



SDC Report

FINAL REPORT



City of Newberg Wastewater System Development Charge Study

May 2018





March 25, 2018

Ms. Kaaren Hofmann
Newberg City Hall
414 E. First Street
Newberg, OR 97132

Subject: City of Newberg Wastewater System Development Charge Final Report

Dear Ms. Hofmann:

Enclosed please find HDR's final report regarding the system development charges for the City of Newberg's wastewater utility. The conclusions and recommendations contained within this report should enable the City to implement cost-based system development charges that meet the City's objectives for their wastewater utility.

This report has been prepared using generally accepted financial, rate, and engineering principles. The City's financial, budgeting, planning, and engineering data were the primary sources for much of the information contained in this report. HDR would recommend that prior to implementing the charges, the City have the charges reviewed by their legal counsel for compliance with Oregon State law.

HDR appreciates the opportunity to assist the City in this matter. We look forward to future opportunities to work with the City.

Sincerely yours,
HDR Engineering, Inc.

A handwritten signature in black ink, appearing to read 'Shawn Koorn'.

Shawn Koorn
Associate Vice President

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Executive Summary

Introduction

HDR was retained by Keller Associates, Inc. to assist the City of Newberg (the “City”) to update its wastewater system development charges (SDCs). The purpose of SDCs is to bring equity between existing customers and new customers connecting to the City’s wastewater system. The objective of this study was to update the cost-based charges for new customers connecting to, or requesting additional capacity to, the City’s wastewater system. By establishing cost-based SDCs, the City attempts to have “growth pay for growth” and existing utility customers will, for the most part, be sheltered from the financial impacts of growth.

The City has a current SDC of \$6,533 for the first 18 fixture units. The SDC has not been reviewed since 2007. However, the SDC has been updated a number of times using industry accepted indices since 2007. .

General industry recommendations are to adjust these charges annually for changes in construction costs and to update the charges every three to five years, or whenever comprehensive planning documents for the systems have been updated. Given the time since the last update and the availability of the Master Plan for the wastewater utility, it is timely to update the charges for the wastewater utility at this time. The City has undertaken this study to determine parity between existing and new utility customers.

Summary and Conclusions

In developing this study, the SDCs have been calculated in a manner which conforms to generally accepted rate making practices and are based on the City’s wastewater system planning and design criteria. The calculations also take into account the financing mechanisms of capital improvements. Based on the sum of the component costs, the “net allowable” SDC is determined. “Net” refers to the “gross” SDC, net of any credits for future debt service principal to be paid within a customer’s rates. “Allowable” refers to the concept that the calculated SDC is the City’s cost-based (i.e., maximum) charge. The City, as a matter of policy, may charge any amount up to the cost-based SDC, but not over that amount. Charging an amount greater than the allowable SDC would not meet the “nexus” test of charging cost-based SDCs which are proportionally related to the benefit derived by the customer.

SDCs must be implemented according to the capacity requirement or impact each new development has on the utility system. This way, the SDC is related to the impact the customer places on the system, and to the benefit they derive from the service provided.

The City's current wastewater SDC is based on the number of fixture units. The updated analysis resulted in a proposed fee of \$5,704 for the first 18 fixture units. Details of the development of the wastewater SDC are discussed in greater detail in Section 4 and the technical analysis is included in the Technical Appendix. Shown below in Table ES-1 are the present and the maximum wastewater system development charge.

Table ES – 1 Existing and Maximum Allowable Wastewater System Development Charge				
Customer Class	Existing SDC Fee	Reimbursement SDC	Improvement SDC	Total SDC or Maximum Allowable
For the first 18 fixture units	\$6,533	\$1,131	\$4,573	\$5,704
Per each fixture unit over 18	\$364			\$317
Efficiency Dwelling Unit	\$364			\$317

The SDC as calculated in this study is lower than the existing SDC. The lower calculated fee is primarily a result of a reduced capital plan in this planning period. The 2007 SDC study included \$37 million in capital projects through 2040, which included SDC eligible extension and upgrade collection projects, which are no longer included in the current Master Plan. The amounts shown in Table ES-1 have been rounded for ease of administration. Table ES-1 shows the wastewater SDC for the first 18 fixture units is \$5,704.

Conclusions and Recommendations

Based on our review and analysis of the City's wastewater system, capital plans from the Master Plan, and financing approach for the development of the system development charges, HDR makes the following recommendations:

- ✓ The City should adopt the wastewater system development charges for new connections to these respective systems which are no greater than the net allowable system development charges as set forth in this report.
- ✓ The adopted system development charges should be updated annually by using industry accepted indices such as the local construction cost index from the Engineering News Record Construction Cost Index (ENR-CCI) for no more than five years before a complete update of the charge is again undertaken. This industry practice can keep the charge relatively current with construction pricing practices.
- ✓ The City should update the actual calculations for the system development charges at such time when a new capital improvement plan, public facilities plan, comprehensive system plan, or a comparable plan is approved or updated by the City.

Summary

The wastewater system development charges developed and presented in this report are based on the planning and engineering design criteria of the City's wastewater system, the value of the existing assets, past financing of the system and generally accepted ratemaking principles. The system development charges will provide multiple benefits to the City and will continue the City's practice of establishing equitable and cost-based SDCs for new customers connecting to the City's wastewater system.



2. Overview of System Development Charges

2.1 Introduction

An important starting point in establishing system development charges is to have a basic understanding of the purpose of these charges, along with the criteria and general methodology that are used to establish cost-based system development charges. This section of the report presents an overview of the methodology that was used to update the City's SDCs to cost-based levels. It should be noted that the City has historically used these same generally accepted methodologies to establish their utility SDCs.

2.2 Defining System Development Charges

The first step in establishing cost-based SDCs is to gain a better understanding of the definition of a SDC or sometimes referred to as "system development charges". For the purposes of this report, an SDC (system development charge) is defined as follows:

"System development charges are one-time charges paid by new development to finance construction of public facilities needed to serve them."¹

Simply stated, system development charges are a contribution of capital to either reimburse current customers for the available capacity in the existing system, or help finance planned future growth-related capacity improvements. At some utilities, system development charges may be referred to as capital facility fees, capacity fees, impact fees, capacity reserve charges, infrastructure investment fees, etc. Regardless of the label used to identify them, their objective is the same. That is, these charges are intended to provide funds to the utility to finance all or a part of the capital improvements needed to serve and accommodate new customer growth. Absent those fees, many utilities would likely be unwilling to build growth-related facilities (i.e., burden existing rate payers with the entire cost of growth-related capacity expansion).

2.3 Economic Theory and System Development Charges

System development charges are generally imposed as a condition of service. The objective of system development charge is not to generate money for a utility, but to create fiscal balance between existing customers and new customers so that all customers seeking to connect to the utility's system bear an equitable share of the cost of capacity that is invested in both the existing and any future growth-related expansions. Through the implementation of equitable

¹ Arthur C. Nelson, System Development Charges for Water, Sewer, and Stormwater Facilities, Lewis Publishers, New York, 1995, p. 1,

system development charges, existing customers will not be unduly burdened with the cost of new development.

By updating the system development charges, the City continues an important step in providing adequate infrastructure to meet growth-related needs while providing this infrastructure to new customers in a cost-based, fair, and equitable manner.

2.4 System Development Charge Criteria

In determining system development charges, a number of different criteria are utilized. Criteria most often used by utilities to establish system development charges include the following:

- State/local laws
- System planning criteria
- Financing criteria
- Customer understanding

Many states and local communities have enacted laws that govern the calculation and imposition of system development charges. These laws must be followed in the development of the system development charges. Most states require a “reasonable relationship” between the charge and the cost associated with providing service (capacity) to the customer. The charges do not need to be mathematically exact, but must bear a reasonable relationship to the cost burden imposed. The utilization of the planning criteria, the actual costs of construction and the planned costs of construction provide the nexus for the reasonable relationship requirement. For utilities in Oregon, Oregon Revised Statute ORS 223.297 to 223.314 provides the approach to establishing SDCs. This will be further discussed in the next chapter.

The use of system planning criteria is one of the more important aspects in the determination of the system development charges. System planning criteria provide the “rational nexus” between the amount of infrastructure necessary to provide service and the charge to the customer. The rational nexus test requires: (a) establishing a system development (nexus) between new development and the existing or expanded facilities required to accommodate new development, and (b) apportioning appropriate cost to the new development in relation to benefits reasonably received. An example using system planning criteria is the determination that a single dwelling unit or equivalent dwelling unit (EDU) generates an annual average daily wastewater flow of so many gallons per day, per EDU. The system development charge methodology then charges the customer per equivalent dwelling unit (EDU) for the cost of the system.

One of the driving forces behind establishing cost-based system development charges is that “growth pays for growth.” Therefore, system development charges are typically established as a means of having new customers pay an equitable share of the cost of their required capacity (infrastructure). The financing criteria for establishing system development charges relates to

the method used to finance infrastructure on the system to show that customers are not paying twice for infrastructure – once through system development charges and again through rates. The double payment can come in through the imposition of system development charges and then the requirement to pay debt service within a customer's rates. The financing criteria also reviews the basis under which main line and collection line extensions were provided such that the customer is not charged for infrastructure that was provided (contributed) by developers.

The component of customer understanding implies that the charge is easy to understand. This criterion has implications for the way that the fee is implemented and assessed to the customer. For a wastewater system, the fee is generally based on the projection of wastewater flow for the time period under review. This makes it easy for the customer to understand that the level of fee is based on the projection of demand (flow) required to provide service. Use of an equivalent dwelling unit (EDU) is a method to bring wastewater flow from nonresidential customers into an equivalent measure with residential customers. An EDU is defined as generating average dry weather flow of a system specific measure of gallons per day per EDU. This will be defined for the City later in this report. The other implication of this criterion is that the methodology is clear and concise in its calculation of the amount of infrastructure necessary to provide service.

2.5 Overview of the System Development Charge Methodology

There are “generally accepted” methodologies that are used to establish system development charges. Within the “generally accepted” system development charge methodologies, there are a number of different steps undertaken. These steps are as follows:

1. Determination of system planning criteria
2. Determination of equivalent dwelling units (EDU, RCE, or ERU)
3. Calculation of system component costs
4. Determination of any credits

The first step in establishing a system development charge is the determination of the system planning criteria. For the wastewater system, average flow per equivalent dwelling unit is used.

Once the system planning criteria is determined, the number of equivalent dwelling units (EDUs) can be determined.

This analysis requires the EDUs be determined for the current period and each year to projected build out of the system. Current period EDUs were determined by taking 2017 average dry weather flow (ADWF) at the treatment plant in million gallons per day and dividing by the average household dry weather flow per day use. Future EDUs were determined in a similar fashion by dividing projected ADWF plant flows, taken from the Master Plan, and dividing by the same average household per day use.

Once the number of EDUs has been determined, a component-by-component (e.g., treatment, collection, etc.) analysis is undertaken to determine the component system development charge in cost (\$) per EDU. Individual system components are analyzed separately for the wastewater system given that the planning criteria differ for the development of the various system components. The calculation of the component system development charge includes both historical assets (reimbursement fee) and planned future assets (improvement fee). The reimbursement to existing customers is accomplished by the fact that without system development charges, rates would otherwise be higher than they are with system development charges. Once the total cost of the capital infrastructure is determined, it is then divided by the appropriate number of EDUs the infrastructure will serve to develop the cost per EDU for the specific system component.

Each system component has two elements, a reimbursement and an improvement. The reimbursement element consists of the existing system components while the improvement element consists of future system upgrades to meet future growth/expansion needs. After each system component is analyzed and a cost per EDU is determined, the cost per EDU for each of the system components is added together to determine the reimbursement and improvement system development charge. The combined reimbursement and improvement SDC provides the “gross system development charge” calculated before any credits for debt service.

Wastewater systems are typically built with reserve capacity to accommodate future growth. This reserved capacity is funded by existing rate payers. The reimbursement portion of the SDC is intended to pay back, or reimburse, existing rate payers for future customers capacity requirements. The improvement portion of the SDC is intended to provide funding for future capital projects that provide additional capacity for new customers. The Oregon Revised Statute that dictates how the reimbursement and improvement portions of the SDC must be used is provided below.

The Oregon Revised Statute (ORS) 223.307 states: *“Authorized expenditure of system development charges. (1) Reimbursement fees may be spent on capital improvements associated with the system for which the fees are assessed including expenditures relating to repayment of indebtedness. (2) Improvement fees maybe spent only on capacity increasing capital improvements, including expenditures related to repayment of debt for such improvements. An increase in system capacity may be established if a capital improvement increases the level of performance or service provided by existing facilities or improves new facilities. The portion of the improvements funded by improvement fees must be related to the need for increased capacity to provide service for future users.”*

The last step in the calculation of the system development charge is the determination of any credits. This is generally a calculation to show that customers are not paying twice, once through system development charges and again through debt service included within the wastewater rates.

The final system development charge is determined by taking the “gross system development charge” and subtracting any credits. This results in a “net system development charge” stated in dollars per EDU. For the wastewater system, an EDU can be defined as a single dwelling unit, which the City currently defines as the first 18 fixture units.

2.6 Disclaimer

HDR, in its calculation of the SDCs for the City’s wastewater utility, as presented in this report, has used “generally accepted” engineering and ratemaking principles. This should not be construed as a legal opinion with respect to Oregon law. HDR recommends that the City have its legal counsel review the wastewater system development charges as set forth in this report for compliance with Oregon State law.

2.7 Summary

This section of the report has provided an overview of system development charges; the basis for establishing the charges, considerations in establishing a system development charge, and the connection (nexus) which must be established between new development and the new or expanded facilities required to accommodate new development, and appropriate apportionment of the cost to the new development in relation to benefits reasonably to be received. The next section of the report will provide a brief discussion of the legal considerations associated with system development charges.



3. Legal Considerations in Establishing System Development Charges

3.1 Introduction

An important consideration in establishing system development charges is review of legal requirements at the state or local level. The legal requirements often establish the methodology around which the system development charges must be calculated or how the funds must be used. Given that, it is important for the City to understand these legal requirements. This section of the report provides an overview of the legal requirements for establishing system development charges under Oregon State law. This summary represents HDR's understanding of the relevant Oregon State law as it relates to establishing system development charges. It in no way constitutes a legal interpretation of the state's law by HDR.

3.2 Requirements Under Oregon State Law

In establishing system development charges, an important requirement is that they be developed and implemented in conformance with local laws. In particular, many states have established specific laws regarding the establishment, calculation, and implementation of system development charges. The main objective of most state laws is to make sure that these charges are established in such a manner that they are fair, equitable, and cost-based. In other cases, state legislation may have been needed to provide the legislative powers to the utility to establish the charges.

The purpose of Oregon law for the determination of SDCs is to provide a uniform framework for the imposition of SDCs by local governments for specified purposes, and to establish that such fees be used only for capital improvements. Specifically, the requirement for the calculation of SDCs in Oregon is found in ORS 223.297 to 223.314. Capital improvements as defined under Oregon law are as follows:

- Water supply, treatment and distribution;
- Wastewater collection, transmission, treatment and disposal;
- Drainage and flood control;
- Transportation; and
- Parks and recreation.

An SDC means a reimbursement fee, an improvement fee, or a combination thereof. As defined under Oregon law, "improvement fee" means a fee for the costs associated with capital improvements to be constructed. "Reimbursement fee" means a fee for costs association with capital improvements already constructed or under construction.

As defined under Oregon law, the methodology setting forth the calculations for reimbursement fees and improvement fees must make the following considerations:

“233.304 Determination of amount of system development charges; methodology; credit allowed against charge; limitation of action contesting methodology for imposing charge; notification request.

- (1)(a) Reimbursement fees must be established or modified by ordinance or resolution setting forth a methodology that is, when applicable, based on:
 - (A) Ratemaking principles employed to finance publicly owned capital improvements;*
 - (B) Prior contributions by existing users;*
 - (C) Gifts or grants from federal or state government or private persons;*
 - (D) The value of unused capacity available to future system users or the cost of the existing facilities; and*
 - (E) Other relevant factors identified by the local government imposing the fee.**
- (b) The methodology for establishing or modifying a reimbursement fee must:
 - (A) Promote the objective of future system users contributing no more than an equitable share to the cost of existing facilities.*
 - (B) Be available for public inspection.**
- (2) Improvement fees must:
 - (a) Be established or modified by ordinance or resolution setting forth a methodology that is available for public inspection and demonstrates consideration of:
 - (A) The projected cost of the capital improvements identified in the plan and list adopted pursuant to ORS 223.309 that are needed to increase the capacity of the systems to which the fee is related; and*
 - (B) The need for increased capacity in the system to which the fee is related that will be required to serve the demands placed on the system by future users.**
 - (b) Be calculated to obtain the cost of capital improvements for the projected need for available system capacity for future users.**
- (3) A local government may establish and impose a system development charge that is a combination of a reimbursement fee and an improvement fee, if the methodology demonstrates that the charge is not based on providing the same system capacity.”*

The Oregon law further defines the ability to adjust the fee based on a documented index.

- (8) A change in the amount of a reimbursement fee or an improvement fee is not a modification of the system development charge methodology if the change in amount is based on:
 - (a) A change in the cost of materials, labor or real property applied to projects or project capacity as set forth on the list adopted pursuant to ORS 223.309; or*
 - (b) The periodic application of one or more specific cost indexes or other periodic data sources. A specific cost index or periodic data source must be:
 - (A) A relevant measurement of the average change in prices or costs over an identified time period for materials, labor, real property or a combination of the three;***

(B) Published by a recognized organization or agency that produces the index or data source for reasons that are independent of the system development charge methodology; and

(C) Incorporated as part of the established methodology or identified and adopted in a separate ordinance, resolution or order.”

In addition to the definitive requirements of the establishment of a SDC as an improvement fee and/or reimbursement fee, other requirements under Oregon law are as follows:

- The SDC must be based on an approved capital improvement plan, public facilities plan, master plan, or comparable plan which lists the capital improvements that may be funded with the improvement fee revenues and the estimated costs and timing for each improvement.
- Proper administrative review procedures must be followed in the enactment of an SDC resolution or ordinance.
- SDC funds must be spent only on facilities for which they were collected.
- A proper accounting system must be established which provides for an annual accounting of SDCs showing the total amount of revenue collected and the projects that were funded.
- The SDC may be annually adjusted based on an annual, recognized, published index if incorporated as part of methodology and in a separate ordinance.

3.3 Summary

This section of the report reviewed the legal basis for establishing system development charges in the State of Oregon and in particular for a City. The next section of the report provides a detailed discussion of the specific calculation of the wastewater system development charges for the City.



4. Development of the Wastewater System Development Charge

4.1 Introduction

This section of the report presents the key assumptions and details used in calculating the City's wastewater system development charge. The calculation of the City's wastewater system development charge is based upon City-specific accounting and planning information. Specifically, the system development charges are based upon the City's fixed asset records, capital improvement plan (CIP), and planning data from the 2018 Wastewater Master Plan (Hereafter referred to as City's Master Plan). The City provided additional relevant financial and accounting information that was used within this analysis.

The wastewater SDC calculation is based on the value of the system in place with capacity available for growth (i.e. the reimbursement component), and future or incremental capacity projects. (i.e. the Improvement fee component). The reimbursement component and the future component are added together, including a debt credit, resulting in the total "net allowable system development charge".

To the extent that the cost and timing of future capital improvements change, then the system development charges presented in this section of the report should be updated to reflect the changes. This section of the report presents the key assumptions and details used in calculating the City's wastewater SDC.

4.2 Overview of the City's Wastewater System

The City owns and operates a secondary WWTP. The City currently provides wastewater collection and treatment services to its residents, commercial establishments, institutional customers, and a number of industries. Sewer service is provided only to customers within the city limits, with the exception of a few residences outside of the City.

The City of Newberg provides wastewater collection services to over 23,500 people spread across an area of approximately 5.2 square miles. This service is provided via the sanitary sewer collection system that is owned, operated, and maintained by the City. Currently, the sanitary collection system connects to over 6,462 residential and nearly 468 commercial and industrial customers.

4.3 Present Wastewater System Development Charge

The City's wastewater system development charge is based on one dwelling unit is equal to the first 18 fixture units. The City's wastewater system development charge was last reviewed in 2007, and has been updated a number of times using industry accepted indices since 2007. The

most recent update is Resolution 2018-3454, Exhibit A. The City's present wastewater system development charges are shown below in Table 4-1.

Table 4-1 Summary of the Present Wastewater System Development Charge	
Customer Class	Existing Fee Reimbursement & Improvement
For the first 18 fixture units	\$6,533
Per each fixture unit over 18	\$364
Efficiency Dwelling Unit	\$364

As shown in Table 4-1, the City's wastewater system development charge is based on one unit equal to 18 fixture units.

4.4 Calculation of the City's Wastewater System Development Charge

As discussed in Section 2, the process of calculating system development charges is based upon a four-step process. In summary form, these steps are as follows:

- Determination of system planning criteria
- Determination of equivalent dwelling units (EDUs)
- Calculation of the system development charge for system component costs
- Determination of any system development charge credits

Each of these steps is discussed in more detail below.

4.4.1 System Planning Criteria

System planning criteria are used to establish the capacity needs of an equivalent dwelling unit (EDU). Based upon the City's Master Plan, a volume of 425.0 gallons per capita, per day, which includes both average dry weather flow and peak instantaneous flow, was established based on planning information in the Master Plan. The average household size of 2.72 persons was based on the US Census Bureau for 2012 to 2016 for the Newberg area. This results in 1,156 gals/day/EDU total daily household unit flow. Table 4-2 provides a summary of the planning criteria used to establish the City's wastewater system development charges.

Table 4-2
Summary of the Wastewater System Planning Criteria

Planning Criteria Description	Gallons/Day/EDU
Average Dry Weather Flow ADWF	99.0 gallons/capita/day
Peak Instantaneous Flow PIF	<u>326.0</u> gallons/capita/day
Total	425.0 gallons/capita/day
Average Household Size	2.72 persons
Total Daily Household Unit Flow	1,156.0 gallons/EDU

The system planning criteria shown above were used to determine the number of existing and future EDUs.

4.4.2 Equivalent Dwelling Units

The planning horizon of this analysis was 2017 to 2037, which aligns with the planning period of the Master Plan. As a part of this study, a projection of the total number of Equivalent Dwelling Units (EDUs) at 2037 must be determined. The City's total number of existing EDUs was determined by dividing the existing projected design flow at the plant of 28.20 MGD by the total daily household unit flow of 1,156.0 gallons per EDU. Future 2037 EDUs were calculated based on projected plant design flows of 32.6 MGD and the total daily household unit flow of 1,156.0 gallons per EDU.

A summary of the EDUs for 2017 and 2037 are presented below in Table 4-3. Details of the determination of EDUs are provided in Exhibit S-5 of the Technical Appendix.

Table 4-3
Wastewater System Equivalent Dwelling Units

Description	Calculated EDUs
Equivalent Dwelling Units – 2017	24,394 EDUs
Equivalent Dwelling Units – 2037	28,201 EDUs

(1) One EDU is defined as 18 fixture units.

Given the development of the total wastewater EDUs for existing and future of the planning period, the focus can shift to the calculation of the system development charge for each system component.

4.4.3 Calculation of the Wastewater System Development Charges

The next step of the analysis is to review each major functional component of the system in service such as treatment plant and the collection system and determine the wastewater system development charge for that component. In calculating the wastewater SDC, both existing system assets, along with planned future CIP were included within the calculation. The major components of the City's wastewater system that were reviewed for purposes of calculating the system development charge were as follows:

- Treatment
- Collection

A brief discussion of the SDC calculated for each of the functional wastewater system components is provided below.

REIMBURSEMENT FEE – To calculate the value of the existing assets for the reimbursement fee component, the City's methodology considered the original cost of each asset. The objective of the reimbursement methodology is that the future users contribute an equitable share of the cost of the utility's existing facilities. The use of an original cost methodology complies with the legal requirements for the establishment of the reimbursement component of the fee. It should be noted that this is the same methodology the City used in the previous wastewater SDC analysis and also the recent water SDC analysis.

The City provided an asset listing for the various existing components and their installation dates. The original cost of the asset was then adjusted by the Engineering News Record (ENR) Construction Cost Index for January 2018 based on the installation date of the asset. The adjustment of original cost by the Engineering News Record, based on asset installment date and the current ENR, follows the City's current methodology of updating the SDC fee by using industry accepted indices since 2007. A more detailed discussion of the calculation of the reimbursement fee is provided below.

TREATMENT –

To determine the system development charge for treatment plant, the reimbursement portion of the existing system was reviewed based on the City's existing asset listing. The previous SDC analysis showed the majority of the original WWTP prior to 2007 was funded by grants. In addition several components of the system prior to 2007 were at capacity and were not included in the SDC. The cost of the existing treatment plant of \$58.6 million was adjusted for SDC eligible to a total of \$37.3 million. The \$37.3 million was then adjusted to account for replacement value for a total of \$42.2 million existing SDC eligible treatment plant. To accomplish this, the original cost of each asset was escalated to current, January, 2018 dollars, based on the Engineering News-Record (ENR), 20-City average Construction Cost Index (CCI) and the installation date for each asset. The total eligible existing treatment plant was divided

by the number of EDUs in 2037, resulting in a reimbursement system development charge for existing treatment plant of \$1,659 per EDU.

COLLECTION –

Collection –The value of the existing collection system is \$19.5 million according to City asset records. The original value was adjusted for contributions, where applicable, to a total of \$14.2 million. Of the total, after being reduced for capital contributions and SDC eligible, \$8.3 million were determined to be eligible for the SDC calculation. The \$8.3 million was then adjusted to account for replacement value for a total of \$11.8 million existing SDC eligible collection system. To accomplish this, the original cost of each asset was escalated to current, January, 2018 dollars, based on the Engineering News-Record (ENR), 20-City average Construction Cost Index (CCI) and the installation date for each asset. The total eligible existing collection system was divided by the number of EDUs in 2037, resulting in a reimbursement system development charge for the existing collection system of \$466 per EDU.

IMPROVEMENT FEE – An important requirement for a capacity fee study is the connection between the anticipated future growth on the system and the needed facilities required to accommodate that growth. For purposes of this study, the City’s Master Plan was provided. The Master Plan provided the detail for projects that were SDC eligible and the percentage eligible to meet demand for the wastewater system. A more detailed discussion of the calculation of the improvement fee is provided below.

TREATMENT –

The Master Plan provided listing of future treatment projects and the percentage capacity related or SDC eligible. The cost of the future treatment plant upgrades of \$26.0 million was adjusted for SDC eligibility to a total of \$4.8 million. The total eligible future treatment plant amount was divided by the number of EDUs added from 2017 to 2037, resulting in an improvement fee system development charge \$1,274 per EDU.

COLLECTION –

The Master Plan provided listing of future collection system projects and the percentage capacity related or SDC eligible. The cost of the future collection system of \$40.8 million was adjusted for SDC eligible to a total of \$12.5 million. The total eligible future collection system was divided by the number of EDUs added from 2017 to 2037, resulting in an improvement system development charge \$3,299 per EDU.

The total system development charge eligible future projects for wastewater totaled \$17.4 million. The total treatment plant and collection system improvement fee is \$4,573 per EDU. Exhibit S-1 and 6 of the Technical Appendix contains the details of this portion of the charge.

DEBT SERVICE COMPONENT – DEBT SERVICE COMPONENT - The final step in calculating the wastewater system development charge was to determine if a credit for payment on debt service is applicable for the utility’s outstanding and future planned loans and bonds. The wastewater utility currently has five loans as outstanding debt.

Credits for debt service payments paid through customer rate revenue are determined to prevent charging the customer twice for debt, once through rates and once through system development charges. By determining a debt credit, customers pay for debt financed infrastructure through their monthly utility rates and those costs are removed from the SDC calculation. The remaining principal portion of the debt associated with the assets was deducted from the total eligible asset value prior to calculating the system development charge. This inclusion of a “debt service credit” avoids double charging the customer for the asset value in the existing or buy-in component of the system development charge, and also in the debt service component of the rates. The principal portion of the debt service balance on existing assets, offset by cash reserves, is removed from the value prior to calculating the reimbursement fee portion of the charge. The debt service credit was determined to be \$994/EDU. Details of the calculations are provided in Exhibit 2 in the Technical Appendix.

4.5 Net Allowable Wastewater System Development Charge

The methodology used to establish the wastewater system development charge is a “combined approach”. The combined approach adds the reimbursement fee component and the improvement fee component together, and accounts for any existing debt credit resulting in a “net allowable system development charge”.

In total, the wastewater system development charge was determined to be \$5,704 for the first 18 fixture units. A summary of these calculations is provided in Table 4-4.

Table 4-4
Calculated Wastewater SDC by System Component (\$/1,000)

System Component	SDC by Component \$/EDU
Reimbursement Fee	
Existing System	
Treatment Plant	\$42,234
Collection System	11,873
General Assets	0
Less: Contributed Capital	<u>0</u>
Total Eligible Existing System	\$54,107
Less Net SDC Eligible Outstanding Debt Principal	(28,040)
Plus: Cash Reserves	<u>5,830</u>
Net Existing System	\$31,897
Existing and Future Equivalent Dwelling Units	28,201
Total Reimbursement Fee per EDU	\$1,131
Improvement Fee	
Future System	
Treatment Plant	\$4,851
Collection System	<u>12,558</u>
Total Future System	\$17,409
Future Equivalent Dwelling Units	3,807
Total Improvement Fee per EDU	\$4,573
Total Reimbursement and Improvement Fee per EDU	\$5,704

Based on the sum of the component costs calculated above, the net allowable wastewater system development charge can be determined. “Net” refers to the “gross” system development charge, net of any debt service credits. “Allowable” refers to the concept that the calculated system development charge shown in Table 4-5 is the City’s cost-based system development charge. The City, as a matter of policy, may charge any amount up to the allowable system development charge, but not over that amount. Charging an amount greater than the allowable system development charge would not meet the nexus test of a cost-based system development charge related to the benefit derived by the customer. A summary of the calculated net allowable wastewater system development charge for the City is shown below in Table 4-5.

Table 4-5
Calculated Net Allowable Wastewater System Development Charge

System Component	Reimbursement SDC	Improvement SDC	Total SDC or Maximum Allowable
Treatment Plant	\$1,659	\$1,274	\$2,933
Collection System	466	3,299	3,765
Debt Service Credit	<u>(994)</u>	<u>0</u>	<u>(994)</u>
System Development Charge per EDU	\$1,131	\$4,573	\$5,704

(1) One EDU equals the first 18 fixture units

The net allowable charge per EDU is \$5,704 for the first 18 fixture units. This compares to the City's current system development charge of \$6,533 per EDU. The calculated SDC, as developed in this study, is lower than the existing SDC. The lower calculated fee is primarily a result of a reduced capital plan in this planning period. The 2007 SDC study included \$37 million in capital projects through 2040, which included SDC eligible extension and upgrade collection projects, which are no longer included in the current master plan. A detail of the net allowable system development charge for the City is shown in Exhibit 6 of the Technical Appendix.

4.6 Key Assumptions

In developing the system development charges for the City's wastewater system, a number of key assumptions were utilized. These are as follows:

- The City's asset records, as of June 2017, were used to determine the existing system assets.
- The methodology used is the "combined" methodology. The reimbursement fee and expansion fee component are added together for a net allowable system development charge.
- The ENR construction cost index was based on the January 2018 index.
- The City's Master Plan provided the CIP for future improvements.
- The City's Master Plan CIP costs are in 2018 dollars.
- The City's Master Plan determined the portion of future improvements that were growth related.

4.7 Consultant's Recommendations

Based on our review and analysis of the City's wastewater system, HDR recommends the following:

- ✓ The City should adopt wastewater system development charges for new connections to the wastewater system that are no greater than the net allowable system development charges as set forth in this report.
- ✓ The adopted wastewater system development charges should be updated annually by industry accepted indices such as the local construction cost index from the Engineering New Record Construction Cost Index (ENR-CCI) for no more than five years before a complete update of the fee is undertaken. This best industry practice can keep the fee relatively current with construction pricing practices.
- ✓ The City should update the actual calculation for the system development charges at such time when a new capital improvement plan, public facilities plan, comprehensive system plan, or a comparable plan is approved or updated by the City, or every five years or when a major infrastructure project is completed.

4.8 Summary

The wastewater system development charges developed and presented in this section of the report are based on the planning and engineering design criteria of the City's Master Plan for the wastewater system, the value of the existing assets, future capital improvements, and "generally accepted" ratemaking principles. Adoption of the calculated net allowable system development charges will create equitable and cost-based charges for new customers connecting to the City's wastewater system.



Technical Appendix

City of Newberg
Exhibit 1
Development of the Wastewater SDC Per EDU

System Description	Original Cost (1)	SDC Eligible Original Cost (2)	SDC Eligible Replacement Cost New (3)
Reimbursement Fee			
Treatment Plant	\$58,657,335	\$37,363,629	\$42,234,191
Less: Contributed Capital (4)	<u>0</u>	<u>0</u>	<u>0</u>
Total Treatment Plant	\$58,657,335	\$37,363,629	\$42,234,191
Collection System	\$16,341,122	\$5,862,581	\$8,783,002
Pump Stations	3,178,185	2,403,689	2,918,335
Lift Station	72,216	42,381	171,897
Less: Contributed Capital (4)	<u>(5,381,449)</u>	<u>0</u>	<u>0</u>
Total Collection System	\$14,210,074	\$8,308,651	\$11,873,235
General Assets	\$1,302,161	\$0	\$0
Total Reimbursement Fee	\$74,169,569	\$45,672,280	\$54,107,426
Less: Outstanding Debt Principal (5)	(\$28,041,128)	(\$28,041,128)	(\$28,041,128)
Plus: Reserves (6)	\$5,830,987	\$5,830,987	\$5,830,987
Total Net Reimbursement Fee	\$51,959,428	\$23,462,139	\$31,897,285
Equivalent Dwelling Units (7)			28,201
Reimbursement Fee per EDU			\$1,131
Improvement Fee			
Treatment Plant (8)	\$26,004,000	\$4,851,000	\$4,851,000
Collection System (8)	40,836,500	12,558,000	12,558,000
Total Improvement Fee	\$66,840,500	\$17,409,000	\$17,409,000
Future Equivalent Dwelling Units (7)			3,807
Improvement Fee per EDU			\$4,573
Total Wastewater SDC per EDU (9)			\$5,704

NOTES:

- (1) Asset list based on original cost as of June 30, 2017. 2007 SDC analysis eliminated treatment plant assets due to grant funding, Clarifiers were 3% eligible, pump stations based on analysis Table 3, page 8 of Exhibit "B" Resolution No. 2007-2740.
- (2) Net of assets that are not SDC eligible.
- (3) Replacement based on specific "in service" date of asset and January 1, 2018 Engineering News Record, 20 City construction cost index.
- (4) Based on June 2017 listing of contributed capital.
- (5) Principal balance as of June 30, 2017 and only rate related debt. See Exhibit 2.
- (6) Cash reserves as of June 2017 which are SDC eligible. See Exhibit 3.
- (7) Existing and future equivalent dwelling units. See Exhibit 5.
- (8) Treatment and Collection CIP based on 2018 Wastewater Master Plan. See Exhibit 4.
- (9) Based on City definition of on sewer equivalent dwelling unit as 18 fixture units.

City of Newberg
Exhibit 2
Development of Outstanding Debt Principal

Debt Name	Composter Loan - Refunding	US Bank Loan-Baker Rock	WWTP RRE - R68820	WWTP RRE - R68821	WWTP RRE - R68820 (2)	EFFLUENT REUSE-Final (3)	Total Principal
I. Debt Status:							
Original Debt							
# of Years/Rate							
Sewer SDF Eligible	100.00%	100.00%	100.00%	100.00%	0.00%	63.70%	
II. Outstanding Principal Payments: (1)							
2018	\$239,974	\$193,000	\$483,409	\$550,175	\$0	\$235,790	\$1,702,348
2019	248,095	193,000	497,432	563,736	0	243,820	1,746,083
2020	0	0	511,861	577,633	0	255,210	1,344,704
2021	0	0	526,709	591,871	0	266,790	1,385,370
2022	0	0	541,987	606,462	0	278,226	1,426,675
2023	0	0	557,709	621,411	0	290,226	1,469,346
2024	0	0	573,886	636,728	0	305,534	1,516,148
2025	0	0	590,533	652,424	0	317,245	1,560,202
2026	0	0	607,662	668,506	0	332,789	1,608,957
2027	0	0	625,290	684,984	0	351,805	1,662,079
2028	0	0	643,427	701,869	0	370,829	1,716,125
2029	0	0	662,091	719,170	0	390,170	1,771,431
2030	0	0	681,297	736,898	0	0	1,418,195
2031	0	0	1,069,419	755,063	0	0	1,824,482
2032	0	0	721,395	773,676	0	0	1,495,071
2033	0	0	742,321	792,746	0	0	1,535,067
2034	0	0	361,402	812,287	0	0	1,173,689
2035	0	0	0	832,311	0	0	832,311
2036	0	0	0	852,846	0	0	852,846
Total	\$488,069	\$386,000	\$10,397,830	\$13,130,796	\$0	\$3,638,433	\$28,041,128
Equivalent Dwelling Units (7)							28,201
Debt Service Credit per EDU							\$994

NOTES:

- (1) Principal balance as of June 30, 2017 and rate related debt.
- (2) Principal balance as of June 30, 2017 and Water and Wastewater SDC revenue source.
- (3) Principal balance as of June 30, 2017 and Water SDC and Sewer Rate revenue source.

City of Newberg
Exhibit 3
Development of Cash Reserves

Reserve Fund Balance (1)			
	<u>June 30, 2017</u>	<u>% SDC (1)</u>	<u>Include in SDC</u>
Wastewater Fund	\$7,706,382	76%	\$5,830,987
Wastewater SDC Fund	3,766,802	0%	0
	-		
Total	\$11,473,184		\$5,830,987

Notes:

(1) Based on City information for June 2017.

City of Newberg
Exhibit 4
Development of Future Wastewater Capital Improvements

Page 1 of 3

Component/Process			Total Estimated Cost (2018) (1)	SDC Growth % (2)	SDC Growth \$	City \$
TREATMENT						
Priority 1 Improvements						
T1.a	Oxidation Ditch Rotor Replacement	Condition	\$595,000	0.0%	\$0	\$595,000
T1.b	Sawdust Bays	Capacity	350,000	0.0%	0	350,000
T1.c	Operations Remodel Project	Condition	300,000	0.0%	0	300,000
T1.d	Oxidation Ditch 1 Rehabilitation	Capacity/Condition	700,000	11.1%	78,000	622,000
T1.e	Roofing Replacement at the WWTP	Condition	220,000	0.0%	0	220,000
T1.f	WWTP Hydraulic Improvements	Capacity	480,000	14.4%	69,000	411,000
T1.g	Secondary Clarifier Rerating Study	Capacity	60,000	23.3%	14,000	46,000
Total Priority 1 Improvements			\$2,705,000		\$161,000	\$2,544,000
Priority 2 Improvements						
T2.a	Oxidation Ditch Expansion	Capacity/Reduncancy	\$11,841,000	22.1%	\$2,617,000	\$9,224,000
T2.b	Chlorine Contact Expansion	Capacity	2,938,000	14.1%	415,000	2,523,000
T2.c	PLC Control System Replacement Evaluation	Condition	40,000	0.0%	0	40,000
Total Priority 2 Improvements			\$14,819,000		\$3,032,000	\$11,787,000
Priority 3 Improvements						
T3.a	Secondary Clarifier #5	Capacity	\$7,500,000	22.1%	\$1,658,000	\$5,842,000
T3.b	Equalization Basin Rehabilitation	Capacity/Conditon	\$980,000	0.0%	0	980,000
Total Priority 3 Improvements			\$8,480,000		\$1,658,000	\$6,822,000
Total Wastewater Treatment Priority Improvements Costs			\$26,004,000		\$4,851,000	\$21,153,000

City of Newberg
Exhibit 4
Development of Future Wastewater Capital Improvements

Page 2 of 3

Component/Process		Total Estimated Cost (2018) (1)	SDC Growth % (2)	SDC Growth \$	City \$
COLLECTION					
Priority 1 Improvements					
C1.a Hess Creek Phase 1 - CIPP	Capacity	\$1,000,000	2.0%	\$20,000	\$980,000
C1.b Hess Creek Phase 2 - Parallel Gravity Line	Capacity	6,649,000	2.0%	131,000	6,518,000
C1.c Springbrook Road	Capacity	3,812,000	19.7%	751,000	3,061,000
C1.d Pinehurst Court	Capacity	258,000	0.0%	0	258,000
C1.e Maintenance Yard Improvements	Capacity/Condition	737,500	20.1%	148,000	589,500
C1.f Lift Station Improvements (short term)	Condition	1,429,000	1.0%	14,000	1,415,000
C1.g I/I Projects	Capacity/Condition	2,700,000	50.0%	1,350,000	1,350,000
C1.h 5th Street	Capacity/Condition	350,000	15.7%	55,000	295,000
Total Priority 1 Improvements		\$16,935,500		\$2,469,000	\$14,466,500
Priority 2 Improvements					
C2.a Hess Creek Phase 3 - Lift Station	Capacity	\$2,121,000	2.0%	\$42,000	\$2,079,000
C2.b River Street	Capacity	2,764,000	12.3%	341,000	2,423,000
C2.c HWY 240 Lift Station Upsize	Capacity	454,000	19.2%	87,000	367,000
C2.d Main and Wynooski Streets	Capacity	328,000	1.2%	4,000	324,000
C2.e Lift Station Improvements (long-term)	Condition	375,000	10.9%	41,000	334,000
C2.f I/I Projects	Capacity/Condition	3,150,000	50.0%	1,575,000	1,575,000
C2.g Wastewater Master Plan	Planning	300,000	100.0%	300,000	0
Total Priority 2 Improvements		\$9,492,000		\$2,390,000	\$7,102,000
Priority 3 Improvements					
C3.a Chehalem Drive Phase 1 - 20-year Infrastructure	Future Development	\$1,619,000	93.0%	\$1,506,000	\$113,000
C3.b Riverfront Infrastructure	Future Development	2,411,000	91.3%	2,202,000	209,000
C3.c Providence Infrastructure	Future Development	1,527,000	100.0%	1,527,000	0
C3.d Chehalem Drive Phase 2 - Buildout Infrastructure	Future Development	888,000	0.0%	0	888,000
C3.e I/I Projects	Capacity/Condition	3,150,000	50.0%	1,575,000	1,575,000
Total Priority 3 Improvements		\$9,595,000		\$6,810,000	\$2,785,000
Priority 4 Improvements					
C4.a Chehalem and Creekside LS Displacement/Future Trunkline	LS Consolidation	\$3,492,000	25.5%	\$889,000	\$2,603,000
C4.b Charles and Andrew LS Displacement	LS Consolidation	1,322,000	0.0%	0	1,322,000
Total Priority 4 Improvements		\$4,814,000		\$889,000	\$3,925,000
Total Wastewater Collection Priority Improvements Costs		\$40,836,500		\$12,558,000	\$28,278,500

Component/Process	Total Estimated Cost (2018) (1)	SDC Growth % (2)	SDC Growth \$	City \$
TOTAL WASTEWATER CAPITAL IMPROVEMENTS COSTS	\$66,840,500		\$17,409,000	\$49,431,500
PROJECT SUMMARY				
TREATMENT	\$26,004,000		\$4,851,000	\$21,153,000
COLLECTION	40,836,500		12,558,000	28,278,500
TOTAL WASTEWATER IMPROVEMENTS COSTS	\$66,840,500		\$17,409,000	\$49,431,500
Less Developer Funding	\$0	100.0%	\$0	
NET WASTEWATER IMPROVEMENTS COSTS	\$66,840,500		\$17,409,000	\$49,431,500

(1) From the 2018 Wastewater Master Plan, Treatment and Collection CIP, Table 1-18. In 2018 dollars.

(2) SDC eligible based on percent growth from 2017 to 2037. See Exhibit 5.

City of Newberg

Exhibit 5

Development of Equivalent Dwelling Units For Year Ended June 30, 2017

EDU = Equivalent Dwelling Unit

Average Dry Weather Flow ADWF (gpcd) (1)	99.0
Peak Instantaneous Flow PIF (gpcd)	326.0
Total projected unit flow (1)	425.0
Persons per Household (2)	2.72
Total design unit flow per EDU	1,156.0
Projected design flow at the plant (MGD) (3)	28.20
EDU's (4)	24,394

Year	Total Projected Design Flow (MGD) (3)	Total EDUs	Additional EDUs
2017	28.20	24,394	
2037	32.60	28,201	3,807
Total Change	4.4		3,807

20 Years
190 Annual EDUs
15.6% Growth

(1) From Table 2-5, Projected Design Flows, 2018 Wastewater Master Plan, page 2-8.

(2) Based on US Census Bureau for 2012-2016 for Newberg area.

(3) From Table 2-5, Projected Design Flows, 2018 Wastewater Master Plan, page 2-8.

(4) Calculated based on gpcd and projected flow at the plant.

City of Newberg

Exhibit 6

Current and Calculated Sewer SDC

Item	Treatment	Collection	Calculated SDC
Reimbursement Fee	\$1,659	\$466	\$2,125
Improvement Fee	<u>1,274</u>	<u>3,299</u>	<u>4,573</u>
Total Reimbursement & Improvement Fee	\$2,933	\$3,765	\$6,698
Debt Credit			<u>(994)</u>
Net SDC			\$5,704
Compliance Charge - Admin Fee			
Total Sewer SDC per EDU			\$5,704

Resolution 2018-3454, Exhibit A	Present 2017 SDC (1)	Calculated SDC
For the first 18 fixture units	\$6,533	\$5,704
Per each fixture unit over 18	\$364	\$317
Efficiency Dwelling Unit (per each fixture unit)	\$364	\$317

(1) Resolution 2018-3454 Exhibit A, Master Fee Schedule

City of Newberg
Exhibit 7
Fixed Asset Listing as of June 30, 2017

Asset #	Function	Contributed	Description	Date Acquired	Original Cost	ENR-CCI 1/1/2018 10,878 ENR Factor	Replacement Cost	%SDC (1)	SDC Eligible Original Cost	SDC Eligible Replacement Cost
100	Treatment		WWTP Land 1	6/26/1984	\$75,000	2.62	\$196,780	100%	\$75,000	\$196,780
204	Pump Stations		Charles St Pump Station	12/31/1971	1,011	6.88	6,953	14%	141	973
240	Treatment		WWTP Land 2	12/31/1947	10	26.34	263	100%	10	263
254	Pump Stations		College St	12/31/1969	315	8.57	2,700	100%	315	2,700
255	Treatment		Old WWTP 1	12/31/1969	3,000	8.57	25,716	100%	3,000	25,716
260	Pump Stations		Eighth St.	12/31/1956	10	15.72	157	100%	10	157
486	Treatment		Meter-Oxygen	12/31/1978	499	3.92	1,955	0%	0	0
490	Treatment		Converter 1	12/31/1991	989	2.25	2,225	0%	0	0
547	Treatment		Motor control center 1	12/31/1987	1,742	2.47	4,302	0%	0	0
548	Treatment		Motor control center 2	12/31/1987	121,484	2.47	299,933	0%	0	0
549	Treatment		Motor control center-pump	12/31/1987	15,488	2.47	38,238	0%	0	0
550	Treatment		Motor control center-Cntr	12/31/1987	95,832	2.47	236,600	0%	0	0
554	Treatment		Motor control center-Blow	12/31/1987	27,104	2.47	66,917	0%	0	0
677	Treatment		Hoist 1	12/31/1987	4,143	2.47	10,229	0%	0	0
731	Treatment		Hoist 2	12/31/1987	3,308	2.47	8,167	0%	0	0
746	Treatment		Rotor Aerator 1	12/31/1987	127,391	2.47	314,517	0%	0	0
747	Treatment		Rotor Aerator 2	12/31/1987	127,391	2.47	314,517	0%	0	0
748	Treatment		Rotor Aerator 3	12/31/1987	127,391	2.47	314,517	0%	0	0
753	Treatment		Rotor Aerator 4	12/31/1987	127,391	2.47	314,517	0%	0	0
755	Treatment		Rotor Aerator 5	12/31/1987	127,391	2.47	314,517	0%	0	0
757	Treatment		Rotor Aerator 6	12/31/1997	127,391	1.87	237,858	0%	0	0
759	Treatment		Rotor Aerator 7	12/31/1987	127,391	2.47	314,517	0%	0	0
767	Treatment		Pump Sludge 1	12/31/1987	4,163	2.47	10,278	0%	0	0
771	Treatment		Pump Sludge 2	12/31/1987	2,034	2.47	5,022	0%	0	0
775	Treatment		Pump Sludge 3	12/31/1987	4,163	2.47	10,278	0%	0	0
781	Treatment		Pump 5	12/31/1987	2,034	2.47	5,022	0%	0	0
788	Treatment		Pump 6	12/31/1987	2,034	2.47	5,022	0%	0	0
789	General Equipment		Tool chest 1	12/31/1987	1,980	2.47	4,888	0%	0	0
791	Treatment		Clarifier 3	12/31/1986	55,333	2.53	140,143	3%	1,660	4,204
795	Treatment		Crane 1	12/31/1987	1,772	2.47	4,375	0%	0	0
804	Treatment		Clarifier 2	12/31/1986	55,333	2.53	140,143	3%	1,660	4,204
813	Treatment		Pump 10	12/31/1987	8,600	2.47	21,233	0%	0	0
814	Treatment		Pump 11	12/31/1987	8,600	2.47	21,233	0%	0	0
816	Treatment		Saw-horizontal band	12/31/1987	2,083	2.47	5,143	0%	0	0
820	Treatment		Pump-Turbine 3	12/31/1987	5,900	2.47	14,567	0%	0	0
825	Treatment		Clarifier 1	12/31/1986	55,333	2.53	140,143	3%	1,660	4,204
829	Treatment		Floor jack-Maintenance	12/31/1987	334	2.47	824	0%	0	0
831	Treatment		Tool chest 2	12/31/1987	1,715	2.47	4,235	0%	0	0
834	Treatment		Pump 15	12/31/1987	1,075	2.47	2,654	0%	0	0
836	Lift Station		Lift Charles St	12/31/1978	34,692	3.92	135,944	14%	4,857	19,032
840	Treatment		Meter tank	12/31/1990	663	2.30	1,524	0%	0	0
842	Treatment		Hoist 3	12/31/1987	1,095	2.47	2,703	0%	0	0
843	Treatment		Sander belt/disc	12/31/1987	585	2.47	1,444	0%	0	0
848	Treatment		Pump 16	12/31/1987	1,075	2.47	2,654	0%	0	0
850	Treatment		Hoist 4	12/31/1987	1,095	2.47	2,703	0%	0	0
871	Treatment		Pump-Turbine 4	12/31/1987	5,900	2.47	14,567	0%	0	0
885	Treatment		Hoist 5	12/31/1987	986	2.47	2,434	0%	0	0
894	Treatment		WWTP Floor	12/31/1991	2,625	2.25	5,906	0%	0	0
899	Treatment		Tank Fuel 1	12/31/1987	450	2.47	1,111	0%	0	0
907	Treatment		Tank Fuel 2	12/31/1987	2,000	2.47	4,938	0%	0	0
910	Treatment		Belt Conveyor 2	12/31/1987	8,712	2.47	21,509	0%	0	0
911	Treatment		Tank-air	12/31/1987	1,906	2.47	4,706	0%	0	0
913	Treatment		Hoist-Crane-Dayton Ave PS	12/31/1987	1,048	2.47	2,588	0%	0	0
919	Treatment		Old WWTP Piping	12/31/1950	72,500	21.33	1,546,384	0%	0	0
923	Treatment		WWTP Plant Piping 1	12/31/1987	15,488	2.47	38,238	0%	0	0
924	Treatment		WWTP Plant Piping 2	12/31/1987	71,632	2.47	176,853	0%	0	0

City of Newberg
Exhibit 7
Fixed Asset Listing as of June 30, 2017

Asset #	Function	Contributed	Description	Date Acquired	Original Cost	ENR-CCI 1/1/2018 10,878 ENR Factor	Replacement Cost	%SDC (1)	SDC Eligible Original Cost	SDC Eligible Replacement Cost
925	Treatment		WWTP Plant Piping 3	12/31/1987	3,388	2.47	8,365	0%	0	0
926	Treatment		Platform-steel	12/31/1987	4,356	2.47	10,755	0%	0	0
930	Treatment		WWTP Plant Piping 4	12/31/1987	145,200	2.47	358,485	0%	0	0
931	Treatment		WWTP Plant Piping 5	12/31/1987	3,872	2.47	9,560	0%	0	0
933	Treatment		WWTP Plant Piping 6	12/31/1987	6,776	2.47	16,729	0%	0	0
936	Treatment		WWTP Plant Piping 7	12/31/1987	11,616	2.47	28,679	0%	0	0
941	Treatment		Workbench 1	12/31/1987	336	2.47	829	0%	0	0
942	Treatment		Workbench 2	12/31/1987	336	2.47	829	0%	0	0
944	Treatment		Workbench 3	12/31/1987	1,091	2.47	2,694	0%	0	0
946	Treatment		Platform 2	12/31/1987	653	2.47	1,612	0%	0	0
948	Treatment		Hopper Feeder	12/31/1987	6,500	2.47	16,048	0%	0	0
949	Treatment		WWTP Plant Piping 8	12/31/1987	9,680	2.47	23,899	0%	0	0
952	Treatment		Bay Workbench	12/31/1987	630	2.47	1,555	0%	0	0
953	Treatment		WWTP Plant Piping 9	12/31/1987	23,232	2.47	57,358	0%	0	0
954	Treatment		Dft 1 Workbench	12/31/1987	1,091	2.47	2,694	0%	0	0
956	Treatment		WWTP Plant Piping 10	12/31/1987	40,656	2.47	100,376	0%	0	0
957	Treatment		Press-hydraulic	12/31/1987	2,615	2.47	6,456	0%	0	0
959	Treatment		Arm loading sludge	12/31/1987	3,800	2.47	9,382	0%	0	0
961	Treatment		Sludge Pump Stat.	12/31/1987	213,750	2.47	527,729	0%	0	0
963	Treatment		Clarifier 1	12/31/1987	157,000	2.47	387,619	3%	4,710	11,629
965	Treatment		Solid Handling	12/31/1987	646,000	2.47	1,594,915	0%	0	0
967	Treatment		KCM Phase III	12/31/1986	490,901	2.53	1,243,312	0%	0	0
968	Treatment		KCM Phase II	12/31/1986	851,611	2.53	2,156,888	0%	0	0
969	Treatment		Capitalized Interest	12/31/1986	461,056	2.53	1,167,723	0%	0	0
970	Treatment		Outfall	12/31/1986	343,674	2.53	870,428	0%	0	0
974	Treatment		RDS Distrib	12/31/1987	24,251	2.47	59,872	0%	0	0
975	Treatment		Chlorine Bldg	12/31/1987	118,750	2.47	293,183	0%	0	0
978	Treatment		Chlorine Contact Tk	12/31/1987	169,000	2.47	417,246	0%	0	0
979	Treatment		Equalization Basin	12/31/1987	454,000	2.47	1,120,884	0%	0	0
980	Treatment		RAS Distr Box	12/31/1987	16,167	2.47	39,915	0%	0	0
981	Treatment		Sludge Tank	12/31/1987	174,000	2.47	429,590	0%	0	0
982	Treatment		Clarifier Distr Box	12/31/1987	41,939	2.47	103,544	3%	1,258	3,106
983	Treatment		Operation Bldg	12/31/1987	881,672	2.47	2,176,768	0%	0	0
985	Treatment		Oxidation Ditch 2	12/31/1987	638,000	2.47	1,575,163	0%	0	0
986	Treatment		Oxidation Ditch 1	12/31/1987	638,000	2.47	1,575,163	0%	0	0
990	Treatment		Clarifier 3	12/31/1987	157,000	2.47	387,619	0%	0	0
991	Treatment		Clarifier 2	12/31/1987	157,000	2.47	387,619	0%	0	0
994	Treatment		KCM Phase I	12/31/1986	455,421	2.53	1,153,451	0%	0	0
997	Treatment		KCM-Design	12/31/1986	1,133,125	2.53	2,869,882	0%	0	0
1005	Treatment		Site Work 1	12/31/1986	19,788	2.53	50,117	0%	0	0
1006	Treatment		Site Work 2	12/31/1986	273,617	2.53	692,994	0%	0	0
1008	Treatment		Influent Pump	12/31/1986	546,970	2.53	1,385,319	0%	0	0
1011	Collection		FY 72-73 Sewer Lines	12/31/1973	2,619	5.74	15,034	20%	524	3,007
1012	Collection		FY 89-90 Sewer Lines	12/31/1990	3,466	2.30	7,968	20%	693	1,594
1014	Collection		FY 70-71 Sewer Lines	12/31/1971	57,325	6.88	394,422	20%	11,465	78,884
1016	Collection		FY 71-72 Sewer Lines	12/31/1972	21,553	6.21	133,744	20%	4,311	26,749
1024	Collection		FY 73-74 Sewer Lines	12/31/1974	30,982	5.39	166,843	20%	6,196	33,369
1025	Collection		FY 69-70 Sewer Lines	12/31/1970	269,447	7.88	2,122,409	20%	53,889	424,482
1027	Collection		FY 75-76 Sewer Lines	12/31/1976	56,899	4.53	257,788	20%	11,380	51,558
1029	Collection		FY 79-80 Sewer Lines	12/31/1980	145,527	3.36	489,047	20%	29,105	97,809
1030	Collection		FY 80-81 Sewer Lines	12/31/1981	463,143	3.08	1,425,198	20%	92,629	285,040
1032	Collection		FY 59-60 Sewer Lines	12/31/1960	46,740	13.20	617,037	20%	9,348	123,407
1034	Collection		FY 87-88 Sewer Lines	12/31/1988	248,007	2.41	596,995	20%	49,601	119,399
1035	Collection		FY 82-83 Sewer Lines	12/31/1983	3,900	2.68	10,434	20%	780	2,087
1036	Collection		FY 64-65 Sewer Lines	12/31/1965	18,523	11.20	207,511	20%	3,705	41,502
1037	Collection		FY 65-66 Sewer Lines	12/31/1966	78,742	10.68	840,585	20%	15,748	168,117

City of Newberg
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1039	Collection		FY 62-63 Sewer Lines	12/31/1963	35,812	12.07	432,368	20%	7,162	86,474
1041	Collection		FY 78-79 Sewer Lines	12/31/1979	53,863	3.62	195,112	20%	10,773	39,022
1043	Collection		FY 47-48 Sewer Lines	12/31/1948	20,466	23.60	482,927	20%	4,093	96,585
1044	Collection		FY 77-78 Sewer Lines	12/31/1978	59,148	3.92	231,777	20%	11,830	46,355
1045	Collection		FY 88-89 Sewer Lines	12/31/1989	113,787	2.36	268,207	20%	22,757	53,641
1046	Collection		FY 88-89 Sewer Lines	12/31/1989	32,877	2.36	77,494	20%	6,575	15,499
1047	Collection		FY 58-59 Sewer Lines	12/31/1959	7,110	13.65	97,042	20%	1,422	19,408
1069	Treatment		Hoist 6	8/14/1992	375	2.18	818	0%	0	0
1107	Treatment		Megohmmer	4/9/1993	682	2.09	1,423	0%	0	0
1113	Treatment		Locker	4/9/1993	310	2.09	646	0%	0	0
1118	Treatment		Sampler	1/12/1993	5,140	2.09	10,732	0%	0	0
1119	Treatment		Clarifier 1	8/14/1992	18,233	2.18	39,788	3%	547	1,194
1154	Treatment		Safety Block 1	9/11/1992	770	2.18	1,679	0%	0	0
1156	Treatment		Processor Board-Cntr	4/9/1993	894	2.09	1,867	0%	0	0
1158	Treatment		Calibrator-Cntr	3/10/1993	1,156	2.09	2,414	0%	0	0
1160	Treatment		Compressor 2	9/10/1992	647	2.18	1,411	0%	0	0
1161	Treatment		Serial Interface-Cntr	10/29/1992	2,270	2.18	4,953	0%	0	0
1177	Collection		FY 92-93 Sewer Lines	6/30/1993	209,960	2.09	438,378	20%	41,992	87,676
1183	Treatment		DC output card-Cntr	7/31/1993	489	2.09	1,022	0%	0	0
1204	Treatment		Reducer-Clar	10/31/1993	622	2.09	1,298	0%	0	0
1234	Treatment		Clarifier 2	10/31/1993	17,995	2.09	37,572	3%	540	1,127
1248	General Equipment		Pickup 94-508	1/31/1994	13,312	2.01	26,777	0%	0	0
1265	Collection		Valeri Park Sub	1/31/1994	1,817	2.01	3,654	0%	0	0
1338	Treatment		I/O Board Assembl	6/1/1994	695	2.01	1,398	0%	0	0
1379	Treatment		DC Output Card	6/30/1994	653	2.01	1,313	0%	0	0
1382	Treatment		Pump 18	9/11/1991	390	2.25	877	0%	0	0
1401	Pump Stations		Dayton Avenue Pump Station	6/30/1994	28,066	2.01	56,453	0%	0	0
1402	Pump Stations		Dayton Ave Pump Station WW	6/30/1994	56,761	2.01	114,173	0%	0	0
1403	Pump Stations		Dayton Ave PS Piping	6/30/1994	183,869	2.01	369,846	0%	0	0
1405	Pump Stations		Pumps Dayton Ave PS	6/30/1994	67,973	2.01	136,724	0%	0	0
1406	Pump Stations		Compressor Dayton Ave PS	6/30/1994	5,147	2.01	10,354	0%	0	0
1407	Pump Stations		Meter Flow Dayton Ave PS	6/30/1994	3,673	2.01	7,389	0%	0	0
1408	Pump Stations		Telemetry Dayton Ave PS	6/30/1994	588	2.01	1,184	0%	0	0
1409	Treatment		Dayton Ave Wet Well	6/30/1994	64,610	2.01	129,960	0%	0	0
1410	Collection		FY 93-94 Sewer Lines	6/30/1994	405,405	2.01	815,459	20%	81,081	163,092
1421	Treatment		Clarifier 3	8/31/1994	27,855	2.01	56,029	3%	836	1,681
1516	Treatment		Cleaner-SewerVactor	12/31/1994	151,950	2.01	305,642	0%	0	0
1520	Treatment		Pump 19	1/31/1995	945	1.99	1,879	0%	0	0
1533	General Equipment		Generator-Portable	3/31/1995	611	1.99	1,215	0%	0	0
1654	Collection		FY 94-95 Sewer Lines	6/30/1995	457,376	1.99	909,402	20%	91,475	181,880
1719	Treatment		Old WWTP 2	1/1/1947	990	26.34	26,076	0%	0	0
1720	Treatment		11th St.	4/1/1969	3,185	8.57	27,302	0%	0	0
1746	Treatment		WWTP Land 3	11/7/1984	68,000	2.62	178,414	0%	0	0
1748	Treatment		WWTP Land 4	6/26/1984	170,000	2.62	446,035	0%	0	0
1759	Lift Station		Lift Stat Rotat Pump College St	4/30/1996	2,445	1.94	4,733	100%	2,445	4,733
1761	Lift Station		Lift Stat Pkg Syst College St	12/31/1977	35,079	4.22	148,133	100%	35,079	148,133
1777	Collection		FY 95-96 Sewer Lines	6/30/1996	1,068,310	1.94	2,067,809	20%	213,662	413,562
1850	Collection		FY 91-92 Sewer Lines	12/31/1992	447,506	2.18	976,525	20%	89,501	195,305
1861	General Equipment		Radio-portable 8	3/31/1997	1,420	1.87	2,651	0%	0	0
1862	General Equipment		Radio-portable 9	3/31/1997	1,420	1.87	2,651	0%	0	0
1864	General Equipment		Radio-portable 10	3/31/1997	1,420	1.87	2,651	0%	0	0
1865	General Equipment		Radio-portable 11	3/31/1997	1,420	1.87	2,651	0%	0	0
1866	General Equipment		Radio-portable 12	3/31/1997	1,420	1.87	2,651	0%	0	0
1867	General Equipment		Radio-portable 13	3/31/1997	1,420	1.87	2,651	0%	0	0
1870	General Equipment		Radio-portable 14	3/31/1997	1,420	1.87	2,651	0%	0	0
1872	General Equipment		Radio-portable 15	3/31/1997	1,420	1.87	2,651	0%	0	0

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1876	General Equipment		Stat Radio-Control	3/31/1997	3,000	1.87	5,601	0%	0	0
1879	General Equipment		Charger	3/31/1997	574	1.87	1,071	0%	0	0
1899	General Equipment		I & C Modifica	6/30/1997	384,647	1.87	718,193	0%	0	0
1920	General Equipment		Sewage Sampler	8/14/1997	3,795	1.87	7,086	0%	0	0
1925	General Equipment		Scope Meter	9/5/1997	1,888	1.87	3,525	0%	0	0
1926	General Equipment		Vacuum-Wet/Dry	8/22/1997	2,094	1.87	3,909	0%	0	0
1927	General Equipment		Hydraulic Puller Set	9/3/1997	2,307	1.87	4,307	0%	0	0
1934	Collection		Telemetry Upgrade	9/1/1997	13,600	1.87	25,393	0%	0	0
1970	General Equipment		Truck 507-98	7/10/1998	38,273	1.84	70,326	0%	0	0
1988	Collection		Sewer Tap	4/30/1998	2,035	1.84	3,739	0%	0	0
1989	Treatment		Pressure Transducer 1	5/27/1998	828	1.84	1,521	0%	0	0
1990	Treatment		Pressure Transducer 2	5/27/1998	828	1.84	1,521	0%	0	0
1997	Treatment		Tapping Machi ne	6/16/1998	3,132	1.84	5,755	0%	0	0
2037	Treatment		Composter	6/30/1998	4,000,000	1.84	7,350,007	0%	0	0
2040	Treatment		WTP Elect Upgrade	6/30/1998	91,266	1.84	167,701	0%	0	0
2044	Collection		FY 97-98 Sewer Lines	6/30/1998	26,747	1.84	49,147	20%	5,349	9,829
2047	General Equipment		Portable Radio 3	7/24/1998	1,629	1.84	2,993	0%	0	0
2050	General Equipment		Portable Radio 4	8/7/1998	1,629	1.84	2,993	0%	0	0
2057	General Equipment		Eyewash Upgrade	8/31/1998	4,283	1.84	7,870	0%	0	0
2072	General Equipment		Portable Radio 5	11/25/1998	1,330	1.84	2,443	0%	0	0
2073	General Equipment		Portable Radio 6	11/25/1998	1,330	1.84	2,443	0%	0	0
2074	General Equipment		Portable Radio 7	11/25/1998	1,330	1.84	2,443	0%	0	0
2080	General Equipment		Pickup 7	1/27/1999	16,535	1.80	29,686	0%	0	0
2113	General Equipment		Variable Spd Dr	3/31/1999	19,500	1.80	35,009	0%	0	0
2115	Treatment		Vacuum Blower	4/30/1999	3,500	1.80	6,284	0%	0	0
2120	Treatment		Valves/Actuator 1	4/26/1999	4,363	1.80	7,833	0%	0	0
2121	Treatment		Valves/Actuator 2	4/26/1999	4,363	1.80	7,833	0%	0	0
2142	Treatment		Conveyor Rebuild	4/23/1999	20,850	1.80	37,433	0%	0	0
2143	Treatment		Variable Freq Drive 2	2/11/1999	2,288	1.80	4,107	0%	0	0
2143.1	Treatment		Install VFD 1	4/27/1999	4,184	1.80	7,511	0%	0	0
2144	Treatment		Variable Freq Drive 3	2/11/1999	2,288	1.80	4,107	0%	0	0
2144.1	Treatment		Install VFD 2	4/27/1999	4,184	1.80	7,511	0%	0	0
2145	Treatment		Sawdust Bin Cover	11/6/1998	2,223	1.84	4,085	0%	0	0
2159	Treatment		Handrails	6/14/1999	2,669	1.80	4,792	0%	0	0
2160	Collection		1998-99 Lines	6/30/1999	11,971	1.80	21,492	20%	2,394	4,298
2162	Pump Stations		Eighth St. Pump Station	6/30/1999	19,442	1.80	34,906	40%	7,777	13,962
2163	Collection		MiddleBrook Relocate	6/30/1999	46,887	1.80	84,178	0%	0	0
2189	General Equipment		Saw-Band	8/19/1999	3,882	1.80	6,970	0%	0	0
2191	Treatment		Fan 1 Jaybird Misting System	9/16/1999	1,787	1.80	3,208	0%	0	0
2192	Treatment		Fan 2 Jaybird Misting System	9/16/1999	1,787	1.80	3,208	0%	0	0
2197	Treatment		Actuator/Controller	12/2/1999	2,574	1.80	4,620	0%	0	0
2202	Treatment		Trash Pump	1/13/2000	1,150	1.75	2,011	0%	0	0
2211	Treatment		Valve Actuator 1	2/2/2000	4,659	1.75	8,147	0%	0	0
2212	Treatment		Valve Actuator 2	2/2/2000	4,659	1.75	8,147	0%	0	0
2221	General Equipment		Handheld Meter Reader	4/28/2000	4,450	1.75	7,781	0%	0	0
2230	Treatment		Conveyor Rebuild	3/28/2000	8,310	1.75	14,531	0%	0	0
2247	Treatment		Generator 2	6/12/2000	29,500	1.75	51,584	0%	0	0
2267	Collection		FY 99-00 City Sewer Lines	6/30/2000	3,995	1.75	6,986	20%	799	1,397
2282	Treatment		Screw Conveyor	7/17/2000	18,399	1.75	32,173	0%	0	0
2314	Treatment		Robotic Total Station	3/23/2001	14,000	1.72	24,044	0%	0	0
2318	Treatment		Circuit Breaker	5/22/2001	6,587	1.72	11,313	0%	0	0
2320	Collection		FY 00-01 City Sewer Lines	6/30/2001	47,445	1.72	81,482	20%	9,489	16,296
2322	Collection		Manholes	6/30/2001	20,040	1.72	34,417	0%	0	0
2323	Pump Stations		Sheridan St Pump	6/30/2001	240,151	1.72	412,435	40%	96,060	164,974
2324	Pump Stations		Charles St Main	6/30/2001	40,985	1.72	70,387	14%	5,738	9,854
2325	Pump Stations		Charles St Pump	6/30/2001	120,592	1.72	207,105	14%	16,883	28,995

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2326	Pump Stations		Andrews St Pump	6/30/2001	118,546	1.72	203,591	5%	5,927	10,180
2327	Treatment		Composter	6/30/2001	140,302	1.72	240,955	0%	0	0
2329	Treatment		WWTP Door Hardware	6/30/2001	19,434	1.72	33,377	0%	0	0
2341	General Equipment		Pickup 534-01	10/30/2001	18,359	1.72	31,530	0%	0	0
2346	Treatment		Flow Meter Monitoring Station	1/9/2002	17,620	1.66	29,316	0%	0	0
2348	Treatment		Variable Freq Drive 4	5/30/2002	15,710	1.66	26,139	0%	0	0
2353	Treatment		Amp Breaker-100	6/26/2002	6,462	1.66	10,752	0%	0	0
2354	Treatment		Amp Breaker-400	6/26/2002	6,929	1.66	11,529	0%	0	0
2364	Treatment		VFD Replacement	6/30/2002	103,621	1.66	172,406	0%	0	0
2370	Collection		01-02 Manholes	6/30/2002	28,192	1.66	46,906	0%	0	0
2371	Collection		FY 01-02 City Sewer Lines	6/30/2002	192,111	1.66	319,636	20%	38,422	63,927
2375	Treatment		Mailing Machine	9/19/2002	6,470	1.66	10,765	0%	0	0
2377	Treatment		VFD Upgrade	9/30/2002	5,170	1.66	8,602	0%	0	0
2381	Treatment		Diesel Fuel Tank	5/8/2003	11,240	1.63	18,265	0%	0	0
2387	Treatment		Pump Base	6/25/2003	7,054	1.63	11,463	0%	0	0
2388	Treatment		Software Work Director/Waterview	6/25/2003	7,910	1.63	12,854	0%	0	0
2390	Collection		FY 02-03 City Sewer Lines	6/30/2003	1,216,110	1.63	1,976,226	20%	243,222	395,245
2402	Collection	Contributed	FY 98-99 Developer Sewer Lines	6/30/1999	308,700	1.80	554,224	0%	0	0
2404	Collection	Contributed	FY 99-00 Developer Sewer Lines	6/30/2000	117,900	1.75	206,159	0%	0	0
2406	Collection	Contributed	FY 00-01 Developer Sewer Lines	6/30/2001	454,500	1.72	780,558	0%	0	0
2408	Collection	Contributed	FY 01-02 Developer Sewer Lines	6/30/2002	127,600	1.66	212,303	0%	0	0
2410	Treatment		Pickup 509-03	8/14/2003	15,783	1.63	25,647	0%	0	0
2412	Treatment		Loader 514-04	11/12/2003	127,822	1.63	207,716	0%	0	0
2418	Treatment		Power Supply	1/29/2004	18,565	1.53	28,384	0%	0	0
2424	Treatment		Screw Conveyor #2	5/13/2004	9,417	1.53	14,397	0%	0	0
2425	Treatment		Screw Conveyor #3	5/13/2004	9,417	1.53	14,397	0%	0	0
2427	Treatment		Pocket Align Laser Align System	6/30/2004	5,008	1.53	7,657	0%	0	0
2428	Treatment		1997 Flatbet 940-97	6/28/2004	20,561	1.53	31,435	0%	0	0
2433	Treatment		Fernwood Rd Pump Station	6/30/2004	1,053,855	1.53	1,611,222	0%	0	0
2434	Collection		FY 03-04 City Sewer Lines	6/30/2004	232,090	1.53	354,839	20%	46,418	70,968
2435	Collection	Contributed	FY 03-04 Developer Sewer Lines	6/30/2004	905,500	1.53	1,384,405	0%	0	0
2442	General Equipment		Trailer 903-04	9/9/2004	11,938	1.53	18,252	0%	0	0
2456	Treatment		Pressure Headworks Blower	1/6/2005	6,800	1.46	9,934	0%	0	0
2457	Treatment		Return Room Piping Replacement	11/18/2004	5,930	1.53	9,066	0%	0	0
2458	Treatment		Reclaim Pump #1	6/30/2005	9,005	1.46	13,156	0%	0	0
2463	Collection	Contributed	FY 2004-05 City Sewer Lines LID	6/30/2005	967,696	1.46	1,413,731	0%	0	0
2464	Collection	Contributed	FY 2004-05 Developer Sewer Lines	6/30/2005	1,111,775	1.46	1,624,219	0%	0	0
2465	Treatment		Headworks Improvements	6/30/2005	420,693	1.46	614,601	0%	0	0
2466	Treatment		Belt Screen & Compactor	6/30/2005	415,387	1.46	606,849	0%	0	0
2467	Treatment		Grit Cyclones & Classifier	6/30/2005	74,669	1.46	109,086	0%	0	0
2468	Treatment		Cure & Blower Building	6/30/2005	728,496	1.46	1,064,278	0%	0	0
2469	Treatment		Scrubber & Biofilter System	6/30/2005	301,212	1.46	440,048	0%	0	0
2470	Treatment		Cure & Ventilation Blower	6/30/2005	338,641	1.46	494,729	0%	0	0
2471	Treatment		Odorous Piping Network	6/30/2005	467,486	1.46	682,962	0%	0	0
2472	Treatment		Reaktop Door	6/30/2005	15,158	1.46	22,145	0%	0	0
2473	Treatment		Compost Bin Live Bottom	6/30/2005	75,546	1.46	110,367	0%	0	0
2478	Treatment		Chehalem Sewer Pump Station & Lines	6/30/2005	877,259	1.46	1,281,609	23%	201,770	294,770
2479	Treatment		Creekside Pump Station Improvements	6/30/2005	31,033	1.46	45,337	40%	12,413	18,135
2491	General Equipment		2005 Dodge Dakota 517-05	9/29/2005	22,169	1.46	32,387	0%	0	0
2496	Treatment		Composter Energy Improvements	2/2/2006	455,000	1.40	638,545	0%	0	0
2498	General Equipment		Tractor Loader & Mower	3/9/2006	20,150	1.40	28,278	0%	0	0
2508	Treatment		WWTP Crane	6/30/2006	8,319	1.40	11,675	0%	0	0
2516	Pump Stations		Generator-Backup Andrews Pump Station	6/30/2006	21,282	1.40	29,867	5%	1,064	1,493
2517	Collection		FY 2005-06 City Sewer Lines	6/30/2006	141,692	1.40	198,850	20%	28,338	39,770
2518	Collection	Contributed	FY 2005-06 Developer Sewer	6/30/2006	376,355	1.40	528,175	0%	0	0
2529	General Equipment		WWTP Truck 527-08	6/30/2007	40,939	1.37	55,896	0%	0	0

City of Newberg
Exhibit 7
Fixed Asset Listing as of June 30, 2017

Asset #	Function	Contributed	Description	Date Acquired	Original Cost	ENR-CCI 1/1/2018 10,878 ENR Factor	Replacement Cost	% SDC (1)	SDC Eligible Original Cost	SDC Eligible Replacement Cost
2547	Collection	Contributed	FY 2006-07 Developer Sewer Lines	6/30/2007	538,720	1.37	735,536	0%	0	0
2578	Collection		Wastewater Line N Arterial S-Curve	6/30/2008	606,926	1.31	794,375	100.0%	606,926	794,375
2581	Collection	Contributed	2007-08 Developer Contributed WW Lines	6/30/2008	278,110	1.31	364,004	0.0%	0	0
2609.2	Collection		Effluent Reuse Pipelines-WW	6/30/2009	436,690	1.27	553,983	100.0%	436,690	553,983
2612	Collection	Contributed	2008-09 Developer Contributed Wastewater Lines	6/30/2009	60,305	1.27	76,503	0.0%	0	0
2635	Collection		W Sheridan/N Harrison WW Improvements	6/30/2010	307,287	1.24	379,746	100.0%	307,287	379,746
2716	Collection		Animal Shelter WW Lines	6/30/2013	48,550	1.14	55,321	100.0%	48,550	55,321
2778	Collection		Wynooski-Riverfront Utilities - relocate trunk line	6/30/2014	2,188,340	1.11	2,427,438	100.0%	2,188,340	2,427,438
2781	Collection		Reuse Line Relocation (Bypass Ph 1)	5/31/2014	28,547	1.11	31,666	100.0%	28,547	31,666
Sewer Lir Collection		Contributed	Highland at Hess Creek Phase 4 & 5 Developer Contribut	6/30/2017	53,737	1.08	58,128	0.0%	0	0
Sewer Lir Collection			South Springbrook (Bypass) (Wastewater Lines)	6/30/2017	71,531	1.08	77,377	100.0%	71,531	77,377
Sewer Lir Collection		Contributed	Shellie Park Developer Contributed	6/30/2017	80,551	1.08	87,134	0.0%	0	0
Sewer Lir Collection			Edwood 8" sewer 176 LF	6/30/2014	19,360	1.11	21,475	100.0%	19,360	21,475
Sewer Lir Collection			2nd Street Parking Lot Rehab (Wastewater Lines)	6/30/2016	59,085	1.08	63,913	100.0%	59,085	63,913
Sewer Lir Collection			Heritage 8" sewer 286 LF	6/30/2014	31,469	1.11	34,907	100.0%	31,469	34,907
Sewer Lir Collection			Inflow/Infiltration - Aquarius, Vittoria Way, Madrona, Cc	6/30/2017	231,448	1.08	250,362	100.0%	231,448	250,362
Sewer Lir Collection			Aquarius Street Lateral Replacement (I&I)	6/30/2016	134,804	1.08	145,819	100.0%	134,804	145,819
Sewer Lir Collection			Meridian St Sewer (I&I)	6/30/2016	452,414	1.08	489,385	100.0%	452,414	489,385
2561	General Equipment		2008 Chev 1/2 ton PU Vehicle No. 528-08.	6/30/2008	19,935	1.31	26,092	0.0%	0	0
2567	General Equipment		Kubota Utility Cart	6/30/2008	14,752	1.31	19,308	0.0%	0	0
2588	General Equipment		Jet Lathe GH1440W-3	6/30/2009	6,098	1.27	7,736	0.0%	0	0
2605	General Equipment		Stantrol 960 base unit and parts	6/30/2009	18,227	1.27	23,123	0.0%	0	0
2673	General Equipment		2012 Chev Silverado Pick Up	6/30/2012	27,067	1.17	31,632	0.0%	0	0
2687	General Equipment		2011 Lawn Mower	6/30/2012	14,700	1.17	17,179	0.0%	0	0
2713	General Equipment		Doosan Forklift #539-13	6/30/2013	32,908	1.14	37,497	0.0%	0	0
2729	General Equipment		2013 Ford TV Inspection Truck (#540-14)	6/30/2014	169,675	1.11	188,214	0.0%	0	0
2742	General Equipment		2014 Freightliner Truck Veh# 542-14	6/30/2014	177,526	1.11	196,922	0.0%	0	0
2744	General Equipment		Camera - Controller for Composter	6/30/2014	7,717	1.11	8,560	0.0%	0	0
2757	General Equipment		2014 Caterpillar	12/18/2014	121,839	1.11	135,151	0.0%	0	0
2821	General Equipment		2017 Chevrolet PU Veh# 546-17	2/28/2017	27,902	1.08	30,182	0.0%	0	0
2822	General Equipment		2017 Chevrolet SUV Veh# 547-17	3/31/2017	22,316	1.08	24,140	0.0%	0	0
2823	General Equipment		Utility Golf Car	4/30/2017	8,207	1.08	8,877	0.0%	0	0
2598	Pump Stations		HWY 240 WW Pump Station 305 W Illinois	6/30/2009	77,808	1.27	98,707	100.0%	77,808	98,707
2649	Pump Stations		Generator at Charles St Pump Station	6/30/2011	20,172	1.20	24,182	100.0%	20,172	24,182
2650	Pump Stations		Generator for Dayton Ave-Pump Station	6/30/2011	35,900	1.20	43,037	100.0%	35,900	43,037
2668	Pump Stations		HWY 240 Pump Station	6/30/2011	1,782,391	1.20	2,136,730	100.0%	1,782,391	2,136,730
CIP	Pump Stations		Dayton Pump Station Design	6/30/2015	353,503	1.08	382,390	100.0%	353,503	382,390
2571	Treatment		Wireless bridge WWTP	6/30/2008	8,304	1.31	10,869	100.0%	8,304	10,869
2592	Treatment		Server for Public Works	6/30/2009	8,552	1.27	10,849	100.0%	8,552	10,849
2599.1	Treatment		City-Wide Wireless Network-Wastewater	6/30/2009	28,944	1.27	36,718	100.0%	28,944	36,718
2600	Treatment		Replacement pump-Inf Pump #3	6/30/2009	69,615	1.27	88,313	100.0%	69,615	88,313
2601.1	Treatment		New key system for Operations Bldg/Stat	6/30/2009	6,328	1.27	8,028	100.0%	6,328	8,028
2608.2	Treatment		Effluent Reuse Facility-WW	6/30/2009	1,931,662	1.27	2,450,498	100.0%	1,931,662	2,450,498
2610.2	Treatment		Effluent Reuse Membrane-WW	6/30/2009	382,000	1.27	484,604	100.0%	382,000	484,604
2611	Treatment		WWTP Generator/Building	6/30/2009	4,198,310	1.27	5,325,959	100.0%	4,198,310	5,325,959
2614	Treatment		8LVP-BHC Pressure Blower	6/30/2010	10,990	1.24	13,581	100.0%	10,990	13,581
2615	Treatment		Heat pump replacement-Operations Bldg	6/30/2010	14,649	1.24	18,103	100.0%	14,649	18,103
2625	Treatment		WWTP Land Expansion 19.68 acres (sold 9.74 ac)	6/30/2010	980,738	1.24	1,211,997	100.0%	980,738	1,211,997
2626	Treatment		Live bottom for composter replacement	6/30/2010	42,592	1.24	52,635	100.0%	42,592	52,635
2627	Treatment		Composter conveyor chains (replacement)	6/30/2010	18,428	1.24	22,773	100.0%	18,428	22,773
2637	Treatment		WWTP Sawdust Dryer	6/30/2010	995,912	1.24	1,230,749	100.0%	995,912	1,230,749
2638	Treatment		Influent Pump #2	6/30/2010	35,032	1.24	43,293	100.0%	35,032	43,293
2639	Treatment		Influent Pump #1	6/30/2010	35,032	1.24	43,293	100.0%	35,032	43,293
2653	Treatment		Sludge Pump to Belt Filter Press	6/30/2011	20,352	1.20	24,398	100.0%	20,352	24,398
2667	Treatment		Security Fencing at WWTP-FEDERAL GRANT	6/30/2011	30,181	1.20	36,181	100.0%	30,181	36,181
2669	Treatment		Jet Milling Machine	6/30/2011	11,072	1.20	13,273	100.0%	11,072	13,273

City of Newberg
Exhibit 7
Fixed Asset Listing as of June 30, 2017

Asset #	Function	Contributed	Description	Date Acquired	Original Cost	ENR-CCI 1/1/2018 10,878 ENR Factor	Replacement Cost	% SDC (1)	SDC Eligible Original Cost	SDC Eligible Replacement Cost
2702	Treatment		Steel Utility Building and Construction	6/30/2013	44,958	1.14	51,228	100.0%	44,958	51,228
2719	Treatment		Engineering Copies	6/30/2013	8,410	1.14	9,583	0.0%	0	0
2724	Treatment		Sawdust Silo Unloader	6/30/2014	43,598	1.11	48,362	100.0%	43,598	48,362
2734	Treatment		WWTP Frontage Sign	6/30/2014	17,360	1.11	19,257	100.0%	17,360	19,257
2797	Treatment		Essco Vertical Pump	12/30/2015	14,368	1.08	15,542	100.0%	14,368	15,542
2798	Treatment		Cornell DP Pump	9/23/2015	8,460	1.08	9,151	100.0%	8,460	9,151
2825	Treatment		7.5 Ton WWTP Heat Pump	6/22/2017	14,594	1.08	15,787	100.0%	14,594	15,787
2832	Treatment		Composter Building Roof Replacement	6/30/2017	45,019	1.08	48,698	100.0%	45,019	48,698
2833	Treatment		Disinfection Building Roof Replacement	6/30/2017	37,524	1.08	40,591	100.0%	37,524	40,591
2834	Treatment		WWTP Hypochlorite	6/30/2017	922,178	1.08	997,538	100.0%	922,178	997,538
2772A	Treatment		520 W 3rd St - Building	6/30/2015	97,690	1.08	105,673	100.0%	97,690	105,673
2773A	Treatment		520 W 3rd St - Land	6/30/2015	128,582	1.08	139,089	100.0%	128,582	139,089
2806A	Treatment		WWTP RRE (4th Clarifier)	6/30/2016	4,690,850	1.08	5,074,181	100.0%	4,690,850	5,074,181
2806B	Treatment		WWTP RRE (Dewatering System)	6/30/2016	4,184,978	1.08	4,526,970	100.0%	4,184,978	4,526,970
2806C	Treatment		WWTP RRE (Headworks and Influent Pump Station)	6/30/2016	17,160,027	1.08	18,562,326	100.0%	17,160,027	18,562,326
2813B	Treatment		Video Inspection System - Vcam-5 control module and	9/14/2016	5,024	1.08	5,435	0.0%	0	0
2824A	Treatment		PWA Building - 500 W 3rd St	6/30/2017	19,883	1.08	21,507	100.0%	19,883	21,507
CIP	Treatment		Villa rd-Haworth to Crestview Culvert Imps.	6/30/2016	594,506	1.08	643,089	100.0%	594,506	643,089
CIP	Treatment		Oxidation Ditches (#2)	6/30/2017	145,415	1.08	157,299	100.0%	145,415	157,299
CIP	Treatment		Oxidation Ditch Rotor Aerator #8	6/30/2017	59,881	1.08	64,775	100.0%	59,881	64,775
Total					\$79,551,018		\$125,488,582		\$45,672,280	\$54,107,426

Matches CAFR

FUNCTION	Original Cost	Replacement Cost	SDC Eligible Original Cost	SDC Eligible Replacement Cost
Assets				
Treatment	\$58,657,335	\$88,125,499	\$37,363,629	\$42,234,191
Pump Stations	3,178,185	4,349,271	2,403,689	2,918,335
Collection	16,341,122	30,835,305	5,862,581	8,783,002
Lift Station	72,216	288,809	42,381	171,897
General Equipment	1,302,161	1,889,699	0	0
Total	\$79,551,018	\$125,488,582	\$45,672,280	\$54,107,426
Contributed				
Treatment	\$0	\$0	\$0	\$0
Pump Stations	0	0	0	0
Collection	5,381,449	8,025,079	0	0
Lift Station	0	0	0	0
General Equipment	0	0	0	0
Total	\$5,381,449	\$8,025,079	\$0	\$0
Net Assets	\$74,169,569	\$117,463,504	\$45,672,280	\$54,107,426