Water User Fee Analysis and Recommendations

Scotia Community Services District
Scotia, California

Prepared for:

Scotia Community Services District

SHN Engineers & Geologists

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Abbreviations & Acronyms

cf	cubic feet
ft^3/mo	cubic feet per month
gal/mo	gallons per month
gpcpd	gallons per capita per day
gpd	gallons per day
hcf/mo	hundred cubic feet per month
ACS	American Community Survey
AMHI	annual median household income
ANSI	American National Standards Institute
AWE	Alliance for Water Efficiency
AWWA	American Water Works Association
CIP	capital improvement plan
CPI	consumer price index
DEA	detailed engineering analysis
EDU	equivalent dwelling unit
EPA	U.S. Environmental Protection Agency
FY	fiscal year
NR	no reference
O&M	operations and maintenance
SCADA	supervisory control and data acquisition
SCSD	Scotia Community Services District
SHN	SHN Engineers & Geologists
SWRCB	State Water Resources Control Board
TOS	Town of Scotia Company, LLC

1.0 Introduction

Located in the heart of California Redwood Country, Scotia was developed starting in the 1880s and has been maintained since then as a true company town. The entire town was developed and constructed by The Pacific Lumber Company. The residences were all constructed and maintained by the company for its employees. Industrial, commercial, and community structures were also developed by the company, creating a consistency in historical design. In 2008, The Pacific Lumber Company was reorganized. Today, Scotia is owned and operated by the Town of Scotia Company, LLC (TOS); the sawmill is operated by Humboldt Redwood Company. TOS is in the process of subdividing the properties and selling them into private ownership. In 2014, the Scotia Community Services District (SCSD) was formed to provide the town with essential services associated with water, wastewater, streets and street lighting, storm drainage, and parks. This report provides support and recommendations for establishment of user fees and benefit assessments to support the provision of those services by the SCSD.

This assessment was conducted by SHN Engineers & Geologists on behalf of the SCSD.

1.1 Objectives

Several objectives should be considered in the development of a financial plan and in the design of fees. The major objectives of the study were:

- Ensure revenue sufficiency to meet the operation and maintenance (O&M) and capital needs of the SCSD's community services.
- Plan for revenue stability to provide for adequate operating and capital reserves, and the overall financial health of the SCSD.
- Provide for fairness and equity in the development of a system of user charges.
- Minimize fee impacts to reduce financial hardship on user categories and individual members of those categories.
- Maintain simplicity for ease of administration and implementation, as well as customer understanding and acceptance.

Some of these objectives are interrelated. This being the case, judgment plays a role in the final design of fee structures and fees.

1.2 Methodology

Municipalities face a common dilemma when establishing fees for municipally owned and operated enterprise facilities (water, sewer, gas, electricity, etc.). Municipal officials, understandably, want to keep user fees as low as possible. However, experience shows that insufficient user fees, combined with a reluctance to adjust fees upward when necessary, contribute to a progressive operating deficit, ultimately requiring substantial fee increases.

There are many cost factors to consider when evaluating utility user fees (such as, operational costs, debt service, capital improvements, and cash reserves to meet emergency needs).

Administrative expenses such as prorated portions of administrative salaries, legal expenses, insurance premiums, pension contributions, costs of audits, and other expenses that may be attributed to the utility are also typically charged to the utility as costs of providing service.

Rating structures generally fit into five basic categories:

1. Flat Charge Fee
2. Uniform Fee
3. Declining Block Fee
4. Ascending Block Fee
5. Base Fee plus Commodity (Volume) Charge Fee

The flat charge fee is used when the municipality has no metered customers. Each customer within a given user category is billed the same amount, regardless of usage. Administration of this fee is simple, because it does not consider usage volume in the billing process, only the type of use (such as, residential, commercial, industrial, etc.). Because the SCSD's water system "customer" base is limited to relatively few property owners whose use is metered, the flat charge fee approach is unnecessary.

TOS, one of the largest local landowners in Scotia, has most likely partially subsidized water service to its rental tenants allocating a portion of rent on a flat fee basis for water and sewer service. However, the SCSD cannot and will not subsidize its customers. As subdivided parcels are sold, each new landowner will become a direct customer.

A uniform fee bills all water at the same unit fee, regardless of the user category or the amount used. This fee tends to discourage water conservation because it does not penalize excess usage, but can hamper industrial growth. This obstacle could, however, be overcome by establishing a separate uniform fee for industrial users; a logical step, because it costs less to produce additional volumes of water once fixed costs are allocated.

The declining block fee approach is preferred by large-volume water users, because it provides for a progressive decrease in the unit cost of water as the aggregate volume used increases. Although widely used, this fee does not encourage water conservation.

The ascending block fee approach promotes water conservation by providing for a progressive increase in the unit cost of water as the aggregate volume used increases. However, the actual cost of production may not be reflected in the ascending fees, often making separate industrial, institutional, or commercial fee structures desirable.

Recognition of the actual costs to produce and deliver water, both direct and indirect, is one of the critical elements needed to establish a fair and equitable fee structure, but the fiscal health of the commercial, industrial, and institutional water users within the service area must also be considered. The economic benefits provided by the larger water users should not be overlooked in establishing the fair and equitable fee structure that recognizes all user categories. Recent court decisions uphold the idea that Proposition 218, an initiative overwhelmingly passed by California voters in 1996, prohibits government agencies from charging more for services than their actual cost.

A base fee, a minimum fee can be established for all customers, regardless of the fee structure chosen. This minimum fee should be based upon identified base fees. A service charge is a cost recovery mechanism that generally is included in the fee structure to recover meter and customer costs, and that provides a stable source of revenue independent of water consumption. Therefore, customer costs related to meter reading and billing are recovered through the service charge.

We recommend that the SCSD establish the practice of applying consistent monthly service charges to users across specific user categories. Customer-related costs are fixed expenditures that relate to operational support activities, including accounting, water billing, customer service, and administrative and technical support. The customer-related costs are essentially common-to-all costs that are independent of user category characteristics. A service charge provides a mechanism for recovering a portion of the fixed costs and ensures a stable source of user revenues for the utility. In addition, there are capacity-related costs (such as, meter maintenance and peaking charges) that are included based on the hydraulic capacity of the meters. It is recommended to charge for water service with a combination of a base fee plus commodity (water usage) volume charge.

1.3 Cost of Service

> *The idea of cost of service feemaking can be loosely stated: fees should be designed so that users pay in water fees for the costs they impose on the utility. Though the idea may be straightforward, considerable controversy can be engendered by any specific cost-of-service analysis. The practice of accepted "cost-of-service" methods is not a static picture and has evolved with both energy and water utilities.*
>
> *The key legal standards that have been set are that fees should be "just and reasonable" and that fees should not be derived on an "arbitrary or capricious" basis. These Supreme Court established principles for review of fees have, in practice, been interpreted in different ways. One method of establishing "just and reasonable" fees is the standard that fees should not "unduly discriminate" against any customer or customer class. In practice, this "nondiscrimination" principle has been interpreted to mean that no customer or customer class should pay significantly more (or less) than the cost of providing service to that customer or customer class. To avoid undue discrimination, fee analysts strive to achieve two forms of equity:*
>
> *Horizontal equity: Users with similar costs of service face similar fees.*
> *Vertical equity: Users with dissimilar costs of service face dissimilar fees.*
>
> *A key choice in the cost-of-service analysis is whether to distinguish costs by "class" of customer. Customer classes (homogeneous groups of customers) have been justified by similarities in service requirements and demand patterns. Both service characteristics and use patterns affect the cost of service. The implication is that customers with similar service requirements and patterns of use should be placed in the same class of service. If customer-use patterns and service requirements are similar among customers, there is*

little reason to have multiple fee structures; if use patterns and service characteristics vary, then the establishment of customer classifications and multiple fee structures is warranted.

Fixed versus Variable Costs: Many costing methods identify costs of water service as either fixed or variable based on the characteristics of the expenditures. Fixed costs are expenditures that remain relatively unchanged throughout the year, irrespective of the volume of water produced. Because large up-front capital costs are required to build capacity for meeting demand, some traditional costing methods classify all system expansion costs as fixed and refer to these costs as "demand" costs. Variable costs, also called "commodity costs," are expenditures that vary directly with the volume of water produced or consumed; variable costs include purchased water, electrical, and chemical costs (Alliance for Water Efficiency [AWE], 2008).

2.0 Revenue Requirements

Utility owners establish user fees based on generating sufficient revenue to pay all operating costs, cover debt service on outstanding loans, provide cash to make ongoing capital improvements, provide a cash reserve for unexpected repairs and to meet all loan requirements, and provide cash reserves for increasing capacity as population growth occurs.

Typically, it is important to distinguish the difference between future capacity needs related to undeveloped areas and additional capacity needs that have occurred in the process of orderly development within the service area. However, the SCSD will have limited future growth capabilities. Future growth, capacity expansion improvements are often paid for through connection fees assessed to new customers. This fee analysis does not address future growth, the capacity needed to accommodate that growth, or existing capacity buy-in costs that are typically assessed to new customers as part of their connection fee. Consequently, there is no analysis or discussion of connection fees in this report. Capacity expansion improvement activities and costs are speculative at best, dependent upon policy determinations not yet made, and are unlikely to be material in any event.

2.1 Operation and Maintenance

A formal definition of operation and maintenance is: The continuing activities required to keep water facilities and their components functioning in accordance with design objectives while maintaining compliance with public water system health and safety requirements.

More specifically for the purpose of establishing user fees, O&M requirements consist of those expenditures associated with the day-to-day operations of the source supply, treatment, distribution, conveyance, and storage systems, and are made up of costs related to such items as personnel, other utility uses (power, telephone), supplies, training, equipment repair, etc.

Operations and maintenance revenue requirements are established based on years of experience, and any unusual changes that may have been instituted in any particular year, and are considered relatively inflexible when analyzing the overall revenue requirements of a utility. As a "start-up"

services district, there is no history with which to establish an O&M budget for SCSD. A proposed O&M budget was prepared giving consideration to the current financial information provided by TOS relative to its past two years of operations, comparisons of neighboring communities' operations, and experience with the financial and budgetary aspects of smaller communities and service districts.

2.2 Debt Service

As a "start-up" entity, the SCSD has no existing debt service. However, some improvements to the water treatment faculties have been identified in the detailed engineering analysis (DEA, 2009) and as updated (SHN, 2016) in relation to the SCSD formation requirements, which projects an expenditure for upgrades in the future. It is anticipated that such improvements will be funded through revenues acquired through debt financing. The SCSD water fund is expected to pay a portion of the debt related to acquisition of the SCSD's office building and grounds, which may be purchased in fiscal year (FY) 2016-17, and the fund is expected to pay debt service related to an approximately $1,200,000 treatment plant upgrade, which may occur in FY 2019-20.

2.3 System Replacement

According to the State Water Resources Control Board (SWRCB), Revenue Program Guidelines, system replacement costs are represented as follows: "Expenditures for obtaining and installing equipment, accessories, or appurtenances, which are necessary during the useful life of the treatment works to maintain the capacity and performance for which such works were designed and constructed" (SWRCB, 2004).

System replacement, as defined above, is considered by that agency to be a minimal level of funding in this category. Establishing a funding level for facilities replacement is a policy decision often driven by a community's determination of user fee affordability, among other criteria. It may be considered good "business sense," for agencies that own and operate water supply, storage, distribution and treatment facilities to fund 100% of the replacement value of the existing facilities, but it is not common. Two primary reasons for that trend are:

1. Replacement of future facilities can be funded through debt financing (primarily revenue bonds) provided by outside sources (such as, state and federal agencies).
2. Most facilities are struggling with needed improvements or existing debt financing burdens, and the managers of such facilities do not always believe it is fair to have the existing customers pay for both current and future improvements. It is common to assume future users will pay for their long-term facility replacement costs.

2.4 Capital Improvement Planning

The term "capital improvement" refers to new or expanded physical facilities for the communities that are of relatively large size. Capital improvements are relatively expensive, and are considered permanent with respect to usefulness to service area customers. Large-scale replacement and rehabilitation of existing facilities also falls within this category. Equipment, such as a utility truck, is not classified as a capital improvement for the purposes of this report.

A capital improvement plan (CIP) for the Scotia water system was prepared in the detailed engineering analysis (DEA), and as updated (SHN 2009, 2016), for the required documentation for district formation. TOS is in the process of performing the distribution system upgrades, including installation of water meters and replacement of more than 90% of the existing distribution system. Improvements identified in the CIP expected to be performed by the SCSD in the near future include treatment plant upgrades, telemetering–supervisory control and data acquisition (SCADA) system installations, and storage tank seismic retrofitting. Costs identified in the CIP associated with those improvements total approximately $1,200,000.

2.5 Total Revenue Requirements

A first year budget and projections of future water system revenue and expenditures were developed for the SCSD. Table 1 presents the projected expenditures related to potable water services and Table 2 presents expenditures projected for raw water services for the upcoming fiscal year and projects them out through FY 2020-21. Raw water is currently used by the electric co-generation facility, costs for which include basic service fees plus volume costs associated with raw water pumping. Treatment and distribution associated fees are not included in raw water fees.

Table 1 Projected Expenses, Water Fund Scotia Community Services District					
	FY[1] 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21
Personal Services					
Attorney	$16,800	$17,136	$17,479	$17,828	$18,185
IT Services	$6,300	$6,426	$6,555	$6,686	$6,819
Auditor (Annual Audit)	$5,040	$5,141	$5,244	$5,348	$5,455
Board Stipend	$2,520	$2,520	$2,520	$2,520	$2,520
Bookkeeping/CPA Consult	$2,100	$2,142	$2,185	$2,229	$2,273
Engineering	$5,400	$5,508	$5,618	$5,731	$5,845
O&M[2] Staff (Salaries & Benefits)	$164,000	$167,280	$170,626	$174,038	$177,519
Total Personal Services	**$202,160**	**$206,153**	**$210,225**	**$214,380**	**$218,617**
Materials and Services					
Bond, Dues, Publications	$2,000	$2,060	$2,122	$2,185	$2,251
Supplies, Lab, Permitting & Monitoring	$14,000	$14,420	$14,853	$15,298	$15,757
Utilities- Water, Sewer Communications	$2,200	$2,266	$2,334	$2,404	$2,476
General Maintenance & Repair	$14,000	$14,420	$14,853	$15,298	$15,757
Insurance	$15,000	$15,450	$15,914	$16,391	$16,883
Electrical	$19,000	$19,570	$20,157	$20,762	$21,385
Contracted Maintenance Services	$9,000	$9,270	$9,548	$9,835	$10,130
Total Materials & Services	**$75,200**	**$77,456**	**$79,780**	**$82,173**	**$84,638**
Total O&M	**$277,360**	**$283,609**	**$290,005**	**$296,553**	**$303,255**
Other Expenditures					
Annual Debt Service	$7,770	$7,770	$7,770	$59,170	$59,170
Transfer to Equipment Replacement Fund	$12,920	$12,920	$12,920	$12,920	$12,920
Transfer to Capital Reserve Fund	$156,100	$156,100	$156,100	$0	$10,000
Total Other Expenditures	**$176,790**	**$176,790**	**$176,790**	**$72,090**	**$82,090**
Capital Outlay					
SCSD Office Building	$113,400				
Water Treatment Plant Facilities Plan Update				$1,200,000	
Office Equipment/furnishings Start-up	$6,500				
Total Capital Expenditures	**$119,900**	**$0**	**$0**	**$1,200,000**	**$0**
Total All Expenditures	**$574,050**	**$460,399**	**$466,795**	**$1,568,643**	**$385,345**

1. FY: fiscal year
2. O&M: operations and maintenance

Table 2 Projected Expenses, Raw Water Fund Scotia Community Services District					
	FY[1] 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21
Personal Services					
Attorney	$800	$816	$832	$849	$866
IT Services	$300	$306	$312	$318	$325
Auditor (Annual Audit)	$240	$245	$250	$255	$260
Board Stipend	$120	$120	$120	$120	$120
Bookkeeping/CPA Consult	$100	$102	$104	$106	$108
Engineering	$1,200	$1,224	$1,248	$1,273	$1,299
O&M[2] Staff (Salaries & Benefits)	$7,480	$7,650	$7,782	$7,937	$8,096
Total Personal Services	**$10,240**	**$10,463**	**$10,648**	**$10,859**	**$11,074**
Materials and Services					
Bond, Dues, Publications	$500	$515	$530	$546	$563
Supplies, Lab, Permitting & Monitoring	$500	$515	$530	$546	$563
Utilities- Water, Sewer Communications	$500	$515	$530	$546	$563
General Maintenance & Repair	$1,000	$1,030	$1,061	$1,093	$1,126
Insurance	$5,000	$5,150	$5,305	$5,464	$5,632
Electrical	$14,000	$14,420	$14,853	$15,298	$15,757
Contracted Maintenance Services	$1,000	$1,030	$1,061	$1,093	$1,126
Total Materials & Services	$22,500	$23,175	$23,870	$24,586	$25,328
Total O&M	**$32,740**	**$33,638**	**$34,519**	**$35,445**	**$36,402**
Other Expenditures					
Annual Debt Service	$370	$370	$370	$370	$370
Transfer to Equipment Replacement Fund	$2,020	$2,020	$2,020	$2,020	$2,020
Transfer to Capital Reserve Fund	$0	$0	$0	$0	$0
Total Other Expenditures	**$2,390**	**$2,390**	**$2,390**	**$2,390**	**$2,390**
Capital Outlay					
SCSD Office Building	$5,400				
Water Treatment Plant Facilities Plan Update					
Office Equipment/furnishings Start-up	$500				
Total Capital Expenditures	**$5,900**	**$0**	**$0**	**$0**	**$0**
Total All Expenditures	**$41,030**	**$36,028**	**$37,909**	**$37,835**	**$38,792**

1. FY: fiscal year
2. O&M: operations and maintenance

2.6 Fee Design

Fee structures should be designed in such a way as to ensure that users pay only their proportionate share of costs. In addition, fee structures should be easy to understand, simple to administer, and comply with regulatory requirements. The service charge and the suggested commodity fee for the various user categories are discussed in detail on the following page.

2.6.1 Base Fee

A base fee is a cost recovery mechanism that generally is included in the fee structure to recover meter and customer costs, and which provides a stable source of revenue independent of water consumption. Therefore, customer costs related to meter reading and billing are recovered through the base fees.

Customer-related costs are fixed expenditures that relate to operational support activities, including accounting, water billing, customer service, and administrative and technical support. The customer-related costs are essentially common-to-all costs that are independent of user category characteristics. A service charge provides a mechanism for recovering a portion of the fixed costs and ensures a stable source of user revenues for the utility.

Once the costs are known, they are divided by the number of units of service associated with those costs to determine annual unit costs. Base fees are associated with equivalent meters to reflect the fact that service costs are higher for larger meters. Equivalent meters are used rather than just meters in order to recognize the fact that larger meters are more expensive to install, maintain, and replace than smaller meters. Table 3 shows the equivalent size of meters developed using the American Water Works Association (AWWA) Safe Maximum Operating Capacity per meter size. These conversion factors were determined using AWWA Standard American National Standards Institute (ANSI)/AWWA C700-02 Cold-Water Meters. Meters are assigned a hydraulic capacity by size, which is based on the maximum measurable flow fee of the meter. In this study, ⅝-inch meters are considered the base measure of a meter, because they are used for residential metering. By using equivalent meters in cost calculations, we do not have to track all meters by meter size. This allows for more concise analysis and explanation. The net effect of using equivalent meters instead of tracking all meters by size is the same. Equivalent meters are used in the unit cost calculation of meters and services in the cost of service section.

Table 3
Equivalent Meter Size
Scotia Community Services District

Meter Size (inches)	Equivalent Size (inches)	Number of Meters	Equivalent Meters
⅝	1.00	286	286
¾	1.50	2	3
1	2.50	2	5
1½	5.00	4	20
2	8.00	3	24
3	15.00	2	30
4	25.00	1	25
6	50.00	0	0
8	80.00	0	0
		Total	**393**

NOTE: This report and associated analyses are based upon consideration of 286 individual residential users as a separate user category. Residential users will not be considered customers until they purchase a home. The residential user category analyses is employed to determine what costs are allocated and paid by TOS, the current owner and customer for all the residential users in town at this time. Once a residence is sold, the new owner will pay the incremental cost and fee for an individual residential user.

2.6.2 Commodity Fee

The commodity fee is the fee developed for each user category that will recover the SCSD's variable volume-related costs. The annual estimated revenues required, less annual cost-based service charge revenues, are the revenues that need to be recovered through a commodity fee. Cost of service-based commodity fees are developed for each user category based on the principle of maintaining inter-category and intra-category revenue neutrality and equity. This means that each user category would only pay its assigned share of costs of service and that each member of each category would only pay his or her fair share of user category costs. Because a portion of the revenues required from each user category is to be recovered through uniform monthly service charges, commodity fees are designed to recover only that portion of revenues that is not recovered through the service charge. Annual service charge revenues for each user category are estimated based on the forecast number of meters by size. The portion of revenues to be recovered through commodity fees is then determined by deducting the annual service charge revenues from the user category's cost of service.

The user categories can be sorted into groups with similar peaking characteristics, resulting in a uniform water commodity fee that is the same within the group. Due to similar usage characteristics, residential users are grouped together, and commercial and industrial are grouped together. The SCSD does not currently differentiate between residences and all other categories for fee design.

Until recently, the existing Scotia water system has been mostly unmetered. With the completion of Phase 1 of the infrastructure improvements, 42 residential meters have been installed and several meters are in service related to some commercial and Industrial uses. For the purposes of this analysis, monthly water demand has been estimated by using data accumulated through the past six months of metered use by those users that are currently being monitored in the community. Due to the limited data available, the high and low months of metered water use were discarded along with identified inconsistencies. Since data mostly consists of information gathered during summer months and the "shoulder" seasons of May (7.93 hundred cubic feet per month [hcf/mo]) and Oct (6.33 hcf/mo) are decreasing, it was assumed that the winter month usage would average approximately 5.0 hcf. Considering all readings and assumptions it is estimated that the average monthly use per household would be 6.50 hcf.

3.0 SCSD Proposed Fee Structure

The proposed fee structure is based upon establishing a fee system intended to remain constant over a five-year period. Revenues collected in the first few years will exceed projected O&M, debt service and replacement expenses. During the first few years, those revenues that exceed O&M, debt service and equipment replacement costs will be placed in a capital reserve fund to help offset debt financing requirements for future capital improvements and to offset increases due to cost of living increases..

As a "start-up" district, the projected expenses presented in Table 1 are based upon guided estimates. The SCSD must establish its operations and gain some experience related to revenues and expenditures on which to base future fees more accurately. Revenues and expenses will have to be monitored throughout the next several years and adjustments made in the user fees when necessary and practical.

3.1 Monthly Base Fee per Meter Size

The proposed monthly base fees are presented in Table 4 (see Appendix A for derivation). The equivalent meter size was presented in Table 3.

Table 4
Proposed Base Fee per Meter Size
Scotia Community Services District

Meter Size (inches)	Monthly
⅝	$62.91
¾	$94.37
1	$157.28
1½	$314.56
2	$503.29
3	$943.67
4	$1,572.78
6	$3,145.57
8	$5,032.91

3.2 Commodity Fee

The proposed commodity fee is $2.66 per 100 cf of water us, (see Appendix A for derivation).

3.3 Typical Equivalent Meter Fee

The above fees represent an average individual residential user (equivalent meter size equaling 1 residential meter) charge of $80.20/month per equivalent meter size, based upon the example calculation depicted below:

⅝-inch meter = $62.91 Base Fee
\+ 650 cf of water used per month ÷ 100
= 6.5 units x $2.66
= $17.29 Commodity Fee
= $80.20/month water charge

3.4 Raw Water Fee

The SCSD will be supplying raw water, diverted from the raw water feed line to a few customers for irrigation and other industrial uses. The raw water fee is based upon the cost of pumping (electrical cost/cf + Pump Replacement Cost).

The proposed raw water fee is $0.23 per 100 cf of water use, (See Table A-1, Appendix A)

3.5 Annual Escalators

The proposed fee structure is based upon establishing a fee system intended to serve the SCSD over a five-year period. Revenues collected that will exceed projected O&M, debt service, and replacement expenses are to be placed in a capital reserve fund, which will use accumulated funds for application toward principal costs of projected capital improvements related to the treatment plant upgrade and other planned capital expenditures.

The SCSD's proposed five-year fees are established with an annual 1.5% escalation factor. The proposed fees may also be increased based on an indexed escalation, if the SCSD chooses to use it. The maximum user fee may increase based on the annual change in the consumer price index (CPI) if that amount exceeds the assumed 1.5% increase built into the initial five-year budget projections. The fee adjustment shall be based on CPI activity measured during the preceding year, for "All Urban Consumers, West Urban Area," all items, published by the United States Department of Labor, Bureau of Labor Statistics (or a reasonably equivalent index if the stated index is discontinued) (US Bureau of Labor Statistics, no date). Table 5 presents the proposed fees through the next five years considering a 1.5% increase annually.

Table 5
Proposed 1.5% Annual Fee Increases
Scotia Community Services District

Operational Year		FY 16/17	FY 17/18	FY 18/19	FY 19/20	FY 20/21
Domestic Water	Base Fee	$62.91	$63.86	$64.81	$65.79	$66.77
	Commodity Fee[1]	$2.66	$2.70	$2.74	$2.78	$2.82
Raw Water	Commodity Fee[1]	$0.23	$0.23	$0.24	$0.24	$0.24

1. Commodity Fee is cost/hundred cubic feet of water used

Future increases shall also take into account the "pass through" costs of the purchase of uncontrolled, mandatory services (such as, utility costs). Increases or decreases in the purchase of uncontrolled mandatory services, outside of typical inflationary values, shall be passed through proportionately when considering all annual fee adjustments.

Indexing fees annually to the CPI and adjusting for "pass through" costs, allows for minor increases for normal maintenance and operating cost escalation without incurring the costs of the Proposition 218 ballot proceedings. Any significant change in the user fees initiated by an increase in service provided or other significant changes to the SCSD would require the Proposition 218 proceedings and property owner approval.

4.0 Affordability

One of the most important issues in water pricing is affordability. Although water is priced extremely low compared to most other goods, it is an essential good. People have little choice but to use water and pay a local monopoly provider. Besides affordability, equity issues are part of the fee making process. Are fees fair across customer groups? Are customers paying for the cost of service? Are some groups getting price breaks on the backs of others? While the issue of affordability is important, revenue adequacy remains the number one priority of any water system. Income effects and affordability issues must be secondary or be addressed directly through other government social programs.

A basic affordability issue is determining who to protect and at what levels? How much income protection should be supplied through the water fee making process? Affordability issues in the future will require careful planning. Consumers must be educated about why fees are set as they are, and customer feedback should be monitored.

How is fee affordability measured? The U.S. Environmental Protection Agency (EPA) suggests that water fees that are 2% or less of Annual Median Household Income (AMHI) are affordable. In a survey of 1,600 utilities in five states, the EPA found that water fees ranged from 0.1% to 3.1% of AMHI with an average of 0.5% (EPA, 1998). Thus by EPA standards, water supply nationwide is affordable. The most recent published AMHI for the SCSD area is estimated at $54,605 for 2014 (American Community Survey [ACS], 2014). Applying EPA's standard of 2%, an affordable (upper end of affordability) monthly fee for residential customers (home or property owners) would be $88 per month. Based upon the EPA criteria, the proposed and projected fee increases are within the range of affordability (EPA, 1998).

It is common for communities or services districts to perform comparative analyses of user fees with neighboring service providers upon addressing user fee changes. When performing any comparative analyses, it is important that the comparisons are made between service providers with similar service and demographic characteristics. One of the more sensitive comparison criteria is associated with the given condition of a service provider's infrastructure in relation to the existing or projected user fee.

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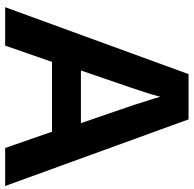

Fee Calculations

Table A-1
Distribution and Calculations For Service and Commodity Charges[1] (Year 1)

	Treated Water Breakdown			Raw Water Breakdown		
	Distribution	**Treatment**	**Base**	**Distribution**	**Treatment**	**Base**
Total Personal Services	$44,440	$54,820	$102,900	$4,740	$600	$4,900
Materials and Services						
Bond, Dues, Publications			$2,000			$500
General Supplies, Lab, Permitting & Monitoring	$2,800	$11,200		$500		
Utilities- water, sewer, Assess., communications	$440	$1,760		$500		
General Maintenance & Repair	$3,500	$10,500		$1,000		
Liability Insurance			$15,000			$5,000
Electrical	$17,100	$1,900		$14,000		
Contracted Maintenance Services	$4,500	$4,500		$1,000		
Total Materials And Services	**$28,340**	**$29,860**	**$17,000**	**$17,000**		**$5,500**
Annual Debt Service on Capital Improvement Loans			$7,770			$370
Transfer to Equipment Replacement Reserve Fund			$12,920			$2,020
Transfer to Capital Reserve Fund			$156,100			
Total All Costs	**$72,780**	**$84,680**	**$296,690**	**$21,740**	**$600**	**$12,790**
	Base Fee[2,3]		**$62.91**			
	121,398	metered use, gpd[(4)]		200,000	metered use, gpd	
	3,692,528	metered use, gal/mo[(5)]		6,083,333	metered use, gal/mo	
	493,654	metered use, ft^3/mo[(6)]		813,280	metered use, ft^3/mo	
	4,937	metered use, 100 ft^3/mo		8,133	metered use, 100 ft^3/mo	
	$157,460	annual flow associated costs		$22,340	annual flow associated costs	
	Commodity Fee[2]	$2.66 per 100 ft^3		**Commodity Fee**	$0.23 per 100 ft^3	

1. Estimated Average Monthly Residential Water Charge:

   Base Fee = $62.91 ($296,690 ÷ 393 equivalent meters ÷ 12 months)

   Commodity Fee = 650 cubic ft./month ÷ 100 = 6.5 units/month X $2.66/Unit = $17.29/month

2. Estimated Monthly Residential Water Charge will be $62.91+ $17.29 or approximately $80.20/month
3. Base Fee Based on Meter Size per Table 3, in report.
4. gpd: gallons per day
5. gal/mo: gallons per month
6. ft^3/mo: cubic feet per month
7. gpcpd: gallons per capita per day

Table A-2 Personal Services Expense Distribution						
	Treated Water			Raw Water		
Position	Distr.	Treatment	Base	Distr.	Treatment	Base
District Manager			$49,270			$2,350
Clerk			$20,870			$990
Operations Supervisor	$16,320	$16,320		$1,518		
Utility Operations/Lead	$2,970	$26,700		$1,380		
Utility Worker - all	$20,030	$6,680		$1,242		
Utility Worker - Parks	$2,420	$2,420		$0		
Legal Counsel			$16,800			$800
IT Services			$6,300			$300
Auditor (Annual Audit)			$5,040			$240
Board Stipend			$2,520			$120
CPA/Bookkeeping			$2,100			$100
Engineering/Operations Consult	$2,700	$2,700		$600	$600	
Total	**$44,440**	**$54,820**	**$102,900**	**$4,740**	**$600**	**$4,900**