RESOLUTION NO. 5051

A RESOLUTION ADOPTING A METHODOLOGY FOR THE DEVELOPMENT OF SYSTEM DEVELOPMENT CHARGES FOR THE WATER SYSTEM AND REPEALING EXHIBIT A, THE WATER SYSTEM PORTION OF RESOLUTION 3287 (A RESOLUTION ADOPTING METHODOLOGIES FOR THE DEVELOPMENT OF SYSTEM DEVELOPMENT CHARGES FOR THE SANITARY SEWER AND WATER SYSTEMS).

WHEREAS, the Council of the City of Albany has declared their intent to comply with Oregon SDC law provisions of ORS 223.207 through 223.208 and 223.297 through 223.314; and

WHEREAS, the Mayor's Water Task Force evaluated alternative system development charges (SDC) methodologies that are consistent with Oregon SDC law and current industry practices, and proposes a methodology that is a combination of reimbursement and improvement fees that results in a maximum allowable SDC of $2,115 based on 2004 dollars; and

WHEREAS, the methodology for calculation of system development charges for the water system developed by the Water Task Force is specifically described in *System Development Charge Methodology - City of Albany Water System* (attached hereto); and

WHEREAS the methodology has been available to the public for comment for the period of time required by state statute and presented the methodology to the public at a Town Hall meeting held on September 15, 2004.

NOW, THEREFORE, BE IT RESOLVED by the Albany City Council that the attached methodology is hereby adopted.

DATED AND EFFECTIVE THIS 13TH DAY OF OCTOBER 2004.

Mayor

ATTEST:

City Clerk

System Development Charge Methodology
City of Albany Water System

INTRODUCTION

Purpose of System Development Charges (SDCs)
SDC fees are an important source of revenue for financing new public facilities or expansions to existing facilities. These fees are designed to recover all, or a portion, of the capital investment required to provide sufficient capacity in a utility system to serve new customers.

Capital improvements needed to provide new capacity in a utility system must generally be constructed in large increments. Therefore, system expansions are usually constructed years in advance of when the added capacity will be fully utilized. As a result, some portions of current system users' monthly rates are used to pay for a portion of the system capacity to serve future users. System development charges, designed to recover the investment in this extra capacity, are often charged to new customers either to avoid charging existing users for these extra capacity costs or to partially compensate the existing users for the costs they have previously incurred to provide the system capacity to serve new customers.

In Oregon, the development and implementation of SDCs is regulated by Oregon Revised Statute (ORS) 223.297-314. In Albany, the authority to impose system development charges is contained in Chapter 15.16 of the Albany Municipal Code (AMC). Oregon law allows that an SDC may include a reimbursement fee, an improvement fee, or a combination of the two.

Reimbursement Fee
The reimbursement fee is based on the value of available reserve capacity for capital improvements already constructed or under construction. The methodology used to calculate the reimbursement fee must consider the cost of existing facilities, prior contributions by existing users, the value of unused capacity, grants, and other relevant factors. The objective of the reimbursement fee methodology is to require new users to contribute an equitable share of the capital costs of existing facilities. When new users connect, they pay for their share of the available reserve capacity through the SDC reimbursement fee, and the money received can be used to retire existing debt or to fund other capital needs.

Improvement Fee
The improvement fee is designed to recover all or a portion of the costs of planned capital improvements that add system capacity to serve future customers. Revenues generated through the improvement fees are dedicated to funding capacity-increasing capital improvements or the repayment of debt on such improvements.

Combined Fee
The combined fee is simply the sum of the reimbursement and improvement fees. Together, the reimbursement and improvement fees recover new development's proportionate share of existing and new facilities.

ALBANY'S SYSTEM DEVELOPMENT CHARGE METHODOLOGY

Oregon law also requires the development of a system development charge methodology for each system that intends to impose an SDC charge. The methodology must describe the assumptions and rationale behind the final SDC fee that is adopted by the community imposing the fee. In Albany, the development of the water SDC was guided by the Mayor's Water Task Force. The Task Force reviewed the capital improvement plan for the water system presented in the 2004 Water Facility Plan and provided guidance regarding the financial and policy decisions that were made during the development of the SDC methodology.

ALBANY'S SYSTEM DEVELOPMENT CHARGE POLICIES

In order to provide equitable and consistent application of the system development charge fees proposed in this methodology, the following statements represent the City's most significant policies relating to the implementation and application of SDC fees to customers in Albany:

1. No new connections may be made to the City water system and no existing connections may be upgraded to allow greater use of the water system unless the corresponding water system development charge has been paid or the installment payment method has been applied for and approved.

2. To ensure equity, no exception to the payment of the required SDC fees will be allowed for non-profit organizations, low-income development, public facilities, or other water customers connecting to or intensifying their use of the water system.

3. A system development charge shall apply to the particular lot or tract for which it is issued. Any changes of use which require additional connections or intensification of use to the water system shall cause an additional systems development charge to be paid.

4. Because the water system development charge is closely related to the cost of construction of the capital improvements, the system development charge shall be adjusted on the first day of July of each calendar year. The adjustment shall be based upon the Seattle Construction Cost Index published by the Engineering News Record (ENR) by calculating the percentage increase/decrease in the index for the period since the last adjustment and then applying that percentage to the figures used to calculate the system development charge.

In addition to these policy statements, there may be other policies relating to the implementation of the SDC fees included in the Albany Municipal Code and/or other City rules and regulations.

SDC DEVELOPMENT PROCESS

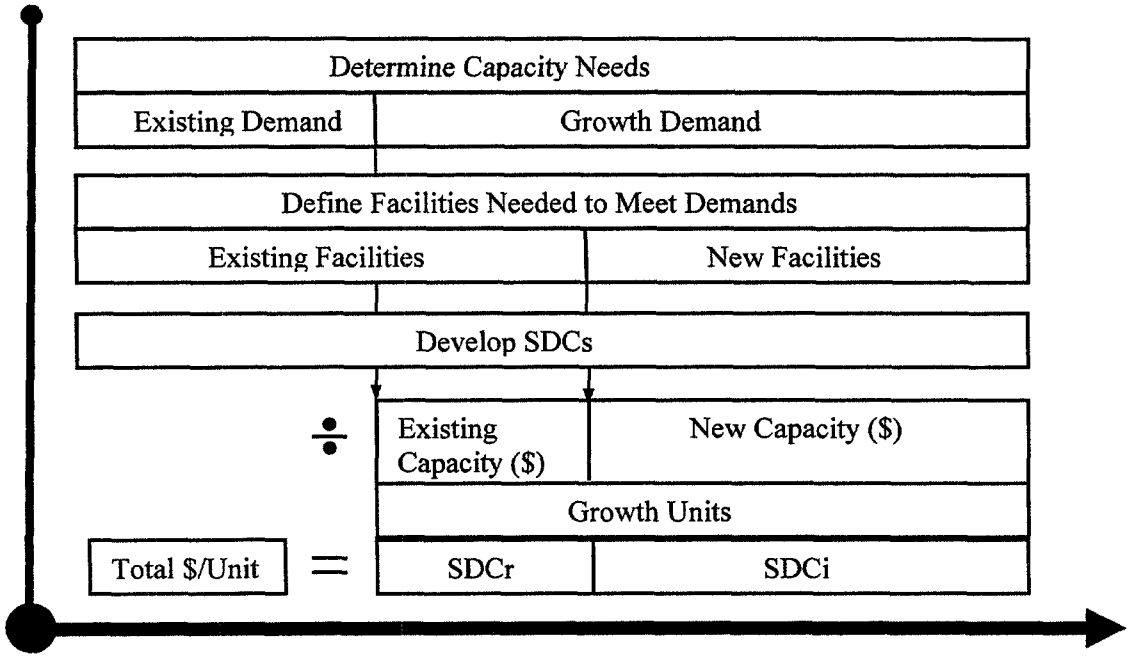
The general approach used for determining reimbursement and improvement fee SDCs is shown schematically in ***Figure 1***. This approach requires a step-by-step analysis of the value and the capacity of the system that is available to new customers. For the reimbursement fee calculation, the SDC fee is based on the value of the existing system that has capacity available to serve new customers. For the improvement fee, the calculation is based on the value of the system capacity that will be available to new customers once the planned capital improvements are completed.

SDC fee units relate to a customer's potential claim on system capacity. Because the SDC is charged before there is a record of the customer's actual use, it is important to select a fee unit that fairly represents the customer's future demand on the system. The Mayor's Water Task Force recommended the size of the water meter as the basis for determining fee units.

Water meters vary by size and amount of water they can deliver to the customer. New developments determine the appropriate water meter size based on projected water demands and plumbing code requirements. For this reason, meter size is the most popular fee unit; the meter size relates to potential demand on system capacity and is information that is available at the time of connection.

To apply the proposed SDC fee to all meter sizes, the fee must be expressed in terms of an equivalent ¾-inch meter (the smallest meter size in Albany's system). Once developed, that unit cost of capacity for a ¾-inch meter is then applied to the meter equivalents represented by other meter sizes to develop the base SDC fee for both the reimbursement fee and the improvement fee. The final step in developing the total SDC fee is to combine the individual fees and prepare a fee schedule for each meter size.

Figure 1: SDC Development Process



SDC REIMBURSEMENT FEE (SDC-R)

Determine SDC-R Cost Basis

The reimbursement fee cost basis is equal to the value of the existing system's available reserve capacity, minus the value of grants, developer contributions, local improvement district revenues, and property tax supported debt principal. Because there are many ways to value the existing water system, it is important to remember that the reimbursement fee cost basis reflects the portion of existing system costs associated with available capacity that the community wants to potentially recover through an SDC-R.

After reviewing five alternative methods for Albany's water system, the Mayor's Water Task Force determined that the existing system should be valued using the facilities' replacement cost value. The replacement cost value approach reimburses existing customers for the cost of their investment plus a return on investment equal to the inflation rate, but does not recognize the remaining useful life (depreciation) of the existing facilities. Replacement costs were calculated by adjusting the acquisition cost of each facility for inflation (as estimated by the ENR construction cost index for Seattle) that has occurred since the asset was constructed. The existing system's total replacement cost was valued at approximately $58.8 million.

To avoid charging future utility users for the existing debt-financed facilities both through SDCs and again through property taxes or user charges, Albany's outstanding water debt was considered. The City currently has two outstanding bonds for the water system: 1) a 1998 General Obligation (G.O.) Bond used to refund bonds used previously to purchase the system from PP&L, and 2) a 1993 revenue bond used to fund storage improvements. Based on a recommendation of the Task Force, the proposed methodology deducts property tax supported debt principal for the G.O. bond from the reimbursement fee cost basis. In this way, no double-charge occurs because the SDCs do not include the facility costs paid through property taxes. The 1993 revenue bonds were used to fund the Broadway reservoir and related improvements. The proposed reimbursement SDC does not include storage costs, as there is no available capacity in the existing system (see further discussion below). Therefore, no further adjustment is required.

It is also important to deduct the value of system improvements that have been funded through developer contributions, local improvement district revenues, and grants. These values represent improvements that were not funded by the City and do not warrant any reimbursement to the City for prior investment. Once property tax supported water debt and developer contributions are deducted from the existing system's replacement cost, the existing system's net replacement value is approximately $38.1 million, as shown in ***Table 1***.

Table 1: Net Replacement Cost Value of Albany's Existing System

Water System Component	Replacement Cost Value[1]	Less: Contributions[2]	GO Bond Adjustment	Net Replacement Value[3]
Source	$636,750	($59,451)	($109,927)	$467,372
Treatment	$9,589,664		($1,826,028)	$7,763,635
Storage	$6,416,956		($1,221,893)	$5,195,063
Pumping	$841,755		($160,284)	$681,471
Pipes	$41,357,903	($11,776,837)	($5,552,217)	$24,028,849
Total	**$58,843,027**	**($11,836,288)**	**($8,870,349)**	**$38,136,390**

[1] Source: City of Albany Water Fund Fixed Asset Summaries

[2] Assets funded by developer contributions, grants, and local improvement districts.

[3] Rounded to the nearest dollar

Determine Value of Available System Capacity

The available system capacity, as used in this portion of the methodology, represents the capacity in the existing water system that is available to serve new customers. The goal in this portion of the methodology development is to determine the value of the existing system that is available to serve future customers.

Each of the major components of water system was evaluated for available capacity. Treatment, storage, source, and pumping were each evaluated on a system-wide basis (as opposed to individual facilities) because they are comprised of relatively few facilities that are sized in large increments. However, pipes were evaluated by individual pipe project (as constructed) and then summarized to determine system-wide capacity. This approach was necessary because the distribution network has numerous pipes of differing capacities at locations throughout the network and so the actual construction cost could be used for the cost basis.

The results of the available capacity analysis are as follows:

- ***Treatment (available capacity = 34%).*** The Vine Street Water Treatment Plant is currently Albany's only treatment facility. While the Vine Street Plant is essentially operating at capacity currently, it is necessary to consider how this plant will operate once the Joint Water Project (JWP) is completed. The existing plant's current capacity is 16 mgd and is anticipated to be expanded to 20 mgd by buildout of the urban growth boundary. The JWP will initially provide 10 mgd capacity for the City of Albany and is planned for future expansion to 20 mgd. The completion of the JWP will add system capacity, reduce existing system needs for emergency water storage, eliminate the existing need for an emergency water supply, and raise the level of service for existing customers. In recognition of these factors, the Facility Plan allocated the initial cost for the JWP to both existing and future customers. Future expansion of the JWP and the future capacity-increasing project for the Vine Street Plant are allocated completely to future customers in the improvement fee. The growth capacity provided from these improvements (i.e., the future JWP [10 mgd] and Vine Street Plant [4 mgd] expansions) will be 14 mgd. Since the total growth demand is 25 mgd, that leaves 11 mgd (25 – 14 = 11) of future capacity to be provided from existing Vine Street facilities and the Phase I JWP improvements. For the purposes of this analysis, it is

assumed that both the Vine Street and the JWP plants will be used equally to meet that remaining 11 mgd growth demand. Thus, the existing Vine Street Plant will provide 50 percent of the future 11 mgd or 5.5 mgd. This 5.5 mgd represents 34% of the total current capacity (16 mgd) of the Vine Street Water Treatment Plant.

- ***Storage (available capacity = 0%).*** The current demand for water system storage exceeds the current available capacity, so there is no storage available for future customers to use. Therefore, reservoir value is excluded from the reimbursement fee cost basis.
- ***Source (available capacity = 48%).*** The South Santiam River via the Santiam-Albany Canal is currently Albany's sole source of water supply. The Canal delivers South Santiam River water directly to the Vine Street Water Treatment Plant. The Canal's existing capacity is adequate to meet buildout source water requirements of 20 mgd for the Vine Street Plant. As mentioned above, 5.5 mgd of future treatment demand will be met by existing capacity at the Vine Street Plant. Similarly, existing Canal capacity will also be used to meet this demand. In addition, the 4 mgd Vine Street Plant expansion will also be served by existing Canal capacity; resulting in a total of 9.5 mgd (5.5 + 4) of existing Canal capacity available for future source water requirements. This represents 48% (9.5/20) of the total existing canal capacity available for source water (20 mgd).
- ***Pumping (available capacity = 37%).*** The existing pump facilities have capacity available to provide service to future customers. Thirty-seven percent or 6,688 gpm of the total existing pumping capacity (18,250 gpm) is available and will be used by future customers.
- ***Pipes (available capacity = 46%).*** The existing pipes were evaluated to identify available capacity by pipe construction project. Only those pipes greater than or equal to 12 inches were considered for evaluation because the value of existing capacity in smaller pipes is recovered through Albany's water connection fee. Connection fees are designed to recover the equivalent cost of constructing the minimum size water line to serve the property; generally 8-inch for single–family residential land use zones and 12-inch for all other land use zones. Because of the connection fee contribution, the values of 12-inch pipes in land use zones other than single-family residential were removed from the final evaluation. The remaining available capacity was further reduced by removing the value of contributions through developer-paid site improvement projects or local improvement projects. The available capacity of individual pipe segments was totaled to determine a system-wide value of available pipe capacity.

The resulting percentages of available capacity were applied to the net system replacement value to calculate the value of available capacity to be used by growth, as shown in ***Table 2***. For example, the treatment facilities net asset value ($7,763,635) was multiplied by 34% (the portion of the existing treatment system available for growth, rounded) to determine the value of the existing treatment system available for growth ($2,668,750). The total value of Albany's existing system that is available to new customers is approximately $14.1 million.

Table 2: Value of Albany's Existing Available Capacity

Water System Components	Net Replacement Value	Available Capacity	Value of Existing Available Capacity[1]
Source	$467,372	48%	$222,002
Treatment	$7,763,635	34%	$2,668,750
Storage	$5,195,063	0%	$0
Pumping	$681,471	37%	$249,717
Pipes	$24,028,849	46%	$10,947,969
Total	**$38,136,390**		**$14,088,438**

[1] Rounded to the nearest dollar

Determine Base SDC-R for Albany

The SDC-R fee is the total value of existing available capacity ($14 million) divided by the number of future growth units. Meter size is used as a basis for existing and growth units because it relates to a customer's potential claim on system capacity and because it is information required at the time a request for connection to the water system is made. The number of meters by meter size and their hydraulic equivalencies are used to calculate the number of equivalent residential units (ERUs).

Existing and growth units are determined by the size and number of meters in the water system. The total number of Albany meters (excludes those in Millersburg) existing in July 2003 was determined to be 14,244. Standard hydraulic equivalency tables (AWWA M6 Table 2-2) are used to compare the hydraulic potential or capacity of each meter to a ¾-inch meter. For example, if the hydraulic capacity of a ¾-inch meter is set at one (1) ERU, then the number of ERUs associated with a 2-inch meter would be 5.33 because the hydraulic capacity of a 2-inch meter is 5.33 times that of a ¾-inch meter. When the standard hydraulic equivalencies are applied to Albany's existing meter data, the result is 17,437 existing equivalent meters or ERUs as shown in ***Table 3.***

Table 3: Standard Hydraulic Equivalencies and Existing Growth Units

Meter Size	Number of Existing Meters	Standard Hydraulic Equivalencies	Existing Growth Units[1]
¾ inch	12,949	1	12,949
1 inch	798	1.67	1,333
1½ inch	201	3.33	669
2 inch	226	5.33	1,205
3 inch	37	10.67	395
4 inch	19	16.67	317
6 inch	10	33.33	333
8 inch	3	53.33	160
10 inch	1	76.67	77
Total	**14,244**		**17,437**

[1] Rounded to the nearest whole number

To estimate the average amount of water required by each ERU today, the current maximum day demand (excluding Millersburg) is divided by the current number of ERUs. Since the existing demand is 15 mgd (million gallons per day), the resulting capacity requirements per ERU are 860 gpd (gallons per day, rounded).

The next step is to determine how many ERUs will be served by the water system at buildout. The Facility Plan projected a total maximum day water demand of 40 million gallons per day (mgd). To estimate the total number of ERUs at buildout, the buildout demand (40 mgd) is divided by the capacity requirement per ERU (860 gpd per ERU). The result is 46,499 ERUs at buildout.

The final step is to determine the number of growth driven ERUs by subtracting the 17,437 existing ERUs from the 46,499 projected for buildout. The result is 29,062 additional ERUs that can be served between now and buildout. These calculations are summarized in ***Table 4.***

Table 4: Determining Future Growth Units

Existing Growth Units		
Existing Meters	14,244	meters
Existing Growth Units	17,437	ERUs
Demand per ERU		
Maximum Day Demand (Less Millersburg)	15	Mgd
Demand per ERU Today	860	ERUs
Future Growth Units		
Maximum Day Demand at Buildout	40	Mgd
Total Growth Units at Buildout	46,499	ERUs
Future Growth Units	29,062	ERUs

* Rounded to the nearest whole number

The SDC-R is calculated by dividing the value of existing available capacity ($14.1 million) by the number of future growth units (29,062 ERUs). The maximum allowable SDC-R per EDU is $485/ERU. The calculation method is summarized in ***Table 5*** below:

Table 5: Maximum Allowable SDC-R

Value of Existing Available Capacity	$14.1	Million
Future Growth Units	29,062	ERUs
Maximum Allowable SDC-R	$485	Per ERU

SDC IMPROVEMENT FEE (SDC-I)

Determine SDC-I Cost Basis

The improvement fee cost basis is equal to the net value of the future, growth-related system improvements. The cost basis is defined by the projected costs of planned capacity-increasing improvements, minus expected grants and developer contributions. Once defined, these projected costs reflect the maximum amount that could be collected through the SDC improvement fee.

Table 6 summarizes the required capital improvement projects as outlined in the 2004 Water Facility Plan. Estimates of project cost are also as shown in the 2004 Water Facility Plan except for the Stage 1 Joint Water Project that has been reduced in cost from $32.3 million to $27.3 million based on bid openings subsequent to completion of the 2004 Water Facility Plan and prior to adoption of the SDC methodology. The provided list identifies a total of $181.3 million in capital improvement needs; $47.4 million (or 26%) of which are capacity increasing projects that are required to serve customer growth through 2074. Detailed project descriptions and allocation methodologies are provided in the 2004 Water Facility Plan.

Table 6: SDC-I Eligible Projects

Project Stage & Description	Total Cost	Allocation Percentage		Improvement Fee Cost Basis
		Existing	Growth	
Stage 1				
Joint Water Project, Phase I	$27,318,000	51%	49%	$13,386,000
East End Transmission Project	$2,379,000	40%	60%	$1,438,000
South Albany Transmission Project	$1,029,000	100%	0%	$0
North Albany Distribution Projects, Phase I	$1,665,000	100%	0%	$0
Reservoir Projects, Phase I	$1,244,000	100%	0%	$0
Canal Projects, Phase I	$3,460,000	100%	0%	$0
Vine St. WTP Projects, Phase I	$2,535,000	100%	0%	$0
Pipeline Replacement Programs, Phase I	$8,033,000	100%	0%	$0
Stage 2				
North Albany Distribution Projects, Phase II	$1,732,000	77%	23%	$392,000
Zone 1 Distribution Projects	$677,000	59%	41%	$278,000
Ellingson Rd. Reservoir Project, Phase I	$4,779,000	0%	100%	$4,779,000
Canal Projects, Phase II	$2,830,000	100%	0%	$0
Vine St. WTP Projects, Phase II	$3,077,000	95%	5%	$165,000
Pipeline Replacement Programs, Phase II	$8,606,000	100%	0%	$0
Stage 3				
Central Albany Transmission Project	$6,318,000	26%	74%	$4,696,000
Reservoir Projects, Phase II	$10,000	0%	100%	$10,000
Ellingson Road Reservoir Project, Phase II	$3,385,000	0%	100%	$3,385,000
Vine St. WTP Projects, Phase III	$1,997,000	79%	21%	$422,000
Canal Projects, Phase III	$2,110,000	100%	0%	$0
Pipeline Replacement Programs, Phase III	$13,435,000	100%	0%	$0
Stage 4				
Joint Water Project, Phase II	$3,900,000	0%	100%	$3,900,000
Development Driven Pipe Projects	$4,301,000	0%	100%	$4,301,000
Knox Butte Reservoir Project, Phase II	$3,500,000	0%	100%	$3,500,000
Knox Butte Reservoir Project, Phase I	$6,020,000	0%	100%	$6,020,000
Wildwood Reservoir Project	$685,000	0%	100%	$685,000
Pipeline Replacement Programs, Phase IV	$66,311,000	100%	0%	$0
Total	**$181,336,00**			**$47,357,000**

The City issued a water revenue bond in the fall of 2003 to fund Albany's share of the Joint Water Project improvements and related projects. The 2004 Water Financial Plan includes an annual transfer from the SDC fund to the debt service fund, equal to growth's share of the 2003 bond principal. Because SDCs will be used to retire growth's share of the 2003 bond principal (through the life of the bond), the principal costs do not become part of water rate revenue requirements, and no double-charge occurs.

Determine Base SDC-I for Albany

The SDC-I is calculated by dividing the total value of planned facilities needed to meet growth demand ($47.4 million) by the number of future growth units (29,062 ERUs). The maximum allowable SDC-I per EDU is $1,630. The calculation method is summarized in ***Table 7*** below:

Table 7: Maximum Allowable SDC-I

Value of Future Available Capacity	$47.4	Million
Future Growth Units	29,062	ERUs
Maximum Allowable SDC-I	$1,630	Per ERU

COMBINED SDC FEE SCHEDULE FOR THE CITY OF ALBANY

Oregon SDC law requires that the methodology demonstrate that the combined SDC charge is not based on providing the same capacity through the reimbursement and improvement fee components. The Albany SDC methodology accomplishes this requirement. Specifically, the methodology determines total growth capacity requirements and the portion of capacity to be met through existing system available capacity and future capacity expansion. Furthermore, when calculating the individual reimbursement and improvement unit costs, the cost bases are divided by the *total* projected growth units for the planning period. Therefore, the combined fee represents a weighted average cost of existing and available capacity.

The combined SDC is shown in ***Table 8*** below:

Table 8: Maximum Allowable Combined SDC

Reimbursement Fee	$485
Improvement Fee	$1,630
Total Fee per ERU	**$2,115**

The combined SDC per ERU is the total fee that a customer with a ¾-inch meter would pay. Standard hydraulic equivalency tables are used to calculate the SDC for larger meters. Water SDCs by meter size are shown in ***Table 9*** below:

Table 9: Water System Development Charges

Meter Size	Hydraulic Capacity Factor	Reimbursement Fee	Improvement Fee	Total SDC Fee
3/4 inch	1.00	$485	$1,630	$2,115
1 inch	1.67	$810	$2,721	$3,531
1½ inch	3.33	$1,614	$5,426	$7,040
2 inch	5.33	$2,584	$8,685	$11,269
3 inch	10.67	$5,173	$17,387	$22,560
4 inch	16.67	$8,081	$27,164	$35,245
6 inch	33.33	$16,158	$54,312	$70,470
8 inch	53.33	$25,853	$86,903	$112,756
10 inch	76.67	$37,168	$124,936	$162,104