br>miles | 0.367        | 673.359      |
| PRECIP            | Mean Annual Precipitation     | 58.7  | inches          | 65.5923      | 151.2906     |
| BSLOPD            | Mean Basin Slope degrees      | 11.7  | degrees         | 10.382       | 25.482       |
| MAXBSLOPD         | Maximum Basin Slope in<br>deg | 30    | degrees         | 34.073       | 68.78        |

November Flow-Duration Statistics Disclaimers [LowFlow Nov Region01 2008 5126]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors.

November Flow-Duration Statistics Flow Report [LowFlow Nov Region01 2008 5126]

| Statistic                    | Value | Unit   |
|------------------------------|-------|--------|
| November 5 Percent Duration  | 37.4  | ft^3/s |
| November 10 Percent Duration | 26.9  | ft^3/s |
| November 25 Percent Duration | 12.4  | ft^3/s |
| November 50 Percent Duration | 4.82  | ft^3/s |
| November 95 Percent Duration | 2.4   | ft^3/s |

November Flow-Duration Statistics Citations

Risley, John, Stonewall, Adam, and Haluska, Tana,2008, Estimating flow-duration and low-flow frequency statistics for unregulated streams in Oregon: U.S. Geological Survey Scientific Investigations Report 2008-5126, 22 p. (http://pubs.usgs.gov/sir/2008/5126/)

> October Flow-Duration Statistics

October Flow-Duration Statistics Parameters [LowFlow Oct Region01 2008 5126]

| Parameter<br>Code | Parameter Name               | Value | Units           | Min<br>Limit | Max Limit |
|-------------------|------------------------------|-------|-----------------|--------------|-----------|
| DRNAREA           | Drainage Area                | 3.09  | square<br>miles | 0.367        | 219.691   |
| ELEV              | Mean Basin Elevation         | 653   | feet            | 520.406      | 2101.874  |
| PRECIP            | Mean Annual<br>Precipitation | 58.7  | inches          | 71.6651      | 143.4891  |

## October Flow-Duration Statistics Disclaimers [LowFlow Oct Region01 2008 5126]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors.

October Flow-Duration Statistics Flow Report [LowFlow Oct Region01 2008 5126]

| Statistic                   | Value | Unit   |
|-----------------------------|-------|--------|
| October 5 Percent Duration  | 6.99  | ft^3/s |
| October 10 Percent Duration | 4.32  | ft^3/s |
| October 25 Percent Duration | 1.54  | ft^3/s |
| October 50 Percent Duration | 0.499 | ft^3/s |
| October 95 Percent Duration | 0.176 | ft^3/s |

October Flow-Duration Statistics Citations

Risley, John, Stonewall, Adam, and Haluska, Tana,2008, Estimating flow-duration and low-flow frequency statistics for unregulated streams in Oregon: U.S. Geological Survey Scientific Investigations Report 2008-5126, 22 p. (http://pubs.usgs.gov/sir/2008/5126/)

## September Flow-Duration Statistics

September Flow-Duration Statistics Parameters [LowFlow Sep Region01 2008 5126]

| Parameter<br>Code | Parameter Name | Value | Units           | Min<br>Limit | Max Limit |
|-------------------|----------------|-------|-----------------|--------------|-----------|
| DRNAREA           | Drainage Area  | 3.09  | square<br>miles | 0.367        | 590.347   |

| Parameter<br>Code | Parameter Name               | Value | Units  | Min<br>Limit | Max Limit |
|-------------------|------------------------------|-------|--------|--------------|-----------|
| MINBELEV          | Minimum Basin Elevation      | 19.7  | feet   | 10.5648      | 1381.5307 |
| PRECIP            | Mean Annual<br>Precipitation | 58.7  | inches | 65.5923      | 151.2906  |

September Flow-Duration Statistics Disclaimers [LowFlow Sep Region01 2008 5126]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors.

September Flow-Duration Statistics Flow Report [LowFlow Sep Region01 2008 5126]

| Statistic                     | Value | Unit   |
|-------------------------------|-------|--------|
| September 5 Percent Duration  | 2.29  | ft^3/s |
| September 10 Percent Duration | 1.59  | ft^3/s |
| September 25 Percent Duration | 0.98  | ft^3/s |
| September 50 Percent Duration | 0.391 | ft^3/s |
| September 95 Percent Duration | 0.157 | ft^3/s |

September Flow-Duration Statistics Citations

Risley, John, Stonewall, Adam, and Haluska, Tana,2008, Estimating flow-duration and low-flow frequency statistics for unregulated streams in Oregon: U.S. Geological Survey Scientific Investigations Report 2008-5126, 22 p. (http://pubs.usgs.gov/sir/2008/5126/)

## > August Flow-Duration Statistics

August Flow-Duration Statistics Parameters [LowFlow Aug Region01 2008 5126]

| Parameter<br>Code | Parameter Name          | Value | Units           | Min<br>Limit | Max Limit |
|-------------------|-------------------------|-------|-----------------|--------------|-----------|
| DRNAREA           | Drainage Area           | 3.09  | square<br>miles | 0.367        | 673.359   |
| MINBELEV          | Minimum Basin Elevation | 19.7  | feet            | 10.5648      | 1381.5307 |

| Parameter<br>Code | Parameter Name               | Value | Units  | Min<br>Limit | Max Limit |
|-------------------|------------------------------|-------|--------|--------------|-----------|
| PRECIP            | Mean Annual<br>Precipitation | 58.7  | inches | 65.5923      | 151.2906  |

August Flow-Duration Statistics Disclaimers [LowFlow Aug Region01 2008 5126]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors.

August Flow-Duration Statistics Flow Report [LowFlow Aug Region01 2008 5126]

| Statistic                  | Value | Unit   |
|----------------------------|-------|--------|
| August 5 Percent Duration  | 1.66  | ft^3/s |
| August 10 Percent Duration | 0.842 | ft^3/s |
| August 25 Percent Duration | 0.671 | ft^3/s |
| August 50 Percent Duration | 0.528 | ft^3/s |
| August 95 Percent Duration | 0.224 | ft^3/s |

August Flow-Duration Statistics Citations

Risley, John, Stonewall, Adam, and Haluska, Tana,2008, Estimating flow-duration and low-flow frequency statistics for unregulated streams in Oregon: U.S. Geological Survey Scientific Investigations Report 2008-5126, 22 p. (http://pubs.usgs.gov/sir/2008/5126/)

## > July Flow-Duration Statistics

July Flow-Duration Statistics Parameters [LowFlow Jul Region01 2008 5126]

| Parameter<br>Code | Parameter Name                     | Value | Units               | Min<br>Limit | Max<br>Limit |
|-------------------|------------------------------------|-------|---------------------|--------------|--------------|
| DRNAREA           | Drainage Area                      | 3.09  | square<br>miles     | 0.367        | 673.359      |
| PRECIP            | Mean Annual Precipitation          | 58.7  | inches              | 65.5923      | 151.2906     |
| WATCAPORR         | Available_Water_Capacity_OR_Risley | 0.14  | inch<br>per<br>inch | 0.12         | 0.23         |

| Parameter<br>Code | Parameter Name           | Value | Units   | Min<br>Limit | Max<br>Limit |
|-------------------|--------------------------|-------|---------|--------------|--------------|
| BSLOPD            | Mean Basin Slope degrees | 11.7  | degrees | 10.382       | 25.482       |

## July Flow-Duration Statistics Disclaimers [LowFlow Jul Region01 2008 5126]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors.

July Flow-Duration Statistics Flow Report [LowFlow Jul Region01 2008 5126]

| Statistic                | Value | Unit   |
|--------------------------|-------|--------|
| July 5 Percent Duration  | 2.37  | ft^3/s |
| July 10 Percent Duration | 1.9   | ft^3/s |
| July 25 Percent Duration | 1.35  | ft^3/s |
| July 50 Percent Duration | 0.733 | ft^3/s |
| July 95 Percent Duration | 0.353 | ft^3/s |

July Flow-Duration Statistics Citations

Risley, John, Stonewall, Adam, and Haluska, Tana,2008, Estimating flow-duration and low-flow frequency statistics for unregulated streams in Oregon: U.S. Geological Survey Scientific Investigations Report 2008-5126, 22 p. (http://pubs.usgs.gov/sir/2008/5126/)

## > June Flow-Duration Statistics

June Flow-Duration Statistics Parameters [LowFlow Jun Region01 2008 5126]

| Parameter<br>Code | Parameter Name                     | Value | Units               | Min<br>Limit | Max<br>Limit |
|-------------------|------------------------------------|-------|---------------------|--------------|--------------|
| DRNAREA           | Drainage Area                      | 3.09  | square<br>miles     | 0.367        | 673.359      |
| PRECIP            | Mean Annual Precipitation          | 58.7  | inches              | 65.5923      | 151.2906     |
| BSLOPD            | Mean Basin Slope degrees           | 11.7  | degrees             | 10.382       | 25.482       |
| WATCAPORR         | Available_Water_Capacity_OR_Risley | 0.14  | inch<br>per<br>inch | 0.12         | 0.23         |

## June Flow-Duration Statistics Disclaimers [LowFlow Jun Region01 2008 5126]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors.

June Flow-Duration Statistics Flow Report [LowFlow Jun Region01 2008 5126]

| Statistic                | Value | Unit   |
|--------------------------|-------|--------|
| June 5 Percent Duration  | 5.15  | ft^3/s |
| June 10 Percent Duration | 3.55  | ft^3/s |
| June 25 Percent Duration | 2.1   | ft^3/s |
| June 50 Percent Duration | 1.54  | ft^3/s |
| June 95 Percent Duration | 1.03  | ft^3/s |

June Flow-Duration Statistics Citations

Risley, John, Stonewall, Adam, and Haluska, Tana,2008, Estimating flow-duration and low-flow frequency statistics for unregulated streams in Oregon: U.S. Geological Survey Scientific Investigations Report 2008-5126, 22 p. (http://pubs.usgs.gov/sir/2008/5126/)

## > May Flow-Duration Statistics

May Flow-Duration Statistics Parameters [LowFlow May Region01 2008 5126]

| Parameter<br>Code | Parameter Name                     | Value | Units               | Min<br>Limit | Max<br>Limit |
|-------------------|------------------------------------|-------|---------------------|--------------|--------------|
| DRNAREA           | Drainage Area                      | 3.09  | square<br>miles     | 1.953        | 673.359      |
| PRECIP            | Mean Annual Precipitation          | 58.7  | inches              | 65.5923      | 151.2906     |
| BSLOPD            | Mean Basin Slope degrees           | 11.7  | degrees             | 10.382       | 25.482       |
| WATCAPORR         | Available_Water_Capacity_OR_Risley | 0.14  | inch<br>per<br>inch | 0.12         | 0.23         |

May Flow-Duration Statistics Disclaimers [LowFlow May Region01 2008 5126]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors.

May Flow-Duration Statistics Flow Report [LowFlow May Region01 2008 5126]

| Statistic               | Value | Unit   |
|-------------------------|-------|--------|
| May 5 Percent Duration  | 8.45  | ft^3/s |
| May 10 Percent Duration | 6.82  | ft^3/s |
| May 25 Percent Duration | 4.63  | ft^3/s |
| May 50 Percent Duration | 3.15  | ft^3/s |
| May 95 Percent Duration | 1.88  | ft^3/s |

May Flow-Duration Statistics Citations

Risley, John, Stonewall, Adam, and Haluska, Tana,2008, Estimating flow-duration and low-flow frequency statistics for unregulated streams in Oregon: U.S. Geological Survey Scientific Investigations Report 2008-5126, 22 p. (http://pubs.usgs.gov/sir/2008/5126/)

## > April Flow-Duration Statistics

April Flow-Duration Statistics Parameters [LowFlow Apr Region01 2008 5126]

| Parameter<br>Code | Parameter Name               | Value | Units           | Min<br>Limit | Max Limit |
|-------------------|------------------------------|-------|-----------------|--------------|-----------|
| DRNAREA           | Drainage Area                | 3.09  | square<br>miles | 0.367        | 673.359   |
| PRECIP            | Mean Annual<br>Precipitation | 58.7  | inches          | 65.5923      | 151.2906  |
| BSLOPD            | Mean Basin Slope<br>degrees  | 11.7  | degrees         | 10.382       | 25.482    |

April Flow-Duration Statistics Disclaimers [LowFlow Apr Region01 2008 5126]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors.

April Flow-Duration Statistics Flow Report [LowFlow Apr Region01 2008 5126]

| Statistic                | Value | Unit   |
|--------------------------|-------|--------|
| April 5 Percent Duration | 20.5  | ft^3/s |

| Statistic                 | Value | Unit   |
|---------------------------|-------|--------|
| April 10 Percent Duration | 15.9  | ft^3/s |
| April 25 Percent Duration | 9.74  | ft^3/s |
| April 50 Percent Duration | 6.09  | ft^3/s |
| April 95 Percent Duration | 3.34  | ft^3/s |

April Flow-Duration Statistics Citations

Risley, John, Stonewall, Adam, and Haluska, Tana,2008, Estimating flow-duration and low-flow frequency statistics for unregulated streams in Oregon: U.S. Geological Survey Scientific Investigations Report 2008-5126, 22 p. (http://pubs.usgs.gov/sir/2008/5126/)

## March Flow-Duration Statistics

March Flow-Duration Statistics Parameters [LowFlow Mar Region01 2008 5126]

| Parameter<br>Code | Parameter Name               | Value | Units           | Min<br>Limit | Max Limit |
|-------------------|------------------------------|-------|-----------------|--------------|-----------|
| DRNAREA           | Drainage Area                | 3.09  | square<br>miles | 0.367        | 673.359   |
| IMPERV            | Percent Impervious           | 2.65  | percent         | 0            | 2.961     |
| PRECIP            | Mean Annual<br>Precipitation | 58.7  | inches          | 65.5923      | 151.2906  |
| BSLOPD            | Mean Basin Slope<br>degrees  | 11.7  | degrees         | 10.382       | 25.482    |

March Flow-Duration Statistics Disclaimers [LowFlow Mar Region01 2008 5126]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors.

March Flow-Duration Statistics Flow Report [LowFlow Mar Region01 2008 5126]

| Statistic                 | Value | Unit   |
|---------------------------|-------|--------|
| March 5 Percent Duration  | 30.5  | ft^3/s |
| March 10 Percent Duration | 25.5  | ft^3/s |
| March 25 Percent Duration | 18.3  | ft^3/s |

| Statistic                 | Value | Unit   |
|---------------------------|-------|--------|
| March 50 Percent Duration | 11.1  | ft^3/s |
| March 95 Percent Duration | 4.5   | ft^3/s |

March Flow-Duration Statistics Citations

Risley, John, Stonewall, Adam, and Haluska, Tana,2008, Estimating flow-duration and low-flow frequency statistics for unregulated streams in Oregon: U.S. Geological Survey Scientific Investigations Report 2008-5126, 22 p. (http://pubs.usgs.gov/sir/2008/5126/)

## > February Flow-Duration Statistics

February Flow-Duration Statistics Parameters [LowFlow Feb Region01 2008 5126]

| Parameter<br>Code | Parameter Name               | Value | Units           | Min<br>Limit | Max Limit |
|-------------------|------------------------------|-------|-----------------|--------------|-----------|
| DRNAREA           | Drainage Area                | 3.09  | square<br>miles | 0.367        | 673.359   |
| IMPERV            | Percent Impervious           | 2.65  | percent         | 0            | 2.961     |
| PRECIP            | Mean Annual<br>Precipitation | 58.7  | inches          | 65.5923      | 151.2906  |
| BSLOPD            | Mean Basin Slope<br>degrees  | 11.7  | degrees         | 10.382       | 25.482    |

## February Flow-Duration Statistics Disclaimers [LowFlow Feb Region01 2008 5126]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors.

## February Flow-Duration Statistics Flow Report [LowFlow Feb Region01 2008 5126]

| Statistic                    | Value | Unit   |
|------------------------------|-------|--------|
| February 5 Percent Duration  | 39.4  | ft^3/s |
| February 10 Percent Duration | 34.4  | ft^3/s |
| February 25 Percent Duration | 22.9  | ft^3/s |
| February 50 Percent Duration | 15.8  | ft^3/s |
| February 95 Percent Duration | 5     | ft^3/s |

Risley, John, Stonewall, Adam, and Haluska, Tana,2008, Estimating flow-duration and low-flow frequency statistics for unregulated streams in Oregon: U.S. Geological Survey Scientific Investigations Report 2008-5126, 22 p. (http://pubs.usgs.gov/sir/2008/5126/)

## > Flow-Duration Statistics

Flow-Duration Statistics Parameters [LowFlow Ann Region01 2008 5126]

| Parameter<br>Code | Parameter Name                     | Value | Units               | Min<br>Limit | Max<br>Limit |
|-------------------|------------------------------------|-------|---------------------|--------------|--------------|
| DRNAREA           | Drainage Area                      | 3.09  | square<br>miles     | 0.367        | 590.347      |
| PRECIP            | Mean Annual Precipitation          | 58.7  | inches              | 65.5923      | 122.9843     |
| WATCAPORR         | Available_Water_Capacity_OR_Risley | 0.14  | inch<br>per<br>inch | 0.12         | 0.23         |

Flow-Duration Statistics Disclaimers [LowFlow Ann Region01 2008 5126]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors.

Flow-Duration Statistics Flow Report [LowFlow Ann Region01 2008 5126]

| Statistic           | Value | Unit   |
|---------------------|-------|--------|
| 5 Percent Duration  | 41.2  | ft^3/s |
| 10 Percent Duration | 27    | ft^3/s |
| 25 Percent Duration | 11.8  | ft^3/s |
| 50 Percent Duration | 3.82  | ft^3/s |
| 95 Percent Duration | 0.37  | ft^3/s |

Flow-Duration Statistics Citations

Risley, John, Stonewall, Adam, and Haluska, Tana,2008, Estimating flow-duration and low-flow frequency statistics for unregulated streams in Oregon: U.S. Geological

## > Peak-Flow Statistics

Peak-Flow Statistics Parameters [Reg 2B Western Interior LT 3000 ft Cooper]

| Parameter<br>Code | Parameter Name                  | Value | Units         | Min<br>Limit | Max<br>Limit |
|-------------------|---------------------------------|-------|---------------|--------------|--------------|
| DRNAREA           | Drainage Area                   | 3.09  | square miles  | 0.37         | 7270         |
| BSLOPD            | Mean Basin Slope degrees        | 11.7  | degrees       | 5.62         | 28.3         |
| I24H2Y            | 24 Hour 2 Year<br>Precipitation | 2.1   | inches        | 1.53         | 4.48         |
| ELEV              | Mean Basin Elevation            | 653   | feet          |              |              |
| ORREG2            | Oregon Region Number            | 10001 | dimensionless |              |              |

## Peak-Flow Statistics Flow Report [Reg 2B Western Interior LT 3000 ft Cooper]

PII: Prediction Interval-Lower, PIu: Prediction Interval-Upper, ASEp: Average Standard Error of Prediction, SE: Standard Error (other -- see report)

| Statistic             | Value | Unit   | PII  | Plu  | SE   | ASEp | Equiv. Yrs. |
|-----------------------|-------|--------|------|------|------|------|-------------|
| 50-percent AEP flood  | 150   | ft^3/s | 88.5 | 254  | 32.6 | 32.6 | 2           |
| 20-percent AEP flood  | 223   | ft^3/s | 132  | 377  | 32.4 | 32.4 | 2.8         |
| 10-percent AEP flood  | 272   | ft^3/s | 160  | 463  | 33   | 33   | 3.6         |
| 4-percent AEP flood   | 335   | ft^3/s | 194  | 580  | 34.1 | 34.1 | 4.8         |
| 2-percent AEP flood   | 382   | ft^3/s | 217  | 672  | 35.1 | 35.1 | 5.5         |
| 1-percent AEP flood   | 428   | ft^3/s | 239  | 766  | 36.2 | 36.2 | 6.2         |
| 0.2-percent AEP flood | 537   | ft^3/s | 288  | 1000 | 39.1 | 39.1 | 7.5         |

Peak-Flow Statistics Citations

Cooper, R.M.,2005, Estimation of Peak Discharges for Rural, Unregulated Streams in Western Oregon: U.S. Geological Survey Scientific Investigations Report 2005-5116, 76 p. (http://pubs.usgs.gov/sir/2005/5116/pdf/sir2005-5116.pdf)

## Low-Flow Statistics Parameters [LowFlow Ann Region01 2008 5126]

| Parameter<br>Code | Parameter Name                     | Value | Units               | Min<br>Limit | Max<br>Limit |
|-------------------|------------------------------------|-------|---------------------|--------------|--------------|
| DRNAREA           | Drainage Area                      | 3.09  | square<br>miles     | 0.367        | 590.347      |
| PRECIP            | Mean Annual Precipitation          | 58.7  | inches              | 65.5923      | 122.9843     |
| WATCAPORR         | Available_Water_Capacity_OR_Risley | 0.14  | inch<br>per<br>inch | 0.12         | 0.23         |

## Low-Flow Statistics Disclaimers [LowFlow Ann Region01 2008 5126]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors.

Low-Flow Statistics Flow Report [LowFlow Ann Region01 2008 5126]

| Statistic              | Value | Unit   |
|------------------------|-------|--------|
| 7 Day 2 Year Low Flow  | 0.327 | ft^3/s |
| 7 Day 10 Year Low Flow | 0.204 | ft^3/s |

Low-Flow Statistics Citations

Risley, John, Stonewall, Adam, and Haluska, Tana,2008, Estimating flow-duration and low-flow frequency statistics for unregulated streams in Oregon: U.S. Geological Survey Scientific Investigations Report 2008-5126, 22 p. (http://pubs.usgs.gov/sir/2008/5126/)

## > Monthly Flow Statistics

Monthly Flow Statistics Parameters [LowFlow Apr Region01 2008 5126]

| Parameter<br>Code | Parameter Name               | Value | Units           | Min<br>Limit | Max Limit |
|-------------------|------------------------------|-------|-----------------|--------------|-----------|
| DRNAREA           | Drainage Area                | 3.09  | square<br>miles | 0.367        | 673.359   |
| PRECIP            | Mean Annual<br>Precipitation | 58.7  | inches          | 65.5923      | 151.2906  |

| Monthly Flow Statistics Parameters | [LowFlow Aug Region01 2008 5126] |
|------------------------------------|----------------------------------|
|------------------------------------|----------------------------------|

| Parameter<br>Code | Parameter Name                  | Value | Units           | Min<br>Limit | Max<br>Limit |
|-------------------|---------------------------------|-------|-----------------|--------------|--------------|
| DRNAREA           | Drainage Area                   | 3.09  | square<br>miles | 0.367        | 673.359      |
| JANMINTMP         | Mean Min January<br>Temperature | 31.4  | degrees F       | 30.678       | 34.661       |
| PRECIP            | Mean Annual Precipitation       | 58.7  | inches          | 65.5923      | 151.2906     |

Monthly Flow Statistics Parameters [LowFlow Dec Region01 2008 5126]

| Parameter<br>Code | Parameter Name               | Value | Units           | Min<br>Limit | Max Limit |
|-------------------|------------------------------|-------|-----------------|--------------|-----------|
| DRNAREA           | Drainage Area                | 3.09  | square<br>miles | 0.367        | 673.359   |
| PRECIP            | Mean Annual<br>Precipitation | 58.7  | inches          | 65.5923      | 151.2906  |

Monthly Flow Statistics Parameters [LowFlow Feb Region01 2008 5126]

| Parameter<br>Code | Parameter Name               | Value | Units           | Min<br>Limit | Max Limit |
|-------------------|------------------------------|-------|-----------------|--------------|-----------|
| DRNAREA           | Drainage Area                | 3.09  | square<br>miles | 0.367        | 673.359   |
| PRECIP            | Mean Annual<br>Precipitation | 58.7  | inches          | 65.5923      | 151.2906  |

Monthly Flow Statistics Parameters [LowFlow Jan Region01 2008 5126]

| Parameter<br>Code | Parameter Name               | Value | Units           | Min<br>Limit | Max Limit |
|-------------------|------------------------------|-------|-----------------|--------------|-----------|
| DRNAREA           | Drainage Area                | 3.09  | square<br>miles | 0.367        | 673.359   |
| PRECIP            | Mean Annual<br>Precipitation | 58.7  | inches          | 65.5923      | 151.2906  |

Monthly Flow Statistics Parameters [LowFlow Jul Region01 2008 5126]

| Parameter |                |             | Min   | Max   |
|-----------|----------------|-------------|-------|-------|
| Code      | Parameter Name | Value Units | Limit | Limit |

| Parameter<br>Code | Parameter Name                  | Value | Units           | Min<br>Limit | Max<br>Limit |
|-------------------|---------------------------------|-------|-----------------|--------------|--------------|
| DRNAREA           | Drainage Area                   | 3.09  | square<br>miles | 0.367        | 673.359      |
| JANMINTMP         | Mean Min January<br>Temperature | 31.4  | degrees F       | 30.678       | 34.661       |
| PRECIP            | Mean Annual Precipitation       | 58.7  | inches          | 65.5923      | 151.2906     |

Monthly Flow Statistics Parameters [LowFlow Jun Region01 2008 5126]

| Parameter<br>Code | Parameter Name               | Value | Units           | Min<br>Limit | Max Limit |
|-------------------|------------------------------|-------|-----------------|--------------|-----------|
| DRNAREA           | Drainage Area                | 3.09  | square<br>miles | 0.367        | 673.359   |
| PRECIP            | Mean Annual<br>Precipitation | 58.7  | inches          | 65.5923      | 151.2906  |

Monthly Flow Statistics Parameters [LowFlow Mar Region01 2008 5126]

| Parameter<br>Code | Parameter Name               | Value | Units           | Min<br>Limit | Max Limit |
|-------------------|------------------------------|-------|-----------------|--------------|-----------|
| DRNAREA           | Drainage Area                | 3.09  | square<br>miles | 0.367        | 673.359   |
| PRECIP            | Mean Annual<br>Precipitation | 58.7  | inches          | 65.5923      | 151.2906  |

Monthly Flow Statistics Parameters [LowFlow May Region01 2008 5126]

| Parameter<br>Code | Parameter Name               | Value | Units           | Min<br>Limit | Max Limit |
|-------------------|------------------------------|-------|-----------------|--------------|-----------|
| DRNAREA           | Drainage Area                | 3.09  | square<br>miles | 1.953        | 673.359   |
| PRECIP            | Mean Annual<br>Precipitation | 58.7  | inches          | 65.5923      | 151.2906  |

Monthly Flow Statistics Parameters [LowFlow Nov Region01 2008 5126]

| Parameter |                |             | Min   |           |
|-----------|----------------|-------------|-------|-----------|
| Code      | Parameter Name | Value Units | Limit | Max Limit |

| Parameter<br>Code | Parameter Name               | Value | Units           | Min<br>Limit | Max Limit |
|-------------------|------------------------------|-------|-----------------|--------------|-----------|
| DRNAREA           | Drainage Area                | 3.09  | square<br>miles | 0.367        | 673.359   |
| ELEV              | Mean Basin Elevation         | 653   | feet            | 520.406      | 2101.874  |
| PRECIP            | Mean Annual<br>Precipitation | 58.7  | inches          | 65.5923      | 151.2906  |

Monthly Flow Statistics Parameters [LowFlow Oct Region01 2008 5126]

| Parameter<br>Code | Parameter Name               | Value | Units           | Min<br>Limit | Max Limit |
|-------------------|------------------------------|-------|-----------------|--------------|-----------|
| DRNAREA           | Drainage Area                | 3.09  | square<br>miles | 0.367        | 219.691   |
| ELEV              | Mean Basin Elevation         | 653   | feet            | 520.406      | 2101.874  |
| PRECIP            | Mean Annual<br>Precipitation | 58.7  | inches          | 71.6651      | 143.4891  |

Monthly Flow Statistics Parameters [LowFlow Sep Region01 2008 5126]

| Parameter<br>Code | Parameter Name               | Value | Units           | Min<br>Limit | Max Limit |
|-------------------|------------------------------|-------|-----------------|--------------|-----------|
| DRNAREA           | Drainage Area                | 3.09  | square<br>miles | 0.367        | 590.347   |
| PRECIP            | Mean Annual<br>Precipitation | 58.7  | inches          | 65.5923      | 151.2906  |

Monthly Flow Statistics Disclaimers [LowFlow Apr Region01 2008 5126]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors.

Monthly Flow Statistics Flow Report [LowFlow Apr Region01 2008 5126]

| Statistic                  | Value | Unit   |
|----------------------------|-------|--------|
| Apr 7 Day 2 Year Low Flow  | 4.99  | ft^3/s |
| Apr 7 Day 10 Year Low Flow | 2.9   | ft^3/s |

Monthly Flow Statistics Disclaimers [LowFlow Aug Region01 2008 5126]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors.

## Monthly Flow Statistics Flow Report [LowFlow Aug Region01 2008 5126]

| Statistic                  | Value | Unit   |
|----------------------------|-------|--------|
| Aug 7 Day 2 Year Low Flow  | 0.224 | ft^3/s |
| Aug 7 Day 10 Year Low Flow | 0.135 | ft^3/s |

## Monthly Flow Statistics Disclaimers [LowFlow Dec Region01 2008 5126]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors.

Monthly Flow Statistics Flow Report [LowFlow Dec Region01 2008 5126]

| Statistic                  | Value | Unit   |
|----------------------------|-------|--------|
| Dec 7 Day 2 Year Low Flow  | 7.91  | ft^3/s |
| Dec 7 Day 10 Year Low Flow | 2.41  | ft^3/s |

Monthly Flow Statistics Disclaimers [LowFlow Feb Region01 2008 5126]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors.

Monthly Flow Statistics Flow Report [LowFlow Feb Region01 2008 5126]

| Statistic                  | Value | Unit   |
|----------------------------|-------|--------|
| Feb 7 Day 2 Year Low Flow  | 9.39  | ft^3/s |
| Feb 7 Day 10 Year Low Flow | 4.51  | ft^3/s |

Monthly Flow Statistics Disclaimers [LowFlow Jan Region01 2008 5126]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors.

Monthly Flow Statistics Flow Report [LowFlow Jan Region01 2008 5126]

| Sta | ti | st | ic |
|-----|----|----|----|
|-----|----|----|----|

| Statistic                  | Value | Unit   |
|----------------------------|-------|--------|
| Jan 7 Day 2 Year Low Flow  | 10.5  | ft^3/s |
| Jan 7 Day 10 Year Low Flow | 4.85  | ft^3/s |

## Monthly Flow Statistics Disclaimers [LowFlow Jul Region01 2008 5126]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors.

Monthly Flow Statistics Flow Report [LowFlow Jul Region01 2008 5126]

| Statistic                  | Value | Unit   |
|----------------------------|-------|--------|
| Jul 7 Day 2 Year Low Flow  | 0.354 | ft^3/s |
| Jul 7 Day 10 Year Low Flow | 0.244 | ft^3/s |

Monthly Flow Statistics Disclaimers [LowFlow Jun Region01 2008 5126]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors.

## Monthly Flow Statistics Flow Report [LowFlow Jun Region01 2008 5126]

| Statistic                  | Value | Unit   |
|----------------------------|-------|--------|
| Jun 7 Day 2 Year Low Flow  | 1.5   | ft^3/s |
| Jun 7 Day 10 Year Low Flow | 1.03  | ft^3/s |

## Monthly Flow Statistics Disclaimers [LowFlow Mar Region01 2008 5126]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors.

Monthly Flow Statistics Flow Report [LowFlow Mar Region01 2008 5126]

| Statistic                  | Value | Unit   |
|----------------------------|-------|--------|
| Mar 7 Day 2 Year Low Flow  | 8.01  | ft^3/s |
| Mar 7 Day 10 Year Low Flow | 4.53  | ft^3/s |

Monthly Flow Statistics Disclaimers [LowFlow May Region01 2008 5126]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors.

## Monthly Flow Statistics Flow Report [LowFlow May Region01 2008 5126]

| Statistic                  | Value | Unit   |
|----------------------------|-------|--------|
| May 7 Day 2 Year Low Flow  | 3.38  | ft^3/s |
| May 7 Day 10 Year Low Flow | 2.44  | ft^3/s |

## Monthly Flow Statistics Disclaimers [LowFlow Nov Region01 2008 5126]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors.

Monthly Flow Statistics Flow Report [LowFlow Nov Region01 2008 5126]

| Statistic                  | Value | Unit   |
|----------------------------|-------|--------|
| Nov 7 Day 2 Year Low Flow  | 2.13  | ft^3/s |
| Nov 7 Day 10 Year Low Flow | 0.802 | ft^3/s |

Monthly Flow Statistics Disclaimers [LowFlow Oct Region01 2008 5126]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors.

Monthly Flow Statistics Flow Report [LowFlow Oct Region01 2008 5126]

| Statistic                  | Value | Unit   |
|----------------------------|-------|--------|
| Oct 7 Day 2 Year Low Flow  | 0.28  | ft^3/s |
| Oct 7 Day 10 Year Low Flow | 0.146 | ft^3/s |

Monthly Flow Statistics Disclaimers [LowFlow Sep Region01 2008 5126]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors.

Monthly Flow Statistics Flow Report [LowFlow Sep Region01 2008 5126]

#### Statistic

| Statistic                  | Value | Unit   |
|----------------------------|-------|--------|
| Sep 7 Day 2 Year Low Flow  | 0.304 | ft^3/s |
| Sep 7 Day 10 Year Low Flow | 0.164 | ft^3/s |

## Monthly Flow Statistics Flow Report [Area-Averaged]

| Statistic                  | Value | Unit   |
|----------------------------|-------|--------|
| Apr 7 Day 2 Year Low Flow  | 4.99  | ft^3/s |
| Apr 7 Day 10 Year Low Flow | 2.9   | ft^3/s |
| Aug 7 Day 2 Year Low Flow  | 0.224 | ft^3/s |
| Aug 7 Day 10 Year Low Flow | 0.135 | ft^3/s |
| Dec 7 Day 2 Year Low Flow  | 7.91  | ft^3/s |
| Dec 7 Day 10 Year Low Flow | 2.41  | ft^3/s |
| Feb 7 Day 2 Year Low Flow  | 9.39  | ft^3/s |
| Feb 7 Day 10 Year Low Flow | 4.51  | ft^3/s |
| Jan 7 Day 2 Year Low Flow  | 10.5  | ft^3/s |
| Jan 7 Day 10 Year Low Flow | 4.85  | ft^3/s |
| Jul 7 Day 2 Year Low Flow  | 0.354 | ft^3/s |
| Jul 7 Day 10 Year Low Flow | 0.244 | ft^3/s |
| Jun 7 Day 2 Year Low Flow  | 1.5   | ft^3/s |
| Jun 7 Day 10 Year Low Flow | 1.03  | ft^3/s |
| Mar 7 Day 2 Year Low Flow  | 8.01  | ft^3/s |
| Mar 7 Day 10 Year Low Flow | 4.53  | ft^3/s |
| May 7 Day 2 Year Low Flow  | 3.38  | ft^3/s |
| May 7 Day 10 Year Low Flow | 2.44  | ft^3/s |
| Nov 7 Day 2 Year Low Flow  | 2.13  | ft^3/s |
| Nov 7 Day 10 Year Low Flow | 0.802 | ft^3/s |
| Oct 7 Day 2 Year Low Flow  | 0.28  | ft^3/s |
| Oct 7 Day 10 Year Low Flow | 0.146 | ft^3/s |
| Sep 7 Day 2 Year Low Flow  | 0.304 | ft^3/s |
| Sep 7 Day 10 Year Low Flow | 0.164 | ft^3/s |

Risley, John, Stonewall, Adam, and Haluska, Tana,2008, Estimating flow-duration and low-flow frequency statistics for unregulated streams in Oregon: U.S. Geological Survey Scientific Investigations Report 2008-5126, 22 p. (http://pubs.usgs.gov/sir/2008/5126/)

## Bankfull Statistics

Bankfull Statistics Parameters [Pacific Mountain System D Bieger 2015]

| Parameter Code | Parameter Name | Value | Units        | Min Limit | Max Limit |
|----------------|----------------|-------|--------------|-----------|-----------|
| DRNAREA        | Drainage Area  | 3.09  | square miles | 6.1776    | 8079.9147 |

Bankfull Statistics Parameters [Pacific Border P Bieger 2015]

| Parameter Code | Parameter Name | Value | Units        | Min Limit | Max Limit   |
|----------------|----------------|-------|--------------|-----------|-------------|
| DRNAREA        | Drainage Area  | 3.09  | square miles | 6.169878  | 3938.976756 |

Bankfull Statistics Parameters [USA Bieger 2015]

| Parameter Code | Parameter Name | Value | Units        | Min Limit | Max Limit  |
|----------------|----------------|-------|--------------|-----------|------------|
| DRNAREA        | Drainage Area  | 3.09  | square miles | 0.07722   | 59927.7393 |

Bankfull Statistics Parameters [Pac Maritime Mtn CastroJackson 2001]

| Parameter Code | Parameter Name | Value | Units        | Min Limit | Max Limit |
|----------------|----------------|-------|--------------|-----------|-----------|
| DRNAREA        | Drainage Area  | 3.09  | square miles | 54.8      | 3093      |

Bankfull Statistics Disclaimers [Pacific Mountain System D Bieger 2015]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors.

Bankfull Statistics Flow Report [Pacific Mountain System D Bieger 2015]

| Statistic                             | Value | Unit |
|---------------------------------------|-------|------|
| Bieger_D_channel_width                | 20.8  | ft   |
| Bieger_D_channel_depth                | 1.39  | ft   |
| Bieger_D_channel_cross_sectional_area | 36.3  | ft^2 |

## Bankfull Statistics Disclaimers [Pacific Border P Bieger 2015]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors.

## Bankfull Statistics Flow Report [Pacific Border P Bieger 2015]

| Statistic                             | Value | Unit |
|---------------------------------------|-------|------|
| Bieger_P_channel_width                | 18    | ft   |
| Bieger_P_channel_cross_sectional_area | 33.4  | ft^2 |
| Bieger_P_channel_depth                | 1.37  | ft   |

### Bankfull Statistics Flow Report [USA Bieger 2015]

| Statistic                               | Value | Unit |
|---|-------|------|
| Bieger_USA_channel_width                | 18.4  | ft   |
| Bieger_USA_channel_depth                | 1.53  | ft   |
| Bieger_USA_channel_cross_sectional_area | 31.4  | ft^2 |

## Bankfull Statistics Disclaimers [Pac Maritime Mtn CastroJackson 2001]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors.

## Bankfull Statistics Flow Report [Pac Maritime Mtn CastroJackson 2001]

| Statistic           | Value | Unit   |
|---------------------|-------|--------|
| Bankfull Width      | 20.1  | ft     |
| Bankfull Depth      | 1.02  | ft     |
| Bankfull Area       | 32.8  | ft^2   |
| Bankfull Streamflow | 194   | ft^3/s |

### Bankfull Statistics Flow Report [Area-Averaged]

| Statistic              | Value | Unit |
|------------------------|-------|------|
| Bieger_D_channel_width | 20.8  | ft   |
| Bieger_D_channel_depth | 1.39  | ft   |

| Statistic                               | Value | Unit   |
|---|-------|--------|
| Bieger_D_channel_cross_sectional_area   | 36.3  | ft^2   |
| Bieger_P_channel_width                  | 18    | ft     |
| Bieger_P_channel_cross_sectional_area   | 33.4  | ft^2   |
| Bieger_P_channel_depth                  | 1.37  | ft     |
| Bieger_USA_channel_width                | 18.4  | ft     |
| Bieger_USA_channel_depth                | 1.53  | ft     |
| Bieger_USA_channel_cross_sectional_area | 31.4  | ft^2   |
| Bankfull Width                          | 20.1  | ft     |
| Bankfull Depth                          | 1.02  | ft     |
| Bankfull Area                           | 32.8  | ft^2   |
| Bankfull Streamflow                     | 194   | ft^3/s |

Bankfull Statistics Citations

Bieger, Katrin; Rathjens, Hendrik; Allen, Peter M.; and Arnold, Jeffrey G.,2015, Development and Evaluation of Bankfull Hydraulic Geometry Relationships for the Physiographic Regions of the United States, Publications from USDA-ARS / UNL Faculty, 17p. (https://digitalcommons.unl.edu/usdaarsfacpub/1515? utm\_source=digitalcommons.unl.edu%2Fusdaarsfacpub%2F1515&utm\_medium=PDF&utm\_ Castro, J.M, and Jackson, P.L.Castro, J.M, and Jackson, P.L., 2001, Bankfull Discharge Recurrence Intervals and Regional Hydraulic Geometery Relationships: Patterns in the Pacific Northwest, USA, Journal of the American Water Resources Association, Volume 37, No. 5, 14 p. (https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1752-1688.2001.tb03636.x)

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Application Version: 4.10.1 StreamStats Services Version: 1.2.22 NSS Services Version: 2.2.1

# Appendix D

# Hydraulic Analysis Results

#### Feasibility Level Mannings Culvert/Channel Hydraulics

Project : Fox Creek Culvert Date: 9/15/2022 Staff: RCC

QC: CJL

| Statistic                                | Limiting<br>Species/Lifestage | Discharge<br>(CFS) | Discharge<br>(Mannings<br>computed) | Difference | Mannings<br>Roughness | Depth<br>(ft) | Depth<br>(ft)<br>(varied) | Depth<br>Criteria | Velocity<br>(ft/s) | Velocity<br>Criteria |
|--|-------------------------------|--------------------|-------------------------------------|------------|-----------------------|---------------|---------------------------|-------------------|--------------------|----------------------|
| 100 year flood                           | -                             | 429                | 429                                 | 0.0        | 0.035                 | 6.9           | 6.9                       | -                 | 6.3                | -                    |
| 2 year flood                             | -                             | 150                | 150                                 | 0.0        | 0.035                 | 4.1           | 4.1                       | -                 | 4.1                | -                    |
| 5% Continuous Exceedance<br>Probability  | Adult Salmonids               | 42                 | 42                                  | 0.0        | 0.08                  | 3.3           | 3.3                       | 1.0 ft            | 1.5                | <2 ft/s*             |
| 50% Continuous Exceedance<br>Probability | Juvenile Salmonids            | 3.9                | 3.9                                 | 0.0        | 0.08                  | 1.6           | 1.6                       | 0.5 ft            | 0.5                | <1 ft/s              |
| 95% Continuous Exceedance<br>Probability | Adults & Juveniles            | 1                  | 1                                   | 0.0        | 0.08                  | 1.2           | 1.2                       | 0.5 ft            | 0.3                | <1 ft/s              |
|  |                               |                    | Sum                                 | 0.00       | set sum to ze         | ro to sol     | ve all simu               | ultaneousl        | у                  |                      |

| Input Parameters           |        |  |  |  |
|----------------------------|--------|--|--|--|
| Culvert/Channel Width (ft) | 15     |  |  |  |
| Inset Channel Depth (ft)   | 1      |  |  |  |
| Inset Channel Width (ft)   | 1.5    |  |  |  |
| Inset Ch Side Slopes (H:V) | 1      |  |  |  |
| Inset channel slope        | 0.0025 |  |  |  |
| Streambed Roughness        | 0.035  |  |  |  |
| Moderate Flow Roughness    | 0.08   |  |  |  |
| Inset Channel Roughness    | 0.08   |  |  |  |
| Outlet Elevation (ft)      | 12.3   |  |  |  |
| Inlet Elevation (ft)       | 15.3   |  |  |  |
| Culvert/Reach length (ft)  | 600    |  |  |  |
| Slope                      | 0.005  |  |  |  |

| Color Code                  |  |  |
|-----------------------------|--|--|
| Entered Value               |  |  |
| Computed Intermediate       |  |  |
| Meets Criteria              |  |  |
| Does Not Meet Criteria      |  |  |
| Complex Criteria Evaluation |  |  |

Input parameters entered at left are passed to Mannings Computations sheets for each flow.

"Discharge (Mannings Computed)" column above is calculated in each sheet using the "Depth (ft) (varied)" column above and other entered values.

Computed discharge above is subtracted from design discharge and the sum of differences is set to zero with Excelss solver function to compute expected depth in the culvert/channel section for each flow.

Project : Fox Creek Culvert Date: 9/15/2022 Staff: RCC QC: CJL Flow: Q100

| Location | Station (ft) | Elevation   | Wetted Perimeter | Sectional               |
|----------|--------------|-------------|------------------|-------------------------|
|          |              | (ft NAVD88) | (ft)             | Area (ft <sup>2</sup> ) |
| 1        | 0            | 8           |                  | 0                       |
| 2        | 0            | 1           | 6.38             | 8.51                    |
| 3        | 5.75         | 1           | 3.58             | 18.51                   |
| 4        | 6.75         | 0           | 1.46             | 6.06                    |
| 5        | 8.25         | 0           | 1.46             | 6.92                    |
| 6        | 9.25         | 1           | 3.58             | 11.47                   |
| 7        | 15           | 1           | 6.38             | 17.03                   |
| 8        | 15           | 8           | 0                | 0                       |

| Manning's Parameters              |  |
|-----------------------------------|--|
| Depth (ft)                        |  |
| average slope                     |  |
| k                                 |  |
| n (selected)                      |  |
| WP (ft)                           |  |
| Sectional Area (ft <sup>2</sup> ) |  |
| Hydraulic Radius (ft)             |  |
| Discharge (CFS)                   |  |
| Velocity (ft/s)                   |  |

#### Manning's Equation:



Where:

Q = Flow Rate, (ft<sup>3</sup>/s) v = Velocity, (ft/s) A = Flow Area, (ft<sup>2</sup>) n = Manning's Roughness Coefficient

R = Hydraulic Radius, (ft)

S = Channel Slope, (ft/ft)

Under the assumption of uniform flow conditions the bottom slope is the same as the slope of the energy grade line and the water surface slope. The Manning's n is a coefficient which represents the roughness or friction applied to the flow by the channel. <u>Manning's n-values</u> are often selected from tables, but can be back calculated from field measurements. In many flow conditions the selection of a Manning's roughness coefficient can greatly affect computational results.



| 6.92  |
|-------|
| 0.005 |
| 1.49  |
| 0.035 |
| 22.8  |
| 68.5  |
| 3.0   |
| 429   |
| 6.3   |
|       |

Project : Fox Creek Culvert Date: 9/15/2022 Staff: RCC QC: CJL Flow: Q2

| Location | Station (ft) | Elevation<br>(ft NAVD88) | Wetted Perimeter<br>(ft) | Sectional<br>Area (ft <sup>2</sup> ) |
|----------|--------------|--------------------------|--------------------------|--------------------------------------|
| 1        | 0            | 8                        |                          | 0                                    |
| 2        | 0            | 1                        | 6.38                     | 4.42                                 |
| 3        | 5.75         | 1                        | 3.58                     | 9.61                                 |
| 4        | 6.75         | 0                        | 1.46                     | 3.57                                 |
| 5        | 8.25         | 0                        | 1.46                     | 4.07                                 |
| 6        | 9.25         | 1                        | 3.58                     | 5.96                                 |
| 7        | 15           | 1                        | 6.38                     | 8.84                                 |
| 8        | 15           | 8                        | 0                        | 0                                    |

| Manning's Parameters              |  |
|-----------------------------------|--|
| Depth (ft)                        |  |
| average slope                     |  |
| k                                 |  |
| n (selected)                      |  |
| WP (ft)                           |  |
| Sectional Area (ft <sup>2</sup> ) |  |
| Hydraulic Radius (ft)             |  |
| Discharge (CFS)                   |  |
| Velocity (ft/s)                   |  |

#### Manning's Equation:



Where:

 $Q = Flow Rate, (ft^3/s)$ v = Velocity, (ft/s)  $A = Flow Area, (ft^2)$ n = Manning's Roughness Coefficient

R = Hydraulic Radius, (ft)

S = Channel Slope, (ft/ft)

Under the assumption of uniform flow conditions the bottom slope is the same as the slope of the energy grade line and the water surface slope. The Manning's n is a coefficient which represents the roughness or friction applied to the flow by the channel. <u>Manning's n-values</u> are often selected from tables, but can be back calculated from field measurements. In many flow conditions the selection of a Manning's roughness coefficient can greatly affect computational results.



| 4.07  |
|-------|
| 0.005 |
| 1.49  |
| 0.035 |
| 22.8  |
| 36.5  |
| 1.6   |
| 150   |
| 4.1   |

Project : Fox Creek Culvert Date: 9/15/2022 Staff: RCC QC: CJL Flow: 5% Exceedance Location Station (ft)

| Location | Station (ft) | Elevation<br>(ft NAVD88) | Wetted Perimeter<br>(ft) | Sectional<br>Area (ft <sup>2</sup> ) |
|----------|--------------|--------------------------|--------------------------|--------------------------------------|
| 1        | 0            | 8                        |                          | 0                                    |
| 2        | 0            | 1                        | 6.38                     | 3.30                                 |
| 3        | 5.75         | 1                        | 3.58                     | 7.17                                 |
| 4        | 6.75         | 0                        | 1.46                     | 2.88                                 |
| 5        | 8.25         | 0                        | 1.46                     | 3.30                                 |
| 6        | 9.25         | 1                        | 3.58                     | 4.45                                 |
| 7        | 15           | 1                        | 6.38                     | 6.60                                 |
| 8        | 15           | 8                        | 0                        | 0                                    |

Manning's Parameters Donth (ft)

| Depth (it)                        |  |
|-----------------------------------|--|
| average slope                     |  |
| k                                 |  |
| n (selected)                      |  |
| WP (ft)                           |  |
| Sectional Area (ft <sup>2</sup> ) |  |
| Hydraulic Radius (ft)             |  |
| Discharge (CFS)                   |  |
| Velocity (ft/s)                   |  |
|                                   |  |

#### Manning's Equation:

$$Q = VA = \left(\frac{1.49}{n}\right)AR^{\frac{2}{3}}\sqrt{S} \quad [U.S]$$
$$Q = VA = \left(\frac{1.00}{n}\right)AR^{\frac{2}{3}}\sqrt{S} \quad [SI]$$

Where:

 $Q = Flow Rate, (ft^3/s)$ v = Velocity, (ft/s)  $A = Flow Area, (ft^2)$ n = Manning's Roughness Coefficient

R = Hydraulic Radius, (ft)

S = Channel Slope, (ft/ft)

Under the assumption of uniform flow conditions the bottom slope is the same as the slope of the energy grade line and the water surface slope. The Manning's n is a coefficient which represents the roughness or friction applied to the flow by the channel. <u>Manning's n-values</u> are often selected from tables, but can be back calculated from field measurements. In many flow conditions the selection of a Manning's roughness coefficient can greatly affect computational results.



| 3.30  |
|-------|
| 0.005 |
| 1.49  |
| 0.08  |
| 22.8  |
| 27.7  |
| 1.2   |
| 42    |
| 1.5   |

Project : Fox Creek Culvert Date: 9/15/2022 Staff: RCC QC: CJL Flow: 50% Exceedance Location Station (ft)

| Location | Station (ft) | Elevation<br>(ft NAVD88) | Wetted Perimeter<br>(ft) | Sectional<br>Area (ft <sup>2</sup> ) |
|----------|--------------|--------------------------|--------------------------|--------------------------------------|
| 1        | 0            | 8                        |                          | 0                                    |
| 2        | 0            | 1                        | 6.38                     | 0.81                                 |
| 3        | 5.75         | 1                        | 3.58                     | 1.75                                 |
| 4        | 6.75         | 0                        | 1.46                     | 1.37                                 |
| 5        | 8.25         | 0                        | 1.46                     | 1.56                                 |
| 6        | 9.25         | 1                        | 3.58                     | 1.09                                 |
| 7        | 15           | 1                        | 6.38                     | 1.61                                 |
| 8        | 15           | 8                        | 0                        | 0                                    |

Manning's Parameters

| Depth (ft)                        |  |
|-----------------------------------|--|
| average slope                     |  |
| k                                 |  |
| n (selected)                      |  |
| WP (ft)                           |  |
| Sectional Area (ft <sup>2</sup> ) |  |
| Hydraulic Radius (ft)             |  |
| Discharge (CFS)                   |  |
| Velocity (ft/s)                   |  |

#### Manning's Equation:



Where:

Q = Flow Rate, (ft<sup>3</sup>/s) v = Velocity, (ft/s) A = Flow Area, (ft<sup>2</sup>) n = Manning's Roughness Coefficient

R = Hydraulic Radius, (ft)

S = Channel Slope, (ft/ft)

Under the assumption of uniform flow conditions the bottom slope is the same as the slope of the energy grade line and the water surface slope. The Manning's n is a coefficient which represents the roughness or friction applied to the flow by the channel. <u>Manning's n-values</u> are often selected from tables, but can be back calculated from field measurements. In many flow conditions the selection of a Manning's roughness coefficient can greatly affect computational results.



| 1.56   |
|--------|
| 0.0025 |
| 1.49   |
| 0.08   |
| 22.8   |
| 8.2    |
| 0.4    |
| 4      |
| 0.5    |

Project : Fox Creek Culvert Date: 9/15/2022 Staff: RCC QC: CJL Flow: 95% Exceedance Location Station (ft)

| Location | Station (ft) | Elevation<br>(ft NAVD88) | Wetted Perimeter<br>(ft) | Sectional<br>Area (ft <sup>2</sup> ) |
|----------|--------------|--------------------------|--------------------------|--------------------------------------|
| 1        | 0            | 8                        |                          | 0                                    |
| 2        | 0            | 1                        | 6.38                     | 0.23                                 |
| 3        | 5.75         | 1                        | 3.58                     | 0.49                                 |
| 4        | 6.75         | 0                        | 1.46                     | 1.01                                 |
| 5        | 8.25         | 0                        | 1.46                     | 1.16                                 |
| 6        | 9.25         | 1                        | 3.58                     | 0.31                                 |
| 7        | 15           | 1                        | 6.38                     | 0.45                                 |
| 8        | 15           | 8                        | 0                        | 0                                    |

Manning's Parameters

| Depth (ft)                        |  |
|-----------------------------------|--|
| average slope                     |  |
| k                                 |  |
| n (selected)                      |  |
| WP (ft)                           |  |
| Sectional Area (ft <sup>2</sup> ) |  |
| Hydraulic Radius (ft)             |  |
| Discharge (CFS)                   |  |
| Velocity (ft/s)                   |  |

#### Manning's Equation:



Where:

Q = Flow Rate, (ft<sup>3</sup>/s) v = Velocity, (ft/s) A = Flow Area, (ft<sup>2</sup>) n = Manning's Roughness Coefficient

R = Hydraulic Radius, (ft)

S = Channel Slope, (ft/ft)

Under the assumption of uniform flow conditions the bottom slope is the same as the slope of the energy grade line and the water surface slope. The Manning's n is a coefficient which represents the roughness or friction applied to the flow by the channel. <u>Manning's n-values</u> are often selected from tables, but can be back calculated from field measurements. In many flow conditions the selection of a Manning's roughness coefficient can greatly affect computational results.



| 1.16   |
|--------|
| 0.0025 |
| 1.49   |
| 0.08   |
| 22.8   |
| 3.6    |
| 0.2    |
| 1      |
| 0.3    |
|        |

# Appendix E

## Fox Creek Cost Estimate

|      | Alternative 1A Construction Cost              |        |      |    |            |             |
|------|---|--------|------|----|------------|-------------|
| Item | Description                                   | Qty    | Unit |    | Unit Cost  | Total       |
| 1    | Mobilization                                  | 15%    | LS   | \$ | 456,000.00 | \$456,000   |
| 2    | Clearing and Grubbing                         | 1      | LS   | \$ | 3,500.00   | \$3,500     |
| 3    | Excavation                                    | 12,000 | CY   | \$ | 50.00      | \$600,000   |
| 4    | Backfill                                      | 420    | CY   | \$ | 70.00      | \$29,400    |
| 5    | Demolition                                    | 1      | LS   | \$ | 70,000.00  | \$70,000    |
| 6    | Shoring                                       | 15,000 | SF   | \$ | 40.00      | \$600,000   |
| 7    | Subgrade/Foundation Stabilization             | 1,500  | CY   | \$ | 100.00     | \$150,000   |
| 8    | Stream Diversion                              | 1      | LS   | \$ | 90,000.00  | \$90,000    |
| 9    | Utility Relocation                            | 1      | LS   | \$ | 20,000.00  | \$20,000    |
| 10   | Surface Restoration/ Improvements             | 1      | LS   | \$ | 15,000.00  | \$15,000    |
| 11   | Ecoblocks                                     | 2,500  | EA   | \$ | 95.00      | \$237,500   |
| 12   | Precast Box Culvert                           | 320    | LF   | \$ | 3,000.00   | \$960,000   |
| 13   | Stream Bed Material                           | 1      | LS   | \$ | 163,600.00 | \$163,600   |
| 14   | Transition piece to ex. ODOT culvert          | 100    | CY   | \$ | 350.00     | \$35,000    |
| 15   | Dewatering                                    | 90     | Day  | \$ | 158.00     | \$14,300    |
| 16   | Asphalt Paving                                | 200    | SY   | \$ | 30.00      | \$6,000     |
| 17   | Traffic Control                               | 90     | Day  | \$ | 500.00     | \$45,000    |
|      | Subtotal                                      |        |      |    |            | \$3,495,300 |
|      | Plus: General Conditions                      |        | 12%  |    |            | \$419,436   |
|      | Plus: Contractor Overhead and Profit          |        | 15%  |    |            | \$524,000   |
|      | Plus: Escalation to Mid-Point of Construction |        | 20%  |    |            | \$699,000   |
|      |   |        |      |    | Sub-Total  | \$5,137,736 |
|      | Contingency                                   |        | 40%  |    |            | \$1,398,000 |
|      | Total Construction Cost (Rounded)             |        |      |    |            | \$6,540,000 |

|                                   | Alternative 1B Construction Cost              |        |      |    |            |             |
|-----------------------------------|---|--------|------|----|------------|-------------|
| Item                              | Description                                   | Qty    | Unit |    | Unit Cost  | Total       |
| 1                                 | Mobilization                                  | 15%    | LS   | \$ | 617,000.00 | \$617,000   |
| 2                                 | Clearing and Grubbing                         | 1      | LS   | \$ | 3,500.00   | \$3,500     |
| 3                                 | Excavation                                    | 8,500  | CY   | \$ | 50.00      | \$425,000   |
| 4                                 | Backfill                                      | 550    | LCY  | \$ | 70.00      | \$38,500    |
| 5                                 | Demolition                                    | 1      | LS   | \$ | 70,000.00  | \$70,000    |
| 6                                 | Shoring                                       | 25,000 | SF   | \$ | 40.00      | \$1,000,000 |
| 7                                 | Subgrade/Foundation Stabilization             | 2,800  | CY   | \$ | 100.00     | \$280,000   |
| 7                                 | Stream Diversion                              | 1      | LS   | \$ | 90,000.00  | \$90,000    |
| 8                                 | Utility Relocation                            | 1      | LS   | \$ | 20,000.00  | \$20,000    |
| 9                                 | Surface Restoration/Improvements              | 1      | LS   | \$ | 15,000.00  | \$15,000    |
| 10                                | Precast Box Culvert                           | 600    | LF   | \$ | 3,000.00   | \$1,800,000 |
| 11                                | Stream Bed Material                           | 1      | LS   | \$ | 275,500.00 | \$275,500   |
| 12                                | Transition piece to Existing ODOT culvert     | 100    | CY   | \$ | 350.00     | \$35,000    |
| 13                                | Dewatering                                    | 80     | Day  | \$ | 158.00     | \$12,700    |
| 14                                | Asphalt Concrete                              | 200    | SY   | \$ | 30.00      | \$6,000     |
| 15                                | Traffic Control                               | 90     | Day  | \$ | 500.00     | \$45,000    |
|                                   | Subtotal                                      |        |      |    |            | \$4,733,200 |
|                                   | Plus: General Conditions                      |        | 12%  | Ď  |            | \$567,984   |
|                                   | Plus: Contractor Overhead and Profit          |        | 15%  | Ď  |            | \$710,000   |
|                                   | Plus: Escalation to Mid-Point of Construction |        | 20%  | Ď  |            | \$947,000   |
|                                   |   |        |      |    | Sub-Total  | \$6,958,184 |
|                                   | Contingency                                   |        | 40%  | Ď  |            | \$227,000   |
| Total Construction Cost (Rounded) |   |        |      |    |            | \$7,190,000 |
|      | Alternative 2A Construction Cost              |        |      |    |           |             |  |
|------|---|--------|------|----|-----------|-------------|--|
| Item | Description                                   | Qty    | Unit |    | Unit Cost | Total       |  |
| 1    | Mobilization                                  | 15%    | LS   | \$ | 525,000   | \$525,000   |  |
| 2    | Clearing and Grubbing                         | 1      | LS   | \$ | 3,500.00  | \$3,500     |  |
| 3    | Excavation                                    | 16,000 | CY   | \$ | 50        | \$800,000   |  |
| 4    | Backfill                                      | 450    | LCY  | \$ | 70        | \$31,500    |  |
| 5    | Demolition                                    | 1      | LS   | \$ | 70,000.00 | \$70,000    |  |
| 6    | Shoring                                       | 15,000 | SF   | \$ | 40        | \$600,000   |  |
| 7    | Subgrade/Foundation Stabilization             | 2,800  | CY   | \$ | 100.00    | \$280,000   |  |
| 7    | Stream Diversion                              | 1      | LS   | \$ | 90,000    | \$90,000    |  |
| 8    | Utility Relocation                            | 1      | LS   | \$ | 20,000    | \$20,000    |  |
| 9    | Surface Restoration / Improvements            | 1      | LS   | \$ | 15,000    | \$15,000    |  |
| 10   | Precast CMP Culvert                           | 320    | LF   | \$ | 3,360     | \$1,075,200 |  |
| 11   | Ecoblocks                                     | 2,500  | EA   | \$ | 95        | \$237,500   |  |
| 12   | Stream Bed Material                           | 1      | LS   | \$ | 175,600   | \$175,600   |  |
| 13   | Transition Piece to Existing ODOT Culvert     | 100    | CY   | \$ | 350       | \$35,000    |  |
| 14   | Dewatering                                    | 90     | Day  | \$ | 158       | \$14,300    |  |
| 15   | Asphalt Concrete                              | 200    | SY   | \$ | 30        | \$6,000     |  |
| 16   | Traffic Control                               | 90     | Day  | \$ | 500       | \$45,000    |  |
|      | Subtotal                                      |        |      |    |           | \$4,023,600 |  |
|      | Plus: General Conditions                      |        | 12%  |    |           | \$482,832   |  |
|      | Plus: Contractor Overhead and Profit          |        | 15%  | )  |           | \$604,000   |  |
|      | Plus: Escalation to Mid-Point of Construction |        | 20%  |    |           | \$805,000   |  |
|      |   |        |      |    | Sub-Total | \$5,915,432 |  |
|      | Contingency                                   |        | 40%  |    |           | \$1,609,000 |  |
|      | Total Construction Cost (Rounded)             |        |      |    |           |             |  |

|      | Alternative 2B Construction Cost              |        |      |        |           |             |  |  |
|------|---|--------|------|--------|-----------|-------------|--|--|
| Item | Description                                   | Qty    | Unit |        | Unit Cost | Total       |  |  |
| 1    | Mobilization                                  | 15%    | LS   | \$     | 771,000   | \$771,000   |  |  |
| 2    | Clearing and Grubbing                         | 1      | LS   | \$     | 3,500.00  | \$3,500     |  |  |
| 3    | Excavation                                    | 15,000 | CY   | \$     | 50        | \$750,000   |  |  |
| 4    | Backfill                                      | 350    | LCY  | \$     | 70        | \$24,500    |  |  |
| 5    | Demolition                                    | 1      | LS   | \$     | 70,000.00 | \$70,000    |  |  |
| 6    | Shoring                                       | 25,000 | SF   | \$     | 40        | \$1,000,000 |  |  |
| 7    | Subgrade/Foundation Stabilization             | 5,500  | CY   | \$     | 100.00    | \$550,000   |  |  |
| 7    | Stream Diversion                              | 1      | LS   | \$     | 90,000    | \$90,000    |  |  |
| 8    | Utility Relocation                            | 1      | LS   | \$     | 20,000    | \$20,000    |  |  |
| 9    | Surface Restoration/Improvements              | 1      | LS   | \$     | 15,000    | \$15,000    |  |  |
| 10   | Precast CMP Culvert                           | 600    | LF   | \$     | 3,360     | \$2,016,000 |  |  |
| 11   | Stream Bed Material                           | 1      | LS   | \$     | 499,500   | \$499,500   |  |  |
| 12   | Transition Pieceto Existing ODOT Culvert      | 100    | CY   | \$     | 350       | \$35,000    |  |  |
| 13   | Dewatering                                    | 90     | Day  | \$     | 158       | \$14,300    |  |  |
| 14   | Asphalt Concrete                              | 200    | SY   | \$     | 30        | \$6,000     |  |  |
| 15   | Traffic Control                               | 90     | Day  | \$     | 500.00    | \$45,000    |  |  |
|      | Subtotal                                      |        |      |        |           | \$5,909,800 |  |  |
|      | Plus: General Conditions                      |        | 12%  | b      |           | \$709,176   |  |  |
|      | Plus: Contractor Overhead and Profit          |        | 15%  | Ď      |           | \$886,000   |  |  |
|      | Plus: Escalation to Mid-Point of Construction |        | 20%  | Ď      |           | \$1,182,000 |  |  |
|      |   |        |      |        | Sub-Total | \$8,686,976 |  |  |
|      | Contingency                                   |        | 40%  | ,<br>D |           | \$284,000   |  |  |
|      | Total Construction Cost (Rounded)             |        |      |        |           | \$8,980,000 |  |  |

|      | Alternative 3 Construction Cost               |        |      |    |           |             |
|------|---|--------|------|----|-----------|-------------|
| Item | Description                                   | Qty    | Unit |    | Unit Cost | Total       |
| 1    | Mobilization                                  | 15%    | LS   | \$ | 473,000   | \$473,000   |
| 2    | Clearing and Grubbing                         | 1      | LS   | \$ | 3,500.00  | \$3,500     |
| 3    | Excavation                                    | 20,000 | CY   | \$ | 50        | \$1,000,000 |
| 4    | Backfill                                      | 450    | LCY  | \$ | 70        | \$31,500    |
| 5    | Demolition                                    | 1      | LS   | \$ | 70,000.00 | \$70,000    |
| 6    | Shoring                                       | 10,000 | SF   | \$ | 40        | \$400,000   |
| 7    | Subgrade/Foundation Stabilization             | 1,800  | CY   | \$ | 100.00    | \$180,000   |
| 8    | Stream Diversion                              | 1      | LS   | \$ | 80,000    | \$80,000    |
| 9    | Utility Relocation                            | 1      | LS   | \$ | 20,000    | \$20,000    |
| 10   | Surface Restoration / Improvements            | 1      | LS   | \$ | 15,000    | \$15,000    |
| 11   | Precast CMP Culvert                           | 200    | LF   | \$ | 3,360     | \$672,000   |
| 12   | Ecoblocks                                     | 4,200  | EA   | \$ | 95        | \$399,000   |
| 13   | Stream Bed Material                           | 1      | LS   | \$ | 199,000   | \$199,000   |
| 14   | Transition Piece to Existing ODOT Culvert     | 100    | CY   | \$ | 350       | \$35,000    |
| 15   | Dewatering                                    | 90     | Day  | \$ | 158       | \$14,300    |
| 16   | Asphalt Concrete                              | 200    | SY   | \$ | 30        | \$6,000     |
| 17   | Traffic Control                               | 60     | Day  | \$ | 500       | \$30,000    |
|      | Subtotal                                      |        |      |    |           | \$3,628,300 |
|      | Plus: General Conditions                      |        | 12%  |    |           | \$435,396   |
|      | Plus: Contractor Overhead and Profit          |        | 15%  | )  |           | \$544,000   |
|      | Plus: Escalation to Mid-Point of Construction |        | 20%  |    |           | \$726,000   |
|      |   |        |      |    | Sub-Total | \$5,333,696 |
|      | Contingency                                   |        | 40%  |    |           | \$1,451,000 |
|      | Total Construction Cost (Rounded)             |        |      |    |           | \$6,790,000 |



November 19, 2022

To: Mayor Jerry Cole and Rainier City CouncilFrom: Skip Urling, City PlannerRe: Knaub Petition to Annex—Findings and Recommendation

Susan and Larry Knaub have submitted a petition to annex approximately one acre to the city of Rainier. The subject property, identified as Tax Lot 7216-CC-00400 is located just south of the cul-de-sac at the terminus of Crestview Lane, west of Debast Road. The intent of the Knaubs is to build a single family dwelling. Because the property is outside the city limits, annexation is required to extend city utilities to serve the proposed dwelling.

# Findings

- 1. The Rainier Comprehensive Plan designates the subject property as Residential which is intended to provide for lower density housing. Plan policies call for implementation of this designation through the assignation of several residential zoning districts. The adjacent property within the city limits is zoned R-1 Low Density Residential. It would be appropriate to extend this zoning district to the subject property.
- 2. The petition was submitted following the steps identified in Rainier Municipal Code (RMC) 18.73.070 and included the requisite information.
- 3. Notice of council public hearing was sent to the Oregon DLCD and affected property owners, and published in the newspaper of record as prescribed by RMC 18.73.040.B
- 4. The subject property is within the city's Urban Growth Boundary.
- 5. The property currently has a Columbia County zoning designation of R-10 Single Family Residential which has a minimum lot size of 10,000 square feet when water and sewer facilities are available. Abutting properties within the city limits on the north and east are zoned R-1, Low Density Residential. The minimum lot size in the R-1 zone is 10,000 square feet for a single family home, which is permitted outright. The subject property exceeds this standard.
- 6. Public Works reports that city potable water and sanitary sewer utilities are available and have the capacity to serve the property. The police chief has also stated that the police department can serve the property.
- 7. Fire protection would continue to be provided by the Columbia River Fire District.

Mayor Cole and Rainier City Council Knaub Annexation Petition November 19, 2022 Page 2

## Fiscal Impact Statement

The Knaubs bought the property in March of this year for \$110,000, but the maximum assessed value is \$49,030 according to the county Real Property Assessment Report. Included in the petition package they estimated that the proposed dwelling would be approximately 2,500 square feet. This improved property, with an approximate home value of \$337,500, would add increased tax revenue to the city.

Utility extension expenses to the property would be the responsibility of the property owner; the city would incure no cost. Potable water and sanitary sewer services are self supporting through fees collected on a regular basis; the fees cover the cost of operations and debt service. No other infrastructure would be required.

It appears that the proposed annexation would be budget neutral.

# Approval Criteria

RMC 18.73.080 provides the criteria for the Council to follow to approve the petition.

A. Findings conducted by the city planning official of other city staff.

This staff report contains findings as required.

B. The affected territory must be located within the city's urban growth boundary.

The affected property is within the UGB.

C. The affected territory must be contiguous to the existing city limits.

The affected territory abuts the city limits on two sides.

D. The city will attempt to apply zoning which is most like the county zone and try to avoid nonconforming uses.

The city's R-1 zoning district proposed by staff is similar to the county's R-10 district.

E. A city of Rainier covenant of waiver of rights and remedies city form has been executed by all owners of the property to be annexed and all owners of any interest in the property to be annexed regarding waiver of any statutory or constitutional regulatory provisions, including, but not limited to, Ballot Measure 37 (effective December 2, 2004) as amended

Mayor Cole and Rainier City Council Knaub Annexation Petition November 19, 2022 Page 3

by Ballot Measure 49. This section only applies to those property owners who have consented in writing to annexation.

A covenant is attached.

*F. That either:* 

1. The funding mechanisms required to construct transportation, wastewater, water, stormwater and park facilities are consistent with adopted public facility or utility master plans, parks and/or transportation system plans are in place; or

The only infrastructure to be constructed by the petitioners is private sanitary sewer and potable water extensions. Staff assumes those costs would be included in the construction loan mentioned in the petition.

2. In lieu, a public facilities, parks, and transportation agreement is executed that funding will be in place prior to or concurrent with a development permit application.

This criterion does not apply. Utility plans and permit applications will be required prior to granting other building permits.

G. That the public interest would be furthered by the annexation.

Granting the petition to effect the annexation would result in the addition of more improved property to the city, increase the city's population, and contribute to the local economy. These are all furtherance's of the public interest.

# Conclusion and Recommendation

This is a small annexation of a single lot that is proposed for development as a single family dwelling. Utility services are available as is police service. Fire protection service will not change. The petition is consistent with and satisfies the municipal code criteria for annexations, the zoning designation proposed by staff is similar to that of Columbia County and would be common with the adjacent areas within the city limits. From a fiscal standpoint, granting the petition would be budget neutral.

Mayor Cole and Rainier City Council Knaub Annexation Petition November 19, 2022 Page 4

Based on the findings and conclusions above, staff recommends the council grant the Knaub petition to annex one acre to the city of Rainier and assign a zoning designation R-1 Low Density Residential.

Suggested Motion: Based on the findings and conclusions of the November 19, 2022 city planner staff report, I move adopt Ordinance No. 1088 after a second reading by the City Council making the Knaub annexation effective and adding approximately one acre of territory to the City of Rainier.

Enclosures Petition package Waiver of Remonstrance Ordinance

# City Of Rainier Waiver of Remonstrance for Public Improvements

| Property Description:                            |
|--|
| Address of Lot: 14965 Debast Ra                  |
| Columbia County Tax Lot Number: 7N 2W16-CC-00400 |
| Lot, Block, and Subdivision:                     |
|  |

| Owner(s) Name and Address:                 |
|--|
| Name of Applicant (s) Larry ? Sus an Knaub |
| Address 6775 SE 68th Ct                    |
| city (hllsbord                             |
| State OR                                   |
| Zip Code                                   |

This is an agreement between the owner(s) of the real property described above ("Property Description:") and the City of Rainier, an Oregon Municipal Corporation ("City") for the deferred construction of public improvements that the City has required as a condition of approval of the owner's development of the property. Those conditions of development are more fully set out in City's records relating to development of the property under the following reference number (map/tax lot): 7N 2NN MCC co400

Owner acknowledges City's legal authority to require that owner construct certain public improvements to serve the property. City agrees to defer construction of those improvements to some future time as the City's deems the requirements are necessary.

Owner agrees that the improvements to be built will constitute "local improvements" as defined in Oregon law that will directly enhance and benefit the property. Owner agrees that the City may levy part of the cost of the improvements proposed, proportional to the benefit received, as an assessment and lien against the property.

In consideration of deferred construction of the improvements, owner, for itself, its heirs, executors, successors and assigns, hereby **WAIVE** any right it otherwise may have to remonstrate against the City's formation of a Local Improvement District (LID) that includes property, for construction of the following public improvements:

Future public street and utility improvements located on the Debast Street frontage.

S:Planning Forms Waiver of Remonstrance for Public Improvements

Owner further agrees to itself, its heirs, executors, successors, and assigns, to **WAIVE** any and all defects and irregularities in any proceeding for information of such Local Improvement District (LID), for the certification of the cost of the improvements and for the levying of assessments for same, including but not limited to the giving of notice of any proceeding concerning same. Nothing herein shall constitute a waiver of any right owner otherwise may have to dispute the proposed method of assessment for the improvements and to dispute the computation of the proportionate cost of improvements to be levied against the property.

City may record this document in the deed records of Columbia County, Oregon. This Waiver shall expire without further notice and have no further legal effect if the City has not commenced proceedings to form a Local Improvement District (LID) that includes this property for some or all of the improvements set out above, or the substantial equivalent of same, within twenty (20) years from the date of execution of this waiver.

| Dated this 22nd | day of Novemb   | xer 2022         |                   |
|-----------------|---|------------------|-------------------|
| Fren            | 6   |                  |                   |
| Owner Signature | and   |                  |                   |
| Owner Signature |   |                  |                   |
| ,Acknowledg     | ed before me this22   | _day of November | 2022              |
|                 | OFFICIAL STAMP  | Natehun          | Public for Oregon |
| MY              | NOTARY PUBLIC - OREGON<br>COMMISSION NO. 1007843<br>COMMISSION EXPIRES JANUARY 24, 2025 | County of Washi  | ngton             |
|                 | My commission exp   | vires: Sorwory   | 24,2025           |

S:Planning Forms Waiver of Remonstrance for Public Improvements

# CITY OF RAINIER ORDINANCE NO. 1088

# AN ORDINANCE APPROVING THE ANNEXATION OF SUSAN AND LARRY KNAUB WHO OWN THE HEREIN DESCRIBED REAL PROPERTY TO THE CITY OF RAINIER, COLUMBIA COUNTY, OREGON

**WHEREAS,** the Petition for Annexation of contiguous property was signed and filed by the petitioners who own the entire property described herein, Susan and Larry Knaub; and

**WHEREAS,** the City caused notice of the hearing to be published once each week for two successive weeks prior to the date of the hearing in a newspaper of general circulation in the City pursuant to ORS 222.120 through 222.125; and

**WHEREAS,** the City caused to be posted four public places in the City copies of the notice of the hearing pursuant to ORS 222.120 through 222.125; and

**WHEREAS,** a public hearing was held on December 5, 2022, and a second hearing was held on January 9, 2023; and

**WHEREAS,** it appears that ORS Chapter 220 concerning annexation of contiguous territory has been fully complied with.

# NOW, THEREFORE, THE CITY OF RAINIER DOES ORDAIN AS FOLLOWS:

**Section 1:** That the following described contiguous real property situated in Columbia County, Oregon, is hereby annexed to and made a part of the City of Rainier, to wit:

Tax Lot 7216-CC-00400. located just south of the cul-de-sac at the terminus of Crestview Lane, west of Debast Road, Columbia County, Oregon.

City Zoning per Ordinance #974 will be Low Density Residential (R1).

Amended Legal description marked Exhibit "A" is attached hereto and by this reference incorporated herein.

Passed, Amended, and Adopted by the City Council of the City of Rainier, Oregon, this \_\_\_\_\_ day of \_\_\_\_\_, 2023.

Jerry Cole, Mayor

W. Scott Jorgensen, City Administrator

# **DRIVING AND USE OF VEHICLES**

Some positions at the City require the employee to drive for their jobs. As a result, we have developed the following rules that all employees are required to follow:

**Driver's License and Insurability**: Employees whose job requires the use of a vehicle must maintain a current valid driver's license and a driving record acceptable to the City. If your position requires you to drive and you have any driving restrictions, you must let the City know immediately. Only employees who are properly licensed, insured and have been authorized by management are permitted to drive on City business. Employees who drive their own vehicles for City business must provide the City with proof of collision and liability insurance annually. While operating your personal vehicle for City use, you are responsible for maintenance and repairs to your vehicle. You are also responsible for any damage to your vehicle or to other vehicles while driving for City business.

City vehicles are for business use only. Personal use of City vehicles is prohibited unless approved by the City Manger in writing on a case-by-case basis. Also, employees are prohibited from transporting any unauthorized passengers in City vehicles or personal vehicles while on City business. This includes friends, family members, etc.

<u>Compliance with the Law, Traffic Violations, and Good Judgment</u>: All employees who drive on behalf of the City are expected to use good judgment and caution in the operation of the vehicle at all times. All employees who drive on behalf of the City are also expected to be aware of and comply with all applicable traffic laws and regulations at all times. This includes using safety belts at all times. The City does not pay for employee traffic violations. If you receive a traffic citation while using any automobile on City business, you are responsible for all fines, court costs, etc.

**Reporting Accidents and Traffic Citations**: All accidents, traffic citations and damage, however small, must be reported in writing immediately to your supervisor. This applies to all types of accidents and damage, including damage to the property of others as well as City property and equipment. Employees are expected to cooperate fully with City accident and damage investigations. Within 24 hours of any accident, employees who are involved in any accident while on City business must write a detailed incident report with an explanation of the incident, including the date, time, location of the incident and what happened. The incident report form must be turned into the City Manager. You will also be responsible for filling out any necessary DMV accident reports. Employees are expected to cooperate fully with City accident and damage investigations.

If you are involved in an accident or receive a traffic citation in your personal vehicle while off duty, which results in a limitation of your driving privileges, you must report it to your supervisor as soon as possible before you drive on any Clty business. If an employee who drives for the City is cited or charged with any criminal driving offense, whether on or off duty, must promptly notify their management supervisor or the City Manager. If an employee is found liable or pleas to any moving violation or higher offense, the employee is expected to report that to their management supervisor or City Manager with 10 calendar days. Failure to adhere to these rules may lead to disciplinary action. The City may also use a third party vendor to review DMV records for empoyees driving for City business. Employees will be provided notice consistent with applicable law.

<u>Cell Phones While Driving</u>: For employees who drive a City vehicle or personal vehicle on City business, your first responsibility is to drive safely at all times. All employees are expected to be aware of weather, traffic, pedestrians, and other driving conditions and to use caution and good

judgment at all times while driving on behalf of the City. Employees who must make or take a call while driving are required to use a hands-free device at all times. Even with a hands-free device, you are expected to be stopped in a safe location before dialing a call. If you do not have a hands-free device available, or if weather or other driving conditions warrant extra caution even with a hands-free device, you must safely pull off the road and have the vehicle in park before engaging in the a call. Any use of a cell phone while driving that requires holding or touching the phone is strictly prohibited. This includes but is not limited to texting of any kind, reading, use of navigation, entertainment or other Apps, and taking notes (including writing down phone numbers or any other information). Such activity is all strictly prohibited while driving, regardless of whether or not you have a hands-free device.

## City Vehicle Use Checklist:

Before leaving on any trip you must do all of the following:

- Check the lights, tires, windshield wipers, horn.
- Make sure the gas tank is at least ¼ full
- Make sure you vehicle registration and proof of insurance.
- Make sure no check engine lights are on.
- If you discover any maintenance problems or safety hazards with City vehicles, do not drive the vehicle. Rather, you must immediately report the problem to your supervisor.

Employees must also do the following whenever they use a City vehicle:

- If you must leave a City vehicle unattended, always lock the doors.
- When returning from trips in City vehicles, you must clean the vehicle of all trash, personal belongings, educational equipment etc.

<u>Compliance With the Law, Traffic Violations, and Good Judgment</u>: All employees who drive on behalf of the City are expected to use good judgment and caution in the operation of the vehicle at all times. All employees who drive on behalf of the City are also expected to be aware of and comply with all applicable traffic laws and regulations at all times. This includes using safety belts for drivers and passengers at all times.

The City does not pay for employee traffic violations. If you receive a traffic citation while using any automobile on CIty business, you are responsible for all fines, court costs, etc.

<u>In Case of Emergency</u>: In the event of a motor vehicle accident, employees are expected to use common sense and good judgment. We have developed the following guidelines to assist employees in case of an accident:

- 1. Pull the vehicle to a safe location if possible
- 2. Turn off the engine and set the emergency brake
- 3. Verify the health of any passengers and call 911 if necessary
- 4. Call your supervisor or the City to immediately notify us of the accident
- 5. If another party is involved in the accident, be sure to get the following information:
  - Full name, address, phone number and driver's license number
  - Make model, year, license plate number and color of the other vehicle(s) involved
  - Insurance company name and policy number
  - The other party's explanation for what happened
  - The names and address and phone numbers for any witnesses
  - DO NOT ADMIT FAULT
- 6. If another party is involved in the accident, DO NOT ADMIT FAULT. Simply provide them with your name, the City's name, phone number and insurance information.

<u>Receipts and Mileage Reimbursement</u>: All receipts for gas and vehicle maintenance must be turned provided to the Public Works Director in a timely manner and recorded in the vehicle maintenance log.

Employees who incur mileage costs in their own vehicles for approved travel on behalf of the City and who wish to be reimbursed must submit a mileage report to payroll for review and approval. Reimbursement will be made at a rate determined annually by policy or collective bargaining agreement. Reimbursement will be made only for pre-approved travel, and will not include travel to and from work.

# Personal Automobile Use

For those drivers utilizing their personal vehicles on City business, the following requirements apply:

- 1. Must have a valid driver license in their state of residence, and meet the same MVR and accident criteria as drivers of City owned vehicles
- 2. Automobile liability and property damage insurance coverage must be maintained by the driver with at least \$300,000 underlying limits. The City must be provided with evidence of this insurance coverage, which clearly lists policy declarations and coverage limits
- 3. In case of an accident and subsequent claim, the coverage provided by the employee's personal insurance will apply first
- 4. The vehicle must be maintained in accordance with the same requirements as City vehicles
- 5. Drivers must comply with all applicable state laws and regulations
- 6. The City reserves the right to withdraw this privilege at any time

### **Color Options & Qty**

Oxford White (YZ) -T641 T642 <del>T643</del> T644 T645 T647 T648 T650 T651 T652 T653 T654 T655 T656 T657 T658 T659 T660 T661 T662 T663 T664 T665 T666 T667 T668 T669 T670 T671 T672 T673 T674 T675

Tax Exempt: N

| Vehicle Option | ns  |     |             |             |
|----------------|---|-----|-------------|-------------|
| Order Code     | Option Description  | Qty | Unit Price  | Ext. Price  |
| 2022-0825-001  | 2022 Ford Maverick (gas only), All-Wheel Drive, Crew Cab (W8F/100A)   | 1   | \$22,373.00 | \$22,373.00 |
| 2022-0825-002  | INFORMATION ONLY: Bud Clary Ford offers a \$300 Prompt Payment Discount if payment is received within 20 days of vehicle delivery.  | 1   | \$0.00      | \$0.00      |
| 2022-0825-003  | INFORMATION ONLY: Bud Clary Ford CARS Cancellation Fees: NO fee to cancel order if vehicle has not been scheduled for production and is able to be cancelled at factory. \$500 cancellation fee if vehicle has been serialized and is locked in for production by manufacturer. \$750 cancellation fee if vehicle has been delivered to customer and must be picked up by dealer and re-stocked into inventory. Absolutely NO cancellation if customer has licensed/registered vehicle. Upfits/Equipment ordered for vans, trucks, chassis cabs and police/fire vehicles will have a 10-30% re-stocking fee; custom bodies cannot be cancelled. | 1   | \$0.00      | \$0.00      |
| 2022-0825-010  | 2022 Ford Maverick (gas only), Intelligent All-Wheel Drive, Crew Cab, 4 1/2 ft Box, 2.0L EcoBoost DOHC, Ti-VCT, 250 HP @5500 rpm, 277 lb-ft TQ at 3000 rpm, 8-Speed Automatic Transmission, P225/65R 17in All-Season BSW Tires, 17in Sparkle Silver-painted steel wheels, full-size spare tire (W8F/100A/999/448/121WB/TT9W/51D) This is the BASE Vehicle, please refer to Vehicle Standard Specifications for complete description.  | 1   | \$0.00      | \$0.00      |
| 2022-0825-011  | 4K Tow Package (includes 225/65R17 All-Terrain Tires #T7J, trailer hitch receiver w/ 7-pin connector, transmission oil cooler, higher capacity radiator, upgraded cooling fan, upgraded drive ratio) (53Q)  | 1   | \$728.00    | \$728.00    |
| 2022-0825-015  | Power 8-Way Driver Seat (90K)   | 1   | \$279.00    | \$279.00    |
| 2022-0825-205  | Spray-In Bedliner (Line-X) (DLR)  | 1   | \$475.00    | \$475.00    |
| 2022-0825-201  | Floor Mats, HD Rubber Molded, Front (Weather Tech) (DLR)  | 1   | \$120.00    | \$120.00    |
| 2022-0825-202  | Floor Mats, HD Rubber Molded, Rear (Weather Tech) (DLR)   | 1   | \$100.00    | \$100.00    |
| 2022-0825-230  | Stock Vehicle Upcharge (Call Dealer for Availability) (DLR)   | 1   | \$250.00    | \$250.00    |
| Quote Totals   |   |     |             |             |

| Tota  | l Vehicles: | 1           |
|-------|-------------|-------------|
|       | Sub Total:  | \$24,325.00 |
| 8.4 % | Sales Tax:  | \$2043.30   |
| Qu    | ote Total:  | \$26,368.30 |

CARS standard specifications page: https://apps.des.wa.gov/CARS/VehicleSpecifications.aspx?id=1898



The Automation Group, Inc. www.tag-inc.us CCB #172838 Phone: 541-359-3755

> Quote #221129G Nov. 29, 2022

Sue Lawrence Public Works Director

RE: Rainier WTP - PLC Upgrade

#### Project Scope:

TAG is providing a Quote to Upgrade the PLC, Power Supplies and Ethernet Switch. Below is list of items that are included.

#### Materials:

- Main Processor 1769-L33ER
- (2) 5 Amp 24vdc Power Supplies
- 12 Port Stratix Ethernet Switch (replaces existing Stratix 8000)
- Dream Reports 50 TAG

#### <u>Tasks:</u>

- Install all above items
- Move logic from Data Concentrator micro 1100 to the compact and add a switch between the radio for IGMP Snooping as the radios are in bridge mode.
- Upgrade switch at the bottom of the PLC enclosure for Water Plant connections and move to the enclosure to the left and clean up ethernet cabling. Move any other device (IT) as necessary to clean up the PLC enclosure.
- Upgrade PLC program and install the new PLC CPU
- Place the existing PLC software in a support contract to upgrade to the latest version to be installed on the new Windows 10 OS and update PLC Firmware to latest Ver 33
- Install Dream Reports software and create reports (2 Days included, additional days/time will be T&M)
- Onsite Startup and follow-up day for tuning and misc. tasks

#### Clarification/Exclusions:

- TAG's Labor Pricing is not affected by the National Supply Chain Shortages but due to Vendors rapidly increasing material prices, we may need to reprice some materials at time of order.
- Lead Times for specific materials are very unpredictable at this time and cannot be verified until orders are placed. We are also seeing some items slipping from the predicted delivery dates after order by a few weeks and also seeing some items showing up early. TAG will track progress on orders and provide updates.

Price.....\$38,302.00

Thank you,

Gary Jenks Gary Jenks (541) 912-3766 gjenks@tag-inc.us

TAG standard terms apply



The Automation Group, Inc. www.tag-inc.us CCB #172838 Phone: 541-359-3755

> Quote #220326Gr1 Nov. 29, 2022

Sue Lawrence Public Works Director

RE: Rainier WWTP - SCADA & PLC Upgrade r1

### Project Scope:

TAG is providing a Quote to Upgrade the SCADA System, PLC System including Cards. Below is list of items that are included.

### Materials:

- Dell SCADA PC RAID 5 Precision 5820 Tower
  - o Intel Xeon Processor W-2223 (4C 3.6GHz 3.9GHz Turbo HT 8.25MB 120W DDR4-2666)
  - Windows 10 Pro for Workstations
  - Nvidia T400, 2GB, 3 mDP to DP adapter (Precision xx20T, R3930, 3650T)
  - o 16GB 2x8GB DDR4 2933MHz RDIMM ECC Memory
  - 2x MegaRAID 9460-16i 12Gb/s PCIe RAID controller (4GB cache) with 1-2 Front FlexBay NVMe PCIe Drives
  - o MegaRAID SAS 9460-16i 12Gb/s PCIe SATA/SAS HW RAID controller (4GB cache)
  - 4x M.2 1TB PCIe NVMe Class 40 Solid State Drive
- PLC System
  - Compact L33ER PLC System
  - Digital I/O cards to replicate the existing ones
  - Analog I/O cards to replicate the existing ones
  - Rack extensions
- FTView Studio for SCADA Development (Wonderware Lic Trade-in for reduced cost)
- FTView Station 100 Display SCADA (Wonderware Lic Trade-in for reduced cost)
- New Compact 5000 Lite PLC Software
- Upgrade Win911 Alarm Software Dialer (Adder for Win911 Mobile)
- Grandstream Modem for Win911
- FT A&E Server for Win911
- Sensaphone 400 Backup Dialer
- Dream Reports 50 TAG

#### Tasks:

- Install all above items
- Build New SCADA Screens to match WTP upgraded modern look
- Upgrade PLC program and install the new PLC System
- Install Sensaphone Auto dialer as a 4-channel backup dialer and install
- Dialer Programming
- Install Dream Reports software and create reports (2 Days included, additional days/time will be T&M)



- Onsite Startup and follow-up day for tuning and misc. tasks
- Install/Upgrade Win911 and setup Alarms

#### Clarification/Exclusions:

- TAG's Labor Pricing is not affected by the National Supply Chain Shortages but due to Vendors rapidly increasing material prices, we may need to reprice some materials at time of order.
- Lead Times for specific materials are very unpredictable at this time and cannot be verified until orders are placed. We are also seeing some items slipping from the predicted delivery dates after order by a few weeks and also seeing some items showing up early. TAG will track progress on orders and provide updates.

Price.....\$70,340.00 Adder #1 Win911 Mobile including setup......\$1,900.00

Thank you,

Gary Jenks Gary Jenks (541) 912-3766 gjenks@tag-inc.us

TAG standard terms apply



> LOC Training Calendar (https://www.orcities.org/education/training/loc-training-calendar) > City Day at the Capitol



Event information will be emailed to registered attendees at the email address used for registration.

The LOC invites *current* elected and appointed city officials to join mayors, city councilors, and city staff members for our City Day at the Capitol on January 25, 2023 starting at 8 a.m. in Salem. This event is your chance to stand with other city officials from around Oregon in support of legislative actions that will return greater local authority over local decisions. It is also the time to let legislators know how actions they take could impact our communities and the difficult decisions we make. By coming together, our collective voices will make a difference to advance our legislative agenda.

Highlights of City Day at the Capitol will include presentations from the LOC's government relations team on legislative priorities, and briefings from Oregon's new governor and legislative leadership about their priorities for the 2023 session. You will also have time for individual visits with your legislators, afternoon seminars and a legislative reception with legislators and staff. We expect nearly 200 people to attend.

The most important part of the day will be your individual visits with legislators. The LOC will provide transportation to the Capitol. You are encouraged to schedule your visits with your state Senators and Representatives during the afternoon (1 p.m. - 4:15 p.m.). More information on scheduling visits will be provided with your registration confirmation.

The Legislative Reception will be held that evening from 4:30 p.m. - 7 p.m. at the Salem Convention Center.

Registration for City Day at the Capitol is due by 5 p.m. on Thursday, January 19.

## **Preliminary Agenda**

#### 8 a.m. - 1 p.m. - GENERAL SESSION

Invited Speakers:

- Oregon Governor Tina Kotek
- Senate President
- Senate Republican Leader
- Speaker of the House
- House Republican Leader

1. Welcome from LOC Board President and OMA President

- 2. Messages from LOC Executive and Legislative Directors
- 3. Legislative Landscape
- 4. Capitol Construction Process
- 5. Working with Legislative Staff Paperless Offices
- 6. LOC Legislative Priorities

#### 12 p.m. - 5 p.m. - AFTERNOON ACTIVITIES

- Boxed lunches available at Salem Convention Center
- Shuttle bus to Capitol for scheduled legislative visits and Local Government Center leaves every 15 minutes.
- Meeting space available at Local Government Center.
- State agency tables at Salem Convention Center

#### 4:30 p.m. - 7 p.m. - RECEPTION

· Legislative Reception

# Register Here (https://imis.orcities.org/LOC/LOC/Event\_Display.aspx? EventKey=CITYDAY22)

# **Hotel Information**

#### Hampton Inn & Suites

#### 510 Hawthorne Ave SE Salem, OR 97301

Each guest must make their own reservations by calling (503) 362-1300 or using this booking link (file:///C:/Users/mdablow/AppData/Local/Microsoft/Windows/INetCache/Content.Outlook/D2T9LU2Q/Booking%20Link: ctyhocn=SLEORHX&groupCode=CHHLOC&arrivaldate=2023-01-24&departuredate=2023-01-26&cid=OM,WW,HILTONLINK,EN,DirectLink&fromId=HILTONLINKDIRECT) by 01/10/2023. They must identify themselves as members of the League of Oregon Cities, City Day. All reservations must be guaranteed and accompanied by a first night room deposit or guaranteed with a major credit card.

Room rates - \$139/night plus taxes and fees.

Best Western Plus Mill Creek Inn 3125 Ryan Dr SE Salem, OR 97301 Each individual must make their own reservations by calling (503) 585-3332 by 12/23/2022. They must identify themselves as members of the League of Oregon Cities, City Day. All reservations must be guaranteed and accompanied by a first night room deposit or guaranteed with a major credit card.

Room rates - \$98/night plus taxes and fees.

Both satellite hotels are about 3 miles from the Salem Convention Center. Parking is available both at Salem Convention Center and their overflow Pringle parking lot.

# **Available Sessions**

| Title                           | Location  | Date     | Time              | Cost | LGMC | Actions    |
|---------------------------------|---|----------|-------------------|------|------|------------|
| 2023 City Day at the<br>Capitol | Salem Convention Center<br>200 Commercial St SE<br>Salem OR 97301 | 01/25/23 | 8:00 AM - 7:00 PM |      |      | Register > |

view the LOC Training Calendar >

# Webinars Available Anytime

Watch recorded webinars hosted by the LOC on topics including the American Rescue Plan, broadband, social media, transportation funding, shelter and homelessness, and more.

Watch now on LOC's YouTube channel (>)

# Find It Fast

Use these convenient quick links:

- Contact Us (https://www.orcities.org/contact)
- Staff Directory (https://www.orcities.org/about/who-we-are/staff-directory)
- Topics A-Z (https://www.orcities.org/resources/reference/topics-z)
- City Directory (https://www.orcities.org/resources/reference/city-directory)
- Jobs Board (https://www.orcities.org/resources/programs-and-services/government-jobs)
- · Cities in the News (https://www.orcities.org/about/news)
- Training and Workshops (https://www.orcities.org/education/training)
- Calendar (https://www.orcities.org/resources/calendar)

# Stay Informed







# City Administrator Report December 5, 2022 Rainier Council Meeting

Mayor Cole and Members of the Council,

On November 1, me and the city's contract Planner, Skip Urling, met with representatives of the Oregon Department of Land Conservation and Development about specific steps and processes to do an Urban Growth Boundary (UGB) land swap.

The following day, I met with Mike Sykes from the Columbia Public Utility District. I addressed Friends of Fox Creek at their meeting that evening.

I attended a library board meeting November 4 and met with representatives of the Rainier Drainage Improvement Corporation.

November 8, I participated in a meeting about potential grant funding streams for the Fox Creek project and another meeting regarding housing issues and opportunities. I conducted election duties that night.

I represented the city at meetings of the Col-Pac board of directors and the Northwest Area Commission on Transportation November 10 at the Portland Community College Oregon Manufacturing Innovation Center in Scappoose.

On November 15, I provided some assistance in obtaining documents for the city's annual audit and coordinated the release of the library survey. I attended a Rainier Chamber of Commerce board meeting the following day and met with Col-Pac's new grant coordinator.

I met with the Columbia County Assessor's Office November 17 to update mapping for the potential UGB land swap. That afternoon, I attended a meeting of the Rainier Oregon Historical Museum board of directors to update its members on the downtown historical banner beautification project.

Councilor Cooper and I did our monthly lunch at the senior center on November 18.

On November 21, I spoke with Columbia County Commissioner Casey Garrett and did a followup with DLCD on the land swap.

Sincerely,

W. Scott Jorgensen, Executive MPA City Administrator

# FINANCIAL REPORT

# FOR THE YEAR ENDED JUNE 30, 2022



12700 SW 72<sup>nd</sup> Ave. Tigard, OR 97223

# MODIFIED CASH BASIS BASIC FINANCIAL STATEMENTS

# FOR THE YEAR ENDED JUNE 30, 2022

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### 2021-2022 COUNCIL MEMBERS AND OFFICERS

| <u>CITY COUNCIL</u>             | TERM EXPIRES      |
|---------------------------------|-------------------|
| Jerry Cole - Mayor              | December 31, 2022 |
| Mike Kreger – Council President | December 31, 2024 |
| Connie Budge                    | December 31, 2022 |
| Jeremy Howell                   | December 31, 2022 |
| Robert DuPlessis                | December 31, 2022 |
| Scott Cooper                    | December 31, 2022 |
| Denise Watson                   | December 31, 2024 |
| Levi Richardson                 | December 31, 2024 |

Council members receive mail at the address listed below.

# **OFFICIALS**

W. Scott Jorgenson, City Administrator/Finance Director/Recorder P.O. Box 100 Rainier, Oregon 97048

### CITY ATTORNEY

Stephen D. Petersen, P.C. P.O. Box 459 Rainier, Oregon 97048

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## CITY OF RAINIER COLUMBIA COUNTY, OREGON MANAGEMENT'S DISCUSSION AND ANALYSIS (MD&A)

This section of the City of Rainier's annual financial report presents our discussion and analysis of the City's financial performance during the fiscal year ended June 30, 2022. Please read it in conjunction with the City's financial statements and notes, which follow this section.

# FINANCIAL HIGHLIGHTS

• The City's total net position was \$7,281,340 at June 30, 2022.

# OVERVIEW OF THE FINANCIAL STATEMENTS

This annual report is prepared by the City using the concepts in the Governmental Accounting Standards Board Statement No. 34 (GASB 34), which sets reporting standards for governmental units under generally accepted accounting principles (GAAP). However, the City's statements are not prepared under GAAP, but have been prepared on the modified cash basis of accounting described in Note 1 to the basic financial statements. Accordingly, the City's basic financial statements do not include all of the statements, reconciliations and disclosures that would normally be required.

Management has determined that the modified cash basis of accounting is appropriate for the City due to its lack of complexity and the necessity to account for, and plan for, the cash needed to operate the City.

This annual report consists of five parts: management's discussion and analysis (this section), the basic financial statements, required supplementary information, supplementary information, and other information. The basic financial statements include two kinds of statements that present different views of the City:

- The first two statements are *government-wide financial statements* that provide information about the City's overall financial status.
- The remaining statements are *fund financial statements* that focus on *individual parts* of the government, reporting the City's operations in more detail than the government-wide statements. *The governmental funds* statements tell how *general government* services were financed in the *short term* as well as what remains for future spending.

The basic financial statements also include notes that explain some of the information in the financial statements and provide more detailed data. The statements are followed by a section of *required supplementary information* that further explains and supports the information in the basic financial statements. The remainder of this overview section of management's discussion and analysis explains the structure and contents of each of the statements.

#### **Government-wide Statements**

The City provides "governmental activities" as defined in GASB 34, and has substantial business-type activities. The City has a total of eleven funds. Eight of the funds are classified as governmental funds. Three of these are considered major funds, while the other five are deemed minor funds. The three remaining funds are classified as enterprise funds.

### **Fund Financial Statements**

The fund financial statements provide more detailed information about the City's most significant *funds* - not the City as a whole. Funds are accounting devices that the City uses to keep track of specific sources of funding and spending for particular purposes.

Most of the City's basic services are included in governmental funds, which focus on (1) how *cash and other financial assets* that can readily be converted to cash flow in and out and (2) the balances left at year-end that are available for spending. Consequently, the governmental fund statements provide a detailed *short-term* view that helps you determine whether there are more or fewer financial resources that can be spent in the near future to finance the City's programs. Because this information does not encompass the additional long-term focus of the government-wide statements, we provide additional information at the bottom of the governmental funds statement, or on the subsequent page, that explain the relationship (or differences) between them.

## FINANCIAL ANALYSIS OF THE CITY AS A WHOLE

# GOVERNMENT-WIDE MODIFIED CASH BALANCES PRIMARY GOVERNMENT

|                               | 2021 |           | 2022         |
|-------------------------------|------|-----------|--------------|
| ASSETS:                       |      |           |              |
| Cash and Investments          | \$   | 6,667,341 | \$ 7,345,233 |
| Property Taxes Receivable     |      | 75,304    | 73,351       |
| Total Assets                  |      | 6,742,645 | 7,418,584    |
| LIABILITIES                   |      |           |              |
| Accrued Compensated Absences  |      | 66,722    | 63,893       |
| Payroll Liabilities           |      | -         | -            |
| Total Liabilities             |      | 66,722    | 63,893       |
| DEFERRED INFLOW OF RESOURCES: |      |           |              |
| Deferred Revenue              |      | 75,342    | 73,351       |
| NET POSITION                  |      |           |              |
| Unrestricted                  |      | 4,429,750 | 5,950,915    |
| Restricted                    |      | 2,170,831 | 1,330,425    |
| Total Net Position            | \$   | 6,600,581 | 7,281,340    |

# CHANGES IN MODIFIED CASH BASIS NET POSITION

|  | 2021         | 2022      |
|--|--------------|-----------|
| RECEIPTS:                              |              |           |
| Charges for Services and Contributions |              |           |
| Governmental Activities                | \$ 315,772   | 313,907   |
| Business-Type Activities:              |              |           |
| Water                                  | 1,030,474    | 934,110   |
| Sewer                                  | 1,030,344    | 1,113,203 |
| Timber                                 | 135,882      | 514,494   |
| General Revenues                       |              |           |
| Property Tax                           | 1,647,183    | 1,062,225 |
| Other Taxes/Fees                       | 124,573      | 99,339    |
| Operating Grants                       | 142,992      | 168,862   |
| Interest                               | 43,814       | 39,212    |
| Miscellaneous/Other                    | 1,266,430    | 1,015,092 |
| Total Receipts                         | 5,737,464    | 5,260,444 |
| DISBURSEMENTS:                         |              |           |
| Governmental Activities:               |              |           |
| General Government                     | 72,846       | 90,106    |
| City Building and Maintenance          | 9,776        | 4,604     |
| Land Use and Development               | 21,056       | 22,472    |
| Library                                | 49,073       | 64,455    |
| Attorney                               | 7,476        | 8,674     |
| Finance & Administration               | 44,648       | 45,489    |
| Municipal Court                        | 50,614       | 52,989    |
| Public Properties                      | 95,369       | 146,766   |
| Police Department                      | 800,679      | 760,696   |
| Street                                 | 184,605      | 164,440   |
| Library Trust                          | 7,445        | 8,537     |
| Capital Outlay                         | 822,224      | 1,395,768 |
| Debt Service Payment                   | 924,252      | 929,373   |
| Special Projects                       | -            | -         |
| Business-Type Activities:              |              |           |
| Water                                  | 598,314      | 648,628   |
| Sewer                                  | 687,086      | 741,198   |
| Timber                                 | 46,880       | 62,078    |
| Total Disbursements                    | 4,422,343    | 5,146,273 |
| Beginning Net Position                 | 5,315,544    | 6,630,665 |
| Change in Net Position                 | 627,762      | 650,675   |
| Ending Net Position                    | \$ 5,315,544 | 7,281,340 |

The main sources of revenue are property tax receipts, user fees, and project related grants and timber proceeds. The main disbursements include public safety, water and sewer utilities, street maintenance, and special projects.

# FINANCIAL ANALYSIS OF THE CITY'S FUNDS

Governmental fund balances totaled \$4,807,627 at June 31, 2022. A summary of changes in governmental fund balances follows:

|                             | Jı | une 30, 2021<br>2021   | June 30, 2022<br>2022        | Change                  |  |  |
|-----------------------------|----|------------------------|------------------------------|-------------------------|--|--|
| General Fund<br>Other Funds | \$ | 2,164,940<br>2,175,871 | \$<br>2,177,172<br>2,630,455 | \$<br>12,232<br>454,584 |  |  |
| Total                       | \$ | 4,340,811              | \$<br>4,807,627              | \$<br>466,816           |  |  |

## CHANGES IN GOVERNMENTAL FUND BALANCES

# CAPITAL ASSETS

The City does not have information available regarding the City's capital assets or depreciation.

## LONG TERM DEBT

The City's Long Term Debt associated with the City's capital assets is not disclosed in the Basic Financial Statements because the City is on the modified cash basis of accounting.

# CONTACTING THE CITY'S FINANCIAL MANAGEMENT

Our financial report is designed to provide our taxpayers, ratepayers, investors and creditors with an overview of the City's finances. If you have any questions about this report or need any clarification of information please contact the City of Rainier. Our address is: PO Box 100, Rainier, OR 97048.

### STATEMENT OF NET POSITION - MODIFIED CASH BASIS June 30, 2022

|   | PRIMARY GOVERNMENT |   |                  |                          |        |   | CON   | COMPONENT   |  |
|---|--------------------|---|------------------|--------------------------|--------|---|---|---|--|
|   | GOVERNMENTAL       |   | BUSINESS<br>TYPE |                          | TOTAL  |   | UNIT<br>(UNAUDITED)   |   |  |
| ASSETS  |                    |   |                  |                          | _      |   |   |   |  |
| Cash and Investments<br>Property Tax Receivable   | \$                 | 4,756,686<br>50,941   | \$               | 2,588,547<br>22,410      | \$<br> | 7,345,233<br>73,351   | \$  | 670,111<br>12,430   |  |
| Total Assets  |                    | 4,807,627   | <u></u>          | 2,610,957                |        | 7,418,584   |   | 682,541   |  |
| LIABILITIES   |                    |   |                  |                          |        |   |   |   |  |
| Accrued Compensated Absences  | <del></del>        | 63,893  |                  | -                        |        | 63,893  | 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 | -   |  |
| Total Liabilities   |                    | 63,893  |                  |                          |        | 63,893  |   | -   |  |
| DEFERRED INFLOW OF RESOURCES  |                    |   |                  |                          |        |   |   |   |  |
| Unavailable Property Tax Revenue  |                    | 50,941  | <u></u>          | 22,410                   |        | 73,351  | <u></u>   | 12,430  |  |
| Total Deferred Inflows of Resources   |                    | 50,941  |                  | 22,410                   |        | 73,351  |   | 12,430  |  |
| NET POSITION:   |                    |   |                  |                          |        |   |   |   |  |
| Restricted for:<br>Grants<br>Street<br>Library<br>Debt Service<br>SDC Charges<br>Special Projects<br>Unrestricted |                    | 16,794<br>221,666<br>88,908<br>364,096<br>353,547<br>285,414<br>3,362,368 |                  | -<br>-<br>-<br>2,588,547 |        | 16,794<br>221,666<br>88,908<br>364,096<br>353,547<br>285,414<br>5,950,915 | <u></u>   | -<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>- |  |
| Total Net Position  | \$                 | 4,692,793   | \$               | 2,588,547                | \$     | 7,281,340   | \$  | 670,111   |  |

# STATEMENT OF ACTIVITIES - MODIFIED CASH BASIS For the year ended June 30, 2022

|   |            | Program Cash Receipts |                         | Net Receipts (Disbursements) and Changes in Net Position |               |              |                     |  |
|---|------------|-----------------------|-------------------------|--|---------------|--------------|---------------------|--|
|   | Cash       | Charges               | Operating<br>Grants and | Governmental   | Business-Type | Total        | Component Unit      |  |
| Dis   | bursements | For Services          | Contributions           | Activities   | Activities    | 1000         | (Official delivery) |  |
| Functions/Programs                                      |            |                       |                         |  |               |              |                     |  |
| General Government \$                                   | 90 106     | s -                   | s -                     | \$ (90,106)  | \$-           | \$ (90,106)  | \$-                 |  |
| City Puilding and Maintenance                           | 4 604      | -                     | -                       | (4,604)  | -             | (4,604)      | -                   |  |
| Land Use and Development                                | 22 472     | 4 282                 | -                       | (18,190)   | -             | (18,190)     | -                   |  |
| Land Ose and Development                                | 64 455     | 851                   | 10 698                  | (52,906)   | -             | (52,906)     | -                   |  |
| Atternet  | 8 674      | -                     |                         | (8.674)  | -             | (8,674)      | -                   |  |
| Finance & Administration                                | 45 489     | 151 279               | -                       | 105,790  | -             | 105,790      | -                   |  |
| Municipal Court   | 52 080     | 59 579                | -                       | 6.590  | -             | 6,590        | -                   |  |
| Public Demonstrate                                      | 146 766    | 97,916                | -                       | (48,850)   | -             | (48,850)     | -                   |  |
| Public Properties                                       | 760 606    | 57,570                | 4 380                   | (756 316)  | -             | (756,316)    | -                   |  |
| Police Department                                       | 164 440    |                       | 153 784                 | (10,656)   | -             | (10,656)     | -                   |  |
| Street  | 104,440    |                       | 155,704                 | (10,050)   | -             | -            | -                   |  |
| Special Projects  | 0 5 2 7    |                       | -                       | (8 537)  | -             | (8,537)      | -                   |  |
| Library Irust   | 1 205 769  | -                     |                         | (1 395 768)  | -             | (1.395.768)  | -                   |  |
| Capital Outlay  | 1,393,708  | -                     |                         | (929 373)  | -             | (929.373)    | -                   |  |
| Debt Service Payments                                   | 929,373    |                       |                         | (929,515)  |               | (12),0107    |                     |  |
| Total Governmental Activities                           | 3,694,369  | 313,907               | 168,862                 | (3,211,600)  | -             | (3,211,600)  |                     |  |
| Business-Type Activities                                |            |                       |                         |  |               |              |                     |  |
| Water   | 648.628    | 934,110               | -                       | -  | 285,482       | 285,482      | -                   |  |
| Server  | 741,198    | 1,113,203             | -                       | -  | 372,005       | 372,005      | -                   |  |
| Timber  | 62,078     | 514,494               |                         |  | 452,416       | 452,416      |                     |  |
| Total Business Activities                               | 1,451,904  | 2,561,807             |                         |  | 1,109,903     | 1,109,903    |                     |  |
| Total Primary Government                                | 5,146,273  | <u>\$ 2,875,714</u>   | \$ 168,862              | (3,211,600)  | 1,109,903     | (2,101,697)  |                     |  |
|   |            |                       |                         |  |               |              |                     |  |
| Component Unit<br>Rainer Economic Development Council § | 292,950    | <u> </u>              | <u> </u>                |  |               | -            | (292,950)           |  |
|   |            |                       |                         |  |               |              |                     |  |
|   |            | Demonstra Terres      | Conoral Fund            | 1 062 225  | -             | 1 062 225    | 285.807             |  |
|   |            | Property Taxes -      | Street Fund             | 115 448  | -             | 115 448      |                     |  |
|   |            | Property Taxes -      | Succi rund              | 115,446  | 493 126       | 493 126      | -                   |  |
|   |            | Property Taxes -      | Sewer Fund              | 203  | 475,120       | 203          | -                   |  |
|   |            | Interest on Deng      | uent raxes              | 203  | _             | 29           | -                   |  |
|   |            | Other Toyon           | moursements             | 00 330   | -             | 99 339       | -                   |  |
|   |            | Other Taxes           |                         | 30,337   | _             | 39 212       | 3.567               |  |
|   |            | Interest              |                         | 005 080  | 19 103        | 1 015 092    | 3.623               |  |
|   |            | Loss on Fair Mai      | ket Value of            | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,                  | 17,105        | 1,010,075    | -,                  |  |
|   |            | Loss on ran Man       | Ket value of            | (72,302)   | -             | (72,302)     | -                   |  |
|   |            | Transfers (net)       |                         | 1,441,614  | (1,441,614)   |              |                     |  |
|   |            | Total General Re      | ceipts and Transfers    | 3,681,757  | (929,385)     | 2,752,372    | 292,997             |  |
|   |            | Change in Net         | Position                | 470,157  | 180,518       | 650,675      | 47                  |  |
|   |            | Beginning Net P       | osition                 | 4,222,636  | 2,408,029     | 6,630,665    | 670,064             |  |
|   |            | Ending Net Posi       | ion                     | \$ 4,692,793   | \$ 2,588,547  | \$ 7,281,340 | \$ 670,111          |  |

# BALANCE SHEET - MODIFIED CASH BASIS GOVERNMENTAL FUNDS June 30, 2022

|                      | GENERAL<br>FUND | DEBT<br>SERVICE<br>FUND | STREET<br>FUND | SPECIAL<br>PROJECT<br>FUND |
|----------------------|-----------------|-------------------------|----------------|----------------------------|
| ASSETS:              |                 |                         |                |                            |
| Cash and Investments | \$ 2,131,225    | \$ 364,096              | \$ 221,666     | \$ 285,414                 |
| Taxes Receivable     | 45,947          | -                       | 4,994          | _                          |
| Total Assets         | \$ 2,177,172    | \$ 364,096              | \$ 226,660     | \$ 285,414                 |

DEFERRED INFLOWS OF RESOURCES AND FUND BALANCES:

| \$ 45,947   | <u>\$</u>  | \$ 4,994   | <u>q</u>  |
|-------------|--|--|---|
| 45,947      |  | 4,994  |   |
|             |  |  |   |
|             |  |  |   |
| 16,794      | -  | -  | -   |
| -           | -  | 221,666  | -   |
| -           | -  | -  | -   |
| -           | 364,096  | -  | -   |
| -           | -  | -  | -   |
| -           | -  | -  | 285,414   |
| 2,114,431   |  |  |   |
| 2,131,225   | 364,096  | 221,666  | 285,414   |
| \$2,177,172 | \$ 364,096   | \$ 226,660   | \$ 285,414  |
|             | \$ 45,947   45,947   16,794   -   -   2,114,431   2,131,225   \$ 2,177,172 | \$ 45,947 \$ -   45,947 - -   16,794 - -   - - -   - 364,096 -   2,114,431 - -   2,131,225 364,096 -   \$ 2,177,172 \$ 364,096 | $\begin{array}{c ccccccccccccccccccccccccccccccccccc$ |

(continued on 3B)

### BALANCE SHEET - MODIFIED CASH BASIS GOVERNMENTAL FUNDS June 30, 2022

| C<br>IMPI | WATER<br>CAPITAL<br>ROVEMENT | C<br>IMPI | SEWER<br>CAPITAL<br>ROVEMENT | NC | N-MAJOR<br>FUNDS |    | TOTAL     |
|-----------|------------------------------|-----------|------------------------------|----|------------------|----|-----------|
| \$        | 357 303                      | \$        | 954 527 \$                   |    | 442.455          | \$ | 4,756,686 |
| φ         | -                            | Ψ         | -                            |    |                  | ·  | 50,941    |
| \$        | 357,303                      | \$        | 954,527 \$                   |    | 442,455          | \$ | 4,807,627 |
|           |                              |           |                              |    |                  |    |           |
| \$        | -                            | \$        | - \$                         | 5  | -                | \$ | 50,941    |
|           |                              |           |                              |    | -                |    | 50,941    |
|           |                              |           |                              |    |                  |    |           |
|           | -                            |           | -                            |    | -                |    | 16,794    |
|           | -                            |           | -                            |    | -                |    | 221,666   |
|           | -                            |           | -                            |    | 88,908           |    | 88,908    |
|           | -                            |           | -                            |    | -                |    | 364,096   |
|           | 357,303                      |           | 954,527                      |    | 353,547          |    | 1,665,377 |
|           | -                            |           | -                            |    | -                |    | 285,414   |
|           | -                            |           |                              |    |                  |    | 2,114,451 |
|           | 357,303                      |           | 954,527                      |    | 442,455          |    | 4,756,686 |
|           |                              |           |                              |    |                  |    |           |
| \$        | 357,303                      | \$        | 954,527 \$                   | 5  | 442,455          | \$ | 4,807,627 |

(continued from 3A)

## **Reconciliation of the Governmental Funds**

Balance Sheet - Modified Cash Basis to the Statement of Net Position - Modified Cash Basis

June 30, 2022

| Total Fund Balances - Governmental Funds  | \$        | 4,756,686 |
|---|-----------|-----------|
| Liabilities applicable to the governmental activities are not due and payable in the current period and accordingly are not reported as fund liabilities. All liabilities, both current and long term, are reported in the Statement of Net Position. |           |           |
| Liabilities<br>Accrued Compensated Absences   |           | (63,893)  |
| Net Position  | <u>\$</u> | 4,692,793 |
#### STATEMENT OF RECEIPTS, DISBURSEMENTS AND CHANGES IN FUND BALANCES - MODIFIED CASH BASIS GOVERNMENTAL FUNDS For the year ended June 30, 2022

|  |       | GENERAL<br>FUND |    | DEBT<br>SERVICE<br>FUND                 |             | STREET<br>FUND | SPE<br>PRC<br>FU | CIAL<br>DJECT<br>JND |
|--|-------|-----------------|----|---|-------------|----------------|------------------|----------------------|
| RECEIPTS:                                      | ••••• |                 |    |   |             |                |                  |                      |
| Current Property Taxes                         | \$    | 1,035,172       | \$ | -                                       | \$          | 112,507        | \$               | -                    |
| Prior Property Taxes                           |       | 27,053          |    | -                                       |             | 2,941          |                  | -                    |
| Interest on Delinquent Taxes                   |       | 203             |    | -                                       |             | -              |                  | -                    |
| Property Tax Reimbursement                     |       | 29              |    | -                                       |             | -              |                  | -                    |
| Other State Taxes                              |       | 61,558          |    | -                                       |             | -              |                  | -                    |
| State Liquor Taxes                             |       | 36,127          |    | -                                       |             | -              |                  | -                    |
| State Cigarette Taxes                          |       | 1,654           |    | -                                       |             | -              |                  | -                    |
| State Marine Board                             |       | 3,700           |    | ~                                       |             | -              |                  | -                    |
| Boating Fees                                   |       | 72,947          |    | -                                       |             | -              |                  | -                    |
| Grants   |       | 10,698          |    | -                                       |             | -              |                  | 179,632              |
| Municipal Court Fines                          |       | 59,579          |    | -                                       |             | -              |                  | -                    |
| Fees and Permits                               |       | 156,412         |    | -                                       |             | -              |                  | -                    |
| State Revenue Sharing                          |       | 26,584          |    | -                                       |             | -              |                  | -                    |
| State Street Allotment                         |       | -               |    | -                                       |             | 153,784        |                  | -                    |
| Mineral Royalties                              |       | 20,790          |    | -                                       |             | -              |                  | -                    |
| Leases   |       | 24,969          |    | -                                       |             | , <b>-</b>     |                  | -                    |
| Library Donations                              |       | 100             |    | -                                       |             | -              |                  | -                    |
| Interest                                       |       | 38,587          |    | -                                       |             | -              |                  | -                    |
| Vehicle Impoundment                            |       | 75              |    | -                                       |             | -              |                  | -                    |
| Police Training & USDOJ                        |       | 4,380           |    | -                                       |             | -              |                  | -                    |
| Administrative Support                         |       | 7,363           |    | -                                       |             | -              |                  | -                    |
| Federal Infrastructure Aid                     |       | -               |    | -                                       |             | -              |                  | -                    |
| System Development Charges                     |       | -               |    | -                                       |             | -              |                  | -                    |
| WTP Insurance Reimbursement                    |       | -               |    | -                                       |             | -              |                  | -                    |
| Miscellaneous                                  |       | 43.973          |    | -                                       |             | 1,846          |                  | -                    |
| 1 mboonario as                                 |       |                 |    |   |             |                |                  |                      |
| Total Receipts                                 |       | 1,631,953       |    | -                                       |             | 271,078        |                  | 179,632              |
| DISBURSEMENTS                                  |       |                 |    |   |             |                |                  |                      |
| Personnel Services                             |       | 973.568         |    | -                                       |             | 70,155         |                  | -                    |
| Materials and Services                         |       | 225,163         |    | -                                       |             | 94,634         |                  | -                    |
| Capital Outlay                                 |       | 99,419          |    | -                                       |             | -              |                  | 273,111              |
| Debt Service                                   |       | -               |    | 929,373                                 |             | -              |                  | -                    |
| Total Disbursements                            |       | 1 298 150       | -  | 929 373                                 |             | 164 789        |                  | 273 111              |
| Total Disbursements                            |       | 1,290,190       |    | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, |             | 101,709        |                  |                      |
| Excess of Receipts Over, (Under) Disbursements |       | 333,803         |    | (929,373)                               |             | 106,289        |                  | (93,479)             |
| Other Financing Sources, (Uses)                |       |                 |    |   |             |                |                  |                      |
| Loss on Fair Market Value of Investments       |       | (72,302)        |    | -                                       |             | -              |                  | -                    |
| Operating Transfers In                         |       | · · · ·         |    | 929,373                                 |             | -              |                  | 165,000              |
| Operating Transfers Out                        |       | (248,803)       |    | -                                       |             | (146,128)      |                  | -                    |
| 1 0  |       |                 | -  |   |             |                |                  |                      |
| Total Other Financing Sources, (Uses)          |       | (321,105)       |    | 929,373                                 |             | (146,128)      |                  | 165,000              |
| Net Change in Fund Balances                    |       | 12,698          |    | -                                       |             | (39,839)       |                  | 71,521               |
| Beginning Fund Balance                         |       | 2,118,527       |    | 364,096                                 | <del></del> | 261,505        |                  | 213,893              |
| Ending Fund Balance                            | \$    | 2,131,225       | \$ | 364,096                                 | \$          | 221,666        | \$               | 285,414              |

See accompanying notes to basic financial statements

#### STATEMENT OF RECEIPTS, DISBURSEMENTS AND CHANGES IN FUND BALANCES - MODIFIED CASH BASIS GOVERNMENTAL FUNDS For the year ended June 30, 2022

| WATER<br>CAPITAL<br>IMPROVEMENT | SEWER<br>CAPITAL<br>IMPROVEMENT | NON-MAJOR<br>FUNDS | TOTAL        |
|---------------------------------|---------------------------------|--------------------|--------------|
| ¢                               | ď                               | ۹                  | \$ 1 147 679 |
| \$ -                            | Þ -                             | .p                 | 29 994       |
| -                               |                                 | -                  | 203          |
| -                               |                                 | -                  | 29           |
|                                 | -                               | -                  | 61,558       |
| _                               | -                               | -                  | 36,127       |
| _                               | -                               | -                  | 1,654        |
| _                               | -                               | -                  | 3,700        |
| -                               | -                               | · _                | 72,947       |
| -                               | -                               | 150,000            | 340,330      |
| -                               | -                               | -<br>-             | 59,579       |
| -                               | -                               | -                  | 156,412      |
| -                               | -                               | -                  | 26,584       |
| -                               | -                               | -                  | 153,784      |
| -                               | -                               | -                  | 20,790       |
| -                               | -                               | -                  | 24,969       |
| -                               | -                               | -                  | 100          |
| -                               | -                               | 625                | 39,212       |
| -                               | -                               | -                  | 75           |
| -                               | -                               | -                  | 4,380        |
| -                               | -                               | -                  | 7,363        |
| 111 613                         | 111.612                         | -                  | 223,225      |
| 9 200                           | 26 450                          | -                  | 35,650       |
| 301.071                         |                                 | -                  | 301,071      |
|                                 | -                               | 1,980              | 47,799       |
| 421,884                         | 138,062                         | 152,605            | 2,795,214    |
|                                 |                                 |                    |              |
| -                               | -                               | -                  | 1,043,723    |
| -                               | -                               | 8,537              | 328,334      |
| 473,035                         | 181,379                         | 368,824            | 929,373      |
|                                 |                                 | 277.2(1            | 2 607 108    |
| 473,035                         | 181,379                         | 577,301            | 5,097,198    |
| (51,151)                        | (43,317)                        | (224,756)          | (901,984)    |
|                                 |                                 |                    | (73 203)     |
| -                               | -                               | -                  | (72,302)     |
| 350,045                         | 245,999                         | 146,128            | 1,830,343    |
| -                               | -                               |                    | (394,931)    |
| 350,045                         | 245,999                         | 146,128            | 1,369,312    |
| 298,894                         | 202,682                         | (78,628)           | 467,328      |
| 58,409                          | 751,845                         | 521,083            | 4,289,358    |
| \$ 357,303                      | \$ 954,527                      | \$ 442,455         | \$ 4,756,686 |

See accompanying notes to basic financial statements

# Reconciliation of the Governmental Funds Statement of Receipts, Disbursements, and Changes in Fund Balances - Modified Cash Basis to the Statement of Activities - Modified Cash Basis For the year ended June 30, 2022

| Total Net Changes in Fund Balances - Governmental Funds   | \$<br>467,328 |
|---|---------------|
| Payment of accrued compensated absences is a disbursement in the governmental funds,<br>but the payment reduces long-term liabilities in the Statement of Net Position. Additions<br>to accrued compensated absences is an expense for the Statement of Net Position but not<br>the governmental funds. | <br>2,829     |
| Change in Net Position of Governmental Activities   | \$<br>470,157 |

See accompanying notes to basic financial statements.

# STATEMENT OF NET POSITION - MODIFIED CASH BASIS PROPRIETARY FUNDS June 30, 2022

|                                     |           | WATER<br>FUND |    | SEWER<br>FUND |       | TIMBER<br>FUND |           | TOTAL     |
|-------------------------------------|-----------|---------------|----|---------------|-------|----------------|-----------|-----------|
| ASSETS:                             | ¢         | 317 750       | ¢  | 531 523       | \$    | 1 709 274      | \$        | 2.588.547 |
| Taxes Receivable                    | φ.        |               | φ  | 22,410        | Ψ<br> |                | ÷         | 22,410    |
| Total Assets                        | \$        | 347,750       | \$ | 553,933       | \$    | 1,709,274      | \$        | 2,610,957 |
| DEFERRED INFLOWS OF RESOURCES       | S AND I   | NET POSITIO   | N: |               |       |                |           |           |
| Deferred Inflows of Resources:      |           |               |    |               |       |                |           |           |
| Unavailable Property Tax Revenue    | <u>\$</u> |               | \$ | 22,410        | \$    | -              | <u>\$</u> | 22,410    |
| Total Deferred Inflows of Resources |           | -             |    | 22,410        |       |                | <u></u>   | 22,410    |
| Net Position                        |           |               |    |               |       |                |           |           |
| Unrestricted                        |           | 347,750       |    | 531,523       |       | 1,709,274      |           | 2,588,547 |
| Total Net Position                  |           | 347,750       |    | 531,523       | ()    | 1,709,274      |           | 2,588,547 |
| Total Deferred Inflows of Resources |           |               |    |               |       |                |           |           |
| and Net Position                    | \$        | 347,750       | \$ | 553,933       | \$    | 1,709,274      | \$        | 2,610,957 |

See accompanying notes to basic financial statements.

# STATEMENT OF RECEIPTS, DISBURSEMENTS AND CHANGES NET POSITION - MODIFIED CASH BASIS PROPRIETARY FUNDS For the year ended June 30, 2022

|  |    | WATER<br>FUND |          | SEWER<br>FUND | TIMBER<br>FUND  |                | TOTAL        |
|--|----|---------------|----------|---------------|-----------------|----------------|--------------|
| OPERATING RECEIPTS                               |    |               |          |               |                 |                |              |
| Water Deposits                                   | \$ | 715           | \$       | -             | \$<br>-         | \$             | 715          |
| Water Revenue                                    |    | 928,395       |          | -             | -               |                | 928,395      |
| Hook-Up Fees                                     |    | 5,000         |          | 1,000         | -               |                | 6,000        |
| Sewer Revenue                                    |    | -             |          | 715,755       | -               |                | 715,755      |
| Sludge Revenue                                   |    | -             |          | 396,448       | -               |                | 396,448      |
| Timber Sales                                     |    |               |          |               | <br>514,494     |                | 514,494      |
| Total Receipts                                   |    | 934,110       |          | 1,113,203     | <br>514,494     |                | 2,561,807    |
| OPERATING DISBURSEMENTS                          |    |               |          |               |                 |                |              |
| Personnel Services                               |    | 472,711       |          | 467,148       | 21,290          |                | 961,149      |
| Materials and Services                           |    | 175,917       |          | 273,196       | 40,788          |                | 489,901      |
| Capital Outlay                                   |    | -             |          | 854           | <br><u></u>     | <u></u>        | 854          |
| Total Operating Disbursements                    |    | 648,628       |          | 741,198       | <br>62,078      |                | 1,451,904    |
| Operating Income (Loss)                          |    | 285,482       |          | 372,005       | 452,416         |                | 1,109,903    |
| NONOPERATING RECEIPTS (DISBURSEMENTS)            | )  |               |          |               |                 |                |              |
| Property Taxes                                   |    | -             |          | 493,126       | -               |                | 493,126      |
| Miscellaneous                                    |    | 17,329        | <u> </u> | 1,774         | <br>-           | <u>., ., .</u> | 19,103       |
| Total Nonoperating Receipts (Disbursements)      |    | 17,329        |          | 494,900       | <br>-           | <b>_</b>       | 512,229      |
| Income (Loss) Before Contributions and Transfers |    | 302,811       |          | 866,905       | 452,416         |                | 1,622,132    |
| Other Financing Sources (Uses)                   |    | (512 381)     |          | (929 233)     | -               |                | (1.441.614)  |
| Transfer Out                                     |    | (312,301)     |          | ()2),255)     | <br>            |                | (1,1,1,0,1,) |
| Change in Modified Cash Basis Net Position       |    | (209,570)     |          | (62,328)      | 452,416         |                | 180,518      |
| Beginning Net Position                           |    | 557,320       |          | 593,851       | <br>1,256,858   | <b></b>        | 2,408,029    |
| Ending Net Position                              | \$ | 347,750       | \$       | 531,523       | \$<br>1,709,274 | \$             | 2,588,547    |

See accompanying notes to basic financial statements

# COMBINING STATEMENT OF CASH FLOWS - MODIFIED CASH BASIS PROPRIETARY FUNDS For the year ended June 30, 2022

|   |           | WATER<br>FUND                     |                       | SEWER<br>FUND                       |         | TIMBER<br>FUND                  | <br>TOTAL                                 |
|---|-----------|-----------------------------------|-----------------------|-------------------------------------|---------|---------------------------------|---|
| Cash Flows from Operating Activities:<br>Cash Received from Customers<br>Payments to Suppliers<br>Payments to Employees | \$        | 934,110<br>(175,917)<br>(472,711) | \$                    | 1,113,203<br>(274,050)<br>(467,148) | \$      | 514,494<br>(40,788)<br>(21,290) | \$<br>2,561,807<br>(490,755)<br>(961,149) |
| Net Cash From Operations  |           | 285,482                           |                       | 372,005                             |         | 452,416                         | <br>1,109,903                             |
| Cash Flows From Capital and Related Financing Activities:<br>Property Taxes<br>Interfund Transfers                      |           | (512,381)                         |                       | 493,126<br>(929,233)                |         | -                               | <br>493,126<br>(1,441,614)                |
| Net Cash (Used) By Capital and Related Financing Activities   |           | (512,381)                         | n gej under den som f | (436,107)                           | <b></b> |                                 | <br>(948,488)                             |
| Cash Flows From Investing Activities<br>Interest and Miscellaneous  |           | 17,329                            |                       | 1,774                               | <b></b> |                                 | <br>19,103                                |
| Net Cash (Used) By Investing Activities   |           | 17,329                            |                       | 1,774                               |         |                                 | <br>19,103                                |
| Net Increase In Cash and Investments  |           | (209,570)                         |                       | (62,328)                            |         | 452,416                         | 180,518                                   |
| Cash and Investments at Beginning of Year   |           | 557,320                           |                       | 593,851                             |         | 1,256,858                       | <br>2,408,029                             |
| Cash and Investments at End of Year   | <u>\$</u> | 347,750                           | \$                    | 531,523                             | \$      | 1,709,274                       | \$<br>2,588,547                           |
| Reconciliation of Cash Flows From Operating<br>Activities to Operating Income   |           |                                   |                       |                                     |         |                                 |   |
| Operating Income<br>Adjustments   | \$        | 285,482                           | \$                    | 372,005                             | \$      | 452,416                         | \$<br>1,109,903                           |
| (Increase), Decrease in Accounts Receivable<br>Increase, (Decrease) in Deferred Revenue                                 |           | -                                 |                       | 1,517<br>(1,517)                    | <u></u> | -                               | <br>1,517<br>(1,517)                      |
| Net Cash From Operations  | \$        | 285,482                           | <u></u>               | 372,005                             | \$      | 452,416                         | \$<br>1,109,903                           |

See accompanying notes to basic financial statements.

# NOTES TO BASIC FINANCIAL STATEMENTS

# 1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

# A. ORGANIZATION AND THE FINANCIAL REPORTING ENTITY

The City of Rainier (the City) is a municipal corporation organized under ORS 221 of the State of Oregon and uses a council form of government. The City Council, composed of an elected Mayor and the elected council members, forms the legislative branch of the City's government and, along with an appointed City Administrator, manages the operations. Police protection, water and sewer services, street maintenance, a library, parks, land use planning and building inspection services are provided for all its citizens.

Accounting principles generally accepted in the United States of America require that these financial statements present the City of Rainier (the primary government) and all component units, if any. Component units, as established by the Government Accounting Standards Board (GASB) Statement No. 61, are separate organizations that are included in the City's reporting entity because of the significance of their operational or financial relationships with the City.

Based upon the above criteria, the following is a brief description of a component unit of the City:

<u>Rainier Economic Development Council (REDCO)</u> – was formed in April 1993 to have urban renewal authority under Oregon law. REDCO does planning and economic development that focuses on the Rainier Waterfront. Receipts are primarily from property taxes. Disbursements are made for planning and economic development.

Although it is legally separate from the City, REDCO's council is appointed by the City Council and because of the significance of its financial relationship with the City, REDCO should be reported as if it were part of the reporting entity (City). The audited financial statements of REDCO for fiscal year 2021-22 are included in the City's modified cash basis basic financial statements.

# B. BASIS OF PRESENTATION - FUND ACCOUNTING

Funds are used to report the financial position and results of operations. Fund accounting is designed to demonstrate legal compliance and to aid financial management by segregating transactions related to certain government functions or activities. A fund is a separate accounting entity with a self-balancing set of accounts.

The following major governmental funds are reported:

<u>General Fund</u> - This fund accounts for all receipts and disbursements, except those required to be accounted for in another fund. The principal receipt sources are property taxes, franchise fees, fines and state-shared receipts. Disbursements are made primarily to finance current operations, the library and for public safety.

<u>Debt Service Fund</u> - This fund provides for the payment of principal and interest on the Water Improvement Bonds and notes payable debt. Principal receipt sources are transfers from other funds.

<u>Street Fund</u> – This fund accounts for receipts from gas tax apportionments received from the State of Oregon, property taxes, and disbursements for maintenance of public streets.

<u>Special Project Fund</u> – This fund is used for the planning, engineering, design, professional services and construction for site and building improvements and other various projects, and the expenditure of anticipated grant funds and other revenue sources.

<u>Water Capital Improvement Fund</u> – This fund is used for the construction, replacement, repair, planning, engineering and site improvements for the city's water department and related infrastructure.

# 1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

# B. BASIS OF PRESENTATION - FUND ACCOUNTING (CONTINUED)

<u>Sewer Capital Improvement Fund</u> – This fund is used for the construction, replacement, repair, planning, engineering and site improvements for the city's sewer department and related infrastructure.

# ENTERPRISE FUNDS

These funds account for the acquisition, operation and maintenance of facilities and services, which are entirely or predominantly self-supporting through service charges to customers. The following funds are included in this category:

Water Fund Sewer Fund Timber Fund

### OTHER FUNDS

These funds account for receipts derived from specifically designated sources which are legally restricted to finance particular functions or activities that the City Council desires to account for separately. Funds included within this category are:

Library Fund Transportation Capital Improvement Fund

# C. BASIS OF ACCOUNTING

The City follows the modified cash basis of accounting. Under the modified cash basis of accounting, receipts are recognized when collected rather than when measurable and available, and disbursements are recognized when paid rather than when incurred. Fund operating statements present increases (receipts and other financing sources) and decreases (disbursements and other financing uses) in cash. The modified cash basis of accounting is a comprehensive basis of accounting other than accounting principles generally accepted in the Unites States of America.

This basis of accounting is specifically allowed under Oregon State Law, and the City considers the use of this basis to be an appropriate reflection of the City's financial status and results of operations. Accounting principles generally accepted in the United States of America would require that all funds considered to be governmental funds be accounted for on the modified accrual basis of accounting and proprietary funds under the accrual method. Under these bases receipts are recorded when measurable and available, and disbursements are recorded when incurred, with certain modifications. The principal modifications from the cash basis are the recording of compensated absences and uncollected property taxes which are disclosed as deferred inflows of resources but not recorded as a receipt.

Proprietary funds distinguish operating receipts and disbursements from non-operating items. Operating receipts and disbursements generally result from providing services and producing and delivering goods in connection with a proprietary fund's principal ongoing operations. The principal operating receipts of the enterprise funds are charges to customers for sales and services. Operating disbursements for enterprise funds include the cost of sales and services, and administrative disbursements. All receipts and disbursements not meeting this definition are reported as non-operating receipts and disbursements.

# 1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

# D. GOVERNMENT-WIDE FINANCIAL STATEMENTS

The government-wide financial statements report information on the primary government under the modified cash basis of accounting. Under this modification capital assets and related depreciation, long term debt and pension liabilities are not reported. For the most part, the effect of interfund activity has been removed from these statements. Governmental activities, which normally are supported by taxes and intergovernmental receipts, are reported separately from business-type activities, which rely to a significant extent on fees and charges for support.

The statement of activities demonstrates the degree to which the direct disbursements of a given function or segment is offset by program receipts. Direct disbursements are those that are clearly identifiable with a specific function or segment. Program receipts include 1) charges to customers or applicants who purchase, use, or directly benefit from goods, services, or privileges provided by a given function or segment and 2) grants and contributions that are restricted to meeting the operational or capital requirements of a particular function or segment. Taxes and other items not properly included among program receipts are reported instead as general receipts.

# E. BUDGETS

A budget is prepared for each fund type in accordance with the modified cash basis of accounting and legal requirements set forth in the Oregon Local Budget Law. The budget process begins early in each fiscal year with the establishment of the budget committee. Recommendations are developed through late winter with the budget committee approving the budget in early spring. Public notices of the budget hearing are published generally in early spring with a public hearing being held approximately three weeks later. The Council may amend the budget prior to adoption; however, budgeted disbursements for each fund may not be increased by more than ten percent. The budget is then adopted, appropriations are made and the tax levy declared no later than June 30.

The General Fund is budgeted by organizational unit. The disbursement budgets for the other remaining funds are appropriated at the following levels:

LEVEL OF CONTROL Personnel Services Materials and Services Capital Outlay

Contingencies and Transfers Debt Service

Disbursements cannot legally exceed the above appropriation levels except in the case of grants which could not be estimated at the time of budget adoption and are appropriated by Council resolution. Management may amend line items in the budget without Council approval as long as appropriation levels (the legal level of control) are not changed. The Council may make appropriation transfers by resolution as long as total appropriations by fund are not increased. Supplemental appropriations may occur if the Council approves them due to a need which exists which was not determined at the time the budget was adopted. Budget amounts shown in the financial statements reflect the original budget amounts and one appropriation transfer resolution. Disbursements in the various funds were within authorized appropriations for the year ended June 30, 2022.

# 1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

# F. PROPERTY TAXES

*Ad valorem* property taxes are levied and become a lien on all taxable property as of July 1. Property taxes are levied on November 15. Collection dates are November 15, February 15, and May 15. Discounts are allowed if the amount due is received by November 15. Taxes unpaid and outstanding on May 16 are considered delinquent. As the basic financial statements are presented on the modified cash basis, uncollected property taxes are shown in the combined balance sheet with the offset to unavailable property tax revenue. Uncollected taxes are deemed by management to be substantially collectible or recoverable through liens.

# G. CAPITAL ASSETS

Capital asset records are not maintained. Accordingly, the modified cash basis basic financial statements do not include capital assets and the related depreciation in the proprietary and government-wide financial statements. The amount of capital assets and related depreciation are not known. Acquisitions of capital assets are recorded as disbursements in the various funds when purchased. Receipts from the sale of capital assets are accounted for as receipts in the fund that purchased the asset. Maintenance and repairs are charged to disbursement accounts when paid.

# H. LONG-TERM OBLIGATIONS

Long-term debt associated with capital assets is not reported in the modified cash basis basic financial statements because they are presented on the modified cash basis of accounting. The Debt Service Fund makes payments for general obligation debt. All other long-term debt is paid by the Water and Sewer Funds. All debt principal and interest is budgeted in the Debt Service, Water and Sewer Funds.

# I. DEFFERED OUTFLOWS/INFLOWS OF RESOURCES

In addition to assets, the modified cash basis basic financial statements will sometimes report a separate section for deferred outflows of resources. This separate financial statement element, deferred outflows of resources, represents a consumption of net position that applies to a future period(s) and so will not be recognized as an outflow of resources (expense/expenditure) until then. The PERS and RHIA pension related deferrals are disclosed in these footnotes but not recorded in the basic financial statements because the City uses the modified cash basis of accounting.

In addition to liabilities, the modified cash basis basic financial statements will sometimes report a separate section for deferred inflows of resources. This separate financial statement element, deferred inflows of resources, represents an acquisition of net position that applies to a future period(s) and so will not be recognized as an inflow of resources (revenue) until that time. The City has two types of items which qualify for reporting in this category, unavailable property tax receipts and pension related deferrals. Unavailable property tax receipts are deferred and recognized as an inflow of resources in the period that the amounts are received. At June 30, 2022 there were deferred inflows representing unavailable property taxes reported on both the Statement of Net Position and the Balance Sheets. The PERS and RHIA pension related deferrals are disclosed in these footnotes but not recorded in the basic financial statements because the City uses the modified cash basis of accounting.

# 1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

# J. RETIREMENT PLANS

Substantially all of the City's employees are participants in the State of Oregon Public Employees Retirement System (PERS). For the purpose of measuring the net pension liability, deferred outflows of resources and deferred inflows of resources related to pensions, and pension expense, information about fiduciary net position of PERS and additions to/deductions from PERS's fiduciary net position have been determined on the same basis as they are reported by PERS. For this purpose, benefit payments (including refunds of employee contributions) are recognized when due and payable in accordance with the benefit terms.

# K. FUND BALANCE

GASB statement No. 54, *Fund Balance Reporting and Governmental Fund-type Definitions*, is followed. The objective of this statement is to enhance the usefulness of fund balance information by providing clearer fund balance classifications that can be more consistently applied and by clarifying the existing governmental fund-type definitions. This statement establishes fund balance classifications that comprise a hierarchy based primarily on the extent to which a government is bound to observe constraints imposed on the use of the resources reported in governmental funds. Under this standard, the fund balance classifications are nonspendable, restricted, committed, assigned, and unassigned.

- Nonspendable fund balance represents amounts that are not in a spendable form.
- <u>Restricted fund balance</u> represents amounts that are legally restricted by outside parties for a specific purpose (such as debt covenants, grant requirements, donor requirements, or other governments) or are restricted by law (constitutionally or by enabling legislation).
- <u>Committed fund balance</u> represents funds formally set aside by the governing body for a particular purpose. The use of committed funds would be approved by resolution.
- <u>Assigned fund balance</u> represents amounts that are constrained by the expressed intent to use resources for specific purposes that do not meet the criteria to be classified as restricted or committed. Intent can be stipulated by the governing body or by an official to whom that authority has been given by the governing body.
- <u>Unassigned fund balance</u> is the residual classification of the General Fund. Only the General Fund may report a positive unassigned fund balance. Other governmental funds would report any negative residual fund balance as unassigned.

There were no nonspendable, committed, or assigned fund balances at year end.

The Council has approved the following order of spending regarding fund balance categories: Restricted resources are spent first when both restricted and unrestricted (committed, assigned or unassigned) resources are available for disbursements. When unrestricted resources are spent, the order of spending is committed (if applicable), assigned (if applicable) and unassigned.

# L. VESTED COMPENSATED ABSENCES

Vested or accumulated vacation leave is reported in the government wide financial statements. In accordance with the provisions of Governmental Accounting Standards Board (GASB) Statement No. 16, *Accounting for Compensated Absences*, no liability is recorded for nonvesting accumulating rights to receive sick pay benefits. Unpaid sick pay lapses upon termination of employment.

#### M. CONTRIBUTED CAPITAL

Grants and other contributions are recorded when received but contributed capital is not recorded.

# 1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

# N. NET POSITION

Net position comprises the various net earnings from operations, nonoperating receipts and disbursements. Net position are classified in the following three categories:

- <u>Net Investment in Capital Assets</u> consists of all capital assets, net of accumulated depreciation and reduced by the outstanding balances of any bonds or other borrowings that are attributable to the acquisition, construction, or improvement of those assets. Since capital assets are not shown in the statement of financial position there is no investment in capital assets recorded.
- <u>Restricted</u> consists of external constraints placed on asset use by creditors, grantors, contributors, or laws or regulations of other governments or constraints imposed by law through constitutional provisions or enabling legislation.
- <u>Unrestricted</u> consists of all other assets that are not included in the other categories previously mentioned.

# O. INTERFUND TRANSACTIONS

Transactions that constitute reimbursements to a fund for disbursements initially made from it that are properly applicable to another fund are recorded as disbursements in the reimbursing fund and as reductions of disbursements in the fund that is reimbursed. Operating interfund transactions are reported as transfers. Quasi-external transactions are accounted for as receipts or disbursements as paid or received.

# P. ESTIMATES

The preparation of the basic financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of receipts and disbursements during the reporting period. Actual results could differ from those estimates.

# Q. GRANTS

Unreimbursed expenditures due from grantor agencies are reflected in the basic financial statements as receivables and revenues. Grant revenues are recorded at the time eligible expenditures are incurred. Cash received from grantor agencies in excess of related grant expenditures is recorded as a liability in the balance sheet and Statement of Net Position. For the year ending June 30, 2022, there were no receipts received in excess of disbursements to be recorded in the balance sheet or Statement of Net Position.

# 2. CASH AND INVESTMENTS

The cash management policies are governed by state statutes. Statutes authorize investing in bankers acceptances, commercial paper, time certificates of deposit, repurchase agreements, obligations of the United States and its agencies and instrumentalities and the Oregon State Treasurer's Local Government Investment Pool.

A cash pool is maintained that is available for use by all funds. Each fund type's portion of this pool is reported on the combined balance sheet as Cash and Investments.

Cash and Investments (recorded at cost) consist of:

Deposits with Financial Institutions:

| Demand Deposits | \$<br>329,116   |
|-----------------|-----------------|
| Investments     | <br>7,016,117   |
|                 | \$<br>7,345,233 |

### **DEPOSITS**

Deposits with financial institutions are comprised of bank demand deposits. The total bank balance per the bank statements is \$417,323 of which \$250,000 is covered by federal depository insurance and the remaining amount is collateralized by the Oregon Public Funds Collateralization Program (PFCP).

### Credit Risk – Deposits

In the case of deposits, this is the risk that in the event of a bank failure, the deposits may not be returned. There is no policy for custodial credit risk. As of June 30, 2022, none of the bank balance was exposed to custodial credit risk because it was insured or collateralized.

# **INVESTMENTS**

Investments in the Local Government Investment Pool (LGIP) are included in the Oregon Short-Term Fund, which is Investments in the Local Government Investment Pool (LGIP) are included in the Oregon Short-Term Fund, which is an external investment pool that is not a 2a-7-like external investment pool, and is not registered with the U.S. Securities and Exchange Commission as an investment company. Fair value of the LGIP is calculated at the same value as the number of pool shares owned. The unit of account is each share held, and the value of the position would be the fair value of the pool's share price multiplied by the number of shares held. Investments in the Short-Term Fund are governed by ORS 294.135, Oregon Investment Council, and portfolio guidelines issued by the Oregon Short-Term Fund Board, which establish diversification percentages and specify the types and maturities of investments. The portfolio guidelines permit securities lending transactions as well as investments in repurchase agreements and reverse repurchase agreements. The fund appears to be in compliance with all portfolio guidelines at June 30, 2022. The LGIP seeks to exchange shares at \$1.00 per share; an investment in the LGIP is neither insured nor guaranteed by the FDIC or any other government agency. Although the LGIP seeks to maintain the value of share investments at \$1.00 per share, it is possible to lose money by investing in the pool. We intend to measure these investments at book value since it *materially approximates fair value*.

The pool is comprised of a variety of investments. These investments are characterized as a level 2 fair value measurement in the Oregon Short Term Fund's audited financial report. As of June 30, 2022, the fair value of the position in the <u>LGIP is 98.98%</u> of the value of the pool shares as reported in the Oregon Short Term Fund audited financial statements. Amounts in the State Treasurer's Local Government Investment Pool are not required to be collateralized. The District booked a fair market value loss of \$72,302 for the difference between the pool fair market value and the book value.

# 2. CASH AND INVESTMENTS (CONTINUED)

# INVESTMENTS (CONTINUED)

The audited financial reports of the Oregon Short Term Fund can be found here:

http://www.oregon.gov/treasury/Divisions/Investment/Pages/Oregon-Short-Term-Fund-(OSTF).aspx

If the link has expired please contact the Oregon Short Term Fund directly.

The investments at June 30, 2022 consisted of the following:

|  |         |            |           | Ν         | 1aturit | ties (in month | s)    |          |
|--|---------|------------|-----------|-----------|---------|----------------|-------|----------|
| Investment Type                                    |         | Fair Value | r Value L |           | 3-18    |                | 18-59 |          |
| State Treasurer's Local Government Investment Pool | \$      | 7,016,117  | \$        | 7,016,117 | \$      | _              | \$    | <u> </u> |
| Total  | <u></u> | 7,016,117  | \$        | 7,016,117 | \$      | -              | \$    | -        |

# Interest Rate Risk

Oregon Revised Statutes require investments to not exceed a maturity of 18 months, except when the local government has adopted a written investment policy that was submitted to and reviewed by the OSTFB. There are no investments that have a maturity date greater than 3 months.

### Credit Risk - Investments

Oregon Revised Statutes do not limit investments as to credit rating for securities purchased from US Government Agencies or USGSE. The State Investment Pool is not rated.

# Concentration of Credit Risk

At June 30, 2022, 100% of total investments were in the State Treasurer's Investment Pool. State statutes do not limit the percentage of investments in State Treasurer's Investment Pool.

# 3. PENSION PLAN

<u>Plan Description</u> – The Oregon Public Employees Retirement System (PERS) consists of a single cost-sharing multiple-employer defined benefit plan. All benefits of the system are established by the legislature pursuant to Oregon Revised Statute (ORS) Chapters 238 and 238A. Oregon PERS produces an independently audited Annual Comprehensive Financial Report which can be found at:

# https://www.oregon.gov/pers/Documents/Financials/CAFR/2021-ACFR.pdf

If the link is expired please contact Oregon PERS for this information.

# 3. PENSION PLAN (CONTINUED)

- a. **PERS Pension (Chapter 238)**. The ORS Chapter 238 Defined Benefit Plan is closed to new members hired on or after August 29, 2003.
  - i. **Pension Benefits**. The PERS retirement allowance is payable monthly for life. It may be selected from 13 retirement benefit options. These options include survivorship benefits and lump-sum refunds. The basic benefit is based on years of service and final average salary. A percentage (2.0 percent for police and fire employees, and 1.67 percent for general service employees) is multiplied by the number of years of service and the final average salary. Benefits may also be calculated under either a formula plus annuity (for members who were contributing before August 21, 1981) or a money match computation if a greater benefits results.

A member is considered vested and will be eligible at minimum retirement age for a service retirement allowance if he or she has had a contribution in each of five calendar years or has reached at least 50 years of age before ceasing employment with a participating employer (age 45 for police and fire members). General service employees may retire after reaching age 55. Police and fire members are eligible after reaching age 50. Tier 1 general service employee benefits are reduced if retirement occurs prior to age 58 with fewer than 30 years of service. Police and fire members are eligible for full benefits at age 60. The ORS Chapter 238 Defined Benefit Pension Plan is closed to new members hired on or after August 29, 2003.

- ii. **Death Benefits**. Upon the death of a non-retired member, the beneficiary receives a lump-sum refund of the member's account balance (accumulated contributions and interest). In addition, the beneficiary will receive a lump-sum payment from employer funds equal to the account balance, provided one or more of the following contributions are met:
  - member was employed by PERS employer at the time of death,
  - member died within 120 days after termination of PERS covered employment,
  - member died as a result of injury sustained while employed in a PERS-covered job, or
  - member was on an official leave of absence from a PERS-covered job at the time of death.
- iii. Disability Benefits. A member with 10 or more years of creditable service who becomes disabled from other than duty-connected causes may receive a non-duty disability benefit. A disability resulting from a job-incurred injury or illness qualifies a member (including PERS judge members) for disability benefits regardless of the length of PERS-covered service. Upon qualifying for either a non-duty or duty disability, service time is computed to age 58 (55 for police and fire members) when determining the monthly benefit.
- iv. Benefit Changes After Retirement. Members may choose to continue participation in their variable account after retiring and may experience annual benefit fluctuations due to changes in the fair value of the underlying global equity investments of that account. Under ORS 238.360 monthly benefits are adjusted annually through cost-of-living changes (COLA). The COLA is capped at 2.0 percent.

# 3. PENSION PLAN (CONTINUED)

- b. **OPSRP Pension Program (OPSRP DB)**. The ORS Chapter 238A Defined Benefit Pension Program provides benefits to members hired on or after August 29, 2003.
  - i. **Pension Benefits**. This portion of OPSRP provides a life pension funded by employer contributions. Benefits are calculated with the following formula for members who attain normal retirement age:

*Police and fire*: 1.8 percent is multiplied by the number of years of service and the final average salary. Normal retirement age for police and fire members is age 60 or age 53 with 25 years of retirement credit. To be classified as a police and fire member, the individual must have been employed continuously as a police and fire member for at least five years immediately preceding retirement.

*General service*: 1.5 percent is multiplied by the number of years of service and the final average salary. Normal retirement age for general service members is age 65, or age 58 with 30 years of retirement credit.

A member of the pension program becomes vested on the earliest of the following dates: the date the member completes 600 hours of service in each of five calendar years, the date the member reaches normal retirement age, and, if the pension program is terminated, the date on which termination becomes effective.

- ii. **Death Benefits**. Upon the death of a non-retired member, the spouse or other person who is constitutionally required to be treated in the same manner as the spouse, receives for life 50 percent of the pension that would otherwise have been paid to the deceased member. The surviving spouse may elect to delay payment of the death benefit, but payment must commence no later than December 31 of the calendar year in which the member would have reached 70<sup>1</sup>/<sub>2</sub> years.
- iii. **Disability Benefits**. A member who has accrued 10 or more years of retirement credits before the member becomes disabled or a member who becomes disabled due to job-related injury shall receive a disability benefit of 45 percent of the member's salary determined as of the last full month of employment before the disability occurred.

<u>Contributions</u> – PERS funding policy provides for monthly employer contributions at actuarially determined rates. These contributions, expressed as a percentage of covered payroll, are intended to accumulate sufficient assets to pay benefits when due. The funding policy applies to the PERS Defined Benefit Plan and the Other Postemployment Benefit Plans. Employer contribution rates during the period were based on the December 31, 2019 actuarial valuation, which became effective July 1, 2021. The state of Oregon and certain schools, community colleges, and political subdivision have made unfunded actuarial liability payments and their rates have been reduced. Employer contributions for the year ended June 30, 2022 were \$182,973, excluding amounts to fund employer specific liabilities. In addition approximately \$66,883 in employee contributions were paid or picked up by the City in fiscal 2022.

**Pension Asset or Liability** – Since the City's financial statements are reported on the modified cash basis, no amounts are reported on the balance sheet for pension related assets, deferred outflows, liabilities or deferred inflows. Had the City's financial statements been reported in accordance with GAAP, it would have reported a net pension liability of \$1,236,413 at June 30, 2022 for its proportionate share of the net pension liability. The pension liability was measured as of June 30, 2021, and the total pension liability used to calculate the net pension liability was determined by an actuarial valuation dated December 31, 2019. The City's proportion of the net pension liability was based on a projection of the City's long-term share of contributions to the pension plan relative to the projected contributions of all participating employers, actuarially determined. As of the measurement date of June 30, 2021 and 2020, the City's proportion was .010 percent and .010 percent, respectively. Pension income for the year ended June 30, 2022 was \$6,205, but is not recorded in the financial statements due to the modified cash basis of accounting being used.

# 3. PENSION PLAN (CONTINUED)

The rates in effect for the year ended June 30, 2022 were:

- (1) Tier 1/Tier 2 20.54%
- (2) OPSRP Employer Contribution 13.64%
- (3) OPSRP police and fire -18.00%

|   | Deferred Outflow |         | Deferred Inflov |           |  |
|---|------------------|---------|-----------------|-----------|--|
|   | of Resources     |         | of              | Resources |  |
| Difference between expected and actual experience | \$               | 115,736 | \$              | -         |  |
| Changes in assumptions                            |                  | 309,511 |                 | 3,254     |  |
| Net difference between projected and actual       |                  |         |                 |           |  |
| earnings on pension plan investments              |                  | -       |                 | 915,307   |  |
| Net changes in proportionate share                |                  | 113,219 |                 | 13,402    |  |
| Differences between City contributions            |                  |         |                 |           |  |
| and proportionate share of contributions          |                  |         |                 | 162,809   |  |
| Subtotal - Amortized Deferrals (below)            |                  | 538,466 |                 | 1,094,772 |  |
| City contributions subsequent to measuring date   |                  | 182,973 |                 | -         |  |
| Deferred outflow (inflow) of resources            | \$               | 721,439 | \$              | 1,094,772 |  |

The amount of contributions subsequent to the measurement date will be included as a reduction of the net pension liability in the fiscal year ended June 30, 2023.

Subtotal amounts related to pension as deferred outflows of resources \$538,466, or deferred inflows of resources, (\$1,094,772), net to \$(556,306) and will be recognized in pension expense as follows:

| Year ending June 30, | Amount |           |  |
|----------------------|--------|-----------|--|
| 2023                 | \$     | (101,780) |  |
| 2024                 |        | (113,449) |  |
| 2025                 |        | (139,024) |  |
| 2026                 |        | (227,437) |  |
| 2027                 |        | 25,384    |  |
| Thereafter           |        | -         |  |
| Total                | \$     | (556,306) |  |

All assumptions, methods and plan provisions used in these calculations are described in the Oregon PERS systemwide GASB 68 reporting summary dated March 1, 2022. Oregon PERS produces an independently audited ACFR which can be found at:

https://www.oregon.gov/pers/Documents/Financials/CAFR/2021-ACFR.pdf

# 3. PENSION PLAN (CONTINUED)

<u>Actuarial Valuations</u> – The employer contribution rates effective July 1, 2021 through June 30, 2023, were set using the entry age normal actuarial cost method. For the Tier One/Tier Two component of the PERS Defined Benefit Plan, this method produced an employer contribution rate consisting of (1) an amount for normal cost (estimated amount necessary to finance benefits earned by employees during the current service year), (2) an amount for the amortization unfunded actuarial accrued liabilities, which are being amortized over a fixed period with new unfunded actuarial liabilities being amortized over 20 years.

For the OPSRP Pension Program component of the PERS Defined Benefit Plan, this method produced an employer rate consisting of (a) an amount for normal cost (the estimated amount necessary to finance benefits earned by the employees during the current service year), (b) an actuarially determined amount for funding a disability benefit component, and (c) an amount for the amortization of unfunded actuarial accrued liabilities, which are being amortized over a fixed period with new unfunded actuarial accrued liabilities being amortized over 16 years.

| Valuation date            | December 31, 2019   |
|---------------------------|---|
| Experience Study Report   | 2018, Published July 24, 2019   |
| Actuarial cost method     | Entry Age Normal  |
| Amortization method       | Level percentage of payroll   |
| Asset valuation method    | Market value of assets  |
| Inflation rate            | 2.40 percent (reduced from 2.50 percent)  |
| Investment rate of return | 6.90 percent (reduced from 7.20 percent)  |
| Discount rate             | 6.90 percent (reduced from 7.20 percent)  |
| Projected salary increase | 3.40 percent (reduced from 3.50 percent)  |
| Cost of Living Adjustment | Blend of 2% COLA and graded COLA (1.25%/0.15%) in accordance with Moro            |
| Cost of Living Adjustment | decision; blend based on service  |
|                           | Healthy retirees and beneficiaries:   |
|                           | Pub-2010 Healthy Retiree, sex distinct, generational with Unisex, Social Security |
|                           | Data Scale, with job category adjustments and set-backs as described in the       |
|                           | valuation. Active members: Pub-2010 Employee, sex distinct, generational with     |
| Mortality                 | Unisex, Social Security Data Scale, with job category adjustments and set-backs   |
|                           | as described in the valuation. Disabled retirees: Pub-2010 Disabled Retiree, sex  |
|                           | distinct, generational with Unisex, Social Security Data Scale, with job category |
|                           | adjustments and set-backs as described in the valuation.                          |

### Actuarial Methods and Assumptions:

Actuarial valuations of an ongoing plan involve estimates of value of reported amounts and assumptions about the probability of events far into the future. Actuarially determined amounts are subject to continual revision as actual results are compared to past expectations and new estimates are made about the future. Experience studies are performed as of December 31 of even numbered years. The method and assumptions shown are based on the 2018 Experience Study which is reviewed for the four-year period ending December 31, 2018.

# 3. PENSION PLAN (CONTINUED)

#### **Assumed Asset Allocation:**

| Asset Class/Strategy   | Low Range | High Range | <b>OIC</b> Target |
|------------------------|-----------|------------|-------------------|
| Debt Securities        | 15.0%     | 25.0%      | 20.0%             |
| Public Equity          | 27.5%     | 37.5%      | 32.5%             |
| Real Estate            | 9.5%      | 15.5%      | 12.5%             |
| Private Equity         | 14.0%     | 21.0%      | 17.5%             |
| Alternatives Portfolio | 7.5%      | 17.5%      | 15.0%             |
| Opportunity Portfolio  | 0.0%      | 5.0%       | 0.0%              |
| Risk Parity            | 0.0%      | 2.5%       | 2.5%              |
| Total                  |           |            | 100.0%            |

(Source: June 30, 2021 PERS ACFR; p. 104)

# Long-Term Expected Rate of Return:

To develop an analytical basis for the selection of the long-term expected rate of return assumption, in June 2021 the PERS Board reviewed long-term assumptions developed by both Milliman's capital market assumptions team and the Oregon Investment Council's (OIC) investment advisors. The table below shows Milliman's assumptions for each of the asset classes in which the plan was invested at that time based on the OIC long-term target asset allocation. The OIC's description of each asset class was used to map the target allocation to the asset classes shown below. Each asset class assumption is based on a consistent set of underlying assumptions, and includes adjustment for the inflation assumption. These assumptions are not based on historical returns, but instead are based on a forward-looking capital market economic model.

|                                     | Target     | <b>Compound Annual</b> |
|-------------------------------------|------------|------------------------|
| Asset Class                         | Allocation | (Geometric) Return     |
| Global Equity                       | 30.62%     | 5.85%                  |
| Private Equity                      | 25.50%     | 7.71%                  |
| Core Fixed Income                   | 23.75%     | 2.73%                  |
| Real Estate                         | 12.25%     | 5.66%                  |
| Master Limited Partnerships         | 0.75%      | 5.71%                  |
| Infrastructure                      | 1.50%      | 6.26%                  |
| Commodities                         | 0.63%      | 3.10%                  |
| Hedge Fund of Funds - Multistrategy | 1.25%      | 5.11%                  |
| Hedge Fund Equity - Hedge           | 0.63%      | 5.31%                  |
| Hedge Fund - Macro                  | 5.62%      | 5.06%                  |
| US Cash                             | -2.50%     | 1.76%                  |
| Assumed Inflation - Mean            |            | 2.40%                  |

(Source: June 30, 2021 PERS ACFR; p. 74)

# 3. PENSION PLAN (CONTINUED)

**Discount Rate** – The discount rate used to measure the total pension liability as of the measurement dates of June 30, 2021 and 2020 was 6.90 and 7.20 percent, respectively, for the Defined Benefit Pension Plan. The projection of cash flows used to determine the discount rate assumed that contributions from the plan members and those of the contributing employers are made at the contractually required rates, as actuarially determined. Based on those assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments for the Defined Benefit Pension Plan was applied to all periods of projected benefit payments to determine the total pension liability.

Sensitivity of the City's proportionate share of the net pension liability to changes in the discount rate – the following presents the City's proportionate share of the net pension liability calculated using the discount rate of 6.90 percent, as well as what the City's proportionate share of the net pension liability would be if it were calculated using a discount rate that is one percent lower (5.90 percent) or one percent higher (7.90 percent) than the current rate.

|                                   | 1% Decrease<br>(5.90%) |           | Dis | Discount Rate<br>(6.90%) |    | 1% Increase<br>(7.90%) |  |
|-----------------------------------|------------------------|-----------|-----|--------------------------|----|------------------------|--|
| District's proportionate share of |                        |           |     |                          |    |                        |  |
| the net pension liability         | \$                     | 2,428,019 | \$  | 1,236,413                | \$ | 239,471                |  |

# **Changes Subsequent to the Measurement Date**

As described above, GASB 67 and GASB 68 require the Total Pension Liability to be determined based on the benefit terms in effect at the Measurement Date. Any changes to benefit terms that occurs after that date are reflected in amounts reported for the subsequent Measurement Date. However, Paragraph 80f of GASB 68 requires employers to briefly describe any changes between the Measurement Date and the employer's reporting date that are expected to have a significant effect on the employer's share of the collective Net Pension Liability, along with an estimate of the resulting change, if available.

There are no changes subsequent to the June 30, 2021 Measurement Date that meet this requirement and thus would require a brief description under the GASB standard.

# **OPSRP Individual Account Program (OPSRP IAP)**

# Plan Description:

Employees of the City are provided with pensions through OPERS. All the benefits of OPERS are established by the Oregon legislature pursuant to Oregon Revised Statute (ORS) Chapters 238 and 238A. Chapter 238 Defined Benefit Pension Plan is closed to new members hired on or after August 29, 2003. Chapter 238A created the Oregon Public Service Retirement Plan (OPSRP), which consists of the Defined Benefit Pension Program and the Individual Account Program (IAP). Membership includes public employees hired on or after August 29, 2003. PERS members retain their existing defined benefit plan accounts, but member contributions are deposited into the member's IAP account. OPSRP is part of OPERS, and is administered by the OPERS Board.

# 3. PENSION PLAN (CONTINUED)

# Pension Benefits:

Participants in OPERS defined benefit pension plans also participate in their defined contribution plan. An IAP member becomes vested on the date the employee account is established or on the date the rollover account was established. If the employer makes optional employer contributions for a member, the member becomes vested on the earliest of the following dates: the date the member completes 600 hours of service in each of five calendar years, the date the member reaches normal retirement age, the date the IAP is terminated, the date the active member becomes disabled, or the date the active member dies. Upon retirement, a member of the OPSRP IAP may receive the amounts in his or her employee account, rollover account, and vested employer account as a lump-sum payment or in equal installments over a 5-, 10-, 15-, 20-year period or an anticipated life span option. Each distribution option has a \$200 minimum distribution limit.

# Death Benefits:

Upon the death of a non-retired member, the beneficiary receives in a lump sum the member's account balance, rollover account balance, and vested employer optional contribution account balance. If a retired member dies before the installment payments are completed, the beneficiary may receive the remaining installment payments or choose a lump-sum payment.

# Contributions:

Employees of the City pay six (6) percent of their covered payroll. Effective July 1, 2020, currently employed Tier 1/Tier 2 and OPSRP members earning \$2,500 or more per month (increased to \$2,535 per month on January 1, 2021) will have a portion of their 6 percent monthly IAP contributions redirected to an Employee Pension Stability Account. The Employee Pension Stability Account will be used to pay part of the member's future benefit. Of the 6 percent monthly IAP contribution, Tier 1/Tier 2 will have 2.5 percent redirected to the Employee Pension Stability Account and OPSRP will have 0.75 percent redirected to the Employee Pension Stability Account, with the remaining going to the member's existing IAP account. Members may voluntarily choose to make additional after-tax contributions into their IAP account to make a full 6 percent contribution to the IAP. The City did not make any optional contributions to member IAP accounts for the year ended June 30, 2022.

Additional disclosures related to Oregon PERS not applicable to specific employers are available online, or by contacting PERS at the following address: PO Box 23700 Tigard, OR 97281-3700.

http://www.oregon.gov/pers/EMP/Pages/GASB.aspx

# 4. OTHER POST-EMPLOYMENT BENEFIT PLAN – (RHIA)

# **Plan Description:**

As a member of Oregon Public Employees Retirement System (OPERS) the City contributes to the Retirement Health Insurance Account (RHIA) for each of its eligible employees. RHIA is a cost-sharing multiple-employer defined benefit other postemployment benefit plan administered by OPERS. RHIA pays a monthly contribution toward the cost of Medicare companion health insurance premiums of eligible retirees. Oregon Revised Statute (ORS) 238.420 established this trust fund. Authority to establish and amend the benefit provisions of RHIA reside with the Oregon Legislature. The plan is closed to new entrants after January 1, 2004. OPERS issues a publicly available financial report that includes financial statements and required supplementary information. That report may be obtained by writing to Oregon Public Employees Retirement System, PO Box 23700, Tigard, OR 97281-3700.

# 4. OTHER POST-EMPLOYMENT BENEFIT PLAN - (RHIA)(CONTINUED)

# **Funding Policy:**

Because RHIA was created by enabling legislation (ORS 238.420), contribution requirements of the plan members and the participating employers were established and may be amended only by the Oregon Legislature. ORS require that an amount equal to \$60 dollars or the total monthly cost of Medicare companion health insurance premiums coverage, whichever is less, shall be paid from the Retirement Health Insurance Account established by the employer, and any monthly cost in excess of \$60 dollars shall be paid by the eligible retired member in the manner provided in ORS 238.410. To be eligible to receive this monthly payment toward the premium cost the member must: (1) have eight years or more of qualifying service in OPERS at the time of retirement or receive a disability allowance as if the member had eight years or more of creditable service in OPERS, (2) receive both Medicare Parts A and B coverage, and (3) enroll in an OPERS-sponsored health plan. A surviving spouse or dependent of a deceased OPERS retiree who was eligible to receive the subsidy is eligible to receive the subsidy if he or she (1) is receiving a retirement benefit or allowance from OPERS or (2) was insured at the time the member died and the member retired before May 1, 1991.

Participating employers are contractually required to contribute to RHIA at a rate assessed each year by OPERS, and the City currently contributes 0.05% of annual covered OPERF payroll and 0.00% of OPSRP payroll under a contractual requirement in effect until June 30, 2022. Consistent with GASB Statement 75, the OPERS Board of Trustees sets the employer contribution rates as a measure of the proportionate relationship of the employer to all employers consistent with the manner in which contributions to the OPEB plan are determined. The basis for the employer's portion is determined by comparing the employer's actual, legally required contributions made during the fiscal year to the plan with the total actual contributions made in the fiscal year of all employers.

Since the City's financial statements are reported on the modified cash basis, no amounts are reported on the balance sheet for OPEB related assets, deferred outflows, liabilities or deferred inflows. Had the City's financial statements been reported in accordance with GAAP, it would have reported a net OPEB asset of \$31,630 for its proportionate share of the net OPEB asset. The OPEB asset was measured as of June 30, 2021, and the total OPEB asset used to calculate the net OPEB asset was determined by an actuarial valuation as of December 31, 2019. Consistent with GASB Statement No. 75, paragraph 59(a), the City's proportion of the net OPEB asset is determined by comparing the employer's actual, legally required contributions made during the fiscal year to the Plan with the total actual contributions made in the fiscal year of all employers. As of the measurement date of June 30, 2021 and 2020, the City's proportion was .01 percent for both years. OPEB income expense for the year ended June 30, 2022 was \$5,964, but is not recorded in the financial statements due to the (modified) cash basis of accounting being used.

# Components of OPEB Expense/(Income):

| Employer's Proportionate share of collective system OPEB Expense/(Income) | \$<br>(5,173) |
|---|---------------|
| Net amortization of employer-specific deferred amounts from:              |               |
| - Changes in proportionate share (per paragraph 64 of GASB 75)            | (519)         |
| - Differences between employer contributions and employer's proportionate | -             |
| share of system contributions (per paragraph 65 of GASB 75)               |               |
| Employer's total OPEB Expense/(Income)                                    | \$<br>(5,692) |

# 4. OTHER POST-EMPLOYMENT BENEFIT PLAN - (RHIA)(CONTINUED)

# **Components of Deferred Outflows/Inflows of Resources:**

|   | Deferred Outflows | Deferred Inflows |
|---|-------------------|------------------|
|   | of Resources      | of Resources     |
| Differences between expended and actual experience              | -                 | 880              |
| Changes of assumptions  | 622               | 471              |
| Net Difference between project and actual earning on investment | -                 | 7,517            |
| Changes in proportionate share                                  | 19                | 1,031            |
| Differences between employer contributions and employer's       |                   |                  |
| proportionate share of system contributions                     | -                 |                  |
| Subtotal - Amortized Deferrals (below)                          | 641               | 9,899            |
| Contributions subsequent to measurement date                    |                   |                  |
| Deferred outflow (inflow) of resources                          | 641               | 9,899            |

The amount of contributions subsequent to the measurement date will be included as a reduction of the net OPEB asset in the fiscal year ended June 30, 2023.

Subtotal amounts related to OPEB as deferred outflows of resources, \$641, and deferred inflows of resources, (\$9,899), net to (\$9,258) and will be recognized in OPEB expense as follows:

| Year of June 30, |               |
|------------------|---------------|
| 2023             | \$<br>(3,313) |
| 2024             | (1,853)       |
| 2025             | (1,716)       |
| 2026             | (2,376)       |
| 2027             | -             |
| Thereafter       | <br>-         |
| Total            | \$<br>(9,258) |

All assumptions, methods and plan provisions used in these calculations are described in the Oregon PERS Retirement Health Insurance Account Cost-Sharing Multiple-Employer Other Postemployment Benefit (OPEB) Plan Schedules of Employer Allocations and OPEB Amounts by Employer report, as of and for the Year Ended June 30, 2021. That independently audited report was dated March 1, 2022 and can be found at:

https://www.oregon.gov/pers/EMP/Documents/GASB/2022/Oregon%20PERS%20-%20GASB%2075%20RHIA%20Employer%20Schedules%20-%20FYE%2006-30-2021.pdf

# 4. OTHER POST-EMPLOYMENT BENEFIT PLAN – (RHIA)(CONTINUED)

# **Actuarial Methods and Assumptions:**

| Valuation Date                   | December 31, 2019   |
|----------------------------------|---|
| Experience Study Report          | 2018, Published July 24, 2019   |
| Actuarial cost method            | Entry Age Normal  |
| Inflation rate                   | 2.40 percent (reduced from 2.50 percent)                                |
| Investment rate of return        | 6.90 percent (reduced from 7.20 percent)                                |
| Discount rate                    | 6.90 percent (reduced from 7.20 percent)                                |
| Projected salary increase        | 3.40 percent (reduced from 3.50 percent)                                |
| Retiree healthcare participation | Healthy retirees: 32%; Disabled retirees: 20%                           |
|                                  | Healthy retirees and beneficiaries:                                     |
|                                  | Pub-2010 Healthy Retiree, sex distinct, generational with Unisex,       |
|                                  | Social Security Data Scale, with job category adjustments and set-      |
|                                  | backs as described in the valuation. Active members: Pub-2010           |
|                                  | Employee, sex distinct, generational with Unisex, Social Security Data  |
|                                  | Scale, with job category adjustments and set-backs as described in the  |
|                                  | valuation. Disabled retirees: Pub-2010 Disabled Retiree, sex distinct,  |
|                                  | generational with Unisex, Social Security Data Scale, with job category |
| Mortality                        | adjustments and set-backs as described in the valuation.                |

Actuarial valuations of an ongoing plan involve estimates of value of reported amounts and assumptions about the probability of events far into the future. Actuarially determined amounts are subject to continual revision as actual results are compared to past expectations and new estimates are made about the future. Experience studies are performed as of December 31 of even numbered years. The method and assumptions shown are based on the 2018 Experience Study which is reviewed for the four-year period ending December 31, 2018.

# **Discount Rate:**

The discount rate used to measure the total pension liability as of the measurement dates of June 30, 2021 and 2020 was 6.90 and 7.20 percent, respectively, for the Defined Benefit Pension Plan. The projection of cash flows used to determine the discount rate assumed that contributions from the plan members and those of the contributing employers are made at the contractually required rates, as actuarially determined. Based on those assumptions, the RHIA plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on OPEB plan investments for the RHIA plan was applied to all periods of projected benefit payments to determine the total OPEB asset.

# 4. OTHER POST-EMPLOYMENT BENEFIT PLAN - (RHIA)(CONTINUED)

# Long-Term Expected Rate of Return:

To develop an analytical basis for the selection of the long-term expected rate of return assumption, in June 2021 the PERS Board reviewed long-term assumptions developed by both Milliman's capital market assumptions team and the Oregon Investment Council's (OIC) investment advisors. The table below shows Milliman's assumptions for each of the asset classes in which the plan was invested at that time based on the OIC long-term target asset allocation. The OIC's description of each asset class was used to map the target allocation to the asset classes shown below. Each asset class assumption is based on a consistent set of underlying assumptions, and includes adjustment for the inflation assumption. These assumptions are not based on historical returns, but instead are based on a forward-looking capital market economic model.

|                                     | Target     | <b>Compound Annual</b> |
|-------------------------------------|------------|------------------------|
| Asset Class                         | Allocation | (Geometric) Return     |
| Global Equity                       | 30.62%     | 5.85%                  |
| Private Equity                      | 25.50%     | 7.71%                  |
| Core Fixed Income                   | 23.75%     | 2.73%                  |
| Real Estate                         | 12.25%     | 5.66%                  |
| Master Limited Partnerships         | 0.75%      | 5.71%                  |
| Infrastructure                      | 1.50%      | 6.26%                  |
| Commodities                         | 0.63%      | 3.10%                  |
| Hedge Fund of Funds - Multistrategy | 1.25%      | 5.11%                  |
| Hedge Fund Equity - Hedge           | 0.63%      | 5.31%                  |
| Hedge Fund - Macro                  | 5.62%      | 5.06%                  |
| US Cash                             | -2.50%     | 1.76%                  |
| Assumed Inflation - Mean            |            | 2.40%                  |

(Source: June 30, 2021 PERS ACFR; p. 74)

Sensitivity of the City's proportionate share of the net OPEB liability/(asset) to changes in the discount rate – The following presents the City's proportionate share of the net OPEB liability/(asset) calculated using the discount rate of 6.90 percent, as well as what the City's proportionate share of the net pension liability would be if it were calculated using a discount rate that is one percent lower (5.90 percent) or one percent higher (7.90 percent) than the current rate.

|                                | 1%       | Discount | 1%       |
|--------------------------------|----------|----------|----------|
|                                | Decrease | Rate     | Increase |
|                                | (5.90%)  | (6.90%)  | (7.90%)  |
| City's proportionate share of  |          |          |          |
| the net OPEB liability (asset) | (27,972) | (31,630) | (34,755) |

# Changes Subsequent to the Measurement Date

There are no changes subsequent to the June 30, 2021 Measurement Date that meet this requirement and thus would require a brief description under the GASB standard.

# 5. DEFERRED COMPENSATION PLAN

A deferred compensation plan is available to employees wherein they may execute an individual agreement with the City for amounts earned by them to not be paid until a future date when certain circumstances are met. These circumstances are termination by reason of resignation, death, disability, or retirement; unforeseeable emergency; or by requesting a de minimis distribution from inactive accounts valued less than \$5,000. Payment to the employee will be made over a period not to exceed 15 years. The deferred compensation plan is one which is authorized under IRC Section 457 and has been approved in its specifics by a private ruling from the Internal Revenue Service. The assets of the plan are held by the administrator for the sole benefit of the plan participants and are not considered assets or liabilities of the City.

# 6. PROPERTY TAX LIMITATIONS

The voters of the State of Oregon passed a constitutional limit on property taxes for City and non-City government operations. The limitation provides that property taxes for non-City operations are limited to \$10 for each \$1,000 of property market value. This limitation does not apply to taxes levied for principal and interest on general obligation bonded debt.

Also, the state voters passed a second limit on property taxes by replacing the previous constitutional limits on tax bases with a rate and value limit. This second limit has reduced the amount of operating property tax receipts available to the City for its 1999-00 fiscal year and thereafter. This reduction was accomplished by rolling assessed property values back to their 1995-96 values, less 10% and limiting future assessment value growth of each property to no more than 3% per year, subject to certain exceptions. Taxes levied to support bonded debt are exempted from the reductions. The Constitution also sets restrictive voter approval requirements for most tax and many fee increases and new bond issues.

#### 7. INTERFUND TRANSFERS

Transfers are made to finance operations between funds.

Amounts are comprised of the following:

|                                | Tr | Transfer Out |    | ransfer In |
|--------------------------------|----|--------------|----|------------|
| General                        | \$ | 248,803      | \$ | -          |
| Debt Service                   |    | -            |    | 929,373    |
| Sewer Fund                     |    | 929,233      |    | -          |
| Water Fund                     |    | 512,381      |    | -          |
| Street Fund                    |    | 146,128      |    | -          |
| Special Projects Fund          |    | -            |    | 165,000    |
| Water Capital Improvement Fund |    | -            |    | 350,045    |
| Sewer Capital Improvement Fund |    | -            |    | 245,999    |
| Non-Major Funds                |    | -            |    | 146,128    |
|                                | \$ | 1,836,545    | \$ | 1,836,545  |

### 8. RISK MANAGEMENT

There is exposure to various risks of loss related to torts; theft of, damage to and destruction of assets; errors and omissions; injuries to employees; and natural disasters. The City is a member of City/County Insurance Services (CCIS), a public entity risk pool operating as a common risk management and insurance program for participating Oregon cities and counties. An annual premium is paid to CCIS for its general insurance coverage and for its workers compensation insurance coverage. The agreement with CCIS provides that CCIS will be self-sustaining through member premiums and will reinsure through commercial companies for claims in excess of \$500,000 for each insured event.

Commercial coverage is purchased for employee health and accident insurance and for errors and omissions insurance. Settled claims have not exceeded this commercial coverage for any of the past three fiscal years.

### 9. LONG-TERM OBLIGATIONS

The following changes occurred in the liabilities reported during the year ended June 30, 2022:

| Name  | Interest Rates                               | Ori    | ginal Issue                         | Ou<br>7 | tstanding<br>//1/2021           | Iss  | sued             | Ma<br>R | itured and edeemed                 | 01<br>6 | itstanding<br>5/30/2022         | Du<br>O | e Within<br>ne Year          |
|---|--|--------|-------------------------------------|---------|---------------------------------|------|------------------|---------|------------------------------------|---------|---------------------------------|---------|------------------------------|
| ECDD Notes Payable<br>OBDD Notes Payable<br>DEQ Notes Payable | 5.01 - 6.00%<br>3.42 - 3.56%<br>1.50 - 2.87% | \$     | 2,097,654<br>1,085,747<br>9,856,180 | \$      | 513,849<br>992,823<br>6,416,399 | \$   | -<br>-<br>97,927 | \$      | (133,217)<br>(38,117)<br>(517,828) | \$      | 380,632<br>954,706<br>4,789,826 | \$      | 140,375<br>38,650<br>543,609 |
|   | Tota   | ıl Lon | g Term Debt                         | \$      | 6,416,399                       | \$ 3 | 97,927           | \$      | (689,162)                          | \$      | 6,125,164                       | \$      | 722,634                      |

Future minimum payments:

| Year ending | Notes Payable |              |  |  |  |
|-------------|---------------|--------------|--|--|--|
| June 30,    | Principal     | Interest     |  |  |  |
| 2023        | 722,634       | 194,045      |  |  |  |
| 2024        | 653,299       | 169,129      |  |  |  |
| 2025        | 673,183       | 147,996      |  |  |  |
| 2026        | 698,752       | 126,177      |  |  |  |
| 2027        | 720,028       | 103,402      |  |  |  |
| 2028-2032   | 1,889,885     | 248,920      |  |  |  |
| 2033-2037   | 395,322       | 99,154       |  |  |  |
| 2038-2042   | 209,984       | 28,313       |  |  |  |
| 2043-2047   | 89,473        | 9,092        |  |  |  |
| 2048-2052   | 72,604        | 2,752        |  |  |  |
| Total       | \$ 6,125,164  | \$ 1,128,980 |  |  |  |

In the event of default, the Department of Environmental Quality (DEQ) lender has the ability to make all outstanding principal and interest immediately due and payable, as well as cease the disbursements of the bond proceeds. In addition, the lender may direct the State to divert any state funds due to the City to be applied to the payment of the loans.

# 9. LONG-TERM OBLIGATIONS (CONTINUED)

In the event of default, the Oregon Business Development Department lender (OBDD) may pursue any or all remedies available by law. In addition, OBDD may terminate any other commitments or obligation to make any further disbursement of financing proceeds under the contract and declaring all payments under the contract immediately due and payable. OBDD may also prevent the City from applying for any future awards and issue foreclosing liens and security interest pursuant to this contract or any other financing documents.

None of these obligations are recorded in the basic financial statements because the modified cash basis of accounting is used.

### 10. TAX ABATEMENTS

As of June 30, 2022, the City had state allowed tax abatements through one program, the Enterprise Zone Program, which impacted their levied taxes.

### Enterprise Zone (ORS 285C.175):

• The Oregon Enterprise Zone program is a State of Oregon economic development program established, that allows for property tax exemptions for up to five years. In exchange for receiving property tax exemption, participating firms are required to meet the program requirements set by state statute and the local sponsor.

The Enterprise Zone program allows industrial firms that will be making a substantial new capital investment a waiver of 100% of the amount of real property taxes attributable to the new investment for a 5-year period after completion. Land or existing machinery or equipment is not tax exempt; therefore, there is no loss of current property tax levies to local taxing jurisdiction.

For the fiscal year ended June 30, 2022, the City had abated property taxes totaling \$5,998 under this program.

### 11. COMMITMENTS AND CONTINGENCIES

The COVID-19 outbreak in the United States has caused substantial disruption to business and local governments due to mandated and voluntary suspension of operations and stay at home orders. There is considerable uncertainty around the duration of the outbreak and the long-term impact to the overall economy. The ultimate impact on the City's finances is not determinable.

# SUPPLEMENTARY INFORMATION

FOR THE YEAR ENDED JUNE 30, 2022

#### SUPPLEMENTARY INFORMATION June 30, 2022

# PERS

# SCHEDULE OF THE PROPORTIONATE SHARE OF THE NET PENSION LIABILITY

|          | (a)             |       | (b)             |         |            | (b/c)      | Plan fiduciary  |            |                   |
|----------|-----------------|-------|-----------------|---------|------------|------------|-----------------|------------|-------------------|
|          | Employer's      | E     | Imployer's      |         | (c)        | NPL as a   | net position as |            |                   |
| Year     | proportion of   | propo | ortionate share |         | Employer's | percentage | a percentage of |            |                   |
| Ended    | the net pension | of th | ne net pension  | covered |            | covered    |                 | of covered | the total pension |
| June 30, | liability (NPL) | lia   | liability (NPL) |         | payroll    | payroll    | liability       |            |                   |
|          |                 |       |                 |         |            |            |                 |            |                   |
| 2022     | 0.010 %         | \$    | 1,236,413       | \$      | 1,099,671  | 112.4 %    | 87.6 %          |            |                   |
| 2021     | 0.010           |       | 2,198,327       |         | 920,567    | 238.8      | 75.8            |            |                   |
| 2020     | 0.009           |       | 1,608,636       |         | 872,570    | 184.4      | 80.2            |            |                   |
| 2019     | 0.010           |       | 1,447,457       |         | 943,746    | 153.4      | 82.1            |            |                   |
| 2018     | 0.010           |       | 1,291,886       |         | 941,920    | 137.2      | 83.1            |            |                   |
| 2017     | 0.008           |       | 1,209,613       |         | 905,241    | 133.6      | 80.5            |            |                   |
| 2016     | 0.007           |       | 414,540         |         | 877,461    | 47.2       | 91.9            |            |                   |
| 2015     | 0.010           |       | (227,765)       |         | 835,934    | (27.2)     | 103.6           |            |                   |
| 2014     | 0.010           |       | 512,777         |         | 768,791    | 66.7       | 92.0            |            |                   |

The amounts presented for each fiscal year were actuarially determined at 12/31 and rolled forward to the measurement date of 6/30 for each year presented.

These schedules are presented to illustrate the requirements to show information for 10 years. However, until a full 10-year trend has been compiled, information is presented only for the years for which the required supplementary information is available.

# SCHEDULE OF CONTRIBUTIONS

|      | Statutorily<br>required<br>contribution |         | Contributions in<br>relation to the<br>statutorily required<br>contribution |         | Contribution<br>deficiency<br>(excess) |   | Employer's<br>covered<br>payroll |           | Contributions<br>as a percent<br>of covered<br>payroll |   |
|------|---|---------|---|---------|--|---|----------------------------------|-----------|--|---|
| 2022 | \$                                      | 182,973 | \$  | 182,973 | \$                                     |   | \$                               | 1,133,724 | 16.1   | % |
| 2021 | -                                       | 145,849 |   | 145,849 |  |   |                                  | 1,099,671 | 13.3   |   |
| 2020 |   | 126.812 |   | 126,812 |  | - |                                  | 920,567   | 13.8   |   |
| 2019 |   | 107,421 |   | 107,421 |  | - |                                  | 872,570   | 12.3   |   |
| 2018 |   | 109,752 |   | 109,752 |  | - |                                  | 943,746   | 11.6   |   |
| 2017 |   | 90.322  |   | 90,322  |  | - |                                  | 941,920   | 9.6  |   |
| 2016 |   | 85,406  |   | 85,406  |  | - |                                  | 905,241   | 9.4  |   |
| 2015 |   | 60.207  |   | 60,207  |  | - |                                  | 877,461   | 6.9  |   |
| 2014 |   | 60,682  |   | 60,682  |  | - |                                  | 835,934   | 7.3  |   |

The amounts presented for each fiscal year were actuarially determined at 12/31 and rolled forward to the measurement date of 6/30 for each year presented.

These schedules are presented to illustrate the requirements to show information for 10 years. However, until a full 10-year trend has been compiled, information is presented only for the years for which the required supplementary information is available.

# RAINIER, CITY OF <u>RAINIER, OREGON</u>

REQUIRED SUPPLEMENTARY INFORMATION

June 30, 2022

### SCHEDULE OF THE PROPORTIONATE SHARE OF THE NET OPEB ASSET FOR RHIA

| Year<br>Ended<br>June 30, | (a)<br>Employer's<br>proportion of<br>the net OPEB<br>asset (NOA) | (b)<br>Employer's<br>proportionate share<br>of the net OPEB<br>asset (NOA) | (b)<br>Employer's<br>oportionate share<br>of the net OPEB<br>asset (NOA) |                    | (b/c)<br>NOA as a<br>percentage<br>of covered<br>payroll | Plan fiduciary<br>net position as<br>a percentage of<br>the total OPEB<br>asset |   |  |
|---------------------------|---|--|--|--------------------|--|---|---|--|
| 2022                      | 0.0092 %  | \$ 31,630  | \$   | 1,099,671          | 2.876 %  | 183.9   | % |  |
| 2021<br>2020              | 0.0081<br>0.0088  | 17,406<br>15,663   |  | 920,567<br>872,570 | 1.737  | 144.5   |   |  |
| 2019<br>2018              | 0.0010<br>0.0010  | 9,819<br>4,039   |  | 943,746<br>941,720 | 1.040<br>0.429   | 124.0   |   |  |

The amounts presented for each fiscal year were actuarially determined at 12/31 and rolled forward to the measurement date of 6/30 for each year presented.

These schedules are presented to illustrate the requirements to show information for 10 years. However, until a full 10-year trend has been compiled, information is presented only for the years for which the required supplementary information is available.

Amounts for covered payroll (c) use the prior year's data to match the measurement date used by the OPEB plan for each year.

#### SCHEDULE OF CONTRIBUTIONS

| Year<br>Ended<br>June 30, | Statutorily<br>required<br>contribution | Contributi<br>relation to<br>statutorily r<br>contribu | ons in<br>o the Cont<br>required def<br>ntion (ex | ribution<br>iciency<br>xcess) | <br>Employer's<br>covered<br>payroll | Contributions<br>as a percent<br>of covered<br>payroll |   |
|---------------------------|---|--|---|-------------------------------|--------------------------------------|--|---|
| 2022 \$                   | \$ N/A                                  | \$ N/A   | \$  | -                             | \$<br>1,133,724                      | -  | % |
| 2021                      | N/A                                     | N/A  |   | -                             | 1,099,671                            | -  |   |
| 2020                      | N/A                                     | N/A  |   | -                             | 920,567                              | -  |   |
| 2019                      | N/A                                     | N/A  |   | -                             | 872,570                              | -  |   |
| 2018                      | N/A                                     | N/A  |   | -                             | 943,746                              | -  |   |

The amounts presented for each fiscal year were actuarially determined at 12/31 and rolled forward to the measurement date of 6/30 for each year presented.

These schedules are presented to illustrate the requirements to show information for 10 years. However, until a full 10-year trend has been compiled, information is presented only for the years for which the required supplementary information is available.

All statutorily required contributions were made and are included with PERS contributions (See p. 32)

### SCHEDULE OF RECEIPTS, DISBURSEMENTS AND CHANGES IN FUND BALANCE -MODIFIED CASH BASIS - ACTUAL AND BUDGET For the year ended June 30, 2022

# GENERAL FUND

|                            | ORIGINAL<br>BUDGET |           |         | FINAL<br>BUDGET |    | ACTUAL    | VARIANCE<br>TO FINAL<br>BUDGET<br>FAVORABLE<br>(UNFAVORABLE) |           |
|----------------------------|--------------------|-----------|---------|-----------------|----|-----------|--|-----------|
| RECEIPTS:                  | ¢                  | 1 000 000 | ¢       | 1 020 000       | ¢  | 1 025 172 | ¢  | 5 1 9 2   |
| Current Levy               | \$                 | 1,029,990 | \$      | 1,029,990       | Э  | 1,035,172 | Ф  | 3,102     |
| Prior Years' Levies        |                    | 41,200    |         | 41,200          |    | 27,033    |  | (14, 147) |
| Interest Delinquent Taxes  |                    | 300       |         | 300             |    | 203       |  | (57)      |
| Property Tax Reimbursement |                    | 6,800     |         | 6,800           |    | (1 559    |  | (0,771)   |
| State Marijuana Tax        |                    | 70,000    |         | 70,000          |    | 01,338    |  | (0,442)   |
| State Liquor Taxes         |                    | 35,000    |         | 35,000          |    | 30,127    |  | 1,127     |
| State Cigarette Taxes      |                    | 2,000     |         | 2,000           |    | 1,654     |  | (346)     |
| State Marine Board         |                    | 6,000     |         | 6,000           |    | 3,700     |  | (2,300)   |
| State Revenue Sharing      |                    | 25,000    |         | 25,000          |    | 26,584    |  | 1,584     |
| Grants                     |                    | 2,000     |         | 4,000           |    | 10,698    |  | 6,698     |
| Municipal Court Fines      |                    | 50,000    |         | 50,000          |    | 59,579    |  | 9,579     |
| Franchise Fees             |                    | 130,000   |         | 130,000         |    | 127,701   |  | (2,299)   |
| Business License Fees      |                    | 22,000    |         | 22,000          |    | 23,578    |  | 1,578     |
| Planning Fees              |                    | 3,000     |         | 3,000           |    | 4,282     |  | 1,282     |
| Library Fees               |                    | 200       |         | 200             |    | 851       |  | 651       |
| Boat Launching             |                    | 27,000    |         | 27,000          |    | 29,581    |  | 2,581     |
| Boat Storage               |                    | 20,000    |         | 20,000          |    | 43,366    |  | 23,366    |
| Mineral Royalties          |                    | 6,000     |         | 6,000           |    | 20,790    |  | 14,790    |
| Leases                     |                    | 40,000    |         | 40,000          |    | 24,969    |  | (15,031)  |
| Miscellaneous              |                    | 6,000     |         | 6,000           |    | 43,973    |  | 37,973    |
| Interest                   |                    | 30,000    |         | 30,000          |    | 38,587    |  | 8,587     |
| Library Donations          |                    | -         |         | 9,000           |    | 100       |  | (8,900)   |
| Police Training            |                    | 3,500     |         | 3,500           |    | 4,380     |  | 880       |
| Vehicle Impoundment        |                    | 100       |         | 100             |    | 75        |  | (25)      |
| Administrative Support     |                    | 7,200     | <b></b> | 7,200           |    | 7,363     |  | 163       |
| Total Receipts             | \$                 | 1,563,290 | \$      | 1,574,290       | \$ | 1,631,953 | \$   | 57,663    |
|                            |                    |           |         |                 |    |           |  |           |

Continued on page -35- & -36-

# SCHEDULE OF RECEIPTS, DISBURSEMENTS AND CHANGES IN FUND BALANCE -MODIFIED CASH BASIS - ACTUAL AND BUDGET For the year ended June 30, 2022

#### GENERAL FUND

| DISBURSEMENTS                    | ORIGINAL<br>BUDGET | FINAL<br>BUDGET | ACTUAL               | VARIANCE<br>TO FINAL<br>BUDGET<br>FAVORABLE<br>( <u>UNFAVORABLE</u> |  |
|----------------------------------|--------------------|-----------------|----------------------|---|--|
| General Government:              |                    |                 |                      |   |  |
| Personnel Services               | \$ 4,500           | \$ 4,500        | \$ 71,862            | \$ (67,362)   |  |
| Materials and Services           | 71,800             | 71,800          | 18,436               | 53,364  |  |
| Capital Outlay                   | 11,000             | 11,000          | 9,914                | 1,086   |  |
| Contingency                      | 51,970             | 35,970          |                      | 35,970  |  |
| Total General Government         | 139,270            | 123,270         | (1) 100,212          | 23,058  |  |
| City Building Maintenance:       |                    |                 |                      |   |  |
| Materials and Services           | 13,500             | 13,500          | 4,604                | 8,896   |  |
| Capital Outlay                   |                    |                 | 2,036                | (2,036)   |  |
| Total City Building Maintenance  | 13,500             | 13,500          | (1) 6,640            | 6,860   |  |
| Land Use and Development:        |                    |                 |                      |   |  |
| Personnel Services               | 15,225             | 15,225          | 15,252               | (27)  |  |
| Materials and Services           | 12,200             | 12,200          | 7,220                | 4,980   |  |
| Total Land Use and Development   | 27,425             | 27,425          | _(1)22,472           | 4,953   |  |
| Library:                         |                    |                 |                      |   |  |
| Personnel Services               | -                  | -               | 64,592               | (64,592)  |  |
| Materials and Services           | 68,800             | 79,800          | -                    | 79,800  |  |
| Capital Outlay                   | -                  |                 | 12,900               | (12,900)  |  |
| Total Library                    | 68,800             | 79,800          | (1) 77,492           | 2,308   |  |
| Attorney:                        |                    |                 |                      |   |  |
| Materials and Services           | 7,500              | 9,500           |                      | 808   |  |
| Total Attorney                   | 7,500              | 9,500           | (1) 8,692            | 808   |  |
| Finance and Administration:      |                    |                 |                      |   |  |
| Personnel Services               | 48,967             | 48,967          | 41,786               | 7,181   |  |
| Materials and Services           | 7,150              | 7,150           | 3,799                | 3,351   |  |
| Capital Outlay                   | <u> </u>           |                 | 70                   | (70)  |  |
| Total Finance and Administration | \$ 56,117          | \$ 56,117       | (1) <u>\$ 45,655</u> | \$ 10,462   |  |

Continued from page -34-Continued on page -36-

# SCHEDULE OF RECEIPTS, DISBURSEMENTS AND CHANGES IN FUND BALANCE -MODIFIED CASH BASIS - ACTUAL AND BUDGET For the year ended June 30, 2022

#### GENERAL FUND

|  | ORIGINAL<br>BUDGET | FINAL<br>BUDGET | ACTUAL                   | VARIANCE<br>TO FINAL<br>BUDGET<br>FAVORABLE<br>(UNFAVORABLE) |
|--|--------------------|-----------------|--------------------------|--|
| DISBURSEMENTS (CONTINUED):   |                    |                 |                          |  |
| Municipal Court:   |                    |                 |                          |  |
| Personnel Services   | \$ 35,284          | \$ 35,284       | \$ 34,954                | \$ 330   |
| Materials and Services   | 25,800             | 25,800          | 18,147                   | 7,653  |
| Capital Outlay   | -                  |                 | 2,027                    | (2,027)  |
| Total Municipal Court  | 61,084             | 61,084 (        | 1) 55,128                | 5,956  |
| Public Properties:   |                    |                 |                          |  |
| Personnel Services   | 81,683             | 81,683          | 77,626                   | 4,057  |
| Materials and Services   | 57,800             | 57,800          | 69,451                   | (11,651)   |
| Capital Outlay   | 50,000             | 50,000          | -                        | 50,000   |
| Total Public Properties  | 189,483            | 189,483 (       | 1) 147,077               | 42,406   |
| Police:  |                    |                 |                          |  |
| Personnel Services   | 799,058            | 799,058         | 667,496                  | 131,562  |
| Materials and Services   | 99,925             | 99,925          | 94,814                   | 5,111  |
| Capital Outlay   | 66,760             | 66,760          | 72,472                   | (5,712)  |
| Total Police   | 965,743            | 965,743 (       | 1) 834,782               | 130,961  |
| Total Disbursements  | 1,528,922          | 1,528,922       | 1,298,150                | 230,772  |
| Excess of Receipts Over (Under) Disbursements  | 34,368             | 45,368          | 333,803                  | 288,435  |
| Other Financing Sources, (Uses)<br>Loss on Fair Market Value of Investments<br>Operating Transfers Out | (249,368)          | (248,803) (     | (72,302)<br>1) (248,803) | (72,302)   |
| Total Other Financing Sources, (Uses)  | (249,368)          | (248,803)       | (321,105)                | (72,302)   |
| Net Change in Fund Balance   | (215,000)          | (203,435)       | 12,698                   | 216,133  |
| Beginning Fund Balance   | 2,086,273          | 2,086,273       | 2,118,527                | 32,254   |
| Ending Fund Balance  | \$ 1,871,273       | \$ 1,882,838    | \$ 2,131,225             | \$ 248,387   |

(1) Appropriation Level

# SCHEDULE OF RECEIPTS, DISBURSEMENTS AND CHANGES IN FUND BALANCE -MODIFIED CASH BASIS - ACTUAL AND BUDGET For the year ended June 30, 2022

### DEBT SERVICE FUND

|   | (  | ORIGINAL<br>BUDGET   |    | FINAL<br>BUDGET        |       | ACTUAL               | VARIANCE<br>TO FINAL<br>BUDGET<br>FAVORABLE<br>(UNFAVORABLE) |                  |
|---|----|----------------------|----|------------------------|-------|----------------------|--|------------------|
| DISBURSEMENTS:<br>Debt Service:                                       | ¢  | 670 507              | ¢  | 670 507                |       | \$ 679 597           | \$   | _                |
| WWIP<br>Water Debt  | Э  | 278,053              | Ъ. | 278,053                |       | 249,776              | Ψ  | 28,277           |
| Total Disbursements<br>Excess of Receipts Over, (Under) Disbursements |    | 957,650<br>(957,650) |    | 957,650 (<br>(957,650) | (1) _ | 929,373<br>(929,373) |  | 28,277<br>28,277 |
| Other Financing Sources, (Uses)<br>Operating Transfers In             |    | 1,321,746            |    | 1,321,746              | -     | 929,373              | . <u>.</u>   | 392,373          |
| Total Other Financing Sources, (Uses)                                 |    | 1,321,746            |    | 1,321,746              | _     | 929,373              |  |                  |
| Net Change in Fund Balance  |    | 364,096              |    | 364,096                |       | -                    |  | (364,096)        |
| Beginning Fund Balance  |    | -                    |    |                        | -     | 364,096              |  | 364,096          |
| Ending Fund Balance   | \$ | 364,096              | \$ | 364,096                | =     | \$ 364,096           | \$   |                  |

(1) Appropriation Level
# SCHEDULE OF RECEIPTS, DISBURSEMENTS AND CHANGES IN FUND BALANCE -MODIFIED CASH BASIS - ACTUAL AND BUDGET For the year ended June 30, 2022

## STREET FUND

|   |          |           |          | ,         |        |           | VA<br>TC<br>B | RIANCE<br>) FINAL<br>UDGET |
|---|----------|-----------|----------|-----------|--------|-----------|---------------|----------------------------|
|   | 0]       | RIGINAL   | ~        | FINAL     |        |           | FAV           | VORABLE                    |
|   | <u> </u> | UDGET     | <u>B</u> | UDGET     | ACTUAL |           | <u>(UNFA</u>  | VORABLE)                   |
| RECEIPTS:                                     | Φ        | 111.000   | ¢        | 111.000   | ¢      | 112 507   | ¢             | 601                        |
| Current Levy                                  | 2        | 111,906   | 2        | 111,900   | 3      | 2.041     | Ф             | (1.525)                    |
| Prior Years' Levies                           |          | 4,476     |          | 4,476     |        | 2,941     |               | (1,333)                    |
| State Street Allotment                        |          | 132,000   |          | 132,000   |        | 100,784   |               | 1 846                      |
| Miscellaneous                                 |          |           |          |           | ·      | 1,840     |               | 1,840                      |
| Total Receipts                                |          | 248,382   |          | 248,382   |        | 271,078   |               | 22,696                     |
| DISBURSEMENTS:                                |          |           |          |           |        |           |               |                            |
| Personnel Services                            |          | 66,643    |          | 66,643    |        | 70,155    |               | (3,512)                    |
| Materials and Services                        |          | 118,150   |          | 118,150   |        | 94,634    |               | 23,516                     |
| Contingency                                   | <b></b>  | 2,144     | <b></b>  | 2,144     |        | -         | <b></b>       | 2,144                      |
| Total Disbursements                           |          | 186,937   |          | 186,937   | (1)_   | 164,789   | <b></b>       | 22,148                     |
| Excess of Receipts Over (Under) Disbursements |          | 61,445    |          | 61,445    |        | 106,289   |               | 44,844                     |
| Other Financing Sources (Uses)                |          |           |          |           |        |           |               |                            |
| Operating Transfers Out                       |          | (146,128) |          | (146,128) | (1)    | (146,128) |               |                            |
| Total Other Financing Sources (Uses)          |          | (146,128) |          | (146,128) |        | (146,128) |               | -                          |
| Net Change in Fund Balance                    |          | (84,683)  |          | (84,683)  |        | (39,839)  |               | 44,844                     |
| Beginning Fund Balance                        |          | 128,659   |          | 128,659   | -      | 261,505   |               | 132,846                    |
| Ending Fund Balance                           | \$       | 43,976    | \$       | 43,976    | -      | 221,666   | \$            | 177,690                    |

# SCHEDULE OF RECEIPTS, DISBURSEMENTS AND CHANGES IN FUND BALANCE -MODIFIED CASH BASIS - ACTUAL AND BUDGET For the year ended June 30, 2022

## SPECIAL PROJECTS FUND

|   | O<br>E   | RIGINAL<br>BUDGET | FINAL<br>BUDGET |           |     | А  | CTUAL_       | VARIANCE<br>TO FINAL<br>BUDGET<br>FAVORABLE<br>(UNFAVORABLE) |           |  |
|---|----------|-------------------|-----------------|-----------|-----|----|--------------|--|-----------|--|
| RECEIPTS:                                     |          |                   |                 |           |     |    | (2 4 6 6 6 ) |  |           |  |
| NOEA-WRA Wetland Migration                    | \$       | 34,099            | \$              | 34,099    |     | \$ | -            | \$   | (34,099)  |  |
| ODOT TGM Grant                                |          | 150,000           |                 | 150,000   |     |    | -            |  | (150,000) |  |
| ODOT Trail Grant                              |          | 252,000           |                 | 252,000   |     |    | -            |  | (252,000) |  |
| CWCOG Grant                                   |          | 84,715            |                 | 84,715    |     |    | 79,632       |  | (5,083)   |  |
| Strategic Planning Grant                      |          | 75,000            |                 | 75,000    |     |    | -            |  | (75,000)  |  |
| Fox Creek Grant                               | <b>.</b> | 100,000           |                 | 100,000   |     |    | 100,000      |  | -         |  |
| Total Receipts                                |          | 695,814           |                 | 695,814   |     |    | 179,632      |  | (516,182) |  |
| DISBURSEMENTS:                                |          |                   |                 |           |     |    |              |  |           |  |
| Capital Outlay                                |          | 926,715           | <b></b>         | 926,715   |     |    | 273,111      |  | 653,604   |  |
| Total Disbursements                           |          | 926,715           |                 | 926,715   | (1) |    | 273,111      |  | 653,604   |  |
| Excess of Receipts Over (Under) Disbursements |          | (230,901)         |                 | (230,901) |     |    | (93,479)     |  | 137,422   |  |
| Other Financing Sources (Uses)                |          |                   |                 |           |     |    |              |  |           |  |
| Operating Transfers In                        |          | 165,000           |                 | 165,000   |     |    | 165,000      |  | -         |  |
| Total Other Financing Sources (Uses)          |          | 165,000           | <u></u>         | 165,000   |     |    | 165,000      |  |           |  |
| Net Change in Fund Balance                    |          | (65,901)          |                 | (65,901)  |     |    | 71,521       |  | 137,422   |  |
| Beginning Fund Balance                        |          | 100,000           | <u></u>         | 100,000   |     |    | 213,893      |  | 113,893   |  |
| Ending Fund Balance                           | \$       | 34,099            | \$              | 34,099    |     | \$ | 285,414      | \$   | 251,315   |  |

# SCHEDULE OF RECEIPTS, DISBURSEMENTS AND CHANGES IN FUND BALANCE -MODIFIED CASH BASIS - ACTUAL AND BUDGET For the year ended June 30, 2022

## WATER CAPITAL IMPROVEMENT FUND

|   | ORIGINAL<br>BUDGET | FINAL<br>BUDGET | ACTUAL      | VARIANCE<br>TO FINAL<br>BUDGET<br>FAVORABLE<br>(UNFAVORABLE) |
|---|--------------------|-----------------|-------------|--|
| RECEIPTS:                                     | ¢ 5,000            | \$ 5,000        | \$ 9200     | \$ 4 200   |
| System Development Charges                    | \$ 3,000<br>68 333 | 68.333          | 111,613     | 43,280   |
| WTP Insurance Reimbursement                   | -                  | -               | 301,071     | 301,071  |
| Water System Master Plan Grant                | 70,000             | 70,000          |             | (70,000)   |
| Total Receipts                                | 143,333            | 143,333         | 421,884     | 278,551  |
| DISBURSEMENTS:                                |                    |                 |             |  |
| Capital Outlay:                               |                    |                 |             | 70.000   |
| Water System Master Plan                      | 70,000             | 70,000          | -           | /0,000   |
| Water System Improvement                      | 428,378            | 428,378         | 473,033     | 20,000   |
| Consulting                                    | 20,000             | 20,000          |             | 20,000   |
| Total Expenditures                            | 518,378            | 518,378         | (1) 473,035 | 45,343   |
| Net Change Fund Balance                       | (375,045)          | (375,045)       | (51,151)    | 323,894  |
| Other Financing Sources, -Uses                |                    |                 | 250.045     |  |
| Operating Transfers In                        | 350,045            | 350,045         | 350,045     |  |
| Total Other Financing Sources, -Uses          | 350,045            | 350,045         | 350,045     |  |
| Excess of Receipts Over (Under) Disbursements | (25,000)           | (25,000)        | 298,894     | 323,894  |
| Beginning Fund Balance                        | 25,000             | 25,000          | 58,409      | 33,409   |
| Ending Fund Balance                           | \$                 | \$ -            | \$ 357,303  | \$ 357,303   |

# SCHEDULE OF RECEIPTS, DISBURSEMENTS AND CHANGES IN FUND BALANCE -MODIFIED CASH BASIS - ACTUAL AND BUDGET For the year ended June 30, 2022

#### SEWER CAPITAL IMPROVEMENT FUND

|   | ORIGINAL  | FINAL       |                   | VARIANCE<br>TO FINAL<br>BUDGET<br>FAVORABLE |
|---|-----------|-------------|-------------------|---|
|   | BUDGET    | BUDGET      | ACTUAL            | (UNFAVORABLE)                               |
| RECEIPTS:   |           |             | * 111 (10)        | ¢ 42.270                                    |
| Federal Infrastructure Aid                                  | \$ 68,333 | \$ 68,333   | \$ 111,612        | \$ 43,279                                   |
| Sewer SDC   | 8,000     | 8,000       | 26,450            | 18,430                                      |
| Total Receipts  | 76,333    | 76,333      | 138,062           | 61,729                                      |
| DISBURSEMENTS   |           |             |                   |   |
| Capital Outlay  | 552,104   | 552,104     | 181,379           | 370,725                                     |
|   |           |             |                   |   |
| Total Disbursements   | 552,104   | 552,104 (1) | 181,379           | 370,725                                     |
| Net Change in Fund Balance                                  | (475,771) | (475,771)   | (43,317)          | 432,454                                     |
| Other Financing Sources -Uses                               |           |             |                   |   |
| Operating Transfers In                                      | 245,999   | 245,999     | 245,999           |   |
| Total Other Financing Sources, -Uses                        | 245,999   | 245,999     | 245,999           | -   |
|   | <u></u>   |             |                   |   |
| Excess of Receipts Over, -Under Disbursements and Transfers | (229,772) | (229,772)   | 202,682           | 432,454                                     |
| Beginning Fund Balance                                      | 229,772   | 229,772     | 751,845           | 522,073                                     |
| Ending Fund Balance   | <u>\$</u> | <u>\$</u>   | <u>\$ 954,527</u> | <u>\$ 954,527</u>                           |

# COMBINING BALANCE SHEET - MODIFIED CASH BASIS ALL NON-MAJOR FUNDS June 30, 2022

|                                     | LIBRARY<br>FUND | TRAN<br>IMI | NSPORTATION<br>CAPITAL<br>PROVEMENT<br>FUND |          | TOTAL   |
|-------------------------------------|-----------------|-------------|---|----------|---------|
| ASSETS:                             | <br>            |             |   |          | 110 155 |
| Cash and Investments                | \$<br>88,908    | <u> </u>    | 353,547                                     | <u> </u> | 442,455 |
| Total Assets                        | \$<br>88,908    | \$          | 353,547                                     | \$       | 442,455 |
| LIABILITIES AND FUND BALANCES:      |                 |             |   |          |         |
| Fund Balances:                      |                 |             |   |          |         |
| Restricted                          | \$<br>88,908    | \$          | 353,547                                     | \$       | 442,455 |
| Total Fund Balance                  | <br>88,908      |             | 353,547                                     |          | 442,455 |
| Total Liabilities and Fund Balances | \$<br>88,908    | \$          | 353,547                                     | \$       | 442,455 |

# COMBINING SCHEDULE OF RECEIPTS, DISBURSEMENTS AND CHANGES IN FUND BALANCES MODIFIED CASH BASIS - ALL NON-MAJOR FUNDS For the year ended June 30, 2022

|  | LIBI<br>FU | RARY<br>IND | TRANSPC<br>CAP<br>IMPROV<br>FU | TOTAL     |         |           |
|--|------------|-------------|--------------------------------|-----------|---------|-----------|
| RECEIPTS:  |            |             |                                |           |         |           |
| Interest   | \$         | 625         | \$                             | -         | \$      | 625       |
| System Development Charges                               |            | -           |                                | -         |         | -         |
| SCA Grant  |            | -           |                                | 150,000   |         | 150,000   |
| Miscellaneous  | <u></u>    | 1,980       |                                | -         |         | 1,980     |
| Total Receipts   |            | 2,605       |                                | 150,000   |         | 152,605   |
| DISBURSEMENTS:   |            |             |                                |           |         |           |
| Materials and Services                                   |            | 8,537       |                                | -         |         | 8,537     |
| Capital Outlay   |            |             |                                | 368,824   | <u></u> | 368,824   |
| Total Disbursements                                      |            | 8,537       |                                | 368,824   |         | 377,361   |
| Excess of Receipts Over (Under) Disbursements            |            | (5,932)     |                                | (218,824) |         | (224,756) |
| Other Financing Sources (Uses)<br>Operating Transfers In |            |             |                                | 146,128   |         | 146,128   |
| Total Other Financing Sources (Uses)                     |            | -           |                                | 146,128   |         | 146,128   |
| Net Change in Fund Balance                               |            | (5,932)     |                                | (72,696)  |         | (78,628)  |
| Beginning Fund Balance                                   |            | 94,840      |                                | 426,243   | <u></u> | 521,083   |
| Ending Fund Balance                                      | \$         | 88,908      | \$                             | 353,547   | \$      | 442,455   |

# SCHEDULE OF RECEIPTS, DISBURSEMENTS AND CHANGES IN FUND BALANCE -MODIFIED CASH BASIS - ACTUAL AND BUDGET For the year ended June 30, 2022

#### LIBRARY TRUST FUND

|   | ORIGINAI<br>BUDGET | FINAL<br>BUDGET |          | ACTUAL  | VA<br>TC<br>B<br>FAV<br>(UNFA | RIANCE<br>O FINAL<br>UDGET<br>/ORABLE<br>AVORABLE) |
|---|--------------------|-----------------|----------|---------|-------------------------------|--|
| RECEIPTS:   | <b>*</b> 10        | r (h) 105       | - ¢      | (25     | ¢                             | 520  |
| Interest  | \$ 10              | 5 \$ 105        | > 2      | 1 020   | 2                             | 1 980  |
| Miscellaneous   |                    |                 |          | 1,980   |                               | 1,980  |
| Total Receipts  | 10                 | 5 105           | 5        | 2,605   |                               | 2,500  |
| DISBURSEMENTS:  |                    |                 |          |         |                               |  |
| Trust   | 85,04              | 3 85,043        | 3        | -       |                               | 85,043   |
| Materials and Services                                      | 10,00              | 0 10,000        | )        | 8,537   |                               | 1,463  |
| Total Disbursements   | 95,04              | 3 95,043        | 3_(1)    | 8,537   |                               | 1,463  |
| Excess of Receipts Over (Under) Disbursements and Transfers | (94,93             | 8) (94,938      | 3)       | (5,932) |                               | 89,006   |
| Beginning Fund Balance                                      | 94,93              | 8 94,938        | <u> </u> | 94,840  |                               | (98)   |
| Ending Fund Balance   | \$                 | - \$            | \$       | 88,908  | \$                            | 88,908   |

# SCHEDULE OF RECEIPTS, DISBURSEMENTS AND CHANGES IN FUND BALANCE -MODIFIED CASH BASIS - ACTUAL AND BUDGET For the year ended June 30, 2022

# TRANSPORTATION CAPITAL IMPROVEMENT FUND

|  |                    |                 |             | VARIANCE<br>TO FINAL<br>BUDGET |
|--|--------------------|-----------------|-------------|--------------------------------|
|  | ORIGINAL<br>BUDGET | FINAL<br>BUDGET | ACTUAL      | FAVORABLE<br>(UNFAVORABLE)     |
| RECEIPTS:                                    |                    |                 |             |                                |
| TSP Grant                                    | \$ 100,000         | \$ 100,000      | \$ -        | \$ (100,000)                   |
| Federal Infrastructure Aid                   | 68,333             | 68,333          | -           | (68,333)                       |
| SCA Grant                                    | 250,000            | 250,000         | 150,000     | (100,000)                      |
| Total Receipts                               | 418,333            | 418,333         | 150,000     | (268,333)                      |
| DISBURSEMENTS:                               |                    |                 |             |                                |
| Capital Outlay                               | 571,368            | 571,368         | 368,824     | 202,544                        |
| Total Disbursements                          | 571,368            | 571,368         | (1) 368,824 | 202,544                        |
| Excess of Receipts Over (Under) Disbursement | s (153,035)        | (153,035)       | (218,824)   | (65,789)                       |
| Other Financing Sources (Uses)               |                    |                 |             |                                |
| Operating Transfers In                       | 146,128            | 146,128         | 146,128     |                                |
| Total Other Financing Sources (Uses)         | 146,128            | 146,128         | 146,128     |                                |
| Net Change in Fund Balance                   | (6,907)            | (6,907)         | (72,696)    | (65,789)                       |
| Beginning Fund Balance                       | 6,907              | 6,907           | 426,243     | 419,336                        |
| Ending Fund Balance                          | \$ -               | \$-             | \$ 353,547  | \$ 353,547                     |

# SCHEDULE OF RECEIPTS, DISBURSEMENTS AND CHANGES IN FUND BALANCE -MODIFIED CASH BASIS - ACTUAL AND BUDGET For the year ended June 30, 2022

#### WATER FUND

|   | 0<br>1   | RIGINAL<br>BUDGET | I       | FINAL<br>BUDGET |            | ACTUAL    | V<br>FA<br><u>(UN</u> | VARIANCE<br>FO FINAL<br>BUDGET<br>AVORABLE<br>FAVORABLE) |
|---|----------|-------------------|---------|-----------------|------------|-----------|-----------------------|--|
| RECEIPTS:                                     | <b>.</b> |                   |         | 0 500           | Φ          | C 000     | ¢                     | 2,500  |
| Hook-Up Fees                                  | \$       | 2,500             | \$      | 2,500           | \$         | 5,000     | \$                    | 2,500  |
| Water Deposits                                |          | 500               |         | 500             |            | /15       |                       | (21, (05))   |
| Water Revenue                                 |          | 950,000           |         | 950,000         |            | 928,393   |                       | (21,003)   |
| Miscellaneous                                 |          | 4,000             |         | 4,000           | . <u> </u> | 17,329    | <u></u>               | 13,329   |
| Total Receipts                                |          | 957,000           |         | 957,000         | . <u> </u> | 951,439   |                       | (5,561)  |
| DISBURSEMENTS:                                |          |                   |         |                 |            |           |                       |  |
| Personnel Services                            |          | 488,346           |         | 488,346         |            | 472,711   |                       | 15,635   |
| Materials and Services                        |          | 192,320           |         | 192,320         |            | 175,917   |                       | 16,403   |
| Contingency                                   | <b>.</b> | 42,150            |         | 42,150          | . <u></u>  |           |                       | 42,150   |
| Total Disbursements                           |          | 722,816           | <u></u> | 722,816         | (1)        | 648,628   |                       | 74,188   |
| Excess of Receipts Over (Under) Disbursements |          | 234,184           |         | 234,184         |            | 302,811   |                       | 68,627   |
| Other Financing Sources (Uses)                |          |                   |         |                 |            |           |                       |  |
| Transfers Out                                 |          | (512,382)         |         | (512,382)       | (1)        | (512,381) |                       | 1  |
| Total Other Financing Sources (Uses)          |          | (512,382)         |         | (512,382)       | . <u>.</u> | (512,381) | <b></b>               | 1  |
| Net Change in Fund Balance                    |          | (278,198)         |         | (278,198)       |            | (209,570) |                       | 68,628   |
| Beginning Fund Balance                        |          | 469,598           | <u></u> | 469,598         | . <u> </u> | 557,320   | <u></u>               | 87,722   |
| Ending Fund Balance                           | \$       | 191,400           | \$      | 191,400         | \$         | 347,750   | \$                    | 156,350  |
|   |          |                   |         |                 |            |           |                       |  |

# SCHEDULE OF RECEIPTS, DISBURSEMENTS AND CHANGES IN FUND BALANCE -MODIFIED CASH BASIS - ACTUAL AND BUDGET For the year ended June 30, 2022

## SEWER FUND

|   | ORIGIN<br>BUDGE | AL<br>ET | FINAL<br>BUDGET |           |             | ACTUAL    | VA<br>T<br>B<br>FA<br>(UNF) | TO FINAL<br>BUDGET<br>FAVORABLE<br>(UNFAVORABLE) |  |  |
|---|-----------------|----------|-----------------|-----------|-------------|-----------|-----------------------------|--|--|--|
| RECEIPTS:                                     |                 |          |                 |           |             |           |                             |  |  |  |
| Property Taxes-Current                        | \$ 488          | ,313     | \$              | 488,313   | \$          | 493,126   | \$                          | 4,813  |  |  |
| Hook-Up Fees                                  |                 | 500      |                 | 500       |             | 1,000     |                             | 500  |  |  |
| Sewer Revenue                                 | 700             | ,000     |                 | 700,000   |             | 715,755   |                             | 15,755   |  |  |
| Sludge Revenue                                | 280             | ,000     |                 | 280,000   |             | 396,448   |                             | 116,448  |  |  |
| Miscellaneous                                 |                 | 100      |                 | 100       | <b></b>     | 1,774     |                             | 1,674  |  |  |
| Total Receipts                                | 1,468           | ,913     |                 | 1,468,913 | <del></del> | 1,608,103 |                             | 139,190  |  |  |
| DISBURSEMENTS:                                |                 |          |                 |           |             |           |                             |  |  |  |
| Personnel Services                            | 454             | ,307     |                 | 454,307   |             | 467,148   |                             | (12,841)   |  |  |
| Materials and Services                        | 278             | ,000     |                 | 278,000   |             | 273,196   |                             | 4,804  |  |  |
| Capital Outlay                                |                 | -        |                 | -         |             | 854       |                             | (854)  |  |  |
| Contingency                                   | 43              | ,310     | •               | 43,310    |             |           | <u></u>                     | 43,310   |  |  |
| Total Disbursements                           | 775             | ,617     |                 | 775,617   | (1)         | 741,198   |                             | 34,419   |  |  |
| Excess of Receipts Over (Under) Disbursements | 693             | ,296     |                 | 693,296   |             | 866,905   |                             | 173,609  |  |  |
| Other Financing Sources (Uses)                |                 |          |                 |           |             |           |                             |  |  |  |
| Transfers Out                                 | (956            | ,944)    |                 | (956,944) | (1)         | (929,233) |                             | 27,711_  |  |  |
| Total Other Financing Sources (Uses)          | (956            | ,944)    | <b></b>         | (956,944) |             | (929,233) |                             | 27,711   |  |  |
| Net Change in Fund Balance                    | (263            | ,648)    |                 | (263,648) |             | (62,328)  |                             | 201,320  |  |  |
| Beginning Fund Balance                        | 459             | ,768     | <b></b>         | 459,768   |             | 593,851   |                             | 134,083  |  |  |
| Ending Fund Balance                           | <u>\$ 196</u>   | ,120     | \$              | 196,120   | \$          | 531,523   | \$                          | 335,403  |  |  |

# SCHEDULE OF RECEIPTS, DISBURSEMENTS AND CHANGES IN FUND BALANCE -MODIFIED CASH BASIS - ACTUAL AND BUDGET For the year ended June 30, 2022

#### TIMBER FUND

|                            |         |          |          |           |          |           | V.<br>T<br>E | ARIANCE<br>O FINAL<br>BUDGET |  |
|----------------------------|---------|----------|----------|-----------|----------|-----------|--------------|------------------------------|--|
|                            | ORIC    | GINAL    | FINAL    |           |          |           | FAVORABLE    |                              |  |
|                            | BUI     | DGET     | E        | BUDGET    | ACTUAL   |           | <u>(UNF</u>  | AVORABLE)                    |  |
| RECEIPTS:                  |         |          |          |           |          |           | •            |                              |  |
| Timber Sales               | \$      | 180,000  | \$       | 180,000   | <u> </u> | 514,494   | <u>\$</u>    | 334,494                      |  |
| Total Receipts             |         | 180,000  | <b>N</b> | 180,000   |          | 514,494   | <del></del>  | 334,494                      |  |
| DISBURSEMENTS:             |         |          |          |           |          |           |              |                              |  |
| Personnel Services         |         | -        |          | -         |          | 21,290    |              | (21,290)                     |  |
| Materials and Services     |         | 80,400   |          | 80,400    |          | 40,788    |              | 39,612                       |  |
| Capital Outlay             |         | 65,000   |          | 65,000    |          | -         |              | 65,000                       |  |
| Contingency                | <u></u> | 300,000  |          | 300,000   |          |           |              | 300,000                      |  |
| Total Disbursements        |         | 445,400  |          | 445,400   | (1)      | 62,078    |              | 383,322                      |  |
| Net Change in Fund Balance | (       | 265,400) |          | (265,400) |          | 452,416   |              | 717,816                      |  |
| Beginning Fund Balance     | 1,      | 257,559  |          | 1,257,559 |          | 1,256,858 |              | (701)                        |  |
| Ending Fund Balance        | \$      | 992,159  | \$       | 992,159   | \$       | 1,709,274 | \$           | 717,115                      |  |
|                            |         |          |          |           |          |           |              |                              |  |

## SCHEDULE OF PROPERTY TAX TRANSACTIONS AND BALANCES OF TAXES UNCOLLECTED - GENERAL FUND For the year ended June 30, 2022

| TAX<br>YEAR           | I<br>I<br>B<br>UNC<br>AT | MPOSED<br>LEVY OR<br>ALANCE<br>COLLECTED<br>F 7/01/2021 | DI      | <u>c</u><br>EDUCT<br>COUNTS | <u>GENE</u><br>A<br>N | RAL FUND<br>DJUST-<br>ÆNTS<br>TO<br>ROLLS | IN | ADD<br>ITEREST | CO<br>B`<br>TI | CASH<br>LLECTIONS<br>Y COUNTY<br>REASURER | BA<br>UNCO<br>OR<br>RI<br>AT | ALANCE<br>OLLECTED<br>UNSEG-<br>EGATED<br>6/30/2022 |
|-----------------------|--------------------------|---|---------|-----------------------------|-----------------------|---|----|----------------|----------------|---|------------------------------|---|
| CURRENT:<br>2021-2022 | \$                       | 1,089,409   | \$      | 29,138                      | \$                    | (2,252)                                   | \$ | 528            | \$             | 1,035,172                                 | \$                           | 23,375  |
| PRIOR YEARS:          |                          |   |         |                             |                       |   |    |                |                |   |                              |   |
| 2020-2021             |                          | 23,337  |         | -                           |                       | (186)                                     |    | 840            |                | 12,087                                    |                              | 11,904  |
| 2019-2020             |                          | 11,835  |         | -                           |                       | (116)                                     |    | 938            |                | 6,134                                     |                              | 6,523   |
| 2018-2019             |                          | 7,054   |         | (3)                         |                       | (265)                                     |    | 1,339          |                | 5,844                                     |                              | 2,287   |
| 2017-2018             |                          | 2,305   |         | -                           |                       | (78)                                      |    | 557            |                | 2,164                                     |                              | 620   |
| Prior                 |                          | 1,844   | <u></u> |                             |                       | (151)                                     |    | 369            | <u> </u>       | 824                                       | <b></b>                      | 1,238   |
| Total Prior           |                          | 46,375  |         | (3)                         |                       | (796)                                     |    | 4,043          |                | 27,053                                    |                              | 22,572  |
| Total                 | \$                       | 1,135,784   | \$      | 29,135                      | \$                    | (3,048)                                   | \$ | 4,571          | \$             | 1,062,225                                 | \$                           | 45,947  |
| RECONCILIA            | ΓΙΟΝ                     | TO REVENUI  | 3:      |                             |                       |   |    |                |                |   |                              |   |

| Cash Collections by County Treasurer Above<br>Interest on Delinquent Taxes | \$<br>1,062,225<br>203 |
|--|------------------------|
| Total Revenue  | \$<br>1,062,457        |

## SCHEDULE OF PROPERTY TAX TRANSACTIONS AND BALANCES OF TAXES UNCOLLECTED - STREET FUND For the year ended June 30, 2022

| TAX<br>YEAR           | IMPOSED<br>LEVY OR<br>BALANCE<br>UNCOLLECTED<br>AT 7/01/2021 | DEDUCT<br>DISCOUNTS | STREET FUND<br>ADJUST-<br>MENTS<br>TO<br>ROLLS | ADD<br>INTEREST | CASH<br>COLLECTIONS<br>BY COUNTY<br>TREASURER | BALANCE<br>UNCOLLECTED<br>OR UNSEG-<br>REGATED<br>AT 6/30/2022 |
|-----------------------|--|---------------------|--|-----------------|---|--|
| CURRENT:<br>2021-2022 | \$ 118,402   | \$ 3,167            | \$ (244)                                       | \$ 57           | \$ 112,507                                    | \$ 2,541   |
| PRIOR YEARS:          |  |                     | (10)   | 01              | 1 2 1 4                                       | 1 204  |
| 2020-2021             | 2,536  | -                   | (19)   | 91              | 1,314   | 1,294  |
| 2019-2020             | 1,286  | -                   | (12)   | 102             | 667   | 709  |
| 2018-2019             | 767  | -                   | (28)   | 145             | 635   | 249  |
| 2017-2018             | 251  | -                   | (10)   | 61              | 235   | 67   |
| Prior                 | 200  |                     | (16)   | 40              | 90  | 134  |
| Total Prior           | 5,040  |                     | (85)   | 439             | 2,941   | 2,453  |
| Total All Funds       | \$ 123,442   | \$ 3,167            | \$ (329)                                       | \$ 496          | \$ 115,448                                    | \$ 4,994   |

#### SCHEDULE OF PROPERTY TAX TRANSACTIONS AND BALANCES OF TAXES UNCOLLECTED - SEWER FUND For the year ended June 30, 2022

|                       | IN<br>LI<br>By | APOSED<br>EVY OR<br>ALANCE |     |        | <u>SEN</u><br>Al | <u>WER FUND</u><br>DJUST-<br>1ENTS |          |        | COL     | CASH<br>LECTIONS | BA<br>UNCC<br>OR | LANCE<br>DLLECTED<br>UNSEG- |
|-----------------------|----------------|----------------------------|-----|--------|------------------|------------------------------------|----------|--------|---------|------------------|------------------|-----------------------------|
| ТАХ                   | UNC            | OLLECTED                   | DB  | EDUCT  |                  | ТО                                 |          | ADD    | BY      | COUNTY           | RE               | GATED                       |
| YEAR                  | AT             | 7/01/2021                  | DIS | COUNTS | F                | COLLS                              | INT      | FEREST | TRE     | EASURER          | AT               | 6/30/2022                   |
| CURRENT:<br>2021-2022 | \$             | 504,142                    | \$  | 13,484 | \$               | (1,042)                            | \$       | 244    | \$      | 479,043          | \$               | 10,817                      |
| PRIOR YEARS:          |                |                            |     |        |                  |                                    |          |        |         |                  |                  |                             |
| 2020-2021             |                | 11,513                     |     | -      |                  | (93)                               |          | 415    |         | 5,963            |                  | 5,872                       |
| 2019-2020             |                | 6,129                      |     | -      |                  | (60)                               |          | 486    |         | 3,177            |                  | 3,378                       |
| 2018-2019             |                | 3,867                      |     | (2)    |                  | (145)                              |          | 734    |         | 3,204            |                  | 1,254                       |
| 2017-2018             |                | 1,337                      |     | -      |                  | (45)                               |          | 323    |         | 1,255            |                  | 360                         |
| Prior                 |                | 1,082                      |     | -      | •                | (86)                               | <u> </u> | 217    |         | 484              |                  | 729                         |
| Total Prior           |                | 23,928                     |     | (2)    | <del></del>      | (429)                              |          | 2,175  | <u></u> | 14,083           |                  | 11,593                      |
| Total All Funds       | \$             | 528,070                    | \$  | 13,482 | \$               | (1,471)                            | \$       | 2,419  | \$      | 493,126          | \$               | 22,410                      |

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# **OTHER INFORMATION**

# SCHEDULE OF FUTURE DEBT SERVICE REQUIREMENTS June 30, 2022

|                                  |              |              | DE<br>STATE RE                            | Q<br>VOLVING                             | WATER FUND<br>OREGON SPECIAL<br>PUBLIC WORKS FUND |                      |  |
|----------------------------------|--------------|--------------|---|--|---|----------------------|--|
| Original Amount<br>Interest Rate | TOTAL REQU   | JIREMENIS    | \$9,856,180<br>1.13 - 2.87%               |  | \$886,347<br>6.00%                                |                      |  |
| YEAR OF<br>MATURITY              | PRINCIPAL    | INTEREST     | PRINCIPAL<br>DUE 6/1, 8/1<br>12/1 and 2/1 | INTEREST<br>DUE 6/1, 8/1<br>12/1 and 2/1 | PRINCIPAL<br>DUE 12/1                             | INTEREST<br>DUE 12/1 |  |
| 2022-2023                        | 722,634      | 194,045      | 543,609                                   | 128,181                                  | 51,812  | 17,524               |  |
| 2023-2024                        | 653,299      | 169,129      | 559,174                                   | 112,616                                  | 54,920  | 14,415               |  |
| 2024-2025                        | 673,183      | 147,996      | 575,184                                   | 96,606                                   | 58,216  | 11,120               |  |
| 2025-2026                        | 698,752      | 126,177      | 591,657                                   | 80,133                                   | 61,709  | 7,627                |  |
| 2026-2027                        | 720,028      | 103,402      | 608,602                                   | 63,188                                   | 65,412  | 3,925                |  |
| 2027-2028                        | 672,703      | 79,891       | 626,035                                   | 45,755                                   | -   | -                    |  |
| 2028-2029                        | 696,320      | 59,773       | 643,971                                   | 27,819                                   | -   | -                    |  |
| 2029-2030                        | 387,935      | 38,862       | 334,875                                   | 9,369                                    | -   | -                    |  |
| 2030-2031                        | 65,987       | 41,559       | 12,187                                    | 4,555                                    | -   | -                    |  |
| 2031-2032                        | 66,941       | 28,834       | 12,370                                    | 4,372                                    | -   | -                    |  |
| 2032-2033                        | 72,932       | 26,113       | 12,557                                    | 4,185                                    | -   | -                    |  |
| 2033-2034                        | 73,959       | 23,086       | 12,746                                    | 3,996                                    | -   | -                    |  |
| 2034-2035                        | 80,025       | 20,021       | 12,938                                    | 3,804                                    | -   | -                    |  |
| 2035-2036                        | 81,130       | 16,665       | 13,133                                    | 3,609                                    | -   | -                    |  |
| 2036-2037                        | 87,276       | 13,270       | 13,330                                    | 3,412                                    | -   | -                    |  |
| 2037-2038                        | 88,466       | 9,579        | 13,531                                    | 3,211                                    | -   | -                    |  |
| 2038-2039                        | 29,220       | 5,843        | 13,735                                    | 3,007                                    | -   | ~                    |  |
| 2039-2040                        | 29,978       | 5,085        | 13,942                                    | 2,800                                    | -   | -                    |  |
| 2040-2041                        | 30,758       | 4,305        | 14,151                                    | 2,591                                    | -   | -                    |  |
| 2041-2042                        | 31,562       | 3,501        | 14,364                                    | 2,378                                    | -   | -                    |  |
| 2042-2043                        | 28,924       | 2,673        | 14,580                                    | 2,162                                    | -   | -                    |  |
| 2043-2044                        | 14,800       | 1,942        | 14,800                                    | 1,942                                    | -   | -                    |  |
| 2044-2045                        | 15,022       | 1,720        | 15,022                                    | 1,720                                    | -   | -                    |  |
| 2045-2046                        | 15,249       | 1,493        | 15,249                                    | 1,493                                    | -   | -                    |  |
| 2046-2047                        | 15,478       | 1,264        | 15,478                                    | 1,264                                    | -   | -                    |  |
| 2047-2048                        | 15,711       | 1,031        | 15,711                                    | 1,031                                    | -   | -                    |  |
| 2048-2049                        | 15,948       | 794          | 15,948                                    | 794                                      | -   | -                    |  |
| 2049-2050                        | 16,188       | 554          | 16,188                                    | 554                                      | -   | -                    |  |
| 2050-2051                        | 16,432       | 310          | 16,432                                    | 310                                      | -   | -                    |  |
| 2051-2052                        | 8,327        | 62           | 8,327                                     | 62                                       |   |                      |  |
| TOTALS                           | \$ 6,125,164 | \$ 1,128,980 | \$ 4,789,826                              | \$ 616,919                               | \$ 292,069  | \$ 54,611            |  |

DEQ State Revolving Loans consist of three loans.

|        | ]  | Balance Due  |
|--------|----|--|
| R75262 | \$ | 1,236,166  |
| R75263 |    | 3,155,733  |
| R75264 |    | 397,927  |
|        |    |  |
| TOTAL  | \$ | 4,789,826  |
|        |    | and the second |

#### SCHEDULE OF FUTURE DEBT SERVICE REQUIREMENTS June 30, 2022

SPECIAL PROJECTS FUND WATER FUND SPECIAL PROJECTS FUND OREGON SPECIAL OREGON SPECIAL OREGON SPECIAL PUBLIC WORKS FUND PUBLIC WORKS FUND PUBLIC WORKS FUND \$300,000 \$785,747 \$1,211,307 3.56% 3.42% 5.01% INTEREST INTEREST PRINCIPAL PRINCIPAL PRINCIPAL INTEREST DUE 12/1 DUE 12/1 DUE 12/1 DUE 12/1 DUE 12/1 DUE 12/1 8,848 9,473 88,563 4,437 29,802 34,430 30,042 32,940 9,163 9,158 9,489 8,832 30,294 31,438 ... 35,559 29,923 9,827 8,494 ..... 10,177 8,144 35,837 28,145 36,129 26,354 10,539 7,782 10,914 7,407 24,547 41,435 41,757 22,475 11,303 7,018 11,705 30,388 6,616 42,095 42,449 18,263 12,122 6,199 12,553 5,768 47,822 16,160 13,000 5,321 48,213 13,769 4,858 13,463 53,624 11,359 13,942 4.379 54,055 8,677 3,883 59,508 5,975 14,438 59,983 2,999 14,952 3,369 15,485 2,836 16,036 2,285 \_ -16,607 1,714 -17,198 1,123 \_ 14,344 511 -..... \_ 88,563 4,437 688,604 \$ 337,842 \$ 266,105 \$ 115,170 \$ \$ \$