

Phelan Pinon Hills Community Services District

March 6, 2013



Water Rate Study *Final Report*



WILLDAN
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December 14, 2012

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Mr. Bartz,

Willdan Financial Services (Willdan) is pleased to present this report on the Water Rate Study conducted for Phelan Pinon Hills Community Services District (the “District”).

This report was undertaken as part of the District’s first water rate study as an independent special district and reviewed and analyzed the District’s financial policy and long term financial plan. The purpose of the analysis is to update and provide revenue and rate recommendations related to District’s water operations. The focus of this study is to ensure the District has sufficient revenues generated from its water rates to meet its short and long-term operational, capital and debt service obligations and those rates are set proportionate to the costs of providing service to each parcel served. The following report outlines the approach, methodology, findings, and conclusions of this study.

This analysis has been prepared using generally accepted rate setting techniques. The District’s accounting, budgeting, billing records, and capital improvement list were the primary sources for the data contained within the report. The conclusions enclosed within this report provide Phelan Pinon Hills CSD with a set of recommendations to provide stable defensible funding for continued high-quality operations.

It was a pleasure working with you, Lori, George, Allyson and other staff members at the District. Thank you for the support and cooperation extended throughout the study.

Sincerely,

Willdan Financial Services

Habib Isaac
Principal Consultant

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Introduction

In 2012, Phelan Pinon Hills Community Services District (the “District”) selected Willdan Financial Services to perform a water rate analysis and financial plan. This analysis provides financial recommendations that focus on two key objectives: short and long-run financial health and stability; and, equitable cost-of-service rates.

The District is located in the High Desert area of San Bernardino County between Palmdale and Victorville and has a population of an estimated 20,873. The District’s water service area is approximately 118.7 square miles and the District provides water to almost 6,800 service connections. Nearly 99 percent of water service connections service single-family residences. Presently, all of the District’s water supply is from groundwater resources in the Mohave River Groundwater Basin which is primarily recharged by the Mojave River. The District has 11 active groundwater wells with an estimated system capacity of approximately 4,307 gpm and roughly 353 miles of pipelines ranging from 4-inch to 16-inch in diameter. The District maintains 35 storage tanks with a total capacity of 11.5 million gallons.

Revenues received from water service fees are used solely to fund the water enterprise, including but not limited to, operations and maintenance, debt, capital improvements, and adequate reserves. The initial review of the District’s existing rate structure and consumption data indicated that the utility was not collecting sufficient revenue to fund existing and projected expenditures (operations, maintenance, and capital) on its own and the District has previously used property tax revenue, from time to time, to assist the Water Enterprise in meeting its annual revenue requirements. In addition, the District has also recently secured additional water rights for its service area by financing it with cash from existing reserves (Property, Plant, and Equipment (PPE) Reserve and Disaster Response Reserve) and a California Economic Development and Infrastructure Bank (CIEDB) loan equal to \$7.5 Million. The loan is amortized over a 30-year term and provides additional local water resources to the District while mitigating the need to purchase more expensive water from the Mojave Water Agency. The financial plan outlined in this Report and accepted by the District Board proposes that the Water Enterprise will become self supporting with the new rate structure in 10-years without the need to rely on other District revenues. The District will annually review revenues and expenditures for the water fund to ensure that sufficient and appropriate revenues are collected to effectively provide for the short and long-term water service needs of the community.

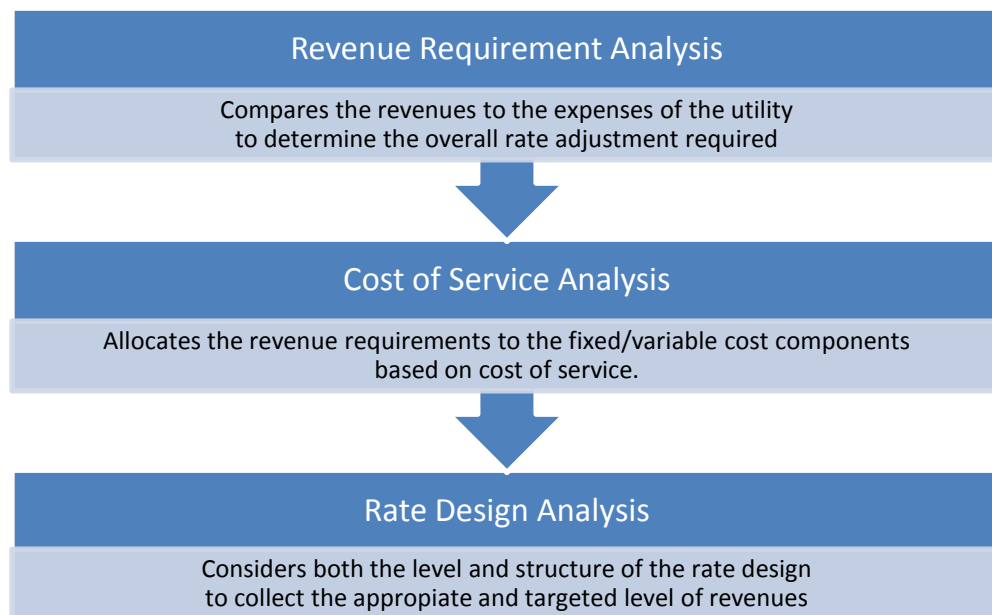
Over the course of the 10-year financial plan, the district’s reserves will also be replenished back to the minimum amounts outlined within the District’s fiscal policies. More specifically, the PPE Reserve is expected to reach its minimum fund balance of 25% of accumulated depreciation by Fiscal Year End (FYE) 2017, and the Disaster Reserve is expected to reach its minimum fund balance of 10% of total assets by (FYE) 2019.

Based on discussion with District staff, guidance and direction from the Finance Committee and Board of Directors, this report presents the recommended revenue adjustments and the corresponding rates to recover the utility’s revenue requirements.

Overview of the Rate Setting Process

The scope of this study included the development of cost-based water user charges through a comprehensive cost of service and rate design analysis. Utility rates must be set at a level where a utility’s operating and capital expenses are met with the revenues received from customers. This is a significant point, as failure to achieve this level could lead to insufficient funds being available to adequately maintain the system. A comprehensive rate study typically consists of following three interrelated analyses:

- I. **Financial Planning/Revenue Requirement Analysis:** Create a ten-year plan to support an orderly, efficient program of on-going maintenance and operating costs, capital improvement and replacement activities, debt financing, and retirement of any outstanding debt. In addition, the long-term plan should fund and maintain reserve balances to adequate levels based on industry standards and Phelan Pinon Hills CSD’s fiscal policies.
- II. **Cost of Service Analysis:** Identifies and apportions annual revenue requirements to functional cost components based on the demand placed on the utility system.
- III. **Rate Design:** Develops an equitable and proportionate fixed/variable schedule of rates for the District’s customer base. This is also where other policy objectives can be achieved, such as, promoting the efficient use of water. The policy objectives are harmonized with cost of service objectives to achieve the delicate balance between customer equity, financial stability and resource conservation goals.



Rate Setting Principles

The primary objective when conducting a comprehensive rate and financial analysis is to determine the adequacy of the existing rates (pricing, structure, and revenue sufficiency) and provide the basis for any necessary adjustments to meet the District’s operating and capital needs as well as policy objectives. The District desires a rate structure that not only fully funds operations, maintenance, and capital costs, but also provides long term funding of reserves. Similar to the existing rate structure, the utility’s revenue requirements would be recovered through a bi-monthly fixed charge and variable charge (based on amount of water used).

Financial Management, Policies, and Rates

A financial plan revolves around the development of a proper long and short-term balance of revenues and expenditures. The following provides an outline of the District’s financial targets and policies, and the financial foundation of the cost of service and rate analysis. Over the past decade, many generally accepted principles have been established to assist in developing utility rates. The purpose of this section of the report is to provide a general background of the methodology and guidelines used for setting cost based utility rates, in order to provide a higher-level understanding of the rate setting approach detailed later in this report.

As a practical matter, there should be a general set of principles used to guide the development of water rates. For water rates, the American Water Works Association (AWWA) establishes these principles in the M1 Manual – *Principles of Water Rates, Fees and Charges*. These guiding principles help to ensure there is a consistent global approach that is employed by all utilities in the development of their rates (water and water-related utilities, including sewer and reclaimed water). Below is a summary listing the established guidelines, which public utilities should consider when setting their rates. These closely reflect the District’s specified objectives.

Rates should be cost-based, equitable, and set at a level such that they provide revenue sufficiency			
Rates and process of allocating costs should conform to generally accepted rate setting techniques	Rates should provide reliable, stable and adequate revenue to meet the utility’s financial, operational, and regulatory requirements	Rate levels should be stable from year to year - minimize “rate shock” -	Rates should be easy to understand and administer

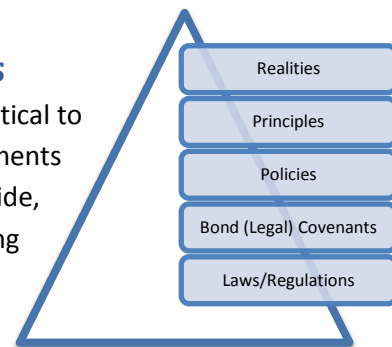
These guidelines, along with the District’s objectives, have been utilized within this study as a framework to help develop utility rates that are cost-based and equitable.

Overview of Rate Setting Environment, Objectives, Process

Rate analyses are typically performed every few years to ensure that revenues from rates are adequately funding utility operations, maintenance, and future capital needs. In California, rate analyses also require compliance with the cost-of-service principles imposed by Proposition 218 to ensure that rates correlate to how costs are incurred. In addition, the District is a member of the Alliance of Water Awareness and Conservation (AWAC) and the best management practices (BMPs) related to water use and conservation was also taken into account. The proposed rate structure Willdan has developed for District customers is a tiered rate structure. This proposed rate structure is thought to provide customers with incentive to use water efficiently by ensuring most of the water rate revenue recovered by the District is from the variable components versus the bi-monthly fix charge.

Considerations in Setting Revenue Requirements

There are a multitude of considerations, ranging from financial to political to legal that must be analyzed or discussed during the revenue requirements process of a rate analysis. This section, along with the graphic beside, provides an overview of the considerations that are reviewed during this process.



Capital Budgeting and Financing

Capital needs are defined by District’s Water Capital Improvement Plan. As part of its budget and planning process, the District identifies capital improvements that are necessary for the continued delivery of clean, safe, drinking water. The Capital Improvement Plan is funded by a variety of sources including system depreciation, water rates, connection (impact) fees, and capital reserves.

Capital Funding: Debt vs. PAYGO

The selection of the most appropriate funding strategy for capital projects is primarily a policy decision between use of cash (“Pay-as-you-go financing” or PAYGO), the issuance of debt, or a combination. PAYGO is the use or build-up of cash to fund capital improvements. With debt financing, capital improvements are funded with borrowed funds (usually through the issuance of bonds) with the obligation of repayment, typically with interest, in future years. Development of an optimal capital financial plan depends on the definition of optimal. Each funding mechanism has a different impact on water rates in the short and long run, different net present values, risks, and legal obligations. Due to the borrowing costs associated with debt, cash funding can be cheaper in the end; however, debt typically ensures greater generational equity for larger and longer lasting capital projects.

Revenue Requirements

The method used by most public utilities to establish their revenue requirements is called the “cash basis” approach of setting rates. As the name implies, a public utility combines its cash expenditures over a time period to determine their required revenues from rates and other forms of income. The figure below presents the “cash basis” methodology.

Figure 1-1: Overview of the “Cash Basis” Design

- + Operation and Maintenance Expenses
 - + Reserves
 - + Capital Additions Financed with Rate Revenue
 - + Debt Service (Principal and Interest)
 - = Total Revenue Requirements
-

To ensure that existing ratepayers are also investing in the infrastructure of the utility, capital replacement expense (depreciation) has been included in the cash basis approach to stabilize annual required revenue requirements by spreading the replacement costs of a depreciated asset over the expected life of the asset. The District’s current policy is to collect 60% of annual depreciation as liquid cash on hand.

Based on the revenue requirement analysis, the utility can determine the overall level of rate adjustments needed in order for the utility to meet its overall expenditures.

Financial Planning

In the development of the revenue requirements, certain parameters are utilized to project future expenditures, growth in customers and consumption, and necessary revenue adjustments. The District’s budget documents are used as the baseline, which are then projected over a ten-year planning horizon to account for fluctuations in costs from year to year as well as any adjustments to debt service payments.

Conservative growth assumptions and prudent financial planning are fundamental in ensuring adequate rate revenue to promote financial stability. The developed financial model considers the District’s existing debt service coverage ratio and operating cash balances (cash on hand). The cost of depreciated infrastructure is collected and used to fund annual repair and replacement. As existing debt is redeemed, additional debt may be utilized to fund additional capital improvements required due to aging infrastructure.

Rate Setting Principles Summary

In meeting the overall objectives of the District, the rate design must also conform to the State Constitution and the State's Water Code. More specifically, Proposition 218 requires that property related fees and charges, such as water rates (as affirmed in *Bighorn-Desert View Water Agency v. Verjil*), must not exceed the reasonable cost of providing the service associated with the fee or charge, and shall also not exceed the proportional cost of the service attributable to the parcel that is subject to the fee or charge.

In conjunction with Proposition 218, Article X (2) of the State Constitution institutes the need to preserve the State's water supplies and discourage the wasteful or unreasonable use of water by encouraging conservation. Article X (2) is broad in its declarations; however, the Water Code provides guidance to its application for developing water rates. Section 106 declares that the highest use of water is for domestic purposes, and irrigation is secondary. In connection with meeting the objectives of Article X, Water Code Sections 370 (AB2882) and 375 authorize a water purveyor to utilize its water rate design to incentivize the efficient use of water.

Although incentives to conserve water could be provided by implementing a higher rate for water as consumption increases, a nexus between rates and cost incurred to provide water at those rates must be developed to achieve compliance with Proposition 218. Therefore, in our analysis, when employing a tiered rate structure, we analyzed the consumption and peaking characteristics of customers within each defined tier to determine the proportional share of cost incurred by such tier, which is then divided by consumption to derive a rate per unit of water per tier. Doing so synchronizes the objectives of Article X (2) and Article XIIID (6) in developing a cost of service tiered rate structure.

Besides ensuring compliance with State law, another key principle for a comprehensive rate study is found in economic theory, which suggests the price of a commodity must roughly equal its cost or value if equity among customers is to be maintained – i.e. cost-based. For example, capacity-related costs are usually incurred by a water utility to meet peak use requirements. Consequently, the customers causing peak demands should pay for the demand-related facilities in proportion to their contribution to maximum demands. This theory is particularly important as the proposed rate structure has been developed to encourage the efficient use of water while maintaining cost of service principles.

Rate Design

The final element, the rate design process, applies the results from the revenue requirements to develop rates that achieve the general guidelines and objectives of the District and compliance with the provision of law. These objectives are achieved through the development of cost-based rates, but may also account for adjustments to expenditures or the level of cash reserves to balance rate shock, continuity of past rate philosophy, conservation objectives, ease of administration, and legal requirements. This section of the report incorporates the general principles, techniques, and economic theory used to set utility rates. These principles were the starting point for this rate study and the groundwork used to meet the District’s key objectives in analyzing and redesigning their utility rates.

This utility rate study was performed to allocate the costs of providing service to users in order to ensure that rates are equitable and in compliance with Proposition 218 requirements. Therefore, a cost of service rate study enables a water utility to adopt rates based on the costs attributable to each customer and corresponding accounts. The purposes of this water utility cost of service study include defining the proportional allocation of the costs of service to users and deriving unit costs to support the development of water rates.

Water Rate Analysis

The District engaged Willdan Financial Services (Willdan) to perform a Water Rate Redesign study focused on two main principles. First is to develop rates that provide sufficient revenues to fund expenditures related to operations, maintenance, capital, and funding of reserves. And second, within the cost of service principles of Proposition 218, design water rates that are based on cost of service principles. This section of the report outlines the details of the analysis and the approach to developing the recommendations.

Water Consumption and User Characteristics

Willdan examined the previous four years of billing data provided by the District. Multiple years of data were analyzed to ensure short-term anomalies were accounted for and long-term trends captured. Furthermore, billing data was analyzed to determine seasonal demand patterns and overall consumption characteristics. As the projected volume of water consumption is a key component in revenue generation, it is critical that appropriate adjustments and trends are rationalized. Figure 2-1 provides a summary of the District’s water consumption characteristics of approximately 6,800 accounts.

Figure 2-1: Water Consumption Characteristics

Category Description	FYE 2012 Accounts	Average Month	Peak Month	Peaking Factor (Peak/Avg)	2011/12 Consumption
District Wide	6,763	155,774	251,720	1.62	1,090,420

These records were analyzed and compiled by reviewing the District’s billing records.

Revenue Requirements Analysis

The first step in a rate analysis is a review of the District’s revenue requirements. The result of this review is a picture of the utility’s existing financial health, which is necessary to determine the current and future revenue needs. To ensure that both short and long run financial health were reviewed, Willdan performed a 10-year financial outlook; however, for the purposes of this study, rates and financial projections will be limited to 5 years. Willdan reviewed expenditures (operation and maintenance (O&M), capital, and reserves requirements) against revenues (rate revenue, capacity fee revenues, etc). Willdan analyzed and reviewed the water utility’s historical and current financial statements, four years of water consumption records, capital improvement programs and plans, reserve policies, and conferred with staff to forecast future expenditures.

Existing Water Revenues

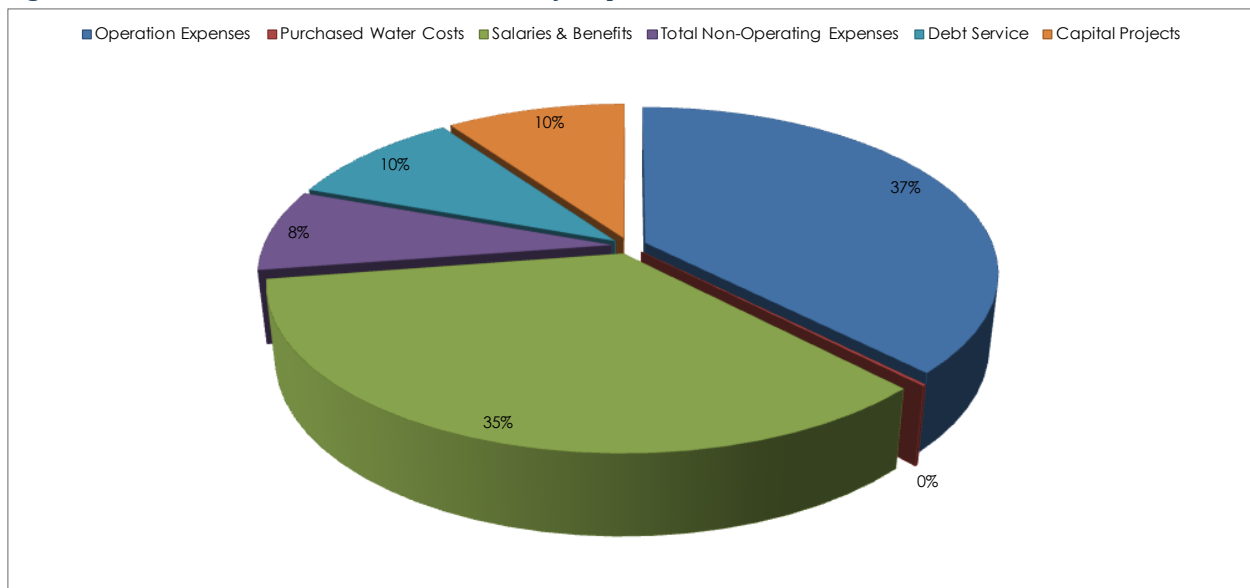
The water utility derives revenue from a variety of sources. Annually, Phelan Pinon Hills CSD has expected 86% of the Water Fund’s revenue to be originated from rate revenues (bi-monthly rates). In Fiscal Year 2011-2012, the District’s water utility generated around \$3.8 million in operating rate revenue, compared with \$638 thousand in non-operating revenue, such as interest income and capacity fees.

Existing Water Expenditures

To achieve long-term financial health, a utility’s revenues must be sufficient to meet total expenditures or cash obligations. This “required revenue” includes all incurred costs related to operation and maintenance, capital improvement programs, and principal and interest payments on existing or proposed debt.

As demonstrated by Figure 2-2, Water Fund expenditures were categorized into one of four classifications: (1) Operation and Maintenance; (2) Salaries & Benefits; (3) Total CIP and Non-Operating Expenses; (4) Debt Service. The pie chart below demonstrates the relative size of the various expense categories over the study period.

Figure 2-2: Water Fund - Cost Distribution by Expenditure Classification



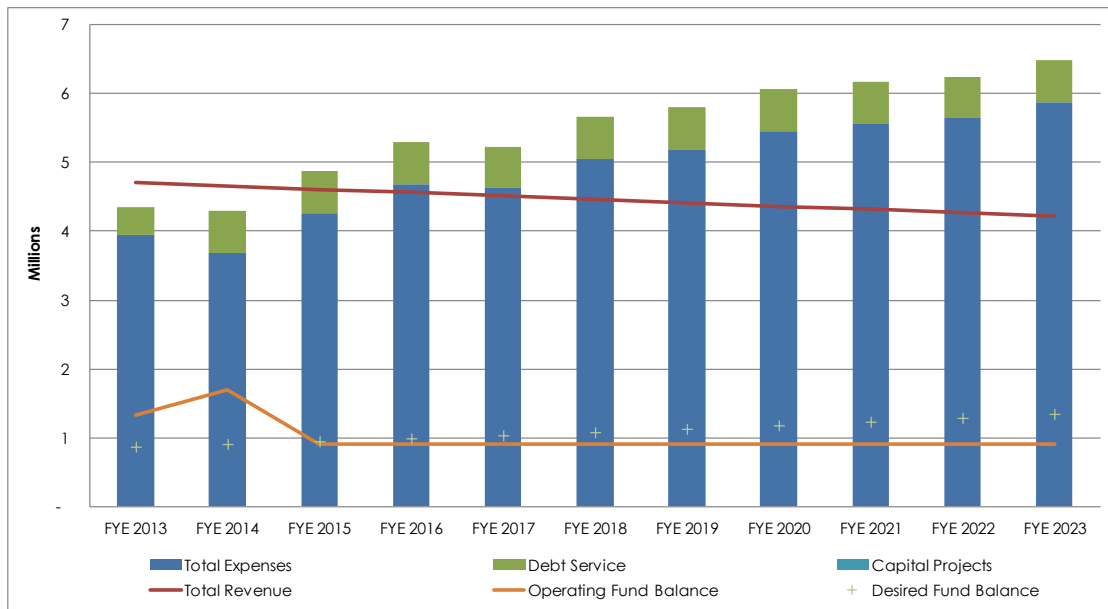
For Water, nearly 37% of the utility’s expenditures are related to maintenance and operations costs and the majority of the remaining 63% of the utility’s expenditures are related to non-operating expenses (8%), debt service (10%), capital improvement projects (10%), and salaries & benefits (35%).

In addition, to maintain financial flexibility, the water utility has a target to maintain an operating reserve of nearly \$980 thousand cash on hand (90 days of operating expense) as part of its reserve policy. At the end of June (FYE 2012), the water fund’s cash balance was \$978 thousand.

Willdan worked with District staff to establish financial thresholds and reserve accounts to ensure sufficient funding and best management practices for operations and capital. Consistent with industry standards recommended by the AWWA, Willdan targeted an Operating reserve of 90 days. The District’s current policy targets a minimum Operating Reserve of 90 days and a maximum of 180 days. This will provide the utilities sufficient working capital to fund day-to-day operations and cash outlay. Additionally, the financial plan developed will also build up reserves to achieve the minimum fund balances over the course of the 10-year planning period.

Figure 2-3 demonstrates the Baseline Scenario for the Water Funds. This represents current and projected financial conditions of the water utility absent any revenue adjustment (increases) over the next 5 years. As the figure illustrates, existing revenue levels are unsustainable and the water fund is forecasted to run at a loss.

Figure 2-3: Water Fund - Baseline Financial Scenario



The declining blue line (lower line) shows the fund’s projected ending cash balance. While short-term drops or dips of reserve levels are acceptable, given the beginning cash balance, the continued downward trend must be reversed with revenue adjustment, as the illustrated baseline scenario is unsustainable.

Recommended Revenue Requirements

Given the existing financial condition of the utility, without near term revenue adjustments, the District’s water fund will not be able to meet its targeted objectives without large spiked increases down the road. As such, Willdan worked with District staff and the Finance Committee to develop a financial plan and rate structure with gradual adjustments to provide continued financial stability throughout the study period. A number of financial scenarios were analyzed and presented over the course of the study. The results and recommendations provided in the analysis were presented in November 2012 and stakeholders were subsequently mailed a Proposition 218 Notice in January 2013. The

recommended financial plan was forecasted and analyzed to achieve a 90 day operations reserve within the five-year study period and to maintain compliance with the District's Debt Coverage Ratio.

To achieve these results in the Water Fund, the recommended revenue adjustments are six percent (6%) each year for the five-year noticing period.

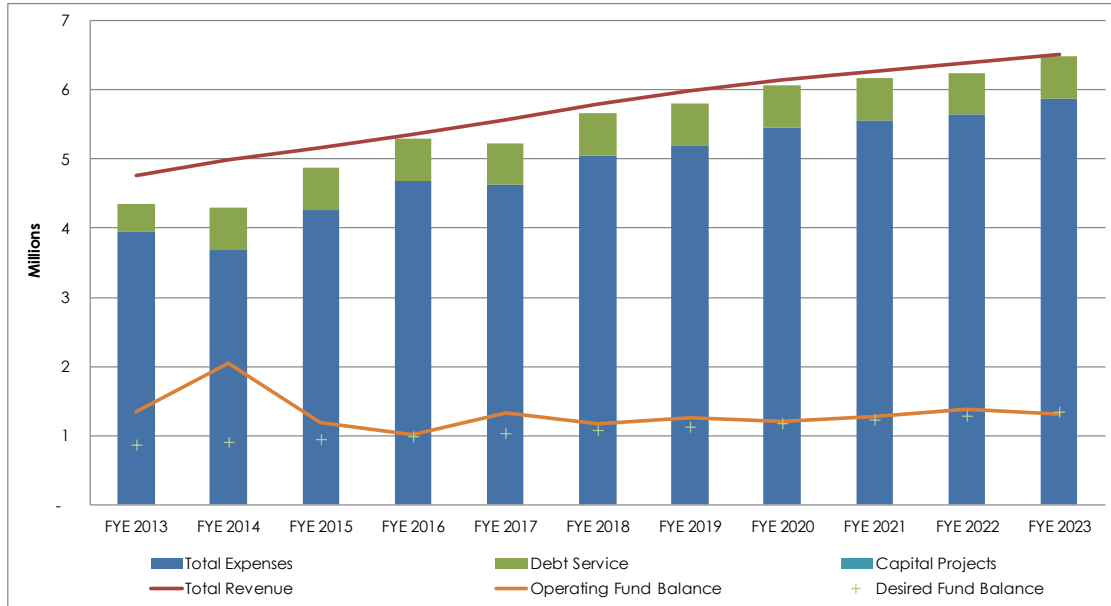
Figure 2-4 details the existing and projected expenditures of the water fund and the corresponding impact of the revenue adjustments on the fund's financial health.

Figure 2-4: Water - Revenue Requirements Analysis

Description	Escalation Code	Account #	FYE 2013	FYE 2014	FYE 2015	FYE 2016	FYE 2017
				1	2	3	4
Revenue from Water Consumption			Current Year	Projected			
Water Sales - Residential - C	GrowthSF	40010	\$ 1,970,085	\$ 1,970,085	\$ 1,970,085	\$ 1,970,085	\$ 1,970,085
Water Sales - Commercial - C	GrowthNonRes	40020	14,479	14,479	14,479	14,479	14,479
Water Sales - Fire Protection-C	NoGrowth	40030	1,014	1,014	1,014	1,014	1,014
Water Sales - Multiple Res - C	GrowthMF	40060	2,210	2,210	2,210	2,210	2,210
Water Sales - School - C	NoGrowth	40070	117,197	117,197	117,197	117,197	117,197
Water Sales - Construction - C	Flat	40090	394	1,000	1,000	1,000	1,000
Water Sales - Adjustment - Wtr	No Projection	40110	-	-	-	-	-
Revenue from Water Meter Charge							
Water Sales - Residential - M	NoGrowth	41010	1,381,261	1,381,261	1,381,261	1,381,261	1,381,261
Water Sales - Commercial - M	NoGrowth	41020	8,345	8,345	8,345	8,345	8,345
Water Sales - Fire Protection-M	NoGrowth	41030	561	561	561	561	561
Water Sales - Multiple Res - M	NoGrowth	41060	1,454	1,454	1,454	1,454	1,454
Water Sales - School - M	NoGrowth	41070	13,431	13,431	13,431	13,431	13,431
Water Sales - Construction - M	NoGrowth	41090	653	653	653	653	653
Revenue from Water Miscellaneous							
Water Sales - Residential -Misc	NoGrowth	42010	-	-	-	-	-
Water Sales - Commercial-Misc	NoGrowth	42020	-	-	-	-	-
Water Sales - Fire Protection-F	NoGrowth	42030	-	-	-	-	-
Water Sales - School - F	NoGrowth	42040	-	-	-	-	-
Total - PROPERTY TAXES	NoGrowth		490,000	441,000	392,000	343,000	294,000
Total Operating Revenue			\$ 3,511,083	\$ 3,511,689	\$ 3,511,689	\$ 3,511,689	\$ 3,511,689
Additional Rate Revenue Required							
Fiscal Year	Revenue Increase	Months Effective					
FYE 2013	6.0%	3	\$ 52,700	\$ 210,700	\$ 210,700	\$ 210,700	\$ 210,700
FYE 2014	6.0%	6		111,700	223,300	223,300	223,300
FYE 2015	6.0%	6			118,400	236,700	236,700
FYE 2016	6.0%	6				125,500	250,900
FYE 2017	6.0%	6					133,000
Total Additional Rate Revenue			\$ 52,700	\$ 322,400	\$ 552,400	\$ 796,200	\$ 1,054,600
Total Revenue			\$ 4,053,783	\$ 4,275,089	\$ 4,456,089	\$ 4,650,889	\$ 4,860,289
Total Required Revenue			\$ 3,563,783	\$ 3,834,089	\$ 4,064,089	\$ 4,307,889	\$ 4,566,289
Operation Expenses							
Total Salaries & Benefits			\$ 1,643,922	\$ 1,726,118	\$ 1,812,424	\$ 1,903,045	\$ 1,998,198
Total Board Compensations			143,762	150,475	157,509	164,880	172,605
Total Professional Fees			306,272	315,460	324,924	334,672	344,712
Total Services and Supplies			646,205	665,591	685,559	706,126	727,310
Total Utilities - Electric/Phone/Gas			775,973	814,445	854,831	897,226	941,731
Other Operating Expenses			286	286	286	286	286
Total Cost Of Replacement Water			8,125	8,199	8,445	8,699	8,960
Total Other Expense			101	104	107	111	114
Capital Projects (funded by rates)			-	-	-	-	-
Total Operating Expenses			\$ 3,524,646	\$ 3,680,680	\$ 3,844,086	\$ 4,015,045	\$ 4,193,915
Operating Income			\$ 529,137	\$ 594,409	\$ 612,003	\$ 635,844	\$ 666,374
Total Non-Operating Revenue			707,502	707,502	707,502	707,502	707,502
Total Non-Operating Expenses			417,090	-	421,639	676,639	431,639
Debt Service			416,292	611,683	610,693	609,677	608,632
Net Income			\$ 819,896	\$ 690,229	\$ 708,811	\$ 733,669	\$ 765,244

Similar to Figure 2-3 - Baseline Scenario Figure, Figure 2-5 forecasts the financial health of the water fund; however, as opposed to the baseline scenario, the revenue adjustments provide a more positive outlook and allow for a funding of capital projects, while maintaining limited reserves.

Figure 2-5: Water - Recommended Financial Plan



Cost of Service Analysis

Following the consumption and revenue requirement analysis, the next stage is to distribute costs (revenue requirements) to functional components, and ultimately, to the District’s customers through updated rates. The cost of service analysis is a systematic process by which revenue requirements are allocated by function to generate a classification of fair and equitable costs in proportion to the service received. The cost of services analysis marries the Water Consumption and Usage Characteristics analysis with the Revenue Requirements and expenditure analyses. This section of the report discusses the methodology of allocating expenditures to the functional cost components to design appropriate rates.

Cost Allocation by Function

To equitably allocate costs, costs first need to be allocated to functional cost components.

Figures 2-6 provides a breakdown of the utility’s revenue requirements by functional cost components, using a 10-year annual average to account for how costs are incurred over time, and Figure 2-7 shows a summary of the utility’s revenue requirements by function for each year of the study period. To generate this data, the water utility’s budget was analyzed line-item by line-item and expenditures were distributed based on a variety of demand factors: average day (base), maximum day (peak) usage, meters and services, and customer accounts.

Base costs are those operating and capital costs incurred by the water system that are associated with servicing customers based on customer class demand.

Max Day (Extra Capacity) costs represent those operating costs incurred to meet customer peak demands for water in excess of average day demand (base). This cost also includes capital costs related providing excess capacity.

Fixed Costs include customer accounts, and meter service related costs. Customer account costs are uniform to all customers and include such costs as meter reading, billing, accounting, and administration. Meter service costs include maintenance and capital costs associated with meters and services related costs.

Figure 2-6: Distribution of Expenditures by Function

Description	Total Water Expenses	% Allocation			
		Base	Max Day	Customer Account	Meters & Services
Total Allocation	6,012,392	45.9%	9.3%	18.2%	26.6%
51 - SALARIES & BENEFIT					
Salaries & Wages	1,163,490	387,830	-	387,830	387,830
Vacations	62,515	20,838	-	20,838	20,838
Holiday	56,299	18,766	-	18,766	18,766
Sick Pay	61,418	20,473	-	20,473	20,473
Misc Earn	28,419	9,473	-	9,473	9,473
Overtime	117,461	39,154	-	39,154	39,154
Payroll Taxes	37,437	12,479	-	12,479	12,479
Worker's Compensation	45,611	15,204	-	15,204	15,204
Employee Group Insurance	272,539	90,846	-	90,846	90,846
Retirement	229,629	76,543	-	76,543	76,543
52 - BOARD COMPENSATIONS					
Board Director's Fee	74,034	-	-	74,034	-
Board Exp - Auto Expense	4,998	-	-	4,998	-
Board Exp - Meals & Lodging	16,746	-	-	16,746	-
Board Exp - Education/Training	5,972	-	-	5,972	-
Board Exp - Insurance & Other Expenses	71,034	-	-	71,034	-
53 - PROFESSIONAL FEE					
Auditing & Accounting Fees	40,811	-	-	20,406	20,406
Legal Services	57,323	-	-	28,661	28,661
Engineering	46,784	46,784	-	-	-
Laboratory Analysis	15,894	15,894	-	-	-
Outside Service	110,740	110,740	-	-	-
Permits & Fees	9,562	9,562	-	-	-
Software Support	75,090	-	-	37,545	37,545
54 - SERVICE AND SUPPLIES					
Advertising	3,088	-	-	-	3,088
Auto Expense	4,408	-	-	-	4,408
Auto Allowance	6,763	-	-	-	6,763
Credit Card Fee & Bank Charges	14,709	-	-	-	14,709
Dues & Subscriptions	26,386	-	-	-	26,386
Education & Training	24,175	-	-	-	24,175
Employment Expense	1,278	-	-	-	1,278
Equipment Rental/ Lease	11,403	-	-	-	11,403
General Maintenance	4,410	-	-	2,205	2,205
Insurance	93,738	-	-	46,869	46,869
Insurance - Vehicle	17,827	-	-	-	17,827
Fuel Costs	84,399	84,399	-	-	-
Meeting, Seminar & Supplies	6,343	-	-	-	6,343
Travel Expense	16,664	-	-	8,332	8,332
Operating Supplies	62,618	62,618	-	-	-
Office Supplies	23,286	-	-	11,643	11,643
Repair & Maintenance	144,238	-	-	-	144,238
Small Tools	17,216	17,216	-	-	-
Uniforms	20,549	6,850	-	6,850	6,850
Vehicle Maintenance	38,780	38,780	-	-	-
Easement Lease	983	983	-	-	-
Computer & Equip Maintenance	638	-	-	319	319
Programs (Wtr Cons, parks,etc)	28,208	11,085	17,122	-	-
State & County Fees & Services	32,166	-	-	-	32,166
Postage & Mailing	28,301	-	-	28,301	-
Printing	16,275	-	-	16,275	-
Public Relation	20,897	-	-	10,449	10,449
58 - UTILITIES - Electric/Phone/Gas					
Telephone	19,086	-	-	9,543	9,543
Utilities - Operations	973,990	973,990	-	-	-
59 - OTHER - Depreciation/Amort, etc.					
Other Operating Expenses	264	-	-	-	264
50 - WATER PURCHASES					
MWA WM Admin. & Bio Fee	9,746	9,746	-	-	-
MWA WM Make Up Water	375	375	-	-	-
Total Cost Of Replacement Water	17,917	7,041	10,876	-	-
796 - Other Expense					
Tax Deduction	0	-	-	-	0
Net Incr/Decr in Fair Value	166	-	-	-	166
Non-Operating Expenses					
Depreciation funded above CIP	485,454	161,818	161,818	-	161,818
Bad Debt	26	-	-	-	26
Property Taxes	34	-	-	-	34
Debt Service					
Total Debt Service	540,428	270,214	-	-	270,214
Capital Projects - R&R Funded (PAYGO)	611,350	240,257	371,093	-	-

Figure 2-7: Distribution of Annual Expenditures by Function

	Rate Revenue Required	Base	Max Day	Customer Account	Meters & Services
Percent Allocation	100%	45.9%	9.3%	18.2%	26.6%
Fiscal Year Ending		55.2%		44.8%	
FYE 2013	\$ 3,563,783	\$ 1,635,938	\$ 332,472	\$ 647,146	\$ 948,226
FYE 2014	\$ 3,834,089	1,760,021	357,690	696,231	1,020,147
FYE 2015	\$ 4,064,089	1,865,601	379,147	737,997	1,081,344
FYE 2016	\$ 4,307,889	1,977,516	401,892	782,268	1,146,213
FYE 2017	\$ 4,566,289	2,096,134	425,998	829,191	1,214,966
FYE 2018	\$ 4,840,289	2,221,912	451,560	878,947	1,287,870
FYE 2019	\$ 5,080,889	2,332,359	474,006	922,637	1,351,887
FYE 2020	\$ 5,284,189	2,425,682	492,973	959,554	1,405,980
FYE 2021	\$ 5,468,589	2,510,330	510,176	993,039	1,455,044
FYE 2022	\$ 5,632,589	2,585,614	525,476	1,022,820	1,498,679
FYE 2023	\$ 5,801,589	2,663,193	541,242	1,053,509	1,543,646

Rate Design Analysis

Rate design is the process of analysis that determines how the allocated revenue requirements are recovered through the bi-monthly fixed charge and variable rates (based on usage).

Criteria and Considerations

In determining the appropriate rate level and structure, Willdan, in conjunction with District staff, analyzed various generated financial scenarios concerning the proposed adjustments and the implications attributed to those decisions.

A simplified list of some of the rate design considerations that were reviewed is listed:

- Clear and understandable
- Easily administered
- Cost of service principles
- Revenue stability (month to month and year to year)
- Prudent financial planning
- Capital Improvement Program Financing (improving the existing system)
- Fair and equitable (cost-based)
- Comply with legal and regulatory requirements

Every consideration has merit and plays an important role in a comprehensive rate study. When developing Phelan Pinon Hills CSD's proposed water rates, all of the aforementioned criteria were taken into consideration, in addition to the objective of minimizing rate shock. Determining the appropriate balance is crucial, as some of the criteria sometime conflict with one another. In designing rates, there will always be a balance between the various objectives as well as policy decisions made by the Board.

Existing Rate Structure

The existing rate structure is a three tiered rate structure for all classes. The structure is comprised of the following cost components.

Meter Charge: Charge is bi-monthly and is based on the size of water meter. This component of the water rate reflects the cost of metering support, customer service, maintaining the account and provides a certain allotment of water based on meter size.

Commodity Charge: The ***Tier 1*** charge is \$1.81 per one hundred cubic feet (HCF) for the first 14 units of water, the ***Tier 2*** charge is \$2.01 for the next 66 units of water, and finally the ***Tier 3*** charge is \$2.08 and provides an allotment for additional needs. This supports the variable cost of the system that brings the water to homes or businesses.

Proposed Rate Structure

To achieve additional equity between accounts, Willdan recommends collapsing the 3-tiered rate design to a two-tiered structure with a more appropriate price differential between the tiered rates reflecting the higher cost of service in relation to demand on the utility system. In addition, because the utility recently secured a new loan for the acquisition of water rights, the Split between Fixed revenue versus

Variable revenue has been adjusted to 45% fixed and 55% variable to ensure slightly more revenue stability.

Beyond changing the structure, some components of the rate structure were modified to reflect the current review and allocation of the costs incurred. Below are the proposed components of the recommended rate structure.

Customer Charge: Bi-monthly Charge based on total accounts and the size of water meters. This component of the water rate reflects the cost of metering support, customer service, and maintaining customer accounts.

Commodity Charge: Charge is applied to all units of water used per month and split between two tiers for all customers. Starting in March 2013, all water customers will be charged \$1.69 for the first 25 HCF, \$1.95 for each additional unit above 25 HCF.

Recommended Water Charges

The proposed revenue adjustments as a percentage do not equal or necessary correlate to an equivalent percentage increase to rates or bi-monthly bills. The results of the cost-of-service analysis and rate redesign will affect users differently.

The cost of service analysis created two notable rate impacts related to rate design: first, the recalibration between fixed and variable charges; and, second, the increased focus of a cost of service nexus and ensuring proper cost recognition and recovery of the different customer classes. Therefore, all units of water consumed are subject to a charge.

The distribution factors that appear at the top of Figure 2-7 are utilized to allocate system expenditures between fixed charges and commodity charges. The cost of service allocation completed in this study is established on the base-extra capacity method endorsed by the American Water Works Association (AWWA). Under the base-extra capacity method, revenue requirements are allocated to functional cost components. This methodology results in an AWWA-accepted cost distribution and recovers costs proportionately.

Fixed Charge

There are two components to the proposed fixed charge: Customer Account costs; and Meters and Services. Per Figure 3-1, roughly \$647,146 of required revenue is allocated to Customer Accounts. These costs are distributed to each account evenly, as each account benefits equally from those expenditure functions.

Figure 3-1: Total Charge per Account

	FYE 2013	FYE 2014	FYE 2015	FYE 2016	FYE 2017
Total Customer Accounts Cost	\$ 647,146	\$ 696,231	\$ 737,997	\$ 782,268	\$ 829,191
Number of Accounts	6,763	6,763	6,763	6,763	6,763
Bi-Monthly Charge per Account	\$ 15.95	\$ 17.16	\$ 18.19	\$ 19.28	\$ 20.43

Costs related to Meters and Services are distributed on an equivalent meter factor, as endorsed by the AWWA. Larger meters require greater level of investment, depending on consideration such as size of pipe, type of materials, and other local characteristics for various size meters, which in turn cause higher maintenance costs. Figure 3-2, shows the determined meter equivalency factor based on investment. This factor ensures meter costs are proportionate to the investment cost incurred on the utility.

Figure 3-2: Total Charge per Meter

Meters and Services Cost Calculation

	FYE 2013	FYE 2014	FYE 2015	FYE 2016	FYE 2017
Total Meters and Services Cost	\$ 948,226	\$ 1,020,147	\$ 1,081,344	\$ 1,146,213	\$ 1,214,966
Number of Equivalent Meters	15,374	15,374	15,374	15,374	15,374
Bi-Monthly Meter Charge per 5/8" Meter	\$ 10.28	\$ 11.06	\$ 11.72	\$ 12.43	\$ 13.17

Meter Size	Eq Meter Factor	Bi-Monthly Meters and Services Charge				
5/8"	1.0	10.28	11.06	11.72	12.43	13.17
3/4"	1.5	15.42	16.59	17.58	18.64	19.76
1"	2.5	25.70	27.65	29.31	31.06	32.93
1.5"	5.0	51.40	55.30	58.61	62.13	65.86
2"	8.0	82.24	88.47	93.78	99.41	105.37
3"	15.0	154.19	165.89	175.84	186.39	197.57
4"	25.0	256.99	276.48	293.07	310.65	329.28
6"	50.0	513.98	552.97	586.14	621.30	658.57
8"	80.0	822.37	884.75	937.82	994.08	1,053.71
10"	115.0	1,182.16	1,271.82	1,348.12	1,428.99	1,514.70

The following figure (Figure 3-3) outlines the recommended meter charge. The cost of service analysis allocated a similar percentage of utility expenditures as “fixed costs” than was previously calculated – this in turn caused the allocation of “variable costs” to be comparable. These costs are classified as “fixed” as they are incurred by the utility regardless of consumption. This influences all users, regardless of water use and efficiency.

Figure 3-3: Fixed Charge

Meter Charge*	March 1, 2013	January 1, 2014	January 1, 2015	January 1, 2016	January 1, 2017
5/8"	\$ 26.23	\$ 28.22	\$ 29.91	\$ 31.70	\$ 33.61
3/4"	31.37	33.75	35.77	37.92	40.19
1"	41.65	44.81	47.49	50.34	53.36
1.5"	67.35	72.45	76.80	81.41	86.29
2"	98.19	105.63	111.97	118.69	125.81
3"	170.14	183.05	194.03	205.67	218.00
4"	272.94	293.64	311.26	329.93	349.72
6"	529.93	570.12	604.32	640.58	679.00
8"	838.32	901.90	956.01	1,013.36	1,074.14
10"	1,198.11	1,288.98	1,366.30	1,448.27	1,535.14

Commodity Charge

The rate structure is designed to reflect the additional costs associated with greater service demand. Each tier of the proposed two-tier inclining block rate structure is designed to mirror how additional costs are incurred by the utility with increasing levels of demand.

Tier Design- Multiple tiers have been designed to reflect the proportionate increase in costs associated with additional demand placed on the utility. In keeping with the cost-of-service requirements of Proposition 218 – the rate structure reflects the higher cost of providing water, and the proportional costs of tier 2 based on the tier's peak demand when compared to Tier 1 (base).

- *Tier 1* provides 25 units of water to account for the average usage during the off-peak season (winter average usage equals 20.5 HCF)
- *Tier 2* captures all units of water used above the Tier 1 allotment. The rate structure reflects the increased cost of providing service as customers use a greater amount of water during the peak season while providing a base allotment of water in Tier 1.

Costs related to the base variable rate component are allocated to each tier distributed by the overall consumption and calculated peak in that tier. This design reflects how the utility incurs higher costs to meet additional demand and increased peaking among all accounts.

Figure 3-5: Recommended Water Commodity Rate

Commodity Charge		March 1, 2013	January 1, 2014	January 1, 2015	January 1, 2016	January 1, 2017
Tiered	Tier (HCF)					
Tier 1	0 - 25	\$ 1.69	\$ 1.89	\$ 2.02	\$ 2.17	2.32
Tier 2	25.01 +	1.95	2.18	2.33	2.50	2.67

Meter Charge*	March 1, 2013	January 1, 2014	January 1, 2015	January 1, 2016	January 1, 2017
3/4"	\$ 31.37	\$ 33.75	\$ 35.77	\$ 37.92	40.19
1"	41.65	44.81	47.49	50.34	53.36
1.5"	67.35	72.45	76.80	81.41	86.29
2"	98.19	105.63	111.97	118.69	125.81
3"	170.14	183.05	194.03	205.67	218.00
4"	272.94	293.64	311.26	329.93	349.72
6"	529.93	570.12	604.32	640.58	679.00
8"	838.32	901.90	956.01	1,013.36	1,074.14
10"	1,198.11	1,288.98	1,366.30	1,448.27	1,535.14

Customer Impacts

The recommended rates will provide Phelan Pinon Hills CSD with the necessary revenue to provide continue quality service, without a significant impact on the average ratepayer. The figure below provides a sample water bill for a variety of consumption levels. The average customer has a bi-monthly usage of 25 one hundred cubic feet (HCF).

Figure 3-6: Bi-Monthly Bill Comparison

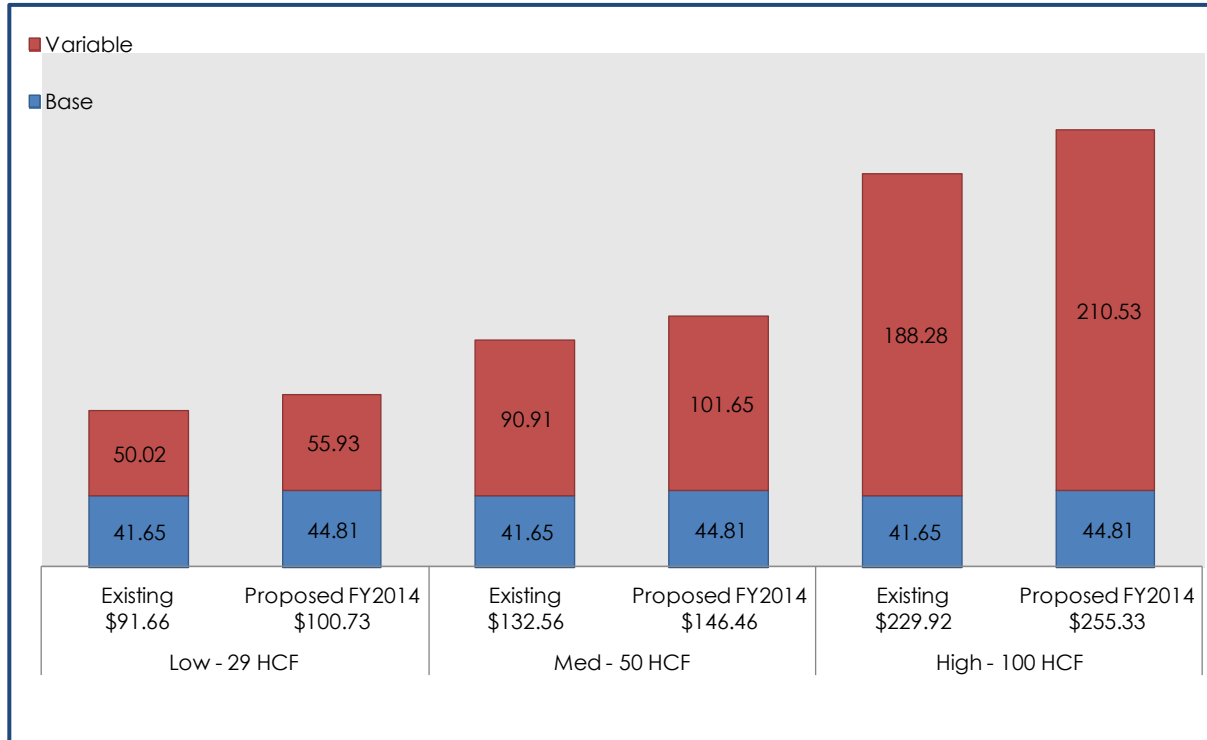


Figure 3-7: Winter Account Distribution Based on Usage

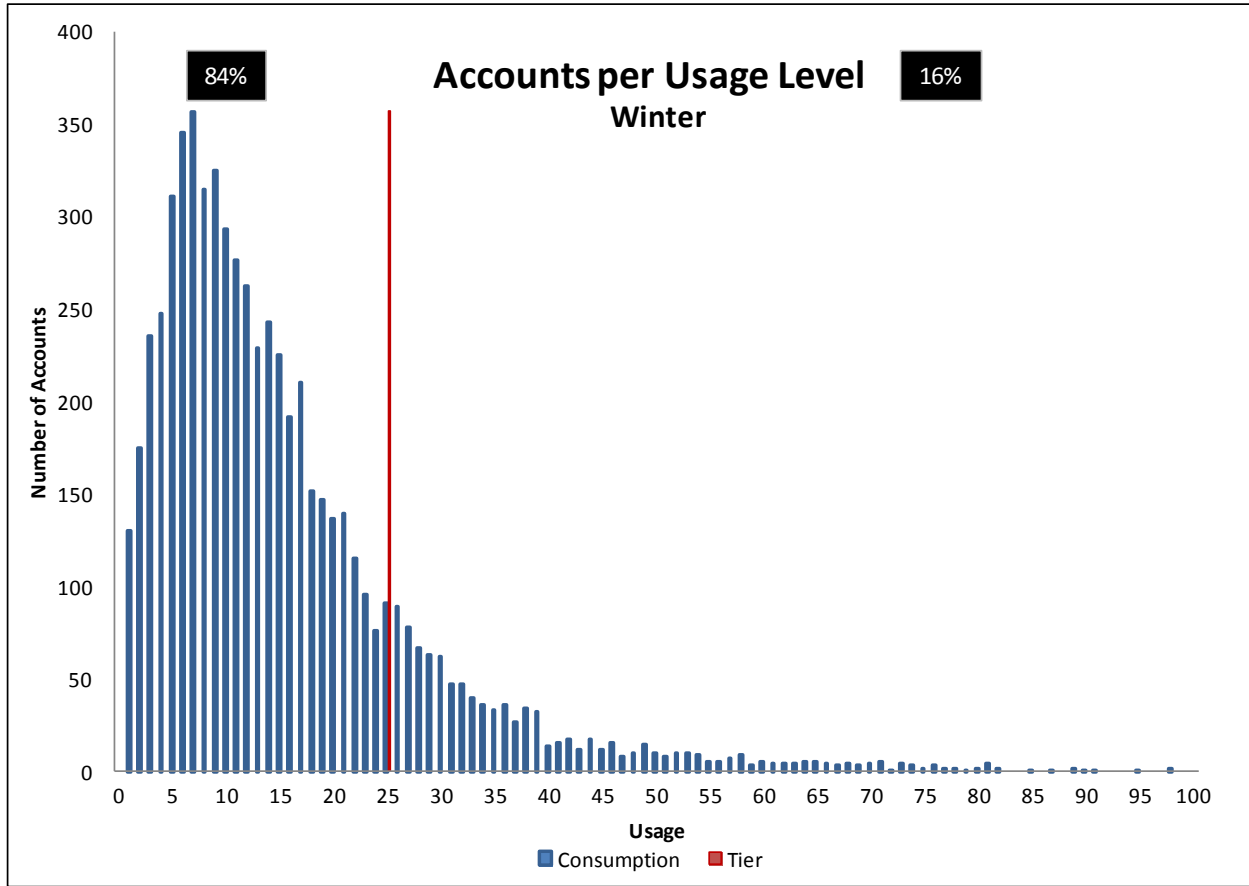


Figure 3-8: Summer Account Distribution Based on Usage

