

CITY OF ASHLAND

SDC Advisory Committee

MEETING #1 AGENDA

Wednesday, June 2nd, 2021

4:00-6:00 p.m.

Meeting Held Virtually via Zoom

Webinar Link: <https://zoom.us/j/94280017309>

1. Introductions
2. Project Background and Objectives
3. Water and Storm Drain SDC Fundamentals
4. SDC Advisory Committee Issues
 - a. Project lists/SDC Phase-In
 - b. SDC assessment options
 - c. Affordable housing
5. Next Steps

Attachments:

1. Ashland Municipal Code 4.20 System Development Charges
2. Preliminary Residential Water Use Analysis Memorandum
3. Water and Storm Drain Project List



Chapter 4.20 SYSTEMS DEVELOPMENT CHARGES

Sections:

- 4.20.010** **Definitions**
- 4.20.020** **Purpose**
- 4.20.030** **Scope**
- 4.20.040** **Systems Development Charge Established**
- 4.20.050** **Methodology**
- 4.20.060** **Authorized Expenditures**
- 4.20.070** **Expenditure Restrictions**
- 4.20.080** **Improvement Plan**
- 4.20.090** **Collection of Charge**
- 4.20.100** **Exemptions**
- 4.20.105** **Deferrals for Affordable Housing**
- 4.20.110** **Credits**
- 4.20.120** **Notification**
- 4.20.130** **Segregation and Use of Revenue**
- 4.20.140** **Refunds**
- 4.20.150** **Appeal Procedures**
- 4.20.160** **Prohibited Connection**
- 4.20.170** **Enforcement – Violation**
- 4.20.180** **Classification of the Fee**

4.20.010 **Definitions**

The following words and phrases, as used in this chapter, have the following definitions and meanings:

- A. *Capital Improvement(s)*. Public facilities or assets used for any of the following:
 1. Water supply, treatment and distribution;
 2. Sanitary sewers, including collection, transmission and treatment;
 3. Storm sewers, including drainage and flood control;
 4. Transportation, including but not limited to streets, sidewalks, bike lanes and paths, street lights, traffic signs and signals, street trees, public transportation, vehicle parking, and bridges; or

5. Parks and recreation, including but not limited to mini-neighborhood parks, neighborhood parks, community parks, public open space and trail systems, buildings, courts, fields and other like facilities.

B. *Development*. As used in Sections [4.20.020](#) through [4.20.180](#) means constructing or enlarging a building or adding facilities, or making a physical change in the use of a structure or land, which increases the usage of any capital improvements or which will contribute to the need for additional or enlarged capital improvements.

C. *Improvement Fee*. A fee for costs associated with capital improvements to be constructed after the effective date of the ordinance codified in this chapter.

D. *Qualified Public Improvements*. A capital improvement that is:

1. Required as a condition of development approval; and
2. Is identified in the plan adopted pursuant to section [4.20.080](#) and is either:
 - a. Not located on or contiguous to property that is the subject of development approval; or
 - b. Located on or contiguous to the property that is the subject of development approval and is required to be built larger or with greater capacity than is necessary for the particular development project to which the improvement fee is related.

E. *Reimbursement Fee*. A fee for costs associated with capital improvements constructed or under construction on the date the fee is adopted pursuant to Section [4.20.040](#).

F. *Systems Development Charge*. A reimbursement fee, a public improvement charge or a combination thereof assessed or collected at any of the times specified in Section [4.20.090](#). It shall not include connection or hook-up fees for sanitary sewers, storm drains or water lines, since such fees are designed by the City only to reimburse the City for the costs for such connections. Nor shall the SDC include costs for capital improvements which by City policy and State statute are paid for by assessments or fees in lieu of assessments for projects of special benefit to a property, or the cost of complying with requirements or conditions imposed by a land use decision. (Ord. 3174 § 1, amended, 03/19/2019; Ord. 2791 § 1, amended, 1997)

4.20.020 Purpose

The purpose of the systems development charge (SDC) is to impose an equitable share of the public costs of capital improvements upon those developments that create the need for or increase the demands on capital improvements. (Ord. 3174 § 1, amended, 03/19/2019)

4.20.030 Scope

The systems development charge imposed by this chapter is separate from and in addition to any applicable tax, assessment, charge, fee in lieu of assessment, or fee otherwise provided by law or imposed as a condition of development. A systems development charge is to be considered in the nature of a charge for service rendered or

facilities made available, or a charge for future services to be rendered on facilities to be made available in the future. (Ord. 3174 § 1, amended, 03/19/2019)

4.20.040 Systems Development Charge Established

A. Unless otherwise exempted by the provisions of this chapter or other local or state law, a systems development charge is hereby imposed upon all development within the City; and all development outside the boundary of the City that connects to or otherwise uses the sanitary sewer system, storm drainage system or water system of the City. The City Administrator is authorized to make interpretations of this section, subject to appeal to the City Council.

B. Systems development charges for each type of capital improvement may be created through application of the methodologies described in Section [4.20.050](#). The amounts of each system development charge shall be adopted initially by Council resolution following a public hearing. Changes in the amounts shall also be adopted by resolution following a public hearing, except changes resulting solely from inflationary cost impacts. Inflationary cost impacts shall be measured and calculated annually by the City Administrator and charged accordingly. Such calculations will be based upon changes in the Engineering News Record Construction Index (ENR Index) for Seattle, Washington. (Ord. 3174 § 1, amended, 03/19/2019; Ord. 2791 § 2, amended, 1997)

4.20.050 Methodology

A. The methodology used to establish a reimbursement fee shall consider the cost of then-existing facilities, prior contributions by then-existing users, gifts or grants from federal or state government or private persons, the value of unused capacity, rate-making principles employed to finance publicly owned capital improvements, and other relevant factors identified by the City Council. The methodology shall promote the objective that future systems users shall contribute an equitable share of the cost of then-existing facilities.

B. The methodology used to establish the improvement fee shall consider the cost of projected capital improvements identified in an improvement plan (see Section [4.20.080](#)) that are needed to increase the capacity of the systems to which the fee is related.

C. The methodologies used to establish the systems development charge shall be adopted by resolution of the Council following a public hearing.

1. The City shall provide written notice to persons who have requested notice of any adoption or modification of SDC methodology at least 90 days before the hearing. If no one has requested notice, the City shall publish notice in a newspaper of general circulation in the City at least 90 days before the hearing.
2. The revised methodology shall be available to the public at least 60 days before the first public hearing of the adoption or amendment of the methodology.

D. A change in the amount of a reimbursement fee or an improvement fee is not a modification of the SDC methodology if the change is based on a change in project costs, including cost of materials, labor and real

property, or on a provision for a periodic adjustment included in the methodology or adopted by separate ordinance or resolution, consistent with State law.

E. A change in the amount of an improvement fee is not a modification of the SDC methodology if the change is the result of a change in the improvement plan adopted in accord with Section [4.20.080](#).

F. The formulas and calculations used to compute specific systems development charges are based upon averages and typical conditions. Whenever the impact of individual developments present special or unique situations such that the calculated fee is grossly disproportionate to the actual impact of the development, alternative fee calculations may be approved or required by the City Administrator under administrative procedures prescribed by the City Council. All data submitted to support alternate calculations under this provision shall be site specific. Major or unique developments may require special analyses to determine alternatives to the standard methodology.

G. When an appeal is filed challenging the methodology adopted by the City Council, the City Administrator shall prepare a written report and recommendation within twenty (20) working days of receipt for presentation to the Council at its next regular meeting. The Council shall, by resolution, approve, modify or reject the report and recommendation of the City Administrator, or may adopt a revised methodology by resolution, if required. Any legal action contesting the City Council's decision in the appeal shall be filed within sixty (60) days of the Council's decision. (Ord. 3174 § 1, amended, 03/19/2019)

4.20.060 Authorized Expenditures

A. Reimbursement fees shall be spent on capital improvements associated with the systems for which the fees are assessed, including expenditures relating to repayment of indebtedness.

B. Improvement fees shall be spent only on capacity increasing improvements for which the fees are assessed, including repayment of indebtedness. An increase in system capacity occurs if a capital improvement increases the level of performance or service provided by existing facilities or provides new facilities. The portion of such improvements funded by improvement SDCs must be related to the need for increased capacity to provide service for future users.

C. Notwithstanding subsections [A](#) and [B](#) of this section, SDC revenues may be expended on the direct costs of complying with the provisions of this chapter, including the costs of developing SDC methodologies, system planning, providing an annual accounting of SDC expenditures and other costs directly related to or required for the administration and operation of this SDC program. (Ord. 3174 § 1, amended, 03/19/2019; Ord. 2791 § 3, amended, 1997)

4.20.070 Expenditure Restrictions

- A. SDCs shall not be expended for costs associated with the construction of administrative office facilities that are more than an incidental part of other capital improvements, or for costs of the operation or routine maintenance of capital improvements.
- B. A capital improvement being funded wholly or in part from revenues derived from the improvement fee shall be included in the plan adopted by the City pursuant to section [4.20.080](#). (Ord. 3174 § 1, added, 03/19/2019)

4.20.080 Improvement Plan

- A. Prior to the establishment of a system development charge, the City Council shall prepare a capital improvement plan, public facilities plan, master plan, or other comparable plan that includes:
1. A list of the capital improvements that the City Council intends to fund, in whole or in part, with revenues from improvement fees;
 2. The estimated cost and time of construction of each improvement and the percentage of that cost eligible to be funded with improvement fee revenue; and
 3. A description of the process for modifying the plan.
- B. In adopting a plan under subsection [A](#) of this section, the City Council may incorporate by reference all or a portion of any capital improvement plan, public facilities plan, master plan, or other comparable plan that contains the information required by this section.
- C. The City Council may modify such plan and list, as described in subsection [A](#) of this section, at any time. If a system development charge will be increased by a proposed modification to the list to include a capacity increasing public improvement, the City Council will:
1. At least thirty (30) days prior to the adoption of the proposed modification, provide written notice to persons who have requested notice pursuant to Section [4.20.120](#);
 2. Hold a public hearing if a written request for a hearing is received within seven (7) days of the date of the proposed modification.
- D. A change in the amount of a reimbursement fee or an improvement fee is not a modification of the system development charge if the change in amount is based on:
1. 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 subsection [A](#) of this section;
 2. The periodic application of one or more specific cost indexes or other periodic data sources, including the cost index identified in Section [4.20.040](#). 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 by the City Council in a separate resolution, or, if no other index is identified in the established methodology, then the index stated in Section [4.20.040](#). (Ord. 3174 § 1, added, 03/19/2019)

4.20.090 Collection of Charge

- A. The systems development charge is payable upon, and as a condition of, issuance or approval of:
1. A building permit;
 2. A development permit;
 3. A permit for a development not requiring the issuance of a building permit;
 4. A permit or other authorization to connect to the water, sanitary sewer or storm drainage systems;
 5. A right-of-way access permit; or
 6. A planning action or change in occupancy (as defined in the Uniform Building Code) that will increase the demands on any public facility for which systems development charges are charged.
- B. If development is commenced or connection is made to the water system, sanitary sewer system or storm sewer system without an appropriate permit, the systems development charge is immediately payable upon the earliest date that a permit was required, and it will be unlawful for anyone to continue with the construction or use constituting a development until the charge has been paid or payment secured to the satisfaction of the City Administrator.
- C. Any and all persons causing a development or making application for the needed permit, or otherwise responsible for the development, are jointly and severally obligated to pay the charge, and the City Administrator may collect the said charge from any of them. The City Administrator or his/her designee shall not issue any permit or allow connections described in subsection [A](#) of this section until the charge has been paid in full or until an adequate secured arrangement for its payment has been made, within the limits prescribed by resolution of the City Council.
- D. An owner of property obligated to pay a system development charge may apply to pay the charge in semi-annual installments over a period not exceeding ten years as provided in this section.
1. The minimum charge subject to payment by installments shall be \$2,000 and the maximum charge that may be subject to payment by installments shall not exceed \$200,000. The minimum semi-annual installment shall be \$1,000. Installments shall include interest on the unpaid balance at annual rate of six percent (6%) for

a five-year installment loan or seven percent (7%) for a 10-year installment loan. A one-year installment loan shall not be subject to an annual interest rate provided all charges are paid prior to the City's issuance of the Certificate of Occupancy, time of sale, or within one year of when the charge was imposed, whichever comes first.

2. The installment application shall state that the applicant waives all irregularities or defects, jurisdictional or otherwise, in the proceedings to cause the system development charge.
3. The application shall also contain a statement, by lots or blocks, or other convenient description of the property meeting the requirements of ORS [93.600](#), subject to the charge.
4. A systems development charge subject to installment payments shall be chargeable as a lien upon the property subject to the charge. Pursuant to ORS [93.643\(2\)\(c\)](#), the City Recorder shall record notice of the installment payment contract with the Jackson County Clerk. The applicant shall pay the recording charges. (Ord. 3174 § 1, renumbered, 03/19/2019; Ord. 2791 § 5, amended, 1997; Ord. 2670, amended, 1992. Formerly 4.20.070)

4.20.100 Exemptions

The conditions under which all or part of the systems development charges imposed in Section [4.20.040](#) may be waived are as follows:

- A. Structures and uses established and legally existing on or before the effective date of the ordinance codified in this chapter are exempt from a system development charge, except water and sewer charges, to the extent of the structure or use then existing and to the extent of the parcel of land as it is constituted on that date. Structures and uses affected by this subsection shall pay the water or sewer charges pursuant to the terms of this chapter upon the receipt of a permit to connect to the water or sewer system.
- B. Housing for low income or elderly persons which is exempt from real property taxes under state law. (Ord. 3174 § 1, renumbered, 03/19/2019; Ord. 2791 § 7, amended, 1997. Formerly 4.20.080)

4.20.105 Deferrals for Affordable Housing

- A. The systems development charge for the development of qualified affordable housing under the City's affordable housing laws shall be deferred until the transfer of ownership to an ineligible buyer occurs. Deferred systems development charges shall be secured by a second mortgage acceptable to the City, bearing interest at not less than five percent (5%) per annum. Accrued interest and principal shall be due on sale to an ineligible buyer.
- B. The systems development charge and second mortgage for the development of qualified affordable housing shall terminate 30 years after the issuance of a certificate of occupancy if the housing unit(s) have continued to meet the affordable housing requirements during the 30-year period. (Ord. 3174 § 1, renumbered, 03/19/2019; Ord. 2791 § 8, amended, 1997; Ord. 2670, amended, 1992. Formerly 4.20.085)

4.20.110 Credits

A. When development occurs that gives rise to a system development charge under Section [4.20.040](#), the system development charge for the existing use shall be calculated and if it is less than the system development charge for the proposed use, the difference between the system development charge for the existing use and the system development charge for the proposed use shall be the system development charge required under Section [4.20.040](#). If the change in use results in the systems development charge for the proposed use being less than the system development charge for the existing use, no system development charge shall be required; however, no refund or credit shall be given.

B. The limitations on the use of credits contained in this subsection shall not apply when credits are otherwise given under this section. A credit shall be given for the cost of a qualified public improvement associated with a development. If a qualified public improvement is located partially on and partially off the parcel of land that is the subject of the approval, the credit shall be given only for the cost of the portion of the improvement not attributable wholly to the development. The credit provided for by this subsection shall be only for the improvement fee charged for the type of improvement being constructed and shall not exceed the improvement fee even if the cost of the capital improvement exceeds the applicable improvement fee. Credits paid as a permit for development will expire five years after paid. The credit shall be apportioned equally among all single-family residential lots (where such credit was granted for subdivisions). Credits for other types of developments shall be allocated to building permits on a first-come, first-served basis until the credit is depleted.

C. Applying the methodology adopted by resolution, the City Administrator or designee shall grant a credit against the improvement fee, for a capital improvement constructed as part of the development that reduces the development's demand upon existing capital improvements or the need for future capital improvements or that would otherwise have to be provided at City expense under then existing Council policies.

D. Credits for additions to dedicated park land, or development of planned improvements on dedicated park land, shall only be granted by the City Administrator upon recommendation by the Park and Recreation Commission for land or park development projects identified in the Capital Improvement Plan, referred to in Section [4.20.070.B](#).

E. In situations where the amount of credit exceeds the amount of the system development charge, the excess credit is not transferable to another development. It may be transferred to another phase of the original development.

F. Credit shall not be transferable from one type of capital improvement to another. (Ord. 3174 § 1, renumbered, 03/19/2019; Ord. 2791 § 9, amended, 1997. Formerly 4.20.090)

4.20.120 Notification

A. The City shall maintain a list of persons who have made a written request for notification prior to adoption or modification of a methodology for any system development charge. Written notice shall be mailed to persons on

the list as provided in sections [4.20.050](#) and [4.20.080](#). The failure of a person on the list to receive a notice that was mailed does not invalidate the action of the City.

B. The City may periodically delete names from the list, but at least thirty (30) days prior to removing a name from the list, the City must notify the person whose name is to be deleted that a new written request for notification is required if the person wishes to remain on the notification list. (Ord. 3174 § 1, added, 03/19/2019)

4.20.130 Segregation and Use of Revenue

A. All SDC proceeds are to be segregated by accounting practices from all other funds of the City. SDC proceeds shall be used only for capital improvement of the type for which they were collected and authorized costs and overhead.

B. The City Administrator shall provide the City Council with an annual accounting, based on the City's fiscal year, for SDCs showing the total amount of SDC revenues collected for each type of facility and the projects funded from each account in the previous fiscal year. A list of the amounts spent on each project funded in whole or in part with SDC revenues shall be included in the annual accounting.

C. The monies deposited into each SDC account shall be used solely as allowed by this chapter and State law, including, but not limited to:

1. Design and construction plan preparation;
2. Permitting and fees;
3. Land, easements, and materials acquisition, including any cost of acquisition or condemnation, including financing, legal and other costs;
4. Construction of capital improvements;
5. Design and construction of new utility facilities required by the construction of capital improvements and structures;
6. Relocating utilities required by the construction of improvements;
7. Landscaping;
8. Construction management and inspection;
9. Surveys, soils, and materials testing;
10. Acquisition of capital equipment;
11. Repayment of monies transferred or borrowed from any budgetary fund of the City which were used to fund any of the capital improvements as herein provided; and

12. Payment of principal and interest, necessary reserves and cost of issuance under bonds or other indebtedness issued by the City to fund capital improvements. (Ord. 3174 § 1, added, 03/19/2019)

4.20.140 Refunds

A. Refunds shall be given by the City Administrator upon finding that there was a clerical error in the calculation of a system development charge.

B. Refunds shall not be allowed for failure to timely claim a credit under Section [4.20.110](#), or for failure to seek an alternative system development charge rate calculation at the time of submission of an application for a building permit.

C. Refunds may be given on application of a permittee if the development did not occur and all permits for the development have been withdrawn. (Ord. 3174 § 1, added, 03/19/2019)

4.20.150 Appeal Procedures

A. As used in this section “working day” means a day when the general offices of the City are open to transact business with the public.

B. A person aggrieved by a decision required or permitted to be made by the City Administrator or designee under Sections [4.20.010](#) through [4.20.130](#) or a person challenging the propriety of an expenditure of systems development charge revenues may appeal the decision or expenditure by filing a written request with the City Recorder for consideration by the City Council. Such appeal shall describe with particularity the decision or the expenditure from which the person appeals and shall comply with subsection [D](#) of this section.

C. An appeal of an expenditure must be filed within two years of the date of alleged improper expenditure. An appeal petition challenging the adopted methodology shall be filed not later than sixty (60) days from the date of the adoption of the methodology. Appeals of any other decision must be filed within 10 working days of the date of the decision.

D. The appeal shall state:

1. The name and address of the appellant;
2. The nature of the determination being appealed;
3. The reason the determination is incorrect; and
4. What the correct determination should be.

An appellant who fails to file such a statement within the time permitted waives any objections, and the appeal shall be dismissed.

E. Unless the appellant and the City agree to a longer period, an appeal shall be heard within 30 days of the receipt of the written appeal. At least 10 working days prior to the hearing, the City shall mail notice of the time and location thereof to the appellant.

F. The City Council shall hear and determine the appeal on the basis of the appellant's written statement and any additional evidence the appellant deems appropriate. At the hearing, the appellant may present testimony and oral argument personally or by counsel. The City may present written or oral testimony at this same hearing. The rules of evidence as used by courts of law do not apply.

G. The appellant shall carry the burden of proving that the determination being appealed is incorrect and what the correct determination should be.

H. The City Council shall render its decision within 15 days after the hearing date and the decision of the Council shall be final. The decision shall be in writing but written findings shall not be made or required unless the Council, in its discretion, elects to make findings for precedential purposes.

Any legal action contesting the Council's decision on the appeal shall be filed within 60 days of the Council's decision. (Ord. 3174 § 1, renumbered, 03/19/2019; Ord. 2791 § 10, amended, 1997. Formerly 4.20.100)

4.20.160 Prohibited Connection

After the effective date of this chapter, no person may connect any premises for service, or cause the same to be connected, to any sanitary sewer, water system, or storm sewer system of the City unless the appropriate systems development charge has been paid or payment has been secured as provided in this chapter. (Ord. 3174 § 1, renumbered, 03/19/2019. Formerly 4.20.110)

4.20.170 Enforcement – Violation

Any service connected to the City water, sewer or storm sewer system after the effective date of this chapter for which the fee due hereunder has not been paid as required or an adequate secured arrangement for its payment has been made is subject to termination of service under the City's utility disconnect policy. In addition to any other remedy or penalty provided herein, any connection to the City water, sewer or storm system made without payment as specified in this chapter shall be considered a Class I violation. (Ord. 3174 § 1, renumbered, 03/19/2019; Ord. 3023, amended, 08/03/2010. Formerly 4.20.120)

4.20.180 Classification of the Fee

System development charges as set forth in this chapter are classified as not subject to the limits of Section [11b](#) of Article [XI](#) of the Oregon Constitution. (Ord. 3174 § 1, renumbered, 03/19/2019; Ord. 2791 § 11, amended, 1997. Formerly 4.20.121)

The Ashland Municipal Code is current through Ordinance 3187, and legislation passed through June 2, 2020.

Disclaimer: The City Recorder's office has the official version of the Ashland Municipal Code. Users should contact the City Recorder's office for ordinances passed subsequent to the ordinance cited above.

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PREPARED FOR: Scott Fleury, Public Works Director, City of Ashland

PREPARED BY: Deb Galardi, Galardi Rothstein Group
Kristi Currans, Clifton-Currans, LLC

SUBJECT: Preliminary Residential Water Use Analysis

DATE: May 25, 2021

Introduction

The City of Ashland (City) currently assesses water System Development Charges (SDCs) for single-family residential homes based on house size, as measured by habitable area (excluding garage and other non-living areas). The current charge for the water SDCs is \$2.6069 for each square foot (SQ FT) of habitable space created by the development. SDCs for all other uses are charged based on water meter size.

For purposes of the SDC update, we have conducted a preliminary analysis of single-family residential water use to determine the relationship between summer (peak) water use and house size. The preliminary analysis is summarized below. We also provide information on the distribution of house sizes based on five years of building permit data.

Regression Analysis

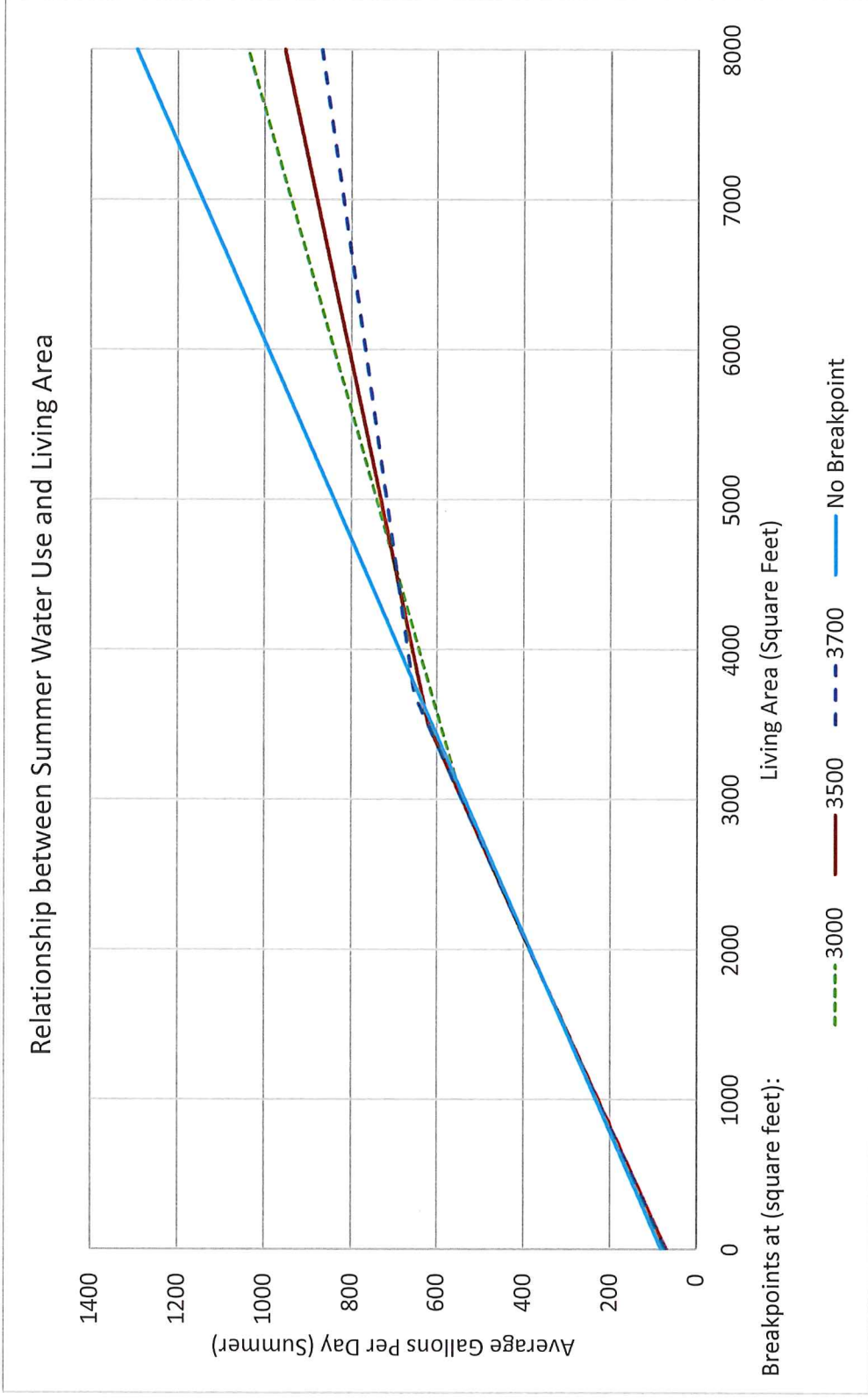
The technical team conducted a regression analysis to determine the functional relationship between summer water use (a consideration in water system facility sizing) and both the size of the lot and size of dwelling unit (in SQ FT). Based on our analysis, acreage was not a significant factor for controlling for variation in the regression results, which means that the significance is largely dominated by the living area of the structure, consistent with the City's existing basis for charges.

While our analysis supports a relationship between amount of summer water use and house size, we found the variation to be reduced (functional relationship stronger) when two adjustments are made to the regression equation:

1. **Base use quantity is added** – Our analysis indicates adding a base use of 71-72 gallons per day (gpd) as a constant for all development improves the regression results.
2. **Breakpoint added above 3,000 SQ FT** - Our analysis shows a non-linear relationship between living area and average gpd at a point somewhere above 2,500 SQ. Ft. In other words, as the living area of a house increases, there is a point in which larger households use less water per SQ FT, and the slope of that relationship decreases. Based on the statistical analysis, the point at which the slope changes fall between roughly 2,500 and 3,700 SQ FT).

Figure 1 shows the base use and slopes of the regression based on three breakpoint examples.

Figure 1: Preliminary Single-Family Regression



Based on the regression analysis, the key variables for estimating water use based on house size are provided in Table 1.

Table 1: Water use variables for three upper breakpoints

Breakpoint (SQFT)	3000	3500	3700
Base Use (gpd)	72	71	72
+ Use (gpd) / SQ FT under breakpoint	0.157	0.157	0.157
+ Use (gpd) / additional SQ FT > breakpoint	0.099	0.074	0.050

Gpd = gallons per day

Examples of what this would look like in practice for a breakpoint at 3,500 SQ FT are provided below based on the following equation:

$$\text{Total Use} = \text{Base Use (71 gpd)} + \text{Living area (<3,500sqft)} * 0.157 + \text{Living area (>=3,500sqft)} * 0.074$$

Example 1: For a house that is 2,500 SQ FT, the calculation would be:

- Total Use = 71 + 2500 SQ FT * 0.157 + 0 SQ FT * 0.074 = 464 in gallons per day

Example 2: For a house that is 4,100 SQ FT, the calculation would be:

- Total Use = 71 + 3500 SQ FT * 0.157 + 600 SQ FT * 0.074 = 665 in gallons per day

Permit Data

The City provided permit data over five years to determine the distribution of house sizes recently constructed. The permit data provides total house size (including unfinished spaces); however, of the 201 permits provided, 106 have address information that can be linked directly to water use data (and corresponding habitable space estimates) from a larger dataset. Habitable space was estimated for the other 95 homes, based on the average ratio of total SQ FT to habitable space of 1.3.

Figure 2 shows habitable space (both actual and estimated) for the permitting records (gray) and the distribution of habitable space for the entire water use sample provided by the City (yellow). In both cases, the data shows that a breakpoint at or above 3000 square feet would apply to only about 6-8% of single-family dwellings.

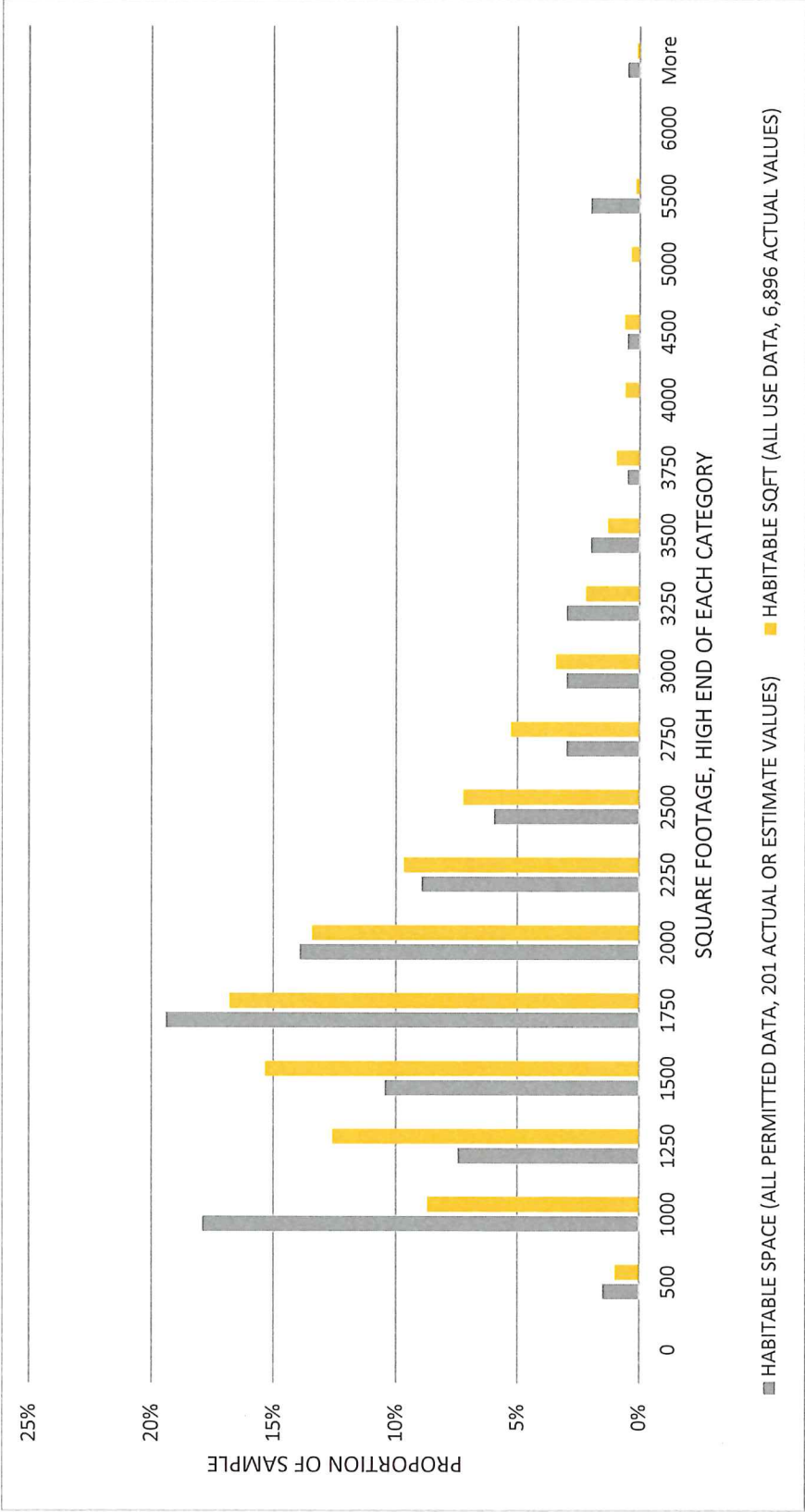


Table 2

City of Ashland

TAP Water Master Plan Costs by Phase for Ashland

Project Type/Description	Phase	2021 Project \$	
		Option 1	Option 2
Regional Booster (RBPS)			
Replace (1) 50 hp pump with 125 hp	1	\$26,312	\$26,312
Programming Updates	1	\$12,279	\$12,279
Subtotal RBPS		\$38,591	\$38,591
Talent Booster (TBPS)			
Generator Upgrade		\$166,433	\$0
Additional Hydraulic Analysis	1	\$6,315	\$6,315
Seismic Upgrades	2	\$33,287	\$0
Expansion	1	\$359,384	\$0
Subtotal TBPS		\$565,418	\$6,315
New Ashland Booster Pump Station [1]		\$0	\$2,157,594
Adjust for Previous Improvements to TBPS [5]		\$0	-\$180,501
N. Phoenix Rd			
MWC Study	1	\$18,069	\$18,069
Master Meter Connection	1	\$117,450	\$117,450
Pipe Improvements to 2030	1	\$1,948,987	\$1,948,987
Pipe Improvements through Buildout	3	\$407,279	\$407,279
Total N. Phoenix Rd Supply Project		\$2,491,785	\$2,491,785
Seismic Upgrades Segment 2	3	\$249,178	\$249,178
Adjust for Creel Road Pipe (HWY 99 to Talent Ave) [1]		\$0	-\$81,620
ODOT Bridge Pipe Relocation	1	\$61,223	\$61,223
Talent to Ashland Improvements			
Pipe along Irrigation Canal	1	\$706,612	\$0
Talent BPS Suction and Discharge	2	\$652,879	\$0
Hwy 99 (Anjou Club to Rapp)	3	\$785,072	\$0
Subtotal Talent to Ashland Improvements		\$2,144,563	\$0
Ashland Dedicated Pipe [1]		\$0	\$3,435,311
New IGA	1	\$17,542	\$17,542
TAP Master Plan Updates (every 10 yrs)	1-3	\$157,873	\$157,873
Telemetry Summary Report	1	\$5,262	\$5,262
Total Estimated Costs		\$5,731,435	\$8,358,553

Source: TAP Water Master Plan, RH2 Engineering, Summer 2020 (Appendix Table A-3)

[1] Dedicated facilities for the City of Ashland. Not a TAP asset.

Phase 1 = Next 10 Years

Phase 2 = 10-20 Years

Phase 3 = 20-40 Years

Table 1

City of Ashland
Water SDC Project List

Project #	Project Type/Description	Time Period	2021 Cost	Developer Funded	2021 City Cost
Supply					
S-1	Dam Safety Improvements	Short	\$5,124,806		\$5,124,806
S-2	Ashland (TID) Canal Piping Project	Short	\$3,736,837		\$3,736,837
S-3	East and West Forks Transmission Line Rehabilitation	Short	\$2,266,659		\$2,266,659
S-4	Reeder Reservoir Intake Repairs	Short	\$140,398		\$140,398
S-5	Reeder Reservoir Sediment Removal	Short/Med/Long	\$1,793,682		\$1,793,682
S-6	7.5 MGD Water Treatment Plant	Short	\$32,777,403		\$32,777,403
S-7	WTP Backwash Recovery System	Medium	\$2,989,470		\$2,989,470
S-8	TAP System Improvements	Short	\$53,383		\$53,383
S-9	Deferred WTP Improvement Projects	Medium	\$2,669,170		\$2,669,170
Supply Subtotal			\$51,551,808	\$0	\$51,551,808
Storage					
ST-1	New 0.85-MG Granite Zone Reservoir	Medium	\$2,989,470		\$2,989,470
Storage Subtotal			\$2,989,470	\$0	\$2,989,470
Pump Stations					
PS-1	TAP BPS Backup Power	Short	\$437,744		\$437,744
PS-2	Hillview BPS Replacement		\$1,601,502		\$1,601,502
PS-3	Granite to WTP BPS	Medium	\$607,503		\$607,503
Pump Station Subtotal			\$2,646,749	\$0	\$2,646,749
Pipes					
AP-1 to AP-25	Annual Pipe Replacement	Short/Med/Long	\$9,609,011		\$9,609,011
Distribution Pipe Projects					
P-1	Oak St Waterline (WWTP to E Nevada St)	Short	\$427,067		\$427,067
P-2	Grandview Drive Waterline (Ditch Road to Sunnyview St)	Short	\$382,225		\$382,225
P-3	Morton to Ivy Street New Pipe Connection	Short	\$707,864		\$707,864
P-4	Parker St Pipe Replacement (Walker Ave to Lit Way)	Short	\$258,376		\$258,376
P-5	Siskiyou Blvd (Beach St to Wightman St)	Short	\$531,699		\$531,699
P-6	Ashland Loop Rd (Park Estates PS to Morton St) and Morton St (Ashland Loop Rd to Waterline Rd)	Short	\$1,241,698		\$1,241,698
P-7	Maple St and Maple Way (N Main to end of Maple Way)	Short	\$366,210		\$366,210
P-8	Harmony Lane, Lit Way, Ray Lane Line Upsizing	Short	\$521,022		\$521,022
P-9	A St Pipe Replacement (1st St to 8th St)	Short	\$1,080,480		\$1,080,480
P-10	Tolman Creek Rd (Morada to Siskiyou Blvd)	Short	\$582,947		\$582,947
P-11	Normal Ave Pipe Replacement (400 north of Siskiyou Blvd to Homes Ave)	Medium	\$746,300		\$746,300
P-12	Interstate 5 Crossing (Ashland St)	Medium	\$533,834		\$533,834
P-13	Rezoning Study, Reconnection of Pipes and Pipe Upsizing in Elkader St, Ivy Lane, Emma St, and South Mountain Avenue.	Medium	\$576,541		\$576,541
P-14	AHS Property Pipe Replacement (Fire hydrant in school property)	Medium	\$187,910		\$187,910
P-15	Pinecrest Ter Pipe Replacement (Walker Ave to Starlight Pl)	Medium	\$747,367		\$747,367
P-15	Ponderosa Dr (Pinecrest Ter to west end)	Medium	\$251,970		\$251,970
P-15	Timberline Ter (Ponderosa Dr to south end)	Medium	\$232,752		\$232,752
P-15	Hiawatha Pl Pipe Replacement (Walker Ave to end of Hiawatha Pl)	Medium	\$117,443		\$117,443
P-16	Nutley and Scenic Dr (Granite St to Grandview St)	Medium	\$705,728		\$705,728
P-17	Oak Knoll Dr (Ashland St to Twin Pines Creek Drive and Loop)	Medium	\$1,568,404		\$1,568,404
P-18	Vista St Pipe Replacement (Fork St to Hillcrest St)	Medium	\$222,075		\$222,075
P-18	Vista St Pipe Replacement (Intersection of Vista St, Hillcrest St, and Glenview Dr)	Medium	\$6,406		\$6,406
P-18	Meade St Pipe Replacement (Vista St/Hillcrest St to Iowa St)	Medium	\$352,330		\$352,330

Table 1
 City of Ashland
 Water SDC Project List

Project #	Project Type/Description	Time Period	2021 Cost	Developer Funded	2021 City Cost
P-19	Black Oak Way Pipe Replacement (Tolman Creek Rd to Bellview Ave)	Medium	\$109,970		\$109,970
P-20	Lakota Way extension to Ashland Mine Rd; Extend piping to new Granite Reservoir	Medium	\$1,043,111	\$521,556	\$521,556
P-21	Schofield St extension to Fox St	Medium	\$148,406		\$148,406
P-22	Fox St extension to Lakota Way	Medium	\$232,752		\$232,752
P-23	Highway 66 Pipe Replacement (Oak Knoll Dr to Dead Indian Memorial Rd)	Medium	\$1,029,232		\$1,029,232
P-24	Dead Indian Mem Rd (Hwy 66 to Airport) and extended to Airport	Long	\$1,226,750		\$1,226,750
P-25	E Nevada St (Helman St to Oak St)	Long	\$320,300		\$320,300
P-26	WWTP loop (part 1 of 2)	Long	\$370,481		\$370,481
P-27	WWTP loop (part 2 of 2)	Long	\$241,293		\$241,293
P-28	Crowson Rd north of I-5 to serve new Welcome Center		\$1,393,307	\$1,393,307	\$0
P-29	Wimer St extension to Ashland Mine Rd		\$730,285	\$730,285	\$0
P-30	Normal Ave (Homes St to Creek Dr to serve new development)		\$412,120	\$412,120	\$0
P-31	Creek Dr (west to Normal Ave between taxlots)		\$380,090	\$380,090	\$0
P-32	Normal Ave (Creek Dr to E Main St to serve new development)		\$570,135	\$570,135	\$0
Transmission Pipe Projects					
T-1	Walker Ave Pipe Replacement (Siskiyou Blvd to Ashland Middle School)	Short	\$623,518		\$623,518
T-2	Granite Street Pipe Replacement (New WTP to Strawberry Ln)	Medium	\$2,385,170		\$2,385,170
T-3	East Main Street (Siskiyou Blvd to Walker)	Long	\$2,501,546		\$2,501,546
T-4	East Main Street (Walker Road to East of I-5)	Long	\$2,819,711		\$2,819,711
T-5	New Pipe East Main St to Ashland St	Long	\$1,249,171		\$1,249,171
Pipes Subtotal			\$39,745,004	\$4,007,491	\$35,737,512
Operations and Maintenance					
OM-1	Tolman Creek Road PRV Station		\$80,075		\$80,075
OM-2	Hydrant Replacement Program	Short/Med	\$2,391,576		\$2,391,576
OM-3	Telemetry Upgrades	Short	\$85,413		\$85,413
OM-4	AMI/AMR Evaluation		\$64,060		\$64,060
OM-5	Pipe Connection/PRV Adjustments from Rezone Studies	Med	\$213,534		\$213,534
OM-6	Clay St and Tolman Creek Road PRV Stations	Med	\$160,150		\$160,150
OM-7	Pressure Relief Valves		TBD		\$0
Operations and Maintenance Subtotal			\$2,994,808	\$0	\$2,994,808
Recommended Studies					
RS-1	TAP Water Master Plan & Future Updates	Short/Med/Long	\$160,150		\$160,150
RS-2	Risk and Resilience Assessment and Emergency Response Plan	Short	\$160,150		\$160,150
RS-3	Rezoning Study		\$53,383		\$53,383
RS-4	Water Master Plan Updates	Med/Long	\$640,601		\$640,601
Recommended Studies Subtotal			\$1,014,284	\$0	\$1,014,284
Project List TOTAL			\$100,942,123	\$4,007,491	\$96,934,632

Source: City of Ashland Water Master Plan Update, RH2 Engineering, Summer 2020

Table 3

City of Ashland

Storm SDC Project List

Project #	Project Type/Description	Time Period	2021 Cost
1	Gresham Street at Beach Avenue	High	\$411,522
2	Dewey Street at East Main Street	High	\$259,964
3	Siskiyou Boulevard and University Way	High	\$135,771
4	Morton Street from Pennsylvania Street to Iowa Street	High	\$456,779
5	Liberty Street from Ashland Street to Iowa Street	Medium	\$892,507
6	Holly Street and Harrison Street	Medium	\$828,306
7	East Main Street at Emerick Street	High	\$247,334
8	North Mountain Avenue	Medium	\$197,867
9	3rd Street at B Street	Medium	\$755,684
10	Manzanita Street at Almond Street	Medium	\$580,972
11	Highway 66 at Oak Knoll Drive	Medium	\$244,177
12	Dewey Street at East Main Street	Medium	\$73,674
13	Van Ness Avenue at Water Street	Medium	\$625,176
14	West Nevada Street east of Alameda Drive	Medium	\$738,845
15	Cemetery Creek Basin Stormwater Quality Improvement	High	\$7,894
Project List TOTAL			\$6,456,470

Source: City of Ashland Stormwater Drainage and Master Plan, Kennedy Jenks, November 2020

High = Within 5 Years

Medium = 5-10 Years