# Seattle Public Utilities
# Response to 2012 Seattle City Council Statement of Legislative Intent, No. 7-1-A-1

## *SPU Update of Tap Fees and Related Work Processes*

**May 14, 2012**

## Contents

## I. Executive Summary

This report responds to the Seattle City Council's (Council) request for an update of Seattle Public Utilities' (SPU) tap fees and related work processes. SPU appreciates the Council's directive on this issue, which continues the work begun by SPU in recent years. This work has resulted in several changes for 2012 and beyond which improve the accuracy of tap fees, leading to greater customer equity and greater ability for SPU to recover the costs associated with new water installation jobs.

The Statement of Legislative Intent ("SLI") requests that SPU submit a report that:

A. Evaluates the formula used to calculate tap fees charged when a new water service is connected to the City system, with a goal of adjusting the formula to recover to the greatest extent possible SPU's cost of providing new taps services.

B. Evaluates the work processes used to connect new water taps to the City system and identifies opportunities to conduct the work more efficiently to lower the cost of new taps services.

C. Recommends how to narrow the gap between new taps revenues and expenditures by updating the formula for calculating tap fees, reducing cost of new taps services through more efficient work processes, or both. The recommendations should seek to reduce the gap by at least $250,000 in 2013 and an additional $250,000 (for a total reduction of at least $500,000) in 2014.

In response to these requirements:

**Section II (Tap Fee Overview**) provides a contextual basis for tap fees, including recent history of tap counts, revenue and expenditures.

**Section III (Tap Fee Work Process)** discusses the updated 2012 work process when a new water service is requested and installed.

**Section IV (Tap Fee Calculation)** describes the underlying calculations of the water installation tap fees.

**Section V (2012 Changes for two-inch and Smaller Taps**) discusses SPU's 2012 changes for two-inch and smaller tap fees, including several changes in the tap fee calculation.

**Section VI (2012 Changes for three-inch and Larger Taps**) discusses SPU's new 2012 process for water installations for three-inch and larger taps.

**Section VII (Jurisdictional Comparison**) provides comparisons of SPU tap fees with comparable jurisdictions.

**Section VIII (Steps Towards Cost Recovery**) provides a summary of how the recent changes will help narrow the gap between tap fee revenues and CIP expenditure.

## Tap Fees

Tap fees are charged by SPU when a customer requires a new connection to the City of Seattle's (the City) water system. The fee recovers the cost of labor, equipment, materials and overhead associated with the water connection installation. Tap fees vary depending on the size of the water meter being installed; however the most common tap sizes are for ¾-inch and 1-inch meters. The fees are published in the water Standard, Connection and Administrative Charges Director's Rule ("Standard Charges"), which is typically updated annually.

In addition to tap fees, there are often other charges associated with a new water connection depending on the water service request, such as connection charges, permit fees, street restoration charges and traffic control charges that are also part of the Standard Charges and are collected the same time as tap fees prior to the installation work.

## Changes for 2012

For several years the tap fee charges have been reviewed and modified. In late 2010 SPU determines that a more comprehensive review was required. An extensive review was begun in late 2010, which led to the decision not to adjust Standard Charges for 2011 while the review was being conducted. Some of the issues which led to this decision were:

- Reliance on annual Maximo data resulted in fluctuations in hours from year to year for tap fee calculations;
- Tap jobs three-inches or larger varied significantly in cost from job to job and having a standard fee based on limited data was inequitable and also led to under or over recovery of costs;
- SPU and the Seattle Department of Transportation (SDOT) were in the midst of addressing a three-year backlog of work and billing associated with street restoration;
- Street restoration estimates were not recovering the proper cost of performing the work; and
- The existing methodology of recovering certain costs via a 10% adder meant larger taps were subsidizing the cost of smaller taps.

Effective April 1, 2012, SPU implemented several changes to its water taps program, including new structures and processes that will improve the accuracy of tap fees and enhance SPU's ability to recover its costs associated with new water installations.

- Tap fees for two-inch and smaller taps have undergone an extensive review and have been revised to include updated inputs for labor, equipment, material and overhead.

- A new separate tap fee schedule for two-inch and smaller taps involving an arterial street has been established, which incorporates higher costs associated with these installations.
- Multiple taps installed with a manifold will receive a discount for additional taps to recognize installation efficiencies.
- Certain costs previously included in the cost of each tap fee (pre and post-inspection, street saw cut, traffic control plan review and traffic control) will be charged separately when applicable as these costs vary on a per-job basis.
- The work process for street restoration has been revamped where SDOT will develop a restoration cost prior to the start of work. This cost will be collected upfront with other charges prior to the start of any work, allowing the customer to make an informed decision whether to use SDOT or a private contractor to perform street restoration.
- The process for new water installations for three-inch and larger taps has been overhauled to address the uniqueness of these larger tap jobs. Instead of relying on standard fees, a site-specific cost will be developed upfront by SPU distribution for a customer.
- A new multi-level review process of work order detail has been implemented by SPU to ensure that actual costs are accurately reported.

## Jurisdictional Comparison

Included in this report is a comparison of SPU's tap fees with 12 regional water utilities. This comparison shows:

- SPU's tap fees for two-inch and smaller taps are competitive with other regional utilities.
- SPU's new process for three-inch and larger taps is consistent with most other regional utilities, which do not have specific tap fees for three-inch and larger taps. Many of these utilities charge the actual cost of the job.

## Steps Toward Cost Recovery

The difference between tap fee revenues and expenditures can be attributed partly to a timing difference between when revenues are collected and costs are recorded, understated labor hour estimates for some tap fee sizes, and issues associated with street restoration billing and work. This difference has decreased in recent years; however SPU acknowledges the need to continue to making progress to full cost recovery.

The recent changes listed above will improve cost recovery by improving the accuracy of both revenues and expenditures. With many of the changes just recently implemented on April 1, 2012, SPU does not yet have the information to quantify the impacts of the changes. SPU plans to monitor and review data and is agreeable to reporting back to Council at a later date as to the impacts of these changes.

## II. Tap Fee Overview

SPU's tap fee program installs new drinking water services throughout the City and parts of the City of Shoreline, the City of Lake Forest Park, the City of Burien and unincorporated King County. The tap program provides the installation of metered water service lines from the new tap to a customer's property lines with no interruption of service to adjacent existing customers. This program meets City responsibility for new service connections in the Seattle Municipal Code (SMC) to provide reliable drinking water supply to customers.[1]

### A. Types of Water Service Connections

A customer may request a new water tap installation for domestic service, fire service, or a combination of domestic and fire service.

Domestic Service – A service connection to furnish water for all purposes permissible under law, including commercial and industrial uses.

Fire Service – A service connection to furnish water solely for extinguishing fires or testing of firefighting systems.

Combination Fire/Domestic Service – A service connection to furnish water for both domestic and firefighting purposes.

New water connections vary depending on the meter size installed and are available in the following sizes:

| | Domestic | Fire | Combination |
|---|---|---|---|
| ¾ -inch | X | | |
| 1 –inch | X | | |
| 1 ½ -inch | X | | |
| 2 –inch | X | X | |
| 3 –inch | X | | |
| 4 –inch | X | X | X |
| 6 –inch | X | X | X |
| 8 -inch | | X | X |

[1] **Seattle Municipal Code 21.04.050 Connection -- City responsibility.** Upon the presentation at the office of the Director of Finance and Administrative Services' receipt for the installation fees and the execution of the contract provided for in Section 21.04.030, the Director shall cause the premises described in the application, if the same abut upon a street in which there is a City water main, to be connected with the City's water main by a service pipe extending at right angles from the main to the property line, except as provided in Sections 21.04.060, 21.04.070 and 21.04.080. The City connection, which shall include a union placed at the end of pipe, and a stopcock placed within the curbline, shall be maintained by and kept within the exclusive control of the City.

## B. Tap Fee Authority

SPU charges a customer a tap fee for a new water service. These tap fee charges, as well as other water standard fees, are administered through the water Standard Charges, as authorized in SMC 21.04.465A:

**SMC 21.04.465 Standard, connection, and administrative charges.**

*A. The Director shall develop and update annually a schedule of charges for standard, recurring services which are incidental to the sale of water. Such charges shall be based on a review of the prevailing actual costs for providing these services.*

In addition to tap fee charges, the Standard Charges include fees for other water services such as water service retirement, connection charge, service size increase, meter removal and reset, reduction in meter size, meter test, relocation of meter and meter box, water service reinspection fee, acquisition of hydraulic flow data, fire hydrant valve and meter use, hydrant reset and relocation, installation of new hydrant, delinquent service charge, special meter read, providing customer statement, processing returned customer check, duplicate bill preparation, shut off/turn on, service abandonment, delayed final customer billing, utility crossing permit, transmission right-of-way gate opening, easement acquisition, easement granted, construction inspection, compaction tests, private developer watermain charges, backflow preventer assembly notification and inspection, water laboratory fees, and real property use fees.

## C. Tap Fee Expenditures vs. Revenue

SPU's costs for new taps are part of the Water Fund's Capital Improvement Program (CIP), under "Water Infrastructure – New Taps (C1113)" in the Distribution Budget Control Level (BCL). The budgeted new taps CIP is developed based on a review of recent new taps costs and expected new taps activity.

When SPU's retail water rates are adopted, a CIP amount that is lower than the budgeted CIP is assumed for rate purposes. This is known as the "CIP accomplishment rate" and is the ratio of the expected actual CIP expense to the total budgeted CIP expense. For example, the recently approved 2012-2014 water rate study assumed an 85 percent CIP accomplishment rate and therefore, 85 percent of total budgeted CIP expense was assumed when establishing rates. For purposes of comparing tap fee revenues to budgeted expenses, the assumed accomplishment rate for each rate period should be applied to the tap fee CIP expense budget, resulting in the expected level of actual tap fee CIP expense.

New tap fee revenues are recorded under "Other Operating Revenues" on the Water Fund income statement. Tap fees are "non-rates" revenues which contribute towards funding the Water Fund's overall revenue requirement and therefore, are a factor considered

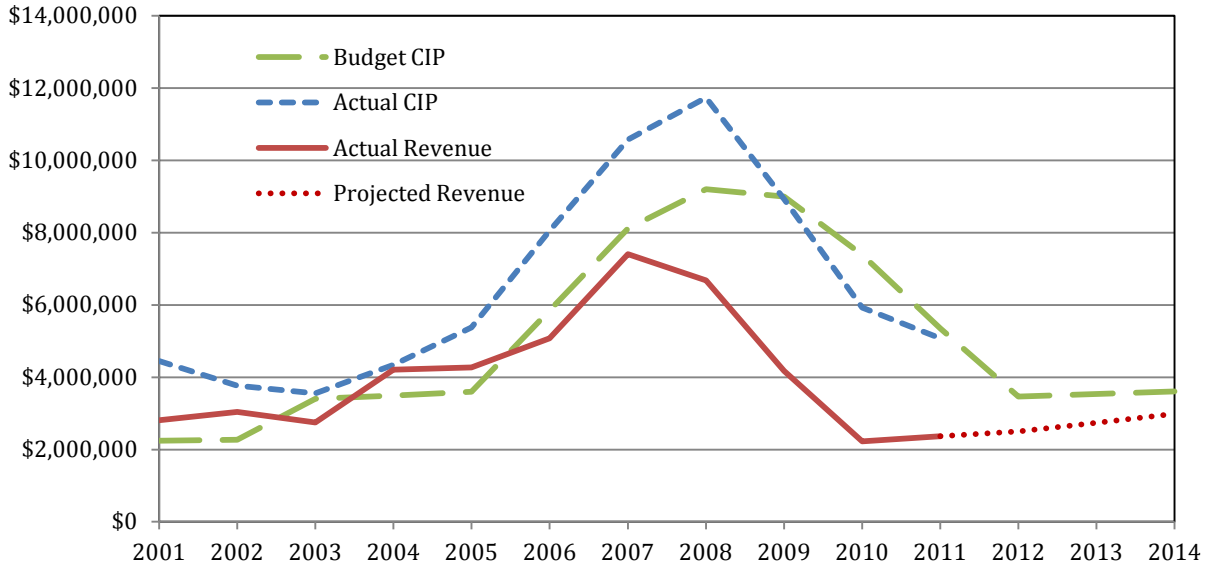
when SPU proposes new water retail rates. The greater the tap fee revenue, the less SPU is required to recover through its retail water rates. SPU's goal is for tap fee revenues to cover the costs associated with new taps.

Tap fee revenues are subject to several taxes including city utility taxes (15.54 percent), state B&O taxes (1.8 percent) on 90 percent of tap fee revenues and state utility tax (5.029 percent) on the remaining 10 percent of tap fee revenues. Tap fees must be set to recover all costs associated with the installation including these tax obligations. Therefore, revenue net of taxes (Net Revenue) is the best benchmark to use when comparing how well projected revenues recover projected CIP expense (direct and support). The impact of taxes was erroneously omitted from the tap fees calculation through 2006, and has been included in tap fees since 2007.

Figure 3 compares tap fee revenues with both budgeted and actual tap fee CIP.

**Figure 3**

**SPU New Taps – Revenue vs. CIP**




Note: Revenues are net of taxes. Budget CIP reflects revised budget at CIP accomplishment rate for each rate period.

New tap CIP expense, both budget and actual, increased as the number of new tap installations increased in the mid-2000's. As tap fee activity began to decline, the effect on expenditures had a delayed impact. The 2012 Adopted Budget included tap fee CIP of $4.1 million, which is $3.5 million after applying the 85 percent accomplishment rate assumed in the 2012-2014 rate study. 2012 tap fee revenues were projected to be approximately $3.0 million or $2.5 million net of taxes. Therefore, at the time 2012-2014 rates were adopted, the difference has been narrowed to where 2012 revenues net of taxes were projected to be approximately $1.0 million less than tap fee expenditures.

## D. Reasons for the Revenue/Expenditure Gap

There are several factors that contribute to the difference between tap fee revenues and expenditures:

- Tap Fee Levels – Tap fees for the more common smaller tap sizes had not recovered their costs due to understated labor hour estimates for some tap sizes and the inclusion of several costs via a 10% adder, which failed to cover the actual costs of these items

- Timing of Revenue Collection vs. Expenditure – Tap fee revenues are collected before the start of the water installation work. The actual tap work may be performed one to two months after the fees are collected. Furthermore, street restoration may occur up to one year from when fees are collected. Therefore, the tap work costs are typically recorded at a later date than when the fees were received and revenues recorded.

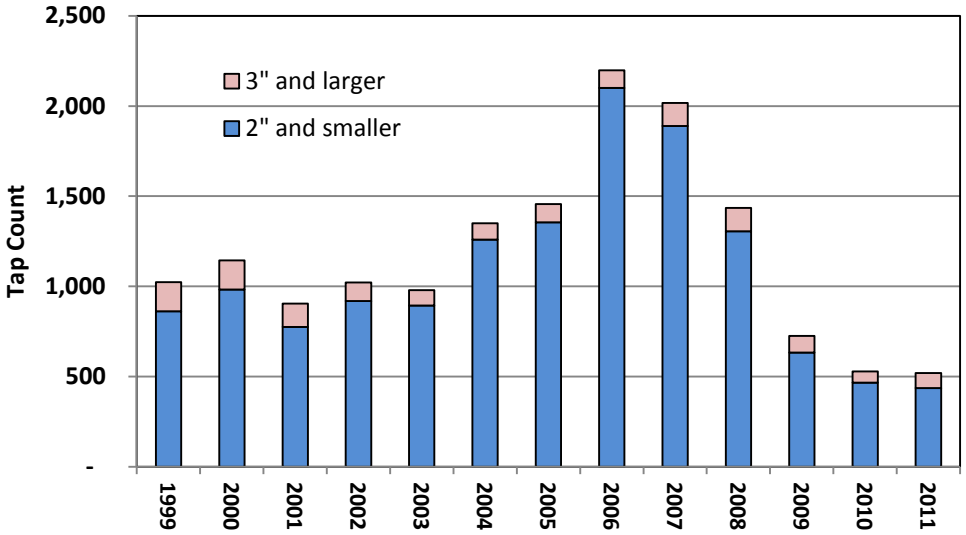
- Street Restoration Billing Backlog – Prior to 2009, an estimate for street restoration was included in the total tap fee and billed to the customer by SPU. Beginning in 2009, street restoration was broken out separate from tap fees and a decision was made by the Executive to have SDOT bill the customer for street restoration. Due to SDOT resource constraints and the fact that SPU was the permit holder, in October 2010 the billing of street restoration reverted back to SPU. The amount of unbilled costs from March 2009 to October 2010 totaled approximately $251,000, of which $134,000 has been recovered. The remaining $117,000 has either been turned over to a collection agency, is being handled by the Law Department, or is in dispute with the customer.

- Street Restoration Work Backlog –At the end of 2008 there was a three year backlog of restoration requests from SPU to SDOT. A portion of the revenues associated with restoration had been previously collected via the street restoration estimate in the tap fee. In May 2010 a Memorandum of Agreement was signed between SPU and SDOT where SPU agreed to fund half of the backlogged request in 2010 and the other half in 2011. This resulted in $1.5 million in additional expenditures in 2010 and 2011 that are reflected in the actual CIP expense totals.

## E. Recent Water Tap Counts

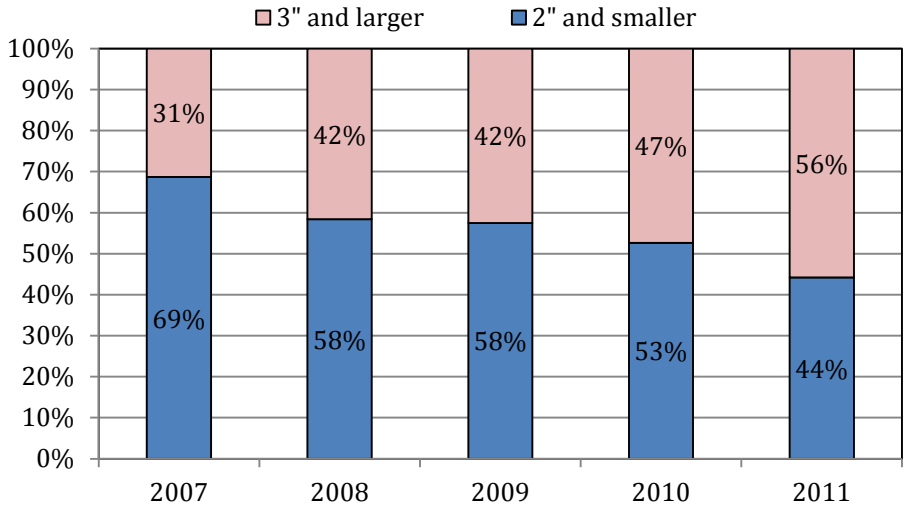
The number of new water installations began to climb in the mid-2000's as the economy improved, peaking in 2006 with about 2,200 new taps. Beginning in 2008, with the downturn in the economy, the number of annual new taps fell off significantly to where the total has been slightly over 500 new taps for the past two years. Figure 1 shows the number of new taps from 1999 to 2011.

**Figure 1**
**Annual Tap Count**




Most of the decline in new taps beginning in 2007 was for two-inch and smaller taps. Thus three-inch and larger taps now represent an increasing percent of new taps (from 5 percent in 2006 to 16 percent in 2011). In addition, since three-inch and larger taps have much higher tap fees, they comprise an even higher share of tap fee revenues (56 percent in 2011) as shown in Figure 2:

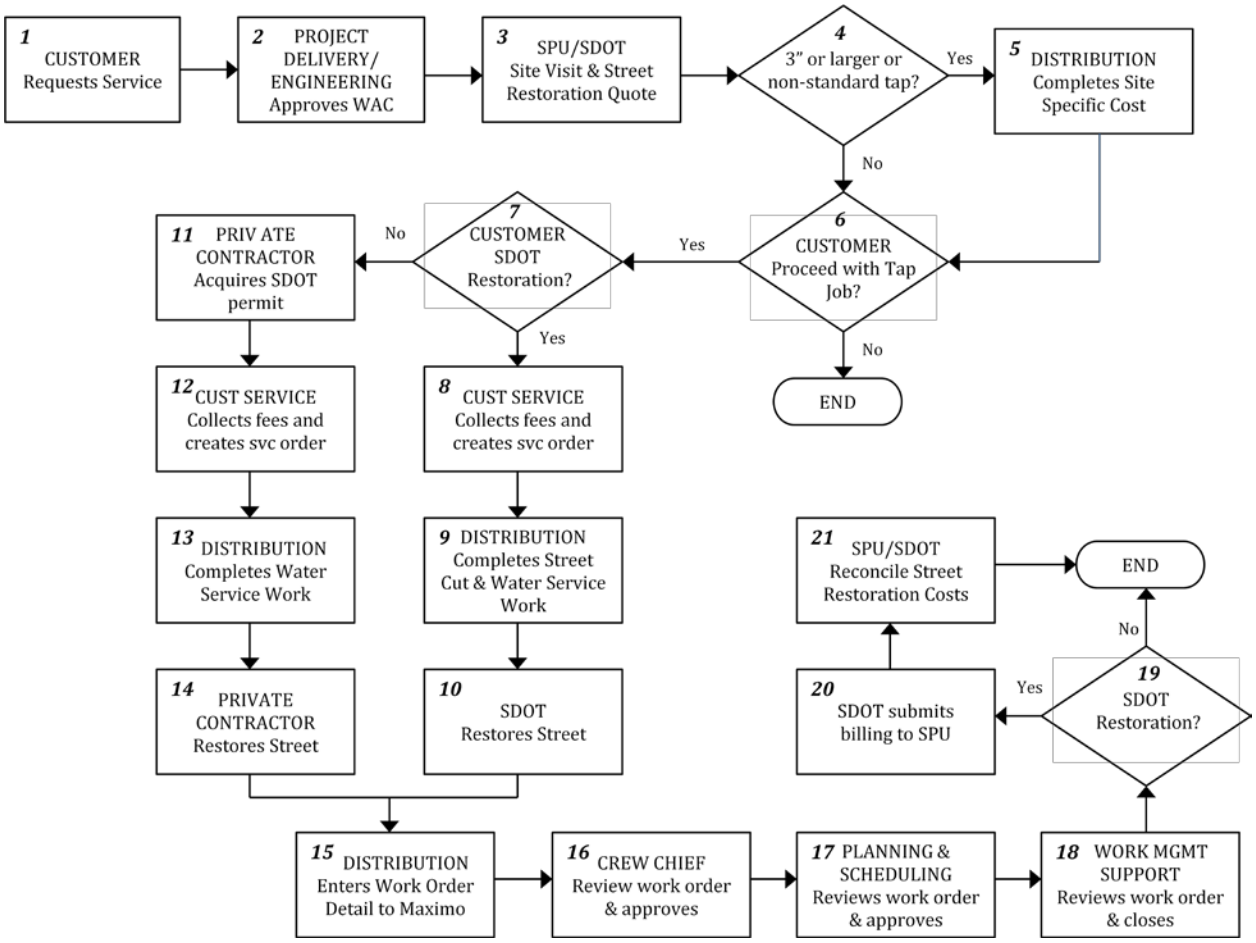
**Figure 2**
**Percent of Tap Fee Revenues**



## III. Tap Fee Work Process

### A. Current Process

The work flow diagram below documents the new tap work process in effect since April 1, 2012. This section describes this process while Section III.B highlights the recent and planned changes to the process.



1) **Customer Requests Service** – The customer requests a new water service from SPU.

2) **Approved WAC** – The customer applies for a Water Availability Certificate (WAC) from SPU, which is approved by SPU Project Delivery / Engineering. The WAC describes details of the new water service.

3) **Site Visit Quote** – SDOT and SPU meet at the site of the new water service and SDOT completes a quote of the street restoration cost, which is subsequently provided to the customer.

4) **3-inch or Larger or Non-standard Tap** – If the new water service is 3-inch or larger, or non-standard, regardless of size, a site specific cost is developed.

5) **Site Specific Cost** – For 3-inch or larger, or non-standard taps, a site specific cost is developed by SPU Distribution which includes all the costs associated with the new water tap installation, as well as all applicable city and state utility taxes.

6) **Customer Decision Whether to Proceed** – The customer must make a decision whether to proceed with the new tap installation.

7) **Customer Street Restoration Decision** – If the customer decides to proceed with the new tap installation, the customer must decide who will perform restoration work.

   - If the customer elects to have SDOT perform the restoration work, the process continues with Step 8.
   - If the customer elects to have a private contractor perform the restoration work, the process continues with Step 11.

**SDOT Restoration**

8) **Fee Collection/Service Order Created** – SPU Customer Service collects the following fees for the water service work and generates a service order in the Consolidated Customer Service System (CCSS), resulting in SPU Field Operations creating a work order in Maximo, which is SPU's work planning and scheduling system.
   - New tap
   - Street restoration quote
   - Pre-and post inspection
   - Saw cut
   - Traffic control (if required)
   - Connection charge
   - SDOT or other agencies permit fees

9) **Water Service Work** – SPU crew performs the water service work, including the street saw cut.

10) **SDOT Street Restoration** – SDOT performs the street restoration work.

**Private Contractor Restoration**

***11)*** **SDOT Street Restoration Permit** – If the customer does not have a street improvement plan, the customer or their agent must apply to SDOT for a street restoration permit, which is provided to SPU.

***12)*** **Fee Collection/Service Order Created** – SPU Customer Service collects the following fees for the water service work and generates a service order in CCSS, resulting in SPU Field Operations creating a work order in Maximo:

- New tap
- Traffic control (if required)
- Connection charge
- SDOT or other agencies permit fees

***13)*** **Water Service Work** – SPU crews complete the water service work.

***14)*** **Private Street Restoration** – The private contractor completes the street restoration.

***15)*** **Maximo Work Order Detail** – SPU Distribution crew enters the work order detail into Maximo (see page 15 for more information on Maximo), including number of hours by position, hours for each type of equipment and all material cost.

***16)*** **Crew Chief Review** – The SPU Distribution crew chief reviews the work order detail and approves it in Maximo.

***17)*** **Planning & Scheduling Review** – SPU Planning & Scheduling reviews the work order detail and approves it in Maximo.

***18)*** **Work Management Support Review** – Once the work order detail is approved by the crew chief and Planning & Scheduling, SPU Work Management Support conducts a final review of the work order detail and closes the work order in Maximo.

***19)*** **SDOT Restoration** – If SDOT performed the street restoration, proceed to Step 20.

***20)*** **SDOT Submit Billing to SPU** – SDOT submits a bill to SPU for the street restoration work.

***21)*** **Street Restoration Cost Reconciliation** – Prior to paying SDOT for street restoration, SPU performs a reconciliation of the street restoration costs with SDOT.

## B. Process Changes Highlights

This section describes recent and planned process changes that will improve the accuracy of recording and recovering costs. The changes include a new process for street restoration, the implementation of a multiple level review of work order detail, and the future deployment of an enhanced version of Maximo.

### 1. Street Restoration Process Change

A water service customer is responsible for street and sidewalk restoration related to new water service installations. Customers are responsible for the full cost of street right-of-way restoration, which may include:

- Paving
- Curb and gutter
- Sidewalks
- Wheelchair ramps
- Traffic loops
- Street lane striping

The customer has a choice as to who will perform the restoration, SDOT or a private contractor. Restoration work performed by an approved private contractor must obtain a separate restoration permit to perform this work in the city right-of-way (unless it has already been included as part of a street improvement plan).

Prior to April 2012, street restoration costs were calculated by SDOT after SPU had performed the water service work. SDOT billed SPU, who in turn billed the customer for the restoration with minimal review of the charge by both departments. The customer did not know the amount of the street restoration charge until late in the process after the work was completed. This often resulted in miscommunication and disagreements between SPU, SDOT and the customer.

Beginning April 2012, when street cuts and restoration are required to perform water service work, SDOT will provide a street restoration quote prior to scheduling the requested water service work. An SPU paving inspector will be on-site to ensure SDOT's street restoration quote is only for required work for SPU and does not include work for other utilities or services. If the customer chooses SDOT to perform the restoration, SPU will collect the fee for street restoration upfront at the same time other water service work fees are collected and no further payment is required from the customer. SPU and SDOT will perform a reconciliation of all street restoration charges prior to payment by SPU. The advantages of this new process are:

a. The customer will have the street restoration cost upfront in time to make an informed decision whether to have the City or a private contractor perform the restoration work and not have to be concerned with unexpected street restoration charges after the work is completed. SDOT and SPU will be responsible for any difference between the amount paid by the customer and the actual street restoration cost.

b. The new process will create greater opportunities to consolidate multiple utility jobs into a single restoration, resulting in better planning and design by developers.

c. SPU will have assurance that the restoration will be paid by collecting the fee upfront.

d. There will be greater transparency between SDOT and SPU in terms of working together on the costs associated with SDOT restoration and improving the accuracy of street restoration quotes.

## 2. Multi-level Work Order Review

Maximo is SPU's work planning and scheduling system, which schedules SPU crew work and maintains work order detail. SPU Field Operations examined its process for Maximo work order review and approval and determined that improvements could be made to increase accountability and increase the accuracy of reported work crew detail. In order to ensure that costs are accurately reported by water tap crews, beginning April 1, 2012 there is a multi-level review of crew detail on a work order prior to it being closed. The review consists of the following:

a. Distribution Crew Chief – The crew chief reviews crew detail for the work order and submits an approval in Maximo.

b. Planning and Scheduling – The Planning and Scheduling group in SPU Field Operations reviews crew detail for the work order, then submits an approval in Maximo.

c. Work Management Support – Once Planning and Scheduling has approved the work order detail, the Work Management Support group will conduct a final review of the crew detail for the work order and will close the work order in Maximo.

The multiple level review of work order detail will improve the accuracy of crew time and costs reported for each tap job by identifying errors earlier, leading to immediate corrective action. This will result in better data to incorporate into future tap fee calculations.

## 3. Maximo Redeployment

SPU is implementing a new version of Maximo, scheduled to be implemented the first quarter of 2013. A user-friendly mobile interface will allow crews to record their work time in the field (via a laptop) rather than waiting until they return to the operations centers at the end of the day.

Maximo will also have an improved capability to capture more detailed data about work jobs, resulting in greater data accuracy, quality and completeness in terms of asset and work tracking capabilities. For new taps, this will mean more data on labor

hours, equipment hours and materials utilized, which will improve the accuracy of job plans. SPU will be able to do a better job planning and scheduling work, as well as identifying variations between "typical" jobs and the specifics on an individual work order. With more detailed data, SPU will be able to improve the alignment between its tap fee assumptions and actual costs for various tap fee jobs.

## IV. Tap Fee Calculation

Water tap fees are intended to represent the average cost for each service, which are developed based on labor, equipment, material and overhead assumptions for each type of service. The underlying cost assumptions are reviewed periodically and revisions to the fees are approved through updates to the Standard Charges. Table 1 shows the components and calculations underlying SPU's tap fees.

**Table 1**

| | | | |
|---|---|---|---|
| | **Labor** | • Water Pipe Workers<br>• Equipment Operator<br>• Truck Driver | Labor = (Current labor rate + fringe + G&A) * (estimated hours by position for each tap) |
| + | **Equipment** | • Water Crew Truck<br>• Backhoe Loader<br>• Dump Truck<br>• Tilt Bed Trailer | Equipment = (Current equipment loaded cost) * (estimated hours by equipment for each tap) |
| + | **Material** | • Meter Cost by size<br>• Fill Material | Material = (Current material cost + fringe factor) + Fill material cost |
| = | **Total Cost** | | |
| + | **Taxes** | • City Utility Tax (15.54%)<br>• State B&O Tax (1.8%)<br>• State Utility Tax (5.029%) | Taxes = Total cost * 21.452%[2] |
| = | **Total Tap Fee** | | |

[2] SPU pays City utility taxes (15.54%) on tap fee revenues. In addition, SPU pays state B&O taxes (1.8%) on 90% of tap fee revenues and state utility tax (5.029%) on the remaining 10% of revenues. In order to include the proper level of taxes in tap fees, the total tap fee cost must be multiplied times 21.452% to arrive at amount of tax to be included in the total tap fee ((1/(1-((90%*(15.54%+1.8%))+(10%*(15.54%+5.029%)))))-1).

## V. 2012 Changes for Two-inch and Smaller Taps

### A. Modifications of Tap Inputs

Beginning in 2010, SPU conducted a comprehensive review of its tap inputs, which resulted in several changes for the 2012 two-inch and smaller tap fees. The following is a summary of the significant changes.

1. Crew labor hours were reviewed based on Maximo data and a survey conducted of SPU water pipe workers as to the typical number of hours required for each job. The survey sought to confirm the accuracy of inputs and understand any anomalies. Hours were adjusted for each tap fee which resulted in an increase in labor hours for ¾-inch and 1-inch taps and a decrease in hours for 1 ½-inch and two-inch taps.
2. SPU looked for efficiencies in the hours required for the equipment operator and truck driver required for tap jobs and these hours were set to levels that align with the time for water pipe workers.
3. The equipment hours for water crew truck, backhoe loader, dump truck and tilt bed trailer were aligned with the crew hours as this equipment cannot be used for another purpose during the job.
4. The overhead factor applied to labor was adjusted to use an alternative general and administrative (G&A) overhead rate.

   The typical G&A overhead used by SPU historically is calculated as follows:

$$\frac{\text{Total Overhead Costs}}{\text{Total Non-Overhead Direct Labor Costs}} = \text{Current G\&A Rate}$$

$$\text{Current G\&A Rate} = 96 \text{ percent}$$

   The alternative G&A rate captures the majority of overhead costs and spreads it over total labor costs.

$$\frac{\text{Support Services G\&A Costs}}{\text{Total Labor Costs}} = \text{Alternative G\&A Rate}$$

$$\text{Alternative G\&A Rate} = 67 \text{ percent}$$

   The alternative overhead rate incorporates costs for areas in SPU that are primarily support functions, which are a subset of all SPU overhead costs. This rate more accurately reflects the overhead associated with new tap jobs, which are more routine. The alternative G&A rate of 67 percent was incorporated into the total tap fees in 2012 and this overhead rate will also be applied to actual new tap CIP labor.

   The 2012 budgeted new tap labor CIP is $2.3 million, or 57.5 percent of the total new tap fee CIP of $4.1 million. The impact of the new alternative overhead rate would have decreased total budgeted tap fee CIP by about 6.4 percent or $262,000.

The input changes resulted in an increase to ¾-inch and 1-inch tap fees and a decrease to 1 ½-inch and two-inch taps. SPU made the decision to phase-in the ¾-inch and one-inch increases over 2012 and 2013, while setting the 2012 tap fees for the 1 ½-inch and two-inch taps at the reduced levels. Based on estimated 2011 tap fee counts, the decision to phase-in the ¾-inch and one-inch increases meant that for 2012, tap fee revenues would be about $220,000 lower than they would have been had the full increase been implemented. SPU plans to complete the phase-in of the increase for ¾-inch and one-inch tap fees in 2013.

## B. Separate Arterial Job Fees

Arterial streets include every street, or portion thereof, designated as such in Exhibit 11.18.010 of the Seattle Municipal Code. Previously the costs for all new water services were averaged for each tap size, whether it involved an arterial or a non-arterial street. Tap jobs in an arterial typically require more water crew hours due to potential issues associated with time constraints, wider streets, traffic, trolley lines and other utilities.

Beginning April 1, 2012, there is a separate schedule of two-inch and smaller tap fees for water services that are off an arterial to account for the higher costs associated with these jobs. In certain situations, this new structure will give a developer a choice whether to install a tap off an arterial, or save money by installing it off a residential street.

Table 2 shows the 2012 fees for 2-inch and smaller taps.

**Table 2**
**2012 Two-inch and Smaller Tap Fees**

| Type | Size | Residential | Arterial |
|---|---|---|---|
| **Domestic** | **¾ -inch** | $2,167 | $2,558 |
| **Domestic** | **1-inch** | $2,283 | $2,682 |
| **Domestic** | **1 ½ -inch** | $5,152 | $5,821 |
| **Domestic** | **2 –inch** | $5,491 | $6,361 |
| **Fire** | **2 –inch** | $7,576 | $10,508 |

## C. Separation of Certain Costs

Beginning in 2009, SPU started to separately identify certain costs that had previously been included in the standard fee for each tap. These were charged separately because they may not be applicable for each individual tap (e.g. only one street use permit is required for a site, even if there are multiple taps for the job). The following costs were separated out of the cost of each tap:

1. **Street Restoration** – Street restoration costs are determined based on street paving type and conditions, in accordance with the requirements of SDOT Street and Sidewalk Opening and Restoration Director's Rules.
2. **Street Use Permit** –SDOT (or another municipality if the job is outside the Seattle city limits, e.g. City of Shoreline) requires a utility permit fee if SDOT or the municipality is performing the street restoration work.
3. **Street Use Inspection Fee** – An SDOT inspector performs an initial and final inspection when SDOT is performing the street restoration work.

SPU continued to account for certain other costs (e.g. pre and post-inspection) by adding 10 percent to the total cost of each tap fee. This methodology tended to understate these costs for smaller taps and overstate costs for larger taps.

During its recent review, SPU made the decision to eliminate the 10 percent adder and separately charge specific costs to increase equity among customers. Beginning April 1, 2012 the following costs are charged on a per site basis:

1. **Pre- and post-inspection** – These inspections are performed by an SPU inspector, who performs a pre-inspection to inspect the type of street, identify any pre-existing conditions and mark the area for the street cut to be made. The post-inspection involves an inspection of the water service work, prior to the street restoration. This is only required if SDOT performs the street restoration.
2. **Street cutting** –If SDOT is performing the street restoration, following the pre-inspection an SPU crew performs a street cut prior to the water tap crew beginning its work.
3. **Traffic Control Plan Review** – If the water service work involves an arterial, SPU must submit a traffic control plan to SDOT, who reviews the plan and approves it.
4. **Traffic Control** – If the water service work involves an arterial, traffic control may be required. This traffic control may utilize Seattle police officers or a vendor flagger.

Table 3 summarizes the changes made for various charges in recent years.

**Table 3**
**Separate Charges Previously Included in Tap Fees**

| Charge | 2008 | 2009 | 2010/11 | 2012 |
|---|---|---|---|---|
| **Street Restoration** | Included in each tap fee(varies by size) | **Separate charge based on conditions** | Separate charge based on conditions | Separate charge based on conditions |
| **Street Use Permit*** | Not separately identified. Assumed included in "Other Costs" for each tap (e.g. $100 for ¾-inch tap). | **$101** | $101 | $146 |
| **Street Use Inspection Fee*** | | **$150** | $150 | $172 |
| **Pre & Post Inspection** | | Part of 10% adder | Part of 10% adder | **$327 per job site** |
| **Street Saw Cut** | | | | **$497 per job site** |
| **Traffic Control Plan Review** | | | | **$172 per hour** |
| **Traffic Control** | | | | **$569 (if necessary)** |

* Fees shown are for jobs within Seattle city limits. Jobs in unincorporated King County or other cities are subject to the fees in these areas.

Table 4 shows a comparison of the water service fee (excluding street restoration) for the most common ¾-inch tap job with the previous standard fees and the new 2012 fees under various scenarios.

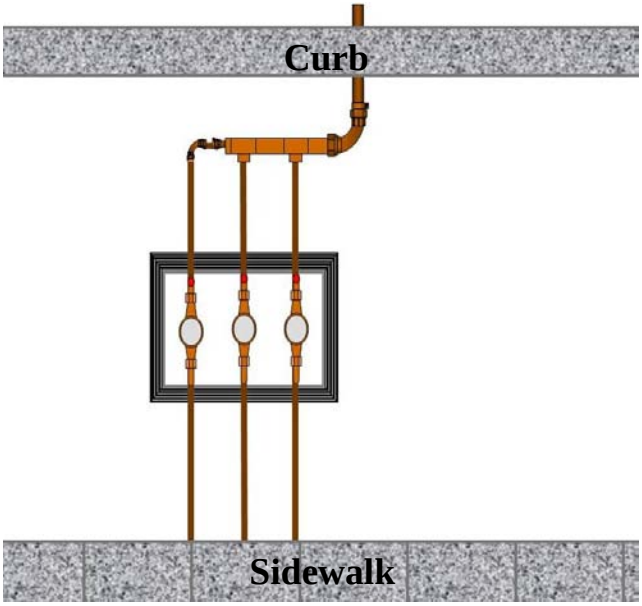
**Table 4**
**Water Service Fee Comparison – ¾-inch Tap**

| | | RESIDENTIAL | | ARTERIAL | |
|---|---|---|---|---|---|
| | 2011 | Private Restoration 2012 | City Restoration 2012 | Private Restoration 2012 | City Restoration 2012 |
| Tap Fee (3/4-inch) | $2,546 | **$2,167** | **$2,167** | **$2,558** | **$2,558** |
| Pre and post-inspection | * | **n/a** | **$327** | **n/a** | **$327** |
| Street saw cutting | * | **n/a** | **$497** | **n/a** | **$497** |
| Subtotal | $2,546 | **$2,167** | **$2,991** | **$2,558** | **$3,382** |
| Connection Charge (3/4-inch) | $743 | **$920** | **$920** | **$920** | **$920** |
| Street Use Permit Fee | $101 | **$146** | **$146** | **$146** | **$146** |
| Street Use Inspection Fee | $150 | **$172** | **$172** | **$172** | **$172** |
| Traffic Control Plan (TCP) Review | n/a | **n/a** | **n/a** | **$172** | **$172** |
| **TOTAL** | $3,540 | **$3,405** | **$4,229** | **$3,968** | **$4,792** |

* Previously included in each tap fee

## D. Reduction for tap jobs installed with a manifold

A manifold is a single pipe connected to the water main that branches into separate individual meters. For example, a townhouse might have one pipe off the main that branches into three separate meters for individual units. This following diagram shows a typical configuration for a three-tap installation with a manifold.




Effective April 1, 2012, multiple ¾-inch and one-inch services installed with a manifold will receive a reduction in fees for each additional tap. Table 4 takes a private contractor street restoration tap fee job and compares the cost of three individual ¾-inch taps to a job with three taps that uses a manifold:

**Table 4**

| | Private Restoration | |
|---|---|---|
| | 2012 Single Tap | 2012 Manifold w/ 3 Taps |
| Tap Fee (3/4-inch) | $2,167 | $6,501 |
| Tap Fee Reduction ($533 per each additional tap) | n/a | -$1,066 |
| Pre and post-inspection | n/a | n/a |
| Street saw cutting | n/a | n/a |
| | $2,167 | $5,435 |
| Connection Charge (3/4-inch) | $920 | $2,760 |
| Street Use Permit Fee | $146 | $146 |
| Street Use Inspection Fee | $172 | $172 |
| Traffic Control Plan (TCP) Review | n/a | n/a |
| TOTAL | $3,405 | **$8,513** |
| TOTAL FOR 3 INDIVIDUAL TAPS | **$10,215** | |

## VI. 2012 Changes for Three-inch and Larger Taps

Historically, tap fees have been developed for most three-inch and larger tap jobs, but the costs can vary significantly from site to site for these jobs. Table 5 shows the range of actual costs for large tap jobs from 2010 and 2011 compared to the tap fee charges in effect.

**Table 5**

| | Count | 2010/11 Tap Fee | Minimum Cost* | Maximum Cost* |
|---|---|---|---|---|
| 3-inch Domestic | 14 | $30,119 | $15,778 | $56,686 |
| 4-inch Domestic | 19 | $31,375 | $20,741 | $44,186 |
| 6-inch Domestic | 1 | $42,885 | $30,872 | $30,872 |
| 4-inch Fire | 54 | $17,410 | $5,089 | $50,774 |
| 6-inch Fire | 43 | $19,960 | $8,177 | $40,018 |
| 8-inch Fire | 7 | $26,063 | $9,387 | $35,005 |

* Costs based on Maximo data plus 10% plus taxes.

Recognizing that these larger tap jobs can vary significantly from job to job, SPU implemented a new process for three-inch and larger water service requests. Beginning April 1, 2012, SPU will develop a site-specific job cost upfront for these larger water service requests and for any water service work in which there are no standard fees. The site-specific cost will be determined by SPU field staff that will visit the site and provide the job specific cost to the customer/developer within 10 days of the initial request. This cost is the charge to the customer and is valid for 365 days from the date the cost is provided.

The advantages to this new process for three-inch and larger taps are:

1. **Cost Equity** – A site-specific cost will help ensure that a customer pays a fair amount based on the uniqueness of the tap job.
2. **Cost Recovery** - Developing an upfront site-specific cost will help identify all costs beforehand to ensure that all costs are recovered.
3. **Greater Transparency** - Previously, some large tap jobs required a time and material deposit from the customer. Actual costs were trued-up with the deposit after the job was completed and at times resulted in a large additional bill to the customer late in process. With the new process, the customer will know the total cost upfront for the job and will not have to pay unexpected charges later in the process.
4. **Improved Documentation** – A unique activity number will be assigned to each large tap installation, which will improve the documentation of the work and costs associated with the tap job. This will also enable improved performance measurements for the water tap crews.

5. **Improved Accountability and Project Management** – Large water tap installations will now be closely managed from the beginning to the end of the job and there will be greater internal control between the site-specific cost and the actual cost of the tap job. SPU will be conducting quarterly review meetings between SPU Field Operations, Customer Service, Engineering and Finance staff to review and reconcile the site-specific cost estimate to the actual costs for each large tap installation in order to improve future cost development.

## VII. Jurisdictional Comparisons

Table 6 provides a comparison of water tap fees to other regional water utilities. Some general conclusions on these comparisons:

- SPU's tap fees are competitive with other jurisdictions, particularly for the most common ¾-inch and one-inch tap sizes.
- SPU's new process for three-inch and larger taps is consistent with most other regional utilities, which do not have specific tap fees for three-inch and larger taps. Many of these utilities charge the actual cost of the job.

**Table 6**

**2012 Water Main Installation Comparison**

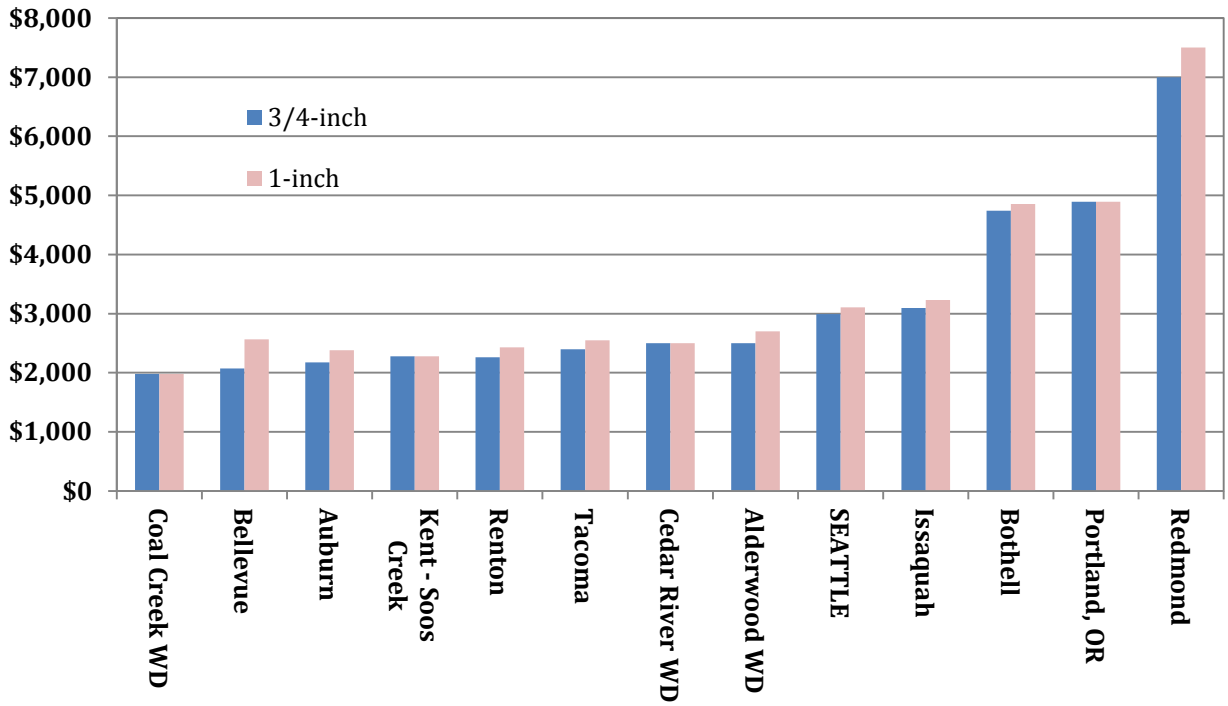
| | ¾-inch | 1-inch | 1 ½ -inch | 2-inch | 3-inch or greater |
|---|---|---|---|---|---|
| **Coal Creek WD** | $1,980 | $1,980 | $3,435 | $3,435 | Actual Cost |
| **Bellevue** | $2,071 | $2,567 | $4,129 | $4,018 | Developer Extension Agreement |
| **Auburn** | $2,175 | $2,380 | $3,210 | $3,488 | Actual Cost |
| **Kent - Soos Creek** | $2,279 | $2,279 | n/a | n/a | n/a |
| **Renton** | $2,260 | $2,430 | $3,600 | $4,030 | Contractor provided |
| **Tacoma** | $2,400 | $2,550 | Actual Cost | Actual Cost | Actual Cost |
| **Cedar River WD** | $2,500 | $2,500 | $3,500 | $3,500 | Actual Cost - $3500 deposit |
| **Alderwood WD** | $2,500 | $2,700 | $3,900 | $4,500 | Actual Cost |
| **SEATTLE *** | **$2,991** | **$3,107** | **$5,976** | **$6,315** | **Site specific cost** |
| **Issaquah** | $3,094 | $3,230 | $5,887 | $6,466 | T&M plus 15% overhead |
| **Bothell** | $4,742 | $4,855 | n/a | n/a | n/a |
| **Portland, OR** | $4,895 | $4,895 | $9,925 | $9,925 | $28-34k |
| **Redmond** | $7,000 | $7,500 | $8,000 | $8,500 | n/a |

***** Seattle based on residential tap fee plus pre and post-inspection fee plus street cut fee

**Figure 4** provides a comparison water tap fees to other regional water utilities for the most common ¾-inch and 1-inch tap sizes.

**Figure 4**

**¾-inch and 1-inch Meter Installation Comparison**




## VIII. Steps Toward Cost Recovery

The SLI requested recommendations on reducing the difference between revenues and expenses by at least $250,000 in 2013 and an additional $250,000 in 2014. The recent changes made by SPU to its new tap work process and tap fee development will improve cost recovery by improving the accuracy of both revenues and expenditures. As several of the changes became effective on April 1, 2012, data is not yet available to determine the impacts of these changes. However, the following provides SPU's assessment of how the changes will impact tap fee revenues and/or expenditures:

- The revised 2012 tap fees, which include updates to the inputs for two-inch and smaller taps, a separate schedule for water installations involving an arterial street, and the breakout of certain charges is expected to increase revenues in 2012 and further in 2013 as the fees for ¾-inch and 1-inch taps are set to recover their costs.

- The new process for street restoration is expected to provide more accurate estimates to help ensure full cost recovery to SPU as it works with SDOT and collects these costs upfront from the customer. The impact is unknown at this time, however SPU will be monitoring and reconciling street restoration costs with SDOT.

- The new process for three-inch and larger taps is projected to increase revenues as site-specific costs are developed for these jobs. As SPU gains experience and data associated with developing site-specific costs for larger tap jobs, the impact of this change can be estimated.

SPU plans to closely monitor revenues and expenditures associated with new water installations and is agreeable to reporting back to Council at a later date once the impacts of these changes can be quantified.

**2012 Seattle City Council Statement of Legislative Intent**

**Approved**

| Tab | Action | Option | Version |
|---|---|---|---|
| 7 | 1 | A | 1 |

**Budget Action Title:** SPU update of tap fees and related work processes.

Councilmembers: Conlin; Harrell; O'Brien

Staff Analyst: Meg Moorehead

**Budget Committee Vote:**

| Date | Result | SB | BH | SC | TR | JG | NL | RC | TB | MO |
|---|---|---|---|---|---|---|---|---|---|---|
| **11/08/2011** | **Pass 9-** | **Y** | **Y** | **Y** | **Y** | **Y** | **Y** | **Y** | **Y** | **Y** |

**Statement of Legislative Intent:**
The Council requests that Seattle Public Utilities (SPU) submit a report that:

1) Evaluates the formula used to calculate tap fees charged when a new water service is connected to the City system, with a goal of adjusting the formula to recover to the greatest extent possible SPU's cost of providing new taps services.

2) Evaluates the work processes used to connect new water taps to the City system and identifies opportunities to conduct the work more efficiently to lower the cost of new taps services.

3) Recommends how to narrow the gap between new taps revenues and expenditures by updating the formula for calculating tap fees, reducing cost of new taps services through more efficient work processes, or both. The recommendations should seek to reduce the gap by at least $250,000 in 2013 and an additional $250,000 (for a total reduction of at least $500,000) in 2014.

**Responsible Council Committee(s):** Seattle Public Utilities & Neighborhoods

**Date Due to Council:** May 1, 2012