Kennedy/Jenks Consultants

1191 2nd Avenue, Suite 630
Seattle, Washington 98101
206-652-4905
206-652-4927 (Fax)

# Independent Review
# 2001 Contract Rate Study

April 2011

Prepared for

Seattle Public Utilities
Seattle Municipal Tower
700 5th Avenue, Suite 5000
Seattle, WA  98104

K/J Project No. 0797015.08

# Table of Contents

*List of Tables* ............ *ii*

*List of Figures* ............ *ii*

*List of Appendices* ............ *iii*

Section 1: Introduction ............ 1

1.1 Background and Objectives ............ 1
1.2 Scope of Services ............ 3
1.3 Conduct of the Independent Review ............ 3

Section 2: SPU Ratesetting Methodology and Key Assumptions ............ 5

2.1 Overview of Methodology ............ 5
2.1.1 Allocation of Costs into Cost Pools ............ 5
2.1.2 2001 Contract Rate Study Revenue Requirement ............ 5
2.1.3 Rate Design ............ 6
2.1.3.1 Ratemaking Principles ............ 6
2.1.3.2 Transition Policies ............ 6
2.1.3.3 Rate Structure ............ 6
2.1.4 Southwest Sub-Region Surcharge ............ 6
2.1.5 East Sub-Region Surcharge ............ 6
2.1.6 Cascade Water Alliance Agreement ............ 7
2.1.7 Northshore Utility District Agreement ............ 7
2.1.8 City of Renton Agreement ............ 7
2.2 Key Assumptions ............ 7

Section 3: Overview of the 2001 Contract Rate Study ............ 9

3.1 Cost Pools ............ 9
3.1.1 Overview of Methodology ............ 9
3.1.2 Rate Study Allocations ............ 10
3.2 Revenue Requirements ............ 11
3.2.1 Overview of Methodology ............ 11
3.2.2 Rate Study Projections ............ 13
3.3 Rate Design ............ 16
3.3.1 Overview of Methodology ............ 16
3.3.2 Rate Study Results ............ 17
3.4 Southwest Sub-Region Surcharge ............ 18
3.5 East Sub-Region Surcharge ............ 18
3.6 Cascade Water Alliance Revenue Requirement ............ 19
3.7 Northshore Utility District Revenue Requirement ............ 19
3.8 Renton Revenue Requirement ............ 20

Section 4: Summary of Independent Review ............ 21

# Table of Contents (cont'd)


4.1 Requirements of the 2001 Contract ....... 21
4.1.1 Cost Pools ....... 21
4.1.2 Accounting ....... 21
4.1.3 Infrastructure Costs ....... 21
4.1.4 Operations Costs ....... 22
4.1.5 Disposition Costs ....... 22
4.1.6 Facilities Charges ....... 22
4.1.7 Revenue Requirements ....... 22
4.1.8 Rate Design ....... 22
4.1.9 Southwest Sub-Region Surcharge ....... 23
4.1.10 East Sub-Region Surcharge ....... 23
4.2 Cost Pools ....... 24
4.3 Accounting ....... 24
4.4 Infrastructure Costs ....... 24
4.5 Operations Costs ....... 24
4.6 Disposition Costs ....... 24
4.7 Facilities Charges ....... 25
4.8 Revenue Requirements ....... 25
4.9 Rate Design ....... 25
4.10 Conclusions ....... 25


# List of Tables


1-1 Water Utilities Receiving Wholesale Water From Seattle
3-1 Categorization of Existing Water System Assets
3-2 Categorization of Projected Capital Improvements
3-3 Projected 2001 Contract Rate Study Revenue Requirements for Option 1
3-4 Projected 2001 Contract Rate Study Revenue Requirements for Option 2
3-5 Existing and Proposed Wholesale Customer Rates for Option 1
3-6 Existing and Proposed Wholesale Customer Rates for Option 2


# List of Figures


3-1 Projected 2011 Regional Cost
3-2 Calculation of the 2001 Contract Rate Study Revenue Requirement – Existing Supply
3-3 Calculation of the 2001 Contract Rate Study Revenue Requirement – Existing Transmission
3-4 Calculation of the 2001 Contract Rate Study Revenue Requirement – New Supply
3-5 2001 Contract Rate Study: Rate Design Flowchart

## List of Appendices

A Estimated and Projected Wholesale Water Demands

B Rate Making Principles

# Section 1: Introduction

This section describes the need for an independent review of Seattle Public Utilities' (SPU's) wholesale water rates, the scope of the independent review, and the conduct of the review. Much of the background information contained in this section was presented in the 2008 independent review and is repeated in this section. Additional information has been included as a result of the expected expiration of 1982 Contract and the execution of new agreements, effective 2011, for the 1982 purveyors.

## 1.1 Background and Objectives

The City of Seattle's water system provides water to the City of Seattle's retail customers and to other utilities on a wholesale basis. Several significant changes have occurred since the 2008 independent review of the 2001 Contract Rate Study was completed. The significant changes are summarized as follows:

- Effective 2011, the 1982 Contract is expected to expire upon execution Full and Partial Requirements Contracts, substantially similar to the existing Full and Partial Requirements Contracts, for six of the eight former 1982 purveyors. The remaining two 1982 Contract purveyors are expected to execute Emergency Intertie Agreements.

- The Cascade Water Alliance Contract was amended to include a supplemental block permitting up to 3.0 MGD additional through 2017.

- Per Section IV.E.12.b of the contracts, the transition growth charge expires at the end of 2011. These revenues will no longer be available to provide a base rate discount for the Full and Partial Requirements Contracts.

- Identification of separate rates for the four cost pools rather than a single 2001 Full and Partial Requirements Contract regional rate.

- Creation of a third block for the City of Renton that will have separately identified costs.

The City of Seattle and eighteen wholesale customers have signed Full or Partial Requirement Contracts for the Supply of Water. In addition, the City of Seattle has entered into separate agreements for water supply with the Cascade Water Alliance (Cascade) and the Northshore Utility District (NUD) and is expected to enter into a separate agreement with the City of Renton (Renton). For the purposes of this report, these eighteen contracts are collectively referred to as the "Contract" and customers under these contracts are referred to as wholesale customers as identified in Table 1-1. Additionally, Table 1-1 identifies the types of SPU wholesale water contracts and their respective customer designations.

Table 1-1: Water Utilities Receiving Wholesale Water From Seattle

| Contract Name | Referred to in this Report As | Reviewed in this Report | Customers Referred to in this Report As |
|---|---|---|---|
| City of Seattle Emergency Intertie Agreements | Emergency Intertie Contract | No | City of Edmonds<br>Lake Forest Park Water Districts |
| City of Seattle Full (or Partial) Requirements Contract for the Supply of Water | 2001 Contract<br>Full and Partial Requirements Contracts | Yes | Wholesale Customers[(a)] |
| 50-Year Declining Block: Water Supply Agreement Between the City of Seattle & the Cascade Water Alliance | Cascade Agreement | Yes | Cascade Members[(b)] |
| Fixed Block: Water Supply Agreement Between the City of Seattle & Northshore Utility District | NUD Agreement | Yes | Northshore Utility District<br>NUD |
| City of Seattle Partial Requirements Contract for the Supply of Water to the City of Renton | Renton Agreement | Yes | City of Renton<br>Renton |

**Notes:**

(a) Wholesale customers include Cedar River Water and Sewer District, City of Mercer Island, Coal Creek Utility District, Highline Water District, King County WD No. 20, King County WD No. 45, King County WD No. 125, Olympic View Water District, Soos Creek Water & Sewer District, Shoreline Water District, Woodinville Water District, City of North Bend, City of Bothell, City of Duvall, King County WD No. 49, King County WD No. 90, and King County WD No. 119.

(b) Cascade members that can receive water from the City of Seattle include the Cities of Bellevue, Issaquah, Kirkland, Redmond, and Tukwila, the Sammamish Plateau Water & Sewer District, and the Skyway Water & Sewer District. The Covington Water District is an additional Cascade member that does not receive water from the City of Seattle.

Section IV.G.2 of the 2001 Contract contains the following requirement for an independent rate consultant.

> Rate Consultant. An independent rate consultant shall be selected by Seattle in consultant with the Operating Board. Detailed information and progress reports from the consultant will be made to Water Utility during the course of the study upon drafting each major study section directly affecting Water Utility and other Wholesale Customers. A final consultant report shall be made available to Water Utility not less than 30 days before Seattle formally transmits any resulting rate adjustment proposal to the Operating Board.

This requirement is also included in Section IV.G.3 of the Renton Agreement but not included in the Cascade or NUD Agreements. Accordingly, the primary objective of this independent review is to fulfill the obligation of the City of Seattle under the 2001 Contract and Renton Agreement to perform an independent review of its wholesale water rates in accordance with the ratesetting principles established in the 2001 Contract.

## 1.2 Scope of Services

To accomplish this objective, Seattle Public Utilities authorized Kennedy/Jenks Consultants (Contract # CO6-067 Work Assignment 8) to prepare this independent review of the proposed water rates for the Wholesale Customers. The scope of services for this independent review is as follows.

> The Consultant shall provide an independent review of SPU's 2012-2014 Wholesale Rate Study for customers under the various 2001-type Contracts ("2001 Contract Rate Study"). The review will evaluate whether the 2001 Contract Rate Study is consistent with the terms of its water supply agreements referred to by SPU as the "Full Requirements Contracts," "Partial Requirements Contracts," "Declining Block Contract," and "Fixed Block Contract."
>
> The review will summarize the requirements of the contracts listed above, identify how those requirements are reflected in the 2001 Contract Rate Study, and verify the calculations contained in SPU's rate model used to prepare the 2001 Contract Rate Study. Where available, the review will identify other rate making assumptions used to develop the 2001 Contract Rate Study that aren't explicitly stated in the 2001-Type contracts. Based on interviews with SPU staff, the Consultant will summarize the aspects of the 2001 Contract Rate Study that have changed since the previous rate study was completed in 2008. Consultant shall also use judgment to identify any other significant items of interest to the wholesale customers, such as the drivers of any rate changes.
>
> The review will accept certain model data as accurate and will not verify the reasonableness of model input data including flow allocators, average service lives, expenditure data from the applicable SPU budget, capital improvement costs, and demand projections.
>
> The Consultant will document the review in a written draft report for submittal to SPU staff for review. Upon receipt of SPU comments, the comments will be incorporated as applicable, and the updated draft will be sent to individual wholesale customers for review. Again, upon receipt of comments, the comments will be incorporated as applicable, and the final report will be prepared. The final report will be presented by Consultant at the joint SPU-wholesale committee ("Operating Board").

## 1.3 Conduct of the Independent Review

The independent review was initiated by a meeting with Ms. Regina Carpenter of SPU's Finance Division who provided copies of the 2001 Contract, Cascade Agreement Amendment and NUD Agreement, Renton Agreement, 2001 Contract Rate Study, and selected backup data.

It was assumed that the underlying information provided is accurate. After reviewing the underlying information provided, additional information was requested and provided. This compilation of information formed the basis of the independent review. In general, the underlying information provided could not be independently verified and this review is limited to analysis of procedural conformance to the 2001 Contract. However, key ratemaking assumptions are critically reviewed and review comments are provided as appropriate. The 2001 Contract Rate Study as it relates to the Cascade Agreement, NUD Agreement and Renton Agreement was also reviewed. Two ratesetting options are presented in the 2001 Contract Rate Study. The options differ based on the rate of revenue recovery of true-up balances. The scope of the independent review does not include the Northwest Sub-Region which is served under a wheeling agreement with the Olympic View Water District or the Partial Requirements Contract with the City of North Bend.

# Section 2: SPU Ratesetting Methodology and Key Assumptions

The basic ratesetting methodology and key assumptions utilized by SPU were summarized in the 2008 independent review. The summary is reported in this section and modified as necessary to incorporate the methodology and assumptions used in the 2001 Contract Rate Study provided for this independent review.

## 2.1 Overview of Methodology

The 2001 Contract Rate Study covers the seven-year period from 2010 through 2016, and proposes two options for a schedule of wholesale customer rates for 2012 through 2014. The primary difference between the two options is the rate of recovery of true-up balances. Option 1 spreads the balances evenly between all three years while Option 2 places a higher portion of the balance in the first year. The following paragraphs are an overview of the methodology used to develop the wholesale customer rates for Option 1 and Option 2 with additional detail provided in the sections that follow.

The calculations that comprise the 2001 Contract Rate Study Options 1 and 2 were developed and provided by SPU, and are primarily located in the following spreadsheet files: "2001 Contract Rates Option 1 RAC 031611.xlsx" and “2001 Contract Rates Option 2 RAC 031611.xlsx” calculates the revenue requirement to be collected from the City of Seattle's wholesale customers and the rate schedule applicable to the 2001 Contract purveyors.

SPU has developed projected 2001 Contract revenue requirements on an annual basis through 2016. Historical revenue requirements are reported for 2010, and projected revenue requirements are reported for 2011 through 2016.

### 2.1.1 Allocation of Costs into Cost Pools

SPU's water system expenses are divided into cost pools that include existing supply, new supply, existing transmission, and new transmission. Additional cost pools are created to identify the costs associated with the Southwest Sub-Region facilities and the East Sub-Region facilities. For cost allocation purposes, Seattle’s retail service area is considered a wholesale customer of the water system. These cost pools do not include expenses for SPU's retail water distribution system.

### 2.1.2 2001 Contract Rate Study Revenue Requirement

The revenue requirement is the sum of applicable operations and infrastructure costs. Flow-based and capacity-based allocation factors are used to establish the proportion of total system costs that are to be recovered from wholesale customers. A true-up adjustment exists to reconcile cost and revenue targets with actual costs incurred and revenues received.

### 2.1.3 Rate Design

#### 2.1.3.1 Ratemaking Principles

Section IV.A of the 2001 Contract describes ratemaking principles and is included in Appendix B. Ratemaking principles that are applicable to the design of rates to recover the 2001 Contract Rate Study revenue requirement include the following:

- Abrupt changes in financial policies should be avoided.
- The rate structure should encourage the efficient use of water, conservation, and the timely development of new environmentally responsible water sources, and should incorporate seasonal rates and other pricing approaches to encourage efficient use.
- The rate structure should be innovative, flexible, and adaptive whenever it is cost effective and beneficial in furthering the ratemaking policies.
- The rate structure should be simple to administer and easily understandable.
- The rate structure should be fair and equitable while balancing the needs of all parties.

#### 2.1.3.2 Transition Policies

Section IV.E.12 of the Contract has two additional provisions for rate-setting policies effective through December 31, 2011. The first provision concerns the collection of facilities charges and is not part of this independent review. The second provision concerns the transition growth surcharge. This surcharge of $0.60/hundred cubic feet (ccf) will be applied until January 1, 2012. Revenues from the transition growth surcharge were used to reduce peak and off-peak volume rates. Because this discount will no longer be realized from the surcharge revenue, the rates will adjust accordingly.

#### 2.1.3.3 Rate Structure

The 2001 Contract revenue requirement is recovered from purveyors by a peak volume rate effective from May 16$^{th}$ through September 15$^{th}$, and an off-peak volume rate effective from September 16$^{th}$ through May 15$^{th.}$

### 2.1.4 Southwest Sub-Region Surcharge

A surcharge applied to five wholesale customers recovers the costs associated with certain facilities in the Southwest Sub-Region. The Southwest Sub-Region is comprised of Highline Water District, King County Water District No. 20, No. 45, No. 49 and No. 125.

### 2.1.5 East Sub-Region Surcharge

A surcharge applicable to SPU and Mercer Island recovers the costs associated with certain facilities in the East Sub-Region.

### 2.1.6 Cascade Water Alliance Agreement

In 2003, a 50-Year Declining Block Water Supply Agreement was established between the City of Seattle and Cascade. This Agreement obligates Seattle to supply a fixed amount of water and includes provisions for cost recovery. This agreement was amended on January 1, 2009 to increase the block water (Supplemental Block) available for purchase by Cascade and its members through December 31, 2023.

### 2.1.7 Northshore Utility District Agreement

In 2004, a Fixed Block Water Supply Agreement was established between the City of Seattle and NUD. This Agreement obligates Seattle to supply a fixed amount of water and includes provisions for cost recovery. The Contract requires that NUD (as a holder of a block purchase contract) be included in the 2001 Contract Rate Study.

### 2.1.8 City of Renton Agreement

At the time of this review, SPU and the City of Renton are expected to execute a Partial Requirements Block Purchase Contract. The Renton Contract is a Partial Requirements Contract for water supply, with an additional provision for additional conservation services. The contract includes provisions for a New Supply Cost Pool with cost recovery for these additional conservation services allocated at 5.7% of the asset value of the Pool.

## 2.2 Key Assumptions

In addition to the ratemaking requirements of the 2001 Contract specified above, there were a number of additional key assumptions required to develop the 2001 Contract wholesale customer rates.

- Projected water demands for wholesale customers, Cascade, Renton and NUD provided by SPU are shown in Appendix A.
- The preliminary 2010 O&M expense as of January 11, 2011 and projected 2011 O&M budget were utilized for the 2001 Contract Rate Study. The estimated budget at this level of detail represents a 2.4 percent increase over 2010. Projected O&M expenditures after 2011 are escalated for an annual inflation rate of 2.0 percent.
- Interest rate used in Allowance for Funds Used During Construction (AFUDC) calculations is 4.7 percent based on an analysis of the cost of capital in 2010. This interest rate results in a Rate of Return on Investment of 6.2 percent in accordance with the 2001 Contract.
- True-up adjustments projected in 2011 will be amortized over the 2012-2014.
- NUD block is assumed to be 8.55 mgd.
- Cascade base block is assumed to be 30.3 mgd; supplemental block is assumed to be 3.0 mgd.

- Seattle water system firm yield is assumed to remain 171 mgd.
- The peak rate factor for ratesetting purposes is 1.485.

# Section 3: Overview of the 2001 Contract Rate Study

This section summarizes the results of the 2001 Contract Rate Study. As with the other sections, the format of this section is similar to that of the 2008 independent review. The information presented is updated based on the current rate study provided by SPU.

## 3.1 Cost Pools

### 3.1.1 Overview of Methodology

Tables 3-1 and 3-2 show the categorization of water system assets and capital improvements in the 2001 Contract Rate Study. In addition to the cost pools mentioned in the 2001 Contract, SPU also categorizes assets and capital improvements into additional categories that are not recovered by the wholesale customer rates, such as Seattle (Seattle's retail water distribution system) and the Northwest Sub-Region.

**Table 3-1: Categorization of Existing Water System Assets**

| Categories | Used to Calculate 2001 Contract Rate Study Revenue Requirements | Used to Calculate East Sub-Region surcharge | Used to Calculate SW Sub-Region surcharge |
|---|---|---|---|
| Seattle | | | |
| Existing Transmission | X | | |
| Existing Supply | X | | |
| New Supply, Rate Based | X | | |
| New Supply, Facilities charge | | | |
| NW Sub-Region | | | |
| East Sub-Region | | X | |
| SW Sub-Region (585, WSR, WSPL, DMPL, MRF) | | | X |

**Table 3-2: Categorization of Projected Capital Improvements**

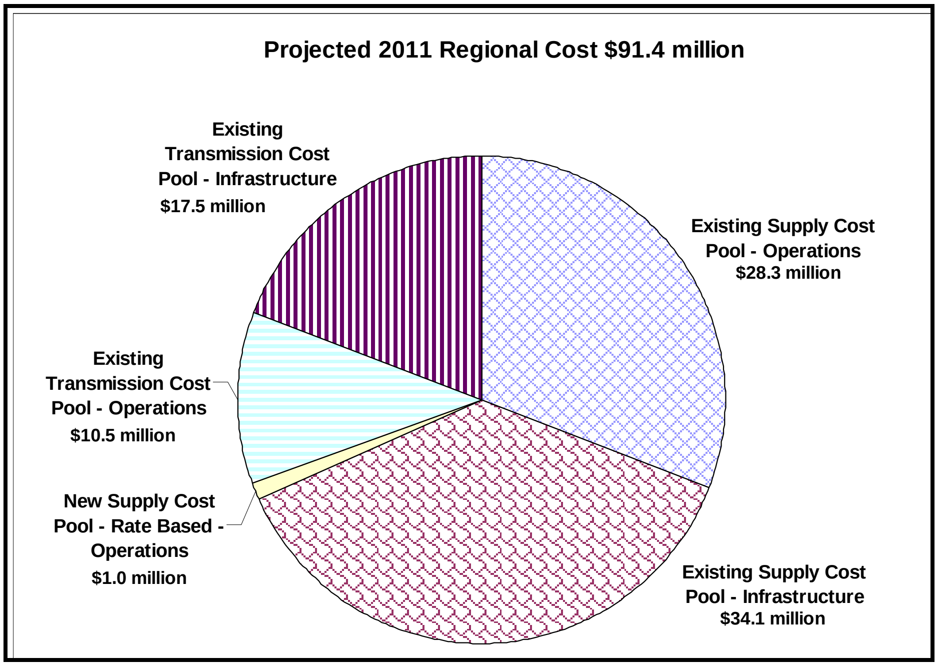
| Categories | Used to Calculate 2001 Contract Rate Study Revenue Requirement | Used to Calculate SW Sub-Region surcharge |
|---|---|---|
| Seattle | | |
| Existing Supply | X | |
| New Supply | X | |
| Existing Transmission | X | |
| NW Sub-Region | | |
| SW Sub-Region (585, WSR, WSPL, DMPL) | | X |

SPU is allowed to recover operations costs for specific activities defined in the 2001 Contract. Administrative costs associated with operations costs are also recoverable using cost indices.

### 3.1.2 Rate Study Allocations

The 2001 Contract Rate Study contains a calculation of the projected regional cost, defined as the sum of the Existing Supply Cost Pool, the rate-funded portion of the New Supply Cost Pool, and the Existing Transmission Cost Pool. Figure 3-1 shows the projected 2011 regional costs, showing the operations and the infrastructure costs of the various cost pools. Similar regional costs were calculated for the years 2012 through 2016.

Figure 3-1: Projected 2011 Regional Cost




## 3.2 Revenue Requirements

### 3.2.1 Overview of Methodology

In the 2001 Contract Rate Study, SPU projected the revenue requirement on an annual basis from 2011 through 2016. SPU also reported historical revenue requirements for 2010. Figures 3-2 through 3-4 illustrate the revenue requirement calculation steps beginning with the determination of the regional cost. The regional cost is the sum of the costs from the Existing Supply Cost Pool (Figure 3-2), the Existing Transmission Cost Pool (Figure 3-3), and the portion of the New Supply Cost Pool (Figure 3-4) that is funded by rates. For each cost pool, the cost recoverable through rates is the sum of operations costs and infrastructure costs. Infrastructure costs are the sum of (1) depreciation expense and (2) the product of the net book value (NBV) and the return on assets (ROA).

Figure 3-2: Calculation of the 2001 Contract Rate Study Revenue Requirement – Existing Supply

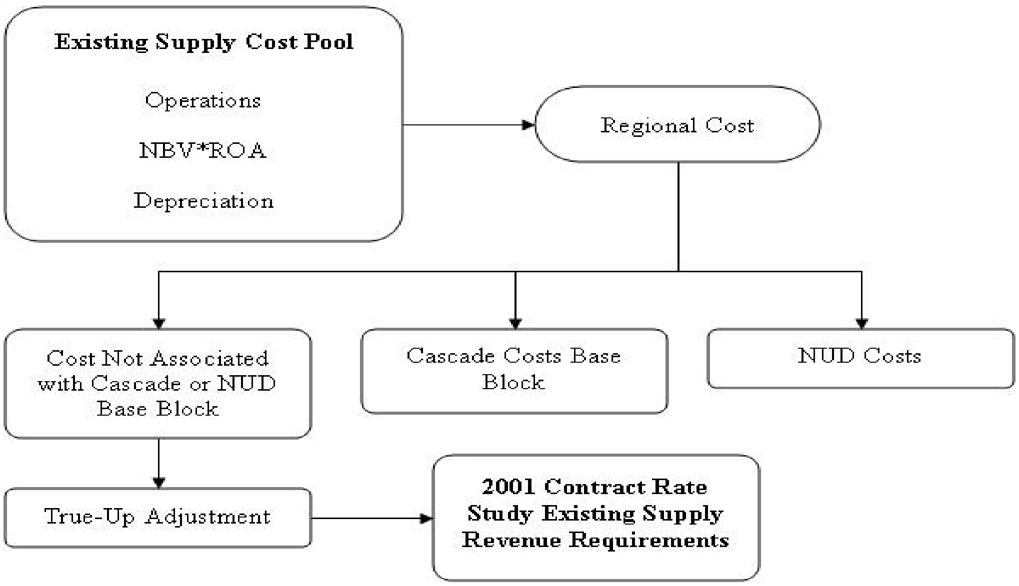



Figure 3-3: Calculation of the 2001 Contract Rate Study Revenue Requirement – Existing Transmission

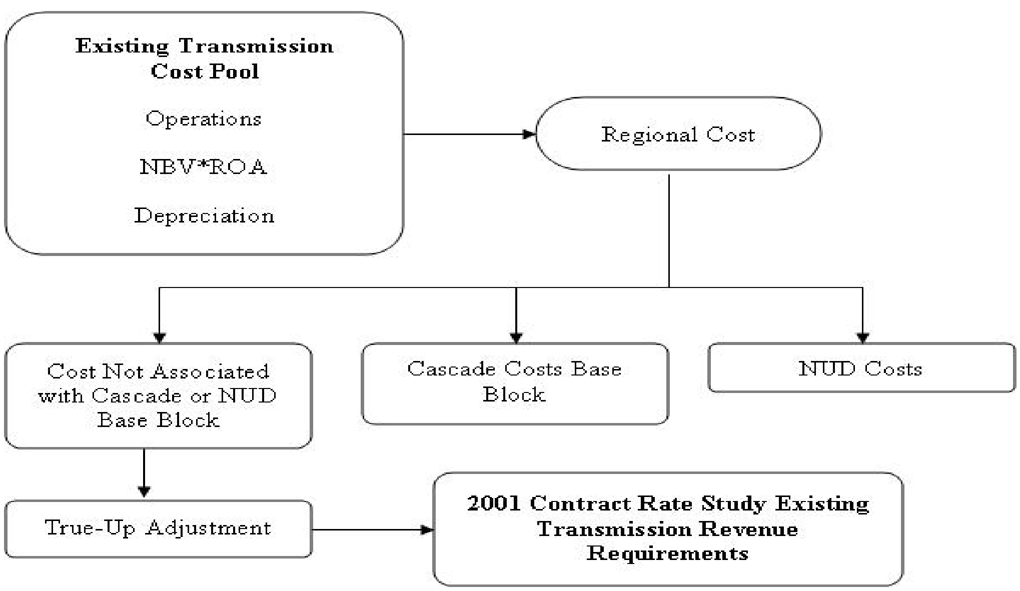
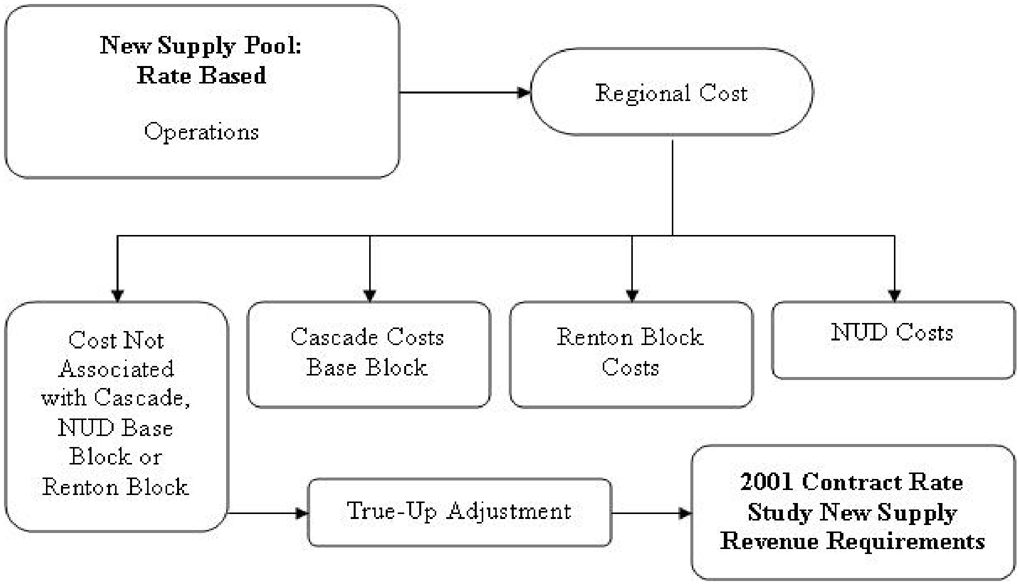


Figure 3-4: Calculation of the 2001 Contract Rate Study Revenue Requirement – New Supply




After the regional cost is determined, the next step is to determine the proportion of the regional cost for which the wholesale customers, Cascade, and NUD are responsible. This is done using the projected water demands for Seattle's retail customers and wholesale customers, combined with Cascade's and NUD's respective blocks of system capacity.

Next, the Cascade and NUD revenue requirement is subtracted. Cascade and NUD have entered into separate block purchase agreements, which stipulate revenue requirements to be based on their respective portions of existing system capacity. Renton is allocated a portion of the New Supply Cost Pool based on the contractually specified amount of 5.7 percent.

The final step in calculating the 2001 Contract Rate Study revenue requirement is the application of the true-up balance amortization. Wholesale water rates are established in advance, based on a projected set of costs and water sales. A true-up mechanism exists to adjust the revenue requirement in succeeding years, using actual costs and actual water sales.

The 2001 Contract Rate Study includes two ratesetting options based on the rate of revenue recovery of true-up balances. Option 1 spreads the balances relatively evenly between all three years and Option 2 recovers a higher portion of the balance in the first year. The rate of recovery is designed to eliminate the balance by 2014.

### 3.2.2 Rate Study Projections

Tables 3-3 and 3-4 summarizes the revenue requirements for 2011 through 2016, as projected by SPU for Options 1 and 2, respectively. Additional detail regarding specific numbers in this table is included in SPU's 2001 Contract Rate Study.

## Table 3-3: Projected 2001 Contract Rate Study Revenue Requirements for Option 1

| | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| **Existing Supply Cost Pool** | | | | | | |
| **Regional Cost**<br>Allocation to 1982 contract | **62,426,505** | **63,113,441** | **64,029,784** | **64,775,273** | **65,399,845** | **70,054,520** |
| Allocation to CWA Base Block | (11,282,769) | (11,406,924) | (11,572,541) | (11,707,278) | (11,820,161) | (12,661,433) |
| Allocation to NUD Block | (3,183,752) | (3,218,785) | (3,265,519) | (3,303,539) | (3,335,392) | (3,572,781) |
| Remaining Costs to F&P rates includes CWA supplemental block & Renton | 47,959,984 | 48,487,731 | 49,191,724 | 49,764,456 | 50,244,291 | 53,820,307 |
| True Up balance applied | - | 2,400,000 | 2,350,000 | 2,200,000 | - | - |
| **Amount to be collected through rates** | **47,959,984** | **50,887,731** | **51,541,724** | **51,964,456** | **50,244,291** | **53,820,307** |
| **Existing Transmission Cost Pool** | | | | | | |
| **Regional Cost**<br>Allocation to 1982 contract | **28,037,944** | **28,100,926** | **28,206,965** | **29,652,073** | **30,006,257** | **30,154,491** |
| Allocation to CWA Base Block | (5,067,489) | (5,078,873) | (5,098,038) | (5,359,222) | (5,423,236) | (5,450,027) |
| Allocation to NUD Block | (1,429,935) | (1,433,147) | (1,438,555) | (1,512,256) | (1,530,319) | (1,537,879) |
| Remaining Costs to F&P rates includes CWA supplemental block & Renton | 21,540,519 | 21,588,906 | 21,670,372 | 22,780,595 | 23,052,701 | 23,166,584 |
| True Up balance applied | - | 1,120,000 | 1,120,000 | 1,120,000 | - | - |
| **Amount to be collected through rates** | **21,540,519** | **22,708,906** | **22,790,372** | **23,900,595** | **23,052,701** | **23,166,584** |
| **New Supply Cost Pool - Rate Based** | | | | | | |
| **Regional Cost**<br>Allocation to 1982 contract | 979,548 | 999,139 | 1,019,121 | 1,039,504 | 1,060,294 | 1,081,500 |
| Allocation to NUD Block | (60,715) | (61,930) | (63,168) | (64,432) | (65,720) | (67,035) |
| Allocation to Renton Block | - | (56,951) | (58,090) | (59,252) | (60,437) | (61,645) |
| Remaining Costs to F&P rates includes CWA supplemental block | 918,832 | 880,258 | 897,863 | 915,821 | 934,137 | 952,820 |
| Transfer from/(to) FC cost pool | - | - | - | - | - | - |
| True Up balance applied | - | 38,000 | 38,000 | 38,000 | - | - |
| **Amount to be collected through rates** | **918,832** | **918,258** | **935,863** | **953,821** | **934,137** | **952,820** |

Source: SPU 2001 Contract Rate Study

## Table 3-4: Projected 2001 Contract Rate Study Revenue Requirements for Option 2

| | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| **Existing Supply Cost Pool** | | | | | | |
| **Regional Cost** | **62,426,505** | **63,113,441** | **64,029,784** | **64,775,273** | **65,399,845** | **70,054,520** |
| Allocation to 1982 contract | | | | | | |
| Allocation to CWA Base Block | (11,282,769) | (11,406,924) | (11,572,541) | (11,707,278) | (11,820,161) | (12,661,433) |
| Allocation to NUD Block | (3,183,752) | (3,218,785) | (3,265,519) | (3,303,539) | (3,335,392) | (3,572,781) |
| Remaining Costs to F&P rates includes CWA supplemental block & Renton | 47,959,984 | 48,487,731 | 49,191,724 | 49,764,456 | 50,244,291 | 53,820,307 |
| True Up balance applied | - | 3,800,000 | 2,100,000 | 800,000 | - | - |
| **Amount to be collected through rates** | **47,959,984** | **52,287,731** | **51,291,724** | **50,564,456** | **50,244,291** | **53,820,307** |
| **Existing Transmission Cost Pool** | | | | | | |
| **Regional Cost** | **28,037,944** | **28,100,926** | **28,206,965** | **29,652,073** | **30,006,257** | **30,154,491** |
| Allocation to 1982 contract | | | | | | |
| Allocation to CWA Base Block | (5,067,489) | (5,078,873) | (5,098,038) | (5,359,222) | (5,423,236) | (5,450,027) |
| Allocation to NUD Block | (1,429,935) | (1,433,147) | (1,438,555) | (1,512,256) | (1,530,319) | (1,537,879) |
| Remaining Costs to F&P rates includes CWA supplemental block & Renton | 21,540,519 | 21,588,906 | 21,670,372 | 22,780,595 | 23,052,701 | 23,166,584 |
| True Up balance applied | - | 1,900,000 | 1,450,000 | | - | - |
| **Amount to be collected through rates** | **21,540,519** | **23,488,906** | **23,120,372** | **22,780,595** | **23,052,701** | **23,166,584** |
| **New Supply Cost Pool - Rate Based** | | | | | | |
| **Regional Cost** | 979,548 | 999,139 | 1,019,121 | 1,039,504 | 1,060,294 | 1,081,500 |
| Allocation to 1982 contract | | | | | | |
| Allocation to NUD Block | (60,715) | (61,930) | (63,168) | (64,432) | (65,720) | (67,035) |
| Allocation to Renton Block | - | (56,951) | (58,090) | (59,252) | (60,437) | (61,645) |
| Remaining Costs to F&P rates | 918,832 | 880,258 | 897,863 | 915,821 | 934,137 | 952,820 |
| includes CWA supplemental block | | | | | | |
| Transfer from/(to) FC cost pool | - | - | - | - | - | - |
| True Up balance applied | - | 38,000 | 38,000 | 38,000 | - | - |
| **Amount to be collected through rates** | **918,832** | **918,258** | **935,863** | **953,821** | **934,137** | **952,820** |

Source: SPU 2001 Contract Rate Study

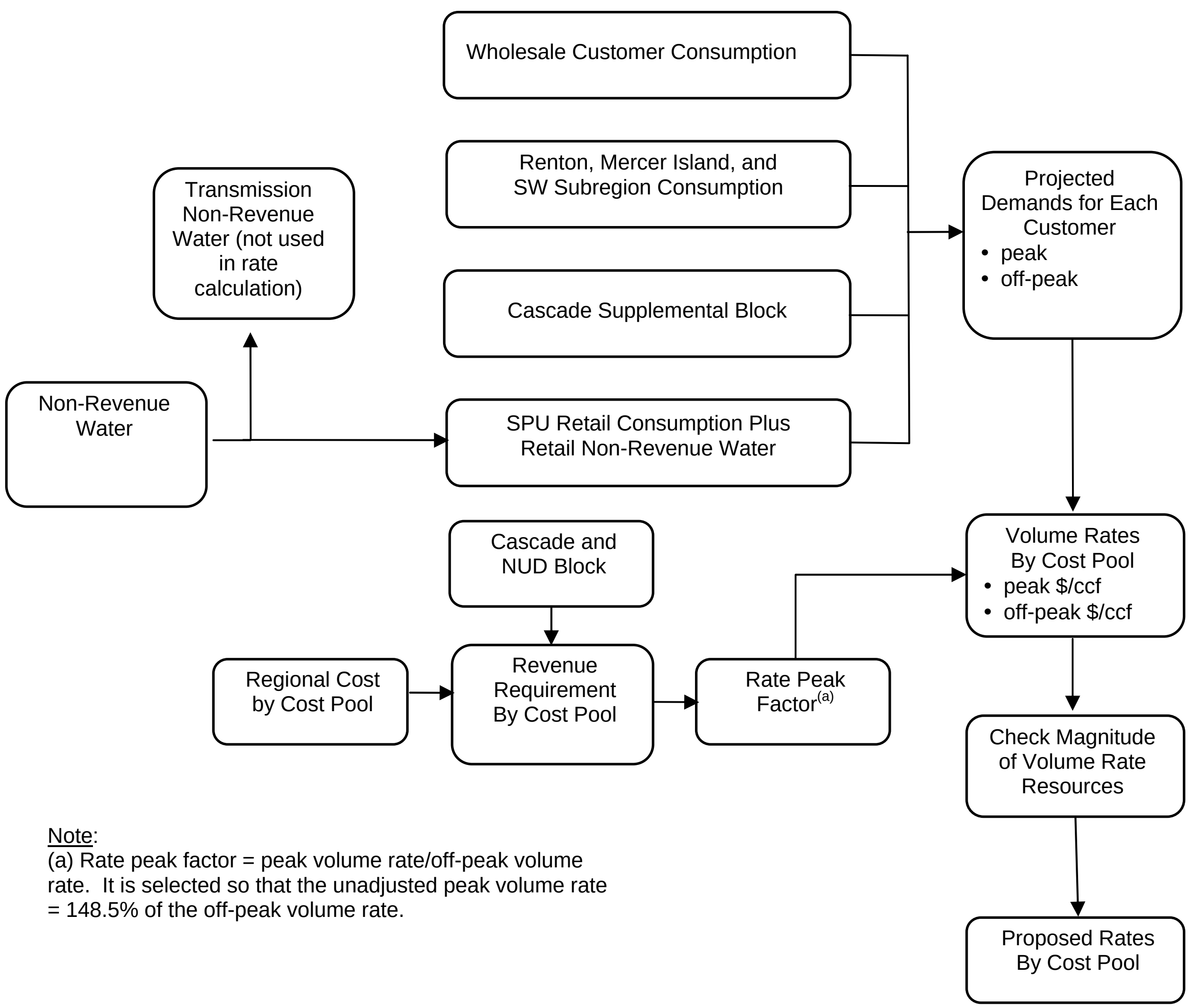
By the end of 2011, the true-up balances are projected to be $6.7 million in the Existing Supply Cost Pool, $3.1 million in the Existing Transmission Cost Pool, and $0.1 million in the New Supply Cost Pool.  The cost recovery allocations of true-up balances for Options 1 and 2 are projected to eliminate these balances by the end of 2014.

## 3.3 Rate Design

### 3.3.1 Overview of Methodology

Figure 3-5 shows the steps used to develop wholesale customer rates for 2012 through 2014. The wholesale customer rates, in units of $/ccf, consist of a peak volume rate effective from May 16 through September 15 and an off-peak volume rate effective from September 16 through May 15.  Separate rates are established for each cost pool.

Figure 3-5:  2001 Contract Rate Study: Rate Design Flowchart




Note:
(a) Rate peak factor = peak volume rate/off-peak volume rate.  It is selected so that the unadjusted peak volume rate = 148.5% of the off-peak volume rate.

The first step in determining wholesale rates is projecting demands for SPU and for each wholesale customer receiving water from SPU. Appendix A summarizes the projections provided by SPU and used in the 2001 Contract Rate Study.

The projected demands for the total wholesale customers (wholesale customer demands plus Cascade and NUD blocks) are projected to steadily decline from 27.5 million ccf in 2011 to 25.5 million ccf in 2016. During the same period, the SPU retail demand is projected to decline gradually from 26.2 million ccf to 24.4 million ccf.

The projected demands, the revenue requirements, and a rate peak factor are used to generate the baseline volume rates. The baseline volume rates consist of a peak volume rate and an off-peak volume rate. The rate peak factor is set by SPU so that the unadjusted peak volume rate is 1.485 times the unadjusted off-peak volume rate.

Until December 31, 2011, the Contract included a provision for a transition growth surcharge of $0.60/ccf for delivery of water in excess of each wholesale customer's Old Water Allowance as referred to in the 1982 Contract. Application of the transition growth surcharge is not included in this 2001 Contract Rate Study.

### 3.3.2 Rate Study Results

The proposed existing and wholesale customer rates through 2014 are summarized in Tables 3-5 and 3-6. The revenue comparisons show that revenue from the proposed volume rates through 2011, rounded off to the nearest $0.01/ccf, equals the projected revenue requirement. This revenue comparison was prepared assuming SPU's retail customers are collectively a wholesale customer, as required by the Contract. The revenue comparison is based on the projected demands shown in Appendix A.

Table 3-5: Existing and Proposed Wholesale Customer Rates for Option 1

| | **2011** | | **2012** | | **2013** | | **2014** | |
|---|---|---|---|---|---|---|---|---|
| **Rates per CCF** | **Off-Peak** | **Peak** | **Off-Peak** | **Peak** | **Off-Peak** | **Peak** | **Off-Peak** | **Peak** |
| System Baseline Rates | $1.29 | $1.91 | $1.48 | $2.19 | $1.52 | $2.26 | $1.58 | $2.35 |
| Change from Prior Year: | | | 15% | 15% | 3% | 3% | 4% | 4% |
| Transition Discount: | -$0.13 | -$0.12 | N/A | N/A | N/A | N/A | N/A | N/A |
| **Adjusted Wholesale** | **$1.16** | **$1.79** | **$1.48** | **$2.19** | **$1.52** | **$2.26** | **$1.58** | **$2.35** |
| Change from Prior Year: | | | 28% | 22% | 3% | 3% | 4% | 4% |
| Interim Growth Charge: | $0.60 | | N/A | | N/A | | N/A | |
| Sub-regional Surcharge | | | | | | | | |
| Southwest Sub-region: | $0.05 | | $0.06 | | $0.07 | | $0.07 | |
| East Sub-region, Segment | $0.05 | | $0.15 | | $0.16 | | $0.16 | |
| East Sub-region, Segment | $0.07 | | $0.18 | | $0.19 | | $0.19 | |
| ERU Fee ($/ERU): | $783 | | $783 | | $783 | | $TBD | |

Source: SPU 2001 Contract Rate Study

Table 3-6: Existing and Proposed Wholesale Customer Rates for Option 2

| Rates per CCF | 2011 Off-Peak | 2011 Peak | 2012 Off-Peak | 2012 Peak | 2013 Off-Peak | 2013 Peak | 2014 Off-Peak | 2014 Peak |
|---|---|---|---|---|---|---|---|---|
| System Baseline Rates | $1.29 | $1.91 | $1.52 | $2.25 | $1.53 | $2.26 | $1.53 | $2.27 |
| Change from Prior Year: | | | 18% | 18% | 0% | 1% | 1% | 0% |
| Transition Discount: | -$0.13 | -$0.12 | N/A | N/A | N/A | N/A | N/A | N/A |
| **Adjusted Wholesale** | **$1.16** | **$1.79** | **$1.52** | **$2.26** | **$1.53** | **$2.26** | **$1.53** | **$2.27** |
| Change from Prior Year: | | | 31% | 26% | 0% | 1% | 1% | 0% |
| Interim Growth Charge: | $0.60 | | N/A | | N/A | | N/A | |
| Sub-regional Surcharge | | | | | | | | |
| Southwest Sub-region: | $0.05 | | $0.06 | | $0.07 | | $0.07 | |
| East Sub-region, Segment | $0.05 | | $0.15 | | $0.16 | | $0.16 | |
| East Sub-region, Segment | $0.07 | | $0.18 | | $0.19 | | $0.19 | |
| ERU Fee ($/ERU): | $783 | | $783 | | $783 | | $TBD | |

Source: SPU 2001 Contract Rate Study

## 3.4 Southwest Sub-Region Surcharge

The Southwest Sub-Region cost pool is the associated costs of operating, maintaining, repairing, and replacing a set of transmission facilities defined in the Contract. Wholesale customers that are served by these transmission facilities are referred to in the 2001 Contract Rate Study as "Southwest Wholesale Customers." Southwest Wholesale Customers are the Highline Water District and King County Water Districts Nos. 20, 45, 49, and 125.

In addition to the four Southwest Wholesale Customers listed above, the City of Tukwila also uses the Southwest Sub-Region transmission facilities. Tukwila, however, is not a wholesale customer. The Southwest Sub-Region surcharge is calculated as if Tukwila were a Southwest Wholesale Customer, but Tukwila does not pay the Southwest Sub-Region surcharge.

The Southwest Sub-Region surcharge is currently $0.05 per ccf for 2011. The proposed surcharge for 2012 is $0.06 per ccf, and $0.07 per ccf for 2013-2014. The projected revenue requirements are $267,264 in 2012, $274,099 in 2013, and $271,184 in 2014. Projected revenues from the proposed Southwest Sub-Region surcharge are approximately $251,838 in 2012, $280,752 in 2013, and $267,693 in 2014. The surcharges are designed to eliminate the true-up balance by the end of 2014.

## 3.5 East Sub-Region Surcharge

The East Sub-Region surcharge was created to recover the costs of the four segments of the Mercer Island Pipeline. The costs are allocated among the Cities of Bellevue, Mercer Island, and Seattle based on the proportion of demand at each respective pipeline segment.

The East Sub-Region cost pool consists of infrastructure and O&M costs for the Mercer Island Pipeline asset. Cost allocations are based on 2010 peak month demand data reported by SPU.

The portion of the projected revenue requirements for Segments 1 and 2 that is not transferred to downstream segments is Bellevue's share. The projected revenue requirements for Bellevue's share of Segments 1 and 2 are $9,815 for 2012, $9,672 for 2013, and $9,554 for 2014. Under the Cascade Agreement, these revenue requirements will be paid as a lump sum to SPU.

The projected revenue requirements for Segment 3 of the East Sub-Region are $31,258 in 2012, $32,955 in 2013 and $30,668 in 2014. The revenue requirements include true-up balance adjustments of $15,000 in 2012, $17,000 in 2013, and $15,000 in 2014. These revenue requirements result in a Segment 3 surcharge of $0.15 per ccf in 2012 and $0.16 per ccf in 2013 and 2014.

The projected revenue requirements for Segment 4 of the East Sub-Region are $115,593 for 2012, $119,233 for 2013, and $117,922 for 2014. The revenue requirements include true-up balance adjustments of $45,000 in 2012 and $50,000 in 2013 and 2014. These revenue requirements result in a Segment 4 surcharge of $0.18 per ccf in 2012 and $0.19 per ccf in 2013 and 2014.

## 3.6 Cascade Water Alliance Revenue Requirement

The Cascade Agreement authorizes recovery of costs for Cascade's Base Block from the Existing Supply Cost Pool, the Existing Transmission Pool, and the Cascade portion of the sub-regional costs. Cascade's costs are allocated based on the ratio of Cascade's block of capacity to the total system capacity. Cascade is not required to pay for costs for new supply facilities. On January 1, 2009, the Cascade Agreement was amended to include a Supplemental Block of 3 million gallons per day. Cost recovery for the Supplemental Block is at the same commodity charges as apply to the other 2001 Contract wholesale customers.

The projected revenue requirements for Cascade's Base Block are $16,485,797 in 2012, $16,670,579 in 2013, and $17,066,500 in 2014. The projected cost of the Supplemental Block is $2,705,319 in 2012, $2,786,638 in 2013, and $2,897,236 in 2014.

## 3.7 Northshore Utility District Revenue Requirement

The NUD Agreement authorizes recovery of costs from the Existing Supply Cost Pool, the Existing Transmission Cost Pool, and the Conservation Block. NUD will not pay for costs for New Supply facilities. Allocation of the existing supply and existing transmission costs is based on ratio of NUD's block of capacity to total system capacity.

The projected revenue requirements for NUD are $4,788,813 in 2012, $5,015,477 in 2013 and $5,159,529 in 2014. The revenue requirement for 2012 and 2013 include recovery with interest of a revenue overpayment. Interest costs are based on the return on asset rate of 4.7 percent.

NUD participates in SPU's Regional Conservation Programs. Cost allocation is based on the ratio of NUD's block of capacity (8.55 mgd) to total system capacity (171 mgd), less the Cascade block of capacity (30.3 mgd) adjusted for transmission losses. NUD's allocation of conservation costs are projected to be $354,124 in 2012, $348,893 in 2013, and $343,735 in 2014.

## 3.8 Renton Revenue Requirement

The Renton Agreement provides for water supply and conservation services. Revenue requirements for conservation services are based on 5.7 percent of applicable asset and O&M costs of the New Supply Cost Pool. The projected revenue requirements are $164,510 in 2012, $167,800 in 2013 and $171,156 in 2014.

# Section 4: Summary of Independent Review

This section summarizes the specific requirements of the rate study specified in the 2001 Contract and the results of SPU's 2001 Contract Rate Study. Comments of the independent review are presented. To facilitate understanding of this independent review, this section is formatted similarly to the 2008 independent review. The summaries of 2001 Contract requirements are derived from the previous review, when applicable.

## 4.1 Requirements of the 2001 Contract

### 4.1.1 Cost Pools

Section IV.C of the 2001 Contract requires creation of an Existing Supply Cost Pool and a New Supply Cost Pool. Section IV.D requires creation of an Existing Transmission Cost Pool and a New Transmission Cost Pool. Section IV.E.5 authorizes the City of Seattle to create additional cost pools. Section IV.E.6 discusses the creation of a separate cost pool for the Tacoma Second Supply Project. The 2001 Contract Rate Study does not contain a Tacoma Second Supply Project cost pool because SPU's participation in the project was cancelled in 2002, and there are no current or projected SPU expenditures associated with this project.

### 4.1.2 Accounting

Section IV.E.1 requires:

- A separate asset account must be maintained for each facility that records the original cost, betterments, and retirements.
- Facilities shall be depreciated according to Standard Water System Asset Lives, and depreciation expense shall not be recorded in the first calendar year of operation of a facility.
- Net book value shall equal the original cost plus betterments, less retirements, and less life-to-date depreciation.

### 4.1.3 Infrastructure Costs

Section IV.E.2 requires that infrastructure costs be determined using a utility basis that is defined to be the sum of (1) the annual depreciation expense and (2) the product of the net book value and the rate of return on investment. Interest costs can be included as an infrastructure cost during the construction of a facility, but if so, they must not be included in the net book value of the facility for purposes of calculating infrastructure costs once construction is complete. At SPU's discretion, the cash basis for new supply facilities and new transmission facilities may be utilized.

### 4.1.4 Operations Costs

SPU's water system operations costs are broken out into a series of approximately 700 "activities," each identified by a unique activity number. Section IV.E.3 requires that these operations costs be included in the appropriate cost pool. Exhibit IX of the 2001 Contract lists the specific activities that can be recovered in the Existing Supply, New Supply, Existing Transmission, and New Transmission Cost Pools. For Southwest and East Sub-regions, operations costs are the actual costs of operating, maintaining, and repairing the sub-regional facilities. In addition to recovering the costs of these direct activities, the 2001 Contract has a provision for recovering indirect expenditures, using the percentage change from year to year in directly recoverable costs.

### 4.1.5 Disposition Costs

Section IV.E.4 specifies that the costs of disposing of assets within a cost pool are to be included in the cost pool. Specifications for calculating net disposition costs are described depending on whether the utility or cash basis is utilized.

### 4.1.6 Facilities Charges

Section IV.E.7 specifies how supply facilities charge revenues shall be used to offset New Supply cost pool infrastructure costs. Section IV.E.9 contains provisions regarding the establishment and calculation of facilities charges.

### 4.1.7 Revenue Requirements

Section IV.A.9 requires that SPU's distribution system, which serves its retail customers, be treated as the equivalent of a wholesale customer for the purposes of developing wholesale customer rates. Section IV.E.8 specifies that costs allocable to the partial and full requirement customer class consist of the costs remaining after costs allocable to the block purchase customer class are subtracted. Currently, the block purchase customer class consists of Cascade and NUD. Section IV.E.10 of the Contract specifies that the wholesale customer rates shall not collect revenues that exceed the allowable costs. Section VI.I describes the mechanism for reconciling cost and revenue targets during each year with actual costs incurred and revenues received within the year. SPU is required to maintain a running balance of the excess or deficit in actual rate revenues and actual expenses incurred. This balance earns simple interest at Seattle's average cost of debt and a statement of this balance is to be reviewed and approved by an external auditor. The revenue requirement is to be adjusted to zero the balance in each cost pool.

### 4.1.8 Rate Design

Section IV.A of the 2001 Contract describes ratemaking principles and is included in Appendix B. Ratemaking principles that are applicable to the design of rates to recover the 2001 Contract Rate Study revenue requirement include the following.

- Abrupt changes in financial policies should be avoided.

- The rate structure should encourage the efficient use of water, conservation, and the timely development of new environmentally responsible water sources, and should incorporate seasonal rates and other pricing approaches to encourage efficient use.

- The rate structure should be innovative, flexible, and adaptive whenever it is cost effective and beneficial in furthering the ratemaking policies.

- The rate structure should be simple to administer and easily understandable.

- The rate structure should be fair and equitable while balancing the needs of all parties.

Section IV.E.12 has two additional provisions for ratemaking policies effective through December 31, 2011. The first provision concerns the collection of facilities charges and is not part of this independent review. The second provision concerns the transition growth surcharge. These provisions are no longer applicable to the 2001 Contract Rate Study.

### 4.1.9 Southwest Sub-Region Surcharge

Requirements for the Southwest Sub-Region surcharge are specified in the 2001 Contract and include the following:

- The costs for each facility shall be allocated between Seattle and Southwest Wholesale Customers based on peak seven-day flows through each facility, though peak month flows can be substituted if seven-day flows are not available.

- Southwest Wholesale Customers shall pay a uniform rate to collect the costs of the Southwest Sub-Region Cost Pool.

- The rate shall apply to every unit of water delivered to a Southwest Wholesale Customer without regard to the location at which the water was delivered.

- Actual Southwest Sub-Region costs and revenues shall be trued-up consistent with the methodology of the other cost pools.

### 4.1.10 East Sub-Region Surcharge

Requirements of the 2001 Contract include:

- The costs for each facility shall be allocated based on peak seven-day flows through each facility; though peak month flows can be substituted if seven-day flows are not available.

- A common rate for each segment will be developed and will apply to every unit of water delivered through each respective segment.

- Actual East Sub-Region costs and revenues shall be trued-up consistent with the methodology of the other cost pools.

## 4.2 Cost Pools

The 2001 Contract Rate Study allocates operations and infrastructure costs into Existing Supply, New Supply – Rate Based, New Supply – Facilities Charge Based, Existing Transmission – Rate Based and New Transmission Cost Pools. There are no costs allocated to the New Transmission Cost Pool. Cost pools are also created for the Southwest, East, and Northwest Sub-Regions, and Renton New Supply Block, Cascade Base Block, and NUD.

The 2001 Contract Rate Study is consistent with the requirements of the 2001 Contract.

## 4.3 Accounting

In the 2001 Contract Rate Study, each asset is accounted for separately and is assigned an account number. Assets are depreciated with the depreciation schedule used uniformly by SPU. The net book value which the infrastructure costs are determined is based on the original cost and applicable capital improvements less depreciation and retirements.

The 2001 Contract Rate Study is consistent with the requirements of the 2001 Contract.

## 4.4 Infrastructure Costs

The 2001 Contract Rate Study applies a rate of return on assets of 6.2 percent on net book value. An interest rate of 4.7 percent is applied to funds used during construction (AFUDC) but is not included in the calculation of the net book value of infrastructure.

The 2001 Contract Rate Study is consistent with the requirements of the 2001 Contract.

## 4.5 Operations Costs

At the time of this independent review, finalized operations and maintenance (O&M) expenses for 2010 were not available. Accordingly, the 2001 Contract Rate Study is based on the 2009 base and index amounts presented in the Wholesale Statements (2001 Contract Types) and Independent Accountant's Report on Applying Agreed-Upon Procedures dated December 31, 2009 and estimated 2010 O&M costs as of January 11, 2011. O&M costs for 2011 are based on the adopted 2011 budget. Projected O&M expenditures after 2011 are escalated for an annual inflation rate of 2.0 percent.

The 2001 Contract Rate Study appears to be consistent with the requirements of the 2001 Contract.

## 4.6 Disposition Costs

In the 2001 Contract Rate Study, dispositions and exchanges are included in the calculation of net book value which is allocated to the appropriate cost pools.

The 2001 Contract Rate Study is consistent with the requirements of the 2001 Contract.

## 4.7 Facilities Charges

In the 2001 Contract Rate Study, reserves from facilities charges are included in the New Supply Cost Pool-Facilities Charge Based for 2012 through 2016. Projected revenues are based on the projected new connections when all Wholesale Customers pay facilities charges at the established rate.

Facilities charges are not included in the scope of this independent review.

## 4.8 Revenue Requirements

In the 2001 Contract Rate Study, SPU's retail customers are treated as the equivalent of a wholesale customer. Costs attributable to Cascade, NUD, and Renton are deducted from the appropriate cost pools to establish the revenue requirements for Wholesale Customers including SPU. True-up adjustments are applied, as necessary, to bring balances as close to zero as possible. Balances accrue or incur interest at 4.7 percent.

The 2001 Contract Rate Study is consistent with the requirements of the 2001 Contract.

## 4.9 Rate Design

The 2001 Contract Rate Study generally conforms to the ratesetting principles included in Appendix B.

## 4.10 Conclusions

Based on the results of the independent review of the 2001 Contract Rate Study, the following conclusions are presented.

1. The 2001 Contract Rate Study is consistent with the provisions of the 2001 Contract that were addressed in the independent review.

2. Facilities charges are not included in the scope of this independent review.

# Appendix A

## Estimated and Projected Wholesale Water Demands

# Appendix A
# Estimated and Projected Wholesale Water Demands for 2011 - 2016 [1]

**Forecast of Old Contract, New Contract and CWA Demand**

| | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| **Full and Partial, excluding separately identified below** | | | | | | |
| Peak CCF | 3,428,384 | 3,349,779 | 3,271,175 | 3,192,570 | 3,113,965 | 3,035,361 |
| Off-Pk CCF | 4,066,133 | 3,972,907 | 3,879,680 | 3,786,453 | 3,693,227 | 3,600,000 |
| Total Base CCF | **7,494,517** | **7,322,686** | **7,150,855** | **6,979,023** | **6,807,192** | **6,635,361** |
| **Renton** | | | | | | |
| Peak CCF | 14,053 | 14,053 | 14,053 | 14,053 | 14,053 | 14,053 |
| Off-Pk CCF | 45,851 | 45,851 | 45,851 | 45,851 | 45,851 | 45,851 |
| Total Base CCF | **59,904** | **59,904** | **59,904** | **59,904** | **59,904** | **59,904** |
| **Mercer Island (East subregion)** | | | | | | |
| Peak CCF | 411,739 | 399,881 | 388,023 | 376,165 | 364,307 | 352,450 |
| Off-Pk CCF | 429,905 | 417,524 | 405,143 | 392,762 | 380,381 | 368,000 |
| Total Base CCF | **841,644** | **817,405** | **793,166** | **768,927** | **744,688** | **720,450** |
| **Highline, WD20, WS45, WD49, WD125 (SW subregion)** | | | | | | |
| Peak CCF | 1,843,289 | 1,764,849 | 1,686,410 | 1,607,970 | 1,529,531 | 1,451,091 |
| Off-Pk CCF | 2,540,555 | 2,432,444 | 2,324,333 | 2,216,222 | 2,108,111 | 2,000,000 |
| Total Base CCF | **4,383,844** | **4,197,293** | **4,010,743** | **3,824,192** | **3,637,642** | **3,451,091** |
| **CWA** | | | | | | |
| Peak CCF | 5,732,938 | 5,748,146 | 5,763,355 | 5,778,563 | 5,793,771 | 5,808,980 |
| Off-Pk CCF | 6,710,986 | 6,728,789 | 6,746,592 | 6,764,394 | 6,782,197 | 6,800,000 |
| Total Base CCF | **12,443,924** | **12,476,935** | **12,509,947** | **12,542,957** | **12,575,968** | **12,608,980** |
| **Northshore** | | | | | | |
| Peak CCF | 1,013,685 | 990,777 | 967,869 | 944,961 | 922,053 | 899,145 |
| Off-Pk CCF | 1,307,769 | 1,278,215 | 1,248,662 | 1,219,108 | 1,189,554 | 1,160,000 |
| Total Base CCF | **2,321,454** | **2,268,992** | **2,216,531** | **2,164,069** | **2,111,607** | **2,059,145** |

**Forecast of Old Contract, New Contract and CWA Demand**

| | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| **Total Wholesale** | | | | | | |
| Peak CCF | 12,444,088 | 12,267,485 | 12,090,885 | 11,914,282 | 11,737,680 | 11,561,080 |
| Off-Pk CCF | 15,101,199 | 14,875,730 | 14,650,261 | 14,424,790 | 14,199,321 | 13,973,851 |
| Total Base CCF | **27,545,287** | **27,143,215** | **26,741,146** | **26,339,072** | **25,937,001** | **25,534,931** |
| **Retail** | | | | | | |
| Peak CCF | 10,277,028 | 10,137,857 | 9,998,686 | 9,859,515 | 9,720,344 | 9,581,173 |
| Off-Pk CCF | 15,873,683 | 15,658,946 | 15,444,210 | 15,229,473 | 15,014,737 | 14,800,000 |
| Total Base CCF | **26,150,711** | **25,796,803** | **25,442,896** | **25,088,988** | **24,735,081** | **24,381,173** |
| **Total Retail & Wholesale (sales)** | | | | | | |
| Peak CCF | 22,721,116 | 22,405,342 | 22,089,571 | 21,773,797 | 21,458,024 | 21,142,253 |
| Off-Pk CCF | 30,974,882 | 30,534,676 | 30,094,471 | 29,654,263 | 29,214,058 | 28,773,851 |
| Total Base CCF | **53,695,998** | **52,940,018** | **52,184,042** | **51,428,060** | **50,672,082** | **49,916,104** |
| **Non revenue water** | | | | | | |
| Peak CCF | 1,216,620 | 1,199,492 | 1,182,363 | 1,165,235 | 1,148,106 | 1,130,977 |
| Off-Pk CCF | 2,393,676 | 2,359,976 | 2,326,276 | 2,292,575 | 2,258,875 | 2,225,175 |
| Total Base CCF | **3,610,297** | **3,559,468** | **3,508,639** | **3,457,810** | **3,406,981** | **3,356,152** |
| **Retail as wholesale** | | | | | | |
| Peak CCF | 11,014,894 | 10,865,252 | 10,715,611 | 10,565,969 | 10,416,327 | 10,266,686 |
| Off-Pk CCF | 17,599,988 | 17,361,029 | 17,122,071 | 16,883,111 | 16,644,153 | 16,405,194 |
| Total Base CCF | **28,614,882** | **28,226,281** | **27,837,681** | **27,449,080** | **27,060,481** | **26,671,880** |
| **Shorewood** | | | | | | |
| Total Base CCF | **35,473** | **34,977** | **34,487** | **34,004** | **33,528** | **33,059** |

[1] Estimated and projected water demands are provided by Seattle Public Utilities

# Appendix B

## Rate Making Principles

## Appendix B
## Rate Making Principles

### III.D. Development of Regional Supply and Transmission Infrastructure

Final decisions and authority to approve construction of capital infrastructure related to the Seattle Water Supply System shall rest with the Seattle City Council. Capital construction activities include all renewals, replacements, upgrades, expansion and any other capital construction activities.

### III.E. Metering Equipment

Seattle shall own and maintain appropriate metering devices to measure the amount of water delivered to Water Utility pursuant to this contract. At Water Utility's request and expense, Seattle shall install and maintain equipment selected by Water Utility and approved by Seattle to transmit signals to Water Utility's recording equipment (at locations determined by Water Utility) of the amount of water delivered as measured by Seattle’s meter(s).

Until such time as Seattle determines it to be economical to install metering devices to measure the amount of water delivered from the Seattle Water Supply System to Seattle’s distribution system, the amount of water delivered to the Seattle distribution system shall be measured indirectly by subtracting the metered water delivered to all of Seattle’s Wholesale Customers from 98% of the total amount of water exiting Seattle’s sources of supply as measured by the supply meters.

### SECTION IV. COST OF WATER & TRANSMISSION

Cost-based rates are a water industry accepted practice and the historical practice of Seattle and the Wholesale Customers. The rate-making principles, policies and methodologies set forth in this Section IV are intended to meet the objective of equitable and cost-based rates.

### IV.A. Rate-making Principles

The following general principles and policies shall apply to the establishment of all rates and charges for water supply and related services hereunder beginning on January 1, 2002. Prior to that date, the pricing method of the 1982 Water Purveyor Contract shall be maintained.

1. No expenses attributable to electric power development maybe allocated to the cost pools identified herein unless the pools are allocated a commensurate share of revenue derived from such development.

2. Seattle shall utilize generally accepted accounting principles consistently applied as a basis for developing the financial information upon which rates and charges are based.

3. Abrupt changes in financial policies should be avoided.

4. The rate structure should encourage the efficient use of water, conservation and the timely development of new environmentally responsible water sources and should incorporate seasonal rates and other pricing approaches to encourage efficient use.

5. The rate structure should be innovative, flexible and adaptive whenever it is cost effective and beneficial in furthering the rate-making policies.

6. The rate structure should be simple to administer and easily understandable.

7. The rate structure should be fair and equitable while the balancing the needs of all parties.

8. Capital costs which benefit only a new Wholesale Customer shall be allocated to that customer and not to any cost pool described in this contract.

9. Seattle's distribution system which serves its retail customers shall be treated as the equivalent of a Wholesale Customer of the Seattle Water Supply System for the purpose of charging Seattle the same wholesale rates and charges as Water Utility for water supply and transmission. Costs calculated under the costs pools described below shall apply equally to Water Utility and to Seattle's distribution system which serves its retail customers.

10. The allocation of costs associated with capital construction activities within the Seattle Water Supply System shall be the responsibility of the Operating Board. The Operating Board shall use its best efforts to determine and approve a cost allocation method for infrastructure projects prior to the capital project obtaining construction approval from the Seattle City Council. Failure of the Operating Board to determine and approve a cost allocation method shall not hinder the Seattle City Council from approving capital infrastructure projects in order to assure Seattle's ability to fulfill the requirements of this contract.

11. The purveyor balance account as that term is defined in the 1982 Water Purveyor Contract between Seattle and Water Utility shall be credited to the Wholesale Customers in a ratable and equitable manner commencing with the application of rate making policies and framework.